Western Pacific

Country Health Information Profiles

2009 REVISION

CHiPS

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World Health Organization

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Introduction

Country health information profiles (CHIPS) were first published in 1974 by the WHO Regional Office for the Western Pacific. The first CHIPS were primarily a reference for WHO staff responsible for briefing others, writing reports, drafting plans of action and verifying statistical data. CHIPS then became a resource tool used by other United Nations agencies, international organizations, government agencies and the general public.

The 2009 edition of CHIPS comprises the ***country profiles*** and the ***health databanks*** for each country and area of the WHO Western Pacific Region. It contains crude data that are supplied either by the health ministries/departments or compiled from national databases and reference libraries. Estimates and adjusted data from various published sources are also used. Every effort is made to update the figures and analyses in CHIPS annually in response to ever-growing demands for current data and information. Clearance by the respective governments is also sought prior to publication. However, data reliability and data coverage may vary for each indicator and from country to country.

The ***country profiles*** provide readers with background on each country's demographic, political and socioeconomic situation as related to health-seeking behaviour and prevailing health conditions. Trends in major disease conditions afflicting specific age groups and the population as a whole are also illustrated. The health system is detailed to provide information as to the country's priorities, policies, strategies and resources to address health problems and improve the health and lives of its people. Specifically, the country profiles provide information as to:

- **Country context** – Provides a picture of the country's population size and distribution, as well as its rate of population growth and movement. The political structure and situation are also described to show how major government initiatives and political events impact on health. Major economic determinants of health, such as economic performance, level of poverty, employment and working conditions, as well as government spending on health, are also explained and quantified. There is an overview of the environmental conditions and prevailing gender and human-rights issues affecting health, and the country's major vulnerabilities, which may be natural, biological, technological or societal, are illustrated.
- **Health situation and trend** – Illustrates the major communicable and noncommunicable diseases afflicting the country, its health transition experience and the leading causes of morbidity and mortality. Maternal health conditions, as well as diseases specifically affecting children and infants, are discussed. Burden-of-disease estimates are also presented, as well as results of national surveys on health risk factors.
- **Health system** – Orients readers on the mission, vision and objectives of the Ministry of Health. The organization of the country's health services and delivery systems, such as the public and private sector set-up, the public health administrative levels and the health facility network, are described. In addition, the framework for health policy, planning and regulation is

presented. The Government's long-term objectives for the health sector are outlined, highlighting policies and directions, legislation recently passed or pending, health reform proposals and health system strengthening strategies. An overview is given of the health care financing system and major financing issues, and key areas and priorities in relation to human resources for health are presented.

- **Major information sources** – Lists key resources for additional information on the country. Includes websites, major publications and policy documents, surveys and databases.
- **Contact information for the Ministry/Department of Health and the WHO Representative or Country Liaison Officer for WHO** (if applicable)
- **Health ministry/department organizational chart** (if available)

A country ***health databank*** is annexed to each country profile and is more detailed in containing different sets of indicators to reflect the country's:

- demographic and socioeconomic conditions;
- health status regarding leading causes of morbidity and mortality, and the number of cases and deaths from selected diseases;
- health system as regards health workforce and infrastructure;
- health service coverage, such as immunization of infants; and
- status in relation to the health-related Millennium Development Goals.

To facilitate intercountry comparisons, a ***statistical annex*** is made available at the end of the publication. It summarizes most of the information in the health databanks and includes other indicators on selected health conditions and practices, such as HIV and obesity, smoking and drinking behaviour and child care. It also contains human-rights, poverty and gender-related development indicators, as well as details of major emergencies occurring in the Region over the last two years.

Individual country profiles and the CHIPS volume as a whole are accessible on the website of the WHO Regional Office for the Western Pacific (http://www.wpro.who.int/).

Note on title. As in the 2004, 2005, 2006, 2007 and 2008 revisions, the year of publication has been used (rather than the year of most recent data). This brings CHIPS into line with other WHO publications, such as the *World Health Report*.

Acronyms

ADB	Asian Development Bank
AFB	Acid-fast bacillus
AIDS	Acquired immunodeficiency syndrome
APEC	Asia-Pacific Economic Cooperation
ARI	Acute respiratory infection
ART	Antiretroviral treatment
AusAID	Australian Agency for International Development
BMI	Body mass index
CCM	Country coordination mechanism
CEDAW	Convention on the Elimination of all Forms of Discrimination Against Women
CFR	Case fatality rate
COPD	Chronic obstructive pulmonary disease
CRC	Convention on the Rights of the Child
CRS	Congenital rubella syndrome
CVD	Cardiovascular disease
DALY	Disability-adjusted life years
DHF	Dengue haemorrhagic fever
DHS	Demographic health survey
DOTS	Directly observed treatment short-course
EPI	Expanded programme on immunization
EU	European Union
FAO	Food and agriculture organization
GAVI	Global Alliance for Vaccine and Immunization
GBD	Global burden of disease
GDI	Gender-related development index
GDP	Gross domestic product
GEM	Gender empowerment measure
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GNI	Gross national income
GNP	Gross national product
HBV	Hepatitis B virus
HDI	Human development index
HFMD	Hand, foot and mouth disease
HIS	Health information system
HIV	Human immunodeficiency virus
HPV	Human papillomavirus
HRDF	Human Resources Development Fund
HRH	Human resources for health
HSIP	Health sector improvement programme
ICD	International classification of diseases
ICT	Information and communication technology
IHR	International health regulations
IMCI	Integrated management of childhood illness
IMF	International Monetary Fund
IMR	Infant mortality rate
JICA	Japan International Cooperation Agency
LDC	Least developed countries
MCH	Maternal and child health
MDA	Mass drug administration
MDG	Millennium Development Goals

MDR TB	Multidrug resistance Tuberculosis
MFA	Medical financial assistance
MICS	Multiple Indicator Cluster Survey
MMR	Maternal mortality ratio
NCD	Noncommunicable disease
NGO	Non-governmental organization
NHA	National health accounts
NSO	National Statistics Office
NZAID	New Zealand Agency for International Development
OCHA	Office for the Coordination of Humanitarian Affairs
ODA	Official Development Assistance
OECD	Organisation for Economic Cooperation and Development
PHC	Primary health care
POLHN	Pacific Open Learning Health Network
PPHSN	Pacific public health surveillance network
PPP	Purchasing power parity
PRISM	Pacific Regional Information System
PYLL	Potential years of life lost
RHS	Reproductive health survey
SAR	Special Administrative Region
SARS	Severe acute respiratory syndrome
SIDS	Sudden infant death syndrome
SPC	Secretariat of the Pacific Community
STEPS	STEPwise approach to chronic disease risk factor surveillance
STI	Sexually transmitted infection
SWAp	Sector wide approach
TB	Tuberculosis
TCM	Traditional Chinese Medicine
TFR	Total fertility rate
TT	Tetanus toxoid
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNDAF	United Nations Development Assistance Framework
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNIFEM	United Nations Development Fund for Women
USAID	United States Agency for International Development
U5MR	Under-five mortality rate
WB	World Bank
WFP	World Food Programme
WHO	World Health Organization
WTO	World Trade Organization
YLD	Years lost due to disability
YLL	Years of life lost

AMERICAN SAMOA

1. CONTEXT

1.1 Demographics

In 2008, American Samoa had an estimated population of 66 107. Based on 2008 population estimates, around 30% of the population is below 15 years of age, while 5% is above 65 years. Life expectancy at birth for men is estimated to be 69.3 years, while for women it is 75.9 years. The crude birth rate dropped from 30.0 per 1000 population in 2000 to 26.3 per 1000 population in 2008. The crude death rate in the same year was 4.5 per 1000 population.

1.2 Political situation

American Samoa was defined by an 1899 treaty between the United States of America, the United Kingdom of Great Britain and Northern Ireland, and Germany, which gave the United States of America control of all Samoan islands east of 171ºW. In 1978, the first popularly elected Samoan governor was inaugurated. There is a bicameral legislature (*Fono*), consisting of a senate (18 members chosen by county councils) and a house of representatives (20 members elected by popular vote, plus one non-voting member from Swains Island, which is privately owned). There is also an independent judiciary.

1.3 Socioeconomic situation

American Samoa is a small developing economy that depends on two main sources of income: the United States Government and tuna canning. Federal expenditures and the canning business together account for 93% of the economy. The remaining 7% comes from the small tourism industry and the service sector. Transfers from the United States Government add substantially to the country's economy. Annual budget revenues of US$ 121 million comprise grants from the United States of America (63%) and local revenue (37%). The United States is the main trading partner. Gross domestic product (GDP) per capita (goods and services) was estimated at US$ 8052 in 2003.

Water supplies and sanitation systems are well organized and maintained, and 99% of the population have access to safe water. Water is increasingly supplied from deep bores, with a smaller portion from reservoirs, and is chlorinated. However, although 99% of the population have adequate excreta disposal facilities, solid waste disposal is still a problem. Waste collection systems have improved significantly, but space for solid waste landfill operations is very limited.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The most serious health issues relate to the increase in chronic diseases associated with lifestyle, with their roots in improper nutrition and physical inactivity. Significant increases in the prevalence of obesity, in both sexes and at increasingly younger ages, are associated with a number of these conditions. Hypertension, cardiovascular diseases, cerebrovascular diseases, type II diabetes mellitus and its complications, arthritis, gout and some forms of cancer are among these important chronic diseases.

American Samoa reported one positive HIV infection in 2001. The Government is taking the issue of HIV/AIDS seriously and has developed a national policy and prevention programme.

Filariasis is a major endemic problem. The mass drug administration (MDA) campaign in 2001 reported a coverage rate of 52% for the target population. This represents a 50% improvement compared with the 1999 MDA, which had a coverage rate of only 19%. In 2008, MDA coverage among the total population

at risk was 52.9%. Blood survey results for filariasis were 2.6% (microfilaria) and 11.5% (immunochromatographic test) in 2001.

2.2 Outbreaks of communicable diseases

No available information.

2.3 Leading causes of mortality and morbidity

The morbidity pattern has shifted significantly over the past three decades from infectious diseases to a predominance of noncommunicable diseases related to modernization and lifestyle changes. Based on hospital discharge data and notifiable disease records, the leading causes of morbidity in 2001 were dengue fever, chickenpox, dog bites, road traffic injuries and food poisonings. Heart diseases and malignant neoplasms remained the leading causes of mortality in 2005. Other common causes of death are diabetes mellitus, cerebrovascular diseases, chronic obstructive pulmonary and allied conditions, pneumonia and influenza, hypertension, accidents, perinatal conditions and septicaemia.

2.4 Maternal, child and infant diseases

There has been considerable progress in primary health care in recent years. The total fertility rate for women aged 15-49 years was 4.0 in 2008, while the maternal mortality ratio was 123 per 100 000 live births in 2002.

The infant mortality rate dropped from 15.2 per 1000 live births in 2004 to 11.9 in 2008. The under-five mortality rate was 4.9 per 1000 live births in 2002.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Department of Health and the Hospital Division continue to co-exist as two separate systems. The Department of Health is responsible for public health issues, communicable disease control (including tuberculosis and HIV/AIDS) and health dispensaries at district and community levels. The national hospital in Pago Pago is under the management of the Hospital Board, designated by the Governor, and is subject to the federal rules and regulation of the United States of America (i.e. the hospital does not have to report to the Department of Health). Nevertheless, coordination between the Department of Health and the hospital is generally well conducted at the technical level. Most public health programmes continue to be funded by federal grants.

The territorial health priorities are as follows:

(1) Increase the capacity of the health system to meet the health challenges of the 21st century by:
   - improving health policy development mechanisms,
   - developing the health workforce,
   - improving management processes at all levels, and
   - strengthening long-range health planning and programme planning.

(2) Identify emerging and re-emerging diseases and implement effective interventions.

(3) Implement effective interventions to decrease the burden of chronic diseases related to unhealthy lifestyles, especially cardiovascular disease, cancer and diabetes mellitus.

(4) Actively implement the Healthy Islands concepts of health promotion, health protection and primary health care in priority settings, particularly through community health centres and school-linked programmes.

(5) Increase the effectiveness of public investment in health through development of decision-oriented information systems, applied research, effective deployment of the

health workforce, application of appropriate technology, and increased allocation of funding for health promotion, health protection and primary health care.

3.2 Organization of health services and delivery systems

See Section 3.1.

3.3 Health policy, planning and regulatory framework

See Section 3.1.

3.4 Health care financing

Financial management of public health programmes is mainly grant-driven rather than programme-driven. The hospital generates financial resources from user fees, local government appropriations and federal health care financing through the Medicaid and Medicare programmes. The total government health budget amounts to 14% of the territory's total budget, the bulk going towards curative care, with only about 10% going to public health. Total health expenditures amount to around US$ 32.3 million, which corresponds to a per capita health expenditure of US$ 500.

The United States Health Care Financing Administration provides about US$ 3 million per year to the hospital, the LBJ Tropical Medical Center (16% of its funding), most of which is used to purchase medicines and medical supplies used at the centre. Pharmaceuticals and vaccines are purchased from the United States of America. United States Federal Drug Administration regulations prevent the territory from purchasing pharmaceuticals from foreign sources. There are frequent shortages due to problems with ordering logistics and financial shortfalls.

A planned project to build a new acute care hospital to replace the LBJ Tropical Medical Center has been deferred due to cost. An alternative plan to renovate and expand the existing facility is being implemented.

3.5 Human resources for health

The health infrastructure consists of one hospital (LBJ Tropical Medical Center) and five primary health centres. The LBJ Tropical Medical Center, a 128-bed general acute-care hospital, is the only hospital in the territory. It provides a reasonable range of general inpatient and outpatient services covering: medicine; surgery; obstetrics and gynaecology; ear, nose and throat (ENT) problems; eye problems; paediatrics; mental health; and renal dialysis.

The 2003 health workforce included 49 physicians (American doctors, Fiji School of Medicine graduates and foreign doctors), 15 dentists, 2 pharmacists, 127 nurses, 1 midwife, 98 other nursing/auxiliary staff, 146 paramedical personnel, and 13 other health personnel. However, the absence of an available health workforce pool in a small island population, along with severe government financial difficulties, make long-range health workforce planning uncertain and recruitment and retention problematic. Both the National Hospital and the Department of Health have inadequate resources to fund continuing education for their staff members. This leaves the Department of Health with a rapidly growing gap between evolving professional responsibilities and existing workforce competencies. The long-standing problem of health workforce deficiencies is one of the greatest challenges to health development. Human resource development for health has therefore been identified as a priority area for national health development, particularly for WHO collaboration.

Training of nurses takes place both locally and through overseas education in the American system and, as recognition of qualifications requires certification and/or registration by American professional associations, much undergraduate and postgraduate training is also undertaken in that system. Adequate numbers of licensed practical nurses are produced this way, but the supply of registered nurses is insufficient to meet the quality standards required for United States federal health care financing programmes.

Specialized training courses and workshops sponsored by WHO and American sources are also conducted and improve the quality of health services, particularly those related to public health. The telecommunications capability at the LBJ Tropical Medical Center provides additional opportunities for distance learning through the telemedicine/telehealth system housed in that facility.

Medical and dental officers are trained at the Fiji Schools of Medicine and Dentistry, and postgraduate training through short-term courses and attachments is arranged in Australia and New Zealand. A number of medical students are also in medical schools in the United States of America, although this practice does not provide any assurance that these individuals will return to the island to practise as doctors after their training.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

No available information.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Statistical yearbook 2006*
Operator	:	Statistics Division, American Samoa Department of Commerce
Web address	:	http://www.asdoc.info/statistics/statshp.htm
Title 2	:	*Demographic tables for the Western Pacific Region 2005-2010*
Operator	:	WHO Regional Office for the Western Pacific, 2005.
Web address	:	http://www.wpro.who.int
Title 3	:	*American Samoa population: 2007*
Operator	:	ASG Department of Commerce, Statistics Division
Web address	:	http://www.asdoc.info/2007_Mid-year_population_estimate.pdf

5. ADDRESSES

DEPARTMENT OF HEALTH

Office Address	:	Pago Pago, American Samoa 96799
Postal Address	:	American Samoa Government Territory of American Samoa, Pago Pago, AS 96799
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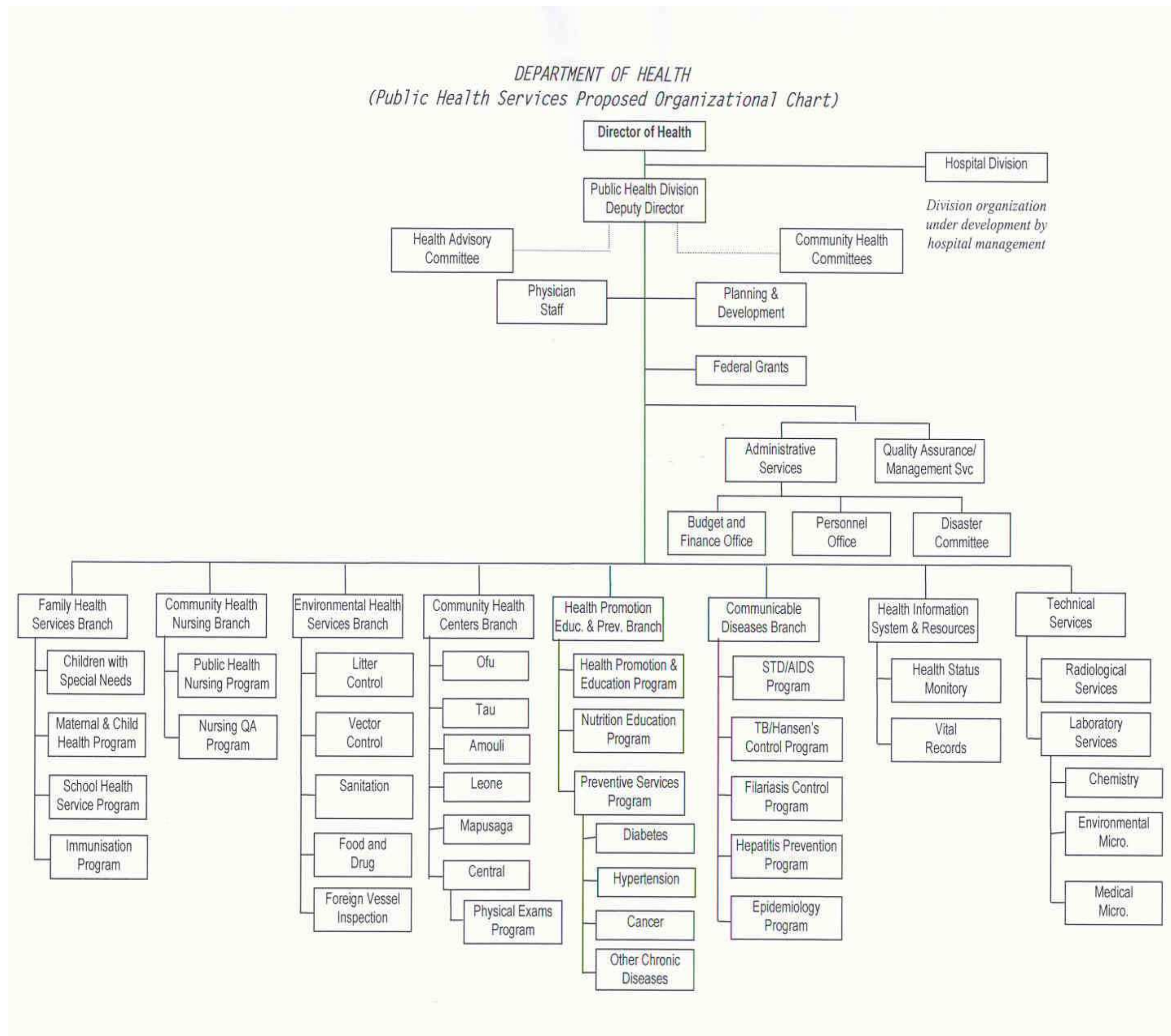
Telephone	:	(685) 23756
Fax	:	(685) 23765

6. ORGANIZATIONAL CHART: Department of Health



AMERICAN SAMOA — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	**Total**	**Male**	**Female**		
1	**Area (1 000 km2)**	0.20			2006	1
2	**Estimated population ('000s)**	66.11	...	...	2008 est	2
3	**Annual population growth rate (%)**	1.60	...	...	2008 est	2
4	**Percentage of population**					
	- 0–4 years	12.00	12.00	12.00	2008 est	3
	- 5–14 years	21.50	21.40	21.50	2008 est	3
	- 65 years and above	5.10	4.50	8.50	2008 est	3
5	**Urban population (%)**	92.00	...	...	2007 est	4
6	**Crude birth rate (per 1000 population)**	26.30	...	...	2008 est	2
7	**Crude death rate (per 1000 population)**	4.50	...	...	2008 est	2
8	**Rate of natural increase of population (% per annum)**	2.18 [a]	...	...	2008 est	2
9	**Life expectancy (years)**					
	- at birth	...	69.30	75.90	2008 est	2
	- Healthy Life Expectancy (HALE) at age 60	...	...	...		
10	**Total fertility rate (women aged 15–49 years)**	4.00			2008 est	2
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	...	...	...		
12	**Per capita GDP at current market prices (US$)**	8052.00 [b]			2003 est	1
13	**Rate of growth of per capita GDP (%)**	...				
14	**Human development index**	...				
	Environmental indicators	**Total**	**Urban**	**Rural**		
15	**Proportion of vehicles using unleaded gasoline (%)**	...	...	...		
16	**Health care waste generation (metric tons per year)**	...	...	...		

	Communicable and noncommunicable diseases	**Number of new cases**			**Number of deaths**			Year	Source
17	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral								
	- Type A	<5	...	...	0	0	0	2003	5
	- Type B	<5	...	...	0	0	0	2003	5
	- Type C	<5	...	...	0	0	0	2003	5
	- Type E	...	...	...	...	...	...		
	- Unspecified	0	0	0	0	0	0	2003	5
	Cholera	0	0	0	0	0	0	2003	5
	Dengue/DHF	126	...	...	2	...	...	2007	6
	Encephalitis	0	0	0	0	0	0	2003	5
	Gonorrhoea	41	30	11	0	0	0	2003	5
	Leprosy	0	0	0	...	...	...	2007	6
	Malaria	...	...	...	...	...	...		
	Plague	0	0	0	0	0	0	2003	5
	Syphilis	3	1	2	0	0	0	2003	5
	Typhoid fever	<5	...	...	0	0	0	2003	5

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	...	...	...	11	...	...	2002	5
19	**Diarrhoeal diseases**	...	...	...	0	0	0	2002	5
20	**Tuberculosis**								
	- All forms	3 [e]	...	...	...	...	...	2007	6
	- New pulmonary tuberculosis (smear-positive)	0 [e]	0 [e]	0 [e]	...	...	...	2007	6
21	**Cancers**								
	All cancers (malignant neoplasms only)	58	...	...	37	...	...	2002	5
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	7	...	...	3	...	...	2002	5
	- Cervix			7			4	2002	5
	- Oesophagus	...	...	...	...	...	...		
	- Leukaemia	2	...	...	2	...	...	2002	5
	- Lip, oral cavity and pharynx	4	...	...	0	0	0	2002	5
	- Liver	2	...	...	6	...	...	2002	5
	- Stomach	7	...	...	5	...	...	2002	5
	- Trachea, bronchus, and lung	2	...	...	7	...	...	2002	5
22	**Circulatory**								
	All circulatory system diseases	...	...	...	88	...	...	2002	5
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	...	...	...	17	...	...	2002	5
	- Hypertension	...	...	...	9	...	...	2002	5
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
23	**Diabetes mellitus**	2417	1119	1298	29	...	...	2002	5
24	**Mental disorders**	135	...	...	0	0	0	2003	5
25	**Injuries**								
	All types	1500	...	...	26	...	...	2002	5
	- Homicide and violence	130	...	...	10	...	...	2002	5
	- Motor and other vehicular accidents	101	...	...	5	...	...	2002	5
	- Occupational injuries	...	...	...	1	...	...	2002	5
	- Suicide	35	...	...	4	...	...	2002	5
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Dengue fever	3196	...	...	5380.47	...	...	2001	7
	2. Chickenpox	325	...	...	547.14	...	...	2001	7
	3. Dog bites	319	...	...	537.04	...	...	2001	7
	4. Road traffic injuries	182	...	...	306.40	...	...	2001	7
	5. Food poisoning	79	...	...	132.99	...	...	2001	7
	6.								
	7.								
	8.								
	9.								
	10.								

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	Total	Male	Female	Total	Male	Female		
	1. Heart diseases	45	…	…	68.70	…	…	2005	7
	2. Malignant neoplasm	36	…	…	54.96	…	…	2005	7
	3. Diabetes mellitus	33	…	…	50.38	…	…	2005	7
	4. Cerebrovascular diseases	25	…	…	38.17	…	…	2005	7
	5. Chronic obstructive pulmonary and allied conditions	21	…	…	32.06	…	…	2005	7
	6. Pneumonia and influenza	12	…	…	18.32	…	…	2005	7
	7. Hypertension	12	…	…	18.32	…	…	2005	7
	8. Accidents	11	…	…	16.79	…	…	2005	7
	9. Perinatal conditions	7	…	…	10.69	…	…	2005	7
	10. Septicaemia	5	…	…	7.63	…	…	2005	7
	Maternal, child and infant diseases	Total		Male		Female			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					33.00		2000	5
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					…			
30	**Percentage of pregnant women with anaemia**					32.00		2002	5
31	**Neonatal mortality rate (per 1000 live births)**	6.20		…		…		2007	4
32	**Percentage of newborn infants weighing at least 2500 g at birth**	97.15 [c]		…		…		2006	2
33	**Immunization coverage for infants (%)**								
	- BCG	…		…		…			
	- DTP3	94.00		…		…		2008	6
	- POL3	92.00		…		…		2008	6
	- Hepatitis B III	89.00		…		…		2008	6
		Number of cases			Number of deaths				
34	**Maternal causes**	Total	Male	Female	Total	Male	Female		
	- Abortion			…			…		
	- Eclampsia			…			…		
	- Haemorrhage			…			…		
	- Obstructed labour			…			…		
	- Sepsis			…			…		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	…	…	…	2008	6
	- Diphtheria	0	0	0	…	…	…	2008	6
	- Hib meningitis	0	0	0	…	…	…	2006	6
	- Measles	0	0	0	…	…	…	2008	6
	- Mumps	0	0	0	…	…	…	2008	6
	- Neonatal tetanus	0	0	0	…	…	…	2008	6
	- Pertussis (whooping cough)	0	0	0	…	…	…	2008	6
	- Poliomyelitis	0	0	0	…	…	…	2008	6
	- Rubella	0	0	0	…	…	…	2008	6
	- Total Tetanus	0	0	0	…	…	…	2008	6

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		...			
37	Health infrastructure					
	Public health facilities	- General hospitals	1	128	2003	5
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	5	0	2003	5
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)			32.30	2003	8
	- total expenditure on health as % of GDP			...		
	- per capita total expenditure on health (in US$)			500.00	2003	8
	Government expenditure on health					
	- amount (in million US$)			31.80	2003	8
	- general government expenditure on health as % of total expenditure on health			98.00	2003	8
	- general government expenditure on health as % of total general government expenditure			14.00	2003	8
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			70.00	2003	8
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			2.00	2003	8
	Exchange rate in US$ of local currency is: 1 US$ =			...		
39	Health insurance coverage as % of total population			...		

	INDICATOR		DATA							Year	Source
40	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	49	36	13	...	...	...	...	2003	5
		- Ratio per 1000 population	0.78 [d]	0.58	0.21	...	...	...	...	2003	5
	Dentists	- Number	15	8	7	...	...	...	...	2003	5
		- Ratio per 1000 population	0.24 [d]	0.13	0.11	...	...	...	...	2003	5
	Pharmacists	- Number	2	2	0	...	...	...	...	2003	5
		- Ratio per 1000 population	0.03 [d]	0.03	0	...	...	...	...	2003	5
	Nurses	- Number	127	4	123	...	...	...	...	2003	5
		- Ratio per 1000 population	2.03 [d]	0.06	1.96	...	...	...	...	2003	5
	Midwives	- Number	1	0	1	...	...	...	...	2003	5
		- Ratio per 1000 population	0.02 [d]	0	0.02	...	...	...	...	2003	5
	Paramedical staff	- Number	146	63	83	...	...	...	...	2003	5
		- Ratio per 1000 population	2.33 [d]	1.01	1.33	...	...	...	...	2003	5
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	Annual number of graduates	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	11.90	...	...	2008	2
45	Under-five mortality rate (per 1000 live births)	4.90	...	...	2002	5
46	Proportion of 1 year-old children immunised against measles	86.00	...	...	2008	6
47	Maternal mortality ratio (per 100 000 live births)	123.00			2002	5
48	Proportion of births attended by skilled health personnel	100.00			2002	5
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.00			2002	5
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.00			2002	5
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	70.00			2002	5
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults	...	...	...		
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	...	...	...		
57	Malaria death rate per 100 000 population	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	5.00	...	...	2007	6
61	Tuberculosis death rate per 100 000 population	0.00	...	...	2007	6
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	115.00	...	...	2006	6
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	75.00	...	...	2005	6
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	99.00	99.00	99.00	2004	5
65	Proportion of population using an improved sanitation facility	99.00	99.00	99.00	2004	5
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
est	Estimate
a	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
b	Figure refers to per capita GDP (goods and services).
c	Figure refers to birthweight equal to 2501 grams and above
d	Revised data
e	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO.

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AUSTRALIA

1. CONTEXT

1.1 Demographics

Australia had a population of 21 542 490 in 2008: 10 717 380 males and 10 825 110 females. The median age was 36.9 years, with a life expectancy at birth of 79.0 years for men and 83.7 years for women. It is one of the world's most urbanized countries, with 88.6% of the population living in urban areas. Most of the population is concentrated along the eastern seaboard and the south-eastern corner of the continent. Australia's population is ageing, with the number of people aged 65 years or more projected to almost triple by 2051 from 2.8 million to 7.6 million, an increase from 13.2% to 22.3% of the total population.

Significant increases in life expectancy occurred throughout the twentieth century, reductions in infant and child mortality being the most significant contributing factors. Life expectancy at birth continues to increase, reflecting the general decrease in death rates. A boy born in 2005-2007 could expect to live 79 years, while a girl could expect to live 83.7 years. Over the last 20 years, life expectancy at birth has increased by 5.9 years for males and 4.2 years for females.

The current infant and child death rates are low by international standards, at 4.2 deaths per 1000 live births for infants and 5.0 per 1000 live births for under-fives in 2007. In the period 2002-2006, indigenous infant and child mortality rates per 1000 live births were around three times the rates for all Australians, although the gap is narrowing. In the triennium 2003-2005, the maternal mortality ratio (MMR) was 8.4 deaths per 100 000 women who gave birth.

There were 137 854 deaths registered in 2007 (70 569 male and 67 285 female), an increase of 3.1% on the corresponding figure from 2006 (133 739). Despite this, there has been a steady decline in the standardized death rate over the past decade, from 7.6 deaths per 1000 population in 1997 to 6.0 in 2007, the lowest on record. The indigenous Australian standardized death rate for 2002-2006 was, however, around twice the non-indigenous rate.

1.2 Political situation

Australia was created in 1901 when former British colonies (now the six states) agreed to federate. The Government is based on a popularly elected parliament with two chambers: the House of Representatives and the Senate. Ministers appointed from these chambers conduct executive government. Policy decisions are made in meetings of the Cabinet. Ministers and are bound by the principle of Cabinet solidarity. Although Australia is an independent nation, Queen Elizabeth II of the United Kingdom of Great Britain and Northern Ireland is also formally Queen of Australia. The Queen appoints a Governor-General (on the advice of the elected Australian Government) to represent her. The Governor-General has wide powers, but by convention acts only on the advice of ministers on virtually all matters.

Australia's system of government is based on the liberal democratic tradition, which includes religious tolerance and freedom of speech and association. Its institutions and practices reflect British and North American models, but are uniquely Australian.

Australia has a written constitution that defines the responsibilities of the Australian Government, which include foreign relations and trade, defence and immigration. Governments of states and territories are responsible for all matters not assigned to the Australian Government. State parliaments are subject to the National Constitution as well as their state constitutions. A federal law overrides any state law not consistent with it.

A national general election must be held within three years of the first meeting of a new federal parliament. The average life of parliaments is about two-and-a-half years. A federal election held in late 2007 resulted in a change of government for the first time in 11 years.

1.3 Socioeconomic situation

Australia's per capita gross domestic product (GDP) (US$ 48 393 in 2007-2008) ranks the country among the top 20 in the world and second highest in the Western Pacific Region. In 2008, the labour force participation rate was 65% and the unemployment rate 5.5%. Inflation was 3.4% in 2007-2008 and 2.5% for the year to March 2009.

Recent macroeconomic policy in Australia has been designed to cushion the impact of the global recession and the sharp fall in commodity prices on economic activity and employment. The Reserve Bank of Australia substantially lowered the official cash interest rate from 7.0% in September 2008 to 3.0% in April 2009. Discretionary fiscal policies, such as the Nation Building and Jobs Plan, which will deliver a fiscal stimulus package of around 2% of GDP in 2009, have also been implemented to boost demand through direct government investment in the economy and to lay the foundation for Australia's future economic growth. Discretionary fiscal policy will temporarily add to the public deficit in order to support economic growth. Inflation is expected to ease on the back of weaker global growth, weaker domestic demand, moderating wage pressures and substantially lower oil prices.

In 2007, Australia's total expenditure on health goods and services was US$82.1 billion (A$98.5 billion). Total health expenditure has been growing faster than the economy over the last decade, increasing from 7.7% of GDP in 1996-1997 to 9.0% of GDP in 2006-2007. Over two-thirds of total health expenditure is funded by the public sector; in 2007, 68% of total health expenditure was funded by governments. The remaining one-third (32%) of total health expenditure was funded by the private sector. Average annual real growth in total health expenditure over the decade to 2006-2007 was 4.9%. In 2006-2007, hospitals, medical services and medications were the three largest health expenditure areas in the country, accounting for two-thirds of total health expenditure (public hospitals 28%, private hospitals 8%, medical services 18% and medications 13%).

1.4 Risks, vulnerabilities and hazards

Australia faces risks from a range of biological hazards, such as viruses with pandemic potential. The rapid international spread of H1N1 human swine flu in 2009, for example, illustrates how rapidly a virus can spread throughout the world. Australia has undertaken a range of preparatory measures, including: hosting the Asia-Pacific Economic Cooperation (APEC) Avian Influenza Preparedness and Response Meeting in Brisbane in 2005; leading the APEC Pandemic Response Exercise in June 2006 and establishing an Inter-jurisdictional Pandemic Planners Working Group; and in 2008, publishing the *Australian Health Management Plan for Pandemic Influenza*.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The twentieth century was a period of great social, economic and scientific development in Australia. In health, those developments brought better nutrition and living conditions from the start of the century, widespread immunization and improvements in medical treatment in the second half, and a growing awareness of the effects of lifestyle and socioeconomic factors on health in more recent times. Such advances have resulted in death rates that are now less than one-third of those in 1900, an improvement in life expectancy at birth of over 20 years, and a dramatic decline in perinatal mortality and deaths from infectious diseases. However, there has also been an increasing incidence of chronic disease and the rise and partial fall of two burdens of disease, coronary heart disease and lung cancer.

There have been substantial improvements in a number of health behaviours and risk factors over recent years. For example, programmes to reduce smoking have resulted in one of the lowest smoking rates in the world. Other risk factors remain of concern, however, including overweight and obesity, and diabetes. The rate of overweight and obesity among adults has doubled over the last two decades. Emerging data show that an increase in obesity predisposes individuals to diabetes.

Although most Australians now enjoy good health, some population groups continue to suffer poor health, particularly Aboriginal and Torres Strait Islander peoples. Australians living in regional and remote areas also generally experience poorer health than their major city counterparts.

An example of the Government's response to communicable disease is its actions to combat HIV/AIDS, in which it is guided by the principles and priorities outlined in the National HIV/AIDS Strategy 2005–2008. In contrast to comparable countries, Australia has low HIV/AIDS prevalence rates in all populations. The country's achievements in relation to HIV/AIDS have been largely attributed to the cooperative partnership between all levels of government; community organizations; the medical, health care and scientific communities; and people living with or affected by HIV/AIDS. The National HIV/AIDS Strategy 2005–2008 identifies five priority areas for action to be addressed over the life of the strategy: developing a targeted prevention education and health promotion programme for HIV/AIDS; improving the health of people living with HIV/AIDS; developing an effective response to the changing care and support needs of people living with HIV/AIDS; reviewing the National HIV Testing Policy; and undertaking focused research to underpin prevention policies and programmes. To ensure that Australia's response to HIV/AIDS continues to be robust and appropriate, the National HIV/AIDS Strategy is currently under review. It is anticipated that a new National Strategy will be implemented in 2009.

2.2 Outbreaks of communicable diseases

The Australian Government provides expert advice and actions to support communicable disease (including foodborne diseases) surveillance activities, both nationally and internationally.

There are 69 nationally notifiable diseases in Australia as defined by the National Notifiable Diseases List, including bacterial infections and bloodborne, sexually transmissible, quarantinable, gastrointestinal, vaccine-preventable and zoonotic diseases. The notifiable diseases most frequently notified during 2008 included chlamydial infections (58 521 notifications), campylobacteriosis (15 520 notifications), pertussis (14 523 notifications) and newly acquired and unspecified hepatitis C infections (12 488 notifications).

Australia is working to ascertain and minimize the incidence and impact of foodborne illness in the country. This is being achieved by collaborating with government agencies, state and territory health and primary industry portfolios, consumers and the food industry to facilitate improved food safety practices and to assess their effectiveness and impact through active surveillance, such as OzFoodNet, and applied research projects.

Pandemic preparedness is also a significant area of health protection being addressed by the Government.

Major activities and programmes include:

- national health sector pandemic planning and coordination of the health sector implementation of the outcomes of Exercise Cumpston 2006;
- establishment and provision of support for the Scientific Influenza Advisory Group and the Chief Medical Officer's Expert Advisory Group on Pandemic Influenza;
- development and implementation of the Pandemic Influenza Communication Strategy;
- establishment of an Inter-jurisdictional Pandemic Planners Working Group;
- publication and ongoing review of the *Australian Health Management Plan for Pandemic Influenza* and associated annexes and technical papers;
- coordination of information regarding developments in international pandemic preparedness; and
- consultation with external stakeholders on pandemic preparedness issues.

The universal vaccination programmes funded under the national immunization programme target the following vaccine-preventable diseases in children: measles, mumps, rubella, poliomyelitis, pneumococcal disease, pertussis (whooping cough), rotavirus, varicella (Chicken pox), diphtheria, tetanus, hepatitis B, hepatitis A (for indigenous children in high-risk areas), human papillomavirus and meningococcal C virus. Incentives are available to both parents and general practices to maximize vaccination. The national immunization coverage rate for infants between 12 and 15 months of age has now reached 91.7% (as processed at 31 March 2009), compared with immunization coverage rates as low as 53% 20 years ago.

2.3 Leading causes of mortality and morbidity

The leading underlying cause of death in 2006 was ischaemic heart disease, with 22 983 deaths, giving a rate of 111.0 per 100 000 population. The second most common cause of death was cerebrovascular disease, with 11 465, giving a rate of 55.4 deaths per 100 000 population. Collectively, malignant neoplasms were another major cause of death in 2006, with 38 721 registered deaths. Seven of the 20 leading underlying causes of death were attributable to a form of malignant cancer, cancer of the trachea and lung being the third major cause of death, with 7348 deaths, giving a rate of 35.5 deaths per 100 000 population. Injuries accounted for 7840 deaths in 2006. Transport accidents and suicide were the major contributors, with 1652 and 1799 deaths, respectively. Males were more likely to commit suicide than females, with 1398 deaths compared with 401 deaths for females (2006).

Many of the health conditions that significantly affect Australians are associated with lifestyle and health-risk factors, often with their roots in improper nutrition and lack of physical activity. Significant increases in the prevalence of obesity, in both sexes and at increasingly younger ages, are associated with cardiovascular disease, diabetes mellitus and its complications and arthritis. In 2004-2005, cardiovascular disease was reported by 18.0% of the population, while 3.6% reported diabetes mellitus and 15.3% reported arthritis.

The proportions of the population reporting arthritis, asthma and hypertension remained steady over the period from 1995 to 2004-2005, while the proportions reporting diabetes mellitus, high cholesterol and osteoporosis increased. Reported mental and behavioural problems increased between 1995 and 2001, but remained steady between 2001 and 2004-2005. In 2004-2005, asthma was reported by 10.2% of the population, while hypertension, high cholesterol, osteoporosis and mental and behavioural problems affected 10.7%, 6.8%, 3.0% and 10.7%, respectively.

2.4 Maternal, child and infant diseases

The neonatal mortality rate for 2007 was 3.0 deaths per 1000 live births and the infant mortality rate was 4.2 deaths per 1000 live births, a decrease from 5.0 in 2005, while the 2007 under-five mortality rate was 5.0 deaths per 1000 live births. Although infant and child deaths form only a small proportion (less than 1%) of all deaths, they nevertheless have important public health policy significance.

Despite the continuing high rate of indigenous infant mortality, compared with other infants, the gap is narrowing. Between 1991 and 2006 the indigenous infant mortality rate declined by around 47% compared with a reduction of 34% for non-indigenous infants in Western Australia, South Australia and the Northern Territory.

There has also been a dramatic decline in mortality rates for women during childbirth. Improved nutrition, better general health, the advent of medical interventions like antiseptic procedures, a decrease in pregnancies (due to contraception and family planning), use of blood transfusions and the professional training of those attending births have all contributed to a sustained decrease in maternal deaths following childbirth.

2.5 Burden of disease

Upper respiratory tract infections, diarrhoeal diseases and back pain account for the leading burdens of disease in 2003, with 26 237 596, 17 457 098 and 9 045 837 cases, respectively, during 2003. Also prevalent are circulatory system diseases, which resulted in 45 670 deaths in 2006. The main circulatory diseases are ischemic heart disease, which includes acute myocardial infarction, and cerebrovascular disease. These diseases contributed to the deaths of 22 983, 11500 and 11 465 people, respectively, during 2006.

Mental disorders affect a sizeable proportion of the community, contributing to 5156 deaths during 2006. Females accounted for 3296 of these, nearly double the number of male deaths due to mental and behavioural disorders.

A 2003 study showed that the burden of disease and injury in Aboriginal and Torres Strait Islander peoples was two and a half times greater than in the total Australian population.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

Australia's health care system is a partnership between the federal, state and territory governments. Through the Health and Ageing portfolio, the Australian Government provides national leadership, determines national policies and outcomes and shares responsibility for funding services.

Australia's goal is to manage, prevent and respond to health risks faced by the population. Policy is based and implemented on evidence-based and targeted programmes, which contribute to the sustainability of the health system by reducing preventable illness and mortality.

The Health and Ageing portfolio provides strategic leadership in health surveillance, biosecurity and emergency preparedness, food policy, chronic and communicable disease control, health promotion and the reduction of harm from substance abuse. A key focus is the integration of the country's capacity to respond to a range of new and emerging threats to health.

The vision of the Department of Health and Ageing is of better health and active ageing for all Australians. This is to be achieved by improving health and well-being through strengthening of evidence-based policy advice and improvement of programme management, research, regulation, and partnerships with other government agencies, consumers and stakeholders. Australia aims to achieve this by:

- focusing the health and aged care system more on healthy lifestyles, prevention and early intervention and a 'best practice' handling of chronic disease;
- improving the transparency, accessibility, accountability and quality of public and private health and aged care service provision through financing and agreements with stakeholders, industry and state and territory governments;
- consolidating and progressing reforms to ensure choice and access to quality aged care services;
- working together with the states and territories to reduce duplication and gaps, and to deliver efficient, value-for-money health and aged care services through an adaptable and sustainable health and aged care workforce;
- working towards improved health for Aboriginal and Torres Strait Island peoples through whole-of-government arrangements for policy development and service delivery, and improved access to, and responsiveness of, the mainstream health system;
- improving choice for consumers through strong private sector involvement, effectively integrated with the public sector; and
- leading a whole-of-government approach to strengthening Australia's readiness for disease threats, national emergencies and other large-scale health incidents.

3.2 Organization of health services and delivery systems

The organization of the Australian public health system is strongly influenced by the federal system, where responsibility and funding for health is shared between the Australian Government and the state and territory governments. The system is complex, with delivery provided by both the public and private sectors.

The Australian Government funds medical and pharmaceutical benefits, private health insurance subsidies and university training places for health workers, and shares responsibility with the states and territories for funding of public hospital services. The Australian Government also has a national leadership role in strategies to tackle significant health issues, as well as regulatory responsibilities.

The states and territories provide public hospital services, community and public health services, assist with training of health workers through clinical training in public hospitals, and regulate private hospitals.

Private practitioners provide medical, dental and allied health services.

The aim of the Australian health system is to give universal access to health care under what is known as 'Medicare', while allowing choice for individuals through substantial private sector involvement in delivery and financing. The three pillars of Medicare, funded by the Australian Government, are:

1) The Medicare Benefits Schedule —a universal programme that provides consumers with access to privately provided medical services and may include co-payments by users where the cost of services is not fully covered by the rebate.
2) The Pharmaceutical Benefits Scheme —subsidization of a wide range of prescription medications supplied by community pharmacies.
3) Funding provided to states and territories to assist them in providing access to public hospital services.

The Australian Government funds a system of private health insurance rebates that subsidize the cost of premiums to private health insurance. Every Australian can elect to be treated as a private patient in a public hospital in order to have a choice of doctor. In addition, private hospitals provide an alternative to the public hospital system for many procedures.

A large proportion of the health workforce is employed by the private sector, and corporatization is increasingly becoming a key organizing factor for the delivery of services such as general medicine, pathology and diagnostic imaging.

3.3 Health policy, planning and regulatory framework

The core values of the Australian health system are ensuring the affordability and accessibility of health care, as well as equitable access to necessary care, and reducing disparities in health outcomes. Providing consumers with choice in their health care is also a key principle of the system.

The reform agenda of the Australian Government aims to improve health system efficiency and access to services, including:

- greater focus on prevention and primary care;
- initiatives to improve the health and well-being of Australian children;
- initiatives to improve the health and well-being of indigenous Australians, including indigenous children;
- working collaboratively and more effectively with state and territory governments;
- initiatives to address health workforce supply issues;
- a nationally consistent approach to activity-based costing and funding of all public hospital services;
- an increased focus on research and treatment of cancer;
- improved patient access to necessary health services; and
- better integration of acute hospitals and aged care facilities.

A key reform initiative has been the establishment of the National Health and Hospitals Reform Commission to provide advice on performance benchmarks and practical reforms to the Australian health system that could be implemented in both the short and long term. Furthermore, a national registration and accreditation scheme for the health professions has been agreed upon by all Australian governments and will replace state-based schemes by July 2010. The objectives of the national scheme are: to provide for protection of public safety; facilitate workforce mobility; reduce red tape for practitioners; and facilitate the provision of education, training and assessment of overseas-trained practitioners.

As part of its commitment to health reform, the Australian Government is also developing the country's first National Primary Health Care Strategy.

3.4 Health care financing

Medicare is a compulsory insurance system financed largely by general taxation revenue, some of which is raised by an income-related levy collected by the Australian Government.

While the states and territories have a larger role in health service delivery, the Australian Government is the major funder of health services. In addition to funding national government health programmes, the Australian Government contributes a significant amount of funding to state and territory governments for public hospital services.

Through the Council of Australian Governments (COAG), all levels of government have committed to a more cooperative approach to health, including more streamlined financing arrangements.

3.5 Human resources for health

Australia's health workforce is influenced by a number of complex and interrelated factors. These include an increase in life expectancy, a greater number and a greater proportion of people aged over 65 years, medical and technical advances that create a need for new specialist knowledge and skills, and increasing consumer awareness and demand for a more sophisticated mix of services.

Although the overall number of health professionals is increasing in Australia, growth in workforce demand has partly offset, and in some cases outstripped growth in supply. For example, the increase in general practitioner numbers has barely kept pace with population growth. Reduced working hours has also counteracted the perceived growth in workforce supply.

Although precise quantification of workforce shortages is difficult, there are currently shortages in general practice, various medical specialty areas, dentistry, nursing and some key allied health areas. Health workforce shortages are more acute in rural and remote areas. Future health workforce supply will be influenced by developments in the broader labour market, the level of workforce re-entry, retention rates, overseas recruitment and supply pressures internationally, as well as how effectively the existing workforce is deployed.

The demand for health services will be strongly stimulated by increasing incomes and community expectations, technological advances and changes in disease burdens. An affluent Australian lifestyle and an ageing population has dramatically moved the burden of disease from acute, episodic conditions to chronic disease, which is expected to impose heavier burdens on the demand for health services, even as new threats emerge.

3.6 Partnerships

Australia manages relationships with international bodies such as WHO, the Organisation for Economic Co-operation and Development (OECD) and the Asia Pacific Economic Cooperation (APEC). Australia also manages a number of bilateral health agreements and partnerships with other countries, primarily within the Asia Pacific Region.

3.7 Challenges to health system strengthening

Australia's health care system is a complex combination of public and private sectors, with services provided by a wide range of professions. It needs to provide care to all members of the community, from the very young to the very old, and to address the health needs of the chronically ill and people from diverse backgrounds and places of origin.

Overall, Australians experience good health, but they still suffer from the major health burdens of the developed world, such as cancer, heart and vascular disease, mental illness, bone and muscular diseases, obesity and diabetes. In some communities, most notably many indigenous communities, diseases of the developing world are still prevalent.

There are a number of issues that are currently influencing decisions on health priorities to some extent and are likely to take on greater significance in coming years. These include: demographic changes, such as population ageing; changes in service delivery models, including a move to a greater emphasis on

community care and coordinated care; changing disease patterns; advances in medical technologies; and increasing consumer expectations. Other priorities include Aboriginal and Torres Strait Islander health and hospital services.

A long-term health reform plan has been initiated by the Australian Government to meet a range of long-term health system challenges, including access to services, the growing burden of chronic disease, population ageing, costs and inefficiencies generated by responsibilities between different levels of government, and the escalating costs of new health technologies. The National Health and Hospitals Reform Commission, established by the Australian Government in February 2008, released an interim reform plan in December 2008. The final report is planned for mid-2009.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Australia's Health*
Operator	:	Australian Institute of Health and Welfare
Specification	:	Biennial report on patterns of health and illness, determinants of health, the supply and use of health services, and health services expenditure.
Web address	:	http://www.aihw.gov.au
Title 2	:	*Annual Report 2007-2008*
Operator	:	Department of Health and Ageing
Web address	:	http://www.health.gov.au
Title 3	:	*Health expenditure Australia 2006-07*
Operator	:	Australian Institute of Health and Welfare
Web address	:	http://www.aihw.gov.au
Title 4	:	*National Health Survey 2004-05*
Operator	:	Australian Bureau of Statistics
Web address	:	http://www.abs.gov.au
Title 5	:	*The State of our Public Hospitals, June 2008 Report*
Operator	:	Department of Health and Ageing
Web address	:	http://www.health.gov.au
Title 6	:	*The burden of disease and injury in Australia 2003*
Operator	:	Australian Institute of Health and Welfare
Web address	:	http://www.aihw.gov.au

5. ADDRESSES

AUSTRALIAN GOVERNMENT DEPARTMENT OF HEALTH AND AGEING

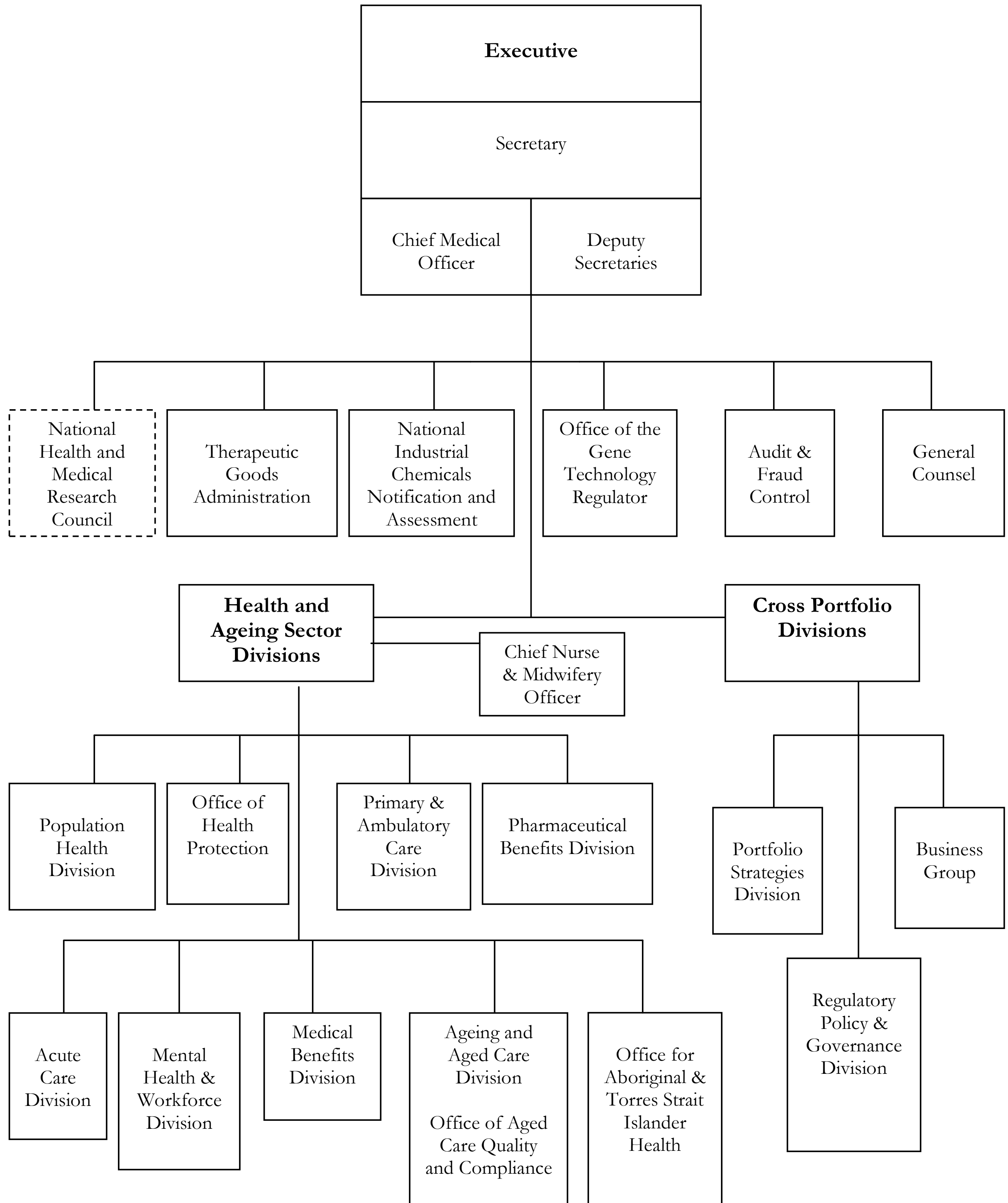
Office Address	:	The Secretary Australian Government Department of Health and Ageing Attention: Assistant Secretary International and Inter-Governmental Policy Branch Scarborough House, Woden ACT, Australia
Postal Address	:	The Secretary Australian Government Department of Health and Ageing Attention: Assistant Secretary International and Inter-Governmental Policy Branch GPO Box 9848, MDP 85 Canberra ACT 2601, Australia
Official Email Address	:	enquiries@health.gov.au
Telephone	:	(612) 6289 1555
Fax	:	(612) 6289 7087
Office Hours	:	Mon-Fri 0830-1700
Website	:	www.health.gov.au

WHO REPRESENTATIVE

There is no WHO Representative in Australia. Queries about the WHO programme of collaboration with Australia should be directed to Director, Programme Management, WHO Regional Office for the Western Pacific

Office Address	:	Director, Programme Management, World Health Organization Regional Office for the Western Pacific
Postal Address	:	United Nations Avenue, P.O. Box 2932, 1000, Manila The Philippines
Official Email Address	:	postmaster@wpro.who.int
Telephone	:	(63 2) 528 8001/ 303 1000
Fax	:	(63 2) 526 0279
Office Hours	:	7:00 -15:30
Website	:	http://www.wpro.who.int

6. ORGANIZATIONAL CHART: Department of Health and Ageing



AUSTRALIA

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	7 692.02			2008	1
2	Estimated population ('000s)	21 542.49 [a]	10 717.38	10 825.11	2008	2
3	Annual population growth rate (%)	1.71	1.77	1.64	2007-08p	2
4	Percentage of population					
	- 0–4 years	6.42	6.63	6.21	2008	2
	- 5–14 years	12.83	13.23	12.44	2008	2
	- 65 years and above	13.21	12.06	14.36	2008	2
5	Urban population (%)	88.60 [a]	…	…	2007 est	3
6	Crude birth rate (per 1000 population)	13.57	14.02	13.13	2007	4
7	Crude death rate (per 1000 population)	6.60	6.80	6.40	2007	5
8	Rate of natural increase of population (% per annum)	0.69	…	…	2007-08p	2
9	Life expectancy (years)					
	- at birth	…	79.00	83.70	2005-07	5
	- Healthy Life Expectancy (HALE) at age 60	18.90	17.10	20.50	2003	6
10	Total fertility rate (women aged 15–49 years)	1.93			2007	4
	Socioeconomic indicators					
11	Adult literacy rate (%)	86.60 [b]	81.60 [b]	91.70 [b]	2006	7
12	Per capita GDP at current market prices (US$)	48 393.00 [c]			2007-08	8
13	Rate of growth of per capita GDP (%)	6.50			2007-08	8
14	Human development index	0.97			2006	9
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	79.28	…	…	2008	10
16	Health care waste generation (metric tons per year)	…	…	…		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	275	158	117	1	1	0	C:2008p D:2006	11,12
	- Type B	7306 [d,e]	3904 [e]	3331 [e]	28	20	8	C:2008p D:2006	11,12
	- Type C	12 488 [e,f]	7856 [e]	4580 [e]	64	49	15	C:2008p D:2006	11,12
	- Type E	43	32	11	0	0	0	C:2008p D:2006	11,12
	- Unspecified	1	1	0	2	2	0	C:2008p D:2006	11,12
	Cholera	4	2	2	0	0	0	C:2008p D:2006	11,12
	Dengue/DHF	557 [g]	318 [g]	239 [g]	0	0	0	C:2008p D:2006	11
	Encephalitis	…	…	…	43	25	18	D:2006	12
	Gonorrhoea	7733 [d]	5031	2692	0	0	0	C:2008p D:2006	11,12
	Leprosy	10	8	2	0	0	0	C:2008p D:2006	11,12
	Malaria	536 [d,p]	372 [d,p]	163 [d,p]	0	0	0	C:2008p D:2006	11,12
	Plague	0	0	0	0	0	0	C:2008p D:2006	11,12
	Syphilis	3214 [d,h]	2391 [h]	810 [h]	2	1	1	C:2008p D:2006	11,12
	Typhoid fever	104	62	42	0	0	0	C:2008p D:2006	11,12

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	26 237 596	12 310 741	13 926 855	2832	1274	1558	C:2003est D:2006	6, 12
19	**Diarrhoeal diseases**	17 457 098	7 867 069	9 590 029	85 [i]	33	52	C:2003est D:2006	6, 12
20	**Tuberculosis**								
	- All forms	1225	…	…	…	…	…	2008p	11
	- New pulmonary tuberculosis (smear-positive)	546	…	…	…	…	…	2008p	11
21	**Cancers**								
	All cancers (malignant neoplasms only)	100 514	56 158	44 356	38 721	21 858	16 863	C: 2005 D: 2006	12,14
	- Breast	12 265	95	12 170	2643	25	2618	C: 2005 D: 2006	12,14
	- Colon and rectum	13 076	7181	5895	3801	2126	1675	C: 2005 D: 2006	12,14
	- Cervix			734			224	C: 2005 D: 2006	12,14
	- Oesophagus	1165	808	357	1171	812	359	C: 2005 D: 2006	12,14
	- Leukaemia	2591	1568	1023	1439	830	609	C: 2005 D: 2006	12,14
	- Lip, oral cavity and pharynx	2704	1891	813	613	451	162	C: 2005 D: 2006	12,14
	- Liver	1060	718	342	1 072	720	352	C: 2005 D: 2006	12,14
	- Stomach	1904	1228	676	1117	669	448	C: 2005 D: 2006	12,14
	- Trachea, bronchus, and lung	9182	5738	3444	7348	4665	2683	C: 2005 D: 2006	12,14
22	**Circulatory**								
	All circulatory system diseases	…	…	…	45 670	21 562	24 108	2006	12
	- Acute myocardial infarction	…	…	…	11 500	5810	5690	2006	12
	- Cerebrovascular diseases	19 627	9129	10 498	11 465	4480	6985	C: 2003est D: 2006	6, 12
	- Hypertension	…	…	…	1495	515	980	2006	12
	- Ischaemic heart disease	38 675	24 651	14 024	22 983	12 186	10 797	C: 2003est D: 2006	6, 12
	- Rheumatic fever and rheumatic heart diseases	1925	635	1290	285	89	196	C: 2003est D: 2006	6, 12
23	**Diabetes mellitus (prevalence)**	700 000	…	…	3662	1825	1837	C:2004-05est	12, 15
24	**Mental disorders**	494 618 [j]	308 668 [j]	185 950 [j]	5156	1860	3296	C:2003est D:2006	6, 12
25	**Injuries**								
	All types	309 026	183 853	125 173	7840	5232	2608	C:2003est D:2006	6, 12
	- Homicide and violence	16 986 [k]	13 356	3631	155	98	57	C:2003est D:2006	6, 12
	- Motor and other vehicular accidents	41 151 [k]	29 429	11 723	1652 [k]	1142	402	C:2003est D:2006	6, 12
	- Occupational injuries	…	…	…	…	…	…		
	- Suicide	24 385	9533	14 852	1799	1398	401	C:2003est D:2006	6, 12
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Care involving dialysis (Z49)	937 803 [d,l]	556 371 [l]	381 431 [l]	4493.00	5364.00	3632.00	2006-07	12
	2. Other medical care (Z51)	316 511 [d,l]	144 303 [l]	172 207 [l]	1516.00	1391.00	1640.00	2006-07	12
	3. Rehabilitation (Z50)	171 203 [d,l]	73 768 [l]	97 423 [l]	820.00	711.00	928.00	2006-07	12
	4. Other cataract (H26)	116 410 [d,l]	47 792 [l]	68 614 [l]	558.00	461.00	653.00	2006-07	12
	5. Pain in throat and chest (R07)	112 940 [l]	58 322 [l]	54 618 [l]	541.00	562.00	520.00	2006-07	12
	6. Abdominal and pelvic pain (R10)	111 586 [l]	37 936 [l]	73 650 [l]	535.00	366.00	701.00	2006-07	12
	7. Other malignant neoplasms of the skin (C44)	79 793 [l]	47 248 [l]	32 545 [l]	382.00	456.00	310.00	2006-07	12
	8. Angina pectoris (I20)	75 109 [d,l]	47 600 [l]	27 507 [l]	360.00	459.00	262.00	2006-07	12
	9. Embedded and impacted teeth (K01)	67 721 [d,l]	27 241 [l]	40 471 [l]	324.00	263.00	385.00	2006-07	12
	10. Adjustment of implanted device (Z45)	62 825 [l]	30 117 [l]	32 708 [l]	301.00	290.00	311.00	2006-07	12

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	Total	Male	Female	Total	Male	Female		
	1. Malignant neoplasms (C00-C97)	38 721	21 858	16 863	187.00	212.40	162.00	2006	12
	2. Ischaemic heart disease (I20-I25)	22 983	12 186	10 797	111.00	118.40	103.70	2006	12
	3. Cerebrovascular disease (I60-I69)	11 465	4480	6985	55.40	43.50	67.10	2006	12
	4. Chronic lower resp disease (J40-J47)	5443	2943	2500	26.30	28.60	24.00	2006	12
	5. Accidents (V01-X59)	5350	3441	1909	25.80	33.40	18.30	2006	12
	6. Organic (inc symptomatic) mental (F00-F09)	4634	1518	3116	22.40	14.80	29.90	2006	12
	7. Diabetes mellitus (E10-E14)	3662	1825	1837	17.70	17.70	17.60	2006	12
	8. Diseases of the kidney and urinary system (N00-N39)	3192	1453	1739	15.40	14.10	16.70	2006	12
	9. Heart failure (I50-I51)	2892	1114	1778	14.00	10.80	17.10	2006	12
	10. Influenza and pneumonia (J10-J18)	2715	1220	1495	13.10	11.90	14.40	2006	12
	Maternal, child and infant diseases	Total		Male		Female			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					65.00 [m]		2001	17
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
30	**Percentage of pregnant women with anaemia**					6.20 [n]		2005	18
31	**Neonatal mortality rate (per 1000 live births)**	3.00		3.15		2.85		2007	4, 5
32	**Percentage of newborn infants weighing at least 2500 g at birth**	93.60		94.10		93.10		2006	19
33	**Immunization coverage for infants (%)**								
	- BCG	...		...		...			
	- DTP3	91.80		...		...		2008	20
	- POL3	91.70		...		...		2008	20
	- Hepatitis B III	94.40		...		...		2008	20
		Number of cases			Number of deaths				
34	**Maternal causes**	Total	Male	Female	Total	Male	Female		
	- Abortion			...			0	2006	12
	- Eclampsia			...			1	2006	12
	- Haemorrhage			...			2	2006	12
	- Obstructed labour			...			0	2006	12
	- Sepsis			...			1	2006	12
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	0	0	0	C:2008p D:2006	11,12
	- Diphtheria	0	0	0	1	0	1	C:2008p D:2006	11,12
	- Hib meningitis	25	15	10	5	1	4	C:2008p D:2006	11,12
	- Measles	65	36	29	0	0	0	C:2008p D:2006	11,12
	- Mumps	286	156	130	1	0	1	C:2008p D:2006	11,12
	- Neonatal tetanus	0	0	0	0	0	0	C:2008p D:2006	11,12
	- Pertussis (whooping cough)	14 523 [d]	6333 [d]	8174 [d]	3	1	2	C:2008p D:2006	11,12
	- Poliomyelitis	0	0	0	0	0	0	C:2008p D:2006	11,12
	- Rubella	38	20	18	0	0	0	C:2008p D:2006	11,12
	- Total Tetanus	4	1	3	0	0	0	C:2008p D:2006	11,12

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Facilities with HIV testing and counseling services**		...			
37	**Health infrastructure**					
	Public health facilities	- General hospitals	739	53 563	2006-07	21
		- Specialized hospitals	19 [o]	2342 [o]	2006-07	21
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	...	...		
	Private health facilities	- Hospitals	557	26 678 [q]	2006-07	22
		- Outpatient clinics	...	...		
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)		82 120.00 [r]		2007p	23
	- total expenditure on health as % of GDP		8.71		2007p	23
	- per capita total expenditure on health (in US$)		3886.00		2007p	23
	Government expenditure on health					
	- amount (in million US$)		56 107.50 [r]		2007p	23
	- general government expenditure on health as % of total expenditure on health		68.32		2007p	23
	- general government expenditure on health as % of total general government expenditure		17.51		2007p	23
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health		0.00		2007p	23
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health		31.68		2007p	23
	Exchange rate in US$ of local currency is: 1 US$ =		1.20 [r]		2007p	23
39	**Health insurance coverage as % of total population**		44.60		2008p	24

	INDICATOR		DATA							Year	Source
40	**Human resources for health**		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	62 800 [s]	40 800 [s]	22 000 [s]	...	...	...	...	2009p	25
		- Ratio per 1000 population	2.93 [s]	1.90 [s]	1.03 [s]	...	...	...	...	2009p	25
	Dentists	- Number	14 500 [s]	10600 [s]	3900 [s]	...	...	...	...	2009p	25
		- Ratio per 1000 population	0.68 [s]	0.49 [s]	0.18 [s]	...	...	...	...	2009p	25
	Pharmacists	- Number	21 800 [s]	7800 [s]	14 000 [s]	...	...	...	...	2009p	25
		- Ratio per 1000 population	1.02 [s]	0.36 [s]	0.65 [s]	...	...	...	...	2009p	25
	Nurses	- Number	188 300 [s,t]	13 900 [s,t]	174 400 [s,t]	...	...	...	...	2009p	25
		- Ratio per 1000 population	8.79 [s,t]	0.65 [s,t]	8.14 [s,t]	...	...	...	...	2009p	25
	Midwives	- Number	13 000 [s]	0 [s]	13 000 [s]	...	...	...	...	2009p	25
		- Ratio per 1000 population	0.61 [s]	0.00 [s]	0.61 [s]	...	...	...	...	2009p	25
	Paramedical staff	- Number	96 800 [s,u]	40 500 [s,u]	56 300 [s,u]	...	...	...	...	2009p	25
		- Ratio per 1000 population	4.52 [s,u]	1.89 [s,u]	2.63 [s,u]	...	...	...	...	2009p	25
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	**Annual number of graduates**	Physicians	2117	962	1155	...	...	...	...	2007	26
		Dentists	193	98	95	...	...	...	...	2007	27
		Pharmacists	1545	535	1010	...	...	...	...	2007	27

	INDICATORS		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
41	Annual number of graduates	Nurses	7924	997	6927	...	...	...	...	2007	26
		Midwives	689	14	675	...	...	...	...	2007	27
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	4.20	4.50	3.90	2007	4, 5
45	Under-five mortality rate (per 1000 live births)	5.01	5.44	4.55	2007	4, 5
46	Proportion of 1 year-old children immunised against measles	93.90 [v]	...	...	2008	20
47	Maternal mortality ratio (per 100 000 live births)	8.40 [w]			2003-05	28
48	Proportion of births attended by skilled health personnel	99.60			2006	19
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.30			2006	19
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.30			2006	19
49	Contraceptive prevalence rate	...	...	65.00	2001	17
50	Adolescent birth rate	4.30 [x]			2006	19
51	Antenatal care coverage - At least one visit	99.60 [aa]			2001	29
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	<0.10	...	...	2008	30
54	Estimated HIV prevalence in adults	0.10	...	...	2008	30
55	Percentage of people with advanced HIV infection receiving ART	80.00 [y]	...	...	2007 est	30
56	Malaria incidence rate per 100 000 population	NR [p]	NR [p]	NR [p]	2008p	11
57	Malaria death rate per 100 000 population	NR [p]	NR [p]	NR [p]	2008p	11
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	NR [p]	NR [p]	NR [p]	2008p	11
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	NR [p]	NR [p]	NR [p]	2008p	11
60	Tuberculosis prevalence rate per 100 000 population	5.70 [aa]	...	...	2008p	11
61	Tuberculosis death rate per 100 000 population	0.02	...	...	2008p	11
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	100.00	...	...	2008p	11
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	79.24	...	...	2008p	11
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	100.00	100.00	100.00	2006	16
65	Proportion of population using an improved sanitation facility	100.00	100.00	100.00	2006	16
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
...	Data not available
P	Provisional
est	Estimate
NR	Not relevant
a	Estimated figure includes Other Territories comprising Jervis Bay Territory, Christmas Island and the Cocos (Keeling) Islands
b	Data for 15-year-old schoolchildren. Literacy defined as Levels 2-5 using OECD PISA (Programme for International Student Assessment) standards
c	Average exchange rate for 2007-08
d	Number includes records where sex was unknown/not reported
e	Includes both newly acquired cases less than 24 months and where period of infection is unknown
f	Figure includes records where sex was unknown/not reported and may be an underestimate as Queensland did not report Hepatitis C (incident) in 2008
g	Includes imported and locally acquired cases
h	Includes infectious syphilis, and syphilis where duration is > 2yrs or unknown duration, excludes congenital syphilis
i	Includes deaths due to Intestinal infectious diseases (A00-A09)
j	Includes substance use disorders, schizophrenia, anxiety amd depression, bipolar disorder, personality disorders, eating disorders, ADHD and autism
k	Total does not always equal the sum of its components due to incidence estimation process
l	Data refer to episodes of admitted patient care (separations). Separations can be overnight or same-day
m	Percentage of women aged 18-49 (or their partners) reporting using contraceptive methods (including hysterectomy, tubal ligation and partner vasectomy)
n	Estimate based on South Australia
o	Number refers to psychiatric hospitals
p	Not endemic, absence of local transmission
q	Available bed/chairs (average for year)
r	Based on OECD Health Data monetary exchange rates. Available at: <http://www.ecosante.org/index2.php?base=OCDE&langs=ENG&langh=ENG&source=411000>
s	These data are subject to sampling variation and may not directly correspond to other Australian labour force data
t	Registered nurses
u	Includes dieticians, imaging specialists, occupational health workers, chiropracters, complementary health workers, physiothrapists, podiatrists, speech therapists, anaesthetists and paramedics
v	At 24-27 months
w	This is the latest data for both direct and indirect maternal deaths
x	Births to women aged less than 20
y	Prevalence is rounded to zero
z	Includes those with any viral load level
aa	Incidence rate

Sources:	
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BRUNEI DARUSSALAM

1. CONTEXT

1.1 Demographics

The population of Brunei Darussalam is estimated to have been 390 000 in 2007 and is increasing at 1.8% per annum. With an area of 5765 square kilometres, the country's population density is 68 persons per square kilometre, although 74.4% of the population are considered urban.

The population comprises 206 900 (53.1%) males and 183 100 (46.9%) females, giving a gender ratio of 113 males per 100 females. The population structure is essentially that of a young population; about 12.5% are under five years of age, 31.3% are under 15 years, and only 2.8% are 65 years or over.

Brunei Darussalam has a multi-ethnic population, with Malays, comprising 66.6%, the predominant ethnic community, and Chinese, with 11.0%, the next major group. Other races and expatriates make up the rest of the population.

In 2007, life expectancy at birth was 75.2 years for males and 77.8 years for females, the crude birth rate had declined from 17.1 in 2006 to 16.2 per 1000 population, and the crude death rate was 3.0 per 1000 population. The total fertility rate for 2007 had decreased slightly to 1.7 from 1.8 children per woman of reproductive age period in 2006.

The country's health services are ranked among the best in Asia. The Ministry of Health works hand in hand with WHO and continues to meet its targets for a better health status. The country has achieved almost all indicators stipulated by WHO, including those outlined in the Millennium Development Goals. For instance, the infant mortality rate and the under-five mortality rate remained at low levels of 7.6 and 9.5 per 1000 live births, respectively, in 2007, while the death rate among mothers giving birth was 15.8 per 100 000 live births.

1.2 Political situation

Brunei Darussalam is an independent sovereign sultanate governed on the basis of a written constitution, and achieved full independence on 1 January 1984. The Head of State, the Head of Government and the Supreme Executive Authority is His Majesty, the Sultan and Yang Di-Pertuan, who also holds the Defence and Finance portfolios in the Cabinet and is the Supreme Commander of the Royal Brunei Armed Forces, the Inspector-General of the Royal Brunei Police Force, and the supreme head of religious affairs in the sultanate.

Brunei's first written constitution came into force in 1959 and was subject to important amendments in 1971 and 1984. The 1959 Constitution provides for the Sultan as the Head of State, with full executive authority. The Sultan is assisted and advised by five councils—the Religious Council, the Privy Council, the Council of Ministers (the Cabinet), the Legislative Council and the Council of Succession.

The Council of Cabinet Ministers is appointed and presided over by the Sultan and handles executive matters. The Religious Council advises on religious matters, the unicameral Legislative Council or *Majlis Mesyuarat Negeri* handles constitutional matters (legislative branch), and the Council of Succession determines the succession to the throne if the need arises. For the judicial branch, the Sultan swears in a Supreme Court (chief justice and judges) for a three-year term.

1.3 Socioeconomic situation

Brunei Darussalam's economy, which is growing at a slow and steady rate, has been dominated by the oil and gas industry for the past 80 years. The economy, which has remained stable with an average inflation rate of 1.5% over the past 20 years, encompasses a mixture of foreign and domestic entrepreneurship, government regulation, welfare measures and village tradition. Crude oil and natural gas production account for nearly half of gross domestic product (GDP). Per capita GDP is far above most developing

countries (US$31 229 in 2007), and the substantial income from overseas investments supplements income from domestic production. The Government provides for all medical services and subsidizes rice and housing.

There is rising awareness in the country of depleting natural resources and the subsequent need to diversify the economy away from its over-reliance on oil and gas. Plans for the future include upgrading the labour force, reducing unemployment, strengthening the banking and tourism sectors, and further widening the economic base beyond oil and gas.

In its effort to stimulate economic growth, the Brunei Government is actively promoting the development of various target sectors through its five-year national development plans. The current 9th National Development Plan (2007-2012) marks a strategic shift in the planning and implementation of development projects, as it is the first to have been formulated in line with the objectives of Brunei Darussalam's recently launched long-term development plan, "Wawasan Brunei 2035 (Brunei's Vision 2035) ".

A large percentage of the budget is allocated to the Ministry of Health each year as a measure towards creating a proper infrastructure for the health system and services. In the 9th National Development Plan (2007-2012), a total of B$149 152 000 (US$ 102 383 300) is allocated to medical and health services, 1.6% of the Plan's total allocation. Emphasis will be on several areas such as national health emergency preparedness; improvement of health service quality and management and staff proficiency; improvement of hospital facilities and services; and improvement of primary health care services.

1.4 Risks, vulnerabilities and hazards

Natural hazards, such as typhoons, earthquakes and severe flooding, are very rare in Brunei Darussalam. However, the country has not been exempt from the impacts of climate change. The incessant and heavy rains during the Northeast Monsoon season have caused floods in low-laying areas and landslides in several areas. There has also been seasonal smoke/haze resulting from forest fires in neighbouring countries in recent years.

Recent events, such as emerging infectious diseases and natural disasters, have led the Government to take steps towards preparedness for such events. A National Committee on Disaster Management has been formed to strengthen the country's preparedness and planned response to any possible disaster.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The trend in the major causes of death has changed over the past 30 years from infectious diseases to chronic, degenerative diseases related to sedentary lifestyles. The five leading causes of death in 2007 were cancer, heart disease, diabetes mellitus, cerebrovascular disease and hypertensive disease. Most of these noncommunicable diseases involve similar modifiable behavioural risk factors, namely unhealthy diet, obesity, lack of physical activity, and smoking—all of which can be addressed through health-promotion strategies, as well as legislation.

Brunei Darussalam has an enviable record in being almost entirely free of major communicable diseases. WHO declared the country malaria-free in 1987 and, in 2000, along with other countries in the WHO Western Pacific Region, it was declared poliomyelitis-free.

Notification of infectious diseases is required by law under the 'Infectious Diseases Order 2003'. To date, a total of 57 infectious diseases are listed as notifiable in the country. All notifications must be reported to the Disease Control Division at the Department of Health. Authorities have been vigilant in detecting and preventing the invasion of newly emerging infectious diseases, such as severe acute respiratory syndrome (SARS) and avian influenza.

Brunei Darussalam has a comprehensive child immunization programme to protect against vaccine-preventable diseases. All these services are free. Medical advances in vaccines have been made widely available through the Expanded Programme on Immunization, which is incorporated into the Child Health Services and School Health Services. The country's health services are monitoring developments to ensure immunization measures and facilities continue to be in line with best practice for disease prevention.

The overall improvement in general sanitation, housing, food hygiene, regular screening and counselling of food handlers, safe drinking water and health education measures have successfully kept foodborne and waterborne diseases under control in the country.

2.2 Outbreaks of communicable diseases

There have been no recent major outbreaks of communicable disease in Brunei Darussalam. In 2006, there were a number of cases of hand, mouth and foot disease, and a very small number of food poisoning and dengue cases, all of which were contained.

To prepare for the possibility of an outbreak of avian influenza, the National Committee on Influenza Pandemic have developed a National Preparedness Plan, including measures for improved surveillance, communications and logistics.

2.3 Leading causes of mortality and morbidity

Data on the main diseases affecting health status (morbidity) are derived from hospital discharge summaries, outpatient morbidity and notifiable disease returns. The International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD10) has been used since 1 January 1998 to code inpatient morbidity data.

The five leading causes of morbidity in 2007 were: acute lower respiratory infection, diarrhoea and gastroenteritis of presumed infectious origin, asthma, acute upper respiratory infection, and diabetes mellitus. As regards mortality, the leading causes were: cancer, heart disease, diabetes mellitus, cerebrovascular disease, and hypertensive disease.

In 2007, there were 1174 deaths registered in Brunei Darussalam, with males accounting for 202 more deaths than females. Cancer, the prime cause of mortality, constituted 18.3% of total deaths. The second was heart disease, accounting for 15.1%, followed by diabetes mellitus (11.9%). The most common type of heart disease is ischaemic heart disease, while the most common types of cancer are of the trachea, lung and bronchus; colon and rectum; and stomach.

2.4 Maternal, child and infant diseases

Infant mortality has been reduced as a result of higher standards of living, improved sanitation, improved levels of education and literacy, increasing empowerment of women, and the rising standard of infant care services. Brunei Darussalam has achieved high immunization coverage of above 95% for all vaccinations included in the National Immunization Programme Schedule.

Maternal health has also improved dramatically and, in 2007, there was only one maternal death, giving a maternal mortality ratio of 15.8 per 100 000 live births. To maintain these outcomes, Brunei Darussalam is striving to ensure the availability and practice of antenatal care, skilled care during childbirth and postnatal care, and quality health services. Currently, 99.88% of all births are delivered in hospitals and 99.9% of all deliveries are attended by skilled health personnel.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health is responsible for all aspects of health care in the country and its vision is to become a highly reputable health service organization that is comparable to the best in the Region and that enables every citizen and resident of the nation to attain a high quality of life by being socially, economically and mentally productive throughout the life span. The Ministry's mission is to improve the health and well-being of the people of Brunei Darussalam through a high quality and comprehensive health care system that is effective, efficient, responsive, affordable, equitable and accessible to all in the country.

The Government is fully committed to continuously improving the health status of the people and considers government funding for health care a major public investment in human development. It is the aspiration of the Government that the Ministry of Health's agenda for the 21st century should focus on health improvement for people-centred development. Health policies and programmes will, therefore, continue to be constantly reviewed in the context of changing economic, social and technological environments and health situations. In looking ahead to the future, the following four principles will be observed in the provision of health services for all citizens:

- ensuring universal access to better health care;
- enabling equity of access to comprehensive health services;
- promoting partnership and public participation in the concept of co-production of efficient and effective health services for all; and
- ensuring that the health service system is sustainable within the institutional capacity and financial resources of the Ministry of Health.

The Government recognizes that it needs to continue its broad involvement in the provision of health care and, wherever possible, policy decision-making and proposed programmes will be strongly evidence-based. In that respect, the Ministry of Health will continue to pursue the following set of goals, or 'policy objectives', derived from careful analysis of the strategic issues and themes. These goals and their implementations measures are classified into two categories, strategic goals and instrumental goals, based on their logical relationships.

Strategic goals:

- to promote primary health care;
- to focus on the management of priority chronic diseases;
- to pursue high quality in health care;
- to achieve a more equitable allocation of funds for diverse health services and to venture into alternative sources of health care financing; and
- to promote selected areas of excellence in health services.

Instrumental goals:

- to develop comprehensive health databases and information management systems that support operational, professional and managerial functions;
- to improve the quality of policy-making and management decisions at higher levels of the organization so that the Ministry becomes an effective enterprise and its administrators effective managers;
- to create and promote a disciplined workforce with positive work attitudes, through teamwork, a sense of belonging and responsibility, to achieve the organizational mission, goals and objectives;
- to improve competency and standards among all health care professionals;
- to enhance cost-effectiveness in the delivery of all aspects of health services; and
- to improve the management of support services in order to contribute to the overall quality of health services.

Measures being implemented to help achieve these goals:

- generation of additional revenue and sending of price signals to users and providers;
- better definition of the range of health services that should be provided by the public sector;
- implementation of the shift to corporatization of hospitals; and
- pursuit of initiatives on dealing with national health emergencies.

With noncommunicable diseases now the dominating causes of morbidity and mortality, Brunei Darussalam has identified health promotion as a major initiative in its National Health Care Plan 2000-2010. This strategy provides the basis for a more integrated health programme. In recognition of the need to promote positive health measures, a multidisciplinary committee, the National Committee on Health Promotion, has been established with the aim of increasing public awareness about health problems, as well as developing strategies to modify public behaviour in favour of healthier lifestyles through community participation and intersectoral collaboration. The Committee has identified seven priority areas for action: nutrition; food safety; tobacco control; mental health; physical activity; healthy environments/settings; and women's health. These priorities are promoted by special events, publicity about major health issues, and appropriate measures to modify lifestyles.

3.2 Organization of health services and delivery systems

The people of Brunei Darussalam enjoy free medical and health care provided via government hospitals, health centres and health clinics. A large network of health centres and clinics located throughout the country provides primary health care services, including those for mother and child. In remote areas that are not accessible or are difficult to access by land or water, primary health care is provided by the Flying Medical Services.

As of 2007, there were four government general hospitals, 16 health centres, 14 maternal and child health clinics, eight travelling health clinics and four Flying Medical Services teams for remote areas. The Ministry of Defence also operates nine medical centres that mainly provide services for its personnel and their families. In addition to the government hospitals in each district, there are two private hospitals.

The main referral government hospital in the country is Raja Isteri Pengiran Anak Saleha (RIPAS) Hospital, situated on a 32-acre site about 0.8 km from the heart of the capital. The hospital was officially opened in August 1984 and is equipped with modern, cutting-edge medical technology. The hospital also offers a very wide and comprehensive range of medical and surgical services, currently totalling 28 different specialties and subspecialties.

Public Health Services is the main division in the Ministry of Health responsible for providing community-based preventive and promotive primary health care services in the country. As a result of its monitoring and surveillance activities and preventive programmes, such as immunization, the country is free from major communicable diseases.

The decentralization programme, started in 2000, is a concerted and ongoing effort by the Ministry to provide access to primary health care for the general population throughout the country. Through decentralization, primary health care is being further strengthened by the provision of more comprehensive services. In addition, patients with chronic illnesses can now be followed up by the primary care services. Thus, decentralization has resulted in better access to care, with primary care services serving as a 'gatekeeper' for secondary and tertiary care.

The Ministry of Health has now categorized the respective health care services available in Brunei Darussalam into two main services. The Directorate of Medical Services is responsible for hospital, nursing, laboratory, pharmaceutical, dental and renal services, while the Directorate of Health Services oversees community health, environmental health and scientific services.

3.3 Health policy, planning and regulatory framework

The provision of a comprehensive health care system for the people is a priority for the Government. The Ministry of Health formulates the National Health Policy, which is designed to provide the highest

level of health care that is cost-effective and to provide a high quality of life for the whole population in a clean and healthy environment.

To attain the target of health for all, emphasis has been given to the development of a health care system that is based on primary health care, aimed at providing a wide range of preventive, promotive, curative and rehabilitative health care and support services to meet the needs of the population. The main policy objectives are: reduction of infant mortality, diseases and disabilities, and premature deaths, thereby increasing life expectancy; improvement of the environment; and control of communicable diseases.

3.4 Health care financing

Health care services are primarily funded by the General Treasury. The budget for health care is allocated by the Ministry of Finance and administered by the Ministry of Health. User fees currently constitute a very small percentage of the total funds available to health care. Data regarding private health care spending are very limited. However, an estimate in 2000 stated that the ratio of public to private spending was approximately 97.2% public versus 2.8% private. Private insurance is offered in several markets. Since the Government provides and pays for comprehensive health care services, there is a limited market for private insurance for citizens and permanent residents. Employers of foreign nationals typically purchase health insurance locally unless the employer is multinational company (e.g. banks, oil companies), in which case the corporation provides health insurance through international insurance companies.

3.5 Human resources for health

In 2007, a total of 393 physicians and 81 dentists were registered to practise. The doctor-to-population ratio was 1:992. A comprehensive manpower development programme for the community, as well as hospital-based health personnel, is to be extended to strengthen health care services throughout the country, with emphasis on the primary health care approach.

The Ministry of Health, in its effort to provide quality health care, puts great emphasis on the continuous skill and professional development of its health care workforce. Upgrading professionalism, skills, credibility and quality of services towards excellence is one of the strategic themes in the National Healthcare Plan (2000 – 2010). Towards that end, the Ministry of Health has made a long-term plan for development of more professionals in various specialities through training courses, workshops and seminars, both local and overseas. Efforts are also being put into developing postgraduate training programmes, including sending local doctors to undergo further highly specialized training overseas. This has progressed to provide such training locally with the accreditation of RIPAS Hospital by the University of Queensland, Australia; the Royal College of Physicians, United Kingdom; the Royal College of Surgeons, Edinburgh, United Kingdom; the Royal College of Obstetrics and Gynaecology, London, United Kingdom; and the Royal College of Paediatrics and Child Health, London, United Kingdom.

In 2000, the Ministry of Health, in collaboration with the Institute of Medicine, University of Brunei Darussalam (UBD) and St. George's Hospital Medical School, started a part-time Postgraduate Diploma course in Primary Health Care. Since 2004, it has been run by the Institute of Medicine, UBD. With the increase in local expertise and the number of graduates in health care, the Ministry has been able to expand the scope of its medical services.

To support capacity-building initiatives, the Primary Health Care Orientation and Training Centre was established in 1986, primarily to provide training courses on the primary health care concept for health personnel. Many training programmes have been conducted for community health nurses by the centre including refresher courses, seminars and workshops for continuing professional development to increase the knowledge and skills of nurses in the community, including nurses from Outpatient Services, School Health Services and other services in the Department of Health.

3.6 Partnerships

The Government continues to forge stronger partnerships among various stakeholders to provide the synergy necessary to reach the shared vision of improved health, including other government agencies, academic institutions and other organizations, both local and international. Government agencies

provide support in many national health programmes. For some health programmes, the Ministry of Health works very closely with international organizations and global initiatives to strengthen priority health programmes. Assistance for the health sector comes mainly in the form of grants and technical assistance. At present, a sectorwide development approach between the Government and partners is being initiated to ensure maximization of investment and generation of necessary resources, not just for the health sector, but also for other sectors.

3.7 Challenges to health system strengthening

The Ministry of Health has embarked on several health care reforms that present a challenge to the nation's health system. These have been necessitated by the rising costs of health care, changing disease patterns and lifestyles, changing population demography, advancements in health technology and increased public expectation of receiving better quality health care. Over time, the role of the Ministry will evolve from that of a provider of health services to that of a facilitator and regulator. Delivery of services will be enhanced to improve the quality and efficiency of care.

Regarding the challenges faced by the Ministry of Health, six aspects may be highlighted: fiscal problems relating to escalating health costs; the paradigm shift in health care (formal and informal activities to preserve and maintain health status); the epidemiological transition (from communicable to noncommunicable diseases and the relationship to lifestyle); and the demographic transition (the increasing number of older people with different needs and demands for health care services). Others include the paradigm shift in public sector management (innovations in the style of managing public services) and the technological revolution.

Critical success factors include the priority given by the Government to the importance of health, as manifested through: the recurrent and development budget; comprehensive health care that is of high quality and is cost-effective in the areas of prevention, health promotion and education, treatment and rehabilitation; the control of major communicable diseases; the potential development of the information and communication system; effective and committed leadership; and the availability of highly qualified and competent staff to provide high quality, comprehensive and cost-effective services. Other success factors include collaboration with other government and nongovernmental organizations, as well as the private sector; support and participation from the public in improving services and health status; and establishment RIPAS Hospital as a centre of medical excellence and a referral hospital, as well as a centre for the treatment of more complicated diseases.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : *2001 Preliminary Census Report*

Title 2 : Statistics Unit, Research and Development Section,
Operator : Ministry of Health

Title 3 : Disease Control Division, Environmental Health Services,
Operator : Ministry of Health

Title 4: : *Health Information Booklet 2007 special edition*
Operator : Department of Policy and Planning, Ministry of Health
Website : http://www.moh.gov.bn/satisticshealthguidelines/download/HIB_2007.pdf

5. ADDRESSES

MINISTRY OF HEALTH

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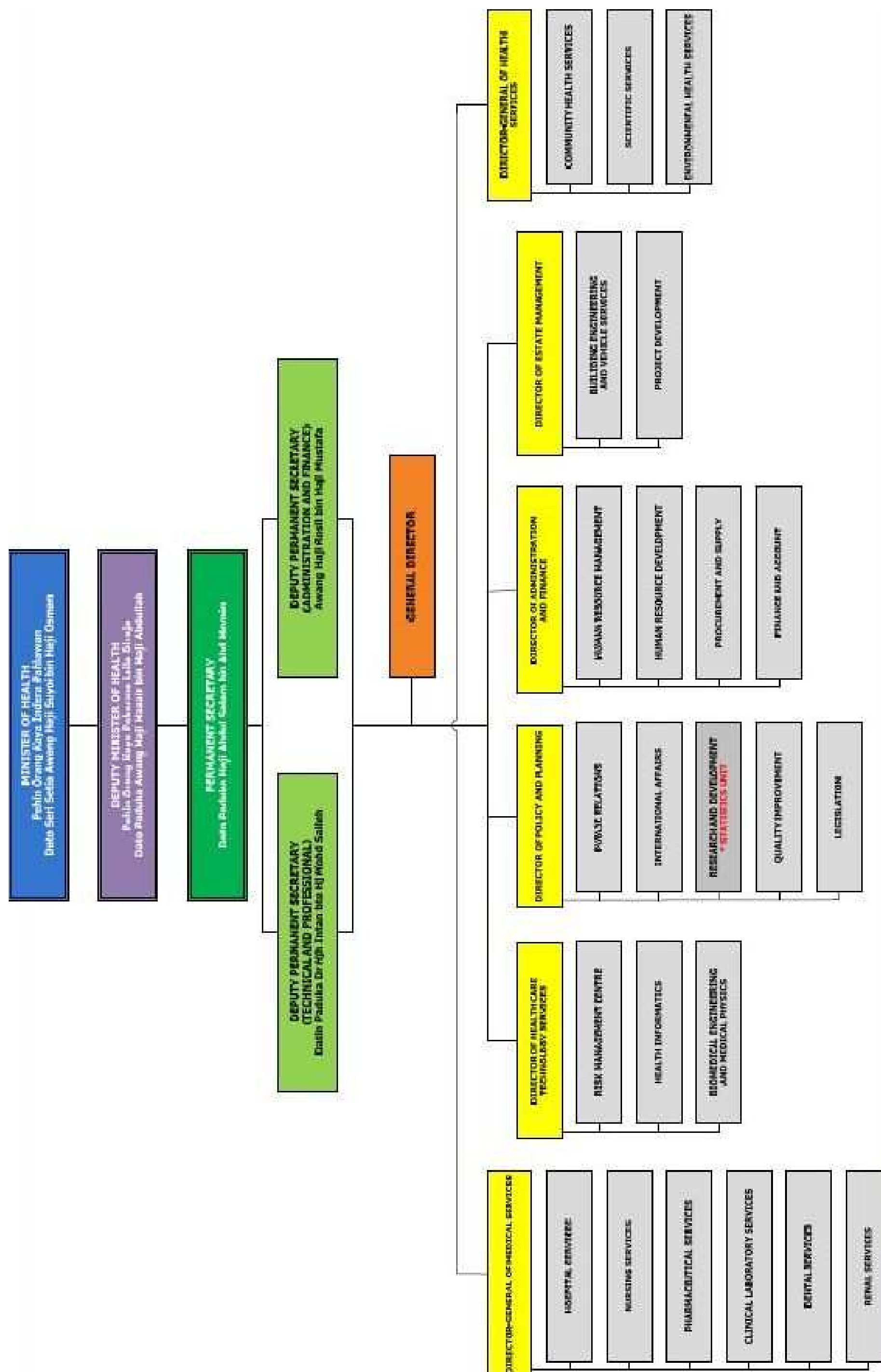
6. ORGANIZATIONAL CHART: Ministry of Health



Country Health Information Profile

Brunei Darussalam

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	**Total**	**Male**	**Female**		
1	**Area (1 000 km2)**	5.77			2007	1
2	**Estimated population ('000s)**	390.00	206.90	183.10	2007	1
3	**Annual population growth rate (%)**	1.80	...	...	2007	1
4	**Percentage of population**					
	- 0–4 years	12.50	12.40	12.70	2007	1
	- 5–14 years	18.80	18.60	19.00	2007	1
	- 65 years and above	2.80	2.40	3.30	2007	1
5	**Urban population (%)**	74.40 [a]	...	...	2007 est	2
6	**Crude birth rate (per 1000 population)**	16.20	...	...	2007	3
7	**Crude death rate (per 1000 population)**	3.00	...	...	2007	3
8	**Rate of natural increase of population (% per annum)**	1.32 [b]	...	...	2007	3
9	**Life expectancy (years)**					
	- at birth	...	75.20	77.80	2007	1
	- Healthy Life Expectancy (HALE) at age 60	...	13.10	13.30	2002	4
10	**Total fertility rate (women aged 15–49 years)**	1.70			2007	1
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	94.90	96.50	93.10	2007	5
12	**Per capita GDP at current market prices (US$)**	31 228.60			2007	1
13	**Rate of growth of per capita GDP (%)**	-0.25			2007	1
14	**Human development index**	0.92			2006	5
	Environmental indicators	**Total**	**Urban**	**Rural**		
15	**Proportion of vehicles using unleaded gasoline (%)**	...	...	...		
16	**Health care waste generation (metric tons per year)**	...	...	...		

	Communicable and noncommunicable diseases	**Number of new cases**			**Number of deaths**				
17	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral								
	- Type A	4	1	3	0	0	0	2007	6
	- Type B	0	0	0	0	0	0	2007	6
	- Type C	0	0	0	0	0	0	2007	6
	- Type E	0	0	0	0	0	0	2007	6
	- Unspecified	0	0	0	0	0	0	2007	6
	Cholera	0	0	0	0	0	0	2007	6
	Dengue/DHF	16	...	...	0	0	0	2008	7
	Encephalitis	0	0	0	0	0	0	2007	6
	Gonorrhoea	378	321	57	0	0	0	2007	6
	Leprosy	0	0	0	0	0	0	2007	6
	Malaria	12	11	1	0	0	0	2007	6
	Plague	0	0	0	0	0	0	2007	6
	Syphilis	19	4	15	0	0	0	2007	6
	Typhoid fever	8 [c]	5 [c]	3 [c]	1	1	0	2007	6

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	4230	2429	1801	121	77	44	2007	3
19	**Diarrhoeal diseases**	425 [d]	245	177	0	0	0	2007	6
20	**Tuberculosis**								
	- All forms	207 [f]	...	...	...	...	...	2007	7
	- New pulmonary tuberculosis (smear-positive)	136 [f]	...	...	...	...	...	2007	7
21	**Cancers**								
	All cancers (malignant neoplasms only)	398	162	236	215	117	98	2007	3
	- Breast	25	0	25	13	1	12	2007	3
	- Colon and rectum	31	12	19	29	15	14	2007	3
	- Cervix			57			10	2007	3
	- Oesophagus	1	1	0	2	2	0	2007	3
	- Leukaemia	4	3	1	6	2	4	2007	3
	- Lip, oral cavity and pharynx	14	7	7	7	6	1	2007	3
	- Liver	15	8	7	16	11	5	2007	3
	- Stomach	19	12	7	20	12	8	2007	3
	- Trachea, bronchus, and lung	61	45	15	50	31	19	2007	3
22	**Circulatory**								
	All circulatory system diseases	1762	998	764	333	196	137	2007	3
	- Acute myocardial infarction	43	35	8	62	40	22	2007	3
	- Cerebrovascular diseases	131	77	54	87	48	39	2007	3
	- Hypertension	757	382	375	57	32	25	2007	3
	- Ischaemic heart disease	202	138	64	103	66	37	2007	3
	- Rheumatic fever and rheumatic heart diseases	13	4	9	1	1	0	2007	3
23	**Diabetes mellitus**	988 [e]	459 [e]	529 [e]	140	75	65	2007	3
24	**Mental disorders**	37	20	17	0	0	0	2007	3
25	**Injuries**								
	All types	3242	2241	1001	108	83	25	2007	3
	- Homicide and violence	52	41	11	12	8	4	2007	3
	- Motor and other vehicular accidents	424	292	132	55	44	11	2007	3
	- Occupational injuries	156	...	...	...	...	...	2007	3
	- Suicide	66	32	34	10	9	1	2007	3
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Acute Lower Respiratory Infections	1226	709	517	314.40	342.70	282.40	2007	3
	2. Diarrhoea and Gastroenteritis of Presumed Infectious Origin	1151	628	523	295.10	303.50	285.60	2007	3
	3. Asthma	1122	643	479	287.70	310.80	261.60	2007	3
	4. Acute Upper Respiratory Infections	1071	594	477	274.60	287.10	260.50	2007	3
	5. Diabetes Mellitus	988	459	529	253.30	221.80	288.90	2007	3
	6. Pregnancy With Abortive Outcome	937		937	240.30		511.70	2007	3
	7. Non-Inflammatory Disorders of Female Genital Tract	933		933	239.20		509.60	2007	3
	8. Hypertensive Diseases	758	383	375	194.40	185.10	204.80	2007	3
	9. Fever of Unknown Origin	676	392	284	173.30	189.50	155.10	2007	3
	10. Heart Diseases	633	385	248	162.30	186.10	135.40	2007	3

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Cancer	215	117	98	55.10	56.50	53.50	2007	3
	2. Heart Diseases (including Acute Rheumatic Fever)	177	106	71	45.40	51.20	38.80	2007	3
	3. Diabetes Mellitus	140	75	65	35.90	36.20	35.50	2007	3
	4. Cerebrovascular Diseases	87	48	39	22.30	23.20	21.30	2007	3
	5. Hypertensive Diseases	57	32	25	14.60	15.50	13.70	2007	3
	6. Transport Accidents	55	44	11	14.10	21.30	6.00	2007	3
	7. Bronchitis, Chronic & Unspecified Emphysema & Asthma	51	29	22	13.10	14.00	12.00	2007	3
	8. Influenza and Pneumonia	35	23	12	9.00	11.10	6.60	2007	3
	9. Septicaemia	25	13	12	6.40	6.30	6.60	2007	3
	10. Congenital Malformations, Deformations & Chromosomal Abnormalities	23	12	11	5.90	5.80	6.00	2007	3
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					...			
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					64.00		2007	3
30	**Percentage of pregnant women with anaemia**					...			
31	**Neonatal mortality rate (per 1000 live births)**	4.40		...		...		2007	3
32	**Percentage of newborn infants weighing at least 2500 g at birth**	88.50		...		...		2007	3
33	**Immunization coverage for infants (%)**								
	- BCG	100.00		100.00		100.00		2007	3
	- DTP3	100.00		100.00		100.00		2007	3
	- POL3	100.00		100.00		100.00		2007	3
	- Hepatitis B III	100.00		100.00		100.00		2007	3
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			937			...	2007	3
	- Eclampsia			...			...		
	- Haemorrhage			8			...	2007	3
	- Obstructed labour			21			1	2007	3
	- Sepsis			...			...		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	...	...	...	...	...	...		
	- Diphtheria	0	0	0	0	0	0	2007	6
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	11	5	6	0	0	0	2007	6
	- Mumps	21	14	7	0	0	0	2007	6
	- Neonatal tetanus	0	0	0	0	0	0	2007	6
	- Pertussis (whooping cough)	1	1	0	0	0	0	2007	6
	- Poliomyelitis	0	0	0	0	0	0	2007	6
	- Rubella	4	4	0	0	0	0	2007	6
	- Total Tetanus	0	0	0	0	0	0	2007	6

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		…			
37	Health infrastructure					
	Public health facilities	- General hospitals	1	555	2007	3
		- Specialized hospitals	…	…		
		- District/first-level referral hospitals	3	342	2007	3
		- Primary health care centres	16	…	2007	3
	Private health facilities	- Hospitals	2	127	2007	3
		- Outpatient clinics	…	…		
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)			241.06	2007p	8
	- total expenditure on health as % of GDP			1.90	2007p	8
	- per capita total expenditure on health (in US$)			618.10	2007p	8
	Government expenditure on health					
	- amount (in million US$)			187.42	2007p	8
	- general government expenditure on health as % of total expenditure on health			77.80	2007p	8
	- general government expenditure on health as % of total general government expenditure			5.30	2007p	8
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			…		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			22.20	2007p	8
	Exchange rate in US$ of local currency is: 1 US$ =			1.51	2007p	8
39	Health insurance coverage as % of total population			…		

	INDICATOR		DATA							Year	Source
40	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	393	258	135	…	…	334	59	2007	3
		- Ratio per 1000 population	1.01	0.66	0.35	…	…	0.86	0.15	2007	3
	Dentists	- Number	81	41	40	…	…	67	14	2007	3
		- Ratio per 1000 population	0.21	0.11	0.10	…	…	0.17	0.04	2007	3
	Pharmacists	- Number	42	7	35	…	…	28	14	2007	3
		- Ratio per 1000 population	0.11	0.02	0.09	…	…	0.07	0.04	2007	3
	Nurses	- Number	1 458	…	…	…	…	…	…	2007	3
		- Ratio per 1000 population	3.74	…	…	…	…	…	…	2007	3
	Midwives	- Number	457	0	457	…	…	447	10	2007	3
		- Ratio per 1000 population	1.17	0.00	1.17	…	…	1.15	0.03	2007	3
	Paramedical staff	- Number	27	19	8	…	…	…	…	2007	3
		- Ratio per 1000 population	0.07	0.05	0.09	…	…	…	…	2007	3
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
41	Annual number of graduates	Physicians	39	21	18	…	…	…	…	2007	3
		Dentists	2	0	2	…	…	…	…	2007	3
		Pharmacists	0	0	0	…	…	…	…	2007	3

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	133	25	108	...	...	...	...	2007	3
		Midwives	5	0	5	...	...	...	...	2007	3
		Paramedical staff	3	2	1	...	...	...	...	2007	3
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	19	10	9	...	...	...	...	2007	3
		Dentists	0	0	0	...	...	...	...	2007	3
		Pharmacists	0	0	0	...	...	...	...	2007	3
		Nurses	26	6	20	...	...	...	...	2007	3
		Midwives	4	0	4	...	...	...	...	2007	3
		Paramedical staff	1	1	0	...	...	...	...	2007	3
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	7.60	...	...	2007	3
45	Under-five mortality rate (per 1000 live births)	9.50	...	...	2007	3
46	Proportion of 1 year-old children immunised against measles	100.00	100.00	100.00	2007	3
47	Maternal mortality ratio (per 100 000 live births)	15.80			2007	3
48	Proportion of births attended by skilled health personnel	99.90			2007	3
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.02			2007	3
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.88			2007	3
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	...				
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults	<0.10	...	...	2005	7
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	...	...	...		
57	Malaria death rate per 100 000 population	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	65.00	...	...	2007	7
61	Tuberculosis death rate per 100 000 population	7.00	...	...	2007	7
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	90.00	...	...	2007	7
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	84.00	...	...	2006	7
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	99.90	...	...	2007	1
65	Proportion of population using an improved sanitation facility	80.00	...	...	2002	3
66	Proportion of population with access to affordable essential drugs on a sustainable basis	100.00	...	...	2003	3

Notes:	
...	Data not available
est	Estimate
a	Revised data
b	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
c	Figure includes paratyphoid cases
d	Figure includes gastroenteritis cases (including 3 unknown cases)
e	Figure refers to inpatients
f	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

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CAMBODIA

1. CONTEXT

1.1 Demographics

The provisional total of the General Population Census of 2008 puts Cambodia's population at 13.4 million by March 2008. The population density is 75 per square kilometre. The male-to-female ratio is gradually normalizing after the distortions caused by 30 years of war during the last century. Eighty-one per cent of the population lives in rural areas, but there is a significant urban drift, especially among young people. The median age was just under 20 years in 2004, with the proportion aged 0-24 being twice that of those aged 25-50.

Mainly due to a decline in early mortality, life expectancy increased in the period from 1998 to 2008 from 52 to 63.1 years for males and from 56 to 67.5 for females. The total fertility rate dropped from 4.0 births per woman in 2000 to 3.4 in 2005, achieving the Cambodian Millennium target for 2010, predominantly occurring as a result of a decline in fertility among rural women; the annual population growth rate between 1998 and 2008 declined from 2.5% to 1.5%. Forty per cent of women use contraceptives, with 27.0% using modern methods. One quarter of currently married women have an unmet need for family planning, which is especially high among women in the lowest wealth quintile and women with no education. The Cambodian Demographic Health Survey (CDHS) 2005 concluded that both education and wealth have an effect on fertility. The interval between births is relatively long, at a median of 36.8 months.

The CDHS 2005 reports a maternal mortality ratio of 472 deaths per 100 000 live births, which does not show significant change from the CDHS 2000 and is one of the highest in the Region. Infant and under-five mortality rates have both declined significantly over the past 25 years, with the most dramatic declines happening since the late 1990s: comparison between the two most recent five-year periods in the CDHS 2005 shows infant and under-five mortality declining by 39% and 35%, respectively, to 66 and 83 deaths per 1000 live births. Socioeconomic characteristics, such as living in an urban environment, the mother's educational level and the mother's household wealth, influence infant and child survival substantially.

1.2 Political situation

Since completion of the United Nations Transitional Authority in Cambodia (UNTAC) mission and promulgation of the 1993 Constitution of the Kingdom of Cambodia, increased political stability has allowed economic growth, improvements in human development indicators and reintegration of the country into the international community. Parliamentary elections are held every five years, the most recent in 2008. The policy of decentralization and deconcentration will lead to the first indirect election of commune representatives at administrative district and provincial levels in 2009. Poverty alleviation and governance are increasingly important items on the Government's agenda.

In September 2008, the Government issued phase two of its 'Rectangular Strategy', with reforms focusing on corruption, the judiciary, public administration and the military as core priorities. The National Strategic Development Plan 2006-2010, combining previous poverty-reduction strategy papers and socioeconomic development plans, specifies the prioritized goals, targets and actions, including the Cambodian Millennium Development Goals, and was drafted in collaboration with development partners.

1.3 Socioeconomic situation

Cambodia has successfully maintained macroeconomic stability since 1993, allowing for an average annual growth rate of 7.1% for the period from 1994 to 2004, increasing to 13.5% in 2005, 10.4% in 2006 and 10.2% in 2007. The 2008 projection is around 6%. This growth, while reducing poverty by 10%-15%, has increased inequality, as reflected in a Gini coefficient of 42.0 in 2004. Over 85% of the labour force is in

the informal sector, with employment in industry (mainly the garment industry) growing substantially during the period from 1998 to 2004, stimulated by preferential trade status with the United States of America. Although this status ended, the change did not affect growth. The other drivers of recent economic growth are tourism and construction, which are expected to change due to the global economic crisis. Agriculture, mainly rice production, accounts for 40% of gross domestic product (GDP) and employs more than 70.0% of the workforce. Annual flooding and drought, however, result in year-to-year fluctuations in agricultural production. Diversifying this rather narrow income base and strengthening rural development are government priorities.

Thirty years of war and serious internal conflict at the end of the last century left Cambodia severely impoverished, with a significant depletion of skilled, educated professionals. In 1990, the Human Development Index (HDI) was 0.51, but by 2006 it had increased to 0.58, moving Cambodia from the low to the medium human development category. Despite this achievement, the country still has some of the worst human development indicators in South-East Asia. In 2008, per capita GDP was US$ 635, with 35% of the total population still living below the official rural and urban poverty lines of US$ 0.46 and US$ 0.63 (1999). In some rural areas, the percentage of the population living below the poverty line rises to 79.0%.

The Constitution guarantees women and men the same legal protection. However, women are disproportionately vulnerable in economic terms. While labour force participation for both is about 60%, over 60% of working women are in unpaid family work, and women head more than 25% of households.

1.4 Risks, vulnerabilities and hazards

Like many developing countries, Cambodia faces a range of vulnerabilities and risks, including traditional, modern and emerging health and environmental risks. These risks emanate from unsafe water and inadequate sanitation; unsafe food supplies, especially from street vendors; indoor air pollution and solid fuel use; as well as disease-vector transmission. However, the country is also subject to emerging issues, including health risks related to changes in the global environment (e.g. climate change and biodiversity loss); development, consumption and production of new products and technologies; consumption and production of more energy sources; and the increasing number and use of chemicals. There are also increasing health risks related to changes in lifestyle, urbanization and working conditions.

According to the latest WHO/UNICEF Joint Monitoring Programme (JMP) Report on Drinking Water and Sanitation, 65% of the total population had sustainable access to an improved water source (80% in urban and 61% in rural areas) and only 28% to improved sanitation (62% in urban and 19% in rural areas) in 2006. Other environmental health hazards include bacteriological contamination of drinking water, the most important health-related concern; arsenic in groundwater, which poses a health threat in seven provinces, exposing around 2.24 million people; indoor and urban air pollution, which is a serious health threat due to almost 98% of the population using biomass fuels for cooking or heating; use of banned pesticides and fertilizers, which has the potential to contaminate food and water; and finally, the serious environmental health impacts from solid and hazardous wastes, including health care waste.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The Cambodian surveillance system includes an indicator-based, passive, zero-reporting weekly surveillance system that reports morbidity and mortality from 12 reportable diseases and syndromes, and a ‘rumour-based’ system that detects outbreaks and unusual health events in a timely manner. Training in surveillance is ongoing at all levels of the health care system. The leading reportable diseases remain unchanged, being ARI and acute watery and/or bloody diarrhoea. However, the number of reported dengue cases and deaths increased dramatically in 2007 due to a large dengue outbreak.

Malaria continues to affect mostly the poorer communities living in forested areas, where over 2 million people are at risk. The total number of treated malaria cases in public health facilities declined steadily from 133 000 in 2003 to 47 748 (new outpatient cases) in 2008, although there was a significant increase

to 101 000 in 2006. Similarly, the number of reported malaria deaths in public health facilities fell from 492 in 2003 to 240 in 2008, although it went up to 396 in 2006. The management of severe malaria has also improved, and the case fatality rate among severe malaria patients at referral hospitals decreased from 10.4% in 2005 to 7.1% in 2008. The proportion of confirmed malaria among all cases treated in public health facilities increased steadily from 54% in 2003 to 78% in 2006, but fell to 71% in 2007 and remained almost the same in 2008 (71.5%). The malaria incidence rate declined from 413 per 100 000 population in 2004 to 294 pero 100 000 population in 2007. However, the country is also right at the centre of the global multidrug-resistant malaria problem because of the presence of artemisinin-tolerant malaria parasites, especially in the Cambodia-Thailand border area. At the moment, an intensified containment effort, with the aim of eliminating the tolerant parasites, is one of the priority objectives for Cambodia by implementing a short-term containment project (2009-2010) and a medium-term plan (2011-2015) to sustain and scale up containment activities.

Dengue fever and dengue haemorrhagic fever have become serious public health problems in the last two decades, the latter being the number one cause of mortality in paediatric wards during the dengue transmission season. The national dengue incidence rate from hospitalized cases decreased from 0.9 per 1000 populations in 2003 to 0.7 per 1000 in 2005. In 2006, however, the rate increased to 1.3 per 1000 due to outbreaks in several provinces, characteristic of the three-to-five-year cyclical pattern of dengue disease. The worst year for dengue on record was 2007, when 39 851 cases, with 407 deaths, were reported (CFR = 1.03%). In 2008, the number of reported dengue cases fell significantly to 9542 cases with 65 deaths (CFR=0.68%). As a result of improved clinical management of DHF and increasing awareness among the general population, the case-fatality rate declined steadily from more than 4% in 1995 to about 1% in 2007 and 0.7% in 2008.

The national immunization programme continues to improve its coverage. For 2008, the Ministry of Healtho decided to apply the 2008 census data, which increased coverage by 7%-10 %, while the actual number of children immunized also improved by 7000-10 000. The official DPT-HepB3 coverage rate increased to 91% and measles coverage to 89%. Preparations are under way to introduce a pentavalent Hib containing vaccine in 2010 with support from GAVI ,which is expected to reduce mortality from pneumonia and meningitis. However, the limited support for the routine operational costs of immunization activities makes it difficult for the programme to maintain high quality services. To address this, the Government will need to balance the support between outreach activities and fixed-site immunization at health centres.

Despite a decrease in tuberculosis incidence of 1% per year, Cambodia has the highest incidence in the Western Pacific Region, at 495 cases/100 000 population/year. In 2007, 35 601 new cases were notified under the national TB programme. A treatment success rate of over 90% has been maintained consistently for over a decade. The third national seroprevalence survey showed a further decline in HIV prevalence among TB patients from 11.8% in 2003 to 7.8% in 2007. The identification and treatment of multidrug-resistant (MDR) TB has begun on a small scale, and programmatic management of MDR-TB is expected to begin in 2009.

The HIV prevalence rate among adults aged 15-49 years decreased from 2% in 1998 to 0.9% in 2006 due to strong prevention activities among entertaiment workers. Prevention programmes have now started for other most-at-risk populations (injecting drug users and men who have sex with men). Voluntary and confidential counselling and testing (VCCT) services have been scaled up to 212 sites (392 315 people tested for HIV in 2008), while home-based care has been scaled up to 343 teams, covering 657 health centres. Services for people living with HIV/AIDS are provided through a continuum-of-care package available in 39 operational districts in 20 provinces, with 32 000 patients on antiretroviral treatment in December 2008. More than 90% of the estimated adults in need of ART were actually receiving it at the end of 2008.

A national survey in 2006 found hepatitis B virus among 3.4% of five-year-old children. Data collected from 27 000 blood donors in 2006 showed infection rates of 1.5% for HIV, 8.4% for HBV, 1.6% for HCV, 2% for syphilis and 0.4% for malaria. In 2007, 80% of blood donations were from paid or replacement donors. With current efforts to strengthen the national blood transfusion programme,

including development of regulations for the Blood Transfusion Services, it is expected that the challenges related to blood safety will be addressed.

Although Cambodia suffered several decades of war and civil unrest, as well as more recent rapid socioeconomic development, there is little information on the prevalence of mental illness, although several small studies have shown high levels of depression among adults and behavioural problems among children and adolescents. Mental health services are available at 35 health centres nationwide and at 25 outpatient departments; there is one psychosocial rehabilitation centre in operation and two psychiatric inpatient units have been established. In 2005, 8800 psychiatric cases were assisted and 56 000 consultations provided by the Government's national programme for mental health, which does not include the more substantial services offered by NGOs around the country.

Increasing use of illicit drugs, especially amphetamine-type stimulant use by young people, sex workers and those in labour-intensive activities, are putting such people at risk of contracting HIV/AIDS and other health problems. Currently, there are virtually no services for most drug users, although Government-approved, basic harm-reduction services are available in Phnom Penh through NGOs.

Cambodia has a significant and growing burden of noncommunicable disease. Two recent epidemiological surveys indicated that, in urban areas, 10% of adults had diabetes and 25% high blood pressure, while in a poor rural community, 5% of adults had diabetes and 12% were found to be hypertensive. In total, 300 000 Cambodians are estimated to have diabetes and, if no action is taken, it is estimated that the number will rise to 1.2 million by 2021. In 2005, a nationwide survey of adult tobacco use found that 48% of men and 3.6% of women smoked cigarettes, while 17% of women and 1% of men chewed tobacco. Alcohol consumption is also on the increase, and the number of violent incidents, traffic accidents and domestic violence incidents linked to alcohol is alarming.

Due to rapid economic growth and changes in lifestyle, the burden of environment-related diseases is an increasing concern, accounting for 26% of the total burden of disease, according to recent WHO estimates. When compared with other countries in the Region, Cambodia has the second highest environmental disease burden. While environmental risk factors are generally associated with noncommunicable diseases and injuries, in Cambodia they are also strongly associated with communicable diseases.

2.2 Outbreaks of communicable diseases

The first poultry outbreaks of H5N1 avian influenza in Cambodia were reported in January 2004, more than a year before the first Cambodian human case was detected in Viet Nam, where the patient had gone for treatment. Three additional human cases were reported in 2005 and two in 2006, together with outbreaks in poultry. In April 2007, the seventh human case was detected, also related to poultry H5N1 in the patient's village. The eighth and most recent case occurred in December 2008, where a relationship with H5N1 infected poultry was identified. This last case is the only one in Cambodia where the patient survived.

Unlike 2007, when a serious dengue outbreak due to DEN-3 occurred, causing 39 851 reported hospitalized cases and 407 fatalities, 2008 showed a more subdued level of dengue. There were 9542 reported hospitalized cases, with 65 fatalities. As in previous years, the peak months were from June to August.

2.3 Leading causes of mortality and morbidity

Infectious diseases still constitute the main causes of mortality and morbidity, but Cambodia is facing an epidemiological transition. Currently, acute respiratory infections are the leading cause of both mortality and morbidity, with gastroenteric infections contributing substantially to the morbidity burden of the population and dengue outbreaks exacerbating the situation. In addition, the country is still classified as one of the 22 worldwide with a high burden of tuberculosis. Notably, HIV prevalence has decreased substantially and a high proportion of people living with HIV/AIDS are receiving antiretroviral therapy.

Preventing and treating noncommunicable diseases and injuries will be the challenge in the near future. The number of road accidents is rising very rapidly as a leading cause of mortality due to improved infrastructure and rapid socioeconomic development. Some surveys have indicated high levels of diabetes (5%-10%) and hypertension (12%-25%) in rural and urban areas, both major risk factors for ischemic heart disease and stroke. As half the male population smokes and alcohol consumption is rising, the composition of the table for leading causes of morbidity and mortality is expected to change in the near future.

2.4 Maternal, child and infant diseases

The maternal mortality ratio is high, at 472 per 100 000 live births, and remained unchanged between the last two Cambodia Demographic and Health Surveys (CDHS) in 2000 and 2005. Postpartum haemorrhage is the leading cause of maternal death, followed by infections, complications from abortions, and hypertension. Maternal death contributes 17% to overall mortality in women aged 15- 49 years. Weaknesses in vital statistics and the routine health information system make it difficult to monitor changes in MMR between surveys, but there are indications of improvement. Renewed attention to maternal health and the introduction in 2008 of performance incentives for facility-based deliveries has resulted in a sharp increase in the proportion of births assisted by trained health professionals. In 2008, 39% of the expected number of births took place in a public health facility, compared with 26% in 2007 and only 18% in 2006. Public service health staff assisted 58% of expected births in 2008, compared with 44% in 2005, a figure that includes private service providers. There are multiple reasons for the high MMR, of which poor access to emergency obstetric and newborn care (EmONC), the low knowledge and competencies of health professionals, the low facility delivery rate, the low level of modern contraceptive use (26% in 2008) and the high rate of unsafe abortions are the most important. Barriers to good quality delivery services include official and unofficial fees, limited physical access for rural populations and the sometimes unprofessional conduct of staff. Limitations in the access to emergency obstetric and newborn care, including emergency blood transfusions and Cesearean sections, are of particular concern. The latter is less than half of the minimum 5% recommended by WHO. There is a chronic shortage of midwives, which has led to raising of the intake to the five public midwife training institutions. A High-level Midwifery Taskforce has been charged with developing a plan for a comprehensive reform of midwifery services, and a fast-track initiative for improving reproductive, maternal, newborn and child health is being implemented.

Infant and under-five mortality rates decreased by about 30% in the the five-year period leading up to 2005, bringing Cambodia on target to meet MDG 4 in 2015. The prevalence of child undernutrition, which has been retrospectively recalculated based on the new WHO growth standards, decreased between 2000 and 2005 from 17% to 8% for weight-for-height, from 39% to 28% for weight-for-age and from 49% to 43% for height-for-age (stunting). Only four out of ten newborn babies are weighed at birth and the proportion of low-birth-weight babies of those weighed is 8%. Respiratory infection remains the leading cause of death among children under five years of age (30%), followed by diarrhoea (27%), dengue haemorrhagic fever (11%), severe acute malnutrition and measles. Coverage of integrated management of childhood illnesses (IMCI) services is steadily increasing and reached 69% of health centres in 2008. The proportion of deaths in the neonatal period is increasing. One quarter of children who die in the neonatal period have a history of poor feeding after initially feeding well, indicating sepsis, while 7% have symptoms suggestive of neonatal tetanus.

Infant and young child feeding practices have improved. The rate of exclusive breast-feeding for the first six months of life rose significantly from 11% in 2000 to 60% in CDHS 2005. An important step towards full adherence to the International Code of Marketing of Breastmilk Substitutes was taken in 2005 when the Government issued a Sub-Decree on the implementation of the Code. The anaemia rate among woman of reproductive age (15-49 years) decreased from 58% in 2000 to 47% in 2005, and from 66% to 57% among pregnant women. Anaemia in children aged 6-59 months remained at 62%. A national nutrition strategy for the period 2008-2015 was completed in 2007.

There are indications of increasing disparities in both health outcomes and service utilization between the rich and the poor, and between urban and rural populations. The Government is committed to improving maternal and child health and to achieving MDGs 4 and 5, but the available resources,

government and external, are not sufficient to meet the challenges. The Ministry of Health has taken important steps to reduce child mortality at the policy and planning level, but it will take substantially larger investments to achieve universal coverage of the 12 Child Survival Score Card interventions of the Cambodia Child Survival Strategy by 2015.

2.5 Burden of disease

A burden-of-disease study is planned as part of implemention of the new Health Sector Plan 2008-2015. The main risks factors affecting health are still posed by exposure to communicable diseases, facilitated by environmental circumstances. A high prevalence of diabetes, hypertension and tobacco use has been recognized and, in combination with changing lifestyles and increased traffic accidents, this points to an epidemiological transition. Annually, around 1500 women die due to pregnancy-related complications and almost 30 000 children die before the age of five.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The first national Health Sector Strategic Plan, approved in 2002, was reviewed in 2007 and resulted in the Health Strategic Plan 2008-2015 (HSP2), synchronizing with the five-year cycles of the government National Strategic Development Plan. It presents the vision as: "To enhance sustainable development of the health sector for better health and well-being of all Cambodia, especially of the poor, women and children, thereby contributing to poverty alleviation and socio-economic development." The mission of the Ministry of Health is: "To provide stewardship for the entire health sector and to ensure a supportive environment for increased demand and equitable access to quality health services in order that all the peoples of Cambodia are able to achieve the highest level of health and well-being", based on values of equity and the right to health.

The building blocks of HSP2 are three main health programme areas to:

- reduce maternal, newborn and child morbidity and mortality, with increased reproductive health;
- reduce morbidity and mortality due to HIV/AIDS, malaria, TB and other communicable diseases; and
- reduce the burden of noncommunicable diseases and other health problems,

which implement a set of the following five cross-cutting health strategies:

- health service delivery;
- health care financing;
- human resource for health;
- health information system; and
- health system governance.

The HSP2 implementation plan identifies an initial three-year consolidation phase to decide key policies in relation to health financing and health system governance requirements under decentralization and deconcentration, followed by a scaling-up phase. A monitoring and evaluation process has been established, including indicators to measure performance, refine existing health policies and determine the effectiveness of interventions. Annual targets are monitored at the National Health Congress and Joint Annual Performance Review and directives for the next Annual Operational Plan issued. Three-year Rolling Plans provide medium-term guidance.

3.2 Organization of health services and delivery systems

The Ministry of Health initiated a health sector reform process in the early 1990s and, in 1996, approved the Health Coverage Plan, formulated with WHO support, which divides the country into 73 operational districts within the 24 provinces. Each operational district covers a population of 100 000-200 000 and comprises 10-20 health centres, each covering populations of about 10 000, and a referral hospital. Health centres are expected to deliver a 'minimum package of activities' that includes basic curative, preventive

and promotional services provided both in the facility and through outreach. Community participation is obtained through health centre management committees. Referral hospitals provide a 'complementary package of activities'. National institutes, national hospitals, national programmes and training institutions provide the third level of services. As of 2007, there were eight national hospitals, 77 operational districts, 76 referral hospitals, 881 functional health centres and 79 health posts. The Ministry of Health comprises three directorates at central level—health services, finance and administration, and inspection—with the Minister of Health as chief executive. The structure, roles and functions are being reviewed as part of an institutional strengthening process.

The private health sector has been expanding rapidly in the past decade, absorbing a substantial part of out-of-pocket expenditure. Many public health civil servants have initiated private activities to complement their official government salaries to earn a living wage. In addition, not-for-profit NGO providers supply a significant volume of hospital and diagnostic services. Enforcement of private practice regulation needs to become a more prominent aspect of the Ministry of Health's work.

3.3 Health policy, planning and regulatory framework

In order to strengthen its stewardship over the health sector, the Ministry of Health has been developing tools to apply sectoral resources where they are most needed, through direct allocation as well as through advocacy, influence and regulation. The Ministry recently developed a comprehensive system of sectoral operational planning to support implementation of the Health Strategic Plan. Strategic planning, aligned with the National Strategic Development Plan, is operationalized through Annual Operational Plans, forming the basis for three-year Rolling Plans, which link mid-term operational and investment planning. This is consolidated planning, encompassing the entire public health sector. It is bottom up, with each facility or administrative unit preparing annual plans based on sectorwide priorities, but accounting for its own specific goals, capacities and challenges. The year 2008 marked the fourth year of the Annual Operational Plans, which will become an increasingly useful tool for resource allocation as the links between planning and budgeting processes are strengthened in coming years. The Ministry of Health has introduced the Joint Annual Plan Appraisal for review of resource allocation with health partners to facilitate this.

Implementation of strategic and operational plans is monitored through the Ministry of Health's health information systems, which inform the Joint Annual Performance Review (JAPR) and the National Health Congress. This consultative event reviews performance toward strategic goals and identifies priorities for action during the coming year. At the 2008 Joint Annual Performance Review, key bottlenecks to improvement of sector performance were identified, and a set of priority interventions was recommended for which resource allocations within individual operational plans should increase. Health facility development is guided by the Health Coverage Plan, which will become an important strategic management tool for the health sector once linkages with human resource planning and national capital investment planning are strengthened.

Regulation of the rapidly growing private pharmacy and medical services sector is a priority for the Ministry of Health. However the Ministry's enforcement ability is constrained by weaknesses in the Police and Judiciary. Nevertheless, registration, as well as development and approval of codes of practice, are proceeding. As most private practitioners are also civil servants, these steps are expected to have some impact.

3.4 Health care financing

The government budget for health has been increasing steadily over recent years, reaching US$ 8 per capita for the recurrent budget of the Ministry of Health in 2008. The challenge, however, lies not only in adequate finances, but also in allocation and management. Although overall disbursement at the end of budget execution is acceptable (around 98%), provinces and districts face irregular and untimely disbursement. Cambodia is also still highly dependant on donor funding (US$ 8 per capita in 2008) and the challenge is to coordinate action to cover national priorities.

Despite the increasing investment in health from government and external sources, the largest portion of health expenditure comes from out-of-pocket sources and goes towards unregulated private health care.

The World Bank Poverty Assessment 2006 estimates out-of-pocket expenditure to be US$ 15 per capita per year (secondary analysis of Cambodian Socio-Economic Survey CSES 2004), while the WHO NHA website estimates the figure at US$ 18. CDHS 2005 reports even higher out-of-pocket spending, almost US$ 25 per capita per year, with potential underreporting in the CSES and overreporting in the CDHS. Preliminary analysis of CSES 2007 seems to indicate an increase in out-of-pocket spending for all quintiles except the richest, which points again towards increased inequities despite overall positive progress. The underlying reasons for these findings still need further investigation.

The Ministry of Health's Health Financing Charter was introduced in 1996 and allows establishment of user-fee schemes in health facilities. Of this income, 60% is redistributed as incentives for staff, while 39% is used for operating costs and quality improvement (1% is paid in tax to the Treasury). A positive impact of user fees on access has been to reduce under-the-table payments, but the costs of health care remain a substantial obstacle for a large portion of the population. In this context, Cambodia has, in recent years, developed several alternative financing mechanisms for health, such as contracting and community-based health insurance. At the same time, health equity funds have been scaled up to cover 39 districts (out of 77) and six national hospitals. Lessons from these experiments were the basis for the formulation of Cambodia's strategic Framework for Health Financing. It proposes a set of interventions to achieve the following five objectives:

(1) Increase the government budget and improve the efficiency of government resource allocations for health.
(2) Align donor funding with Ministry of Health strategies, plans and priorities and strengthen the coordination of donor funding.
(3) Remove financial barriers at the point of care and develop social health protection mechanisms.
(4) Ensure efficient use of all health resources at service delivery level.
(5) Improve the production and use of evidence and information in health financing policy development.

3.5 Human resources for health

The war years had a disproportionate impact on the professional classes, with the health sector suffering severe losses in human resources, both in terms of deaths and emigration, as well as truncated education and years lost. While the country's recovery has been striking and the total number of health workers in Cambodia is no longer particularly low by international standards, staff shortages persist throughout the public health sector, particularly in remote areas. Staff remuneration is one of the key challenges. With over 15 000 staff members, the Ministry of Health salary budget for 2007 was just over US$ 3 million, with an average monthly salary of US$ 61. This is a major contributing factor to the serious maldistribution of staff. Health professionals tend to come from urban backgrounds. As a result, it is extremely difficult to recruit and place staff in remote rural areas. This problem is particularly acute for midwives, who are key staff members at all health centres across the country. Recruitment and training of new staff from remote areas is therefore a Ministry of Health priority.

Many staff must supplement their salaries through side practices in the private sector, which compounds staffing problems for facilities and results in curtailed opening hours and diminished quality of service. It is recognized that this is a widespread practice, and that it will be necessary to either substantially increase public sector remuneration or develop workable models for dual practice if it is to be addressed successfully. Until recently, the main response to the staff salaries problem has been the use of donor-funded staff incentives for priority areas, as well as payment of a per diem for key activities. As is to be expected with such partial solutions, the effect has been mixed. While many staff are now reasonably well remunerated, uncoordinated donor funding has resulted in human resource imbalances between external and Cambodian priorities. Similarly, reliance on a per diem for income supplementation creates incentives that may adversely affect staff members' abilities to accomplish their core functions. To address these issues, the Ministry of Health and other relevant ministries and health partners have finalized a scheme for providing merit-based salary support across the sector under the guidance of the Council for Administrative Reform.

An important component of facility-level remuneration is user fees, 60% of which flow to staff incentives. Attracting more clients through improved quality of care will increase staff incentives, but it is not realistic to expect the requisite improvements in staff morale without first ensuring a living wage. Contracting models have been successfully employed in selected operational districts to increase salaries, strengthen human resource management, and improve staff morale and the quality of care.

3.6 Partnerships

Cambodia's health sector is a crowded field where the Ministry of Health is joined by some 20 bilateral and multilateral donors, development agencies and global health partnerships, as well as more than 100 international and national NGOs. The Ministry generally welcomes the contribution of health partners and the Health Strategic Plan explicitly promotes public and private partnerships for basic and specialist care. However, sectorwide management, introduced and led by the Ministry of Health as the primary mechanism for sector dialogue, has been reviewed in order to strengthen coordination and implementation of the new Strategic Plan. With the multidonor Health Sector Support Programme being the only significant example of a coordinated direct partnership with the Government, coordination of partners and their activities has taken on an increasingly important role in the sector. In its efforts to achieve more effective stewardship, including through the creation of a new Department of International Cooperation, the Ministry is finding it difficult to manage aid as it is delivered (mostly project-based). More broadly, the Government of Cambodia is taking greater ownership of its development processes, assisted by a global agenda for greater harmonization and alignment, to which Cambodia contributes as a pilot country for monitoring of progress. These efforts are also embedded in the National Strategic Development Plan 2006-2010 and were reflected in the move to a more Government-led Cambodia Development Cooperation Forum in mid-2007. While the general contribution of partners to the improving health status is unquestioned, their support to Cambodia's health system could be increased considerably if donors were to adapt to more harmonized and efficient modes of cooperation that take into account existing systems at country level. To enable this in-country process, the Ministry of Health signed the International Health Partnership Compact in 2007, as one of the seven first-wave countries globally.

3.7 Challenges to health system strengthening

The formulation process of the Health Strategic Plan 2008-2015 identified a number of key challenges for the health sector that remain valid or have become more pressing:

1. Increasing the utilization of cost-effective health services: The overall utilization of public health facilities is around 0.5 visits per person per year. Except in a few areas where additional resources and semiautonomous management have been provided, utilization rates are not increasing substantially and, to date, the underresourced publicly funded health services have had little to offer the rural poor. Most people are choosing to use the private sector for treatment, particularly private pharmacies.

2. Improving the quality of care in both the public and private health sectors: The low utilization of health services may be affected by unfavourable staff attitudes and practices in the public sector, an irregular and inadequate flow of funds to service delivery, limited management and leadership capacity, uncertainty about user charges, and a lack of knowledge about available services. The Ministry of Health published the National Policy for Quality in Health in 2005 and the Operational Guidelines for Clients' Rights and Providers' Rights-Duties in 2007 to address these issues. A number of initiatives have been introduced to promote a 'client-centred' approach to service delivery in health staff training programmes, and the newly established Medical Council is introducing a code of medical ethics in an attempt to improve professionalism among medical practitioners.

3. Improving the distribution of staff, particularly midwives, in the health sector: The persistence of a high maternal mortality ratio in the CDHS 2005 confirms the pertinence of this challenge. Currently, many referral hospitals and health centres, particularly in rural areas, have insufficient numbers of midwives to provide safe coverage for emergency obstetric care. A continuing functional analysis process, initiated in 2002, has focused attention on the need to develop policy to address the maldistribution of staff, and there has been an increase in the

number of midwifery trainees in recent years. However, a recent comprehensive midwifery review indicated serious gaps in the skills of the current midwife workforce.

4. Improving reproductive and adolescent health services: Cambodia has a recently declining fertility rate and a youthful population, with half under 20 years of age. The main focus of reproductive health services is fertility control and antenatal care. Establishing a continuum of quality care for adolescent and maternal and child health, including a functional referral system, will become increasingly important to continue to improve the indicators, which until now have been substantially influenced by an improving socioeconomic situation.

The Government has recently introduced a policy to improve public service delivery through a purchaser-provider split approach. The Ministry of Health/provincial health departments can now contract operational districts or health facilities to provide services, a strategy that is combined with improved staff remuneration to create an environment to address the listed key challenges.

A new challenge has gradually become more apparent: prevention and treatment of noncommunicable diseases and injuries. Recent surveys have revealed a high prevalence of diabetes (5%-10%) and hypertension among both rural and urban populations. In combination with the fact that about 50% of men in Cambodia smoke and the rapid increase in life expectancy, an epidemiological transition is imminent. Rapid socioeconomic development is constantly changing the social determinants of health, and improved road infrastructure has resulted in a steeply rising number of deaths and injuries due to traffic accidents. Health staff will need to be trained and provided with the means to promote healthy lifestyles and treat chronic diseases or disabilities. The burden of environment-based diseases is also an increasing concern for the country. These are mainly related to unimproved drinking water and sanitation, indoor and outdoor air pollution and occupational health risks (occupational carcinogens and particulates). This requires multisectoral collaboration and cooperation among all relevant agencies, including health, environment and agriculture, among others. A health impact assessment is being formulated to address these health burdens.

A multipronged challenge will be to improve effectiveness and efficiency in allocation and disbursement of the scarce financial and human resources. As an Organisation for Economic Co-operation and Development (OECD) pilot country for Aid Effectiveness, the Government is assuming a growing leadership role and is taking forward an action plan to facilitate harmonization and alignment processes. This includes improved governance procedures, public financial management reforms and decentralization and deconcentration policies, requiring the involvement of a multitude of government institutions. The international funding institutions need to determine how to move from the current situation of coordinated, but fragmented support for the health sector, to more policy coherence and balanced funding of country priorities. Engaging global health programmes meaningfully and managing the institutional burden will be a particularly demanding undertaking for the Ministry of Health, and improved management information systems are essential to guide analysis of its efficiency and effectiveness.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Cambodia Demographic and Health Survey 2005*
Operator	:	National Institute of Public Health, Ministry of Health and National Institute of Statistics, Ministry of Planning
Specification	:	Contains information on demographics, family planning, maternal mortality, infant and child mortality, domestic violence, women's status and health-related information such as breast-feeding, antenatal care, child immunization, childhood diseases and HIV/AIDS
Web address	:	http://www.measuredhs.com
Title 2	:	*National Health Statistics 2007*
Operator	:	Health Information Bureau, Department of Planning and Health Information, Ministry of Health
Specification	:	Provides health data, tables and graphs based on statistics generated from the nationwide Health Information System (HIS)
Web address	:	http://www.nis.gov.kh

Title 3	:	*Demographic Estimates and Revised Population Projections 2005*
Operator	:	National Institute of Statistics, Ministry of Planning
Specification	:	Presents population projections, estimations of fertility and mortality, and provides tables based on the 2004 CIPS data

Title 4	:	*Cambodia Inter-Censal Population Survey 2004*
Operator	:	National Institute of Statistics, Ministry of Planning
Features	:	Includes information on population characteristics, household facilities and amenities.

Title 5	:	*Cambodia-Halving Poverty by 2015-Poverty Assessment 2006*
Operator	:	The World Bank
Specification	:	Lays out the key facts on the nature of poverty, poverty trends, education, health and wealth based on the Cambodia Socio-Economic Survey (CSES).
Web address	:	http://www.worldbank.org

5. ADDRESSES

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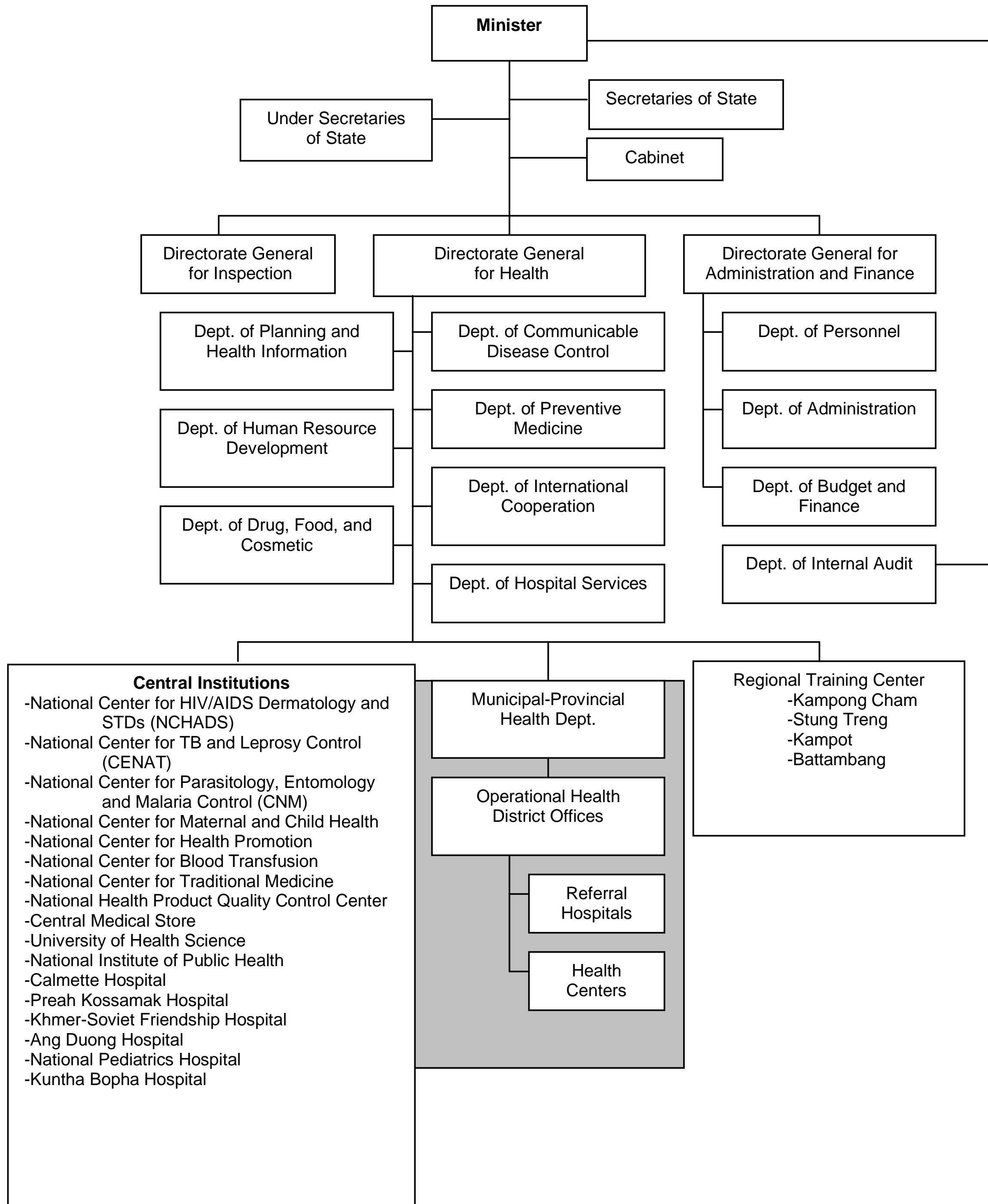
6. ORGANIZATIONAL CHART: Ministry of Health



CAMBODIA — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	181.04				1
2	Estimated population ('000s)	13 388.91	6495.51	6893.39	2008	2
3	Annual population growth rate (%)	1.54	…	…	2008	2
4	Percentage of population					
	- 0–4 years	11.50	12.20	10.90	2005	3
	- 5–14 years	27.40	29.30	25.80	2005	3
	- 65 years and above	4.60	3.90	5.30	2005	3
5	Urban population (%)	19.50	…	…	2008	2
6	Crude birth rate (per 1000 population)	25.00	…	…	2004	4
7	Crude death rate (per 1000 population)	6.70	…	…	2004	4
8	Rate of natural increase of population (% per annum)	1.83 [a]	…	…	2004	4
9	Life expectancy (years)					
	- at birth	…	63.10	67.50	2008	5
	- Healthy Life Expectancy (HALE) at age 60	…	9.70	11.00	2002	6
10	Total fertility rate (women aged 15–49 years)	3.40			2005	3
	Socioeconomic indicators					
11	Adult literacy rate (%)	73.60	84.70	64.10	2004	4
12	Per capita GDP at current market prices (US$)	635.00			2008	7
13	Rate of growth of per capita GDP (%)	6.80			2008	8
14	Human development index	0.58			2006	9
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	…	…	…		
16	Health care waste generation (metric tons per year)	690-1602	…	…	2008	10

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	…	…	…	…	…	…		
	- Type B	484	…	…	9	…	…	2008	11
	- Type C	…	…	…	…	…	…		
	- Type E	…	…	…	…	…	…		
	- Unspecified	…	…	…	…	…	…		
	Cholera	…	…	…	…	…	…		
	Dengue/DHF	9542	4726	4816	65	….	….	2008	12,13
	Encephalitis	1825	…	…	67	…	…	2007	14
	Gonorrhoea	…	…	…	…	…	…		
	Leprosy	306	221	85	…	…	…	2008	15
	Malaria	47 748 [e]	…	…	240	…	…	2008	5
	Plague	…	…	…	…	…	…		
	Syphilis	…	…	…	…	…	…		
	Typhoid fever	…	…	…	…	…	…		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	66 387 [g]	…	…	1188	…	…	2008	11
19	**Diarrhoeal diseases**	22 688	…	…	62	…	…	2008	11
20	**Tuberculosis**								
	- All forms	35 601 [f]	…	…	…	…	…	2007	13,16
	- New pulmonary tuberculosis (smear-positive)	19 421 [f]	…	…	…	…	…	2007	13,16
21	**Cancers**								
	All cancers (malignant neoplasms only)	…	…	…	…	…	…		
	- Breast	169	…	…	2	…	…	2008	11
	- Colon and rectum	…	…	…	…	…	…		
	- Cervix			306			5	2008	11
	- Oesophagus	…	…	…	…	…	…		
	- Leukaemia	…	…	…	…	…	…		
	- Lip, oral cavity and pharynx	…	…	…	…	…	…		
	- Liver	247	…	…	17	…	…	2008	11
	- Stomach	…	…	…	…	…	…		
	- Trachea, bronchus, and lung	212	…	…	20	…	…	2008	11
22	**Circulatory**								
	All circulatory system diseases	…	…	…	…	…	…		
	- Acute myocardial infarction	…	…	…	…	…	…		
	- Cerebrovascular diseases	…	…	…	…	…	…		
	- Hypertension	…	…	…	…	…	…		
	- Ischaemic heart disease	…	…	…	…	…	…		
	- Rheumatic fever and rheumatic heart diseases	…	…	…	…	…	…		
23	**Diabetes mellitus**	1333	…	…	43	…	…	2008	11
24	**Mental disorders**	2630	…	…	20	…	…	2008	11
25	**Injuries**								
	All types	…	…	…	…	…	…		
	- Homicide and violence	…	…	…	…	…	…		
	- Motor and other vehicular accidents	27 403	…	…	…	…	…	2007	17
	- Occupational injuries	…	…	…	…	…	…		
	- Suicide	…	…	…	…	…	…		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Acute respiratory infections	66 387	…	…	495.84 [a]	…	…	2008	11
	2. Tuberculosis	30 799	…	…	230.03 [a]	…	…	2008	11
	3. Traffic accident	22 890	…	…	170.96 [a]	…	…	2008	11
	4. Diarrhoea	22 688	…	…	169.45 [a]	…	…	2008	11
	5. Typhod fever	13 241	…	…	98.90 [a]	…	…	2008	11
	6. Dengue	12 035	…	…	89.89 [a]	…	…	2008	11
	7. Genecological Pathology	10 195	…	…	76.15 [a]	…	…	2008	11
	8. High blood pressure	6920	…	…	51.68 [a]	…	…	2008	11
	9. AIDS	6239	…	…	46.60 [a]	…	…	2008	11
	10. Cataract	6032	…	…	45.05 [a]	…	…	2008	11

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	Leading causes of mortality	Total	Male	Female	Total	Male	Female		
	1. Acute respiratory infections	1220	...	...	9.11 [a]	...	...	2008	11
	2. AIDS	449	...	...	3.35 [a]	...	...	2008	11
	3. Traffic accident	446	...	...	3.33 [a]	...	...	2008	11
	4. High blood pressure	417	...	...	3.11 [a]	...	...	2008	11
	5. Tuberculosis	285	...	...	2.13 [a]	...	...	2008	11
	6. Cardiopath	229	...	...	1.71 [a]	...	...	2008	11
	7. Meningitis	218	...	...	1.63 [a]	...	...	2008	11
	8. Dengue	110	...	...	0.84 [a]	...	...	2008	11
	9. Other tetanus	37	...	...	0.28 [a]	...	...	2008	11
	10. Liver cancer	17	...	...	0.13 [a]	...	...	2008	11
	Maternal, child and infant diseases	Total		Male		Female			
28	Percentage of women in the reproductive age group using modern contraceptive methods					27.20		2005	3
29	Percentage of pregnant women immunized with tetanus toxoid (TT2)					57.00		2008	13
30	Percentage of pregnant women with anaemia					57.10		2005	3
31	Neonatal mortality rate (per 1000 live births)	28.00		...		...		2005	3
32	Percentage of newborn infants weighing at least 2500 g at birth	90.00 [b]		...		...		2005	3
33	Immunization coverage for infants (%)								
	- BCG	98.00		...		...		2008	13
	- DTP3	91.00		...		...		2008	13
	- POL3	91.00		...		...		2008	13
	- Hepatitis B III	91.00		...		...		2008	13
		Number of cases			Number of deaths				
34	Maternal causes	Total	Male	Female	Total	Male	Female		
	- Abortion			3912			...	2008	11
	- Eclampsia			573			...	2008	11
	- Haemorrhage			1668			...	2008	11
	- Obstructed labour			1268			...	2008	11
	- Sepsis			79			...	2008	11
35	Selected diseases under the WHO-EPI								
	- Congenital rubella syndrome	...	...	...	...	...	...		
	- Diphtheria	7	...	...	...	...	...	2008	13
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	4211	...	...	...	...	...	2008	13
	- Mumps	...	...	...	...	...	...		
	- Neonatal tetanus	34	...	...	...	...	...	2008	13
	- Pertussis (whooping cough)	1212	...	...	...	...	...	2008	13
	- Poliomyelitis	0	0	0	...	...	...	2008	13
	- Rubella	4211	...	...	...	...	...	2008	13
	- Total Tetanus	324	...	...	...	...	...	2008	13

	INDICATORS		DATA: Number	DATA: Number of beds	Year	Source
	Health facilities		Number	Number of beds		
36	**Facilities with HIV testing and counseling services**		212		2008	13
37	**Health infrastructure**					
	Public health facilities	- General hospitals	...	...		
		- Specialized hospitals	8	...	2007	11
		- District/first-level referral hospitals	76	...	2007	11
		- Primary health care centres	881	...	2007	11
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		

	INDICATORS	DATA	Year	Source
	Health care financing			
	Total health expenditure			
	- amount (in million US$)	512.96	2007p	19
	- total expenditure on health as % of GDP	5.90	2007p	19
	- per capita total expenditure on health (in US$)	35.51	2007p	19
	Government expenditure on health			
	- amount (in million US$)	148.66	2007p	19
	- general government expenditure on health as % of total expenditure on health	29.00	2007p	19
	- general government expenditure on health as % of total general government expenditure	11.20	2007p	19
	External source of government health expenditure			
	- external resources for health as % of general government expenditure on health	...		
	Private health expenditure			
	- private expenditure on health as % of total expenditure on health	71.00	2007p	19
	Exchange rate in US$ of local currency is: 1 US$ =	4056.17	2007p	19
39	**Health insurance coverage as % of total population**	0.00	2007	19

	INDICATOR		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
40	Human resources for health										
	Physicians	- Number	3393	...	...	...	...	...	...	2008	20
		- Ratio per 1000 population	0.25	...	...	...	...	...	...	2008	20
	Dentists	- Number	258	...	...	...	...	...	...	2008	20
		- Ratio per 1000 population	0.02	...	...	...	...	...	...	2008	20
	Pharmacists	- Number	569	...	...	...	...	...	...	2008	20
		- Ratio per 1000 population	0.04	...	...	...	...	...	...	2008	20
	Nurses	- Number	8491	...	...	...	...	...	...	2008	20
		- Ratio per 1000 population	0.63	...	...	...	...	...	...	2008	20
	Midwives	- Number	3245	...	...	...	...	...	...	2008	20
		- Ratio per 1000 population	0.24	...	...	...	...	...	...	2008	20
	Paramedical staff	- Number	518	...	...	...	...	...	...	2008	20
		- Ratio per 1000 population	0.40	...	...	...	...	...	...	2008	20
	Community health workers	- Number	1638	...	...	...	...	...	...	2004	21
		- Ratio per 1000 population	0.13	...	...	...	...	...	...	2004	21
41	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists									
		Pharmacists	...	...	...	...	...	...	...		

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	208 [c]	...	...	...	...	...	...	2002-04	21
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	**Prevalence of underweight children under five years of age**	28.00 [d]	...	...	2005	5
44	**Infant mortality rate (per 1000 live births)**	66.00	...	...	2005	3
45	**Under-five mortality rate (per 1000 live births)**	83.00	...	...	2005	3
46	**Proportion of 1 year-old children immunised against measles**	89.00	...	...	2008	13
47	**Maternal mortality ratio (per 100 000 live births)**	472.00			2005	3
48	**Proportion of births attended by skilled health personnel**	58.00			2008	11
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	19.00			2008	11
	- Percentage of deliveries in health facilities (as % of total deliveries)	39.00			2008	11
49	**Contraceptive prevalence rate**	27.20 [d]	...	...	2005	3
50	**Adolescent birth rate**	5.20			2005	3
51	**Antenatal care coverage** - At least one visit	44.40			2005	3
	- At least four visits	27.00			2005	3
52	**Unmet need for family planning**	25.00	...	...	2005	3
53	**HIV prevalence among population aged 15-24 years**	...	...	...		
54	**Estimated HIV prevalence in adults**	0.90	...	...	2006	18
55	**Percentage of people with advanced HIV infection receiving ART**	>90.00	...	...	2008	5
56	**Malaria incidence rate per 100 000 population**	294.00	...	...	2007	13
57	**Malaria death rate per 100 000 population**	1.67	...	...	2007	13
58	**Proportion of population in malaria-risk areas using effective malaria prevention measures**	...	...	...		
59	**Proportion of population in malaria-risk areas using effective malaria treatment measures**	...	...	...		
60	**Tuberculosis prevalence rate per 100 000 population**	664.00	...	...	2007	13
61	**Tuberculosis death rate per 100 000 population**	89.00	...	...	2007	13
62	**Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)**	61.00	...	...	2007	13
63	**Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)**	90.00	...	...	2006	13
		Total	Urban	Rural		
64	**Proportion of population using an improved drinking water source**	65.00	80.00	61.00	2006	22
65	**Proportion of population using an improved sanitation facility**	28.00	62.00	19.00	2006	22
66	**Proportion of population with access to affordable essential drugs on a sustainable basis**	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
b	Figure refers to children with normal birthweight among approximately 40% of children in Cambodia with reported birthweight
c	Primary nurses and midwives included in other nursing/auxiliary staff graduated between 2002-2004, Ministry of Health
d	Revised data
e	Figure refers to new outpatient malaria cases, while there were 11 701 severe malaria inpatients
f	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO
g	Figure refers to inpatients only

Sources:	
1	Information furnished by the WHO Representative for Cambodia, 09 March 2004.
2	General Population Census of Cambodia 2008, National Institute of Statistics, Ministry of Planning.
3	National Institute of Public Health, National Institute of Statistics (Cambodia) and ORC Macro, 2006. Cambodia Demographic and Health Survey 2005. Phnom Penh, Cambodia and Calverton, Maryland, USA. National Institute of Statistics and ORC Macro. <http://www.measuredhs.com>.
4	Cambodia Inter-Censal Population Survey 2004, General Report, Ministry of Planning, Department of Demographic Statistics, Censuses and Survey, November 2004.
5	Information furnished by the WHO Representative for Cambodia, May 2009.
6	Demographic Estimates and Revised Population Projections 2007, National Institute of Statistics, Ministry of Planning.
7	Annual Health Financing Report 2008, Cambodia.
8	Ministry of Economy and Finance <http://www.mef.gov.kh
9	United Nations Development Programme (UNDP) 2008. Human Development Indices: a statistical update. New York: UNDP. Available from [http://hdr.undp.org/en/media/HDI2008Tables.xls]
10	Diaz,L. (2008), Draft Mission Report on Integrated Health Care Waste Management in Cambodia, World Health Organization (WPRO)
11	National Health Statistics 2008, Cambodia.
12	Annual Report of the National Centre for Parasitology, Entomology and Malaria Control.
13	WHO Regional Office for the Western Pacific, data received from technical units.
14	Communicable Disease Control Database (CAM EWARN), Ministry of Health.
15	National Leprosy Control Program, Ministry of Health.
16	National Tuberculosis Program, Ministry of Health.
17	Government of Cambodia National Road Traffic Committee (2008): Annual Report on Cambodia Road Traffic Accident and viction Information Syatem (RTAAVIS).
18	National Center for HIV/AIDs, Dermatology and STI, Ministry of Health.
19	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html.
20	Personnel Department, Ministry of Health.
21	Human Resources Database, Minstry of Health, 2004 (civil service employees).
22	World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). Progress on Drinking Water and Sanitation: Special focus on Sanitation. UNICEF, New York and WHO, Geneva, 2008. [http://www.wssinfo.org/en/40_mdg2008.html].

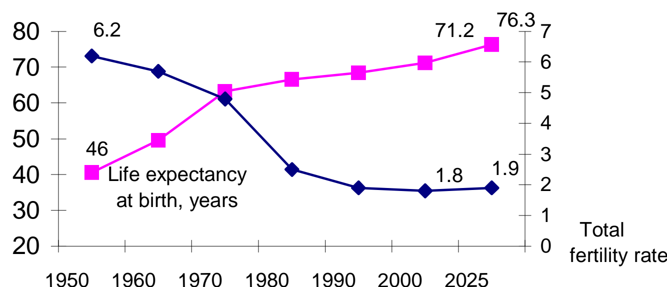
CHINA

1. CONTEXT

1.1 Demographics

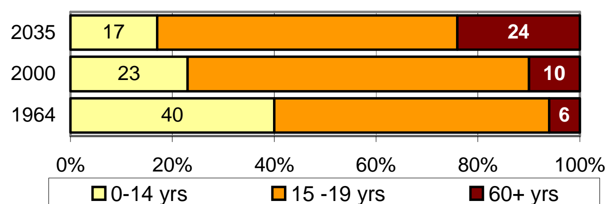
China is the most populous country in the world, with more than 1.3 billion citizens. Population growth rates have slowed and life expectancy has risen in recent decades (Figure 1).[1] While a child born in China in the 1950s could expect to live 46 years, one born in 2000 could expect to live for over 71 years.

Figure 1. Life expectancy at birth and total fertility rates, 1950-1955 to 2025-2030 projections



Rapid success in reducing fertility, however, has had several important impacts. First, the 2000 census estimates that 117 boys were born for every 100 girls for first births, but this ratio quickly rises to 152 for every 100 for second births.[2] In addition, China's population is ageing rapidly. One in four people living in the country in 2035 will be aged 60 years or older.[3] Population ageing leads to a shift towards chronic diseases and disabilities and pressures on the health system to address more complex health conditions that generate higher costs. In addition, the tradition of providing long-term care at home for elderly parents and grandparents will be challenged in the light of the one-child policy.

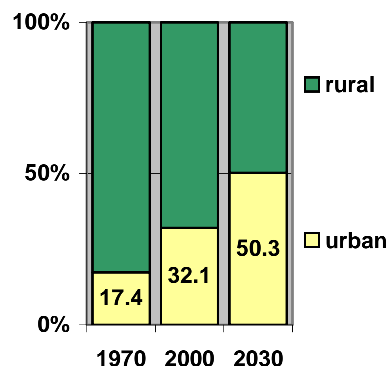
Figure 2. Population of China by age group (%), 1964, 2000, 2035



In line with the Government's policy to accelerate urbanization, half of the population will be living in urban areas by 2030 (Figure 3),[4] placing great pressure on water, air and electricity resources.

[1] *EarthTrends*. World Resources Institute.
[2] Population Reference Bureau
[3] Population Reference Bureau
[4] *Op cit.* Ref 1.

Figure 3. Urban population (%), 1970, 2000, 2030



1.2 Political situation

China's 11th Five Year Plan (2006-2010) forms the basis of the Government's current economic and social development efforts. In continuity with the 10th Five Year Plan, the 11th Plan aims to sustain the rapid and steady development of China's 'socialist market economy' while, in addition, aiming to achieve the 'five balances':

- *Balance between urban and rural development*: The gap between urban and rural areas increased during the 1990s for some important economic and health indicators.
- *Balance in regional development*: The Government is promoting development in the western regions in an effort to address the regional imbalances that have grown over time.
- *Balance in social and economic development*: The Government has made a commitment to focus more on social issues, including poverty, education, medical care and public health, in its overall goal to build a well-rounded better-off society.
- *Balance between human beings and nature*: Industry, agriculture and humans are competing for scarce resources, including water and air.
- *Balance between domestic and international development*: This balance promotes international cooperation and emphasizes the importance of fulfilling international commitments.

The 11th Plan includes two key quantitative targets:

- to achieve an annual gross domestic product (GDP) growth rate of 7.5%, with the goal of doubling 2000 per capita GDP by 2010; and
- to reduce energy consumption per unit of GDP by 20%, and the total discharge of major pollutants by 10%, by 2010.

It also includes a number of strategic priorities and major tasks, including: rebalancing China's pattern of growth; deepening reforms and opening up further to the outside world; constructing a 'new socialist countryside'; promoting more balanced development among the different regions; and increasing capacity for independent innovation.

To enable a larger proportion of the population to take advantage of the opportunities afforded by economic growth, future programmes aim to reduce poverty; develop the education, health, technology, scientific and cultural fields, among others; and strengthen the social safety net. The Plan is referred to as a 'people's agenda' because it focuses on inclusive social development that will make a measurable difference in people's lives by 2020.

1.3 Socioeconomic situation

China has made impressive gains in improving living standards, reducing poverty and maintaining strong economic growth since initiating market reforms in 1979. GDP averaged a real annual growth rate of

10% during the period from 1979 to 2006. During 1979-1984, economic growth was driven by the shift of labour from agriculture to rural industry. Between 1985 and 1992, growth benefited from improved efficiency in capital allocation stemming from price liberalization and from opening up to foreign trade. Further opening up of the economy to foreign direct investment in the 1990s stimulated technological progress.

China's earlier high health standards have played a pivotal role in the country's economic success. Impressive growth performance has been correlated with reductions in poverty and advancements in social development. Using the standard international poverty line of US$ 1 per day, an estimated 400 million people in China have been lifted out of poverty over the past 30 years. This is primarily a result of the liberalization of agriculture and other rural industries. At China's official poverty line, the rural population living in absolute poverty with an annual per capita net income below 668 Yuan (US$ 87) decreased from 250 million in 1978 (31% of the rural population) to 24 million in 2005 (3% of the rural population). New estimates of poverty using purchasing power parity (PPP) suggest even greater gains in poverty from 71%-77% in 1981 to 13%-17%. By whatever measure, China alone has accounted for over 75% of poverty reduction in the developing world over the last 30 years.

The global economic crisis has shifted downward projections of GDP growth to 6%-7% for 2009. Driven by a drop in the property sector and a weakened export market, it has been estimated that the economic decline has put 20 million migrant workers out of work in 2008-2009. The Government recognized the economic downturn in late 2008, and began to plan for its economic stimulus package. Approved in March 2009, the stimulus package amounts to 4 trillion Yuan (US$ 585 billion) for 2010-2011, for 10 key sectors. Of that total, 1.2 trillion is from the Central Government, and the remainder is to come from local governments, SOE, or the private sector. Some 63% of the total is dedicated to infrastructure (public and post-quake reconstruction). In addition to the stimulus package, the Central Government is investing substantial resources in alleviating the impact of the economic crisis in 2009, including investing 293 billion Yuan (US$ 43 billion) to improve the social safety net, offering 5 trillion Yuan in additional loans, and investing 42 billion Yuan (US$ 6.2 billion) to stimulate employment.

1.4 Risks, vulnerabilities and hazards

The projected decline in local revenues implies that local governments may be unable to mobilize resources for implementation of the health reform agenda. It could also lead to pressure on local governments to find resources locally via off-budget sources, including fees for public services. Central Government may view public health policies as less important than encouraging consumption (for example, fiscal policies for 2009 include maintaining stable prices for edible oils and increasing sales of tobacco and alcohol). The major health threats in underdeveloped areas of rural China include unsafe water, lack of sanitation, undernutrition, vitamin and mineral deficiencies, and indoor pollution. Emerging health threats related to the environment, workplace and lifestyle are becoming more evident. Air pollution and water contamination by industrial and municipal waste, as well as overuse of chemical fertilizers and pesticides, annually cost China over 400 000 lives.[1, 2]

The linkages between health and economic growth are intensifying as China seeks to sustain economic growth. The benefits of this growth, however, have not been shared equally and gaps exist in socioeconomic indicators between geographic regions, rich and poor households, urban and rural residents, and migrant and resident populations within cities. Up to 30% of poor people state that health is the single most important cause of their poverty. Ill-health can lead to poverty through reduced earning capacity and high out-of-pocket medical expenses that can be financially catastrophic. Poor health contributes to cycles of poverty that reduce physical capacity and erode economic productivity.

[1] Guang X. An estimate of the economic consequences of environmental pollution in China. Smil V, Yushi M, eds. *Project on environmental scarcities, state capacity and civil violence*. Committee on International Security Studies, 1997.

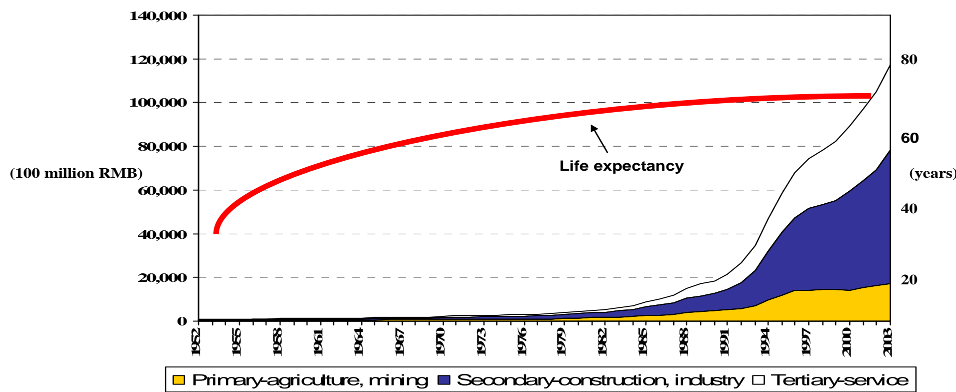
[2] Relatively easy availability of pesticides in rural markets and homes is also associated with China's internationally very high suicide rates among young rural women.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Publicly financed health programmes provided access to basic care during the 1960s and 1970s, especially in rural areas. Health outcomes continued to improve between 1980 and 2005, although at a slower pace. Figure 4 shows the increase in life expectancy over almost 50 years in comparison with economic growth. Other health indicators improved as well. By 2007, the maternal mortality ratio had declined to 36.6 per 100 000 livebirths, and the infant and under-five mortality rates to 15.3 and 18.1 per 1000, respectively. Immunization coverage of one-year-olds against tuberculosis and measles exceeded 90%, while malnutrition rates among the under-fives had declined to less than 10%. A critical health challenge relates to inequality in health outcomes. Life expectancy is also generally lower in rural provinces and those with higher poverty rates.

Figure 4. Life expectancy and GDP, 1952-2003



Source: China Statistical Yearbook 2004 and UNIDO analysis

2.2 Outbreaks of communicable diseases

China is one of 22 high-burden countries for tuberculosis, with the prevalence for all forms of the disease estimated at 194 per 100 000 people in 2007. WHO estimates that, each year, there are approximately 1 million new cases, of which 500 000 are infectious, smear-positive pulmonary disease.[1] Every year, approximately 200 000 people in China die due to TB . Multidrug-resistant tuberculosis (MDR-TB) is becoming a critical public health threat, and WHO estimates that China has 65 853 multidrug-resistant cases among new cases and 64 694 MDR among previously treated cases.

An estimated 700 000 people were living with HIV at the end of 2007. Although HIV prevalence in adults is currently low (0.05%), several provinces in central, southern and western areas of the country face serious concentrated epidemics, with the epidemic spilling into the general population in some areas. Yunnan, Henan and Guangxi provinces are the worst affected, with over 30 000 cumulative HIV cases reported in 2005. Sexual transmission is now the main mode of transmission. Among those living with HIV reported between January and October 2007, 37.9% of infections were through heterosexual transmission, 3.3% through homosexual transmission, and 29.4% via injecting drug use.[2] There are also indications of increasing HIV infection rates at antenatal sites.

Emerging disease threats include HIV/AIDS, severe acute respiratory disease syndrome (SARS) and influenza. Emerging infectious diseases, such as SARS, avian influenza (H5N1), and H1N1 type A influenza are important because of their epidemic potential. In addition to the illness and death they

[1] *Global tuberculosis control 2009: surveillance, planning, financing*. Geneva, World Health Organization, 2009.
[2] *Joint assessment of HIV/AIDS prevention, treatment and care in China*. Beijing, United Nations China, State Council AIDS Working Committee Office and United Nations Theme Group on AIDS in China, 2007.

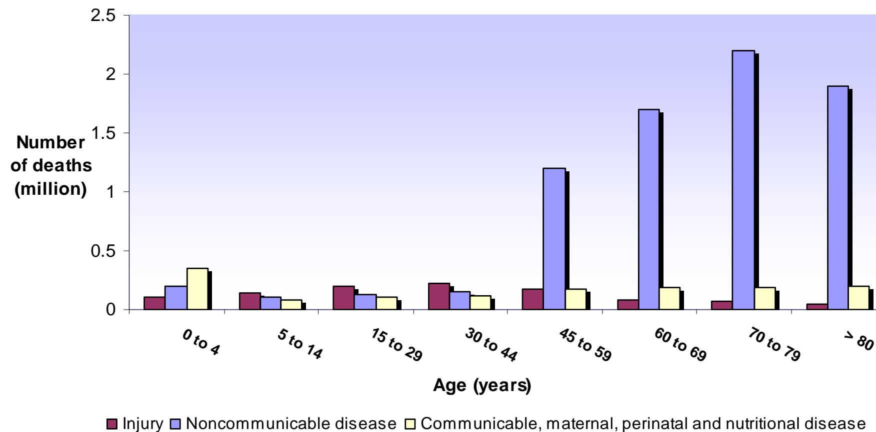
bring, they can cause social instability and considerable financial and economic loss. The SARS outbreak in 2003 affected 5327 people in mainland China and killed 348. Since 2003, 38 people in China have been reported to have H5N1 and 26 of them have died.

While China remains vulnerable to the health threats posed by emerging and re-emerging infectious diseases, known and preventable diseases such as malaria, cholera, schistosomiasis and filariasis continue to occur in the country despite the availability of effective treatment and preventive measures. The large-scale national malaria control programme, launched in 1955, successfully reduced the 30 million malaria cases that had been occurring annually before 1949. However, China still faces major malaria control issues in the border areas of the country's tropical south, and in the central area of the country, where malaria has re-emerged since 2001. Nineteen of 31 provinces, municipalities and autonomous regions are considered malaria-endemic, that is, they have reported at least one locally acquired case in the past three years. However, higher endemic counties have been concentrated in eight provinces. In 2008, all counties with incidence ≥1.0 per 10 000 came from Anhui, Yunnan, Henan, Hainan, Hubei, Jiangsu, Guizhou and Tibet, accounting for 86% of confirmed cases. In 2007, the malaria incidence rate was 2.0 per 100 000 population.

2.3 Leading causes of mortality and morbidity

According to the Third National Health Service Survey, conducted in 2003, a decline in infectious diseases of the respiratory and digestive systems was seen from 1998 to 2003, while circulatory, endocrine, digestive and kinetic system disorders rose continually over the same period. The disease profile resembles that of a developed country, with some 85% to 90% of deaths due to noncommunicable diseases and injuries. Figure 5 shows causes of death by age in 2003. Among the remaining infectious diseases, hepatitis B infection, TB and lower respiratory infections still account for significant mortality and lost DALYs.

Figure 5. Number of deaths by cause and age, 2003



Source: WHO World Health Report (2005)

2.4 Maternal, child and infant diseases

The country has remained polio-free since 1994 and the incidence of immunization-targeted diseases, such as measles and diphtheria, has declined significantly. Currently the Expanded Programme on Immunization also includes hepatitis B vaccine, with a rate of 88% for timely Hep B birth dose delivery in 2006. The Government recently expanded the immunization programme to include vaccines to prevent 12 diseases (TB, poliomyelitis, diphtheria, tetanus, pertussis, measles, hepatitis B, Japanese encephalitis, meningococcal meningitis, hepatitis A, rubella, mumps and measles, as well as leptospirosis, anthrax and epidemic hemorrhagic fever). Vaccines now exist for pneumonia and diarrhoea in young children and the Government will be considering whether and how to introduce these vaccines in the future. The 11th Five Year Plan stipulates that the immunization rate should reach more than 90% by 2010. The 11th Five

Year Plan also sets 2010 targets for infant mortality (17 per 100 000 live births) and maternal mortality (40 per 100 000 live births).

China has been remarkably successful in achieving maternal and child health goals, exceeding national targets. While regional disparities exist, since the mid-1980s, the infant and under-five mortality rates in China as a whole have continued to fall. National statistics show that the MMR decreased from 80 to 36.6 per 100 000 live births between 1996 and 2007,[1,2] and reductions occurred in the infant mortality rate (IMR) and under-five mortality rate (U5MR) to 15.3 and 18.1 per 1000 live births, respectively, in 2007.[3] Like other health indicators, MMR, IMR and U5MR are much higher in western China compared with coastal areas. Girls also continue to be disadvantaged. Significantly, the U5MR is much higher for girls (41 per 1000 live births) than for boys (30 per 1000 live births).

2.5 Burden of disease

Global burden-of-disease estimates produced by WHO indicate that 80% of deaths in China are due to noncommunicable diseases and injuries. Cerebrovascular disease, chronic obstructive pulmonary disease and heart disease account for nearly 50% of all deaths. The rankings based on disability-adjusted life years (DALYs)[4] also highlight the emergence of noncommunicable chronic diseases and injuries as the predominant health conditions. Much of the disability and death attributable to chronic diseases, particularly among working-age adults, could be reduced through a reduction in risk factors, including improvements in air quality, water and sanitation; reductions in tobacco and alcohol use; improvements in diet and nutrition; and increased exercise. It is projected that disabilities and deaths related to chronic diseases will result in a US$ 550 billion loss in productivity between 2005 and 2015.

The disease burden varies by age group. It is estimated that 70% of deaths among children less than five years of age are attributable to maternal, perinatal or nutritional conditions, many of which could be addressed through high quality health care, including sepsis, pneumonia, diarrhoea, measles and tetanus. Among children aged five to 14 years, the number of deaths is a very small part of the total disease burden; however, most of these deaths are attributable to injuries and accidents, including drowning and road accidents. For those between the ages of five and 44 years, injuries and violence account for an even larger share of deaths, at over 50%. Some 69% of disability and 80% of deaths among adults and older people are due to noncommunicable diseases.

Among the remaining infectious diseases, hepatitis B, TB and lower respiratory infections still account for significant mortality and lost DALYs, particularly among children. While infectious diseases attract enormous interest both domestically and internationally, injuries and violence contribute about 11% of total mortality each year, compared with 8.6% attributed to infectious diseases. In 2007, most injury deaths were attributed to suicide (28%), road traffic injuries (25%) and drowning (11%), with the suicide rate for women estimated to be 25% higher than that for men, and traffic injury mortality rates twice as high for males than for females.[5] Mental and neurological disorders are responsible for about 20% of the overall disease burden in China. More than 30 million children and adolescents under 17 years of age have behavioural and emotional problems, of which about 50%-70% need mental health services, but remain untreated.[6]

[1] National Maternal and Child Health Surveillance System
[2] *Millennium Development Goal Indicators: the official United Nations site for the MDG Indicators*. New York, United Nations Statistics Division, Department of Economic and Social Affairs. Available from: http://millenniumindicators.un.org/unsd/mdg/Default.aspx
[3] National Maternal and Child Health Surveillance System
[4] DALY is a statistical formulation widely used to put a specific number on the combined loss of health and loss of years of life due to disability from disease or injury.
[5] *Turning the tide: injury and violence prevention in China*. Beijing, World Health Organization, 2006.
[6] *National Project on Mental Health (2002-2010)*, China Department for Disease Control and Prevention, MoH 2002.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

China's political commitment to health system reform was declared at the highest level when President Hu Jintao stated in October 2006 that all Chinese people should have access to affordable essential health services. The Government established a 14-ministry working group to be in charge of outlining future health care reforms, appointing the National Development Reform Commission and the Ministry of Health as lead ministries.

After three years of deliberation, in 2009, the group announced their national health reform blueprint. The plan's main objective is to provide universal coverage of basic health care by the end of 2020. Reforms are proposed in five areas: the public health system, the medical care delivery system, the health security system, the pharmaceutical system, and pilot hospital reform. The initial three-year implementation plan for 2009-2011 emphasizes several programmes, including improving the social health security system (urban employees, urban residents, rural CMS, and medical assistance programmes); establishing an essential medicines system; strengthening primary-level health care facilities; reducing disparities in public health care between regions; and piloting reforms in public hospital financing by reducing the reliance on drug sales for operational costs and salaries. The Government has committed to spend 850 billion Yuan (US$ 124 billion) on fulfilling the three-year plan (est 0.8% annual increase in [2008] GDP), 39% from Central Government. The Central Government allocation to implementing health reform in 2009 amounts to 118 billion Yuan, including 30.4 billion Yuan (US$ 4.4 billion) dedicated to insurance, 24.6 billion Yuan (US$ 3.6 billion) for public health and disease control, and 6.5 billion Yuan (US$ 2.4 billion) for construction.

Specific targets for 2009 include: (1) 29 000 township health centres built; (2) revised essential medicines list published; and (3) 15 Yuan government subsidy for public health. Targets for 2011 include: (1) 90% health insurance coverage for both urban and rural areas; (2) 120 Yuan government subsidy to urban residents' basic medical insurance and the new rural coooperative health insurance; and (3) 2000 new county hospitals, 3700 urban community health centres and 11 000 community health stations built or renovated.

3.2 Organization of health services and delivery systems

Economic growth has enabled wealthier households to benefit more from access to health care and medical technologies. However, most low-income households face important barriers in accessing affordable essential health services and medicine. Despite large-scale government infrastructure investment, the cost of health services remains a major barrier to accessing quality services, particularly for people in remote and rural areas.[1] Increasing levels of user fees are resulting in low usage of health services among low-income households, as medical care expenditure and the cost of health services are rapidly outpacing average incomes. Lack of attention to communicable disease treatment, in particular, could have a negative impact on the health of the community as a whole.[2]

While health insurance coverage is increasing, especially in rural areas, many people are underinsured and continue to face high out-of-pocket costs. While the health insurance schemes, particularly in rural areas, report high coverage, benefits are often limited to catastrophic illness; inpatient medical services frequently require pre-payment and reimbursement can be as low as 20%-30% of the total bill.[3] The technical quality of care is affected by incentives in the existing provider payment mechanisms. Benefits are also not portable across localities, which is a major concern for migrant workers.

Implementation of the Medical Financial Assistance (MFA) scheme for both the urban and rural poor depends on local fiscal capacity and thus access is inequitable across regions. For example, richer

[1] *An analysis report of the National Health Services Survey in 2003*. Tables 3-8-9, 3-8-6. Beijing, MoH 2004.
[2] Hu S, Liu X, Peng Y. Assessment of antibiotic prescription in hospitalized patients at a Chinese university hospital. *Journal of infection*, 2003, 46(3):161-163.
[3] Among many studies, including: Liu Y. Development of the rural health insurance system in China. *Health policy and planning*, 2004, 19(3):159-165.

municipalities, such as Beijing and Shanghai, can offer MFA to families living below the poverty line, but rural counties are generally supported by more modest local government budgets. Large geographical differences exist in health outcomes. Remote and rural regions face problems in making specialized care available to their populations, including emergency obstetric services and trauma, adequate facilities, and trained health professionals. This presents a major problem in implementing the government goal of universal health care access.

The availability and affordability of essential medicines needs to be improved. Inadequate access, quality and use of medical products and technologies are rooted in different factors, including the absence of a national medicines policy to guide and coordinate different stakeholders and policies in the pharmaceutical sector; the absence of a generics-substitution policy; and financial incentives in the health care system that contribute to irrational use. Senior-level officials have publicly recognized the problems in the pharmaceutical sector and the insufficient access to essential medicines. The Government is in the process of outlining reforms to improve access to quality safe essential medicines, modify the pricing system and strengthen medicine production and distribution systems.

3.3 Health policy, planning and regulatory framework

A major component of the health reform aims to better define government roles in the health sector. Important efforts have been made to reduce ambiguity and redundancy in responsibilities, as well as the competing interests among departments and in government roles in health across agencies.

Regulations related to public health and health care delivery systems are underdeveloped and poorly enforced, and monitoring capacity is weak. Most health facilities lack clinical governance systems, and important gaps exist in the regulatory system to ensure the quality of care. For example, hospital accreditation is not linked to comprehensive safety records, and doctors and health institutions are not restricted in their engagement in commercial incentive programmes. Deficiencies in clinical quality have resulted from financial incentives in the delivery system, lack of clinical treatment guidelines, inadequate government resource allocation, weak regulation among service providers, and the low capacity of health care personnel.

Safety standards and health regulations – pertaining to food, medicines, environment, roads and traffic, occupational and living conditions, blood, hospitals, medicines and laboratories, among others – are inconsistent in their design and enforcement across sectors and localities. Weaknesses in safety regulation and enforcement are particularly apparent in rural areas, where township and village enterprises operate in a largely unregulated fashion and generate the majority of occupational diseases, disabilities and deaths.

The overwhelming majority of the Chinese population seek out traditional Chinese medicine (TCM) to address their health problems. The Government promotes the development of a modern TCM industry, as well as the integration of TCM into the national health care system and integrated training of health care practitioners. In 2008, the Minister of Health identified several key priorities for TCM development, including increasing policy support for TCM , strengthening research on key TCM issues and building capacity for TCM research, training prominent TCM doctors and establishing well-known TCM hospitals and departments, improving and adapting TCM services to meet public needs, increasing access and quality of TCM services in rural and urban communities, and strengthening international cooperation and communication on TCM.[1]

However, a number of challenges to further development of TCM remain. There is a lack of unified, systematic regulations for assessing the safety and efficacy and ensuring the quality of TCM products. In addition, there are no national TCM standards or guidelines for TCM clinical trials. Evidenced-based TCM product testing and research are still needed. In view of the vast differences in the qualifications of TCM practitioners, the quality of TCM education needs to be strengthened and the management and supervision of TCM institutions need to be regulated.

[1] Word Report by Minister Chen Zhu at the Annual Health Conference, 2008.

3.4 Health care financing

Total health expenditures rose from 3% of GDP in 1978 to 4.5% of GDP, or US$ 112 per person in 2007.[1] Of this total, the Government contributed 20%, social health expenditure amounted to 34%, and individual out-of-pocket payments to 45%. Contributions from both the Government and social health expenditure have declined as a proportion of total health expenditure. The decline in the Government's contribution and the increase in individual out-of-pocket payments is due in part to rapidly escalating health care costs and the lack of incentives for cost or quality control in the health delivery system.

Public resource allocation is highly decentralized.[2,3] Township, county, prefecture and provincial governments administer about 90% of all government spending on health. While localities are given the responsibility to finance health care, however, local governments are unable to raise revenue through taxes to finance basic public services, especially in resource-poor communities. Government spending on health tends to be lower in provinces with higher numbers of rural poor. Thus, poor localities have access to fewer and lower quality services, for which they must pay out of pocket. The health reform plan aims to alleviate these differences and the Government has committed to spend 15 Yuan per person on a basic public health package.

Under the current health system, local health departments and other health care providers are expected to generate a significant share of their own operating budgets.[4] This provides an incentive to focus on more profitable curative care and medicines to generate larger profit margins.[5] Service fees are applied to public health goods, such as immunization and communicable disease control programmes that have broader economic benefits, leading to underutilization of health services by the poor and underinvestment in these programmes from a societal welfare standpoint. The health reform plan aims to resolve this problem by increasing public spending on basic health services, as well as reducing the reliance on medicines and service sales to fund facility operational costs.

3.5 Human resources for health

Key challenges in improving human resources for health include: improving the human resource strategy for health development; increasing capacity and technical qualifications; distributing staff more evenly nationwide; and creating a more rational balance among the different health care professions.

Over the last several decades, the Government has prioritized increasing the quality and technical capacity of health personnel with two to six years of professional training. However, capacity issues remain: 47% of health professionals have only technical secondary school diplomas and only 14% of health professionals have bachelor degrees or above.[6]

In addition, qualified staff are not well distributed across the country.[7] As in many other countries, poor and rural areas have not been able to attract and retain qualified medical staff.[8] After economic reforms were initiated, many experienced health professionals moved to hospitals in cities and areas with well-paying clinics. This poses an enormous barrier to the delivery of quality basic health services in remote and rural regions.

China is one of the few countries where doctors outnumber nurses. In 2008, China had 1.6 physicians per 1000 population and 1.2 nurses per 1000 population (compared with 15.0 physicians and 44.0 nurses per 10 000 people in Singapore, and 19.4 physicians and 38.2 nurses per 10 000 people in the Republic of

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[1] *China National Health Account report (2007).* Beijing, National Health Economic Institute, 2007.

[2] In China, subnational governments are responsible for 70% of government expenditures. In contrast, in most industrialized countries, subnational governments are responsible for less than 30% of the government budget.

[3] *National development and sub-national finance:review of provincial expenditures*. Washington DC, World Bank, 2002.

[4] Liu XZ, Xu LZ: Evaluation of the reform of public health financing in China. *Chinese health resource*, 1998,1(4):151-154.

[5] Liu XZ, Liu YL, Chen NS. Chinese experience of hospital price regulation. *Health policy and planning*, 2003,15:157-63.

[6] Zhang JH, *Situation and development of the health workforce in China*. Beijing, Health Human Resources Development Center (HHRDC) Ministry of Health, China, 2007.

[7] Wu XL, Rao KQ. 2001. An analysis of health resource development in China since 1980. *China health economics*, 2001,11:38-41.

[8] Rao K. *Initial analysis of the 3rd National Health Service Investigation*. Beijing, Ministry of Health, July 1, 2004.

Korea).[1] The relatively high number of doctors compared with nurses raises questions about public investment in training and deployment to achieve the most cost-effective means of service delivery.

3.6 Partnerships

The Government has made many international commitments to a wide range of health targets, best exemplified by its acceptance of the Millennium Development Goals (MDGs). Six of the eight MDGs either directly or indirectly relate to health, calling for reductions in child malnutrition, child and maternal mortality, communicable diseases such as HIV/AIDS, malaria and tuberculosis; and increasing access to essential medicines. Supporting China's achievement of the MDGs provides an important organizational framework for donor coordination in the country, and the majority of donors have reflected this in their country assistance plans. The United Nations Theme Group on Health (UNTGH) is a government-donor forum for cooperation on health issues in China. WHO chairs and acts as Secretariat for the UNTGH, which comprises United Nations agencies, bilateral and multilateral donors, government agencies and nongovernmental organizations.

China is ahead of schedule in achieving most of the MDGs, benefiting from the positive effects of both rapid economic growth and targeted government programmes. It may be an appropriate time to develop indicators that reflect the current health challenges, including for the control of noncommunicable diseases, and stronger health policies and systems that could address inequalities in health outcomes.

The country has been taking a leading role in improving public health in the Region and the world, and has organized several important regional and global health events, promoting both multilateral and bilateral partnerships. In 2005, China initiated a resolution on Public Health in the United Nations, recommending that public health be further integrated into national economic and social development schemes as a basis for promoting sustainable growth with equity around the world.

China also made an important commitment to better health by signing the Framework Convention on Tobacco Control in November 2003. Ratified by China's National People's Congress in August 2005, the convention became effective in January 2006. China's Ministry of Health has taken further steps to improve public awareness of the health risks related to smoking and inhaling second-hand smoke, and to reduce smoking in public areas.

3.7 Challenges to health system strengthening

It is widely recognized that increasing the level of government spending needs to be done in conjunction with reform and regulatory programmes that provide incentives for quality, performance and health outcomes. WHO provides assistance to the Government in implementing its health sector reforms and national strategies that aim to achieve universal coverage of essential health care services by 2020 and to improve quality, equity and efficiency.

Since 2006, the Government has made an enormous effort to define its role in health more clearly. As many countries around the world attest, launching comprehensive health system reforms is very difficult on political and ethical, as well as technical grounds, and such reforms are further complicated by complex governance structures. In China, as in other countries, the single biggest challenge is securing the political will to balance the influence of interest groups and promote the well-being of the entire population, regardless of political influence, socioeconomic status or cultural background. The involvement of many stakeholders in the ongoing implementation of health reform gives every hope that China will succeed and set yet another example of successful reform that can inspire other countries.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	中华人民共和国国民经济和社会发展第十一个五年规划纲要
Specification	:	China's 11th Five-Year Plan
Web address	:	http://www.china.org.cn

[1] Core Health Indicators (2005). Geneva, World Health Organization.

Title 2	:	*2007 NPC & CPPCC Sessions*
Features	:	The National People's Congress (NPC) approved reports on government work, economic and social development, the central and local budgets, the work of the NPC Standing Committee, and the work of the Supreme People's Court and the Supreme People's Procuratorate
Web address	:	http://japanese.china.org.cn
Title 3	:	*Report on China's Economic and Social Development Plan*
Features	:	Report on the Implementation of the 2006 Plan for National Economic and Social Development and on the 2007 Draft Plan for National Economic and Social Development, delivered at the Fifth Session of the Tenth National People's Congress on March 5, 2007
Web address	:	http://www.china.org.cn
Title 4	:	*Building a new socialist countryside*
Features	:	China's central Government recently released an important policy document on "building a new socialist countryside," and established it as one of the primary objectives of the 11th Five-Year Guidelines for National Economic and Social Development (2006-10)
Web address	:	http://www.china.org.cn
Title 5	:	*The outline of the Eleventh Five-Year Plan*
Web address	:	http://en.ndrc.gov.cn/
Title 6	:	*Health, poverty and economic development*
Operator	:	WHO and China State Council Development Research Center. Beijing. 2006.
Web address	:	http://www.wpro.who.int/china
Title 7	:	*A health situation assessment of the People's Republic of China.*
Operator	:	United Nations Health Partners Group in China, July 2005.
Web address	:	http://www.wpro.who.int/china

5. ADDRESSES

MINISTRY OF HEALTH

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Website	:	http://www.moh.gov.cn
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WHO REPRESENTATIVE IN THE PEOPLE'S REPUBLIC OF CHINA

Office Address	:	World Health Organization China Office 401 Dongwai Diplomatic Office Building No. 23 Dongzhimenwai Dajie Chaoyang District Beijing 100600, PR China
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Telephone	:	(8610) 65327189 to 92
Fax	:	(8610) 65322359
Website	:	http://www.wpro.who.int/china

CHINA

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	**Area** (1 000 km^2)	9600.00			2007	1
2	**Estimated population** ('000s)	1 328 020.00	683 570.00	644 450.00	2008	2
3	**Annual population growth rate** (%)	...	...	....		
4	**Percentage of population**					
	- 0–4 years	...	...	...		
	- 5–14 years	19.00 [a]	...	...	2008	2
	- 65 years and above	8.30	...	...	2008	2
5	**Urban population** (%)	45.70	...	...	2008	2
6	**Crude birth rate** (per 1000 population)	12.14	...	...	2008	2
7	**Crude death rate** (per 1000 population)	7.06	...	...	2008	2
8	**Rate of natural increase of population** (% per annum)	0.51	...	...	2008	2
9	**Life expectancy** (years)					
	- at birth	71.40	69.60	73.70	2000	3
	- Healthy Life Expectancy (HALE) at age 60	...	13.10	14.70	2002	4
10	**Total fertility rate** (women aged 15–49 years)	1.90			2001	5
	Socioeconomic indicators					
11	**Adult literacy rate** (%)	88.96	94.14	83.85	2005	6
12	**Per capita GDP at current market prices** (US$)	3312.63 [b]			2008	2
13	**Rate of growth of per capita GDP** (%)	...				
14	**Human development index**	0.76			2006	7
	Environmental indicators	Total	Urban	Rural		
15	**Proportion of vehicles using unleaded gasoline** (%)	...	...	...		
16	**Health care waste generation** (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	**Selected communicable diseases**	Total	Male	Female	Total	Male	Female		
	Hepatitis viral	1 407 664	...	...	1049	...	...	2008	8
	- Type A	56 052	...	...	10	...	...	2008	8
	- Type B	1 169 569	...	...	831	...	...	2008	8
	- Type C	108 446	...	...	123	...	...	2008	8
	- Type E	18 525	...	...	28	...	...	2008	8
	- Unspecified	55 072	...	...	57	...	...	2008	8
	Cholera	168	...	...	0	...	...	2008	8
	Dengue/DHF	202	...	...	0	0	0	2008	9
	Encephalitis	2975	...	...	142	...	...	2008	8
	Gonorrhoea	150 818	...	...	1	...	...	2008	8
	Leprosy	1526	...	...	...	...	...	2007	9
	Malaria	29 247	...	...	18	...	...	2007	9
	Plague	2	...	...	2	0	0	2008	8
	Syphilis	257 474	...	...	60	...	...	2008	8
	Typhoid fever	15 641	...	...	7	...	...	2008	8

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	**Number of new cases**			**Number of deaths**				
		Total	**Male**	**Female**	**Total**	**Male**	**Female**		
18	**Acute respiratory infections**	…	…	…	213 900 [c]	…	…	2004-2005	10
19	**Diarrhoeal diseases**	…	…	…	…	…	…		
20	**Tuberculosis**								
	- All forms	979 502 [o]	…	…	…	…	…	2007	9
	- New pulmonary tuberculosis (smear-positive)	465 877 [o]	…	…	…	…	…	2007	9
21	**Cancers**								
	All cancers (malignant neoplasms only)	2 740 000	…	…	1 885 500 [c]	…	…	2004-2005	10
	- Breast	…	…	…	…	…	32 668	2004-2005	10
	- Colon and rectum	…	…	…	85 719 [c]	52 397 [c]	33 322	2004-2005	10
	- Cervix			…			16 020	2004-2005	10
	- Oesophagus	…	…	…	185 319 [c,d]	134 055 [c]	51 265	2004-2005	10
	- Leukaemia	…	…	…	…	…	…		
	- Lip, oral cavity and pharynx	…	…	…	…	…	…		
	- Liver	…	…	…	314 266 [c]	235 446 [c]	78 820 [c]	2004-2005	10
	- Stomach	…	…	…	298 020 [c]	209 588 [c]	88 432 [c]	2004-2005	10
	- Trachea, bronchus, and lung	…	…	…	373 083 [c]	266 068 [c]	107 015 [c]	2004-2005	10
22	**Circulatory**								
	All circulatory system diseases	…	…	…	…	…	…		
	- Acute myocardial infarction	…	…	…	…	…	…		
	- Cerebrovascular diseases	13 160 000	…	…	1 895 800 [c]	…	…	2004-2005	10
	- Hypertension	73 100 000	…	…	…	…	…	2004-2005	10
	- Ischaemic heart disease	23 140 000	…	…	1 252 000 [c]	…	…	2004-2005	10
	- Rheumatic fever and rheumatic heart diseases	…	…	…	…	…	…		
23	**Diabetes mellitus**	13 360 000	…	…	…	…	…	2004-2005	10
24	**Mental disorders**	…	…	…	…	…	…		
25	**Injuries**								
	All types	…	…	…	857 800 [c]	…	…	2004-2005	10
	- Homicide and violence	…	…	…	…	…	…		
	- Motor and other vehicular accidents	…	…	…	…	…	…		
	- Occupational injuries	…	…	…	…	…	…		
	- Suicide	…	…	…	…	…	…		
	Leading causes of mortality and morbidity	**Number of cases**			**Rate per 100 000 population**				
26	**Leading causes of morbidity (inpatient care)**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Disease of the respiratory system	…	…	…	11.20 [e]	…	…	2002	5
	2. Disease of the digestive system	…	…	…	11.00 [e]	…	…	2002	5
	3. Pregnancy, childbirth and puerperium causes	…	…	…	10.68 [e]	…	…	2002	5
	4. Injury and poisoning	…	…	…	9.13 [e]	…	…	2002	5
	5. Malignant neoplasms	…	…	…	6.36 [e]	…	…	2002	5

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Malignant neoplasms	...	...	...	166.97 [f]	204.00 [f]	129.22 [f]	2008	3
	2. Heart diseases	...	...	...	121.00 [f]	123.45 [f]	118.49 [f]	2008	3
	3. Cerebrovascular diseases	...	...	...	120.79 [f]	127.78 [f]	113.66 [f]	2008	3
	4. Diseases of respiratory system	...	...	...	73.02 [f]	83.41 [f]	62.44 [f]	2008	3
	5. Injury and poisoning	...	...	...	31.26 [f]	38.46 [f]	23.92 [f]	2008	3
	6. Endocrine, nutritional and metabolic disease	...	...	...	21.09 [f]	18.72 [f]	23.51 [f]	2008	3
	7. Diseases of the digestive system	...	...	...	17.60 [f]	20.19 [f]	14.96 [f]	2008	3
	8. Disease of the genitourinary system	...	...	...	6.97 [f]	7.26 [f]	6.68 [f]	2008	3
	9. Disease of the nervous system	...	...	...	6.34 [f]	6.62 [f]	6.05 [f]	2008	3
	10. Mental disorders	...	...	...	3.69 [f]	3.21 [f]	4.18 [f]	2008	3
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					89.60		2006	11
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
30	**Percentage of pregnant women with anaemia**					18.45		2006	12
31	**Neonatal mortality rate** (per 1000 live births)	10.70 [g]		...		...		2007	3
32	**Percentage of newborn infants weighing at least 2500 g at birth**	97.78		...		...		2006	13
33	**Immunization coverage for infants (%)**								
	- BCG	97.50		...		...		2008	9
	- DTP3	97.10		...		...		2008	9
	- POL3	99.00		...		...		2008	9
	- Hepatitis B III	94.80		...		...		2008	9
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			...		
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	...	...	...	...	...	...		
	- Diphtheria	0	0	0	...	...	...	2008	9
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	131 441	...	...	...	...	...	2008	9
	- Mumps	310 826	...	...	...	...	...	2008	9
	- Neonatal tetanus	1786	...	...	...	...	...	2008	9
	- Pertussis (whooping cough)	2387	...	...	...	...	...	2008	9
	- Poliomyelitis	0	0	0	...	...	...	2008	9
	- Rubella	120 354	...	...	...	...	...	2008	9
	- Total Tetanus	...	...	...	...	...	...		

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Facilities with HIV testing and counseling services**		6077		2008	14
37	**Health infrastructure**					
	Public health facilities	- General hospitals	13 119	2 112 792	2008	3
		- Specialized hospitals	6593 [h]	770 070 [h]	2008	3
		- District/first-level referral hospitals	64 120 [i]	963 419 [i]	2008	3
		- Primary health care centres	185 073 [n]	151 102 [n]	2008	3
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)			148 468.00	2007	15
	- total expenditure on health as % of GDP			4.52	2007	15
	- per capita total expenditure on health (in US$)			112.37	2007	15
	Government expenditure on health					
	- amount (in million US$)			67 284.00	2007	15
	- general government expenditure on health as % of total expenditure on health			45.29	2007	15
	- general government expenditure on health as % of total general government expenditure			10.30	2007p	16
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			...		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			54.71	2007	15
	Exchange rate in US$ of local currency is: 1 US$ =			7.60	2007	15
39	**Health insurance coverage as % of total population**			...		

	INDICATOR		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
40	**Human resources for health**										
	Physicians	- Number	2 082 258 [j]	...	...	...	...	...	...	2008	3
		- Raioe per 1000 population	1.57	...	...	...	...	...	...	2008	3
	Dentists	- Number	51 012 [l]	...	...	...	...	...	...	2005	3
		- Ratio per 1000 population	0.04 [k]	...	...	...	...	...	...	2005	3
	Pharmacists	- Number	330 525	...	...	...	...	...	...	2008	3
		- Ratio per 1000 population	0.24	...	...	...	...	...	...	2008	3
	Nurses	- Number	1 653 297	...	...	...	...	...	...	2008	3
		- Ratio per 1000 population	1.25	...	...	...	...	...	...	2008	3
	Midwives	- Number	42 000	...	...	...	...	...	...	2001	22
		- Ratio per 1000 population	0.03	...	...	...	...	...	...	2001	22
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	**Annual number of graduates**	Physicians	332 842 [m]	...	...	...	...	...	...	2007	3
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	…	…	…	…	…	…	…		
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	..	..	..	..	..	..		
42	Workforce losses/ Attrition	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		
		Nurses	…	…	…	…	…	…	…		
		Midwives	…	..	..	..	..	..	..		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	..	..	..	..	..	..		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	7.80	…	…	2002	17
44	Infant mortality rate (per 1000 live births)	15.30 [h]	…	…	2007	3
45	Under-five mortality rate (per 1000 live births)	18.10 [h]	…	…	2007	3
46	Proportion of 1 year-old children immunised against measles	94.00	…	…	2007	9
47	Maternal mortality ratio (per 100 000 live births)	36.60 [h]			2007	3
48	Proportion of births attended by skilled health personnel	…				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	…				
	- Percentage of deliveries in health facilities (as % of total deliveries)	91.70			2007	18
49	Contraceptive prevalence rate	89.74	…	…	2007	19
50	Adolescent birth rate	…				
51	Antenatal care coverage - At least one visit	90.90			2007	18
	- At least four visits	…				
52	Unmet need for family planning	…	…	…		
53	HIV prevalence among population aged 15-24 years	…	…	…		
54	Estimated HIV prevalence in adults	0.05	…	…	2007	20
55	Percentage of people with advanced HIV infection receiving ART	37.45	…	…	2007	20
56	Malaria incidence rate per 100 000 population	2.00	…	…	2007	9,18
57	Malaria death rate per 100 000 population	0.00	…	…	2007	9,18
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	…	…	…		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	…	…	…		
60	Tuberculosis prevalence rate per 100 000 population	194.00	…	…	2007	9
61	Tuberculosis death rate per 100 000 population	15.00	…	…	2007	9
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	80.00	…	…	2007	9
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	92.00	…	…	2006	9
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	88.00	98.00	81.00	2006	21
65	Proportion of population using an improved sanitation facility	65.00	74.00	59.00	2006	21
66	Proportion of population with access to affordable essential drugs on a sustainable basis	…	…	…		

Notes:	
...	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Figure refers to 0-14 years old.
b	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
c	The number of death is calculated according to the rates but not reported data.
d	Totals may not tally due to some reported cases with no gender breakdown.
e	Figure refers to leading causes of morbidity among inpatients in city hospitals (% of total cases).
f	Data refers to certain region (data from city, not county)
g	Figure refers to Surveillance Region (per 1000 live births)
h	Figure include TCM hospital, TCM-WM hospital, Minority hospital, specialized hospital and nursing hospital
i	Figure include health service centre for community, urban health centre and tonwhsip health centre
j	Doctor and Assistant Doctor.
k	Computed by Health System Development team of WHO China Office.
l	Registered dentist.
m	Total medical graduates from colleges.
n	Figure include outpatient department, clinic MCH centre and specialised disease prevention and treatment institute.
o	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

Sources:	
1	Government of China. [www.gov.cn]
2	Statistical Communique of the People's Republic of China on the 2008 National Economic and Social Development. National Bureau of Statistics of China (http://www.stats.gov.cn/english/).
3	Chinese Health Statistical Digest 2006, 2007, 2008, 2009.
4	The world health report 2004: changing history. Geneva, World Health Organization, 2004.
5	Information furnished by Ministry of Health, 2003, 2004 and 2005.
6	China Statistical Yearbook 2006.
7	United Nations Development Programme (UNDP) 2008. Human Development Indices: a statistical update. New York: UNDP. Available from [http://hdr.undp.org/en/media/HDI2008Tables.xls].
8	Ministry of Health of the People's Republic of China [http://www.moh.gov.cn/publicfiles/business/htmlfiles/mohbgt/s3582/200902/39079.htm]
9	WHO Regional Office for the Western Pacific, data received from the technical units.
10	The 3rd National Cause-of-Death Survey, Centre for Health Statistics and Information, Ministry of Health of the People's People's Republic of China.
11	Information furnished by National Population and Family Planning Commission of China, 2000-2006.
12	Midterm Evaluation report on the Implementation of the National Programme of Action for Child Development in China (2001-2005), NWCCW.
13	China Statistical Yearbook 2007.
14	Report of AIDS progress of 2008, Ministry of Health 2009 National Annual AIDS meeting.
15	China National Health Accounts Report 2007, 2008.
16	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html.
17	National Nutrition Survery, 2002.
18	China Health Statistical Yearbook 2007, 2008.
19	China's Progress Towards the Millennium Development Goals, 2008 Report.
20	State Council AIDS Working Committee Office, UN Theme Group on AIDS in China. A joint assessment of HIV/AIDS prevention, treatment and care in China (2007).
21	World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). Progress on Drinking Water and Sanitation: Special focus on Sanitation. UNICEF, New York and WHO, Geneva, 2008. [http://www.wssinfo.org/en/40_mdg2008.html]
22	The world health report 2006: working together for health. Geneva, World Health Organization, 2006.

Cook Islands

1. CONTEXT

1.1 Demographics

The population of Cook Islands decreased between 1996 and 2001 due to outmigration, but then began to increase again, with an estimated 22 200 people in 2008. Around 33.5% are below 15 years of age and about 5.1% are 65 years and above.

In 2007, overall life expectancy at birth was estimated at 68 years: 66 years for men and 70 years for women. The crude birth rate was 20.1 per 1000 population, and the crude death rate 4.5 per 1000 resident population in 2008.

1.2 Political situation

Cook Islands has a unicameral, democratic parliament with 25 elected members who serve parliamentary terms of five years. However, there have been four government changes since 1999. In the September 2004 elections, Jim Marurai was elected Prime Minister. The Government has given priority to education, health, human resources and outer island development.

1.3 Socioeconomic situation

The country went through some economic difficulties during the period from 1996 to 1997. Since then, there have been public sector reforms, the sale of state assets and the stimulation of the private sector, all of which have led to the growth and strengthening of financial and economic management. The four leading generators of income are tourism, fishing, agriculture and financial services. Tourism is the main industry and accounts for around 54% of gross domestic product (GDP).

GDP was estimated at almost 286 million New Zealand dollars (approximately US$ 211 million) and 13 558 New Zealand dollars (approximately US$ 9991) per capita in 2007. The country's focus on development has been affected by various challenges, such as the emigration of skilled workers to New Zealand, an unstable political situation and the insufficient and inequitable distribution of resources. Of central importance is the delivery of health services to all the islands.

In 2006, about 95% of the population had access to a clean, safe water supply and 100% had adequate sewage sanitation disposal facilities.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Infectious diseases are rarely seen and usually occur as imported cases. Parasitic intestinal worm disease has been greatly reduced by improved water and sanitation. A water supply and sanitation improvement programme, with the building of flush toilets in all schools and health centres on the outer islands, has enhanced the reduction in these diseases and probably also septic skin disease, rheumatic fever and obstructive airways disease. There was no case of leprosy in 2007. The incidence of sexually transmitted infections (STI) varies. Gonorrhoea and syphilis are rare, while trichomoniasis and chlamydial infection are relatively common. The prevalence of condom use is low. The mass drug administration (MDA) programme for elimination of filariasis continues as part of the WHO Filariasis Elimination Programme. A small-scale blood survey was conducted before the 2001 MDA, in which 460 people from four different islands were randomly tested using ICT test kits. MDA coverage in 2001 was 91.3%, but dropped to 79.2% in 2008.

Noncommunicable diseases, such as hypertension, diabetes, cancer, coronary heart disease, obesity, and injuries and poisonings, continue to be major public health problems. According to a WHO consultancy report in 2001, the prevalence of diabetes is 11.8% for males and 3.8% for females (not including patients with well controlled pre-existing diabetes). The prevalence of obesity is 48.4% for males and 36.2% for females. According to hospital records, 65% of registered patients in 1980-2007 were reported to have acquired hypertension, 16% having both hypertension and diabetes and 19% having diabetes only.

2.2 Outbreaks of communicable diseases

The only infectious disease outbreak since the dengue outbreaks in 1992-1993 and 1995 was the dengue outbreak in 2006, with 468 cases reported, and 2007, with 1224 registered cases.

2.3 Leading causes of mortality and morbidity

The leading causes of morbidity and mortality are noncommunicable diseases. Disease of the circulatory system has continued to be the leading cause of mortality in the last three years, accounting for 25% of deaths in 2008. It also caused about 35% of inpatient morbidity, 40% due to hypertensive disease.

2.4 Maternal, child and infant diseases

There has been no case of maternal mortality since 1993. The infant mortality rate was 24.8 per 1000 live births in 2007. During the 2004-2005 financial year, the country's expanded programme on immunization aimed to achieve 100% coverage.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

To achieve the vision of "accessible quality health for all Cook Islanders", the following health issues are being targeted for priority action.

(1) Sexually transmitted infections, including HIV/AIDS: The prevalence of trichomoniasis and chlamydial infection is relatively high, while the prevalence of condom use is low. The objective is to develop a strategy on STI control, intensify sexual health education and promotion of condom use, and explore the need for qualified counsellors.

(2) Communicable disease surveillance and response: This programme focuses on increasing awareness and formulating and developing a protocol on dengue management to avoid future epidemics of dengue fever, as well as improving vector control and surveillance.

(3) Healthy settings and environment: A healthy environment will be created and promoted through a multisectoral approach and partnerships to improve healthy lifestyles, minimize the risk of disease and reduce the need for hospital and other health services through:

- evaluation of the effectiveness of health education and promotion activities and strengthening of the concepts approach; and
- provision of special training for health personnel and other stakeholder agencies to enable them to deliver services satisfactorily.

(4) Child and adolescent health and development: Child and adolescence health will be further strengthened through increasing awareness of risky behaviours, reducing teenage pregnancy, and reducing STI, with emphasis on:

- conducting seminars that target adolescents to enhance their knowledge of safer sex practices; and
- increasing knowledge on risky behaviours through awareness programmes on television and radio and in newspaper articles.

(5) Reproductive health: There are insufficient trained and skilled personnel to provide quality reproductive health services at various levels of the health care system. At present, there is only one family planning nurse, assisted by a retired staff nurse. There is an immediate need to train younger nurses in technical and management skills.

The responsibilities of husbands or male partners will be emphasized. Through training, their awareness and understanding of the reproductive health needs of women during pregnancy and childbirth and after delivery, and family planning will be enhanced.

(6) Noncommunicable diseases and mental health: A more vigorous effort will be made to change the attitudes of people through health education and promotion. Technical training of health educators in healthy living (e.g. diet, exercise) is part and parcel of this programme. Monitoring and management of noncommunicable diseases will be strengthened.

Properly trained dental personnel are required for each island to strengthen preventive dental care and the treatment of common dental diseases. There is also a need to upgrade facilities, including rooms and dental equipment.

(7) Tobacco Free Initiative: The Global Youth Tobacco Survey, conducted in 2002, needs to be extended to examine smoking prevalence among adults. The results of the survey will determine and guide the development of the tobacco control programme and strengthen the nationwide promotion of healthy lifestyles, and will reduce the toll of tobacco-related mortality and associated diseases.

(8) Human resource development: Workforce planning has been identified as the key strategy to meet the need for skilled health workers. An increase in the number of qualified health workers with skills tailored towards specific needs of the population is critical if health objectives are to be met.

Developing leadership and management skills will be essential in the transformation of the quality of care currently being delivered to the people of Cook Islands. Training is needed to help health personnel communicate with, inform and educate their patients.

3.2 Organization of health services and delivery systems

While the population on the main island, Rarotonga, has access to the best health care in the country, those on the outer islands, especially the northern islands, do not. There is an urgent need to address and rectify this disparity. It is therefore of vital importance that the delivery of health services to the outer islands be addressed, especially the availability of drugs, the deficiency in equipment and the provision of properly trained health staff to provide services.

In 2001, the Ministry of Health opened a new hospital wing that provides ample room for laboratory services, maternal health care, and statistics. There is also a library and a conference room to assist in continuous medical education. A telehealth venture is also being established, which will provide distance-learning education for doctors, nurses and other health staff in Rarotonga and some of the outer islands to improve human resource development and strengthen health services. At the same time, telehealth will be used to consult specialists overseas in regard to problematic cases. Efforts are also being concentrated on continuing medical education and health staff training, both in-country and overseas.

3.3 Health policy, planning and regulatory framework

No available information.

3.4 Health care financing

In 2007, total health expenditure amounted to 13 million New Zealand dollars (US$ 9.6 million), with per capita expenditure on health of US$ 453.

3.5 Human resources for health

During recent years, the Ministry of Health has concentrated on providing sufficient general practitioners to provide health services in the outer islands. To date, there are only two islands, Palmerston and Rakahanga, without a resident doctor. However, there are health officers on these two islands. The Ministry of Health has also provided extra doctors at the Rarotonga Hospital so that services are provided 24 hours a day without any doctor having to work more than eight hours a day.

In the absence of resident dental personnel, the Ministry of Health recently employed two flying dentists to visit the outer islands. Currently, on most of the islands, there are no dental personnel, a lack of proper dental planning, and a lack of oral health promotion and education, preventive care and constant review. There are also no proper facilities or equipment. The high level of "decayed, missing or filled (DMF)" reports clearly shows the lack of diagnosis of dental caries and the absence of restorative treatment for tooth decay. There is also a need to review and improve oral health safety procedures to maintain the provision of quality health care services.

The health infrastructure is well developed. There is a general hospital with 70 beds in Rarotonga and seven primary health care centres. As of 2004, there were 22 physicians, 11 midwives, 52 nurses and 20 dentists.

3.6 Partnerships

New Zealand remains the largest donor, while Australia and the Asian Development Bank provide significant inflows geared towards capacity-building, outer island development and human resource development. WHO is the fourth largest donor and provides support for human development for health, health care delivery and outer island devolution. Other United Nations agencies, agencies based in the Pacific region, and two bilateral donors make up the remaining donor support to the country. Cook Islands has received ad hoc grants and technical support from the governments of China and Japan and has progressed significantly in aid discussions with the European Union.

3.7 Challenges to health system strengthening

No available information.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*2007 Annual statistical bulletin.*
Operator	:	Ministry of Health Medical *Records* Unit
Web address	:	http://www.health.gov.ck
Title 2	:	*Cook Islands statistical bulletin, Census of Population and Dwellings 2006: Preliminary result*
Operator	:	Statistics Office
Web address	:	http://www.stats.gov.ck
Title 3	:	*Key indicators 2003 of developing Asian and Pacific countries, vol. 34.*
Operator	:	Asian Development Bank

5. ADDRESSES

MINISTRY OF HEALTH

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WHO REPRESENTATIVE IN SAMOA

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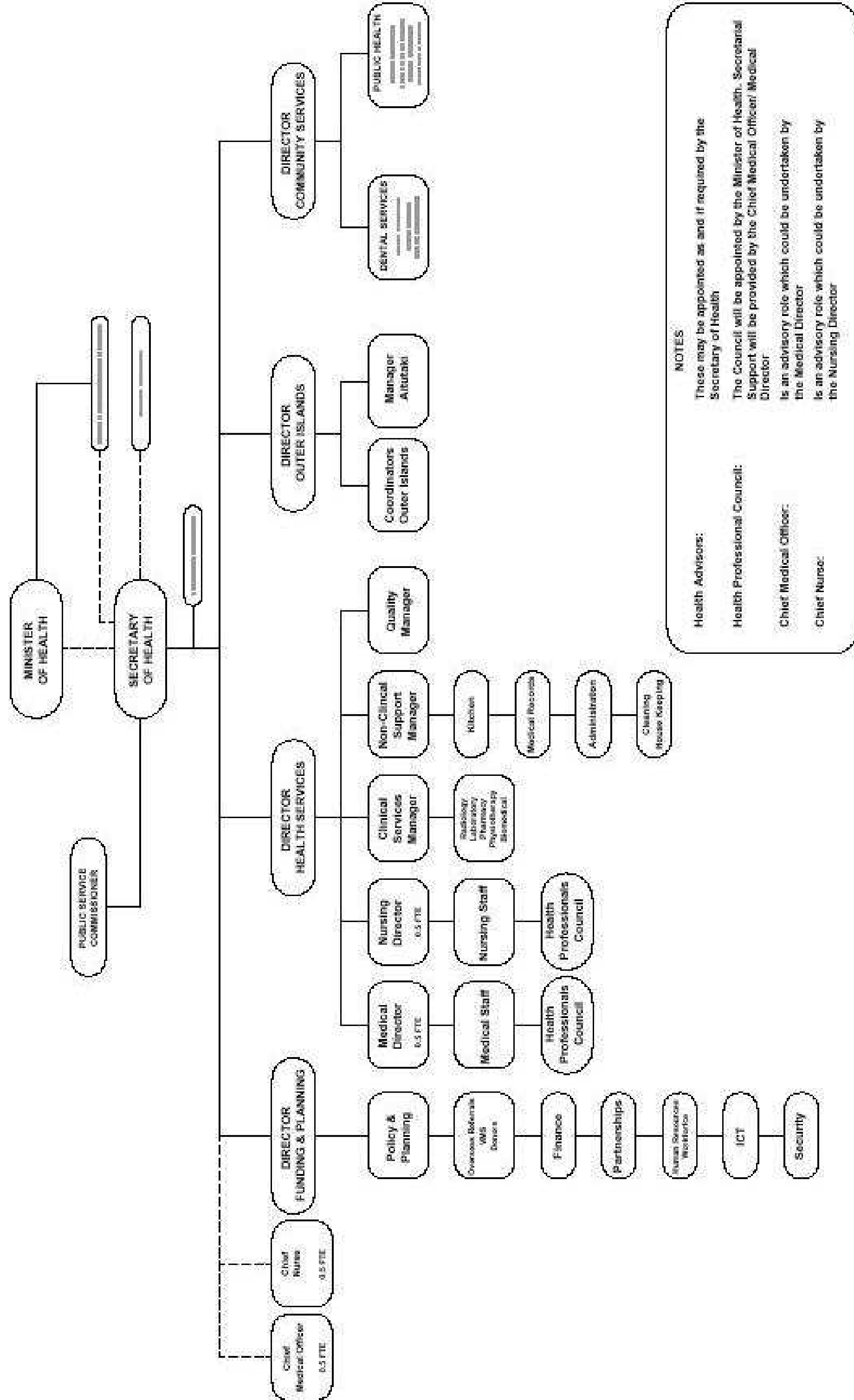
Official Email Address	:	who@sma.wpro.who.int
Telephone	:	(685) 23756/ 23757
Fax	:	(685) 23765

6. ORGANIZATIONAL CHART: Ministry of Health



COOK ISLANDS — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	0.24						2006	1
2	Estimated population ('000s)	22.20		...		...		2008p	2
3	Annual population growth rate (%)	1.70		...		...		2007	3
4	Percentage of population								
	- 0–4 years	12.20		12.20		12.20		2008 est	4
	- 5–14 years	21.30		21.30		21.40		2008 est	4
	- 65 years and above	5.10		4.60		5.80		2008 est	4
5	Urban population (%)	73.00 [t]		...		...		2007 est	5
6	Crude birth rate (per 1000 population)	20.10 [a]		...		...		2008p	2
7	Crude death rate (per 1000 population)	4.50 [a]		...		...		2008p	2
8	Rate of natural increase of population (% per annum)	1.61 [b]		...		...		2008p	2
9	Life expectancy (years)								
	- at birth	68.00 [c]		66.00 [c]		70.00 [c]		2007 est	3
	- Healthy Life Expectancy (HALE) at age 60	...		11.50		12.60		2002	6
10	Total fertility rate (women aged 15–49 years)	3.10						2007	3
	Socioeconomic indicators								
11	Adult literacy rate (%)	100.00		...		...		2007	3
12	Per capita GDP at current market prices (US$)	9991.18 [b]						2007p	7
13	Rate of growth of per capita GDP (%)	...							
14	Human development index	...							
	Environmental indicators	Total		Urban		Rural			
15	Proportion of vehicles using unleaded gasoline (%)	...		...		...			
16	Health care waste generation (metric tons per year)	...		...		...			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	...	...	...	...	...	...		
	- Type B	16 [d]	...	...	...	...	...	2007	3
	- Type C	0 [d]	0 [d]	0 [d]	...	...	...	2007	3
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	0 [d]	0 [d]	0 [d]	0	0	0	2005	1
	Dengue/DHF	11	...	...	0	0	0	C:2008 D:2007	8
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	16 [d]	...	...	...	...	...	2007	3
	Leprosy	0	0	0	...	...	...	2007	8
	Malaria	0	0	0	...	...	...	2005	8
	Plague	0	0	0	0	0	0	2005	1
	Syphilis	1 [d]	...	...	...	...	...	2007	3
	Typhoid fever	0 [d]	0 [d]	0 [d]	0	0	0	2005	1

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	5428	...	...	...	...	...	2007	3
19	**Diarrhoeal diseases**	409	...	...	...	...	...	2007	3
20	**Tuberculosis**								
	- All forms	2	...	...	...	...	...	2007	3
	- New pulmonary tuberculosis (smear-positive)	2	...	...	...	...	...	2007	3
21	**Cancers**								
	All cancers (malignant neoplasms only)	33	15	18	13	11	2	2007	3
	- Breast	1	0	1	2	0	2	2007	3
	- Colon and rectum	1	1	0	0	0	0	2007	3
	- Cervix			1			...	2007	3
	- Oesophagus	0	0	0	0	0	0	2005	9
	- Leukaemia	2	1	1	...	...	...	2007	3
	- Lip, oral cavity and pharynx	1	1	0	...	...	...	2007	3
	- Liver	1	1	0	1	1	0	2007	3
	- Stomach	0	0	0	0	0	0	2005	9
	- Trachea, bronchus, and lung	2	2	0	4 [e]	4 [e]	0	2007	3
22	**Circulatory**								
	All circulatory system diseases	386	215	171	25	16	9	2007	3
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	21	...	...	3	3	0	2007	3
	- Hypertension	154	...	...	12	7	5	2007	3
	- Ischaemic heart disease	46	...	...	5	3	2	2007	3
	- Rheumatic fever and rheumatic heart diseases	11	...	...	...	...	...	2007	3
23	**Diabetes mellitus**	99	...	...	8	5	3	2007	3
24	**Mental disorders**	71 [f]	52 [f]	19 [f]	1 [g]	1 [g]	0 [g]	2007	3
25	**Injuries**								
	All types	274 [h]	174 [h]	100 [h]	10 [h]	8 [h]	2 [h]	2007	3
	- Homicide and violence	5 [i]	...	...	...	...	...	2007	3
	- Motor and other vehicular accidents	79 [j]	...	...	5 [j]	4 [j]	1 [j]	2007	3
	- Occupational injuries	0	0	0	0	0	0	2005	9
	- Suicide	1 [k]	...	...	2 [k]	1 [k]	1 [k]	2007	3
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Diseases of the circulatory system	386 [l]	215 [l]	171 [l]	1829.38 [b,l]	...	...	2007	3
	2. Injury, poisoning and certain other consequences of external causes	274 [l]	174 [l]	100 [l]	1298.58 [b,l]	...	...	2007	3
	3. Diseases of the respiratory system	240 [l]	118 [l]	122 [l]	1137.44 [b,l]	...	...	2007	3
	4. Certain infectious and parasitic diseases	163 [l]	72 [l]	91 [l]	772.51 [b,l]	...	...	2007	3
	5. Diseases of the genitourinary system	134 [l]	50 [l]	84 [l]	635.07 [b,l]	...	...	2007	3
	6. Diseases of the digestive system	130 [l]	82 [l]	48 [l]	616.11 [b,l]	...	...	2007	3
	7. Endocrine, nutritional and metabolic diseases	128 [l]	67 [l]	61 [l]	606.64 [b,l]	...	...	2007	3
	8. Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	110 [l]	62 [l]	48 [l]	521.33 [b,l]	...	...	2007	3
	9. Diseases of the musculoskeletal system and connective tissue	107 [l]	72 [l]	35 [l]	507.11 [b,l]	...	...	2007	3
	10. Diseases of the eye and adnexa	73 [l]	37 [l]	36 [l]	345.97 [b,l]	...	...	2007	3

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Diseases of the circulatory system	25	16	9	118.48 [b]	...	...	2007	3
	2. Neoplasms	17	14	3	80.57 [b]	...	...	2007	3
	3. Endocrine, nutritional and metabolic diseases	10	6	4	47.39 [b]	...	...	2007	3
	4. Injury, poisoning & certain other consequences of external cause	10	8	2	47.39 [b]	...	...	2007	3
	5. Symptoms, signs & abnormal clinical & laboratory findings	9	5	4	42.65 [b]	...	...	2007	3
	6. Diseases of the respiratory system	7	1	6	33.18 [b]	...	...	2007	3
	7. Certain infectious and parasitic diseases	5	0	5	23.70 [b]	...	...	2007	3
	8. Diseases of the nervous system	4	2	2	18.96 [b]	...	...	2007	3
	9. Diseases of the digestive system	4	3	1	18.96 [b]	...	...	2007	3
	10. Diseases of the genitourinary system	4	2	2	18.96 [b]	...	...	2007	3
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					29.00 [m]		2007	3
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					83.00		2007	8
30	**Percentage of pregnant women with anaemia**					...			
31	**Neonatal mortality rate (per 1000 live births)**	9.90		...		...		2005	9
32	**Percentage of newborn infants weighing at least 2500 g at birth**	94.40						2007	3
33	**Immunization coverage for infants (%)**								
	- BCG	100.00		...		...		2008	8
	- DTP3	100.00		...		...		2008	8
	- POL3	100.00		...		...		2008	8
	- Hepatitis B III	100.00		...		...		2008	8
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			21			...	2007	3
	- Eclampsia			6 [l,n]			...	2007	3
	- Haemorrhage			22 [l,o]			...	2007	3
	- Obstructed labour			42 [l,p]			...	2007	3
	- Sepsis			4 [l,q]			...	2007	3
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	8
	- Diphtheria	0	0	0	...	...	...	2008	8
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2008	8
	- Mumps	0	0	0	...	...	...	2008	8
	- Neonatal tetanus	0	0	0	...	...	...	2008	8
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	8
	- Poliomyelitis	0	0	0	...	...	...	2008	8
	- Rubella	0	0	0	...	...	...	2008	8
	- Total Tetanus	0	0	0	...	...	...	2008	8

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Facilities with HIV testing and counseling services**		...			
37	**Health infrastructure**					
	Public health facilities	- General hospitals	1	70	2005	5
		- Specialized hospitals	0	0	2005	5
		- District/first-level referral hospitals	7	57	2005	5
		- Primary health care centres	73 [r]	...	2005	5
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	5	...	2005	5
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)		9.55		2007p	10
	- total expenditure on health as % of GDP		4.40		2007p	10
	- per capita total expenditure on health (in US$)		453.02 [b]		2007p	10
	Government expenditure on health					
	- amount (in million US$)		9.00		2007p	10
	- general government expenditure on health as % of total expenditure on health		91.70		2007p	10
	- general government expenditure on health as % of total general government expenditure		12.40		2007p	10
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health		24.70 [b]		2007p	10
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health		7.69 [b]		2007p	10
	Exchange rate in US$ of local currency is: 1 US$ =		1.36		2007p	10
39	**Health insurance coverage as % of total population**		...			

	INDICATOR		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
40	**Human resources for health**										
	Physicians	- Number	22	...	...	...	...	22	0	2004	11
		- Ratio per 1000 population	1.08 [t]	...	...	...	...	1.08 [t]	0.00	2004	11
	Dentists	- Number	20	...	...	...	...	20	0	2004	11
		- Ratio per 1000 population	0.99 [t]	...	...	...	...	0.99 [t]	0.00	2004	11
	Pharmacists	- Number	1	1	0	...	...	1	0	2004	11
		- Ratio per 1000 population	0.05 [t]	0.05	0.00	...	...	0.05 [t]	0.00	2004	11
	Nurses	- Number	52	0	52	...	...	52	0	2004	11
		- Ratio per 1000 population	2.56 [t]	0.00	2.56	...	...	2.56 [t]	0.00	2004	11
	Midwives	- Number	11	0	11	...	...	11	0	2004	11
		- Ratio per 1000 population	0.54 [t]	0.00	0.54	...	...	0.54 [t]	0.00	2004	11
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	**Annual number of graduates**	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	**Workforce losses/ Attrition**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	**Total**	**Male**	**Female**		
43	**Prevalence of underweight children under five years of age**	...	...	...		
44	**Infant mortality rate (per 1000 live births)**	24.80	...	...	2007	3
45	**Under-five mortality rate (per 1000 live births)**	90.00	...	...	2007	3
46	**Proportion of 1 year-old children immunised against measles**	95.00	...	...	2008	8
47	**Maternal mortality ratio (per 100 000 live births)**	0.00			2007	8
48	**Proportion of births attended by skilled health personnel**	100.00			2005	9
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.42 [b]			2007	3
	- Percentage of deliveries in health facilities (as % of total deliveries)	97.80 [b]			2007	3
49	**Contraceptive prevalence rate**	29.00 [s]	...	...	2007	3
50	**Adolescent birth rate**	...				
51	**Antenatal care coverage** - At least one visit	100.00			2005	9
	- At least four visits	...				
52	**Unmet need for family planning**	...	...	...		
53	**HIV prevalence among population aged 15-24 years**	...	...	...		
54	**Estimated HIV prevalence in adults**	...	...	...		
55	**Percentage of people with advanced HIV infection receiving ART**	...	...	...		
56	**Malaria incidence rate per 100 000 population**	2.00	...	...	2007	8
57	**Malaria death rate per 100 000 population**	0.00	...	...	2007	8
58	**Proportion of population in malaria-risk areas using effective malaria prevention measures**	...	...	...		
59	**Proportion of population in malaria-risk areas using effective malaria treatment measures**	...	...	...		
60	**Tuberculosis prevalence rate per 100 000 population**	31.00	...	...	2007	8
61	**Tuberculosis death rate per 100 000 population**	4.00	...	...	2007	8
62	**Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)**	77.00	...	...	2005	8
63	**Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)**	100.00	...	...	2005	8
		Total	**Urban**	**Rural**		
64	**Proportion of population using an improved drinking water source**	95.00	98.00	88.00	2006	12
65	**Proportion of population using an improved sanitation facility**	100.00	100.00	100.00	2006	12
66	**Proportion of population with access to affordable essential drugs on a sustainable basis**	...	...	...		

Notes:	
...	Data not available
p	Provisional
est	Estimate
a	Figure is computed per thousand resident population as of 1992
b	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
c	Figures were estimated using complete life table method - health stats.
d	Figure refers to registered positive cases.
e	Figure refers to deaths due to malignant neoplasm of bronchus and lung.
f	Figure refers to mntal and behavioral disorders (ICD10 F00-F99).
g	Deaths caused by mental and behavioral disorders due to use of alcohol.
h	Figure refers to hospital admissions due to injury, poisoning and certain other consequences of external causes (ICD10 S00-T98).
i	Figure refers to hospital admissions due to assault (ICD10 X85-Y09).
j	Figure refers to hospital admissions due to transport accidents (ICD10 V01-V99).
k	Figure refers to hospital admissions due to intentional self-harm (ICD10 X60-X84).
l	Figure refers to Rarotonga only.
m	Figure refers to percentage of women of child-bearing ages (15-44 years old) who are current users of any type of family planning contraceptive.
n	Figure refers to hospital admissions due to oedema, proteinuria and hypertensive disorders in pregnancy, childbirth and the puerperium (ICD10 O10-O16).
o	Figure refers to hospital admissions classified under maternal care related to the fetus and amniotic cavity and possible delivery problems (ICD10 O30-O48).
p	Figure refers to hospital admissions due to complications of labor and delivery (ICD10 O60-O75).
q	Figure refers to complications predominantly related to the puerperium (ICD10 O85-O92).
r	Figure includes 9 out-patient clinics, 8 dental clinics, 6 health centres and 50 child welfare clinics.
s	Figure refers to women currently practicing any type of family planning contraceptives.
t	Revised data

Sources:	
1	Census of Population and Dwellings 2006, Preliminary Result. Cook Islands Statistical Bulletin. http://www.spc.int/prism/Country/CK/stats/.
2	Population Estimates and Vital Statistics [http://www.stats.gov.ck/CurReleases/popnestVital/Popn.PDF]
3	Annual Statistical Bulletin 2007. Cooks Islands Ministry of Health. http://www.health.gov.ck/docs/annual/2007%20Annual%20Bulletin.pdf
4	*Demographic Tables for the Western Pacific 2005-2010* . Manila, World Health Organization Regional Office for the Western Pacific, 2005
5	United Nations, Department of Economic and Social Affairs, Population Division. Urban and Rural Areas 2007. UN New York 2006. [http:///www.unpopulation.org].
6	World health report 2004. *Changing history* . Geneva, World Health Organization, 2004.
7	Economic Statistics [http://www.stats.gov.ck/Statistics/Economic/econav.htm]
8	WHO Regional Office for the Western Pacific, data received from the technical units.
9	Annual Statistical Bulletin 2005. Cooks Islands Ministry of Health. Http://www.health.gov.ck/default.asp
10	World Health Organization - National health accounts series [http://www.who.int/entity/nha/country/MYS.pdf].
11	Annual Bulletin 2004. Cooks Islands Ministry of Health. http://www.health.gov.ck/default.asp.
12	WHO and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). 2008. Progress on Drinking Water and Sanitation, New York/Geneva: UNICEF/WHO. Available from: <http://www.wssinfo.org/en/40_mdg2008.html> (Accessed 20 April 2009).

FIJI

1. CONTEXT

1.1 Demographics

Fiji has the largest population of all the South Pacific island countries. Based on the 2007 Census of Population and Housing, the multiethnic population of Fiji is 837 271, with 475 739 ethnic Fijians, 313 798 Indo-fijians and 47 734 people of other ethnic groups. The average annual growth rate stands at 0.7%, this trend of slow growth being due to a moderately low level of fertility and a high level of emigration, especially among Indo-fijians. Fiji's Economic Exclusive Zone contains 332 islands covering a total land area of 18 333 square kilometres in 1.3 million square kilometres of the South Pacific Ocean. The population occupies around one-third of the 332 islands and is concentrated on the two largest islands, Viti Levu (10 429 square kilometres) and Vanua Levu (5556 square kilometres), with the nation's capital, Suva, located on Viti Levu.

People in Fiji are living longer, with life expectancy standing at 68 years for males and 72 years for females.

1.2 Political situation

Since the coup d'etat of 5 December 2006, Fiji has been governed by a military-led government.

In April 2009, the constitution was abrogated, and the Government is now being run by special Presidential decrees.

There is a proposed amendment to the current constitution, with an emphasis on electoral reform. The new timeline for a newly-elected government is 2014.

1.3 Socioeconomic situation

Fiji, endowed with forest, mineral and fish resources, is one of the most developed of the Pacific island economies, although there is still a large subsistence sector. Sugar exports, remittances from Fijians working abroad and a growing tourist industry —with 300 000 to 400 000 tourists annually—are the major sources of foreign exchange. Fiji's sugar has special access to European Union (EU) markets, but will be harmed by the EU's decision to cut sugar subsidies. Sugar processing makes up one-third of industrial activity, but is inefficient.

The volatile political situation has had some adverse impact on the country's economy, particularly on tourism numbers and foreign investor confidence. Additionally, the EU has suspended all aid until the interim administration is able to hold a democratic election. Fiji's economy has been dependent on foreign exchange provided by remittances from Fijians working in the British Army, the United Nations, Iraq and Kuwait, and this has increased significantly over the years. The current global financial crisis is also expected to have a significant impact on the local economy and the Fiji dollar has been devalued to cushion some of the effects.

Fiji has a gross domestic product (GDP) of FJD 4447.3 million (US$ 2762.3 million) and a GDP per capita of FJD 5333 (US$ 3312.1), with a per capita GDP growth rate of -4.4%. Government income comes largely from customs duties and port dues, as well as taxation.

1.4 Risks, vulnerabilities and hazards

With the continuing rule of the interim administration and the many international pressures, Fiji is vulnerable to suffer economically, especially when the main income earner, tourism, is one of the industries being affected significantly. The sugar industry should be undergoing reform in an effort to improve its efficiency and production level, but this too remains vulnerable due to the current prevailing political situation.

2. HEALTH SITUATION AND TREND

Fiji generally has a good standard of health and compares well with other Pacific island nations. The country's health status met or exceeded most of the WHO goals for 2000. Such a status is due to improved health standards, sound comprehensive health care programmes and the untiring efforts of the Ministry of Health in promoting healthy living for the population.

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Like many developing countries, Fiji is still undergoing an epidemiological transition and is faced with a double burden of communicable and noncommunicable disease. In addition, however, the alarming rise in injuries and accidents is producing a third burden that is projected to become a real concern in terms of both intentional and unintentional injuries.

The national health indicators compare favourably with other developing countries. Infant and child mortality rates, the maternal mortality ratio and the incidence of low birth weight have all shown gradual decreases over the last decade.

Noncommunicable diseases (NCDs) such as diabetes, heart disease, high blood pressure, respiratory diseases and cancers, have now replaced infectious and parasitic diseases as the principal causes of mortality and morbidity. The revelation of the magnitude of NCD risk factors by the 2002 NCD STEPS survey highlighted the reasons: around 65% of population take one or less servings of fruit a day and there is a low rate of physical activity (25%). This information led to the formulation of the National NCD Strategy to scale up efforts to curb the growing epidemic, which resulted in an excellent commitment from the Government (a 300% increase in the national NCD budget in the first year).

There are three health goals under the Millennium Development Declaration. The two mortality goals have been largely achieved, but the target for HIV/AIDS is still a major challenge for Fiji. As of December 2007, there were 259 HIV-positive individuals, a large proportion of them between the ages of 20 and 29. With a window of five to 10 years from the time of infection to detection, it is clear that many are becoming infected while still in their teens. A strategic plan to prevent and control the spread and impact of HIV/AIDS and sexually transmitted infections (STIs) has been developed, and is being supported through a dedicated government budget, under the coordination of the National Advisory Committee on AIDS.

The threat of emerging and re-emerging communicable diseases, such as TB, SARS and avian influenza (HPAI H5N1), that pose international threats and would have socioeconomic impacts on Fiji, has highlighted the need for vigilance in surveillance, border control, detection capacity, investigation capacity and capacity to respond in a timely and coordinated manner.

Regional elimination initiatives include those for lymphatic filariasis (Pac ELF) and measles elimination. Control of hepatitis B is also being addressed. Fiji is a committed partner in these initiatives, which are being coordinated by WHO.

2.2 Outbreaks of communicable diseases

Although there was no major new outbreak in 2008, the persistence of typhoid fever, especially in the north of the country, is warranting greater attention. The threat of dengue infection and outbreaks will continue in Fiji given the many factors that could introduce the virus. To reduce the disease burden and the case-fatality rate, epidemiological and entomological surveillance must continue to improve, including better emergency preparedness to prevent and control epidemics, effective case management through sensitive diagnostics, infrastructure improvements and strengthened vector-control activities in an integrated vector-management mode.

Leptospirosis represents an underdiagnosed, underreported and misdiagnosed zoonotic infection that continues to spread to humans, with evidence showing shifts in clinical presentations and human

pathogenic serovars. With the advent of eco-tourism, people are facing increased risk of acquiring the pathogenic organisms in the environment. Research and identification of animal reservoirs is planned.

2.3 Leading causes of mortality and morbidity

By 2007, around 82% of deaths in Fiji were due to noncommunicable diseases (NCD) and 10% to communicable diseases. Over the past ten years, the leading causes of adult morbidity and mortality have been noncommunicable diseases, with cardiovascular disease the leading cause of death. While infectious diseases used to claim the majority of lives, they no longer do so due to the vigorous immunization programme and improved living conditions.

Diabetes continues to be a devastating disease, with a prevalence rate of 16% among those aged 15-64 years. Estimates reveal that one in every eight people is affected in some way by the disease, and figures from hospital admissions show that around 80% of all admissions into medical and surgical wards are diabetes-related.

2.4 Maternal, child and infant diseases

Maternal, child and infant diseases are continuing to decline in Fiji. The infant mortality rate has fallen by 62% in the past 20 years and is now about 18.4 deaths per 1000 live births. Good obstetrical services are contributing to the lower number of infant deaths, with about 99% of births being attended by trained medical personnel. The existence of protein energy malnutrition among children less than five years of age, although minimal, remains a concern for public health, especially when these few are infected with diarrhoea and other infectious diseases that could make them vulnerable to fatality.

The introduction of the integrated management of childhood illness (IMCI) strategy has strengthened what used to be the vertical ARI/CDD programme, and a similar integrated approach has been adopted for antenatal care.

2.5 Burden of disease

Although no proper burden-of-disease studies have been carried out, it is clear that the triple burden of communicable diseases, noncommunicable diseases and injuries is plaguing the health system in Fiji. The prematurity of NCD deaths especially is becoming an economic and development issue, as the age of men dying from cardiovascular disease falls every year. In a 2002 study carried out by the World Bank and the Secretariat of the Pacific Community (SPC), it was revealed that 38.8% of all treatment costs could be attributed to NCD and 18.5% to communicable diseases.

3. HEALTH SYSTEM

The Ministry of Health acknowledges that it is the right of every citizen of the Republic of Fiji, irrespective of race, sex, colour, creed or socioeconomic status, to have access to a national health system that provides a high quality health service.

The Ministry of Health provides services to two types of user: internal (provision of health care to citizens); and external (monitoring of compliance with statutes and regulation; issue of permits, certificates and reports; professional board functions; provision of health care to visitors; provision of accommodation and meals for staff; provision of training to health staff of the region).

Basic health care is provided to all residents through a hierarchy of village health workers, nursing stations, health centres, subdivisional hospitals and divisional and specialized hospitals. Tertiary health care services are currently offered by the three divisional hospitals. Subdivisional hospitals offer primary care and limited secondary health care services.

In 2008, there was a change of Minister and Permanent Secretary for Health as a result of reshuffling by the interim administration and the resignation of the previous Permanent Secretary.

3.1 Ministry of Health's mission, vision and objectives

Providing accessible, affordable, efficient and high quality health care services for the people of Fiji is the

main goal of the Ministry of Health. With the emergence of new and chronic diseases, together with an increasing demand for free health services, the use of new technologies and modern and expensive drugs to support the delivery of the services will continue to be a challenge in the years to come in the face of limited resources.

The Ministry of Health Strategic Plan 2007-2011 has as its vision:

A well financed health care delivery system that fosters good health and well-being for all citizens

and as its mission:

To provide quality health services through strengthened divisional health structures for the people of Fiji.

The Plan focuses on five main thematic areas:

- Provision of affordable, well planned, quality health services to everyone in Fiji.
- Protection of the health of citizens through the review of formulations and appropriate policies, legislation, regulations and standards that safeguard health.
- Promotion of health through the development and maintenance of effective partnerships that empower all stakeholders in health promotion so as to reduce risk factors related to communicable and noncommunicable diseases.
- Development and retention of a valued, committed and skilled workforce to enhance the delivery of quality health services.
- Development and use of an integrated management system to empower managers to maximize resources and promote continuous improvement at all levels of health service delivery.

The Ministry of Health Strategic Plan 2007-2011 aims to achieve seven health outcomes:

- a reduced noncommunicable disease burden;
- a start in reversing the spread of HIV/AIDS and preventing, controlling or eliminating other communicable diseases;
- improved family health and reduced maternal morbidity and mortality;
- improved child health and reduced child morbidity and mortality;
- improved adolescent health and reduced adolescent morbidity and mortality;
- improved mental health and
- improved environmental health through safe water and sanitation.

The work of the Ministry is based on the following values: Customer focus (being genuinely concerned that customers receive quality health care, respecting the dignity of all people); Equity (striving for an equitable health system and being fair in all dealings, irrespective of ethnicity, religion, political affiliation, disability, gender or age); Quality (pursuing high quality outcomes in all facets of activities); Integrity (committing to the highest ethical standards in all activities); and Responsiveness (responsive to the health needs of the population, noting the need for speed in delivery of urgent health services).

3.2 Organization of health services and delivery systems

Health services are delivered through 900 village clinics, 124 nursing stations, three area hospitals, 76 health centres, 19 subdivisional medical centres, three divisional hospitals and three speciality hospitals, with TB, leprosy and medical rehabilitation units at Tamavua Hospital and St Giles Mental Hospital. Fiji is playing a key role in the development of public health surveillance for eight priority infectious diseases (Pac NET), public health laboratory networks (Lab NET) and targeted outbreak response (Epi NET) under the Pacific Public Health Surveillance Network (PPHSN). The country hosts level 2 public health laboratories at Mataika House and is now venturing into the Regional Measles Laboratory Network. There is also an initiative to coalesce public health laboratory functions at Mataika House through collaboration between the clinical and public health laboratories.

HIV/AIDS laboratory testing in Fiji has undergone assessment and validation testing and has commenced confirmatory testing under the guidance of the National Reference Laboratory (Melbourne,

Australia)-WHO Collaborating Centre for HIV/AIDS and funding from the Global Fund. Testing will be for diagnosis, surveillance and monitoring of patients on antiretroviral treatment.

3.3 Health policy, planning and regulatory framework

The Ministry of Health Strategic Plan 2007-2011 was developed through extensive consultations with major stakeholders, including the private sector, nongovernmental organizations, central government agencies and senior staff of the Ministry of Health. The Strategic Plan has been developed in recognition of the Government's international commitments, the Government's Strategic Development Plan 2007 to 2011, the major health priorities for the people of Fiji and the planning requirements of the Ministry of Finance and National Planning. The Strategic Plan is also expected to form the framework for the development of annual corporate plans for the Ministry of Health for each successive year, from 2007 to 2011 inclusive.

3.4 Health care financing

The public health care system is heavily dependent on general taxation. The increasing demand for and cost of health care, coupled with limited resources, requires the Ministry of Health to place a greater focus on health care financing and cost-recovery strategies. The Ministry is examining a range of health-financing options, including social insurance. Moreover, the proposed financial management reform is expected to provide opportunities for revenue generation and retention. Hospital fees and charges for services, as determined in the Public Hospital and Dispensary Act, need to be reviewed. However, any cost-recovery strategies and fee structures introduced must ensure that disadvantaged groups in the community are not adversely affected.

Increasing demand for services has led to an expansion in the number of private general practitioners and specialists practising in Fiji under the Fiji Medical Council. The immediate priority of the Government is to shorten long queues, reduce long waiting lists and turnaround times and facilitate patient flow. The Ministry hopes to rise to the occasion and to continue to provide quality health care to improve the health status of all citizens through: implementation of the Clinical Services Plan; improved planning and delivery of effective public health and promotion activities; performance budgeting; identification of appropriate financing/resource options to complement the health budget; and implementation of appropriate prevention strategies. However, this may be hampered further by the current political situation and the effects of the global economic crisis.

3.5 Human resources for health

Emigration of health professionals, including doctors, nurses and paramedics, has increased over the last few years. The Ministry of Health is reviewing the health workforce plan to ensure that the training of doctors and nurses is aligned with the requirements of the health system. A review of the various professional structures in health is being undertaken and appropriate strategies will be put in place in the lifespan of this plan. A focus will also be placed on retaining existing staff, training nurse practitioners, employing part-time highly skilled staff and increasing the training opportunities for health professionals.

The announcement of the Government's intention to reduce the retirement age for civil servants from 60 year to 55 years would greatly affect the human resource capacity within the Ministry of Health and would have a negative impact on the efficient delivery of health care services to the people of Fiji.

3.6 Partnerships

With the idea of health being a collective responsibility, the Ministry of Health engages with other partners in delivering the best possible health care services to the people of Fiji. For noncommunicable diseases (NCD), health promotion, HIV/AIDS and suicide prevention there are national multisectoral committees that oversee and coordinate national implementation of the respective strategic plans developed by the same multi-stakeholders. These three committees are usually chaired by the Minister of Health, and members are from the permanent secretary or directorate level of government, non-state actors and civil society groups, including faith-based groups.

The Ministry also works in close partnership with the autonomous Fiji School of Medicine, the University of the South Pacific, Fiji Institute of Technology and other academic institutions for training of its staff members. At the regional level, WHO and the SPC are the main partners.

3.7 Challenges to health system strengthening

Fiji has a well developed health system with an infrastructure of base hospitals in three geographical divisions, supported by area and subdivisional hospitals, health centres and nursing stations in the smaller towns and rural and remote areas. Clinical services for surgery, medicine, paediatrics, obstetrics and gynaecology, orthopaedics, ENT, emergency medicine and relevant support services, however, need to be strengthened.

Maintenance of appropriate levels of infrastructure and facility is vital for the delivery of health services. Over recent years, new facilities have been built and are in full operation in Nadi, Levuka, Vunidawa, and Taveuni. New infrastructure development will include the completion of Labasa Hospital, relocation of Navua Hospital, construction of a new hospital in Ba Nausori and the relocation of St Giles Hospital. As an ongoing activity, the Ministry of Health will continue to concentrate on maintaining and improving existing facilities. The safety of hospitals and health facilities in and during emergencies and disasters will be a challenge, especially in the face of changing weather patterns. During the course of the Health Strategic Plan 2007-2011, clinical services in the areas of cardiology, oncology, nephrology and hyperbaric medicine will be strengthened.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : *Fiji today 2006/2007*
Operator : Ministry of Information & communications
Web address : http://www.fiji.gov.fj

Title 2 : *Ministry of Health, data update, April 2008*
Operator : Health Information Unit

Title 3 : *Corporate Plan 2008, Ministry of Health*
Operator : Ministry of Health

Title 4 : *Strategic Plan 2007 – 2011: Ministry of Health*
Operator : Ministry of Health

Title 5 : *Pacific Regional Information System (PRISM), SPC,*
Operator : Secretariat of the Pacific Community
Web address : http://www.spc.int/prism

5. ADDRESSES

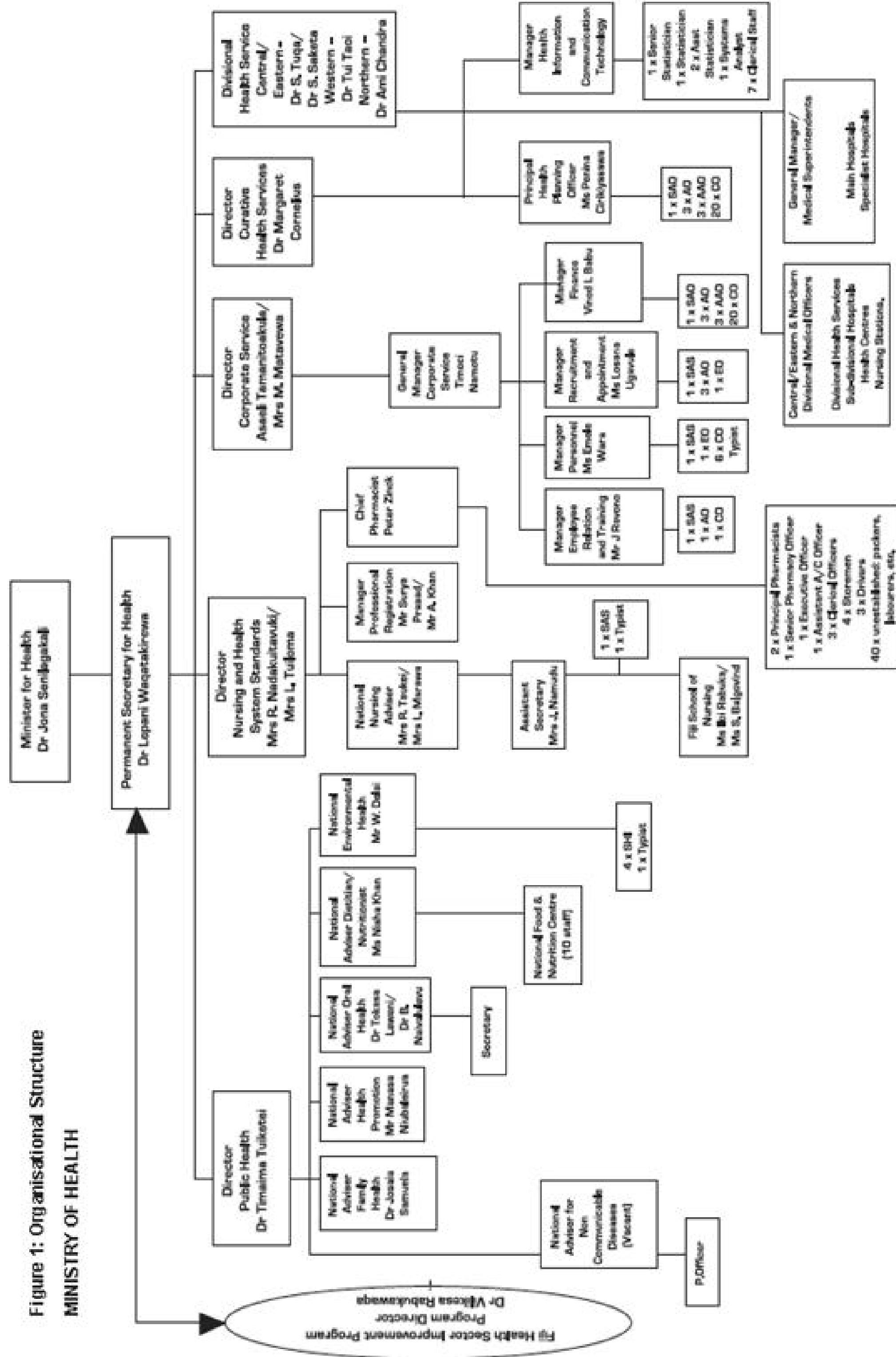
MINISTRY OF HEALTH

Office Address : Ministry of Health, 88 Amy Street., Toorak
Postal Address : PO Box 2223, Govt Bulding, Suva
Official Email Address : info@health.gov.fj
Telephone : 679-3306177
Fax : 679-3 306163
Office Hours : 8am – 4:30pm

WHO REPRESENTATIVE IN THE SOUTH PACIFIC

Office Address : Level 4 Provident Plaza One,
Downtown Boulevard,
33 Ellery Street, Suva
Postal Address : PO Box 113, Suva, Fiji.
Official Email Address : who@sp.wpro.who.int
Telephone : (679) 3234 100
Fax : (679) 3234 166/ 3234 177
Website : http://www.wpro.who.int/southpacific

6. ORGANIZATIONAL CHART: Ministry of Health



FIJI — **WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision**

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	18.33						2007	1
2	Estimated population ('000s)	837.27		427.18		410.10		2007	1
3	Annual population growth rate (%)	0.70		...		...		2007	2
4	Percentage of population								
	- 0–4 years	9.88 [g]		10.03 [g]		9.73 [g]		2007	1
	- 5–14 years	19.16 [g]		19.39 [g]		18.92 [g]		2007	1
	- 65 years and above	4.64 [g]		4.23 [g]		5.06 [g]		2007	1
5	Urban population (%)	51.80 [g]		...		...		2007 est	3
6	Crude birth rate (per 1000 population)	22.20		...		...		2007	4
7	Crude death rate (per 1000 population)	9.80		...		...		2007	4
8	Rate of natural increase of population (% per annum)	1.20		...		...		2007	4
9	Life expectancy (years)								
	- at birth	...		68.00		72.00		2007	5
	- Healthy Life Expectancy (HALE) at age 60	...		10.40		11.90		2002	6
10	Total fertility rate (women aged 15–49 years)	2.60						2003	7
	Socioeconomic indicators								
11	Adult literacy rate (%)	92.90 [a]		...		...		2002	8
12	Per capita GDP at current market prices (US$)	3312.10 [b]						2007p	9
13	Rate of growth of per capita GDP (%)	-4.40						2007p	9
14	Human development index	0.74						2006	10
	Environmental indicators	Total		Urban		Rural			
15	Proportion of vehicles using unleaded gasoline (%)	...		...		...			
16	Health care waste generation (metric tons per year)	...		...		...			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral	72	...	...	...	...	...	2005	11
	- Type A	...	...	...	...	...	...		
	- Type B	...	...	...	...	...	...		
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	0	0	0	0	0	0	2007	4
	Dengue/DHF	2014	...	...	0	0	0	2008	12
	Encephalitis	1	...	...	...	...	...	2007	4
	Gonorrhoea	1355	...	...		...	...	2007	4
	Leprosy	6	...	...	...	...	...	2007	12
	Malaria	1	...	...	...	...	...	2007	4
	Plague	0	0	0	0	0	0	2007	4
	Syphilis	910	...	...	...	...	...	2007	4
	Typhoid fever	286	...	...	...	...	...	2007	4

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	18 787	…	…	…	…	…	2007	4
19	**Diarrhoeal diseases**	7428	…	…	…	…	…	2007	4
20	**Tuberculosis**								
	- All forms	94 [f]	…	…	…	…	…	2007	12
	- New pulmonary tuberculosis (smear-positive)	52 [f]	…	…	…	…	…	2007	12
21	**Cancers**								
	All cancers (malignant neoplasms only)	395	129	266	…	…	…	2005	11
	- Breast	…	…	…	…	…	…		
	- Colon and rectum	10	7	3	…	…	…	2005	11
	- Cervix			69			…	2005	11
	- Oesophagus	…	…	…	…	…	…		
	- Leukaemia	24	16	8	…	…	…	2005	11
	- Lip, oral cavity and pharynx	15	9	6	…	…	…	2005	11
	- Liver	4	2	2	…	…	…	2005	11
	- Stomach	10	8	2	…	…	…	2005	11
	- Trachea, bronchus, and lung	1	1	0	…	…	…	2005	11
22	**Circulatory**								
	All circulatory system diseases	3304	…	…	…	…	…	2005	11
	- Acute myocardial infarction	376	…	…	…	…	…	2005	11
	- Cerebrovascular diseases	277	…	…	…	…	…	2005	11
	- Hypertension	346	…	…	…	…	…	2005	11
	- Ischaemic heart disease	353	…	…	…	…	…	2005	11
	- Rheumatic fever and rheumatic heart diseases	99	…	…	…	…	…	2005	11
23	**Diabetes mellitus**	208	92	116	…	…	…	2005	11
24	**Mental disorders**	…	…	…	…	…	…		
25	**Injuries**								
	All types	3174	…	…	…	…	…	2005	11
	- Homicide and violence	…	…	…	…	…	…		
	- Motor and other vehicular accidents	663 [c]	…	…	59	…	…	2007	1
	- Occupational injuries	…	…	…	…	…	…		
	- Suicide	77	…	…	…	…	…	2005p	7
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Injury	…	…	…	…	…	…	2007	4
	2. Influenza and pneumonia	…	…	…	…	…	…	2007	4
	3. Intestinal infectious disease	…	…	…	…	…	…	2007	4
	4. Infection of skin and subcutaneous tissues	…	…	…	…	…	…	2007	4
	5. Ischaemic heart disease	…	…	…	…	…	…	2007	4
	6. Other conditions originating in the perinatal period	…	…	…	…	…	…	2007	4
	7. Chronic lower respiratory disease	…	…	…	…	…	…	2007	4
	8. Other forms of heart disease	…	…	…	…	…	…	2007	4
	9. Hypertension	…	…	…	…	…	…	2007	4
	10. Diabetes mellitus	…	…	…	…	…	…	2007	4

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Diabetes mellitus	...	...	...	...	...	...	2007	4
	2. Other forms of heart disease	...	...	...	...	...	...	2007	4
	3. Ischaemic heart disease	...	...	...	...	...	...	2007	4
	4. Hypertension	...	...	...	...	...	...	2007	4
	5. Septicaemia	...	...	...	...	...	...	2007	4
	6. Cerebrovascular disease	...	...	...	...	...	...	2007	4
	7. Other conditions originating in the perinatal period	...	...	...	...	...	...	2007	4
	8. Chronic lower respiratory disease	...	...	...	...	...	...	2007	4
	9. Renal failure	...	...	...	...	...	...	2007	4
	10. Influenza and pneumonia	...	...	...	...	...	...	2007	4
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					42.29		2005	11
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
30	**Percentage of pregnant women with anaemia**					9.20		2007	4
31	**Neonatal mortality rate** (per 1000 live births)	11.90		...		...		2007	3
32	**Percentage of newborn infants weighing at least 2500 g at birth**	91.00		...		...		2005	11
33	**Immunization coverage for infants (%)**								
	- BCG	100.00		...		...		2008	12
	- DTP3	98.80		...		...		2008	12
	- POL3	99.20		...		...		2008	12
	- Hepatitis B III	98.80		...		...		2008	12
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			1			0	2005	11
	- Eclampsia			0			0	2005	11
	- Haemorrhage			0			0	2005	11
	- Obstructed labour			0			0	2005	11
	- Sepsis			1			0	2005	11
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	12
	- Diphtheria	0	0	0	...	...	...	2008	12
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2008	12
	- Mumps	0	0	0	...	...	...	2008	12
	- Neonatal tetanus	0	0	0	...	...	...	2008	12
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	12
	- Poliomyelitis	0	0	0	...	...	...	2008	12
	- Rubella	0	0	0	...	...	...	2008	12
	- Total Tetanus	0	0	0	...	...	...	2008	12

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Facilities with HIV testing and counseling services**		31		2008	12
37	**Health infrastructure**					
	Public health facilities	- General hospitals	3	944	2007	4
		- Specialized hospitals	3	227	2007	4
		- District/first-level referral hospitals	19	556	2007	4
		- Primary health care centres	76	0	2007	1
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)		126.70 [d]		2007p	13
	- total expenditure on health as % of GDP		3.80		2007p	13
	- per capita total expenditure on health (in US$)		151.02 [e]		2007p	13
	Government expenditure on health					
	- amount (in million US$)		87.58 [d]		2007p	13
	- general government expenditure on health as % of total expenditure on health		69.10		2007p	13
	- general government expenditure on health as % of total general government expenditure		9.10		2007p	13
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health		...			
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health		30.90		2007p	13
	Exchange rate in US$ of local currency is: 1 US$ =		1.61		2007	13
39	**Health insurance coverage as % of total population**		...			

	INDICATOR		DATA							Year	Source
40	**Human resources for health**		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	315	...	...	...	...	...	...	2006	11
		- Ratio per 1000 population	0.37 [e]	...	...	...	...	...	...	2006	11
	Dentists	- Number	42	...	...	...	...	...	...	2006	11
		- Ratio per 1000 population	0.05 [e]	...	...	...	...	...	...	2006	11
	Pharmacists	- Number	40	...	...	...	...	...	...	2006	11
		- Ratio per 1000 population	0.05 [e]	...	...	...	...	...	...	2006	11
	Nurses	- Number	1673	...	...	...	...	...	...	2006	11
		- Ratio per 1000 population	1.96 [e]	...	...	...	...	...	...	2006	11
	Midwives	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Paramedical staff	- Number	444	...	...	...	...	...	...	2006	11
		- Ratio per 1000 population	0.52 [e]	...	...	...	...	...	...	2006	11
	Community health workers	- Number	115	...	...	...	...	...	...	2006	11
		- Ratio per 1000 population	0.13 [e]	...	...	...	...	...	...	2006	11
41	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	…	…	…	…	…	…	…		
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	…	…	…	…	…	…		
42	Workforce losses/ Attrition	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		
		Nurses	…	…	…	…	…	…	…		
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	…	…	…	…	…	…		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	…	…	…		
44	Infant mortality rate (per 1000 live births)	18.40	…	…	2007	4
45	Under-five mortality rate (per 1000 live births)	22.40	…	…	2007	4
46	Proportion of 1 year-old children immunised against measles	93.90	…	…	2008	12
47	Maternal mortality ratio (per 100 000 live births)	31.10			2007	4
48	Proportion of births attended by skilled health personnel	99.00 [9]			2007	4
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	…				
	- Percentage of deliveries in health facilities (as % of total deliveries)	…				
49	Contraceptive prevalence rate	43.00	…	…	2007	4
50	Adolescent birth rate	8.50			2007	4
51	Antenatal care coverage - At least one visit	100.00			2005	11
	- At least four visits	…				
52	Unmet need for family planning	…	…	…		
53	HIV prevalence among population aged 15-24 years	…	…	…		
54	Estimated HIV prevalence in adults	0.10	…	…	2007	12
55	Percentage of people with advanced HIV infection receiving ART	…	…	…		
56	Malaria incidence rate per 100 000 population	…	…	…		
57	Malaria death rate per 100 000 population	…	…	…		
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	…	…	…		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	…	…	…		
60	Tuberculosis prevalence rate per 100 000 population	30.00	…	…	2007	12
61	Tuberculosis death rate per 100 000 population	4.00	…	…	2007	12
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	67.00	…	…	2007	12
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	66.00	…	…	2006	12
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	47.00	43.00	51.00	2006	14
65	Proportion of population using an improved sanitation facility	71.00	87.00	55.00	2006	14
66	Proportion of population with access to affordable essential drugs on a sustainable basis	…	…	…	…	

Notes:	
...	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Figure refers to 1999/2000 SY and census data
b	Figure calculated using 2007 exchange rate FJD 1.61 per USD from WHO national health accounts
c	Figure refers to serious injuries (hospital) and slight injuries (non-hospital)
d	Figure converted using exchange rate 1 USD= FJD 1.61
e	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
f	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO
g	Revised data

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FRENCH POLYNESIA

1. CONTEXT

1.1 Demographics

Located about 6000 kilometres east of Australia, French Polynesia is a group of five archipelagos covering an area of 4167 million square kilometres, with a land area of 3521 square kilometres. The country comprises 35 volcanic islands and about 183 low-lying coral atolls. Its closest neighbours are Kiribati to the north-west and Cook Islands to the west.

According to annual estimations, the population was of 264 000 at 31 January 2008. Around 88% of the population is concentrated in the Society Islands, which constitute about one-half of the land area. The most populated (82% of the population) and biggest island is Tahiti. The administration services are centralized in Tahiti (within the city of Papeete).

The population is characterized by its youth: 36% are below 20 years old and 6% above 65 years. The life expectancy is 73 for males and 78.2 for females. The majority of the population is Polynesian.

1.2 Political situation

Since the passing of the organic law of February 2004, reinforcing its autonomy, French Polynesia has become a French overseas country within the French Republic. Freely and democraticly governed by its representatives and by local referendum, French Polynesia constitutes an overseas collectivity where autonomy, guaranteed by the Republic, is ruled by article 74 of the French Constitution. French Polynesia can dispose representations towards any countries recognized by the French Republic (non-diplomatic representations). In addition, the status gives French Polynesian authorities competences in several fields, particularly civil rights, employment and fiscal rights.

The state core functions, such as justice, security and public order, defence and foreign policy are still under the authority of France, which is represented by a High Commissioner.

1.3 Socioeconomic situation

In 2005, the gross domestic product (GDP) was US$ 23 214 per capita, with a total GDP of US$ 5.9 billion, relying highly on transfers from France.

French Polynesia has reached a high level of health and socioeconomic development, as shown by the principal indicators, with 13% of GDP currently being spent on health. This favourable situation may be attributed to significant socioeconomic development and to the gradual implementation of an efficient health care system.

1.4 Risks, vulnerabilities and hazards

The main challenges facing French Polynesia and its health system are linked to its geography; the spread of its atolls and islands over a vast ocean area; differences between urban and rural areas in terms of social, economic and cultural activities; and the high density of the population on Tahiti island. All these factors make achievement of a really equitable system difficult. The challenges are also linked to the rapid mutation towards a society based on consumption, but with economic and social inequalities, leading to important differences in living standards.

The consequences are an increasing number of environmental issues (habitat, waste management, air, drinking water, water quality, resources and pollution of the lagoons) for which policies are currently being developed. The main risk factors for health are therefore linked to environmental health factors, smoking, sedentary lifestyles and poor diets, as well as mental health in its broader context.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

French Polynesia is facing challenges related to the evolution of the population's health. There has been a general decrease in the incidence of communicable diseases during recent decades thanks to the development of the health care system and the immunization policy. In parallel, however, there has been an alarming increase in cases of noncommunicable disease, such as obesity, diabetes, cardiovascular diseases and cancers, caused by changes in lifestyles and the emergence of unfavourable social behaviours, such as use of tobacco and alcohol, drugs abuse, unbalanced diets and sedentary lifestyles. In years to come, these health problems will predominate, along with their consequences on morbidity and mortality.

Added to these risk factors is an increase in the precariousness of some population groups in urban areas, the increasing fragility of the traditional family solidarity and social structure, and insufficiently controlled environmental health problems.

2.2 Outbreaks of communicable diseases

In 2006-2007, French Polynesia faced an outbreak of dengue serotype 1, circulating since the last outbreak in 2001 and partially linked to a reservoir of the population who had not been immunized. In February 2009, French Polynesia declared an outbreak of dengue serotype 4, and dengue serotype 1 is flowing again. This situation is related to that in the rest of the Pacific region. The severity of dengue outbreaks has been increasing for the last 30 years and the disease has become an important cause of hospitalization and childhood death. Dengue, leptospirosis and lymphatic filariasis are endemic. A more intensive surveillance system targeting these diseases has been organized, and a stronger vector control programme is now in place. There is a specific programme and surveillance system for tuberculosis.

2.3 Leading causes of mortality and morbidity

While morbidity due to acute respiratory infections remains fairly high, especially in rural and poor urban districts, improvements in medical care have resulted in very low mortality for these conditions. Morbidity due to noncommunicable diseases has been increasing in recent decades; obesity prevalence is high among adults (42%) and among children (10%) and is the major risk factor for chronic diseases.

Like many European countries, the leading causes of mortality are chronic diseases, especially cardiovascular disease and cancer, which are responsible for half of deaths. The main causes of premature mortality (before 65 years) are attributable to cardiovascular disease, cancer (men: lung; women: breast) and injuries.

2.4 Maternal, child and infant diseases

Almost the entire population have ready access to quality health care, resulting in good immunization coverage levels of over 95%, a low infant mortality rate (6.8 per 1000 live births), a very low maternal mortality ratio (1 maternal death out of 4434 births) and a high life expectancy at birth of 73 years for men and 78.2 years for women.

2.5 Burden of disease

Noncommunicable diseases represent an important burden. In addition to the impact of NCD on premature mortality and the high morbidity of chronic diseases (cancer, cardiovascular disease, asthma, etc.), however, there is still considerable morbidity due to communicable diseases. There is a real need for specific and specialized long-term care and treatment programmes. The current disease trend has been taken into account in construction of the new hospital, which will provide modern oncology and cardiology services. However, this will bring about an automatic increase in hospital expenses, causing an overload for the country's health budget.

Chronic diseases also have an economic impact, with an increase in health expenditure, loss of productivity at work, the cost of social insurance coverage of incapacities and handicaps, and decreased family incomes for those concerned. The focus needs to be on prevention aimed at reduction and

control of the multiple risk factors causing the rising NCD incidence, including obesity, lifestyles changes, sedentary lifestyles, tobacco use and unhealthy diets. There is currently an imbalance between the means dedicated to prevention activities and those to curative interventions, and public awareness has still not been raised to a level where substantial changes can take place

Excessive alcohol and drug consumption represents an important burden because they are linked to mental health problems, suicides, juvenile delinquency, violence within families, insecurity and road accidents.

The epidemic threats due to emerging infectious diseases, such as vectorborne diseases and influenza, are also a public health concern.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

According to the organic law, health is of the responsibility of the French Polynesian Government. The Health Directorate is the health authority under the Health Minister and is one of the most important administrative services in the country.

The mission and organization of the Health Directorate are defined by 1992 and 2004 regulations. The Directorate's mission is to implement, by any means at its disposal, public health objectives determined by public politics. It is in charge of health programme monitoring, coordination, implementation, control and evaluation, which contribute to public health objectives.

Through the documents defining health policy and health system organization, the main objectives of Health Ministry are:

- to maintain and improve equity in access to care by strengthening local-level health care services;

- to reconcile the accessibility and quality of care services, ensuring sustainability and promoting quality control in all hospital and non-hospital health facilities;

- to develop care channels and networks ;

- to combine curative interventions and prevention by reinforcing prevention activities, health education and promotion, and by making users more responsible; and

- to strengthen the role of the health authority in piloting the health system and adapting governance to address reality in the field through an efficient system of information.

3.2 Organization of health services and delivery systems

Both the private and the public health systems deliver curative care.

The hospital system includes five public and three private hospitals, including one for ambulatory treatment and one for physiotherapy. The public hospitals include: the Main Hospital of French Polynesia (Centre Hospitalier de Polynésie française), which is the referral hospital offering child and adult resuscitation, neurosurgery, cancerology and cardiovascular surgery, including heavy treatment; and four hospitals managed by the Health Direction : one general hospital in the Leeward islands (UTUROA, Raiatea); one hospital in the Marquesas islands with surgical, emergency and medical wards (TAIOAHE, Nuku Hiva); one hospital with a medical ward, an emergency ward and a long-stay ward in TARAVAO (TAHITI, Windward islands); and one hospital with medical and emergency wards in MOOREA (Windward islands).

Primary health care is also delivered through the private and public systems. The private system is mainly concentrated on the Windward Islands and the Leeward Islands.

However, the number of health professionals working in the private sector (medical practitioners, nurses, physiotherapists, dentists) whose services are refunded under the Social Health Insurance scheme, based on agreed fares, is limited. Primary health care is also delivered through the public sector. 115 public health facilities (dispensaries, medical centres, aid posts) are spread across all archipelagos and are managed by the Health Directorate. On the majority of islands, the public sector is the only one present, especially in remote and isolated areas.

The whole public health system is under the authority of the Health Directorate, except the Main Hospital of French Polynesia, which is under the direct authority of the Ministry of Health

3.3 Health policy, planning and regulatory framework

The latest health plan defining the health policies and priorities of the Ministry of Health was evaluated in 2005 by the Health Directorate, and a number of recommendations were formulated. However, a new health plan has not been yet prepared.

In terms of planning and regulation of care services, the implementation period for the most recent health organisation scheme has been extended for a further five years, from 2008

3.4 Health care financing

In 2008, total expenditure on health amounted to US$ 787 million. The government contribution represented 55% of these expenditures, 22% of the country's budget.

Thanks to a generalized health plan run by social security insurance, the whole population is covered.

The budget for the development of prevention activities comes essentially from the funds for prevention, supplied by sugar and alcohol taxation, created in 2001. This US$ 13-15 million budget is attributed to prevention activities implemented by the ministries of health, solidarity, family, youth, sports, transports and education

3.5 Human resources for health

Human resources for health are distributed in three large sectors in the health care system:

- the public hospital (French Polynesia Hospital Centre), which employs close to 1060 workers in Papeete, including 143 doctors and 508 nurses;

- the Health Directorate, which represents 1200 workers disseminated throughout the country, including 116 doctors and 340 nurses; and

- the private sector (three private clinics, private medicine), with 230 doctors and 255 nurses.

In order to strengthen health services, one to two nurses have been assigned to each isolated island and given responsibility for local coordination of the various public health programmes. They are also the liaison persons for the programme managers and are responsible for implementation and evaluation. These nurse coordinators are regularly recalled to share their experiences and be informed on the status of the different public health programmes and their outcomes. Nurses work in about 20 isolated communities where there is no doctor.

3.6 Partnerships

French Polynesia had signed partnership conventions with various governmental health organizations in France, particularly:

- the *Direction générale de la Santé* (French Health General Directorate), under the Health Ministry of France ,

- the *Institut de Veille Sanitaire* (INVS), in charge of surveillance and alert management,

- the *Agence Française de Sécurité Sanitaire des Produits de Santé* (AFSSAPS),
- the *Institut National de Prévention et d'Education pour la Santé* (INPES), in charge of health development and evaluation programmes),
- the *Centre d'Epidémiologie sur les causes médicales de décès* (CépiDC – INSERM) in charge of mortality data analysis) and national referral centres.

The cancer registry of French Polynesia is linked to the IARC (Association Internationale des Registres des Cancers), FRANCIM (France Cancer-Incidence et Mortalité) and the INVS.

French Polynesia also has significant collaboration in health with WHO and SPC in regional and international development of strategic plans in many areas.

3.7 Challenges to health system strengthening

French Polynesia is currently facing a number of challenges (see chap 3.1), the major one being related to gaining better control over the cost of curative services while improving the accessibility and the quality of care, mainly primary health care, in the most remote and isolated areas. Defining the level of care appropriate to each geographical area is another challenge.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Direction de la Santé en Polynésie française
Title 2	:	Institut de la Statistique de Polynésie française
Web address	:	http://www.ispf.pf
Title 3	:	Centre hospitalier de la Polynésie française

5. ADDRESSES

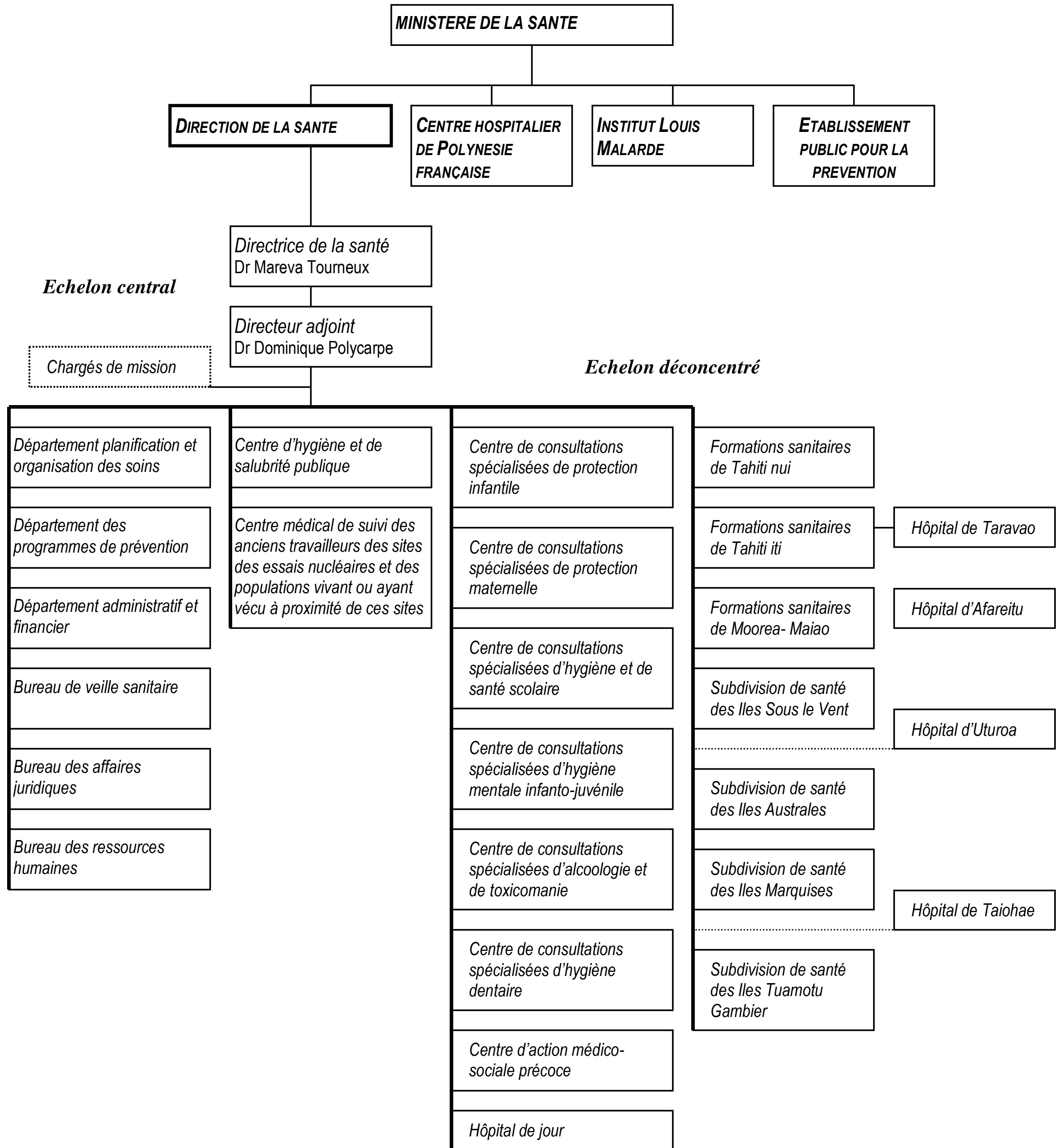
MINISTRY OF HEALTH

Office Address	:	Direction de la Santé Rue des Poilus Tahitiens Papeete – Tahiti, Polynésie Française
Postal Address	:	B.P. 611, 98713 Papeete – Tahiti
Official Email Address	:	Directrice de la santé : mareva.tourneux@sante.gov.pf Secrétariat : secretariat@sante.gov.pf
Telephone	:	(689) 46 00 02
Fax	:	(689) 43 00 74
Office Hours	:	7:30 am – 15:30 pm

WHO REPRESENTATIVE IN THE SOUTH PACIFIC

Office Address	:	Level 4 Provident Plaza One Downtown Boulevard 33 Ellery Street, Suva
Postal Address	:	P.O. Box 113, Suva, Fiji
Official Email Address	:	who@sp.wpro.who.int
Telephone	:	(679) 3234 100
Fax	:	(679) 3234 166; 3234 177
Office hours	:	0800 – 1700
Website	:	http://www.wpro.who.int/southpacific

6. ORGANIZATIONAL CHART: Ministry of Health



FRENCH POLYNESIA

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	3.52			2009	1
2	Estimated population ('000s)	264.00 [a]	135.20	128.80	2008 est	3
3	Annual population growth rate (%)	1.20	1.20	1.30	2002-2007	2
4	Percentage of population					
	- 0–4 years	8.30	8.28	8.31	2008	3
	- 5–14 years	17.65	17.60	17.55	2008	3
	- 65 years and above	5.80	5.55	6.13	2008	3
5	Urban population (%)	46.10 [b]	...	...	2007	4
6	Crude birth rate (per 1000 population)	17.10	17.34	16.64	2007	5
7	Crude death rate (per 1000 population)	4.80	5.57	3.86	2007	5,6
8	Rate of natural increase of population (% per annum)	1.23	...	...	2007	7
9	Life expectancy (years)					
	- at birth	75.40	73.00	78.20	2008	8
	- Healthy Life Expectancy (HALE) at age 60	20.10	18.20	22.00	2008	8
10	Total fertility rate (women aged 15–49 years)	2.18			2008	9
	Socioeconomic indicators					
11	Adult literacy rate (%)	94.70 [c]	93.70 [c]	95.60 [c]	2007	10
12	Per capita GDP at current market prices (US$)	23 214.00			2005	11
13	Rate of growth of per capita GDP (%)	1.29			2004-05	11
14	Human development index	...				
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	...	...	...		
16	Health care waste generation (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	...	...	...	0	0	0	2007	6,12
	- Type B	...	...	...	2	0	2	2007	6,12
	- Type C	...	...	...	0	0	0	2007	6,12
	- Type E	...	...	...	0	0	0	2007	6,12
	- Unspecified	...	...	...	0	0	0	2007	6,12
	Cholera	0	0	0	0	0	0	2007	6,12
	Dengue/DHF	189 [d]	...	...	0	0	0	C:2008 D:2007	C: 12,13 D:6
	Encephalitis	...	...	...	0	0	0	2007	6,12
	Gonorrhoea	0	0	0	0	0	0	2007	6,12
	Leprosy	95	79	16	0	0	0	2007	6,12
	Malaria	0	0	0	0	0	0	2007	6,12
	Plague	0	0	0	0	0	0	2007	6,12
	Syphilis	...	...	...	0	0	0	2007	6,12
	Typhoid fever	0	0	0	0	0	0	2005	6,12

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	…	…	…	36	16	20	2007	6
19	**Diarrhoeal diseases**	…	…	…	6	5	1	2007	6
20	**Tuberculosis**								
	- All forms	48	25	23	1	0	1	C:2008 D: 2007	C: 14, D: 6
	- New pulmonary tuberculosis (smear-positive)	20	…	…	…	…	…	2008	14
21	**Cancers**								
	All cancers (malignant neoplasms only)	525	266	259	306	175	131	C:2005 D:2007	C:6, D:27
	- Breast	95	1	94	34	1	33	C:2005 D:2007	C:6, D:27
	- Colon and rectum	32	16	16	10	5	5	C:2005 D:2007	C:6, D:27
	- Cervix			14			4	C:2005 D:2007	C:6, D:27
	- Oesophagus	4	4	0	11	10	1	C:2005 D:2007	C:6, D:27
	- Leukaemia	9	6	3	10	4	6	C:2005 D:2007	C:6, D:27
	- Lip, oral cavity and pharynx	23	15	8	10	7	3	C:2005 D:2007	C:6, D:27
	- Liver	8	4	4	23	16	7	C:2005 D:2007	C:6, D:27
	- Stomach	17	11	6	8	6	2	C:2005 D:2007	C:6, D:27
	- Trachea, bronchus, and lung	81	56	25	67	50	17	C:2005 D:2007	C:6, D:27
22	**Circulatory**								
	All circulatory system diseases	…	…	…	292	177	114	2007	6
	- Acute myocardial infarction	…	…	…	52	35	16	2007	6
	- Cerebrovascular diseases	…	…	…	96	51	45	2007	6
	- Hypertension	…	…	…	25	10	15	2007	6
	- Ischaemic heart disease	…	…	…	77	56	20	2007	6
	- Rheumatic fever and rheumatic heart diseases	…	…	…	6	2	4	2007	6
23	**Diabetes mellitus**	…	…	…	36	24	12	2007	6
24	**Mental disorders**	…	…	…	0	0	0	2007	6
25	**Injuries**								
	All types	…	…	…	132	98	34	2007	6
	- Homicide and violence	…	…	…	…	…	…	2007	6
	- Motor and other vehicular accidents	…	…	…	55	41	14	2007	6
	- Occupational injuries	…	…	…	…	…	…	2007	6
	- Suicide	188	67	131	31	23	8	C:2008 D:2007	6,15
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Acute respiratory infections	12 906 [e]	…	…	5069.13 [f]	…	…	2005	16
	2. Infections of the skin and subcutaneous tissues	12 235 [e]	…	…	4805.58 [f]	…	…	2005	16
	3. Acute otitis media	5581 [e]	…	…	2192.06 [f]	…	…	2005	16
	4. Pharyngitis	4706 [e]	…	…	1848.39 [f]	…	…	2005	16
	5.								
	6.								
	7.								
	8.								
	9.								
	10.								

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Neoplasms	308	176	132	118.60	132.22	104.27	2007	6
	2. Diseases of the circulatory system	292 [g]	177	114	112.43	132.97	90.05	2007	6
	3. Injuries and external causes	132	98	34	50.83	73.62	26.86	2007	6
	4. Diseases of the respiratory system	101	58	43	38.89	43.57	33.97	2007	6
	5. Endocrine, nutritional and metabolic diseases	51	32	19	19.64	24.04	15.01	2007	6
	6. Infectious and parasitic diseases	38	23	15	14.63	17.28	11.85	2007	6
	7. Diseases of the digestive system	38	23	15	14.63	17.28	11.85	2007	6
	8. Diseases of the genitourninary system	31	18	13	11.94	13.52	10.27	2007	6
	9. Diseases of the nervous system	20	10	10	7.70	7.51	7.90	2007	6
	10. Affections of which l' origin is during the perinatal time	11	7	4	4.24	5.26	3.16	2007	6
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					62.00 [h]		2005	17
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
30	**Percentage of pregnant women with anaemia**					...			
31	**Neonatal mortality rate (per 1000 live births)**	2.90		...		...		2007	5
32	**Percentage of newborn infants weighing at least 2500 g at birth**	93.08		...		...		2004	18
33	**Immunization coverage for infants (%)**								
	- BCG	99.00		...		...		2007	13,19
	- DTP3	98.00		...		...		2007	13,19
	- POL3	98.00		...		...		2007	13,19
	- Hepatitis B III	99.00		...		...		2007	13,19
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			0	2007	6
	- Eclampsia			...			0	2007	6
	- Haemorrhage			...			0	2007	6
	- Obstructed labour			...			0	2007	6
	- Sepsis			...			0	2007	6
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	13
	- Diphtheria	0	0	0	...	...	...	2008	13
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2008	13
	- Mumps	0	0	0	...	...	...	2008	13
	- Neonatal tetanus	0	0	0	...	...	...	2008	13
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	13
	- Poliomyelitis	0	0	0	...	...	...	2008	13
	- Rubella	0	0	0	...	...	...	2008	13
	- Total Tetanus	0	0	0	...	...	...	2008	13

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Facilities with HIV testing and counseling services**		9 [i]		2009	24
37	**Health infrastructure**					
	Public health facilities	- General hospitals	1	434 [b]	2005	29
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	4	177	2009p	20
		- Primary health care centres	115	...	2009p	20
	Private health facilities	- Hospitals	3	260	2009p	20
		- Outpatient clinics	3	260	2009p	20
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)			787.00	2008 est	28
	- total expenditure on health as % of GDP			13.00	2008 est	28
	- per capita total expenditure on health (in US$)			3029.00	2008 est	28
	Government expenditure on health					
	- amount (in million US$)			...		
	- general government expenditure on health as % of total expenditure on health			55.00	2008 est	28
	- general government expenditure on health as % of total general government expenditure			...		
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			...		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			...		
	Exchange rate in US$ of local currency is: 1 US$ =			...		
39	**Health insurance coverage as % of total population**			98.00	2008	23

	INDICATOR		DATA							Year	Source
40	**Human resources for health**		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	531	387	144	403	128	262	269	2009p	20
		- Ratio per 1000 population	2.01	1.47 [f]	0.55 [f]	3.36 [f]	0.91 [f]	0.99 [f]	1.02 [f]	2009p	20
	Dentists	- Number	114	93	21	73	41	29	85	2009p	20
		- Ratio per 1000 population	0.43	0.35 [f]	0.08 [f]	0.61 [f]	0.29 [f]	0.11 [f]	0.32 [f]	2009p	20
	Pharmacists	- Number	152	80	72	102	50	14	138	2009p	20
		- Ratio per 1000 population	0.58	0.30 [f]	0.27 [f]	0.85 [f]	0.36 [f]	0.05 [f]	0.52 [f]	2009p	20
	Nurses	- Number	1147	281	866	843	304	849	298	2009p	20
		- Ratio per 1000 population	4.34	1.06 [f]	3.28 [f]	7.04 [f]	2.17 [f]	3.22 [f]	1.13 [f]	2009p	20
	Midwives	- Number	124	11	113	87	37	79	45	2009p	20
		- Ratio per 1000 population	0.47	0.04 [f]	0.43 [f]	0.73 [f]	0.26 [f]	0.30 [f]	0.17 [f]	2009p	20
	Paramedical staff	- Number	398	172	226	303	95	164	234	2009p	20
		- Ratio per 1000 population	1.51	0.65 [f]	0.86 [f]	2.53 [f]	0.68 [f]	0.62 [f]	0.89 [f]	2009p	20
	Community health workers	- Number	530	66	464	392	138	403	127	2009p	20
		- Ratio per 1000 population	2.01	0.25 [f]	1.76 [f]	3.27 [f]	0.99 [f]	1.53 [f]	0.48 [f]	2009p	20
41	**Annual number of graduates**	Physicians	0	0	0	0	0	0	0	2008	20
		Dentists	0	0	0	0	0	0	0	2008	20
		Pharmacists	0	0	0	0	0	0	0	2008	20

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	**Annual number of graduates**	Nurses	25	5	20	...	...	...	...	2008	21
		Midwives	4	1	3	...	...	...	...	2007	22
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	**Workforce losses/ Attrition**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	**Total**	**Male**	**Female**		
43	**Prevalence of underweight children under five years of age**	...	...	...		
44	**Infant mortality rate (per 1000 live births)**	6.80	...	...	2007	5
45	**Under-five mortality rate (per 1000 live births)**	7.90	...	...	2007	6
46	**Proportion of 1 year-old children immunised against measles**	96.00	...	...	2007	19
47	**Maternal mortality ratio (per 100 000 live births)**	22.55 [j]			2007	6
48	**Proportion of births attended by skilled health personnel**	100.00 [b]			2004	18
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.00 [b]			2004	18
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.00 [b]			2004	18
49	**Contraceptive prevalence rate**	...	...	...		
50	**Adolescent birth rate**	48.90			2007	24
51	**Antenatal care coverage** - At least one visit	100.00 [j,b]			2004	18
	- At least four visits	95.00			2004 est	18
52	**Unmet need for family planning**	...	...	...		
53	**HIV prevalence among population aged 15-24 years**	0.01	0.01	0.02	2008	25
54	**Estimated HIV prevalence in adults**	0.07	0.09	0.04	2008	25
55	**Percentage of people with advanced HIV infection receiving ART**	86.89	89.74	81.08	2008	25
56	**Malaria incidence rate per 100 000 population**	0.00	0.00	0.00	2008	12
57	**Malaria death rate per 100 000 population**	0.00	0.00	0.00	2008	12
58	**Proportion of population in malaria-risk areas using effective malaria prevention measures**	NR	NR	NR	2008	12
59	**Proportion of population in malaria-risk areas using effective malaria treatment measures**	NR	NR	NR	2008	12
60	**Tuberculosis prevalence rate per 100 000 population**	18.50	...	...	2008	14
61	**Tuberculosis death rate per 100 000 population**	0.38	...	...	2008	14
62	**Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)**	84.38	...	...	2008	14
63	**Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)**	73.00	...	...	2008	14
		Total	**Urban**	**Rural**		
64	**Proportion of population using an improved drinking water source**	100.00	100.00	100.00	2006	26
65	**Proportion of population using an improved sanitation facility**	98.00	99.00	97.00	2006	26
66	**Proportion of population with access to affordable essential drugs on a sustainable basis**	100.00	100.00	100.00	2008	24

Notes:	
…	Data not available
est	Estimate
NR	Not relevant
a	Estimated population as at 31 January 2008
b	Revised data
c	Figure refers to french as official language
d	Figure refers to 189 dengue serotype 1 cases and 1 DHF
e	Figure provided by dispensaries and isolated aid posts only. It does not represent the whole public and private data
f	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
g	Totals may not tally due to some reported cases with no gender breakdown
h	Figure refers to women aged 15-39 years old.
i	Figure refers to free and anonymous testing and counselling centres or CDAG.
j	Figure refers to 1 maternal death out of 4434 births

Sources:	
1	Institut de la Statistique de la Polynésie française. Les chiffres essentiels de l'économie polynésienne - Edition 2007.
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5	Institut de la Statistique de la Polynésie française. Etat-civil - Indicateurs démographiques annuels de la Pf - Années 1994 à 2007; février 2009 (www.ispf.pf).
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8	Institut de la Statistique de la Polynésie française. Espérance de vie en Polynésie française de 1984 à 2008 et table de mortalité abrégé pour la génération 2008.
9	Institut de la Statistique de la Polynésie française. Etat civil - Taux général de fécondité et taux de fécondité par âge en Pf; février 2009.
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15	Bilan de l'enquête START régionale de l'OMS sur les tentatives de suicide et suicides en Polynésie française- Année 2008.
16	Department des Programme de Prevention; DPP, Direction de la Sante en Polynesie Francaise.
17	Direction de la Santé. Comportements sexuels et prévention du Sida en Polynésie française. Rapport d'enquête, décembre 2007.
18	Direction de la Santé. Certficats de santé du 8ème jour. Résultats de l'année 2008. BISES n°5/2006, décembre 2006.
19	Direction de la Santé (Département des Programmes de Prévention). Evaluation de la couverture vaccinale des élèves scolarisés en Polynésie française, 2007.
20	Direction de la santé (Département Planification et Offre de Soins) - Registre des professions de santé (mai 2009).
21	Direction de la Santé (Institut de Formations en Soins Infirmiers de Polynésie française).
22	Ecole de Sages-Femmes de Papeete.
23	Caisse de Prévoyance Sociale, ministère de la solidarité et de la famile.
24	Direction de la Santé. Observatoire de la Santé.
25	Direction de la Santé (Bureau de Veille Sanitaire). Registre de surveillance du VIH/Sida en Polynésie française.
26	World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). Progress on Drinking Water and Sanitation: Special focus on Sanitation. UNICEF, New York and WHO, Geneva, 2008. [http://www.wssinfo.org/en/40_mdg2008.html].
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28	Etats généraux de la Polynésie français, documents proviroires de la Présidence de la Polynésie française.
29	Présentation du Centre Hospitalier de Polynésie française - 9/08/2005 (www.chpf.pf).

Guam

1. CONTEXT

1.1 Demographics

The population of Guam was estimated to be 175 991 in 2008, with 104 males for every 100 females. Population density is 325 per square kilometre. Total life expectancy for both sexes is 77.8 years. Men are expected to live to 74.8 years of age and women to 81.1 years. The crude birth rate decreased slightly from 20.6 in 2004 to 18.4 in 2008. The crude death rate in 2008 was 4.5 per 1000 population, a slight increase from 4.2 in 2004.

1.2 Political situation

The political situation on Guam remains stable, with elections for the mayors of municipal civil districts (villages) and the unicameral legislature held in 2004. Cooperation between the Executive Branch and the Legislative Branch is growing.

1.3 Socioeconomic situation

Guam has been in a financial crisis since the 1994 fiscal year. The economic decline is related to the Asian economic crisis and unforeseen events such as supertyphoons (which have destroyed much of Guam's infrastructure and left much of the island with little or no potable water for weeks and no electricity for two to three months in some areas), the war in Iraq, and the outbreak of severe acute respiratory syndrome (SARS). Guam's economy is heavily reliant on the tourism industry, with the majority of visitors originating from Japan and the Pacific rim. Tourist arrivals and expenditures have dwindled due to the aforementioned events, although there are indications of an upswing.

The most critical impact of the crisis has been in the employment area. According to the local Department of Labour office, Guam's unemployment rate was 7.7 % as of March 2004. In 2005, the reported per capita gross island product was US$ 22 661.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

No available information.

2.2 Outbreaks of communicable diseases

There were two food poisoning outbreaks in 2006. The first occurred in September 2006 among over 100 students and four adults at Chief Brodie Elementary School. Victims complained of abdominal cramps, diarrhoea and vomiting, but none required hospitalization. The definite cause of the outbreak was not determined. However, the rapid onset and recovery from symptoms experienced by those affected suggests that it may have been due to *Bacillus cereus* or *Staphylococcus aureaus* intoxication, problems that may be facilitated when transporting food.

The Department Public Health and Social Services was notified of another food poisoning outbreak in October 2006 among 49 tourists staying in a local hotel. Investigation revealed that tourists complained of nausea, vomiting, diarrhoea and headache, but no hospitalization was required. The affected persons had eaten at a number of regulated establishments prior to their illnesses; no significant food establishment violations that might have contributed to the outbreak were identified.

2.3 Leading causes of mortality and morbidity

Based on inpatient data, the leading causes of morbidity in 2005 were diseases of pregnancy, childbirth and the puerperium; influenza and pneumonia; certain infectious and parasitic diseases; ischaemic heart disease; and malignant neoplasm.

The leading causes of death in 2003 were: diseases of the heart (119.4 per 100 000 population), malignant neoplasms (68.4), cerebrovascular diseases (31.2), accidents (17.4) and bacterial diseases, such as septicaemia (16.2).

2.4 Maternal, child and infant diseases

In 2003, there was no maternal death. About 87% of total deliveries in 2004 occurred in health facilities. The infant mortality rate declined from 12.3 per 1000 live births in 2004 to 6.17 in 2008. In 2006, the coverage rate for poliomyelitis and measles immunization was 85%, while it was 89% for DTP3, and 91% for hepatitis B3.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

Guam is dedicated to the attainment of health for all by 2010. In 1992, the Guam Health Planning and Development Agency identified 13 health service priority areas to be strengthened:

- human resource development;
- health planning;
- wellness promotion;
- health information systems;
- communicable disease control;
- disposal of hazardous and toxic materials;
- availability and accessibility of health services;
- environmental protection;
- drug and alcohol abuse;
- chronic disease prevention and control;
- injury prevention;
- maternal and child health; and
- vector control.

Although some improvement has been made in the area of health information systems, wellness promotion and communicable disease control, the remaining areas continue to be top priorities.

3.2 Organization of health services and delivery systems

No available information.

3.3 Health policy, planning and regulatory framework

See Section 3.1.

3.4 Health care financing

Total health expenditure amounted to US$ 159.8 million in 2000, with per capita total expenditure on health of US$ 1032.4. As of 30 September, government expenditure on public health for 2005 was US$ 64 million, about 9% of total government expenditure.

3.5 Human resources for health

All public health services depend on having a basic infrastructure, especially in terms of personnel. Unfortunately, Guam is experiencing health workforce shortages due to the early retirement of its most experienced professionals. Human resources for health are still lacking in critical areas and must be developed locally to the greatest extent possible. The following training needs are priorities: environmental studies, with an emphasis on environmental law, policy, management, and planning and analysis; and short-term training on retail hazard analysis critical control point (HACCP), as well as on drugs, medical devices and controlled substances.

The Guam Environmental Protection Agency (GEPA) relies heavily on its professional staff to provide technical expertise in all areas of environmental resource protection, management and policy. At the same time, this technical expertise is needed for the young professionals within GEPA, as the fields of environmental protection and science are constantly changing. However, due to early retirement and voluntary separation, all personnel with over 10 years of professional and technical experience have left GEPA, leaving half (two out of four) of the remaining personnel with less than four years of professional GEPA experience. Combined with the local hiring freeze, it is anticipated that no new professionals will be hired within the next two to three years. The lack of well educated and technically trained personnel is severely undermining the professional credibility of GEPA. To further complicate matters, GEPA also serves as the primary regulatory agency for all environmental issues and policies on Guam, and takes the lead for most other islands in Micronesia.

The Division of Environmental Health of the Department of Public Health and Social Services (DPHSS) is also greatly understaffed. Over half the Division's staff have fewer than five years experience, and staff generally lack specialized training.

Training in retail HACCP is lacking. The United States Federal Drug Administration is urging all locales, states and territories to explore HACCP as a requirement in retail and food service establishments, and to develop a model food code that incorporates HACCP principles.

All health care products, from toothbrushes to prescription medications, are regulated and monitored by the Drug and Medical Device Programme. Because of Guam's geographical location and the ethnic diversity of its people, various drugs and medical devices of foreign origin are imported, distributed and marketed. These include many poorly labelled, misbranded and adulterated drugs, as well as hazardous medical devices. Training in the area of drug and medical devices is therefore necessary for staff of the Division of Environmental Health.

Forged prescriptions, lack of accountability of controlled substances by businesses, and illegal dispensing of controlled substances are estimated to be significant problems. However, because of the lack of human resources, only urgent cases are pursued and investigated.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

Guam is faced with the challenge of maintaining a health care system that will adequately meet the needs of a predominantly young and growing population. At the same time, it is also facing the added challenge of addressing the problems of the rapidly increasing number of older people, forecast to increase from 3.9% of the total population in 1990 to 7.5% in 2010.

A reduction in human and financial resources has severely impacted the health system. An early retirement programme, instituted at the end of 1999, led many experienced health workers to retire. While the vacated positions have continued to be funded, there is not a large enough resource pool to fill all of them. Tightening government budgets have left some less critical positions vacant, and these vacancies have reduced the overall amount of services available to the uninsured and underinsured population. The vacancies have also affected progress in strengthening other health service priority areas, such as disposal

of hazardous and toxic materials, environmental protection, vector control, and drug and alcohol abuse services.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Guam statistical yearbook 2005*
Operator	:	Bureau of Statistics and Plans, Office of the Governor
Web address	:	http://bsp.guam.gov/
Title 2	:	Office of Vital Statistics, Guam Department of Health and Social Services
Web address	:	http://dphss.guam.gov/
Title 3	:	United States of America Bureau of the Census
Web address	:	http://www.census.gov/
Title 4	:	Secretariat of the Pacific Community
Web address	:	http://www.spc.int/prism/

5. ADDRESSES

DEPARTMENT OF PUBLIC HEALTH AND SOCIAL SERVICES

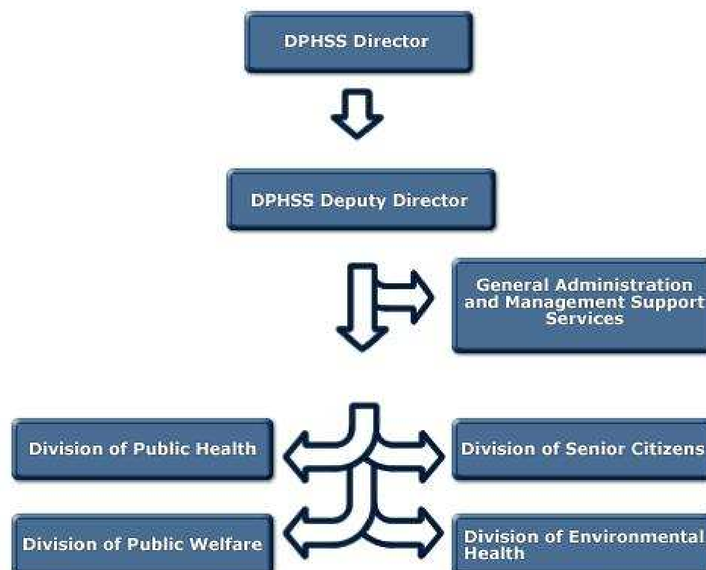
Postal Address	:	123 Chalan Kareta Mangilao, Guam 96913-6304
Website	:	http://dphss.guam.gov/

WHO REPRESENTATIVE

There is no WHO Representative in Guam. Queries about WHO's programme of collaboration with Guam should be directed to the Director (Programme Management):

Office Address	:	World Health Organization Regional Office for the Western Pacific, United Nations Avenue, Manila, Philippines 1000
Postal Address	:	P.O. Box 2932, Manila, Philippines 1000
Telephone	:	(632) 528-8001 (trunk line)
Office Hours	:	0700H-1530H
Website	:	http://www.wpro.who.int

6. ORGANIZATIONAL CHART: Ministry of Health



GUAM — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	**Total**	**Male**	**Female**		
1	**Area (1 000 km2)**	0.54			2008	1
2	**Estimated population ('000s)**	175.99	89.56	86.44	2008	2
3	**Annual population growth rate (%)**	1.39	…	…	2008	2
4	**Percentage of population**					
	- 0–4 years	10.50	10.40	10.60	2008 est	3
	- 5–14 years	19.60 [a]	19.30 [a]	19.80 [a]	2008 est	3
	- 65 years and above	6.50 [a]	6.10 [a]	6.70 [a]	2008 est	3
5	**Urban population (%)**	93.10 [b]	…	…	2007 est	4
6	**Crude birth rate (per 1000 population)**	18.38	…	…	2008	2
7	**Crude death rate (per 1000 population)**	4.50	…	…	2008	2
8	**Rate of natural increase of population (% per annum)**	1.39	…	…	2008	2
9	**Life expectancy (years)**					
	- at birth	77.84	74.79	81.06	2008	2
	- Healthy Life Expectancy (HALE) at age 60	…	…	…		
10	**Total fertility rate (women aged 15–49 years)**	2.55			2008	2
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	…	…	…		
12	**Per capita GDP at current market prices (US$)**	22 661.00			2005	5
13	**Rate of growth of per capita GDP (%)**	…				
14	**Human development index**	…				
	Environmental indicators	**Total**	**Urban**	**Rural**		
15	**Proportion of vehicles using unleaded gasoline (%)**	…	…	…		
16	**Health care waste generation (metric tons per year)**	…	…	…		

	Communicable and noncommunicable diseases	**Number of new cases**			**Number of deaths**				
17	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral								
	- Type A	3	…	…	…	…	…	2006	6
	- Type B	159	…	…	…	…	…	2006	6
	- Type C	66	…	…	…	…	…	2006	6
	- Type E	…	…	…	…	…	…		
	- Unspecified	…	…	…	…	…	…		
	Cholera	0	0	0	0	0	0	2006	6
	Dengue/DHF	1	…	…	…	…	…	2007	7
	Encephalitis	2	…	…	0	0	0	2003	7
	Gonorrhoea	98	…	…	…	…	…	2006	6
	Leprosy	3	…	…	…	…	…	2006	7
	Malaria	3 [c]	…	…	…	…	…	2006	7
	Plague	0	0	0	0	0	0	2003	7
	Syphilis	3	…	…	…	…	…	2006	6
	Typhoid fever	0	0	0	…	…	…	2006	6

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	137	…	…	11	7	4	2000	8
19	**Diarrhoeal diseases**	…	…	…	0	0	0	2000	8
20	**Tuberculosis**								
	- All forms	53 [l]	…	…	…	…	…	2007	7
	- New pulmonary tuberculosis (smear-positive)	5 [l]	…	…	…	…	…	2007	7
21	**Cancers**								
	All cancers (malignant neoplasms only)	…	…	…	125	74	51	2000	8
	- Breast	…	…	…	…	…	…		
	- Colon and rectum	…	…	…	13	8	5	2000	8
	- Cervix			…			2	2000	8
	- Oesophagus	…	…	…	…	…	…		
	- Leukaemia	…	…	…	4	1	3	2000	8
	- Lip, oral cavity and pharynx	…	…	…	1	1	0	2000	8
	- Liver	…	…	…	7	6	1	2000	8
	- Stomach	…	…	…	7	3	4	2000	8
	- Trachea, bronchus, and lung	…	…	…	36	22	14	2000	8
22	**Circulatory**								
	All circulatory system diseases	…	…	…	246	149	97	2000	8
	- Acute myocardial infarction	….	….	….	25	19	6	2000	8
	- Cerebrovascular diseases	…	…	…	48	33	25	2000	8
	- Hypertension	…	…	…	15	10	5	2000	8
	- Ischaemic heart disease	…	…	…	142	88	54	2000	8
	- Rheumatic fever and rheumatic heart diseases	…	…	…	2	2	0	2000	8
23	**Diabetes mellitus**	…	…	…	19	…	…	2001	9
24	**Mental disorders**	…	…	…	0	0	0	2000	8
25	**Injuries**								
	All types	…	…	…	82	69	13	2000	8
	- Homicide and violence	…	…	…	4	2	2	2000	8
	- Motor and other vehicular accidents	…	…	…	23	18	5	2000	8
	- Occupational injuries	…	…	…	5	4	1	2000	8
	- Suicide	…	…	…	29	27	2	2000	8
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Pregnancy, childbirth and the puerperium	3892 [d]	….	….	2308.97	….	….	2005	10
	2. Influenza and pneumonia	645 [d]	….	….	382.65	….	….	2005	10
	3. Certain infectious and parasitic diseases	583 [d]	….	….	345.87	….	….	2005	10
	4. Ischaemic heart disease	521 [d]	….	….	309.09	….	….	2005	10
	5. Malignant neoplasm	370 [d]	….	….	219.51	….	….	2005	10
	6.	…	….	….	…	….	….		
	7.	…	….	….	…	….	….		
	8.	…	….	….	…	….	….		
	9.	…	….	….	…	….	….		
	10.	…	…	…	…	…	…		

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	Total	Male	Female	Total	Male	Female		
	1. Diseases of the heart	199	...	...	119.45	...	...	2003	10
	2. Malignant neoplasm	114	...	...	68.43	...	...	2003	10
	3. Cerebrovascular disease	52	...	...	31.21	...	...	2003	10
	4. All other accidents	29	...	...	17.41	...	...	2003	10
	5. Bacterial diseases (septicaemia)	27	...	...	16.21	...	...	2003	10
	6.	...	...	...	...	...	...		
	7.	...	...	...	...	...	...		
	8.	...	...	...	...	...	...		
	9.	...	...	...	...	...	...		
	10.	...	...	...	...	...	...		
	Maternal, child and infant diseases	Total		Male		Female			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					...			
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					NR		2006	7
30	**Percentage of pregnant women with anaemia**					1.20		2001	8
31	**Neonatal mortality rate (per 1000 live births)**	5.20		...		5.20		2003	10
32	**Percentage of newborn infants weighing at least 2500 g at birth**	91.54 [e]		...		...		2004	11
33	**Immunization coverage for infants (%)**								
	- BCG	...		...		...		2006	7
	- DTP3	89.00		...		...		2006	7
	- POL3	85.00 [f]		...		...		2006	7
	- Hepatitis B III	91.00		...		...		2006	7
		Number of cases			Number of deaths				
34	**Maternal causes**	Total	Male	Female	Total	Male	Female		
	- Abortion			76			0	2000	8
	- Eclampsia			...			...		
	- Haemorrhage			57			0	2000	8
	- Obstructed labour			...			...		
	- Sepsis			...			...		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	7
	- Diphtheria	0	0	0	...	...	...	2008	7
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2008	7
	- Mumps	0	0	0	...	...	...	2008	7
	- Neonatal tetanus	0	0	0	...	...	...	2008	7
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	7
	- Poliomyelitis	0	0	0	...	...	...	2008	7
	- Rubella	0	0	0	...	...	...	2008	7
	- Total Tetanus	0	0	0	..	...	...	2008	7

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		...			
37	Health infrastructure					
	Public health facilities	- General hospitals	2 [g]	187	2005	10
		- Specialized hospitals	0	0	2005	10
		- District/first-level referral hospitals	0	0	2005	10
		- Primary health care centres	77 [h]	0	2005	10
	Private health facilities	- Hospitals	0	0	2005	10
		- Outpatient clinics	...	...		
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)			159.81	2000	8
	- total expenditure on health as % of GDP			...		
	- per capita total expenditure on health (in US$)			1032.36	2000	8
	Government expenditure on health					
	- amount (in million US$)			64.07 [i]	2005	10
	- general government expenditure on health as % of total expenditure on health			...		
	- general government expenditure on health as % of total general government expenditure			8.71 [j]	2005	10
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			...		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			...		
	Exchange rate in US$ of local currency is: 1 US$ =			NA		
39	Health insurance coverage as % of total population			...		

	INDICATOR		DATA							Year	Source
40	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	244 [k]	...	...	...	...	244	0	2005	10
		- Ratio per 1000 population	1.41	...	...	...	...	1.41	0	2005	10
	Dentists	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Pharmacists	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Nurses	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Midwives	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	Annual number of graduates	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	6.17	6.59	5.72	2008	2
45	Under-five mortality rate (per 1000 live births)	10.00	...	...	2005 est	3
46	Proportion of 1 year-old children immunised against measles	85.00	...	...	2006	7
47	Maternal mortality ratio (per 100 000 live births)	0.00			2003	12
48	Proportion of births attended by skilled health personnel	...				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	87.22			2004	10
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	92.05			2001	8
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults k	...	...	...		
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	...	...	...		
57	Malaria death rate per 100 000 population	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	36.00	...	...	2007	7
61	Tuberculosis death rate per 100 000 population	2.00	...	...	2007	7
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	90.00	...	...	2007	7
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	90.00	...	...	2006	7
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	100.00	100.00	100.00	2006	13
65	Proportion of population using an improved sanitation facility	99.00	99.00	98.00	2006	13
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
...	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by the Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
b	Revised data.
c	Disease contracted "off-island"
d	Figure refers to inpatients in Guam Memorial Hospital
e	Figure refers to birth weight equal to 2501 grams and above
f	Given as inactivated polio vaccine (IPV)
g	Figure includes one civilian hospital and one naval hospital
h	Figure refers to clinics which includes specialized services but excludes eye and dental clinics
i	Figure refers to total expenditure on public health as of 30 Septermber 2005 (audited)
j	Figure refers to percentage total expenditure on public health as to total government expenditure
k	Figure refers to physicians in Guam Memorial Hospital and includes licensed military physicians working on part-time basis
l	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

Sources:	
1	Pacific Island Populations. Secretariat of the Pacific Communities 2009.
2	US Census Bureau [www.census.gov].
3	Demographic Tables for the Western Pacific 2005-2010. Manila, World Health Organization Regional Office for the Western Pacific, 2005.
4	United Nations, Department of Economic and Social Affairs, Population Division. Urban and Rural Areas 2007. UN New York 2006. [http:///www.unpopulation.org].
5	2008 Pocket Statistical Summary (PSS) Secretariat of the Pacific Community, Statistics and Demography. Accessed on 12 May 2009 from http://www.spc.int/sdp/.
6	Annual Summary of Notifiable Disease Guam- 2006. Office of Epidemiology & Research, Department of Public Health and Social Services. Government of Guam.
7	WHO Regional Office for the Western Pacific, data received from the technical units.
8	Information furnished by the Department of Health and Social Services, Guam 16 June 2003.
9	Guam Statistics. Guam Department of Public Health and Social Services [http//dphss.guam.gov/diabetes/about/guam_stats.htm.
10	Guam Statistical Yearbook 2005. Bureau of Statistics and Plans, Office of the Governor, Guam, 2006.
11	Guam Bureau of Statistics and Plans [www.spc.int/prism].
12	Information furnished by the Department of Health and Social Services, Guam 21 June 2004.
13	World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). Progress on Drinking Water and Sanitation: Special focus on Sanitation. UNICEF, New York and WHO, Geneva, 2008. [http://www.wssinfo.org/en/40_mdg2008.html].

HONG KONG (CHINA)

1. CONTEXT

1.1 Demographics

Hong Kong (China) had an estimated mid-year population of 6 977 700 in 2008, representing an increase of 0.7% over mid-2007. There were 896 males for every 1000 females. Population density was 6460 persons per square kilometre, and about 94.9% of the population were city dwellers. Both births and the inflow of one-way permit holders from mainland China were important constituents of the overall population increase. The population were 95% ethnic Chinese, the major non-Chinese ethnic groups being Filipinos and Indonesians.

In 2008, life expectancy at birth was 79.4* years for males and 85.5* years for females. The registered crude birth rate was 11.3* per 1000 population and the registered crude death rate was 6.0* per 1000. The total fertility rate was 1.1 known live births per woman.

As a result of increasing life expectancy, Hong Kong's population has been ageing steadily. In 2008, 12.6% were aged 65 years and above (10.6% in 1998), while those aged 14 and below made up 12.9% of the population (17.7% in 1998).

There were two* registered maternal deaths recorded in 2008. The number of registered infant deaths was 139* and the infant mortality rate was 1.8* per 1000 registered live births. The under-five mortality rate was 2.2* per 1000 registered live births.

Note: * Provisional figure.

1.2 Political situation

Hong Kong is a Special Administrative Region of the People's Republic of China. Under the Basic Law, Hong Kong (China) has a high degree of autonomy, except in defence and foreign affairs, and enjoys executive, legislative and independent judicial power, including that of final adjudication. There are currently 12 bureaux, each headed by a Director. Together, they form the Government Secretariat. The Government introduced an accountability system for principal officials on 1 July 2002. Under that system, the politically appointed principal officials are held accountable for matters occurring within their respective portfolios.

1.3 Socioeconomic situation

The gross domestic product (GDP) grew at an average annual rate of 4.7% in real terms during the 10 years to 2008. Per capita GDP increased by 2.0% in money terms over the same period, reaching US$ 30 892 (HK$ 240 554) in 2008.

The major source of government income is taxation. In the financial year 2007-2008, about 37% of government revenue was collected from direct taxes and 27% from indirect taxes. Other sources of revenue include fines; forfeitures and penalties; utilities; fees and charges; income from properties and investments; reimbursements and contributions; loan repayments; net proceeds from issuance of bonds and notes; land premiums; and capital revenue.

Based on the results of the General Household Survey, the size of the total labour force in 2008 was 3.6 million, of whom 53% were male. This represents 61% of the total land-based non-institutional population aged 15 and over. A total of 3 518 800 persons were employed, of whom 53% were male. The unemployment rate was 3.6%, lower than the 4.0% rate in 2007, while the underemployment rate was 1.9%.

In the past decade, "wholesale, retail and import/export trades, restaurants and hotels" and "community, social and personal services" have been the two largest employment sectors, with their combined share of

the labour market increasing from 53% to 59% during the period. The proportion of the working population in the "finance, insurance, real estate and business services" sector has increased and it has become the third largest sector. In contrast, there has been a significant decline in the number of workers in the manufacturing sector, with its share decreasing from 12% in 1998 to 5% in 2008.

In 2008, nearly 100% of the population had sustainable access to an improved water source, while 99% had access to improved sanitation.

1.4 Risks, vulnerabilities and hazards

Hong Kong is geologically stable. It is occasionally hit by tropical cyclones between June and October. The close approach of tropical cyclones can bring strong winds and heavy rain. The resultant landslips and flooding sometimes cause considerably more damage than the winds.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Hong Kong takes pride in having achieved health indices that rank among the best in the world.

Like many other developed economies, Hong Kong has gone through an epidemiological transition in mortality from communicable to noncommunicable diseases (NCD). With gradual urbanization, adoption of more affluent lifestyles and medical advances over the past few decades, the proportion of registered deaths due to infectious and parasitic diseases dropped from 15.3% in 1961 to less than 3.0%* in 2008. In 2008, the four major chronic NCD—cancer, heart diseases, stroke and chronic lower respiratory diseases—accounted for more than three-fifths (60.3%*) of all registered deaths. The age-standardized mortality rates for these four major NCD, for both males and females, have declined gradually over recent decades, although there has been an increase in the absolute number of registered deaths as a result of population ageing and population growth. The number of new cancer cases has shown an increasing trend, while the age-standardized incidence rate has shown a decreasing trend over recent decades.

Many NCD are closely related to behavioural risk factors, such as overweight and obesity, unhealthy diet, physical inactivity, smoking and consumption of alcohol. A periodic telephone survey in 2008, which interviewed around 2000 people aged 18-64, reported that about two-fifths (39.4%) of those aged 18-64 were overweight/obese. A significantly higher proportion of males (54.0%) than females (26.7%) were classified as overweight/obese, and about four-fifths (78.0%) of the population failed to meet the WHO recommendation of having at least five servings of fruit and vegetables per day (82.3% for males and 74.3% for females). As regards physical activity, around one-fifth (22.7%) of the population were classified as having a low level of physical activity (22.5% for males and 22.9% for females). About one in 11 (9.2%) were binge drinkers (16.4% for males and 3.0% for females). Furthermore, according to the Thematic Household Survey conducted in 2008, around one in nine (11.8%) people aged 15 and above were daily smokers (20.5% for males and 3.6% for females).

In terms of communicable diseases, the Prevention and Control of Disease Ordinance in Hong Kong provides the legal framework for their management and defines a list of infectious diseases that are of public health importance and are required to be reported to the Director of Health. In 2008, there were 45 infectious diseases on the list. A total of 16 683* cases of notifiable disease were reported in 2008, 34.0%* lower than in 2007. The top three most commonly reported diseases were chickenpox (8930* cases), tuberculosis (5730* cases) and food poisoning (619* outbreaks, 2537* persons affected), constituting 91.6%* of all notifications among the 45 listed conditions.

In 2008, there were 5730* tuberculosis notifications, giving a notification rate of 82.1* per 100 000 population. For HIV/AIDS, by the end of 2008, a cumulative total of 4047 cases of HIV infection and 1030 AIDS patients had been reported.

Note: *Provisional figure.

2.2 Outbreaks of communicable diseases

Schools, residential care homes and other community institutions are strongly encouraged to report any suspected communicable disease outbreak to the Department of Health for investigation and early intervention. In 2008, the most commonly reported outbreaks were influenza-like illness, hand-foot-mouth disease and acute gastroenteritis. Throughout the year, 131* confirmed influenza outbreaks occurred in institutions, affecting 1430* persons, with a winter peak from late February to March and a summer peak from July to August. There were 78* acute gastroenteritis outbreaks in institutions, confirmed to be caused by norovirus, affecting 773* persons, and 167* institutional outbreaks of hand-foot-mouth disease or herpangina, affecting 911* persons.

Note: * Provisional figure.

2.3 Leading causes of mortality and morbidity

There were 39 963 registered deaths in 2007, with NCD-related causes predominating. Among the top ten leading causes of death, six were NCD, including cancer, heart disease, stroke, chronic lower respiratory disease, injury and poisoning, and diabetes. They contributed to a total of 26 657 registered deaths (cancer: 12 316; heart disease: 6372; stroke: 3513; chronic lower respiratory disease: 2096; injury and poisoning: 1854; and diabetes: 506) and accounted for 66.7% (cancer: 30.8%; heart disease: 15.9%; stroke: 8.8%; chronic lower respiratory disease: 5.2%; injury and poisoning: 4.6%; and diabetes: 1.3%) of all registered deaths.

In terms of morbidity, there were 1 537 783 episodes of hospital discharge and death in all hospitals in 2007. Similar to the mortality data, a substantial proportion of hospitalizations were due to NCD, including cancer, heart disease, stroke, injury and poisoning, chronic lower respiratory disease and diabetes. In total, they accounted for 21.5% (331 373 episodes) of hospitalization, while infectious and parasitic diseases accounted for only 2.9% (44 912 episodes).

Note: *Provisional figure.

2.4 Maternal, child and infant diseases

Infant and under-five mortality rates continue to be consistently low, as is the maternal mortality ratio.

Maternal and child health services provided by the Department of Health are delivered through a network of 31 easily accessible maternal and child health centres (MCHCs) located throughout the territory. In 2008, 53% of newborn babies were delivered in public hospitals and 47% in private hospitals. About 90% of babies born to local mothers patronize the MCHCs.

Children are immunized against tuberculosis, hepatitis B, poliomyelitis, diphtheria, tetanus, pertussis, measles, mumps and rubella. A cross-sectional survey conducted in 2006 for children aged two to five years revealed that the immunization coverage rates of all vaccines for local-born children were over 97%. Due to high immunization coverage, diseases such as diphtheria and poliomyelitis have been virtually eradicated, and the incidence of preventable infectious diseases among children is relatively low.

Breast-feeding surveys conducted regularly in MCHCs show that the ever-breast-fed rate increased from 50% for babies born in 1997 to 70% for those born in 2006. The exclusive breast-feeding rate for those over four to six months increased from 6% to 13% in the corresponding period.

2.5 Burden of disease

Apart from mortality and hospitalization data, the prevalence rates for diseases or risk factors can also reflect the disease burden in the community. The Heart Health Survey 2004-05, which involved over 1200 people aged 15-84, showed that 6.9% had diabetes and 33.3% had high blood cholesterol levels. Another survey, the Population Health Survey 2003-04, which interviewed more than 7000 people aged 15 and above, showed that more than one-quarter (27.2%) of the population had hypertension. Diabetes, high blood cholesterol and hypertension are important risk factors for many NCD, such as heart disease and stroke.

The Population Health Survey 2003-04 also revealed that the prevalence rates for coronary heart disease, chronic obstructive pulmonary disease, cancer and stroke were 1.6%, 1.4%, 1.3% and 1.1%, respectively. As regards injuries, 14.3% of the population reported that they had sustained injuries that were serious enough to curtail their normal activities in the 12 months preceding the survey.

In terms of potential years of life lost (PYLL) at age 75, which provides a good estimate of the overall level of premature deaths in the population, cancer accounted for over two-fifths (41.8%) of total PYLL in 2007. Although injury and poisoning only ranked sixth as the leading cause of death in 2007, it accounted for around one-sixth (16.8%) of the total PYLL. This indicates that injuries and poisonings constitute an important health problem, especially among young people. For heart disease, stroke and chronic lower respiratory disease, the proportions of PYLL were 9.9%, 5.4% and 1.6%, respectively. In total, these five NCD accounted for 75.5% of all PYLL in 2007.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The mission of the Food and Health Bureau is to enhance the well-being of every member of the community and to build a healthy and caring society, seeking to ensure good quality, equitable, efficient, cost-effective and accessible health care systems and to organize the infrastructure for coordinated health care delivery through an interface of public and private systems.

The Government’s goal is to provide a health care system that is able to protect and promote health and to provide quality health care services to citizens at reasonable prices.

3.2 Organization of health services and delivery systems

Primary health care services, which include a range of health-promotion, preventive and curative services, are provided by the Department of Health, the Hospital Authority and the private sector.

Most health-promotion and preventive services are provided by the public sector. For curative services, private practitioners of Western medicine account for more than half (55.8%) of consultations. Most private practitioners are in solo practices and usually work on a fee-for-service basis. The traditional Chinese medicine practitioner is the principal alternative primary care provider in Hong Kong outside the mainstream Western medical system. Many patients use both systems in parallel, taking Western medicine to suppress symptoms and Chinese medicine to restore the body to its natural balance.

In contrast to curative primary care services, the public sector is the dominant provider of secondary and tertiary services in Hong Kong. Hospital services are subsidized by the Government to a large extent.

The Department of Health provides a wide range of health-promotion and disease-prevention services, covering programmes on maternal and child health, student health, elderly health, dental health and port health. The Department also operates a number of specialized clinics, including 20 methadone clinics, 19 tuberculosis and chest clinics, seven social hygiene clinics, four dermatology clinics, two integrated treatment centres, three clinical genetics clinics, six child-assessment centres, two travel-health centres and other clinical services. In June 2004, the Centre for Health Protection was set up under the Department of Health to strengthen the prevention and control of communicable diseases and other public health hazards.

The Hospital Authority provides medical treatment and rehabilitation services to patients through public hospitals, general outpatient and specialist clinics and outreach services. The Authority was managing a total of 27 229 hospital beds in 38 public hospitals at the end of 2008, which represents around 3.9* public hospital beds per 1000 population. The Hospital Authority also operates 74 general outpatient clinics throughout the territory, targeted primarily at serving low-income families, patients with chronic diseases and other vulnerable groups.

The private sector plays a complementary role in providing health care and there were around 3700 private clinics providing primary and specialist medical care in 2008. The Thematic Household Survey,

conducted from November 2005 to March 2006, showed that, of a total of 2 227 800 doctor consultations during the 30 days before enumeration, 71% (or 1 584 500 consultations) were with private medical practitioners, while 82% of all hospital admissions were managed by public hospitals. There were 13 private hospitals operating a total of 3712 hospital beds at the end of 2008. Their market share in terms of inpatient discharges and deaths on attendance was about 20.4% in 2007. There were also 34 private nursing homes, providing about 3347 beds, in 2008.

With regard to pharmaceutical services, public hospitals and clinics provide the more essential medicines to patients at a nominal cost. Private hospitals and clinics supply a broader range of medicines, which are paid for by the patients themselves. All medicines available in Hong Kong must first be registered with the Pharmacy and Poisons Board, a statutory body whose membership comprises mainly doctors, academics and pharmacists. All manufacturers of medicines must meet the requirements of the good manufacturing practices (GMP) guidelines promulgated by the Pharmacy and Poisons Board, which are adopted from the GMP guidelines recommended by WHO. Medicines are classified into three broad categories in terms of control of sale: prescription-only medicines, pharmacy medicines and general-sale medicines. There are currently about 20 000 registered medicines in total, of which about 40% are prescription-only medicines, 14% are pharmacy medicines and 46% are general-sale medicines.

Note: * Provisional figure.

3.3 Health policy, planning and regulatory framework

The Government's health care policy is that no one in Hong Kong is deprived of medical care because of lack of means.

The Food and Health Bureau is the policy-making body responsible for health. It oversees the Department of Health and the Hospital Authority. The Department of Health is the Government's health adviser and the agency responsible for executing health care policies and statutory functions. The Hospital Authority is the statutory body responsible for the management of all public hospitals.

3.4 Health care financing

Total health care expenditure in 2004/2005 amounted to 5.2% of GDP, including the public sector (55%) and the private sector (45%). Public expenditure on health reached US$ 4.8 billion, representing 14.5% of total public expenditure. As there are no social security funds; all public finances for health care services come from general government funds.

The health services provided by the public sector are heavily subsidized, with subsidy levels at about 97% of total cost for inpatient services and 83% for general outpatient services in 2007/2008. Health-promotion and disease-prevention activities, such as treatment of tuberculosis and childhood immunization, are provided free of charge.

The private health care sector was financed largely by household out-of-pocket payments (70%) and, to some extent, private insurance (11%) and employer-provided group medical benefits (17%) in 2004/2005.

3.5 Human resources for health

Health care manpower is monitored regularly through surveys to ensure that workforce planning is in line with the needs of the community.

The Hong Kong Government also makes projections on health care manpower demand from time to time. When making manpower projections, the views of major employers from both the public and private sectors are taken into account. Advice is given to the University Grants Committee in relation to publicly-funded places on health care programmes, which serves as a reference for institutions in formulating their academic plans.

On the regulatory front, various statutory boards and councils, such as the Medical Council, the Dental Council, and the Pharmacy and Poisons Boards, have been established under relevant ordinances to handle the registration, conduct and discipline of their respective health care professionals. Under existing

legislation, 12 types of health care professional are required to be registered with their respective boards or councils before being allowed to practise in Hong Kong. In addition, an independent statutory body, the Hong Kong Academy of Medicine, has the authority to approve, assess and accredit specialist training within the medical and dental professions.

The medical and health care professionals registered with respective statutory boards and councils are encouraged to enrol in continuing medical education and continuous professional development (CME/CPD) programmes to update their knowledge and promote the development of competencies relevant to their practice. Medical practitioners and dentists on the Specialist Register must fulfil the CME/CPD requirements of their respective councils in order to maintain their specialist status.

3.6 Partnerships

Locally, the Government maintains good working relationships and collaborates with various partners, including professional and community associations, in health-promotion activities for the prevention and control of communicable and noncommunicable diseases. For instance, a comprehensive disease notification system is maintained with health care providers and institutions from the public and private sectors. The latest outbreak news and surveillance results are shared and dialogue is maintained among health care providers and professional associations. The Government also partners with the Hospital Authority and voluntary agencies in handling public health emergencies.

On the regional front, close alliances with regional authorities, including the Ministry of Health of the People's Republic of China, the Health Department of Guangdong Province and the Macao Health Bureau, facilitate regular exchanges of information on selected diseases. Bilateral and multilateral meetings, forums and emergency response exercises are held from time to time to strengthen cooperation and communication among regional authorities. Internationally, the Government liaises closely with WHO and engages in collaborative projects with overseas health protection agencies and academic institutions.

3.7 Challenges to health system strengthening

Over the years, Hong Kong has built an enviable health care system that provides high quality services. However, that system is now facing major challenges due to the ageing population and the need to keep pace with rapid developments in medical technology. The ratio of working-age (between 15 and 64) to elderly populations (65 or above) is 5.9:1, and it is estimated that it will be 4.4:1 in 10 years and 2.7:1 in 20 years. On the other hand, overall public health expenditure is projected to increase to about US$ 10.0 billion in 2015 and about US$ 16.3 billion in 2025 (at constant 2005 prices). To uphold the principle of no one in Hong Kong being deprived of medical care because of lack of means, the Government of Hong Kong launched a consultation exercise in March 2008 on health care reform and supplementary financing options, aimed at building a consensus to reform the health care system and make it sustainable and more responsive to the increasing needs of the community.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : *Statistics on demographic and socioeconomic situation*
Operator : Census and Statistics Department
Web address : http://www.censtatd.gov.hk/home/index.jsp

Title 2 : *Statistics on mortality, morbidity, healthcare professionals and services, and communicable diseases*
Operator : Department of Health
Web address : http://www.dh.gov.hk/eindex.html

Title 3 : *Behavioural Risk Factor Survey*
Operator : Department of Health
Specification : The survey collected information on health-related behaviours of the Hong Kong adult population. Results were obtained from samples of at least 2000 randomly selected land-based, non-institutionalized persons aged 18 to 64 years
Web address : http://www.chp.gov.hk/behavioural.asp?lang=en&pid=10&id=280

Title 4 : *Population Health Survey*
Operator : Department of Health
Specification : The survey collected information on general health status, the prevalence and incidence of major health conditions, mental health status, health behaviour relating to major causes of mortality and morbidity, preventive health practices, health-promoting behaviours, health service utilization, social and financial support, and the quality of life of the population. Results were obtained from over 7000 land-based, non-institutionalized persons of Hong Kong aged 15 and over, representing 5.68 million persons, after applying population weights. The household response rate was 72%.
Web address : http://www.chp.gov.hk/

Title 5 : *Thematic Household Survey*
Specification : The survey collected information on the health status of Hong Kong residents and their patterns with respect to doctor consultation, hospitalization, dental consultation, the provision of medical benefits by employers/companies and the coverage of medical insurance purchased by individuals. Some 10 000 households within a scientifically selected sample were successfully enumerated, constituting a response rate of 79%.
Web address : http://www.censtatd.gov.hk/products_and_services/products/publications/statistical_report/social_data/index_cd_B1130230_dt_detail.jsp

Title 6 : *Statistics on health expenditure*
Operator : Food and Health Bureau
Specification : It presents the estimates of domestic health expenditure in Hong Kong between the fiscal years 1989/90 and 2004/05 based on the latest OECD guidelines, with breakdown by financing source, provider and function over time.
Web address : http://www.fhb.gov.hk/statistics/en/dha.htm

5. ADDRESSES

DEPARTMENT OF HEALTH

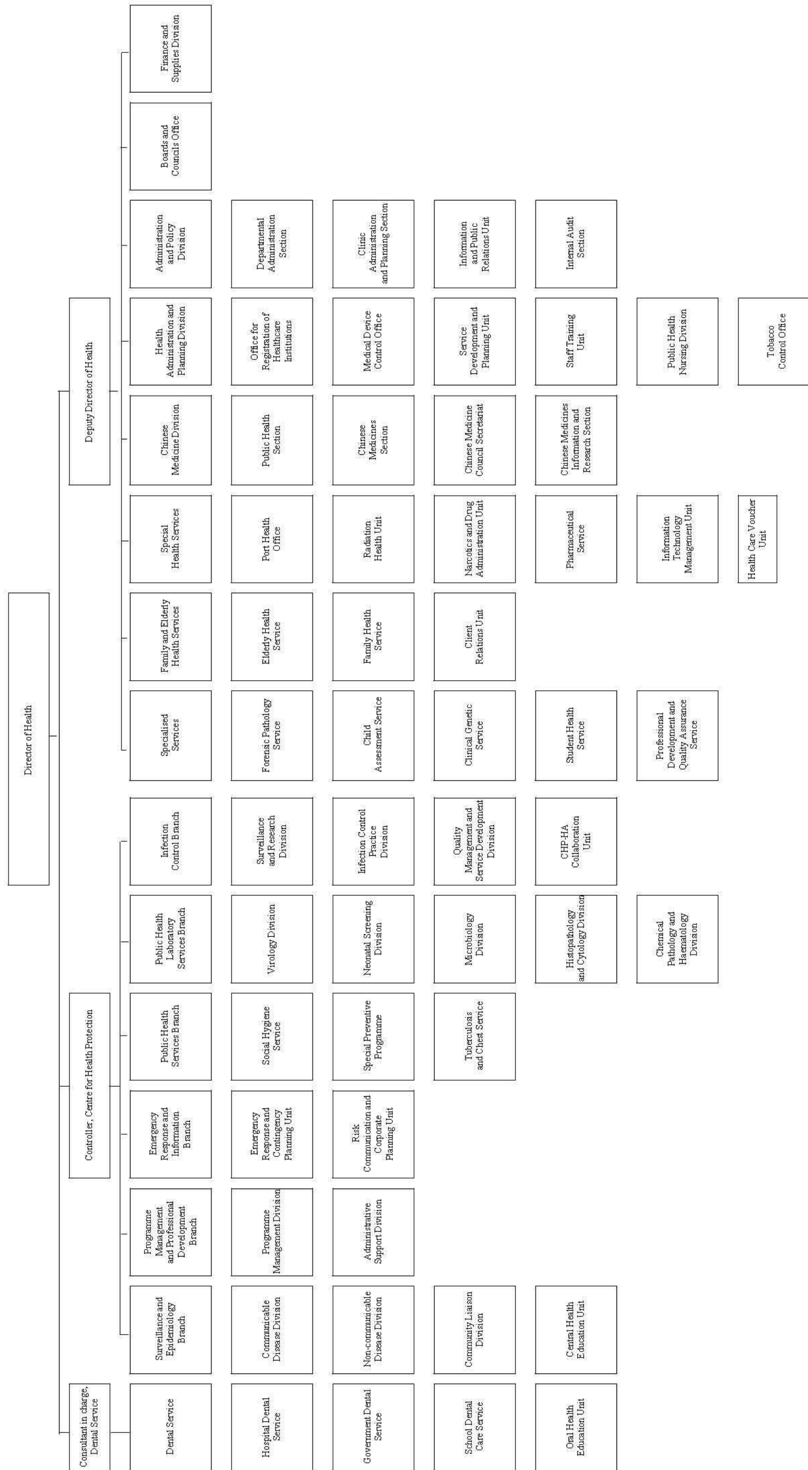
Office Address : 21/F Wu Chung House, 213 Queen's Road East, Wan Chai, Hong Kong
Postal Address : 21/F Wu Chung House, 213 Queen's Road East, Wan Chai, Hong Kong
Official Email Address : enquiries@dh.gov.hk
Telephone : (852) 29618989
Fax : (852) 28360071
Office Hours : Mon to Fri: 9am-5:45pm; Sat, Sun & Public Holidays off
Website : http://www.dh.gov.hk

WHO REPRESENTATIVE

There is no WHO Representative in Hong Kong (China). Queries about WHO's programme of collaboration with Hong Kong (China) should be directed to Director, Programme Management, WHO Regional Office for the Western Pacific.

Office Address : Director, Programme Management
World Health Organization
Regional Office for the Western Pacific
Postal Address : United Nations Avenue, P.O. Box 2932, 1000
Manila, Philippines
Official Email Address : postmaster@wpro.who.int
Telephone : +632 528 8001
Fax : +632 521 1036
Office Hours : 0700 – 1530 M-F
Website : http://www.wpro.who.int

6. ORGANIZATIONAL CHART: Department of Health



HONG KONG (CHINA)

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	**Area** (1 000 km^2)	1.10			2008	1
2	**Estimated population** ('000s)	6977.70	3297.50	3680.20	2008	2
3	**Annual population growth rate** (%)	0.75	0.31	1.15	2008	2
4	**Percentage of population**					
	- 0–4 years	3.16	3.49	2.87	2008	2
	- 5–14 years	9.77	10.66	8.97	2008	2
	- 65 years and above	12.61	12.34	12.84	2008	2
5	**Urban population** (%)	94.85	...	...	2008	3
6	**Crude birth rate** (per 1000 population)	11.29 [a]	12.70 [a]	10.02 [a]	2008p	2,4
7	**Crude death rate** (per 1000 population)	5.95 [a]	6.97 [a]	5.04 [a]	2008p	2,4
8	**Rate of natural increase of population** (% per annum)	0.54	...	...	2008p	2
9	**Life expectancy** (years)					
	- at birth	...	79.40	85.46	2008p	2
	- Healthy Life Expectancy (HALE) at age 60	...	22.31	27.41	2008p	2
10	**Total fertility rate** (women aged 15–49 years)	1.05			2008p	2
	Socioeconomic indicators					
11	**Adult literacy rate** (%)	94.54 [c]	97.40 [c]	92.04 [c]	2008	2
12	**Per capita GDP at current market prices** (US$)	30 891.74			2008p	2,4
13	**Rate of growth of per capita GDP** (%)	3.16			2008p	2,4
14	**Human development index**	0.94			2006	5
	Environmental indicators	Total	Urban	Rural		
15	**Proportion of vehicles using unleaded gasoline** (%)	73.97 [d]	...	...	2008	6
16	**Health care waste generation** (metric tons per year)	2500.00	...	...	2008	7

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	**Selected communicable diseases**	Total	Male	Female	Total	Male	Female		
	Hepatitis viral	241 [e]	166 [e]	75 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4
	- Type A	67 [e]	38 [e]	29 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4
	- Type B	76 [e]	61 [e]	15 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4
	- Type C	2 [e]	2 [e]	0 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4
	- Type E	87 [e]	59 [e]	28 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4
	- Unspecified	9 [e]	6 [e]	3 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4
	Cholera	7 [e]	4 [e]	3 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4
	Dengue/DHF	42 [ag]	23 [ag]	19 [ag]	0 [a]	0 [a]	0 [a]	2008p	2,4
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	1423 [f]	1254 [f]	169 [f]	...	...	...	2008p	2,4
	Leprosy	5 [e]	4 [e]	1 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4
	Malaria	25 [e]	17 [e]	8 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4
	Plague	0 [e]	0 [e]	0 [e]	0 [a]	0 [a]	0 [a,p]	2008p	2,4
	Syphilis	908 [f]	506 [f]	402 [f]	...	...	...	2008p	2,4
	Typhoid fever	38 [e]	13 [e]	25 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	…	…	…	11 [a]	3 [a]	8 [a]	2007	2,4
19	**Diarrhoeal diseases**	…	…	…	12 [a]	5 [a]	7 [a]	2007	2,4
20	**Tuberculosis**								
	- All forms	5730	3690	2040	237 [a]	179 [a]	58 [a]	2008p	2,4
	- New pulmonary tuberculosis (smear-positive)	1463	1027	436	…	…	…	2008	4
21	**Cancers**								
	All cancers (malignant neoplasms only)	23 750	12 753	10 997	12 316 [a]	7600 [a]	4716 [a]	C: 2006 D: 2007	2,4,8
	- Breast	2595	11	2584	529 [a]	3 [a]	526 [a]	C: 2006 D: 2007	2,4,8
	- Colon and rectum	3918	2230	1688	1690 [a]	973 [a]	717 [a]	C: 2006 D: 2007	2,4,8
	- Cervix			459			129 [a]	C: 2006 D: 2007	2,4,8
	- Oesophagus	470	374	96	357 [a]	286 [a]	71 [a]	C: 2006 D: 2007	2,4,8
	- Leukaemia	431	246	185	281 [a]	160 [a]	121 [a]	C: 2006 D: 2007	2,4,8
	- Lip, oral cavity and pharynx	1429	1009	420	504 [a]	373 [a]	131 [a]	C: 2006 D: 2007	2,4,8
	- Liver	1745	1331	414	1449 [a]	1098 [a]	351 [a]	C: 2006 D: 2007	2,4,8
	- Stomach	1018	634	384	640 [a]	396 [a]	244 [a]	C: 2006 D: 2007	2,4,8
	- Trachea, bronchus, and lung	4233	2885	1348	3648 [a]	2512 [a]	1136 [a]	C: 2006 D: 2007	2,4,8
22	**Circulatory**								
	All circulatory system diseases	…	…	…	10 738 [a]	5494 [a]	5244 [a]	2007	2,4
	- Acute myocardial infarction	…	…	…	1937 [a]	1107 [a]	830 [a]	2007	2,4
	- Cerebrovascular diseases	…	…	…	3513 [a]	1779 [a]	1734 [a]	2007	2,4
	- Hypertension	…	…	…	901 [a]	389 [a]	512 [a]	2007	2,4
	- Ischaemic heart disease	…	…	…	4421 [a]	2400 [a]	2021 [a]	2007	2,4
	- Rheumatic fever and rheumatic heart diseases	…	…	…	102 [a]	33 [a]	69 [a]	2007	2,4
23	**Diabetes mellitus**	…	…	…	506 [a]	221 [a]	285 [a]	2007	2,4
24	**Mental disorders**	…	…	…	324 [a]	132 [a]	192 [a]	2007	2,4
25	**Injuries**								
	All types	…	…	…	1854 [a,h]	1223 [a,h]	631 [a,h]	2007	2,4
	- Homicide and violence	…	…	…	23 [a,h]	15 [a,h]	8 [a,h]	2007	2,4
	- Motor and other vehicular accidents	…	…	…	158 [a,h]	103 [a,h]	55 [a,h]	2007	2,4
	- Occupational injuries	43 979	27 809	16 170	172	157	15	2007	9
	- Suicide	…	…	…	922 [a,h]	578 [a,h]	344 [a,h]	2007	2,4
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Diseases of the genitourinary system (ICD10: N00-N99)	190 238 [g]	…	…	2746.76 [g]	…	…	2007	2,4,8
	2. Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified (ICD10: R00-R99)	151 479 [g]	…	…	2187.14 [g]	…	…	2007	2,4,8
	3. Neoplasms (ICD10: C00-D48)	144 634 [g]	…	…	2088.31 [g]	…	…	2007	2,4,8
	4. Diseases of the respiratory system (ICD10: J00-J99)	137 598 [g]	…	…	1986.72 [g]	…	…	2007	2,4,8
	5. Diseases of the digestive system (ICD10: K00-K93)	130 798 [g]	…	…	1888.53 [g]	…	…	2007	2,4,8
	6. Factors influencing health status and contact with health services (ICD10: Z00-Z99)	127 779 [g]	…	…	1844.94 [g]	…	…	2007	2,4,8
	7. Diseases of the circulatory system (ICD10: I00-I99)	125 832 [g]	…	…	1816.83 [g]	…	…	2007	2,4,8
	8. Pregnancy, childbirth and the puerperium (ICD10: O00-O99)	113 492 [g]	…	…	1638.66 [g]	…	…	2007	2,4,8
	9. Injury, poisoning and certain other consequences of external causes (ICD10: S00-T98)	73 907 [g]	…	…	1067.11 [g]	…	…	2007	2,4,8
	10. Diseases of the musculoskeletal system and connective tissue (ICD10: M00-M99)	49 428 [g]	…	…	713.67 [g]	…	…	2007	2,4,8

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Malignant neoplasms (ICD10: C00-C97)	12 316 [a]	7600 [a]	4716 [a]	177.83 [a]	231.19 [a]	129.61 [a]	2007	2,4
	2. Diseases of heart (ICD10: I00-I09, I11, I13, I20-I51)	6372 [a]	3255 [a]	3117 [a]	92.00 [a]	99.01 [a]	85.67 [a]	2007	2,4
	3. Pneumonia (ICD10: J12-J18)	4978 [a]	2723 [a]	2255 [a]	71.88 [a]	82.83 [a]	61.98 [a]	2007	2,4
	4. Cerebrovascular diseases (ICD10: I60-I69)	3513 [a]	1779 [a]	1734 [a]	50.72 [a]	54.12 [a]	47.66 [a]	2007	2,4
	5. Chronic lower respiratory diseases (ICD10: J40-J47)	2096 [a]	1521 [a]	575 [a]	30.26 [a]	46.27 [a]	15.80 [a]	2007	2,4
	6. External causes of morbidity and mortality (ICD10: V01-Y89)	1854 [a,h]	1223 [a,h]	631 [a,h]	26.77 [a,h]	37.20 [a,h]	17.34 [a,h]	2007	2,4
	7. Nephritis, nephrotic syndrome and nephrosis (ICD10: N00-N07, N17-N19, N25-N27)	1347 [a]	656 [a]	691 [a]	19.45 [a]	19.95 [a]	18.99 [a]	2007	2,4
	8. Septicaemia (ICD10: A40-A41)	737 [a]	381 [a]	356 [a]	10.64 [a]	11.59 [a]	9.78 [a]	2007	2,4
	9. Diabetes mellitus (ICD10: E10-E14)	506 [a]	221 [a]	285 [a]	7.31 [a]	6.72 [a]	7.83 [a]	2007	2,4
	10. Chronic liver disease and cirrhosis (ICD10: K70, K73-K74)	401 [a]	263 [a]	138 [a]	5.79 [a]	8.00 [a]	3.79 [a]	2007	2,4
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					...			
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
30	**Percentage of pregnant women with anaemia**					1.64 [i]		2008	4
31	**Neonatal mortality rate** (per 1000 live births)	1.03 [a]		1.12 [a]		0.92 [a]		2008p	2,4
32	**Percentage of newborn infants weighing at least 2500 g at birth**	94.63 [j]		95.10 [j]		94.11 [j]		2007	2,4
33	**Immunization coverage for infants (%)**								
	- BCG	>95.00		...		...		2007	4
	- DTP3	>95.00		...		...		2007	4
	- POL3	>95.00		...		...		2007	4
	- Hepatitis B III	>95.00		...		...		2007	4
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			0 [a]	2007	2,4
	- Eclampsia			...			0 [a]	2007	2,4
	- Haemorrhage			...			0 [a]	2007	2,4
	- Obstructed labour			...			0 [a]	2007	2,4
	- Sepsis			...			0 [a]	2007	2,4
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	1 [e]	1 [e]	0 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4,14
	- Diphtheria	0 [e]	0 [e]	0 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4,14
	- Hib meningitis	0 [e]	0 [e]	0 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4
	- Measles	69 [e]	35 [e]	34 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4,14
	- Mumps	139 [e]	88 [e]	51 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4,14
	- Neonatal tetanus	0 [e]	0 [e]	0 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4,14
	- Pertussis (whooping cough)	25 [e]	17 [e]	8 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4,14
	- Poliomyelitis	0 [e]	0 [e]	0 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4,14
	- Rubella	38 [e]	24 [e]	14 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4,14
	- Total Tetanus	0 [e]	0 [e]	0 [e]	0 [a]	0 [a]	0 [a]	2008p	2,4,14

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Facilities with HIV testing and counseling services**		...			
37	**Health infrastructure**					
	Public health facilities	- General hospitals	38 [d]	27 229 [d]	2008	8
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	290 [d,k]	760 [d,k]	2008	4,8
	Private health facilities	- Hospitals	13 [d,l]	3712 [d,l]	2008	4
		- Nursing Homes	34 [d,l]	3347 [d,l]	2008	4
		- Outpatient clinics	3700 [d]	...	2008	2
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)			8707.00 [m]	FY 2004/05	2,4,10
	- total expenditure on health as % of GDP			5.20 [n]	FY 2004/05	2,4,10
	- per capita total expenditure on health (in US$)			1283.00 [o]	FY 2004/05	2,4,10
	Government expenditure on health					
	- amount (in million US$)			4774.00 [q]	FY 2004/05	2,4,10
	- general government expenditure on health as % of total expenditure on health			55.00 [r]	FY 2004/05	2,4,10
	- general government expenditure on health as % of total general government expenditure			14.50 [s]	FY 2004/05	2,4,10
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			...		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			45.00 [t]	FY 2004/05	2,4,10
	Exchange rate in US$ of local currency is: 1 US$ =			7.79	2004	2
39	**Health insurance coverage as % of total population**			38.50 [u]	2005-2006	2

	INDICATOR		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
40	**Human resources for health**										
	Physicians	- Number	12 215 [w,x]	8803 [w,x]	3412 [w,x]	12 215 [w,x]	...	...	...	2008	4
		- Ratio per 1000 population	1.74 [w,x]	1.26 [w,x]	0.49 [w,x]	1.74 [w,x]	...	...	...	2008p	2,4
	Dentists	- Number	2074 [w]	1503 [w]	571 [w]	2074 [w]	...	...	...	2008	4
		- Ratio per 1000 population	0.30 [w]	0.21 [w]	0.08 [w]	0.30 [w]	...	...	...	2008p	2,4
	Pharmacists	- Number	1785	876	909	1785	...	...	...	2008	4
		- Ratio per 1000 population	0.25	0.12	0.13	0.25	...	...	...	2008p	2,4
	Nurses	- Number	37 447 [y]	4263 [y]	33 184 [y]	37 447 [y]	...	...	...	2008	4
		- Ratio per 1000 population	5.34 [y]	0.61 [y]	4.73 [y]	5.34 [y]	...	...	...	2008p	2,4
	Midwives	- Number	4756	0	4756	4756	...	...	...	2008	4
		- Ratio per 1000 population	0.68	0.00	0.68	0.68	...	...	...	2008p	2,4
	Paramedical staff	- Number	9793 [z]	5067 [z]	4726 [z]	9793 [z]	...	...	...	2008	4
		- Ratio per 1000 population	1.40 [z]	0.72 [z]	0.67 [z]	1.40 [z]	...	...	...	2008p	2,4
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	**Annual number of graduates**	Physicians	283 [ab]	...	...	...	...	...	...	2008	11
		Dentists	45 [ab]	...	...	...	...	...	...	2008	11
		Pharmacists	30 [ab]	...	...	...	...	...	...	2008	11

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	557 [ab]	...	...	...	...	...	...	2008	11
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	270 [ab]	...	...	...	...	...	...	2008	11
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	135	...	...	...	...	...	...	2008	4
		Dentists	21	...	...	...	...	...	...	2008	4
		Pharmacists	7	...	...	...	...	...	...	2008	4
		Nurses	880	...	...	...	...	...	...	2008	4
		Midwives	11	...	...	...	...	...	...	2008	4
		Paramedical staff	132	...	...	...	...	...	...	2008	4
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	1.77 [a]	1.67 [a]	1.87 [a]	2008p	2,4
45	Under-five mortality rate (per 1000 live births)	2.16 [a]	2.01 [a]	2.33 [a]	2008p	2,4
46	Proportion of 1 year-old children immunised against measles	>95.00	...	...	2007	4
47	Maternal mortality ratio (per 100 000 live births)	2.54 [a]			2008p	2,4,12
48	Proportion of births attended by skilled health personnel	100.00			2008est	4
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.00 [ac]			2008est	4
	- Percentage of deliveries in health facilities (as % of total deliveries)	100.00 [ad]			2008est	4
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	4.05			2007	2,4
51	Antenatal care coverage - At least one visit	...				
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults	<0.10	...	...	2008	4
55	Percentage of people with advanced HIV infection receiving ART	88.30 [ae]	...	...	2008	4
56	Malaria incidence rate per 100 000 population	0.36 [e,af]	0.52 [e,af]	0.22 [e,af]	2008p	2,4
57	Malaria death rate per 100 000 population	0.00 [a]	0.00 [a]	0.00 [a]	2008p	2,4
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	82.12	111.90	55.43	2008	2,4
61	Tuberculosis death rate per 100 000 population	3.40	5.43	1.58	2008	2,4
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	87.00	...	...	2007	4
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	78.00	...	...	2006	4
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	100.00	...	...	2008	13
65	Proportion of population using an improved sanitation facility	99.00	...	...	2008	7
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes :	
...	Data not available
est	Estimate
p	Provisional
a	The figure is compiled based on registered deaths and/or registered births
b	The figure includes unknown sex
c	The figure refers to the percentage of population aged 15 and above with primary or above educational attainment
d	The figure(s) is/are as at end of the year
e	The figure refers to the cases reported to the Department of Health for the listed Statutory Notifiable Infectious Diseases
f	The figure refers to the number of new cases seen in public Sexually Transmitted Diseases clinics and those in prisons
g	The figure refers to the number of in-patient discharges including deaths on attendances basis by disease from public hospitals, private hospitals and correctional institutions
h	According to the ICD 10th revision, when the morbid condition is classifiable under Chapter XIX as “injury, poisoning and certain other consequences of external causes”, the codes under Chapter XX for “external causes of morbidity and mortality” should be used as the primary cause of death
i	The figure refers to the cases who had Hb<10g/dl and attending the maternal and child health centres for ante-natal checkups
j	The figure excludes those with unknown birth weight
k	The figure covers the out-patient clinics, health education centres and travel health centres under the Department of Health, general out-patient clinics under the Hospital Authority and the out-patient clinics/hospitals in the correctional institutions
l	The figure covers the institutions licensed under the Hospitals, Nursing Homes and Maternity Homes Registration Ordinance (Cap.165)
m	The figure refers to the summation of public health expenditure and private health expenditure in the financial year 2004/05
n	The figure is compiled based on the summation of public health expenditure and private health expenditure in the financial year 2004/05 as percentage of GDP in the financial year 2004/05.
o	The figure is compiled based on the summation of public health expenditure and private health expenditure in the financial year 2004/05 per mid-2004 population
q	The figure refers to the public health expenditure
r	The figure refers to public health expenditure as percentage of the summation of public health expenditure and private health expenditure in the financial year 2004/05
s	The figure refers to public health expenditure as percentage of overall public expenditure
t	The figure refers to private health expenditure as percentage of the summation of public health expenditure and private health expenditure in the financial year 2004/05
u	The figure applies to November 2005-March 2006 and refers to the percentage of the population who were entitled to medical benefits provided by employers/companies or covered by medical insurance purchased by individuals, or had both kinds of medical protection. Medical benefits provided by employers/companies referred to medical benefits provided to employees, irrespective of whether they were currently employed or retired, and their eligible dependants by their employers/companies in the private sector or by the Government in whatever form
v	The number of healthcare personnel regardless of whether they are actually working in the profession or not
w	The number of doctors/dentists refers to the number of doctors/dentists with full registration on both the local and overseas lists
x	The figure does not include Chinese medicine practitioners
y	The figure refers to the number of registered nurses and enrolled nurses
z	Paramedical staff include medical laboratory technologists, occupational therapists, radiographers, optometrists and physiotherapists
aa	Assume all human resources for health in Hong Kong are in urban area
ab	The figure only covers graduates of full-time sub-degree and undergraduate programmes funded by the University Grants Committee at the end of the graduation year 2008 Graduates may not be engaged in work areas directly related to their discipline of study after graduation
ac	Nearly all newborns were delivered in health facilities
ad	The figure refers to the cases known to the maternity homes, public and private hospitals
ae	The figure only reflects those attending Department of Health's specialist clinic
af	All are imported cases
ag	Figure refers to dengue fever cases only reported to the Department of Health for the listed Statutory Notifiable Infectious Diseases. There is no dengue haemorrhagic fever case and death in 2008

Sources:	
1	Lands Department, Hong Kong Special Administrative Region Government (HKSARG).
2	Census and Statistics Department, HKSARG.
3	Planning Department, HKSARG.
4	Department of Health, HKSARG.
5	United Nations Development Programme (UNDP) 2008. Human Development Indices: a statistical update. New York: UNDP. Available from [http://hdr.undp.org/en/media/HDI2008Tables.xls].
6	Transport Department, HKSARG.
7	Environmental Protection Department, HKSARG.
8	Hospital Authority, HKSARG.
9	Labour Department, HKSARG.
10	Food and Health Bureau, HKSARG.
11	University Grants Committee, HKSARG.
12	Immigration Department, HKSARG.
13	Water Supplies Department, HKSARG.
14	WHO Regional Office for the Western Pacific, data received from the technical units.

JAPAN

1. CONTEXT

1.1 Demographics

As of 1 October 2008, the total population of Japan was estimated to be 127 692 000, comprising 62 251 000 males and 65 441 000 females. With regard to distribution by age group, 13.5% of the population are aged 0-14 years, 64.5% 15-64 years and 22.2% 65 years and over.

The average life expectancy remains the highest in the world. In 2007, it was 85.9 years for women and 79.2 years for men.

In 2007, the crude birth rate was 8.6 per 1000 persons and the crude death rate was 8.8 per 1000 persons.

1.2 Political situation

The Japanese Government, a constitutional monarchy, is based on a parliamentary cabinet system. Executive power is vested in the Cabinet, which consists of the Prime Minister and not more than 17 Ministers of State, who are collectively responsible to the Diet (legislature).

In September 2008, Mr Taro Aso assumed the office of the 92nd Prime Minister of Japan. He is a member of the Liberal Democratic Party, which currently holds the largest block of representation in the House of Representatives.

1.3 Socioeconomic situation

Japan has the second largest economy in the world in terms of gross domestic product (GDP), after the United States of America. As of 2006, the GDP of Japan and the United States totaled 36.4% of the world's GDP. Japan's GDP per capita in 2007 was US$ 34 326. This economic scale was achieved largely due to high economic growth from 1955 to the late 1960s.

In the 2006 financial year, the economy as a whole improved, as did the employment/unemployment situation, while some severe aspects remained. The jobless rate increased 0.2 of a percentage point year on year to 3.8% on the 2007 average. The active ratio of jobs to applicants in the same period increased 0.11 point to 1.06 times.

Water supply coverage has reached a high level of 100% (2006).

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The health situation in Japan remains one of the best in the Region. The majority of health-related statistics, such as life expectancy and the under-five mortality rate, continue to improve. The health disparities within the country are also relatively small compared with those in other industrialized nations.

Due to the increasingly complex social environment created by a high-tech and competitive society, it is said that the stress levels felt by all age groups are rising. There were 29 921 suicides in 2006; the number has remained stable at approximately 30 000 since 1998.

Tuberculosis, infectious and difficult-to-treat diseases, such as HIV infection and new types of influenza, are becoming serious threats to public health in Japan.

2.2 Outbreaks of communicable diseases

No available information.

2.3 Leading causes of mortality and morbidity

With the ageing of the population, disease patterns have shifted to lifestyle-related diseases, such as cancer, heart disease, cerebrovascular disease and diabetes. These diseases account for 60% of mortality and this trend is expected to continue.

2.4 Maternal, child and infant diseases

The infant mortality rate was 2.6 per 1000 live births and the maternal mortality ratio was 4.8 per 100 000 live births in 2007.

Activities carried out by the municipalities include distribution of the Maternal and Child Health Handbook, health care guidance, home visits and health check-ups for pregnant women. They also operate maternal and child health programmes, including parenting classes.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The basic principle governing the delivery of health care services is that all citizens should be able, at any time and place, to receive the care they require, with an affordable personal contribution.

The Ministry of Health, Labour and Welfare announced a health promotion programme, the National Health Promotion Movement in the 21st Century (Healthy Japan 21), in 2000. The movement, unlike traditional programmes, emphasizes 'primary prevention', aiming at early detection and treatment of diseases. Under the campaign, particular areas that are going to be important for the health and medical care of nationals are selected, and concrete numerical targets are set. These targets function as indicators for evaluation of the population's health status. The goal of the programme, which is to be completed in 2012, is to realize a society where all Japanese nationals live healthy and happy lives, free of disease.

- Improving healthy dietary habits: The Ministry of Health, Labour and Welfare has carried out the National Health and Nutrition Survey every year since 1945. The recommended dietary allowances (Dietary Reference Intakes) are revised every five years. In 2004, they underwent their seventh revision. Dietary guidelines for Japanese, the benchmark for dietary improvement, were established in 2000.

- Promoting physical activities and exercise: Healthy Japan 21 encourages people to take physical exercise. In 2006, the Ministry of Health, Labour and Welfare drew up "Exercise Criteria for Health Promotion 2006", describing the amount of physical activity and exercise needed to prevent lifestyle diseases, with updated evidence.

- Promoting appropriate rest and sleep: The need for relaxation and the part it plays in maintaining and improving health is well recognized. Therefore, "relaxation and health of the mind" is one of the targets in Healthy Japan 21. In 2003, the Ministry of Health, Labour and Welfare drew up guidelines for good sleep as a tool for achieving the sleep target in Healthy Japan 21.

- Smoking and health: The Ministry of Health, Labour and Welfare publicizes accurate information about smoking and its harm to human health, not only for smokers but also generally. The Ministry tries to prevent juveniles being tempted to smoke through health education, promotes efficient separation of smoking areas in public places or offices to reduce

second-hand smoking, and assists smokers who want to quit smoking through support programmes. Medical insurance covers treatment for nicotine-dependent patients.

3.2 Organization of health services and delivery systems

No available information.

3.3 Health policy, planning and regulatory framework

With increasing financial constraints, the Government is planning to introduce structural reforms in the heath system to increase efficiency while maintaining equity and quality of services. These reforms are closely associated with the ongoing demographic transition—longer life expectancy and lower birth rate—that has resulted in a rapid increase in the percentage of elderly citizens.

Japanese society is ageing at an unprecedented speed compared with other developed countries. In 2005, Japan's ageing rate reached 21.0%, showing that the country is still ageing at a high speed. According to population projections, the ageing trend will continue and the ageing rate will exceed 35% in 2050. This ageing population will need to pay attention to lifestyle-related diseases. Maintaining healthy lifestyles and the early detection of disease could help to reduce the incidence of the three major killer diseases: malignant neoplasms, cardiovascular diseases and cerebrovascular diseases. The new Health Promotion Law (2002) emphasizes the importance of establishing an environment conducive to healthier lifestyles as a key strategy for the ageing society.

3.4 Health care financing

National expenditure on health has been rising year after year. In 2007, total health expenditure reached US$ 351 472.9 million, about 8.0% of GDP. The rapidly growing number of senior citizens has resulted in a sharp rise in medical costs for the elderly and is a major reason for the upward trend in medical care expenditure. The average per capita total expenditure on health in 2007 was US$ 2750.8.

3.5 Human resources for health

As of 2006, there were 277 927 doctors and 1 234 312 nurses, public health nurses and assistant nurses in Japan. Due to population ageing, along with the growing sophistication and specialization of medical services, among other factors, it is presumed that the demand for health, medical and welfare service personnel will increase in the future.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

The health insurance system in Japan maintains universal coverage and there is free access to all health institutions. While this system has ensured equitable health care delivery across different socioeconomic groups and different areas of the country, it has given rise to an inefficient supply of services. Under the free-access system, patients have a tendency to skip the general practitioner and go directly to hospitals for even relatively common illnesses. At the same time, the current fee-for-service payment scheme tends to invite overtreatment. For example, the average length of a hospital stay in Japan is more than three weeks, more than double that in the majority of developed countries.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Summary of vital statistics*
Operator	:	Ministry of Health Labour and Welfare
Features	:	Includes information on health and labour
Web address	:	http://www.mhlw.go.jp/english/index.html

Title 2	:	*Japan in figures; Japan statistical yearbook*
Operator	:	Statistics Bureau, Ministry of Internal Affairs and Communications
Web address	:	http://www.stat.go.jp/english/index.htm

5. ADDRESSES

MINISTRY OF HEALTH, LABOUR AND WELFARE

Office Address	:	l-2-2, Kasumigaseki, Chiyoda-ku, Tokyo 100-8916, Japan
Website	:	http://www.mhlw.go.jp/english/index.html

WHO REPRESENTATIVE

There is no WHO Representative in Japan. Queries about the WHO programme of collaboration with Japan should be directed to Director, Programme Management, WHO Regional Office for the Western Pacific.

Office Address	:	Director, Programme Management, World Health Organization Regional Office for the Western Pacific
Postal Address	:	United Nations Avenue, P.O. Box 2932, 1000, Manila, the Philippines
Official Email Address	:	postmaster@wpro.who.int
Telephone	:	(63 2) 5288001/ 303 1000
Fax	:	(63 2) 526 0279
Office Hours	:	7:00-15:30
Website	:	http://www.wpro.who.int/

JAPAN — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	**Total**	**Male**	**Female**		
1	**Area (1 000 km2)**	377.93			2007	1
2	**Estimated population ('000s)**	127 692.00 [a]	62 251.00 [a]	65 441.00 [a]	2008	2
3	**Annual population growth rate (%)**	...	...	...		
4	**Percentage of population**					
	- 0–4 years	4.23 [b]	4.45 [b]	4.03 [b]	2008	2
	- 5–14 years	9.21 [b]	9.68 [b]	8.76 [b]	2008	2
	- 65 years and above	22.24 [b]	19.49 [b]	24.86 [b]	2008	2
5	**Urban population (%)**	66.30 [h]	...	...	2007 est	3
6	**Crude birth rate (per 1000 population)**	8.60	9.10	8.20	2007	4
7	**Crude death rate (per 1000 population)**	8.80	9.60	8.00	2007	4
8	**Rate of natural increase of population (% per annum)**	-0.10	-0.50	0.20	2007	4
9	**Life expectancy (years)**					
	- at birth	...	79.19	85.99	2007	4
	- Healthy Life Expectancy (HALE) at age 60	...	17.50	21.70	2002 est	5
10	**Total fertility rate (women aged 15–49 years)**	1.34			2007	4
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	99.00	...	...	2000 est	6
12	**Per capita GDP at current market prices (US$)**	34 326.00			2007	7
13	**Rate of growth of per capita GDP (%)**	...				
14	**Human development index**	0.95			2006	8
	Environmental indicators	**Total**	**Urban**	**Rural**		
15	**Proportion of vehicles using unleaded gasoline (%)**	...	...	...		
16	**Health care waste generation (metric tons per year)**	260.00	...	...	2002	9

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral	...	...	...	5659	2880	2779	2007	4
	- Type A	...	...	...	5	3	2	2007	4
	- Type B	...	...	...	686	446	240	2007	4
	- Type C	...	...	...	4622	2257	2365	2007	4
	- Type E	...	...	...	...	...	...	2007	4
	- Unspecified	...	...	...	282	151	131	2007	4
	Cholera	13	8	5	...	...	...	2007	4
	Dengue/DHF	101	...	...		...	...	2008	10
	Encephalitis	227	...	...	114	57	57	2007	4
	Gonorrhoea	11 157	...	...		...	...	2007	4
	Leprosy	11	...	...	...	...	...	2007	10
	Malaria	52	37	15		...	...	2007	4
	Plague	...	...	...	...	...	...		
	Syphilis	737	...	...	15	...	...	2007	4
	Typhoid fever	47	27	20	...	...	...	2007	4

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	...	...	...	222	98	124	2007	4
19	**Diarrhoeal diseases**	...	...	...	...	...	...		
20	**Tuberculosis**								
	- All forms	24 779 [g]	...	...	2194	1 458	736	2007	C: 10, D: 4
	- New pulmonary tuberculosis (smear-positive)	9433 [g]	...	...	...	...	...	2007	10
21	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	336 468	202 743	133 725	2007	4
	- Breast	...	...	...	11 414	91	11 323	2007	4
	- Colon and rectum	...	...	...	41 859	22 846	19 013	2007	4
	- Cervix			...			2441	2007	4
	- Oesophagus	...	...	...	11 669	9900	1769	2007	4
	- Leukaemia	...	...	...	7607	4556	3051	2007	4
	- Lip, oral cavity and pharynx	...	...	...	6399	4601	1798	2007	4
	- Liver	...	...	...	33 599	22 300	11 299	2007	4
	- Stomach	...	...	...	50 597	33 143	17 454	2007	4
	- Trachea, bronchus, and lung	...	...	...	65 608	47 685	17 923	2007	4
22	**Circulatory**								
	All circulatory system diseases	...	...	...	327 486	156 268	171 218	2007	4
	- Acute myocardial infarction	...	...	...	43 780	23 927	19 853	2007	4
	- Cerebrovascular diseases	...	...	...	127 041	60 992	66 049	2007	4
	- Hypertension	...	...	...	6144	2323	3821	2007	4
	- Ischaemic heart disease	...	...	...	75 140	41 023	34 117	2007	4
	- Rheumatic fever and rheumatic heart diseases	...	...	...	2451	737	1714	2007	4
23	**Diabetes mellitus**	...	...	...	13 999	7395	6604	2007	4
24	**Mental disorders**	...	...	...	5781	1946	3835	2007	4
25	**Injuries**								
	All types	...	...	...	73 826	47 600	26 226	2007	4
	- Homicide and violence	...	...	...	516	271	245	2007	4
	- Motor and other vehicular accidents	...	...	...	8268	5559	2709	2007	4
	- Occupational injuries	...	...	...	...	...	...		
	- Suicide	...	...	...	30 827	22 007	8820	2007	4
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Influenza (grippe)	305 441	...	...	239.95 [b]	...	...	2001	6
	2. Chickenpox	271 409	...	...	213.22 [b]	...	...	2001	6
	3. Mumps	254 711 [c]	...	...	200.10 [b]	...	...	2001	6
	4. Other venereal diseases	55 328 [c]	...	...	43.47 [b]	...	...	2001	6
	5. Tuberculosis (all forms)	39 384	...	...	30.94 [b]	...	...	2001	6
	6. Measles	33 812	...	...	26.56 [b]	...	...	2001	6
	7. Food poisoning (bacterial)	32 417	...	...	25.47 [b]	...	...	2001	6
	8. Gonococcal infections	20 662 [c]	...	...	16.23 [b]	...	...	2001	6
	9. Rubella	2 561 [c]	...	...	2.01 [b]	...	...	2001	6
	10. Pertussis (whooping cough)	1 760	...	...	1.38 [b]	...	...	2001	6

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Malignant neoplasms	336 468	202 743	133 725	266.90	329.60	207.10	2007	4
	2. Heart disease	175 539	83 090	92 449	139.20	135.10	143.20	2007	4
	3. Cerebrovascular diseases	127 041	60 992	66 049	100.80	99.20	102.30	2007	4
	4. Pneumonia and bronchitis	110 159	58 575	51 584	87.40	95.20	79.90	2007	4
	5. Accidents and adverse effects	37 966	22 666	15 300	30.10	36.80	23.70	2007	4
	6. Suicide	30 827	22 007	8 820	24.40	35.80	13.70	2007	4
	7. Senility	30 734	7 493	23 241	24.40	12.20	36.00	2007	4
	8. Renal failure	21 632	9 928	11 704	17.20	16.10	18.10	2007	4
	9. Diseases of the liver	16 195	10 708	5 487	12.80	17.40	8.50	2007	4
	10. Chronic obstructive pulmonary disease	14 907	11 445	3 462	11.80	18.60	5.40	2007	4
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					43.90		2004 est	11
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					42.90		2007	10
30	**Percentage of pregnant women with anaemia**					...			
31	**Neonatal mortality rate (per 1000 live births)**	2.60		2.70		2.40		2007	4
32	**Percentage of newborn infants weighing at least 2500 g at birth**	90.30		91.40		89.20		2007	4
33	**Immunization coverage for infants (%)**								
	- BCG	89.50		...		...		2008	10
	- DTP3	98.30		...		...		2008	10
	- POL3	94.70		...		...		2008	10
	- Hepatitis B III	...		...		...			
		Number of cases			**Number of deaths**				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			...		
	- Eclampsia			...			2	2007	4
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	10
	- Diphtheria	0	0	0	...	...	...	2008	10
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	11 015	...	...	...	...	...	2008	10
	- Mumps	65 361	35605	29756	...	...	...	2008	7, 10
	- Neonatal tetanus	...	...	...	...	...	...		
	- Pertussis (whooping cough)	6753	2930	3823	...	...	...	2008	7, 10
	- Poliomyelitis	0	0	0	...	...	...	2008	10
	- Rubella	303	167	136	...	...	...	2008	7, 10
	- Total Tetanus	123	69	54	...	...	...	2008	7, 10

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		…			
37	Health infrastructure					
	Public health facilities	- General hospitals	6074 [d]	466 640 [d]	2007	4
		- Specialized hospitals	…	…		
		- District/first-level referral hospitals	…	…		
		- Primary health care centres	…	…		
	Private health facilities	- Hospitals	7246	1 158 765	2007	4
		- Outpatient clinics	95 074	149 911	2007	4
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)			351 472.94 [b]	2007p	12
	- total expenditure on health as % of GDP			8.00	2007p	12
	- per capita total expenditure on health (in US$)			2750.80 [b]	2007p	12
	Government expenditure on health					
	- amount (in million US$)			285 842.50 [b]	2007p	12
	- general government expenditure on health as % of total expenditure on health			81.30	2007p	12
	- general government expenditure on health as % of total general government expenditure			17.90	2007p	12
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			0.00	2007p	12
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			18.70	2007p	12
	Exchange rate in US$ of local currency is: 1 US$ =			117.75	2007p	12
39	Health insurance coverage as % of total population			…		

	INDICATOR		DATA							Year	Source
40	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	277 927	229 998	47 929	…	…	…	…	2006	4
		- Ratio per 1000 population	2.18	1.80	0.38	…	…	…	…	2006	4
	Dentists	- Number	97 198	78 254	18 944	…	…	…	…	2006	4
		- Ratio per 1000 population	0.76	0.61	0.15	…	…	…	…	2006	4
	Pharmacists	- Number	252 533	98 802	153 731	…	…	…	…	2006	4
		- Ratio per 1000 population	1.98	0.77	1.20	…	…	…	…	2006	4
	Nurses	- Number	1 234 312 [e]	61 831 [e]	1 172 481 [e]	…	…	…	…	2006	4
		- Ratio per 1000 population	9.66	0.48	9.18	…	…	…	…	2006	4
	Midwives	- Number	25 775	…	25 775	…	…	…	…	2006	4
		- Ratio per 1000 population	0.20	…	0.20	…	…	…	…	2006	4
	Paramedical staff	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
41	Annual number of graduates	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	2.60	2.70	2.40	2007	4
45	Under-five mortality rate (per 1000 live births)	3.50	3.70	3.30	2007	4
46	Proportion of 1 year-old children immunised against measles	97.40	...	...	2008	10
47	Maternal mortality ratio (per 100 000 live births)	3.20			2007	4
48	Proportion of births attended by skilled health personnel	99.97 [f]			2007	4
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.19 [f]			2007	4
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.76 [f]			2007	4
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	...				
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults	<0.10	...	...	2007	10
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	0.05	...	...	2006	4, 10
57	Malaria death rate per 100 000 population	0.00	0.00	0.00	2006	4, 10
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	28.00	...	...	2007	10
61	Tuberculosis death rate per 100 000 population	3.00	...	...	2007	10
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	77.00	...	...	2007	10
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	20.00	...	...	2006	10
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	100.00	100.00	100.00	2006	13
65	Proportion of population using an improved sanitation facility	100.00	100.00	100.00	2006	13
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
a	Population as of 1 October 2008.
b	Computed by Health Information and Evidence for Policy Unit of WHO Regional Office for the Western Pacific
c	Figure refers to cases treated in large hospitals only
d	Figure refers to public health facilities (hospitals and clinics)
e	Figure includes nurses, public nurses and assistant nurses
f	Figure refers to the percentage of live births (except fetal deaths).
g	Figure based on the notified TB cases (New and Relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO.
h	Revised data

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KIRIBATI

1. CONTEXT

1.1 Demographics

The Republic of Kiribati, located in the Pacific, consists of 33 low-lying atoll islands in three main island groups, the Gilbert, Phoenix and Line Islands. The country spreads over 3.5. million kilometres of ocean, but has a total land area of only 811 square kilometres.

With an annual population growth rate of 1.8%, the 2008 estimated population of Kiribati was 97 231. The average population density is 120 per square kilometre, but this varies widely between islands. Between 1995 and 2000, there was significant in-migration of people from the Outer Islands to South Tarawa, resulting in an urban growth rate of 5.2%, compared with a national growth rate of 1.7%. In-migration plateaued during 2000-2005, when the overall growth rate in South Tarawa reduced to 1.9%. Overcrowding in South Tarawa persists, however, putting stress on the environment and infrastructure. New 'urban' settlements have emerged since 2000, especially in Northern Tarawa and Kiritimati Island. Between 2000-2005, North Tarawa's growth rate was 4.8% and Kirimati Island's 8%, compared with 2.2.% and 1.2 %, respectively, during the period 1995-2000.

The total fertility rate was 3.4 in 2008, representing a decline from the 1990s, when it was reported to be about 4.5. Kiribati has a young population, with 34.4% under 15 years of age and only 5.1 % over 64 years. The sex ratio was 97 males to 100 females in 2006.

There has been a steady improvement in health indicators over the last decade, but people in Kiribati still have a shorter life span than those in most other Pacific islands. In 2008, life expectancy at birth was estimated at 58.9 for males and 63.1 for females.

1.2 Political situation

Kiribati has a two-tier system of Government at central and local levels. The central Government (*Maneaba ni Maungatabu*) consists of 42 democratically elected members, led by the President. The local level consists of 23 elected and appointed Councils, three in urban areas and 20 in the Outer Islands. Kiribati has enjoyed political stability since the election of the *Boutokaan to Koaua* Party in 2003.

The guiding development document of the Government, the National Development Plan for 2008-2011 sets out the main policy areas, and strategies are operationalized through respective line ministries.

While politically, administration and service delivery is decentralized, line ministries and councils appear to have few decision-making powers and little authority. A project to strengthen governance in the Outer Islands has recently been launched by the United Nations Development Programme (UNDP).

The Government places considerable importance on its international commitments to health and is a signatory to the Framework Convention on Tobacco Control and the International Health Regulations. At the national level, food safety legislation was approved by Parliament in 2006. Tobacco legislation has been drafted, but has not yet been put before Parliament.

1.3 Socioeconomic situation

Kiribati is categorized as a least-developed country (LDC) because of its low per capita gross national product (GNP), limited human resources and high vulnerability to external forces. During the 1990s, the buoyant global economy, the use of the Australian dollar as domestic currency, access to external assistance and sound fiscal management of the Revenues Equalising Reserve Funds (RERF), derived from previous phosphate deposits, allowed achievment of relative macroeconomic stability.

The Kiribati economy remains relatively resilient, due to government reserve funds, which had a market value of US$ 336 million in 2003, and domestic income from fishing licences (approximately 23%), grants

and loans (approximately 30%), remittances and a narrow domestic production base of marine products and copra (approximately 10%-20%). In 2006, there was a decline in GNP per capita from US$ 1040 in 1999 to US$ 653, largely due to a decline in the number of fishing licences issued.

The 2005 Census found that 64% of people above the age of 15 were "economically active", but only 23% had regular paid employment; 53% of those employed were in public administration, while the remainder were employed mainly as subsistence farmers or fishermen. Subsidies to public entities are thought to reduce opportunities for private job creation. The lack of regular paid employment, particularly in urban settlements, is associated with an increase in youth violence and alcohol abuse.

Kiribati is a signatory to the Convention for the Elimination of All Forms of Discrimination Against Women and there is evidence that gender equality is improving. Women now comprise 51.8% of the workforce and girls outnumber boys in secondary and tertiary education. Women, however, are still underrepresented at all levels of decision-making, and domestic violence, linked to alcohol abuse, is an increasing problem.

In 2006, 65.0% of the population had access to an improved water source. South Tarawa and Kiritimati Island have public water supply infrastructures, with over 3500 households in South Tarawa and 400 in Kirimati connected to a reticulated, treated water system. The remaining population rely on rainwater supplies and well-water. The protection of the well-water and the water sources from pollution, mainly from nearby sanitation systems, is a constant public health concern.

In 2006, 33% of the population had access to improved sanitation. According to the 2005 Census, approximately 2000 premises are connected to a waterborne sewage system in the main settlements of South Tarawa, but most of the population reported using the beach, sea or bush for toileting facilities. Two solid-waste landfill sights have been developed to dispose of solid waste, although one is facing problems of seawater seepage. A solid-waste collection service is now operating in South Tarawa. Despite these developments, sanitation in South Tarawa is inadequate and the environment unhealthy

1.4 Risks, vulnerabilities and hazards

The low-lying atolls of Kiribati, rising no higher than three meters above sea-level, makes the country very vulnerable to climate change and rises in sea-level. It is estimated (World Bank Regional Economic Report 2000) that, without appropriate adaptation measures, 25%-54% of the land in areas of South Tarawa and 55%-80% in North Tarawa will be inundated by 2050.

The natural environment in urban areas is under pressure due to groundwater depletion, marine-life and sea-water contamination from human and solid waste, over-fishing of the reefs and lagoons, ad hoc construction of seawalls, coastal erosion and illegal beach mining, and contamination. The country is also facing considerable socioeconomic difficulities due to the ad hoc management of urban growth.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

A number of environmental factors are increasing the risk of communicable diseases in Kiribati. High-density housing and overcrowding in urban areas, such as South Tarawa, is facilitating the transmission of infectious diseases. For instance, tuberculosis incidence in Kiribati has now surpassed that of other Pacific island countries, and most reported cases (70% in 2005) are found in the urban settlement of Betio in South Tarawa. Other health indicators suggest that the health status of people living in South Tarawa is now worse that of people living in the Outer Islands. In the 2005 Census, for example, the infant mortality rate in South Tarawa was higher than that in the Outer Islands.

Inadequate water supplies, unsafe drinking water, variable standards of personal hygiene, poor food handling and storage, and poor sanitation are all contributing to the high number of cases of diarrhoeal, respiratory, eye and skin infections. Diarrhoeal diseases and respiratory infections are major causes of mortality among children.

There is a high prevalence of STIs, with a surveillance study in 2004 showing that approximately 15% of pregnant women were infected. HIV was first confirmed in Kiribati in 1991 and the number of people infected continues to rise. As of the end of 2006, Kiribati had a cumulative total of 50 HIV/AIDS cases, of whom 24 were known to have died. Since 2006, seven people living with HIV have been enrolled in a care and treatment programme. One has since died.

Kiribati achieved leprosy elimination status in 2000, but has since reverted to pre-elimination status.

Data suggest that the prevalence of noncommunicable diseases is increasing. Around 70% of males between the ages of 30 and 54 are regular smokers, compared with less than 50% of the adult female population, while 32% of young males aged 15-19 smoke (2005 census). The gift of tobacco (*Mweaka*) remains closely tied to spiritual beliefs in the Outer Islands and, in urban areas, a gift of tobacco is still considered polite.

Economic development and modernization has increased reliance on imported, processed food, such as rice and noodles, and on motorized transport. These changes, together with a strong tradition of feasting, have led to overnutrition and reduced activity in adults, increasing the risk of noncommunicable disease. Results from the 2004-2005 STEPs survey showed approximately 20% of the adult population had diabetes, and diseases of the circulatory system are now the second leading cause of mortality.

Kiribati faces a double-edged health problem related to diet and nutrition: overnutrition in adults and undernutrition in children. Although nationally representative nutrition data are scarce, infant mortality and routine health facility data suggest undernutrition and vitamin and mineral deficiencies are major contributing factors to under-five mortality. The STEPs survey in 2004-2005 showed an anaemia prevalence rate of 17% for non-pregnant women and 22% for women aged 15-24. Vitamin A deficiency was highly prevalent in an assessment in 1989. Morbidity due to diarrhoeal disease and pneumonia among children suggests vitamin A deficiency remains a public health problem.

In the late 1990s, the infection rate for chronic hepatitis B was 27.4% among students aged 10-13 years, increasing the burden of chronic liver disease and cancer. The introduction of hepatitis B vaccination in 2002 will reduce this burden of disease in the future.

2.2 Outbreaks of communicable diseases

Anecdotal reports of outbreaks of diarrhoea are common, but few official reports are available. No outbreak of a vaccine-preventable disease has been reported since 2004.

2.3 Leading causes of mortality and morbidity

The causes of mortality and morbidity remained fairly consistent between 2002 and 2005. Acute respiratory infections and diarrhoeal diseases are the two major causes of morbidity and are among the five leading causes of mortality. There was an increase in reported cases of respiratory disease and eye infection between 2002 and 2005.

There have been increases in mortality from diseases of the circulatory system, respiratory system and cancers. Perinatal conditions are still a leading cause of mortality for infants.

2.4 Maternal, child and infant diseases

Maternal health is improving. Approximately 90% of all births are now attended by trained health personnel and the total fertility rate has declined, falling from 4.5 in 1995 to 3.4 in 2008. The maternal mortality ratio, based on hospital records, is now 158 per 100 000 live births (2005 Census Report), a significant reduction from the previously reported ratio and consistent with (a) the reduction in the total fertility rate, and (b) the continued high percentage of women attended by trained staff.

Infant mortality has also improved. The infant mortality rate was estimated at 52 per 1000 live births in the 2005 census, significantly lower than the 67 reported in 1995, but still high compared with many other Pacific island counties. Perinatal conditions, diarrhoeal diseases and pneumonia are the main causes of

infant mortality and morbidity. Malnutrition, iron and vitamin A deficiency, and worm infestation among children are contributing factors.

2.5 Burden of disease

Kiribati faces a double burden of disease, with high mortality and morbidity from both communicable and noncommunicable diseases.

Data on the burden of disease caused by injury, disability and mental health are scarce. A recent national survey on disabilities found 3840 people with 4358 disabilities. Physical disabilities accounted for 32% of all disabilities; blindness and vision impairment 27%; deafness and hearing impairment 23%; and intellectual disability, epilepsy or psychiatric illness approximately 17 %. Twenty three per cent of disabilities are in the under-20 age group. The number of these disabilities that are due to birth injuries and childhood infections is unknown.

Data on consumption of alcohol and its impact on the burden of disease are also very limited, but alcohol consumption among young people is seen as a "common social problem faced by society". Excessive alcohol consumption is commonly linked with road traffic accidents and domestic violence.

An expanded immunization programme, introduced in the early 1980s, as well as supplementary measles campaigns in 1997 and 1998, have resulted in few reported outbreaks of vaccine-preventable diseases. Kiribati was declared polio-free in 2002.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The strategic objectives set out in the National Development Plan for the period 2008-2011 guide the formulation of the Ministry of Health's annual operational plans.

The objectives are to: (1) improve health status in priority areas; (2) improve access to and utilization of curative health services that are efficient, effective, responsive to patients needs and delivered to a high standard nationwide; (3) improve the quality, sustainability and coverage of public health services through increased responsiveness, efficiency and effectiveness nationwide; (4) improve, manage and maintain appropriate legislation, plans, policies, protocols, systems and structures within the Ministry of Health and Medical Services; (5) improve the quality of health information and data in terms of accuracy, timeliness and dissemination, for better planning, decision-making, allocation of resources and monitoring and evaluation of performance; and (6) develop a well-performing, highly skilled and supported workforce to enhance the delivery of quality health services.

3.2 Organization of health services and delivery systems

Kiribati has a well established, publicly funded, formal health system administered by the central Ministry of Health. A parallel traditional health system exists, provided by traditional healers and offering local medicines, massage and antenatal, childbirth and postnatal care. Most people use both traditional and formal health services, but there is no coordination between the two systems.

A national referral hospital, situated in South Tawara, provides a comprehensive range of secondary curative services, while Kiritimati Island has a hospital providing basic surgical, medical and maternity services. A new hospital is under construction in North Tabiteuea to serve the Northern District of the Gilbert Islands. A small hospital providing basic medical services is also located in Betio, South Tarawa. These hospitals and one health centre in South Tarawa are the only facilities with medical doctors present. People requiring tertiary curative services are referred overseas for treatment if they fulfil the clinical criteria set out by the Ministry of Health.

Comprehensive primary health care services are offered through a network of 92 health centres and dispensaries. Health centres are headed by a medical assistant—a registered nurse who has undertaken additional training—who also supervises up to eight dispensaries staffed by nurses and nurse aides

employed by the Island Council. Six principle Nursing Officers, based in Tarawa, are responsible for the support and oversight of health services in each district and for selected national programmes.

The Ministry of Health faces a number of challenges related to the quality of health service delivery, the availability of supplies and equipment and the maintenance of equipment.

3.3 Health policy, planning and regulatory framework

The Ministry of Health works within a comprehensive framework of policies, plans and legislation, the implementation and enforcement of which is variable. The Government has introduced an annual performance-based planning process that requires all line ministries to develop annual output-based operational plans known as ministry operational plans, or MOPs.

Public health legislation mostly falls under the Environmental Health Ordinance. The Ordinance, which is over 30 years old, primarily covers water and sanitation issues. The Ordinance and other legislation, including the Medicines Act and mental health legislation, are in need of review to meet current public health requirements.

3.4 Health care financing

Kiribati has a publicly funded, publicly provided health system. Government spending on health was US$ 11.76 million in 2007 and has remained fairly consistent over recent years. In 2007, approximately 7.8% of total government expenditure was on health. Revenue generated by the Ministry of Health was mostly generated from the sale of pharmaceuticals and medical supplies. Most government expenditure is on curative services, pharmaceuticals and staff.

A total of AUS$ 26.9 million (US$ 23 million) in development assistance was approved for health in 2006. This includes AUS$ 12 million (US$ 10.2 million) to strengthen Outer Island health services over a period of four years. A further AUS$ 34 741 (US$ 29 738) was approved to extend hospital facilities in the main referral hospital. Public health services are mainly reliant on donor support.

3.5 Human resources for health

Kiribati has an ageing health workforce and relies on retired health staff employed on contract to fill some nursing and medical positions. The current intake of health workers for training is unlikely to meet future employment requirements. A total of 238 locally trained nurses and midwives made up 80% of the health workforce in 2004. Doctors make up the next largest group of health workers. The number of doctors increased from 20 to 30 in 2006 with the recruitment of 10 doctors from Cuba.

Basic nurse training is provided locally through a three-year, hospital-based training programme. Approximately 25 nurses are enrolled in the programme each year. Post-basic training is offered in midwifery and public health. In 2007, about 20 school-leavers were recruited for training as first-level nurses in Australia. These nurses will able to work in Australia and those who are able will be given the opportunity to undertake second-level nursing training. It is anticipated that some of these trained nurses will return to Kiribati and will be available for employment in the health sector in the future.

Locally recruited medical students are usually trained in the Fiji School of Medicine. In 2007, an additional 23 medical students were recruited to undertake medical training in Cuba. Once graduated, doctors in Kiribati receive additional training through short courses and workshops, provided mainly through regional health programmes.

There is a serious shortage of paramedical and support staff. The retirement of a pharmacist in 2006 left only one qualified pharmacist in the country. Most staff employed in laboratory and radiography services, health promotion, environmental health and health information units lack basic qualifications, relying on local in-service training and short courses overseas to learn their skills. There is no pathologist or radiologist employed by the Ministry of Health.

The Ministry of Health has a workforce training plan to guide the awarding of overseas fellowships, but there is no systematic process in place to ensure the ongoing competency of health workers, and no

routine clinical supervision or support. Absenteeism and attrition is thought to impact on productivity, and staff motivation is reported to be a human resources management problem.

3.6 Partnerships

The Ministry of Health receives significant technical and financial support from development partners. WHO provides funding and technical support to: epidemic alert and response; HIV care and treatment; health promotion, including tobacco control; environmental health; essential health technologies and medicines; health information; and health system development.

The United Nations Population Fund (UNFPA) supports reproductive health activities and the United Nations Children's Fund (UNICEF) supports the expanded programme on immunization, nutrition and infant feeding, and implementation of the integrated management of childhood illness (IMCI) strategy. The Secretariat for the Pacific Community supports the control of tuberculosis, HIV/STIs, noncommunicable diseases, disease surveillance and pandemic preparedness. Considerable support is also provided by the Australian Agency for International Development, the New Zealand Agency for International Development, and the governments of Cuba and Taiwan (China).

A large Outer Island project, funded by the European Union, is refurbishing Outer Island health facilities, providing in-country training courses from the Fiji School of Medicine and developing primary health care capacity in the Outer Islands.

3.7 Challenges to health system strengthening

Kiribati has a well established health system. It faces many of the challenges faced by other Pacific island countries, but its geography, isolation and extremely small population exacerbate these challenges, which include:

- developing logistical systems that ensure adequate essential medicines and medical supplies are available and accessible at all times;
- recruiting, coordinating, rationalizing and ensuring the quality of basic health-worker training and in-service training, be it local or overseas;
- improving staff competency and performance;
- increasing utilization and the responsiveness of curative and public health services to reduce child mortality, improve maternal health, reduce the incidence of NCDs and reduce the transmission of tuberculosis, STIs and HIV;
- ensuring there is sufficient accurate, timely and relevant health information to inform planning, policy development and monitoring of health sector performance;
- ensuring that there is a responsive disease surveillance and response system in place and that reporting meets international requirements;
- managing health sector resources more efficiently to impact on health status, improve planning and donor coordination and strengthen the monitoring of health plans and interventions; and
- updating legislation, regulations and policies.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : *Kiribati 2005 Census volume 2 : Analytical report January 2007*
Operator : Ministry of Finance and Economic Development
Comments : Supported by SPC

Title 2 : *National Development Strategies 2004-2007*
Operator : Ministry of Finance and Economic Development
Comments : To be reviewed in 2008

5. ADDRESSES

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WHO COUNTRY LIAISON OFFICER IN KIRIBATI

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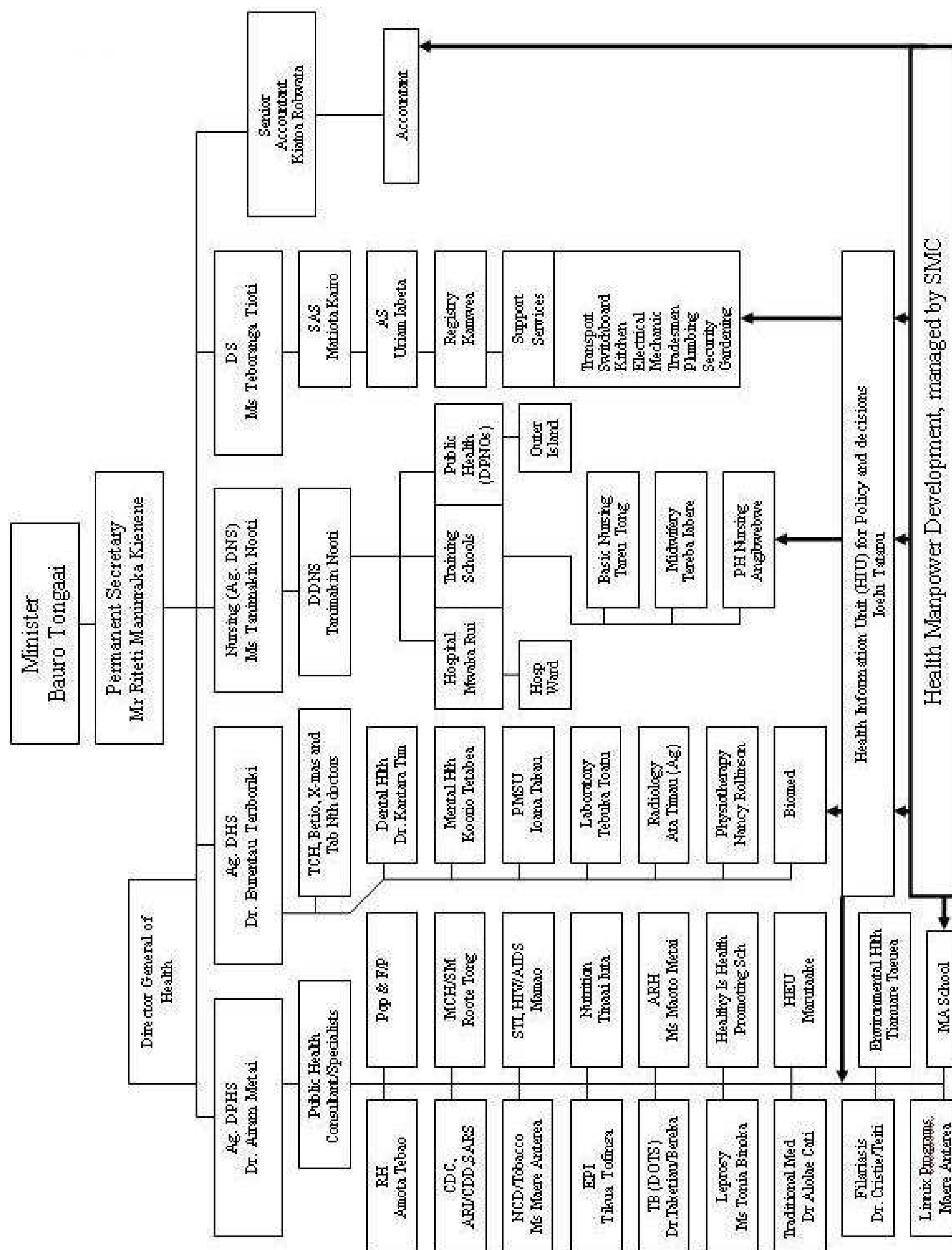
Telephone	:	(686) 28231
Fax	:	(686) 28188
Office Hours	:	0800-1230 -1230-1700
Website	:	www.wpro.who.int

6. ORGANIZATIONAL CHART: Ministry of Health and Medical Services



KIRIBATI — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	0.81			2008	1
2	Estimated population ('000s)	97.23	...	...	2008 est	1
3	Annual population growth rate (%)	1.80	...	...	2008	1
4	Percentage of population					
	- 0–4 years	12.20	12.20	12.30	2008 est	2
	- 5–14 years	22.20 [a]	22.10 [a]	22.20 [a]	2008 est	2
	- 65 years and above	5.10 [a]	4.80 [a]	5.70 [a]	2008 est	2
5	Urban population (%)	43.70 [b]	...	...	2007 est	3
6	Crude birth rate (per 1000 population)	27.50	...	...	2008 est	1
7	Crude death rate (per 1000 population)	8.30	...	...	2008 est	1
8	Rate of natural increase of population (% per annum)	1.92 [a]	...	...	2008 est	1
9	Life expectancy (years)					
	- at birth	...	58.90	63.10	2008 est	1
	- Healthy Life Expectancy (HALE) at age 60	...	11.50	11.60	2002	4
10	Total fertility rate (women aged 15–49 years)	3.40			2008 est	1
	Socioeconomic indicators					
11	Adult literacy rate (%)	91.00	...	...	2005	5
12	Per capita GDP at current market prices (US$)	653.00			2006p	1
13	Rate of growth of per capita GDP (%)	...				
14	Human development index	...				
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	...	...	...		
16	Health care waste generation (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	...	...	...	...	...	...		
	- Type B	...	...	...	4	1	3	2005	6
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	51	25	26	9	5	4	2005	6
	Cholera	0	0	0	0	0	0	2005	6
	Dengue/DHF	831	...	...	...	...	...	2008	7
	Encephalitis	0	0	0	0	0	0	2005	6
	Gonorrhoea	278	175	103	0	0	0	2005	6
	Leprosy	63	...	...	...	...	...	2007	7
	Malaria	...	...	...	...	...	...		
	Plague	...	...	...	...	...	...		
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	0	0	0	0	0	0	2005	6

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	101 954	50 097	51 857	…	…	…	2005	6
19	**Diarrhoeal diseases**	22 548	11 664	10 884	41	24	17	2005	6
20	**Tuberculosis**								
	- All forms	334 [e]	…	…	…	…	…	2007	7
	- New pulmonary tuberculosis (smear-positive)	103 [e]	…	…	…	…	…	2007	7
21	**Cancers**								
	All cancers (malignant neoplasms only)	…	…	…	27	…	…	2005	6
	- Breast	…	…	…	…	…	…		
	- Colon and rectum	…	…	…	1	0	1	2005	6
	- Cervix			…			7	2005	6
	- Oesophagus	…	…	…	…	…	…		
	- Leukaemia	…	…	…	3	2	1	2005	6
	- Lip, oral cavity and pharynx	…	…	…	1	0	1	2005	6
	- Liver	…	…	…	…	…	…		
	- Stomach	…	…	…	2	1	1	2005	6
	- Trachea, bronchus, and lung	…	…	…	2	2	0	2005	6
22	**Circulatory**								
	All circulatory system diseases	…	…	…	84	58	26	2005	6
	- Acute myocardial infarction	…	…	…	0	0	0	2005	6
	- Cerebrovascular diseases	…	…	…	47	37	10	2005	6
	- Hypertension	190	87	103	6	4	2	2005	6
	- Ischaemic heart disease	…	…	…	0	0	0	2005	6
	- Rheumatic fever and rheumatic heart diseases	…	…	…	4	3	1	2005	6
23	**Diabetes mellitus**	248	112	136	23	12	11	2005	6
24	**Mental disorders**	8	6	2	1	1	0	2005	6
25	**Injuries**								
	All types	…	…	…	…	…	…		
	- Homicide and violence	…	…	…	…	…	…		
	- Motor and other vehicular accidents	…	…	…	3	2	1	2005	6
	- Occupational injuries	…	…	…	…	…	…		
	- Suicide	…	…	…	21	17	4	2005	6
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Acute respiratory infections	102 148	50 190	51 958	110390.89	110036.83	110735.07	2005	6
	2. Diarrhoeal diseases	22 647	11 709	10 938	24474.51	25670.88	23311.52	2005	6
	3. Eye diseases	10 247	4948	5299	11073.89	10848.02	11293.45	2005	6
	4. Skin diseases	795	398	397	859.15	872.58	846.10	2005	6
	5. Communicable diseases	694	383	311	750.00	839.69	662.82	2005	6
	6. Non-communicable deseases	450	206	244	486.31	451.64	520.02	2005	6
	7. Nutrition and related diseases	318	161	157	343.66	352.98	334.60	2005	6
	8. Injury and poisoning	87	44	43	94.02	96.47	91.64	2005	6
	9.								
	10.								

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Symtoms, signs and ill-defined conditions	127	72	55	137.25	157.85	117.22	2005	6
	2. Disease of the circulatory system	84	58	26	90.78	127.16	55.41	2005	6
	3. Infectious and parasitic system	70	27	43	75.65	59.19	91.64	2005	6
	4. Certain conditions originating in the perinatal	63	34	29	68.08	74.54	61.81	2005	6
	5. Diseases of the respiratory system	62	31	31	67.00	67.96	66.07	2005	6
	6. Diseases of the digestive system	55	35	20	59.44	76.73	42.62	2005	6
	7. Endocrine, nutritional and metabolic	49	24	25	52.95	52.62	53.28	2005	6
	8. External causes of mortality	35	31	4	37.82	67.96	8.52	2005	6
	9. Neoplasms	28	9	19	30.26	19.73	40.49	2005	6
	10. Diseases of the blood & blood-forming organs	9	5	4	9.73	10.96	8.52	2005	6
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					18.46		2005	8
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					41.90		2008	7
30	**Percentage of pregnant women with anaemia**					...			
31	**Neonatal mortality rate (per 1000 live births)**	...		...		...			
32	**Percentage of newborn infants weighing at least 2500 g at birth**	91.80		92.30		91.40		2005	6
33	**Immunization coverage for infants (%)**								
	- BCG	82.60		...		...		2008	7
	- DTP3	81.80		...		...		2008	7
	- POL3	74.10		...		...		2008	7
	- Hepatitis B III	83.30		...		...		2008	7
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			2			2	2004	6
	- Eclampsia			...			...		
	- Haemorrhage			2			2	2004	6
	- Obstructed labour			...			...		
	- Sepsis			...			...		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	7
	- Diphtheria	0	0	0	...	...	...	2008	7
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2008	7
	- Mumps	0	0	0	...	...	...	2008	7
	- Neonatal tetanus	0	0	0	...	...	...	2008	7
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	7
	- Poliomyelitis	0	0	0	...	...	...	2008	7
	- Rubella	0	0	0	...	...	...	2008	7
	- Total Tetanus	0	0	0	...	...	...	2008	7

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Facilities with HIV testing and counseling services**		…			
37	**Health infrastructure**					
	Public health facilities	- General hospitals	1	140	2005	6
		- Specialized hospitals	…	…		
		- District/first-level referral hospitals	…	…		
		- Primary health care centres	92 [c]	…	2005	6
	Private health facilities	- Hospitals	…	…		
		- Outpatient clinics	…	…		
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)		13.45 [a]		2007p	10
	- total expenditure on health as % of GDP		13.00		2007p	10
	- per capita total expenditure on health (in US$)		141.53 [a]		2007p	10
	Government expenditure on health					
	- amount (in million US$)		11.76 [a]		2007p	10
	- general government expenditure on health as % of total expenditure on health		87.20		2007p	10
	- general government expenditure on health as % of total general government expenditure		7.80		2007p	10
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health		0.46 [a,b]		2006p	10
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health		12.80		2007p	10
	Exchange rate in US$ of local currency is: 1 US$ =		1.19		2007p	10
39	**Health insurance coverage as % of total population**		…			

	INDICATOR		DATA							Year	Source
40	**Human resources for health**		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	30	…	…	…	…	…	…	2006	6
		- Ratio per 1000 population	0.32	…	…	…	…	…	…	2006	6
	Dentists	- Number	3	0	3	…	…	…	…	2004	6
		- Ratio per 1000 population	0.03	0	0.03	…	…	…	…	2004	6
	Pharmacists	- Number	1	0	1	…	…	…	…	2006	6
		- Ratio per 1000 population	0.01	0	0.01	…	…	…	…	2006	6
	Nurses	- Number	238	18	220	…	…	…	…	2004	6
		- Ratio per 1000 population	2.56 [b]	0.19 [a]	2.36 [a]	…	…	…	…	2004	6
	Midwives	- Number	32	4	28	…	…	…	…	2004	6
		- Ratio per 1000 population	0.34 [b]	0.04 [a]	0.30 [a]	…	…	…	…	2004	6
	Paramedical staff	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
41	**Annual number of graduates**	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	52.00	...	...	2005	5
45	Under-five mortality rate (per 1000 live births)	69.00	...	...	2005	5
46	Proportion of 1 year-old children immunised against measles	72.20	...	...	2008	7
47	Maternal mortality ratio (per 100 000 live births)	158.00			2005	4
48	Proportion of births attended by skilled health personnel	89.65 [a]			2005	6
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	4.65 [d]			2005	6
	- Percentage of deliveries in health facilities (as % of total deliveries)	85.00 [d]			2005	6
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	100.00			2005	11
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults e	...	...	...		
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	...	...	...		
57	Malaria death rate per 100 000 population	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	423.00	...	...	2007	7
61	Tuberculosis death rate per 100 000 population	49.00	...	...	2007	7
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	66.00	...	...	2007	7
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	61.00	...	...	2006	7
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	65.00	77.00	53.00	2006	12
65	Proportion of population using an improved sanitation facility	33.00	46.00	20.00	2006	12
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
...	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
b	Revised data
c	Figure refers to health centers and dispensaries
d	Best estimated figure
e	Figure based on the notified TB cases (New and Relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO.

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LAO PEOPLE'S DEMOCRATIC REPUBLIC

1. CONTEXT

1.1 Demographics

The Lao People's Democratic Republic has a population of 5.6 million (2005), a population growth rate of 2.1%, a sparse population density (23.7 per square kilometre) with large inter-provincial variations, and an average household size of 5.9 persons. The topography breaks into lowland areas along the Mekong River that depend predominantly on paddy rice, and highland areas that depend on upland rice and the gathering of non-timber forest products for livelihoods. The population is young, but there are signs of changes in the demographic structure; the percentage of the population under 15 years of age decreased from 43.6% to 39% between 1995 and 2005. The nation is rural, with the beginnings of a rural-to-urban shift; the percentage of the population living in rural areas decreased from 83% to 72.9% from 1995 to 2005.

The latest census identified 47 distinct ethnic groups. The ethnic Lao comprise 52.5% of the total population and predominate in the lowlands, while ethnic minorities predominate in the highlands, although mixing is common. The highlands have more poverty, worse health indicators and fewer services available for multiple reasons, including remoteness, lower education levels, land that is less agriculturally productive and increasing land pressure, and limited rural health care services. Ethnic diversity presents a major challenge in health care delivery and education due to cultural and linguistic barriers. Women have lower literacy rates than men and girls have lower school completion rates. These gaps are accentuated in the rural and highland areas, where the level of poverty is highest. There is some evidence of decreased treatment-seeking behaviour for women when ill.

Despite recent efforts, statistics are still relatively weak and major capacity strengthening is still necessary in the area of surveillance data, official statistics collection and vital registration. National health indicators have been improving steadily over the past three decades but, despite the efforts of the national authorities, they remain below international standards, being some of the lowest in the Region. The infant mortality rate declined from 137 to 70 per 1000 live births from 1990 to 2005. Over the same period, the maternal mortality ratio fell from 750 to 405 deaths per 100 000 live births. The crude death rate also declined, from 15.1 to 9.8 deaths per 1000 inhabitants, while the total fertility rate (average number of children per women) fell from 5.6 in 1995 to 4.1 in 2005 and the crude birth rate (number of births per 1000 inhabitants) from 41.3 to 34.3. At the same time, life expectancy at birth rose 10 years in a decade, from 51 years in 1995 to 61 in 2005. Female life expectancy is slightly higher than that of males. Safe water is accessible to 60% of the population and improved sanitation to 48% (2006).

1.2 Political situation

The Lao People's Democratic Republic was founded in 1975. The organs of government are the President, the Prime Minister and the National Assembly. The Government operates under the guidance of the Lao Peoples' Revolutionary Party (LPRP) through five-yearly Party Congresses, the Politburo and the Central Committee. The VIIIth Party Congress was held in early 2006. A National Assembly election was held in April 2006, with competition among a group of LPRP-approved candidates and outstanding participation by the population. The National Assembly, asthe main legislative organ, is composed of 115 members, of which 29 are women; 113 members are LPRP members. The National Assembly elected a new President, Lt. Gen. Choummaly Sayasone, in June 2006. At the same time, a new Prime Minister, Mr Bouasone Bouphavanh, was appointed by the President for a five-year term, with the approval of the Assembly. The rule of law has continuously been strengthened by new laws, including several health

sector laws in respect of public health, curative services, food safety, drugs and medical devices. The Government reports to the National Assembly on the implementation of its 6th National Social and Economic Development Plan 2006-10 (NSEDP), which includes national strategies on poverty eradication. The last report to the Assembly was made in June 2007.

Until January 2006, the country comprised 16 provinces and one special administrative zone under military administration. In early 2006, the special administration status over Xaysomboune region was released and the concerned district allocated to Xiengkhouang and Vientiane provinces. The security in the country is considered stable.

1.3 Socioeconomic situation

The Lao People's Democratic Republic ranked 133rd out of 179 nations on the Human Development Index in 2006. Literacy has improved in the last decade, attaining 73% in the population above 15 years of age in 2005, compared with 60% in 1995. Schooling has improved for children from 6 to 16 years of age, but boys still have higher attendance than girls: 75% for boys and 68% for girls in 2005 compared with 66% for boys and 56% for girls in 1995.

The official poverty rate fell from 39% in 1997 to 33.5% in 2002. Poverty is higher in remote and highland areas and inversely correlates with road or river access. Compared with international standards in 2006, 71% of the population live on less than PPP US$ 2 a day and 23% live on less than PPP US$ 1 a day. Inequalities remain important, with the share of the national economy of the lowest and the highest quintile being 7.6% and 45%, respectively. Proxy indicators of poverty, such as access to sanitation and electricity, also point to the vulnerability of the population. The latest Lao Reproductive Health Survey found that, in 2005, 50% of households had no toilet and over 40% had no electricity. Disparities between urban and rural areas are still pronounced. For example, 96% of urban households have access to electricity, compared with only 33.3% in rural areas without road access.

The World Bank estimated that per capita gross national income was US$ 500 in 2006, with 7.6% economic growth. Agriculture makes up 42% of the gross domestic product (GDP), industry (mainly hydropower, mining and textiles) 32.5%, and services 26%. Revenue collection has been above national targets for the last two years but remains very low, estimated at 14.3% of GDP in 2006. The budget deficit has therefore declined and fiscal space has widened. Major public management reforms are ongoing, but implementation is still below desirable targets. One persisting major issue is the management of customs and taxes. In 2007, tax and revenue collection was recentralized by Prime Ministerial decree. New budget and state audit laws still need to be fully implemented.

In its official will to provide better services to the rural population and eradicate slash-and-burn agriculture and opium cultivation, the Government has strengthened its policy on resettlement of villagers from the highlands to lowland areas closer to roads and essential public facilities. The resettlement policy has brought with it tremendous challenges in delivering social services to the resettled communities. International NGOs and, more recently, the World Food Programme have pointed out that the vulnerability of the resettled populations is a major source of concern. The traditional cultivation techniques of highland populations are inadequate to enable them to access subsistence crops and their traditional reliance on non-timber products, combined with increased environmental pressure, has contributed to deterioration in their nutritional and health status. The situation may have been accelerated by the need to resettle villages and populations in areas affected by the building of new hydropower projects and other programmes exploiting natural resources.

1.4 Risks, vulnerabilities and hazards

Locked between China, Myanmar, Thailand and Viet Nam, the Lao People's Democratic Republic is facing major challenges as the country opens up to external influences. Despite its current low prevalence, the HIV/AIDS epidemic is gaining attention in the country. The latest round of surveillance (2004) showed an accelerated rate of transmission among sex workers in two of the 17 provinces. With the recent trend in opening of offshore trade zones with China and Viet Nam, the important investment in casinos throughout the country and the easing of migration formalities, the country faces important

challenges with regards to the spread of HIV/AIDS and other communicable diseases, including emerging diseases, such as avian influenza.

The economy continues to rely heavily on natural resources (hydropower, timber and minerals) and concern has been raised by international environmental agencies that biodiversity and resources are being overexploited, particularly timber.

In 1998, the Lao People's Democratic Republic ranked as the third largest illicit opium producer in the world, after Afghanistan and Myanmar, and had one of the highest opium addiction rates. Through its high-level commitment to fighting drug production and abuse, the Government managed, in less than a decade, from 1998 to 2005, to reduced opium cultivation by 93% and opium addiction by 68%. These changes, however, have brought new challenges for the authorities as there is a need for sustainable economic alternatives for highland former opium farmers. New synthetic drugs have emerged, however, raising concern for public health, with amphetamine-type stimulants posing the most serious and fastest-growing drug threat in the country.

The country ranks among the least-developed in the world and, despite a steadily increasing GDP, growth is still slow and inequalities serious. The country is also facing major challenges in addressing transparency and corruption issues; in 2008, it was classified by Transparency International as 151st on the Corruption Perception Index of 180 countries. As a comparison, in 2005, it ranked 77th of 158 countries.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Health indicators from the routine health information system are neither robust nor universal. Many of the most reliable indicators are, therefore, from national surveys, most of which were conducted in 2000 and reported in 2001. A national census was conducted in 2005 and the official results, published in 2006, showed important improvements in the maternal mortality ratio, the crude death rate, the total fertility rate, the crude birth rate and other macro-indicators. The methodologies used in the calculation of these indicators have, however, been criticized by international development partners, particularly those concerning maternal mortality; the actual numbers may be underestimated. A multiple-indicator cluster survey was conducted in early 2006 and its results published in 2008.

The Lao People's Democratic Republic is a low-HIV-prevalence country, with an estimated adult seroprevalence rate of 0.2%. At the end of 2007, the official cumulative number of people identified with HIV since 1993 was 2630, of whom 1675 were known to be living with AIDS. Of the reported HIV cases, 55% were male. Based on cumulative HIV case reports, the majority of those infected are between the ages of 20 and 39 years. Of those whose mode of transmission was known, 85% had been infected through heterosexual sexual contact, 3.5% from mother to child, 0.7% through homosexual sexual contact, 0.3% through blood products and 0.2% through use of unsterilized needles (the remainder unknown). Preliminary results from a second round of second generation surveillance have shown the HIV-positive seroprevalence rate in female sex workers increasing from 0.9% in 2001 to 2% in 2005. Chlamydial infection and gonorrhoea are common in sex workers, with an estimated combined infection rate of 37.6%. A total of 375 individuals are currently receiving antiretroviral treatment at a single treatment site.

2.2 Outbreaks of communicable diseases

Dengue fever incidence has increased in recent years, with 96.9 cases per 100 000 inhabitants in 2006. In the same year, outbreaks of dengue accounted for a total 6356 cases (5556 cases of dengue fever and 800 cases of dengue hemorrhagic fever/shock syndrome), and six resultant deaths were reported. This represents an increase to an incidence rate of 110.6 cases per 100 000 inhabitants, using the Census 2005 population projections at mid-year. Dengue appears to be moving peripherally, with cases recorded in smaller population centres in recent years. In 2008, 4149 cases were estimated.

Until early 2007, there were only limited reported outbreaks of avian influenza in poultry and no human cases of infection with the H5N1 virus in the country. However, in February 2007, the Ministry of Agriculture confirmed an outbreak of avian influenza, H5N1, in commercial poultry farms and backyard poultry in the capital city, Vientiane. Since then, other outbreaks in poultry have been reported and confirmed from four other provinces in the north, centre and south of the country. Control activities targeted at poultry have been conducted successfully and passive surveillance has been reinforced. In early 2008, several new outbreaks in poultry were reported in the northern region bordering China and Myanmar. The first two human cases were confirmed in early 2007, both resulting in death. The first reported case was a 15-year-old girl from Vientiane city. She developed symptoms and died after a long period of hospitalization. The second case was a 42-year-old woman from Vientiane province. Both cases had recent histories of poultry exposure. Public health activities targeting avian influenza have intensified since the first case was confirmed. There is now a health-care-facility-based avian-influenza-surveillance system in place. At the national level, as well as in several provinces, there are alert telephone numbers for reporting of suspected human avian influenza cases. The National Influenza Laboratory (NIL), based at the National Centre for Laboratory and Epidemiology (NCLE), has been operational since the beginning of January 2007.

In December 2007, a cholera outbreak was reported in the south of the country, in Sekong province, with more than 350 cases and three fatalities.

There were a substantial number of measles outbreaks in 2007, accounting for 1678 cases, mostly in the north of the country. A national measles immunization campaign was conducted in November 2007 for children aged nine months to 15 years and this activity vaccinated more than 2 million children, achieving 96% coverage. The campaign was carried out with the support of WHO and other international partners. Although it is expected that the campaign will lower the incidence of measles for the next two to three years, large outbreaks will occur again unless routine immunization coverage improves or a follow-up campaign is conducted.

In May 2009, when WHO Headquarters declared Pandemic Alertness Level Phase 5 due to an international ("swine") influenza A (H1N1) outbreak that started in Mexico in April 2009, the country prepared itself, with a focus on enhanced surveillance systems and risk communication. Effective chains of communication have been established between the Government and development partners.

2.3 Leading causes of mortality and morbidity

Malaria is still considered an important contributor to morbidity and mortality, with 70% of the population at risk, although recent efforts to combat the disease (with Global Fund support) have had a positive impact. In 2008, the total number of reported malaria cases fell to 17 503, corresponding to an incidence rate of 292 cases per 100 000 population.

Programme data showed 75.5% of those at risk using preventive measures in 2006. A total of 2 702 339 people (population at risk 3.6 million) were being protected with bednets as of the end of 2005. The number of probable and confirmed malaria deaths in hospitals decreased from 187 in 2001 to 14 in 2007, while the annual incidence of confirmed malaria cases per 1000 population decreased from 5.5 in 2003 to 3.25 in 2007. Artemesinin-based combination treatment was introduced in 2004 following increasing malaria-drug resistance.

2.4 Maternal, child and infant diseases

The maternal mortality ratio (MMR) fell from 656 to 405 deaths per 100 000 live births from 1995 to 2005, the infant mortality rate (IMR) from 104 to 70 deaths per 1000 live births, and the under-five mortality rate (U5MR) from 170 to 98 deaths per 1000 live births. However, these numbers are probably underestimates. The IMR varies a great deal between provinces, with the lowest rate in Vientiane Capital (18) and the highest in Sekong (122). While the mortality rate in Vientiane Capital is only 26% of the national rate, Sekong has a mortality rate that is 183% higher than the average for the country. The latest National Health Survey shows that children have a two-week fever incidence rate of 2.9%, an ARI incidence rate of 3%, and a diarrhoea incidence rate of 6.2%.

The preliminary results of the 2005 Lao Reproductive Health Survey, disseminated in late 2007, revealed that progress in antenatal care and skilled birth attendance had not been significant in the general population, despite some improvements among younger women. The survey showed that only 71.5% of women were seeking antenatal care, compared with 75.8% in 2000; 18.5% of deliveries were taking place with the participation of a trained birth attendant, compared with 17.4% in 2000; 86% of women were still delivering at home, compared with 89% in 2000; and only 32% of children aged 12 to 23 months were fully immunized. However, the survey showed a slow but significant improvement in intermediary health outcomes related to reproductive health. Progress was observed in usage of modern contraceptive methods (28.9% in 2000 to 36.6% in 2005) among married women, and the total fertility rate showed a decline (4.88 between 1995 and 1999, to 4.07 between 2002 and 2005). This highlights the improvements in family planning observed over the period.

2.5 Burden of disease

Tuberculosis prevalence (all forms) was estimated at 289 per 100 000 population in 2007. A total of 3080 smear-positive cases were reported in 2007, an increase from 3041 in 2006. The directly observed treatment, short-course (DOTS) programme reaches 100% of districts. The estimated smear-positive case-detection rate was 78% in 2007 and the treatment success rate was 88% in 2006.

The most recent data show an intestinal helminth prevalence rate of 62% (2002) among schoolchildren. De-worming for children aged 12-59 months has now been established, with child-health days and a national measles campaign, reaching more than 500 000 children (>80%) in 2007. There is evidence to show that schistosomiasis has been re-emerging in southern parts of the country since control programmes have ended.

Road accidents are a growing problem as the volume of traffic and the travelling speed of vehicles due to road improvements increase. Between 2006 and 2007, for instance, fatalities due to road traffic accidents more than doubled nationwide.

Mental health issues, particularly drug abuse, are also a growing concern but are currently poorly reported. Other mental health and neurological diseases issues include management of seizure disorders and psychoses.

Nutrition is a neglected area although 41% of children are stunted and 48.2% of children and 31.3% of females have haemoglobin levels below 11 g/dl. Universal salt iodization misses at least 7% of children, and vitamin A supplementation in the past has been far from universal. A new bi-annual child-health-day approach has been used recently, however, achieving >80% of the target 600 000+ children aged six to 59 months, for both rounds, in 2007. The rate of exclusive breast-feeding at three months of age is only 28.1%.

The food insecurity situation in the country has also been pointed out as alarming by international partners like the World Food Programme (WFP). In 2006, WFP conducted a comprehensive food security and vulnerability study. The initial conclusions of the study pointed out that …"*the chronic malnutrition in the Lao People's Democratic Republic is at an alarmingly high level. Every second child in the rural areas is chronically malnourished, affecting not only their physical development but also their cognitive capacity"…."Chronic malnutrition is as high today as it was 10 years ago. 30% of the rural households have either poor or borderline food consumption."…."Sino-Tibetan ethnic groups are the most disadvantaged and food insecure, followed by the Hmong-Mien and the Austro-Asiatic."*

There are very few official national data available on risk factors for noncommunicable diseases (NCD). The national authorities are currently conducting a STEP-wise approach survey (STEPS) for the assessment of national NCD risk factors, with WHO support.

Tobacco and alcohol consumption remains a concern, although no actual figures on consumption and effects on public health are available. However, the Government has taken note of the risks related to their abuse and has made important efforts regarding prevention and control of alcohol and tobacco consumption. In 2006, major legal steps were taken towards tobacco consumption control: the country ratified the International Framework Convention on Tobacco Control and a series of regulations was

passed concerning health warnings on cigarette packs, importation of tobacco and smoke-free areas in the National University. In 2007, a law was drafted for national implementation of the Framework Convention.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The national health priorities are articulated in three documents: (1) the 20-year Health Strategy to the Year 2020 (2000); (2) the Lao Health Master Planning Study (2002); and (3) the National Growth and Poverty Eradication Strategy (NGPES, 2001). The principles and visions of these documents have been included in the current sixth 5-year National Socio and Economical Development Plan (NSEDP, 2006-10) as well as the sixth National Health Sector Development Plan (2006-10), which was shared in English with development partners in November 2008.

The Health Strategy to the Year 2020 was promulgated by the VIIth Party Congress in 2001 and has four basic concepts: full health care service coverage and health care service equity; development of early integrated health care services; demand-based health care services; and self-reliant health services. This then leads to six health-development policies:

- strengthening the ability of providers;
- community-based health promotion and disease prevention;
- hospital improvement and expansion at all levels, including remote areas;
- promotion of traditional medicine, integration of modern and traditional care, rational use of quality and safe food and drugs, and national pharmaceutical product promotion;
- operational health research; and
- effective health administration and management, self-sufficient financial systems, and health insurance.

The health sector is project- and donor-dependent, which has often led to competing and overlapping donor demands. The Minister of Health has called for more integrated approaches, particularly for maternal and child health and immunization, decentralized service delivery methods, improved methods of health care financing, a unified and simplified health information system, and an emphasis on quality improvement in the next five years, rather than quantity improvement, which was emphasized over the past few years.

3.2 Organization of health services and delivery systems

The public health system is predominant, although a private alternative is growing. There are no private hospitals, but there are around 1865 private pharmacies and 254 private clinics, mainly in urban areas. The state system is underutilized, especially in the peripheral areas. In its efforts to increase access through village volunteers and village revolving drug funds, the Government has managed to reach 5226 villages.

There are four administrative strata in the health system: the central (the Ministry, the College of Health Technology and reference/specialized centres); provincial (provincial health offices, provincial and regional hospitals, and auxiliary nursing schools); district (district health offices and district hospitals); and village (health centres) levels.

The main network for health care service provision remains the public system. In 2005, its health facilities consisted of four central teaching and referral hospitals; five regional hospitals, including one teaching hospital; 13 provincial hospitals; 127 district hospitals; and about 746 health centres. District hospitals are further classified as category A or B, category A meaning that the facilities have surgical capacity, unlike category B. A total of 5081 hospital beds were available in 2005, 0.9 beds per 1000 inhabitants.

The Government has announced future autonomy for public health facilities. In 2007, the Lao Health Maintenance Organisation was created, which foresees the opening of the first fully private hospital in the country by 2009/2010.

3.3 Health policy, planning and regulatory framework

In 2001/2002, the Ministry of Health, with support from the Japan International Cooperation Agency (JICA), conducted the Lao Health Master Planning Study. The study identified seven 'precedent programmes' to be implemented and 31 'very high priority' programmes in the fields of planning and management, human resource development, health financing, health education, infectious disease control, primary health care, maternal and child health, nutrition, hospital services, medical laboratory technology, and essential drugs. The need for sectorwide coordination is emphasized in the study report and initial steps toward such coordination have been taken since 2005 with the support of the sectorwide coordination process financed by the Japanese Government in close collaboration with other major donors, WHO and other United Nations agencies working in the health sector.

A third major policy document is the National Growth and Poverty Eradication Strategy (NGPES). The NGPES focuses on poverty and the poorest districts, of which 72 poor, 47 poorest, and 10 for initial activities have been identified. The health priorities in the NGPES are:

- information, education and communication for health;
- expansion of the service network for the health promotion of people in rural areas;
- improving and upgrading the capacity of health workers from village to post-graduate level, with an emphasis on ethnic minorities, gender balance, and incentives for retaining health workers in areas of shortage;
- maternal and child health (MCH) promotion;
- immunization;
- water supply and environmental health;
- communicable disease control;
- control of sexually transmitted infections, including HIV/AIDS;
- development of village revolving drug funds;
- food and drug safety;
- promotion of traditional medicine integrated with modern medical treatment; and
- strengthened sustainability, including financing, management, quality assurance and legal framework.

To a large extent, all documents are superseded by the Sixth National Socio-Economical Development Plan (2006-10) (NSEDP), which was promulgated by the VIIIth Party Congress and the National Assembly in 2006. The NGPES has been fully integrated into the draft 6th NSEDP and serves as its core. The NSEDP was presented to and discussed widely with both internal and external partners, but there remains a large funding gap for implementation in all sectors, including health. Despite the constant fall in the share of health expenditure in the public budget and as a percentage of GDP, the Government has pledged to increase health spending within the framework of it policy dialogue with the Bretton-Woods institutions (World Bank and International Monetary Fund).

A new constitutional article (2004) obligates the Government to improve and extend the health network; improve disease prevention; create conditions so all people receive health care, especially mothers, children and the poor; and legalize private investment in health services.

In August 2007, the 6th National Health Conference (NHC) reviewed the achievements and implementation of the 2001-2005 National Health Plan and provided recommendations for the 2006-2010 five-year national plan. The actual strategy of the Ministry of Health is based on a 'healthy village' model that will include the eight components of primary health care (PHC), as expressed in national PHC policy, and will provide health for all. It is aimed at enabling development from the grassroots level up. The 6th NHC calls for: (1) a general increase in funding for health; (2) establishment of the University of Health Sciences under the direct supervision of the Ministry of Health; (3) implementation of the Complex of Hospital-Insituto-Projecto-University (CHIPU); (4) creation of new posts; and (5) increased incentives for health workers in rural areas.

To accelerate progress toward achievement of Millennium Development Goals 1, 4 and 5 and in support of the 6th National Health Sector Development Plan 2006-2010, the following policy and strategy

documents have recently been developed and endorsed by the Ministry of Health and other government authorities:

- National Nutrition Policy (2008);
- National Food Safety Policy (2009);
- Skilled Birth Attendance Development Plan 2008-2015 (2008);
- Strategy for Integrated Package of Maternal Neonatal and Child Health Services 2009-2015 (2009).

3.4 Health care financing

Current estimated per capita health expenditure is US$ 24, about 55% coming from households, 30% from donors, and 15% from the government hospitals, which are highly dependent on user fees for recurrent expenditure. There are nascent health insurances systems for both the formal and non-formal sectors and the civil service scheme is being reformed. Equity funds—third party mechanisms that pay for health services used by the poor—are being expanded.

Total health expenditure made up 3.7% of GDP in 2007, and donor spending is estimated to have made up 30% of total public sector health spending in the same year. Salaries account for the bulk of domestic public expenditure on health (75.3%).

3.5 Human resources for health

The Lao People's Democratic Republic faces similar challenges to all low-income countries as regards human resources for health (HRH) issues: underfunding of salaries and wages, maldistribution of qualified staff among geographic and health system levels, limited numbers of qualified health workers, and low staff productivity.

The country faces a general shortage of qualified health workers. The total health workforce in 2005 numbered 18 017 workers, corresponding to a ratio per 1000 inhabitants of 3.21. That included regular staff (civil servants) under the Ministry of Public Health, as well as contractual staff. It also included the health workers under the two other ministries that manage non-public health facilities: the Ministry of Defence and the Ministry of Public Security. Around 70% of all health workers are under the Ministry of Health. High- and mid-level medical staff under the Ministry of Health, defined as physicians, nursing staff and midwives with more than two years of formal training, account only for 23% (4123, i.e. 0.74 workers per 1000 inhabitants).

Less than 50% of all health workers are in public health facilities managed by the Ministry of Health. The 8942 regular health workers under the Ministry work in hospitals, health centres and district health offices/hospitals, with district-level facilities accounting for the majority. However, the bulk of the staff at district level are mid- and low-level (88%) health workers, with physicians representing only 6% of district-level staff. Health centres are almost totally served by low-level (81%) and mid-level (18%) staff. There are only eight doctors working in health centres.

Maldistribution of staff, both geographically and by facility level, exacerbates the crisis. There are only 2992 regular high- and mid-level medical staff at health-facility level, corresponding to 0.53 workers per 1000 inhabitants, far below the recommended WHO target of 2.5. These workers tend to be concentrated in socioeconomically better-off regions to cope with the limitations of their salaries and wages. Rural areas, where living conditions are difficult, are not attractive to newly trained, competent workers.

Compared with international standards, the productivity of health workers could be considered low. This is mainly due to the lack of financial and material incentives available to them; in 2005, the average annual salary for health workers was estimated to be US$ 405. This forces health workers to rely on coping strategies and secondary occupations to ensure their livelihoods. Such a situation, combined with the limited number of new posts created in recent years (the workforce has grown more slowly than the population in the last decade), is limiting the development of the health system and its response to the needs of the population.

In 2007, with WHO support, a national HRH database was designed and tested. A national conference on HRH was held and the drafting of a framework for the development of HRH in the Lao People's Democratic Republic was initiated.

3.6 Partnerships

The Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) has been a major contributor in the country, with more than US$ 45.5 million in grants allocated between 2003 and 2006. The majority of that funding was allocated towards reducing the malaria disease burden (US$ 27.2 million). In total, at the actual approved state of proposals, the Global Fund has made available more than US$ 62 million of the US$ 95 million requested. In 2007, the country applied for grants as part of Round 7 of the Global Fund call for proposals, and two of its proposals were assessed positively by the Fund's Technical Review Panel. The requested funds amount to US$ 25.6 million to fight malaria and US$ 10.9 million to fight tuberculosis. In 2008, the country successfully applied for further support from Global Fund Round 8 for HIV/AIDS and health systems strengthening, up to a total of US$ 24.6 million.

Since 2002, the Global Alliance for Vaccination and Immunization (GAVI) has given support to immunization services and introduction of new vaccines. The support included the rolling out of DTP-HepB tetravalent vaccine to all districts (2004) along with injection-safety improvements. GAVI's five-year estimated commitment to the country (2002-2007) currently stands at US$ 7.1 million.

Other major health sector development partners and donors include: the Asian Development Bank, the World Bank, and the governments of Japan, Luxembourg and France. Avian influenza preparation has also benefited from the important support of the European Union and the governments of Australia and the United States of America.

Most United Nations funds and specialized agencies are represented in the country. In 2006, the United Nations Country Team, with the national authorities, finalized the 2007-2011 United Nations Development Assistance Framework (UNDAF), based on the Common Country Assessment conducted in 2005. WHO led the health working group for preparation of the documents. The UNDAF will be the leading guideline for actions carried out by the United Nations Country Team in future years.

3.7 Challenges to health system strengthening

Underfinancing of the health sector is placing a major burden on the management and implementation of national policies for prevention and care. The efforts begun in recent decades to improve primary health care and respond to the demands of those populations most at need are still ongoing. In May 2009, the first national workshop on sustainable health financing was organized, with attendance of high ranking national (vice-ministers and vice-governors) and international participants and support from WHO and the World Bank.

Financial barriers to service access are important, which is not surprising in a country where around 70% of the population live on less than US$ 0.4 a day. Risk-pooling and prepayment has been introduced through social security for the formal sector and health insurance for the public sector. Voluntary community schemes have been piloted and are now part of the national instruments for health care financing. However, all these instruments cover only a small part of the population. A road map to universal coverage still needs to be adopted and implemented, despite major efforts in recent years. For the poor, the Government has decided to pilot health equity funds to replace the former exemption policy, which has proved to be inefficient. The sustainability of such funds remains questionable, however, and their nationwide implementation will require national commitment and external resources.

The main network for health care service provision remains the public system. There were a total of 5081 hospital beds in 2005, or 0.9 beds per 1000 inhabitants. The shortage of health workers is evident when the ratio of health workers per bed is analysed. The situation is worsened by the uneven distribution of staff among different types of health facility and the shortage of non-medical staff to implement essential administrative and support tasks. Central hospitals have high ratios of high- and mid-level medical staff (see paragraph 3.5) compared with other types of facility. In central hospitals the ratio of high- and mid-level medical staff per bed is 0.9, which could be considered good if there was not a very high doctor-to-

nurse ratio (0.63 at central hospitals), which raises concerns that inefficiency in hospitals may have structural origins.

Health worker productivity is low in most national hospitals for various reasons. At the moment only one province provides a comprehensive incentive system. Such a system at the national level might ensure health workers' best performance and attract new staff to remote and difficult regions. Moving towards such an approach would, however, require a significant increase in the health budget and a reorientation of expenditure towards recurrent costs for national and donor funding sources. This would only be possible if transparency and accountability were to be reinforced and clear mechanisms for performance and quality assessment of the provided services established. Such efforts have been initiated by the Ministry of Health, but much still remains to be done.

Coordination among sector donors and partners has improved in recent years, as shown through exercises like avian influenza pandemic and outbreak preparation and response. Following the 2005 *Paris Declaration on Aid Effectiveness*, donors and partners in the Lao People's Democratic Republic signed the local *Vientiane Declaration on Aid Effectiveness* in November 2006. A task force was created to elaborate a country action plan for implementation of that declaration and to ensure harmonization and alignment among the signatories. The country action plan (CAP) was developed and approved by the Government and its partners in early 2007 and a first local survey for the Paris Declaration Monitoring Survey (OECD DAC) was conducted in parallel. The survey was a challenging process because of the complexity of the task and the scarcity of reliable data, even at individual development-partner level. A significant number of development partners did not participate in the process, putting the collected information into question. The findings of the survey showed that much remained to be done to achieve the objectives of the *Paris Declaration*. Only 16% of capacity development interventions in the country were being carried out in a coordinated fashion, compared with the targeted 50%, and only 17% of total ODA had been disbursed following national procurement systems and procedures. On bilateral disbursement for the fiscal year 2005/2006, of US$ 223 million, only US$ 14 million was reported to be for the health sector. The multilateral situation was little better, with US$ 22 million of US$ 245 million. The health sector therefore accounted for only 7.6% of the ODA disbursements.

In order to operationalize the *Vientiane Declaration on Aid Effectiveness* (VD) in the health sector, the Ministry of Health developed a sectorwide coordination mechanism, according to the CAP. In November 2007, the structure of the new coordination mechanism for the health sector was presented by the Ministry. The new structure includes multiple layers of technical and policy dialogue between development partners and the Government. The yearly monitoring process of the VD CAP (2008) indicates that substantial progress in aid effectiveness has been made in most CAP areas.

In 2007, the former Committee on Planning and Investment was converted into the Ministry for Planning and Investment (MPI) and the Directorate of International Cooperation (DIC) was transferred from the Ministry of Foreign Affaires to this newly created structure. The DIC is now responsible for supervising ODA in all sectors and for monitoring implementation of the CAP.

Health information from surveillance and surveys still needs to be framed by national policy. WHO, and recently the Health Metrics Network (HMN), have supported the Government in developing a new health information system extending from village to district and provincial level. This system has been discussed widely with the major donors and project implementers nationwide, and has been adopted by the World Bank and the Asian Development Bank as a part of their support actions in the south and north of the country. However, nationwide implementation of the system still needs to be carried out and evaluated. Further, other aspects of the health information system still need to be reinforced, such as vital registration and information collection and analysis. Towards that goal, WHO and other development partners facilitated the formulation of the 1st Lao Health Information Strategic Plan (2009-15) using the HMN methodology in late 2008.

Hospital financial management systems are being reinforced as part of the 'good-governance' efforts of the Government and the Ministry of Health, but they also need to be integrated into a broader information system to ensure timely, evidence-based decision-making.

Prevention activities, such as vaccinations, have been the centre of a major focus by the Ministry of Health in the last year. Immunization rates had been falling and corrective actions were needed. The trend has been reversed, but this has brought up certain questions about the adequacy of the health system in providing regular basic services to the population. The traditional outreach approach has been questioned and the primary barrier to the effective delivery of services is thought to be the absence of routine vaccination services at health centres and district hospitals (fixed sites). Integrating vaccination activities and other essential primary prevention and health care services for mother and child has been advocated as a solution to improve the situation. This is now one of the priorities of the Ministry of Health. A comprehensive package of services and the cost of providing it to the population in a constant and regular way still need to be defined. Several United Nations agencies, including WHO, are working on these issues. However, implementation of the package will also need a change in the current financial-incentive approach, which relies on payment for outreach activities rather than on performance.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : *Population Census 2005*
Operator : National Statistics Centre
Specification : Includes the latest available official demographic data for Lao PDR
Web address : http://www.nsc.gov.la/PopulationCensus2005.htm

Title 2 : *Lao Info 4.1*
Operator : National Statistics Centre
Specification : Povides a key statistical tool for monitoring the Millennium Development Goals (MDGs)
Web address : http://www.nsc.gov.la/Lao_Info.htm

Title 3 : *World Bank country website*
Specification : Includes most recent links and documents produced by the World Bank on the Lao People's Democratic Republic
Web address : www.worldbank.org/lao

Title 4 : *Asian Development Bank country website*
Features : Includes most recent links and documents produced by the ADB on the Lao People's Democratic Republic
Web address : http://www.adb.org/LaoPDR/

Title 5 : *Sixth National Socio Economic Development Plan (2006-2010)*
Operator : Committee for Planning and Investment

Title 6 : *United Nations Common Country Assessment for the Lao People's Democratic Republic 2005*
Operator : Government of Lao PDR and the United Nations System
Web address : http://www.undplao.org/

Title 7 : *United Nations Common Country Assessment for the Lao People's Democratic Republic 2005*
Operator : Government of Lao PDR and the United Nations System
Web address : http://www.undplao.org/

Title 8 : *Lao Reproductive Health Survey 2005*
Operator : National Statistics Centre and UNFPA
Features : Includes the latest available data on reproductive health in the Lao PDR
Web address : http://www.nsc.gov.la/

Title 9 : *Nam Saat Central website*
Operator : Nam Saat Central, Ministry of Health
Features : Includes a repository of the main national regulations and legislation
Specification : Website of the National Centre for Environmental Health and Water Supply
Web address : http://www.nsc.gov.la/

Title 10 : *National Round Table Process website*
Operator : Department for International Cooperation, Ministry of Planning and Investment; UNDP
Features : Includes a repository of the main national regulations and legislation
Specification : Website of the National Centre for Environmental Health and Water Supply
Web address : http://www.nsc.gov.la/

5. ADDRESSES

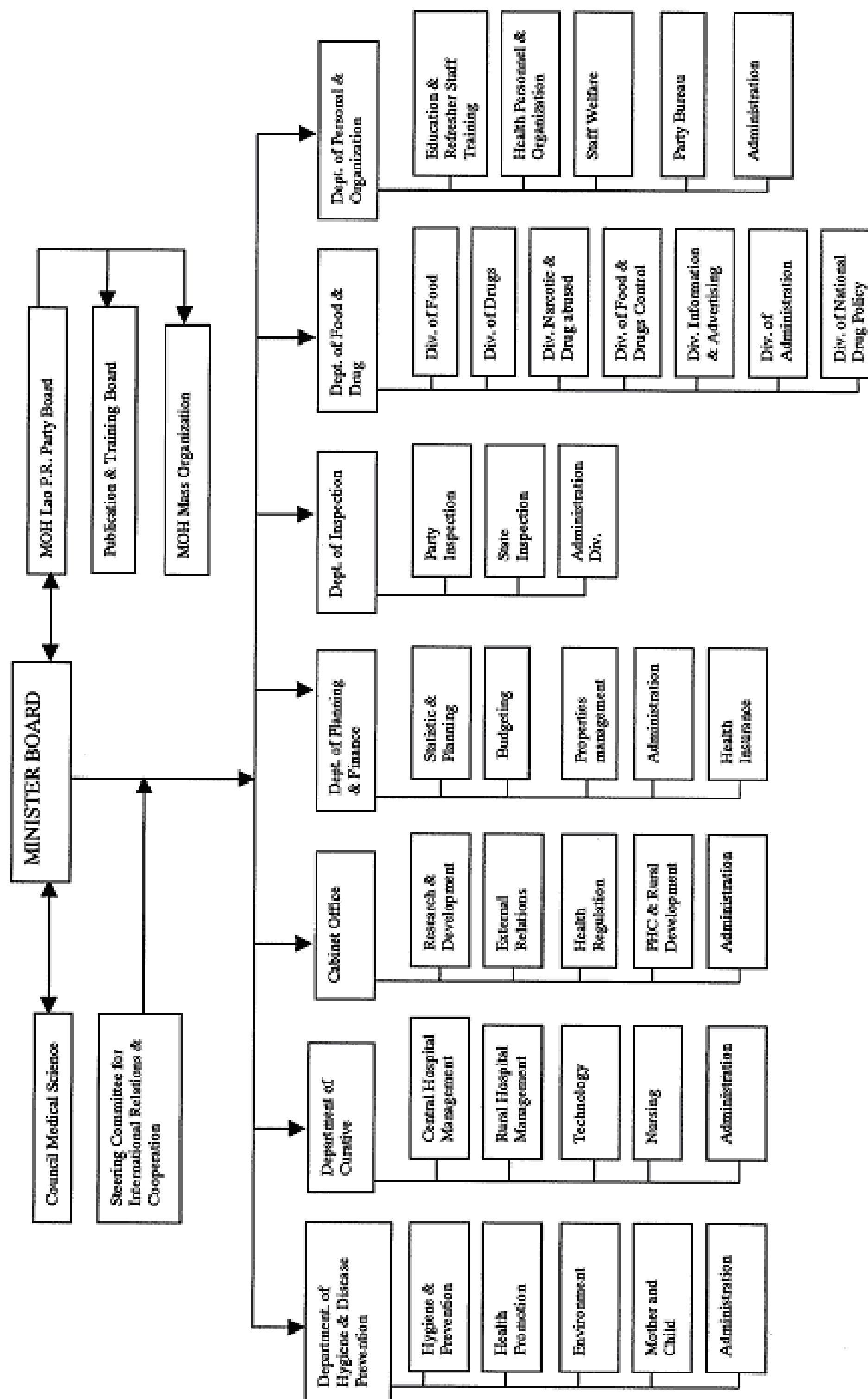
MINISTRY OF HEALTH

Office Address	:	Simuang Road, Vientiane, Lao People's Democratic Republic
Official Email Address	:	pomdohp@laotel.com (for Department of Prevention and Hygiene)
Telephone	:	856 (0)21 217607
Fax	:	856 (0)21 214003

WHO REPRESENTATIVE IN THE LAO PEOPLE'S DEMOCRATIC REPUBLIC

Office Address	:	125 Saphanthong Rd, Unit 5 Ban Saphanthongtai, Sisattanak District, Vientiane, Lao People's Democratic Republic
Postal Address	:	P.O. Box 343, Vientiane, Lao People's Democratic Republic
Official Email Address	:	who@laos.wpro.who.int
Telephone	:	(856)21 353 902, 353 903, 353 904
Fax	:	(856) 21 353 905
Office Hours	:	08:00 a.m. – 05:00 p.m.

6. ORGANIZATIONAL CHART: Ministry of Health



LAO PEOPLE'S DEMOCRATIC REPUBLIC

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	**Total**	**Male**	**Female**		
1	**Area** (1 000 km^2)	236.80			2005	1
2	**Estimated population** ('000s)	5621.00	2800.00	2821.00	2005	1
3	**Annual population growth rate** (%)	2.10	...	...	1995-2005	1
4	**Percentage of population**					
	- 0–4 years	12.45	12.56	12.33	2005	1
	- 5–14 years	26.56	27.44	26.67	2005	1
	- 65 years and above	4.00	4.00	4.00	2005	1
5	**Urban population** (%)	29.70	...	...	2007 est	2
6	**Crude birth rate** (per 1000 population)	34.30	...	...	2005	1
7	**Crude death rate** (per 1000 population)	9.80	...	...	2005	1
8	**Rate of natural increase of population** (% per annum)	2.45 [a]	...	...	2005	1
9	**Life expectancy** (years)					
	- at birth	61.00	59.10	63.00	2005	1
	- Healthy Life Expectancy (HALE) at age 60	...	9.60	10.10	2002	3
10	**Total fertility rate** (women aged 15–49 years)	4.07			2002-2005	4
	Socioeconomic indicators					
11	**Adult literacy rate** (%)	73.00	...	...	2005	1
12	**Per capita GDP at current market prices** (US$)	580.00 [b]			2007	5
13	**Rate of growth of per capita GDP** (%)	5.70			2007	5
14	**Human development index**	0.61			2006	6
	Environmental indicators	**Total**	**Urban**	**Rural**		
15	**Proportion of vehicles using unleaded gasoline** (%)	...	...	...		
16	**Health care waste generation** (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral	632	...	...	0	0	0	2002	7
	- Type A	10	...	...	0	0	0	2002	7
	- Type B	61	...	...	0	0	0	2002	7
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	966	...	...	0	0	0	2008	8
	Cholera	1272	...	...	...	...	...	2002	7
	Dengue/DHF	4149	...	...	21	...	...	2008	7
	Encephalitis	12	...	...	0	0	0	2008	8
	Gonorrhoea	...	...	...	...	...	...		
	Leprosy	125	...	...	...	...	...	2007	7
	Malaria	17 503	...	...	...	...	...	2008	9
	Plague	0	...	...	0	...	...	2008	8
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	1698	...	...	0	...	...	2008	8

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	2601	...	...	1	...	...	2008	8
19	**Diarrhoeal diseases**	8979	...	...	7	...	...	2008	8
20	**Tuberculosis**								
	- All forms	3905	...	...	...	...	...	2007	7
	- New pulmonary tuberculosis (smear-positive)	3080 [i]	...	...	...	...	...	2007	7
21	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	...	...	...		
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	...	...	...	...	...	...		
	- Cervix			...			...		
	- Oesophagus	...	...	...	...	...	...		
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	...	...	...	...	...	...		
	- Liver	...	...	...	...	...	...		
	- Stomach	...	...	...	...	...	...		
	- Trachea, bronchus, and lung	...	...	...	...	...	...		
22	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	...	...	...	...	...	...		
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
23	**Diabetes mellitus**	...	...	...	...	...	...		
24	**Mental disorders**	...	...	...	...	...	...		
25	**Injuries**								
	All types	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Motor and other vehicular accidents	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Suicide	...	...	...	...	...	...		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Malaria	104 434	...	...	4083.17	...	...	2000	10
	2. Pneumonia	18 096	...	...	728.00	...	...	2000	10
	3. Gastritis	17 132	...	...	690.00	...	...	2000	10
	4. Influenza	12 987	...	...	523.00	...	...	2000	10
	5. Diarrhoea	12 334	...	...	496.49	...	...	2000	10
	6.								
	7.								
	8.								
	9.								
	10.								

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Malaria	996	…	…	40.09	…	…	2000	10
	2. Pneumonia	83	…	…	3.34	…	…	2000	10
	3. Diarrhoea	34	…	…	1.36	…	…	2000	10
	4. Heart Failure	34	…	…	1.36	…	…	2000	10
	5. Injury	33	…	…	1.32	…	…	2000	10
	6.								
	7.								
	8.								
	9.								
	10.								
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					36.60 [c]		2005	4
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					30.00		2008	7
30	**Percentage of pregnant women with anaemia**					…			
31	**Neonatal mortality rate** (per 1000 live births)	26.00		…		…		2005	4
32	**Percentage of newborn infants weighing at least 2500 g at birth**	…		…		…			
33	**Immunization coverage for infants (%)**								
	- BCG	68.00		…		…		2008	7
	- DTP3	61.00		…		…		2008	7
	- POL3	60.00		…		…		2008	7
	- Hepatitis B III	61.00		…		…		2008	7
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			…			…		
	- Eclampsia			…			…		
	- Haemorrhage			…			…		
	- Obstructed labour			…			…		
	- Sepsis			…			…		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	…	…	…	…	…	…		
	- Diphtheria	2	…	…	…	…	…	2008	7
	- Hib meningitis	…	…	…	…	…	…		
	- Measles	174	…	…	…	…	…	2008	7
	- Mumps	…	…	…	…	…	…		
	- Neonatal tetanus	5	…	…	…	…	…	2008	7
	- Pertussis (whooping cough)	26	…	…	…	…	…	2008	7
	- Poliomyelitis	0	0	0	…	…	…	2008	7
	- Rubella	45	…	…	…	…	…	2008	7
	- Total Tetanus	12	…	…	…	…	…	2008	7

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Facilities with HIV testing and counseling services**		91		2008	7
37	**Health infrastructure**					
	Public health facilities	- General hospitals	22 [d]	2555	2005	11
		- Specialized hospitals	3 [e]	160	2005	12
		- District/first-level referral hospitals	127	2366	2005	12
		- Primary health care centres	746	1658	2005	12
	Private health facilities	- Hospitals	0	0	2005	12
		- Outpatient clinics	254	…	2008	13
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)			138.19	2007	14
	- total expenditure on health as % of GDP			3.70	2007	14
	- per capita total expenditure on health (in US$)			24.10	2007	14
	Government expenditure on health					
	- amount (in million US$)			21.56	2007	14
	- general government expenditure on health as % of total expenditure on health			15.60	2007	14
	- general government expenditure on health as % of total general government expenditure			2.70	2007	14
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			30.20	2007	14
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			52.20	2007	14
	Exchange rate in US$ of local currency is: 1 US$ =			10 652.00	2007	14
39	**Health insurance coverage as % of total population**			9.00	2008	15

	INDICATOR		DATA							Year	Source
40	**Human resources for health**		**Total**	**Male**	**Female**	**Urban**	**Rural**	**Public**	**Private**		
	Physicians	- Number	1283	…	…	…	…	…	…	2005	11
		- Rate per 1000 population	0.23	…	…	…	…	…	…	2005	11
	Dentists	- Number	83	…	…	…	…	…	…	2005	11
		- Rate per 1000 population	0.02	…	…	…	…	…	…	2005	11
	Pharmacists	- Number	276	…	…	…	…	…	…	2005	11
		- Rate per 1000 population	0.05	…	…	…	…	…	…	2005	11
	Nurses	- Number	5291 [f]	…	…	…	…	…	…	2005	11
		- Rate per 1000 population	0.93	…	…	…	…	…	…	2005	11
	Midwives	- Number	…	…	…	…	…	…	…		
		- Rate per 1000 population	…	…	…	…	…	…	…		
	Paramedical staff	- Number	…	…	…	…	…	…	…		
		- Rate per 1000 population	…	…	…	…	…	…	…		
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Rate per 1000 population	…	…	…	…	…	…	…		
41	**Annual number of graduates**	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	53	…	…	…	…	…	…	2005	11

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	**Annual number of graduates**	Nurses	30 [g]	...	...	...	...	...	...	2005	11
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	**Workforce losses/ Attrition**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	**Total**	**Male**	**Female**		
43	**Prevalence of underweight children under five years of age**	37.10	...	...	2006	10
44	**Infant mortality rate (per 1000 live births)**	70.00 [h]	...	...	2005	1
45	**Under-five mortality rate (per 1000 live births)**	98.00 [h]	...	...	2005	4
46	**Proportion of 1 year-old children immunised against measles**	52.00			2008	7
47	**Maternal mortality ratio (per 100 000 live births)**	405.00			2005	1
48	**Proportion of births attended by skilled health personnel**	18.50			2005	4
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	7.50			2005	4
	- Percentage of deliveries in health facilities (as % of total deliveries)	11.00			2005	4
49	**Contraceptive prevalence rate**	38.40	...	...	2005	4
50	**Adolescent birth rate**	...				
51	**Antenatal care coverage** - At least one visit	28.50			2005	4
	- At least four visits	...				
52	**Unmet need for family planning**	...	...	...	2005	4
53	**HIV prevalence among population aged 15-24 years**	...	...	...		
54	**Estimated HIV prevalence in adults**	0.20	...	...	2007	7, 16
55	**Percentage of people with advanced HIV infection receiving ART**	100.00	100.00	100.00	2007	16
56	**Malaria incidence rate per 100 000 population**	292.00	...	...	2008	9
57	**Malaria death rate per 100 000 population**	0.18	...	...	2008	9
58	**Proportion of population in malaria-risk areas using effective malaria prevention measures**	85.00	...	...	2008	9
59	**Proportion of population in malaria-risk areas using effective malaria treatment measures**	...	...	...		
60	**Tuberculosis prevalence rate per 100 000 population**	289.00	...	...	2007	7
61	**Tuberculosis death rate per 100 000 population**	24.00	...	...	2007	7
62	**Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)**	78.00	...	...	2007	7
63	**Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)**	88.00	...	...	2006	7
		Total	**Urban**	**Rural**		
64	**Proportion of population using an improved drinking water source**	60.00	86.00	53.00	2006	17
65	**Proportion of population using an improved sanitation facility**	48.00	87.00	38.00	2006	17
66	**Proportion of population with access to affordable essential drugs on a sustainable basis**	...	...	...	...	

Notes:	
...	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
b	Figure refers to Atlas method
c	Figure refers to married women
d	Refers to tertiary hospitals (central, regional and provincial)
e	Refers to specialized hospitals at central level
f	Includes medical assistants
g	Includes only nurses trained at university. Due to a reformulation of the curricula there has not been any graduate from the nursing schools for the past two years
h	Revised data
i	Figure based on the notified TB cases (New and Relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

Sources:	
1	National Population Census 2005. National Statistical Centre, 2006 - http://www.nsc.gov.la/PopulationCensus2005.htm .
2	Urban and Rural Areas 2007. United Nations, Department of Economic and Social Affairs, Population Division. New York 2008. [http:///www.unpopulation.org].
3	The world health report 2004: changing history. Geneva, World Health Organization, 2004.
4	Lao Reproductive Health Survey 2005. National Statistical Centre 2007.
5	Lao PDR Economic Monitor, World Bank Office Laos, April 2008
6	United Nations Development Programme (UNDP) 2008. Human Development Indices: a statistical update. New York: UNDP. Available from [http://hdr.undp.org/en/media/HDI2008Tables.xls]
7	WHO Regional Office for the Western Pacific, data received from the technical units.
8	National Centre for Laboratory and Epidemiology, Vientiane 2008
9	National Centre for Malaria, Parasitology and Entomology, Vientiane 2006 & 2007/08
10	Lao National Health Survey. National Statistical Centre and NIOPH, January 2001. 6a MICS 2006
11	Information furnished by National Ministry of Health, Department of Personal and Organization.
12	Population and Housing Census Year 2005. Preliminary report, National Statistics Centre, September 2005.
13	Lao Ministry of Health, unpublished records, 2008
14	Government of Lao PDR Official Gazette, State Budget Revenue - Expenditure: Implementation of FY 2006-2007 & Plan for FY 2007-2008
15	World Bank. Poverty Reduction Support Operation. Vientiane, April 2008
16	National Centre for HIV/AIDS, Vientiane 2007.
17	World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). Progress on Drinking Water and Sanitation: Special focus on Sanitation. UNICEF, New York and WHO, Geneva, 2008. [http://www.wssinfo.org/en/40_mdg2008.html]

MACAO (CHINA)

1. CONTEXT

1.1 Demographics

With an annual growth rate of 2.0%, Macao (China) had a year-end estimated population of 549 200 in 2008, 50.9% female and 49.1% male; 12.8% of the population were aged 0-14 and 7.2% were 65 years and above. The average population density was 18 900 per square kilometre, with the entire resident population being city dwellers.

In 2008, there were 4717 live births, up by 4.0% compared with 2007, while mortality increased by 13.7% to 1756. The natural growth rate for the same year was 5.4, with a crude birth rate of 8.5 and a crude death rate of 3.2 per 1000 population. The infant mortality rate was 3.2 per 1000 live births and the under-five mortality rate 3.6 per 1000 live births, while the total fertility rate was 1.0 birth per woman (aged 15-49), with no recorded maternal mortality. Life expectancy at birth for males was 79.0 years in 2004-2007, and 84.8 years for females.

Besides natural increases, migration flow is another important factor in determining population growth. In 2008, an estimated net inflow of 9100 persons was recorded, including Chinese immigrants with "one-way exit permits" from Mainland China, persons authorized to reside in Macao, and non-resident workers.

1.2 Political situation

Macao became a Special Administrative Region of the People's Republic of China on 20 December 1999. The constitutional document, the Basic Law of the Macao Special Administrative Region, came into force on the same day. It stipulates the system to be practised in Macao, and lays down the political and administrative framework for 50 years from 1999.

Under the Basic Law, Macao is entitled to a high degree of autonomy in all areas except defence and foreign affairs. The principles of "One country, two systems", "Macao people governing Macao" and "a high degree of autonomy" have passed their initial tests with flying colours, and are now broadly recognized in Macao and infused into its social and political culture.

The first Chief Executive, Edmund Ho Hau Wah, is currently serving his second term of office. The Government has begun preparing for the elections of the third-term Chief Executive and the fourth-term Legislative Assembly.

1.3 Socioeconomic situation

With the support of Mainland China, the economy of Macao has remained strong. The real gross domestic product (GDP) growth rate for 2008 was 13.2% in real terms and per capita GDP (US$) in nominal terms rose by 10.4% year-on-year. Prosperity in the gaming and tourism sector, as well as improvements in residents' employment conditions and the rise in income, stimulated private consumption expenditure. Exports of services have continued to be bolstered by the growth in the number of tourists from Mainland China. On the other hand, the cancellation of the global textile and garment quota system and the weak economy in the United States of America and the Euro Zone have resulted in a fall in exports.

The health expenditure share of GDP was 1.9% in 2007, less than the 2.3% in 2006, with government expenditure accounting for 68.5%.

Macao has maintained sound economic and trade relations with more than 120 countries and regions, particularly with the United States of America, the European Union and Portuguese-speaking countries.

In 2008, the total labour force was estimated to be 333 000, of which 323 000 were employed, giving an unemployment rate of 3.0%, down by 0.1 percentage point compared with 2007; the underemployment rate rose by 0.6 percentage point year-on-year, to 1.6%.

1.4 Risks, vulnerabilities and hazards

Macao is occasionally hit by tropical storms, tropical cyclones and typhoons during summer and autumn, causing traffic disruption and, on occasions, major floods and landslips, but seldom casualties.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Having gone through the process of a demographic and epidemiological transition, the population of Macao enjoys a fairly low mortality rate and a long life expectancy. They also enjoy a high standard of health, as reflected in the general decline in the incidence of communicable diseases and the increase in life expectancy, as well as the improvement in health indices. Noncommunicable diseases are the main causes of morbidity and mortality. However, like other developed areas, the threat from re-emerging and newly emerging infectious diseases continues. The HIV/AIDS incidence rate is slowly increasing.

2.2 Outbreaks of communicable diseases

Outbreaks of influenza, enterovirus infections and norovirus gastroenteritis in schools and residential institutes occur from time to time.

2.3 Leading causes of mortality and morbidity

Among the 1756 deaths in 2008, 31.0% were attributable to neoplasms, 27.6% to diseases of the circulatory system and 13.7% to diseases of the respiratory system.

Since 2001, cancer has been the leading cause of death, claiming nearly 500 deaths every year. In 2007, cancers of the colorectum, bronchus and lung, breast, prostate, and liver were the five most common, contributing 13.5%, 11.9%, 10.8%, 8.6%, 6.6% of all new cancer cases. The top five leading cancer deaths were cancers of the bronchus and lung, colorectum, liver, stomach, and leukaemia, contributing 23.5%, 14.6%, 12.6%, 5.1% and 4.9% of all cancer deaths.

In terms of causes of morbidity, the three most common notifiable diseases in 2008 were varicella (28.5%), enterovirus infection (25.2%) and tuberculosis of the lung (10.9%).

Morbidity and mortality from most vaccine-preventable communicable diseases have remained very low for many years. There is no risk of malaria, but small clusters of dengue fever occur occasionally. The hepatitis B carrier rate among adults is around 11.5%, and is less than 1% among vaccinated children. HIV/AIDS prevalence remains low, estimated at less than 0.1%.

2.4 Maternal, child and infant diseases

Maternal, child and infant care services are available in all highly accessible health centres, half of them equipped with prenatal ultrasound examination equipment. More than 95% of pregnant women receive prenatal care and almost 100% deliver in hospital. No maternal death was recorded during the period from 1992 to 2008. Diarrhoea among infants and children is common, but rarely causes death.

2.5 Burden of disease

A study in 1999 indicated injury and intoxication and cancer as the leading causes of potential years of life lost (PYLL).

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

In line with the Government's policy of building a quality society, a long-term objective of Macao's health authorities is to enhance the quality of medical and health care, thus safeguarding and improving the public's health.

The Health Bureau is tasked with coordinating the activities of public and private organizations in the domain of public health and assuring the health of citizens through specialized and primary health care services, as well as disease prevention and health promotion activities.

3.2 Organization of health services and delivery systems

Medical and health service providers in Macao are classified as either governmental or nongovernmental. The former mainly include government health centres that provide primary health care, as well as the Conde S. Januário Hospital, which provides specialist medical services. Nongovernmental providers include medical entities subsidized by the Government and other institutions, such as Kiang Wu Hospital, the University Hospital, the Workers' Clinic and Tung Sin Tong Clinic, as well as various private clinics and laboratories.

The departments of Conde S. Januário Hospital include Inpatient, Outpatient, Emergency, Surgery, Intensive Care, Coronary Intensive Care, Burns Service, Physiotherapy and Rehabilitation Medicine, Haemodialysis and Peritoneal Dialysis, Medical Imaging, Laboratory, and Haematological Oncology. The 73 types of service offered by the Outpatient Department include anaesthesiology, cardiology, chest clinic, surgery, plastic and reconstructive surgery, dermatology, stomatology, gynaecology and obstetrics, haematological oncology, physiotherapy and rehabilitation, internal medicine, general medicine, nephrology, neurosurgery, ophthalmology, orthopaedics, otorhinolaryngology, paediatrics, psychiatry and urology.

With regard to the private sector, there are two nongovernmental hospitals that play complementary roles in providing health care services. Founded in 1871, Kiang Wu Hospital has three departments: Emergency, Outpatient and Inpatient. It is a modern general hospital that integrates treatment, prevention, teaching and research. The University Hospital, sharing a close and collaborating relationship with the Macau University of Science and Technology, was established on 25 March 2006; it integrates clinical services, teaching and scientific research, and is Macao's first hospital dedicated to both Chinese and Western medicine.

To realise the objective of "Health for all", Macao's health authorities have established a primary health care network with health centres as the operational units offering all residents easy access to primary health care services in their own neighbourhoods. There are six health centres and two health stations distributed throughout the various districts of Macao. Two of the health centres, the Fai Chi Kei Health Centre and Areia Preta Health Centre also have traditional Chinese medicine clinics. By the end of 2008, the primary health care network had provided services to 481 265 outpatients during the year. Most outpatients had attended the adult health care, child health care and family planning clinics, which accounted for 59.5%, 13.2% and 8.6%, respectively, of total outpatient visits.

3.3 Health policy, planning and regulatory framework

"A sound health care system and putting prevention first" is the Government's policy. In recent years, it has focused particularly on enhancing prevention and control capacity in the areas of emergency rescue response and public health.

The Health Bureau is a public entity, endowed with administrative, financial and patrimonial autonomy, under the supervision of the Secretary for Social Affairs and Culture. The Health Bureau's task is to assure the health of citizens, prevent diseases, provide health care and rehabilitation services, train professional health workers, supervise and support entities in the health sector, and provide forensic services.

3.4 Health care financing

The health system is financed mainly by the Macao Government, which attaches great importance to the resources allocated to medical and health care. In 2007, it spent US$ 244.7 million on related services, up by 8.9% from the US$ 224.6 million in 2006.

The medical services provided by health centres and the Tung Sin Tong Clinic are basically free of charge. All legal residents of Macao, regardless of their ages or occupations, are entitled to free services at health centres and supplementary check-ups at Conde S. Januário Hospital by referral from health centres. Non-residents pay for such services according to rates established by the Health Bureau.

3.5 Human resources for health

Human resources for health (HRH) planning is based on the Government's policy objectives in terms of its programmes and activities. In order to execute and coordinate with government policy, to respond to the global threat of communicable diseases, and to meet the territory's development demands, the Health Bureau has established a mechanism for emergency rescue response and is enhancing training in the specialty of accident and emergency; recruitment of specialized physicians for the Department of Accident and Emergency has been identified as one of the priorities.

In 2005, the Macao Government enlisted Kiang Wu Nursing College of Macao to conduct a study for development of a ten-year plan for Macao's nursing manpower. After the results were announced, the Health Bureau established a consultation group to gather extensive opinions to help formulate policy on allowing importation of foreign nursing staff to mitigate the pressure on the nursing service, without harming the interests of local nursing staff.

Meanwhile, the health authorities are revising the existing grade structures for doctors, nurses and diagnostic and therapeutic personnel. This is considered necessary given the rapid pace of development and the increasing medical and health care demands. To remain in line with the development of Macao, collaboration with neighbouring countries and regions will be further enhanced by launching various training programmes in the health domain.

3.6 Partnerships

Regular communications and cooperation have been maintained with regional health authorities to prevent the spread of infectious diseases and improve other health-related work. In 2007, the Macao Government continued to enhance regional connections, particularly with Hong Kong (China) and Guangdong Province, China.

At the 7th Tripartite Meeting of Guangdong, Macao and Hong Kong on the Prevention and Control of Infectious Diseases, held in July 2007, the health authorities from the three areas agreed to continue strengthening their cooperation and communication mechanisms to control diseases.

In April 2007, the Health Bureau signed a cooperation agreement with the Hong Kong Hospital Authority with the aim of establishing a communication and support mechanism to handle medical emergencies and health incidents and to strengthen cooperation on aspects such as ongoing training and education for medical and administration staff, case referrals and regular exchanges of official infectious-disease information.

At the Guangdong-Macao Cooperation Joint Conference 2007, the two areas signed the Framework Agreement on Exchanges and Cooperation in Food Safety for Guangdong and Macao to maintain food safety in both places. The agreement further strengthens communication between Macao and Guangdong regarding food safety policies and laws, safety standards, food testing and recalls, major food incidents, and verification and dissemination of media reports on food issues.

3.7 Challenges to health system strengthening

The health authorities continue to follow their policies and plans to create a favourable environment and conditions for medical consultation and to ensure that Macao residents receive a satisfying and convenient community health care service, hence strengthening public health and improving the quality

of life of the population. However, factors such as the increasing population and population ageing, as well as the rising demand for medical services, are serious concerns for the Government of Macao.

Statistics from the Conde de S. Januário Hospital indicate that hospital admissions increased from 14 056 in 2003 to 15 934 in 2008, an increase of 13.4%, while outpatient and emergency consultations were up by 40.4% and 18.3%, respectively. In 2008, the bed occupancy rate stood at 85.8%, and patients stayed in the hospital for an average of 9.2 days. To respond to the rising demand for medical services, the service hours of two health centres have already been extended. Simultaneously, the health authorities have given priority to expansion projects at the Accident and Emergency Department of the Conde de S. Januário Hospital, as well as the rehabilitation centre, and are studying the feasibility of establishing a second public hospital in Taipa.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Health statistics*
Operator	:	Statistics and Census Service
Specification	:	Contains analyses and tables in relation to health care of Macao
Web address	:	http://www.dsec.gov.mo/Statistic/Social/HealthStatistics.aspx?lang=en-US

Title 2	:	*Yearbook of statistics*
Operator	:	Statistics and Census Service
Specification	:	Includes latest general information
Web address	:	http://www.dsec.gov.mo/Statistic/General/YearbookOfStatistics.aspx?lang=en-US

Title 3	:	*Macao yearbook 2008*
Operator	:	Government Information Bureau
Specification	:	Outlines major events, progresses and changes on a yearly basis
Web address	:	http://yearbook.gcs.gov.mo

5. ADDRESSES

HEALTH BUREAU

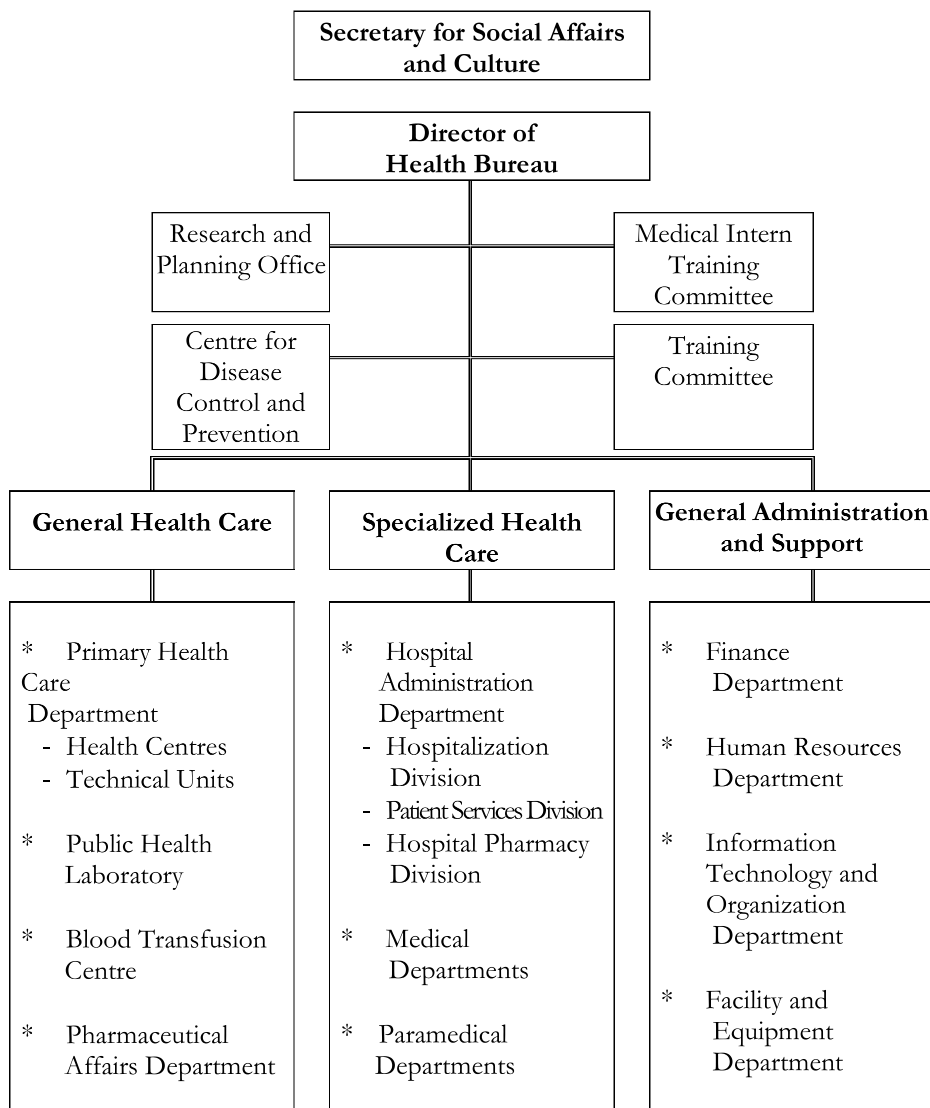
Office Address	:	Estrada do Visconde de S. Januário, Macau
Postal Address	:	Caixa Postal 3002 – Macau
Official Email Address	:	info@ssm.gov.mo
Telephone	:	(853) 28313731
Fax	:	(853) 28713105
Website	:	http://www.ssm.gov.mo

WHO REPRESENTATIVE

There is no WHO Representative in Macao (China). Queries about the WHO programme of collaboration with Macao (China) should be directed to:

Office Address	:	Director, Programme Management World Health Organization Regional Office for the Western Pacific United Nations Avenue P.O. Box 2932, 1000 Manila, Philippines
Postal Address	:	P.O. Box 2932, 1000 Manila, Philippines
Official Email Address	:	postmaster@wpro.who.int
Telephone	:	(632) 528 8001 (632) 3031000
Fax	:	(632) 5260279
Office Hours	:	7:00–15:30
Website	:	http://www.wpro.who.int

6. ORGANIZATIONAL CHART: Health Bureau



MACAO (CHINA) — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	0.03			2008	1
2	Estimated population ('000s)	549.20 [a]	269.50 [a]	279.70 [a]	2008	1
3	Annual population growth rate (%)	2.00	1.40	2.60	2008	1
4	Percentage of population					
	- 0–4 years	3.60	3.80	3.40	2008	1
	- 5–14 years	9.20	9.80	8.70	2008	1
	- 65 years and above	7.20	6.50	7.90	2008	1
5	Urban population (%)	100.00	100.00	100.00	2008	1
6	Crude birth rate (per 1000 population)	8.50	...	...	2008	1
7	Crude death rate (per 1000 population)	3.20	...	...	2008	1
8	Rate of natural increase of population (% per annum)	0.54	...	...	2008	1
9	Life expectancy (years)					
	- at birth	82.00	79.00	84.80	2004-07	1
	- Healthy Life Expectancy (HALE) at age 60	...	...	...		
10	Total fertility rate (women aged 15–49 years)	1.00			2008	1
	Socioeconomic indicators					
11	Adult literacy rate (%)	95.00 [b]	97.50 [b]	92.60 [b]	2008	1
12	Per capita GDP at current market prices (US$)	39 036.00			2008	1
13	Rate of growth of per capita GDP (%) (in US$)	8.40			2008	1
14	Human development index	0.94			2006	1
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	...	...	NA		
16	Health care waste generation (metric tons per year)	199 771.42 [c]	...	NA	2008	1

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A (B15.0-9)	5	2	3	0	0	0	2008	1
	- Type B (B16.1-9)	14	8	6	0	0	0	2008	1
	- Type C (B17.1)	24	13	11	0	0	0	2008	1
	- Type E(B17.2)	3	2	1	0	0	0	2008	1
	- Unspecified (B17.8)	0	0	0	0	0	0	2008	1
	Cholera (A00)	0	0	0	0	0	0	2008	1
	Dengue/DHF (A90, A91)	3	3	0	0	0	0	2008	1
	Encephalitis (A85.0-A87)	13	11	2	0	0	0	2008	1
	Gonorrhoea (A54_Gonococcal infections)	28	25	3	0	0	0	2008	1
	Leprosy (A30)	1	0	1	0	0	0	2008	1
	Malaria (B50-B54)	0	0	0	0	0	0	2008	1
	Plague (A20)	0	0	0	0	0	0	2008	1
	Syphilis (A50-A53)	62	40	22	0	0	0	2008	1
	Typhoid fever (A01.0)	2	1	1	0	0	0	2008	1

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections (J20-J22)**	...	...	...	6	5	1	2008	1
19	**Diarrhoeal diseases**	...	...	...	...	...	...		
20	**Tuberculosis**								
	- All forms (A15-A19)	314	...	...	...	...	...	2007	3
	- New pulmonary tuberculosis (smear-positive)	137	...	...	...	...	...	2007	3
21	**Cancers**								
	All cancers (malignant neoplasms only) (C00-C97)	...	...	...	540	329	211	2008	1
	- Breast (C50)	...	...	...	34	1	33	2008	1
	- Colon and rectum (C18,C20)	...	...	...	63	38	25	2008	1
	- Cervix (C53)			...			7	2008	1
	- Oesophagus (C15)	...	...	...	22	20	2	2008	1
	- Leukaemia (C91-C95)	...	...	...	11	5	6	2008	1
	- Lip, oral cavity and pharynx (C00-C14)	...	...	...	43	35	8	2008	1
	- Liver (C22)	...	...	...	62	50	12	2008	1
	- Stomach (C16)	...	...	...	27	16	11	2008	1
	- Trachea, bronchus, and lung (C33-C34)	...	...	...	144	88	56	2008	1
22	**Circulatory**								
	All circulatory system diseases (I00-I99)	...	...	...	485	241	244	2008	1
	- Acute myocardial infarction (I21-I22)	...	...	...	37	24	13	2008	1
	- Cerebrovascular diseases (I60-I69)	...	...	...	55	27	28	2008	1
	- Hypertension (I10, I12)	...	...	...	175	82	93	2008	1
	- Ischaemic heart disease (I20-I25)	...	...	...	103	57	46	2008	1
	- Rheumatic fever and rheumatic heart diseases (I00-I09)	...	...	...	7	1	6	2008	1
23	**Diabetes mellitus (E10-E14)**	...	...	...	86	35	51	2008	1
24	**Mental disorders (F00-F99)**	...	...	...	9	6	3	2008	1
25	**Injuries**								
	All types (V01-Y98)	...	...	...	120	83	37	2008	1
	- Homicide and violence (X85-Y09)	...	...	...	5	2	3	2008	1
	- Motor and other vehicular accidents (V01-V99)	...	...	...	10	7	3	2008	1
	- Occupational injuries (Y96)	...	...	...	0	0	0	2008	1
	- Suicide (X60-X84)	...	...	...	69	44	25	2008	1
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1.								
	2.								
	3.								
	4.								
	5.								
	6.								
	7.								
	8.								
	9.								
	10.								

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Essential (primary) hypertension (I10)	175	82	93	31.70	30.00	33.40	2008	1
	2. Malignant neoplasm of bronchus and lung (C34)	143	87	56	25.95	31.80	20.10	2008	1
	3. Pneumonia, organism unspecified (J18)	110	52	58	19.90	19.00	20.80	2008	1
	4. Non-insulin-dependent diabetes mellitus (E11)	68	26	42	12.30	9.50	15.10	2008	1
	5. Malignant neoplasm of liver and intrahepatic bile ducts (C22)	62	50	12	11.30	18.30	4.30	2008	1
	6. Other chronic obstructive pulmonary disease (J44)	54	29	25	9.80	10.60	9.00	2008	1
	7. Malignant neoplasm of colon (C18)	51	29	22	9.25	10.60	7.90	2008	1
	8. Chronic renal failure (N18)	48	18	30	8.70	6.60	10.80	2008	1
	9. Chronic ischaemic heart disease (I25)	46	17	29	8.30	6.20	10.40	2008	1
	10. Hypertensive heart disease (I11)	44	23	21	7.95	8.40	7.50	2008	1
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					...			
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
30	**Percentage of pregnant women with anaemia**					...			
31	**Neonatal mortality rate (per 1000 live births)**	2.50		2.40		2.70		2008	1
32	**Percentage of newborn infants weighing at least 2500 g at birth**	92.60		93.90		91.20		2008	1
33	**Immunization coverage for infants (%)**								
	- BCG	99.60		...		...		2008	2,3
	- DTP3	91.30		...		...		2008	2,3
	- POL3	90.80		...		...		2008	2,3
	- Hepatitis B III	91.30		...		...		2008	2,3
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion (O03-O07)			...			0	2008	1
	- Eclampsia (O15)			...			0	2008	1
	- Haemorrhage (O20,O46,O67,O72)			...			0	2008	1
	- Obstructed labour (O64-O66)			...			0	2008	1
	- Sepsis (O85)			...			0	2008	1
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome (P35.0)	0	0	0	0	0	0	2008	1,2
	- Diphtheria (A36)	0	0	0	0	0	0	2008	1,2
	- Hib meningitis (G00.0)	0	0	0	0	0	0	2008	1
	- Measles (B05)	4	1	3	0	0	0	2008	1,2
	- Mumps (B26)	99	59	40	0	0	0	2008	1,2
	- Neonatal tetanus (A33)	0	0	0	0	0	0	2008	1,2
	- Pertussis (whooping cough) (A37)	2	1	1	0	0	0	2008	1,2
	- Poliomyelitis (A80)	0	0	0	0	0	0	2008	1,2
	- Rubella (B06)	9	6	3	0	0	0	2008	1,2
	- Total Tetanus (A33-A35)	0	0	0	0	0	0	2008	1,2

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		...			
37	Health infrastructure					
	Public health facilities	- General hospitals	1	586	2008	1
		- Specialized hospitals	0	0	2008	1
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	8 [d]	0	2008	1
	Private health facilities	- Hospitals	2	601	2008	1
		- Outpatient clinics	679	...	2008	3
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)			357.36	2007	1
	- total expenditure on health as % of GDP			1.92	2007	1
	- per capita total expenditure on health (in US$)			679.70	2007	1
	Government expenditure on health					
	- amount (in million US$)			244.67	2007	1
	- general government expenditure on health as % of total expenditure on health			68.47	2007	1
	- general government expenditure on health as % of total general government expenditure			10.54	2007	1
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			...		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			31.53	2007	1
	Exchange rate in US$ of local currency is: 1 US$ =			8.04	2007	4
39	Health insurance coverage as % of total population			...		

	INDICATOR		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
40	Human resources for health										
	Physicians	- Number	1712 [f]	1021 [f]	691 [f]	1712 [f]	NA	365 [f]	1347 [f]	2008	1
		- Ratio per 1000 population	3.12 [f]	1.86 [f]	1.26 [f]	3.12 [f]	NA	0.66 [f]	2.45 [f]	2008	1
	Dentists	- Number	190 [g]	132 [g]	58 [g]	190 [g]	NA	13 [g]	177 [g]	2008	1
		- Ratio per 1000 population	0.35 [g]	0.24 [g]	0.11 [g]	0.35 [g]	NA	0.02 [g]	0.32 [g]	2008	1
	Pharmacists	- Number	...	...	...	...	NA	...	...		
		- Ratio per 1000 population	...	...	...	...	NA	...	...		
	Nurses	- Number	1415	82	1333	1415	NA	830	585	2008	1
		- Ratio per 1000 population	2.58	0.15	2.43	2.58	NA	1.51	1.07	2008	1
	Midwives	- Number	...	...	...	...	NA	...	...		
		- Ratio per 1000 population	...	....	...	...	NA	...	...		
	Paramedical staff	- Number	1406	500	906	1406	NA	...	...	2007	1
		- Ratio per 1000 population	2.56	0.91	1.65	2.56	NA	...	...	2007	1
	Community health workers	- Number	905	296	609	905	NA	...	...	2007	1
		- Ratio per 1000 population	1.65	0.54	1.11	1.65	NA	...	...	2007	1
41	Annual number of graduates	Physicians	...	...	...	...	NA	...	...		
		Dentists	...	....	...	...	NA	...	...		
		Pharmacists	...	....	...	...	NA	...	...		

	INDICATORS		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
41	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	....	...	...	...	...	...		
		Community health workers	...	....	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	....	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	....	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	....	...	...	...	...	...		
		Community health workers	...	....	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	3.20	3.20	3.10	2008	1
45	Under-five mortality rate (per 1000 live births)	3.60	4.00	3.10	2008	1
46	Proportion of 1 year-old children immunised against measles	89.70	...	...	2008	2
47	Maternal mortality ratio (per 100 000 live births)	0.00			2008	1
48	Proportion of births attended by skilled health personnel	100.00			2008	1
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.00			2008	1
	- Percentage of deliveries in health facilities (as % of total deliveries)	100.00			2008	1
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	1.60			2008	1
51	Antenatal care coverage - At least one visit	89.20 [h]			2007	3
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults	<0.10 [e]	...	...	2008	3
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	0.00	0.00	0.00	2008	1
57	Malaria death rate per 100 000 population	0.00	0.00	0.00	2008	1
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	63.00	...	...	2007	2
61	Tuberculosis death rate per 100 000 population(A15-A19)	6.88	...	...	2007	3
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	102.00	...	...	2007	2
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	90.28	...	...	2006	3
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	100.00	100.00	NA	2008	1
65	Proportion of population using an improved sanitation facility	100.00	100.00	NA	2008	1
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	NA		

Notes:	
...	Data not available
p	Provisional
est	Estimate
NA	Not applicable
a	Refers to Macao population as of 31st December, 2008
b	Refers to Macao population, excluding the marine population and those residing in collective living quarters, such as military camp, hospital, prison, student dormitory and elderly home. Data derived from the Employment Survey of Statistics and Census Service, Macao SAR
c	Figure includes 8066.33 metric tons of general solid waste, 250.09 metric tons pathological solid waste and 191 455 m^3 liquid effluent from hospital
d	Figure includes six health centres and two health stations
e	Estimated figure is 0.0083% and refers to Macao population
f	Figure refers to general practitioners and practicitioners of Chinese medicine
g	Figure include odontologists
h	Figure refers to services provided by public health facilities

Sources:	
1	Statistics and Census Service, Macao SAR.
2	WHO Regional Office for the Western Pacific, data received from the technical units.
3	Health Bureau, Macao SAR.
4	Monetary Authority of Macao.

MALAYSIA

1. CONTEXT

1.1 Demographics

In 2008, the population of Malaysia was estimated to be 27 728 700. Covering an area of 330 803 square kilometres, the population density is 84 persons per square kilometre. Malaysia is a multiracial country consisting of Malays, Chinese, Indians, Ibans, Kadazans and other ethnic groups. In 2008, an estimated 1 907 800 non-Malaysians were living in the country. Malaysia has a young population, with 8 875 957 (32.0%) below the age of 15 years, while those aged 15-64 years account for 17 621 589 (63.6 %) and those 65 years or older for about 1 231 154 (4.4 %).

Life expectancy at birth for both genders has increased over the years, rising from 56 years for males and 58 for females in 1957 to 71.7 years for males and 76.5 years for females in 2007. Over the same period, the crude death rate fell from 12.4 per 1000 population to 4.5. The crude birth rate in 2007 was 17.5 per 1000 population and the crude rate of natural increase was 13.0 per 1000 population.

1.2 Political situation

Malaysia practises parliamentary democracy based on the federal system of government. The country is a constitutional monarchy with three branches of government: the legislative, judiciary and executive. Under the Federal Constitution, the states of Perlis, Kedah, Pulau Pinang, Perak, Selangor, Negeri Sembilan, Melaka, Johor, Pahang, Terengganu, Kelantan, Sarawak and Sabah agreed to the concept of the formation of Malaysia, whereby the powers of state governments are defined by the Federal Constitution.

The constitutional monarch is the Yang Di-Pertuan Agung (Paramount Ruler), who is elected from among and by the sultans (hereditary rulers) of the nine states for a five-year term. The Yang Di-Pertuan Agong is empowered to safeguard the customs and traditions of the Malays. Islam, the official religion of the country, is safeguarded by Yang Di-Pertuan Agong and the sultans of the respective states. The monarch is also the Commander-in-Chief of the Federation's Armed Forces. Since early 2007, the Yang Di-Pertuan Agung has been Sultan Mizan Zainal Abidin, the Sultan of Terengganu.

The head of government is the Prime Minister, who appoints the Cabinet from among the members of Parliament with the consent of the Yang Di-Pertuan Agung. The current Prime Minister is Y.A.B Dato' Seri Mohd Najib Tun Razak .

1.3 Socioeconomic situation

Malaysia's fifty years of nationhood is marked by significant socioeconomic progress and development. On independence, the nation was highly reliant on tin and rubber, with more than half the population living in poverty. Today, the country has a broad-based and diversified economy, and is the 19th largest trading nation in the world, with trade in excess of RM 1 trillion. The country continues to enjoy political stability, with a multi-ethnic and united population. At the same time, per capita income has increased to RM 22 345 (US$ 6725.98) and the incidence of poverty has been reduced to less than 6.0%.

The 2007 Budget was formulated as a building block towards achieving the targets set in the 9th Malaysia Plan and onwards to realise Vision 2020. The National Mission articulates five key development policy thrusts: to move the economy up the value chain; to raise the capacity for knowledge and innovation and nurture 'first class mentality' to address persistent socioeconomic inequalities constructively and productively; to improve the standard and sustainability of the quality of life; and to strengthen institutional and implementation capacity. Therefore, the 2007 Budget was formulated with the theme 'Implementing the National Mission towards Achieving the National Vision ' to translate the National Mission into programmes and projects to sustain economic growth.

In 2007, total expenditure was expected to increase by 14.8% to RM 164 743 million (US$ 49 574.67 million), the increased spending being based on better revenue performance from both tax and non-tax

sources, which were expected to contribute RM 96 196 million (US$ 28 945.79 million) and RM 45 593 million (US$ 13 718.97 million), respectively, to total revenue. With increased expenditure matched by higher revenue, the Government will further consolidate the fiscal deficit at 3.2% of nominal gross domestic product (GDP), the deficit to be secured by striking a balance between long-term economic growth and fiscal sustainability.

The manufacturing sector is expected to pick up gradually and expand by 3.1%, following the anticipated recovery in global electronics demand. On the demand side, growth will be driven by resilient public and private sector expenditure, following stronger consumer sentiment, business confidence and higher government spending. Nominal gross national product (GNP) is estimated to increase by 9.4% to RM 607 212 million (US$ 182 710.20 million), with per capita income increasing by 7.2% to RM 22 345 (US$ 6725.98) (2006: 9.9%, RM 20 841 [US$ 6271.06]). In terms of purchasing power parity (PPP), per capita income was expected to increase by 13.9% to reach US$ 13 289 in 2007 (2006: 13.00%; US$ 11 663).

The total labour force in the fourth quarter of 2007 was 10 999 000 and the unemployment rate (percentage total labour force) was 3%.

The Malaysian economy was expected to register robust growth in 2008, with real GDP expanding between 6% and 6.5%. This translates to a 6.8% growth in nominal per capita income, rising from RM 22 345 in 2007 to RM 23 864 in 2008 or, in PPP terms, from US$ 13 289 to US$ 14 206. With an unemployment rate of 3.3%, the economy was expected to continue to operate under full employment and, in tandem with the Government's efforts to ensure fiscal sustainability, the fiscal deficit was expected to continue to decline to 3.1% of GDP. Malaysia's balance of payments position is expected to remain strong with the current account recording a surplus for the eleventh consecutive year. The current account surplus, amounting to 13% of GDP, was expected to emanate from the goods and travel account. These developments augur well for all Malaysians and keep the nation on track towards realizing Vision 2020.

1.4 Risks, vulnerabilities and hazards

As a whole, Malaysia did not face any major catastrophes in 2008, except for a few incidences of flash flooding and landslides that affected certain parts of the country during heavy downpours.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Malaysia is at an epidemiological transition stage, with communicable and noncommunicable diseases both presenting as disease burdens. The top five diseases are dominated by noncommunicable diseaseas, as in most developed nations. However, some communicable diseases persist along with the rising incidence of noncommunicable disease. Mental illness has also become an increasing problem.

The Burden of Disease Study in 2000 showed that the top 30 out of the 111 disease groups made up 83% of the total country's disease burden. New epidemics are associated with lifestyle and health-risk conditions, such as ischaemic heart disease, mental illness, cerebrovascular disease/ stroke, trauma/road traffic injuries, cancer, asthma/COPD, obesity, diabetes mellitus, and sexually transmitted diseases, including HIV/AIDS. In addition, there is a growing threat from emerging and re-emerging infections. These are due partly to changing lifestyles and socioeconomic development, environmental degradation and pollution. Today's population is at risk from an increasingly polluted environment.

In 2007, the top five notifiable diseases were dengue fever, tuberculosis, food poisoning, hand food and mouth disease (HFMD) and HIV/AIDS. The incidence rates were 80.6 per 100 000 population for dengue fever, 61.9 per 100 000 for tuberculosis, 52.6 per 100 000 for food poisoning, 46.1 per 100 000 for HFMD, and 16.0 per 100 000 for HIV/AIDS.

Malaysia has been classified by WHO as an intermediate-TB-burden country. In the last 20 years, the TB incidence rate has stagnated, except for a slight increase in 1999. In 2007, 16 129 new cases were registered and the incidence rate for TB (all forms) was 103 per 100 000 population.

From 1986 until the end of 2007, a cumulative total of 80 966 HIV infections and 13 636 AIDS cases were reported, with 10 337 AIDS-related deaths. A total of 4577 new HIV infections, 1132 news AIDS cases and 1182 AIDS-related deaths were reported in 2007. Case analysis shows that 89.8% of the new cases in 2007 were in the 20-49 age group. The Ministry of Health has introduced a harm-reduction strategy as a new initiative to curb the spread of HIV among drug users. This strategy consists of two components: the Needle and Syringe Exchange Programme and drug substitution therapy.

With the introduction of various national vaccination programmes, a significant decrease was observed in the incidence of specific vaccine-preventable diseases, such as whooping cough, which has an incidence rate of 0.06 per 100 000 population. No case of diptheria was notified in 2007.

The underlying causes of the noncommunicable disease (NCD) epidemic are demographic changes and an increase in the level of population risk factors resulting from social and economic development. In 2005, an NCD survey was conducted to establish an NCD surveillance baseline to provide information to determine the extent of NCD risk factors in the country. The survey collected a broad range of information on the sociodemographic status and NCD risk factors of people aged 25-64 years. The following prevalence rates were revealed: 25.7% had raised blood pressure; 11.0% had raised blood glucose; 53.5% had cholesterol levels; 31.6% were overweight; 16.3% were obese; 48.6% had central or abdominal obesity; 25.5% were current smokers; 60.1% were physically inactive; 72.8% did not meet dietary guidelines for vegetable and fruit intake; 12.2% consumed alcohol; and 18.1%, 29.7%, 28.4%, 13.8% and 7.0%, had one, two, three, four and more than four NCD risk factors, respectively.

In 2007, 1 361 781 foreign workers were screened. Of these, 41 342 (3.03%) were certified as unsuitable to work in Malaysia. The number was slightly lower than in 2006 (45 368). Tuberculosis was the most common disease found, with 16 240 cases (39.2%); followed by hepatitis B, with 10 957 cases (26.5%); sexually transmitted diseases, with 2830 cases (6.8%); and HIV/AIDS, with 686 cases (1.6%).

From the second report of the National Cancer Registry, compiled in 2003, it was found that the crude cancer rate for males was 97.4 per 100 000 population and 127.6 per 100 000 population for females. The age-standardized incidence rate for all cancers in 2003 was 134.3 per 100 000 males and 154.2 per 100 000 females. The male-to-female ratio for cancer incidence was 1:1.3. Cancer was occuring at all ages, with the median age at diagnosis in males being 59 years, and 53 years for females. In 2003, the five most common cancers in children (0-14 years old) were leukaemia, cancers of the brain, lymphoma, and cancers of the connective tissue and kidney. In young adults (15-49 years old), the most common cancers were leukaemia, lymphoma, and cancers of the nasopharynx, lung, colon and rectum in men, and cancers of the breast, cervix, ovary, uterus, thyroid gland and leukaemia in women. In older subjects (50 years old and above), cancers of the lung (13.8%), colon, rectum, nasopharynx, prostate and stomach were predominant among men, while cancers of the breast (31.0%), cervix, colon, uterus, lung and rectum occurred commonly in women.

2.2 Outbreaks of communicable diseases

In 2007, 48 846 cases of dengue were reported: 46 095 (94.4%) were dengue fever and 2720(5.6%) dengue haemorrhagic fever. The dengue incidence rate was 179.2 per 100 000 population, compared with 144.7 per 100 000 population in 2006. Kuala Lumpur had the highest incidence rate, followed by Selangor, Kelantan and Penang.

There was an increase in the number of episodes of food poisoning reported from various states, with the majority of outbreaks occurring in schools. The major factor contributing to the outbreaks was unsafe food-handling practices, which accounted for more than 50%. A committee within the Ministry of Education was set up to overcome the problem.

2.3 Leading causes of mortality and morbidity

The ten top causes of admission to Ministry of Health hospitals in 2007 were normal deliveries (ICD-10: O80), which constituted 14.47% of total admissions; complications of pregnancy, childbirth and the puerperium (ICD-10: O00-O75, O81-O99), accounting for 12.31%; accidents (ICD-10:V01-X59), 8.78%; diseases of the respiratory system (ICD-10:J00-J99), 7.38%; diseases of the circulatory system, 7.10%; certain conditions originating in the perinatal period, 6.72%; diseases of the digestive system, 5.30%; diseases of the urinary system, 3.56%; ill-defined conditions (symptoms and signs), 3.26%; and malignant neoplasms, 3.23%.

The ten most common causes of death in Ministry of Health hospitals in 2007 were heart disease and disease of the pulmonary system (16.49%); septicaemia (13.38%); malignant neoplasms (11.28%); cerebrovascular diseases (8.50%); pneumonia (7.43%); accidents (5.20%); diseases of the digestive system (4.86%); certain conditions originating in the perinatal period (4.11%); nephritis, nephrotic syndrome and nephrosis (4.09%); and ill-defined conditions (2.55%).

2.4 Maternal, child and infant diseases

Socioeconomic development, together with efforts to promote health, have resulted in a decline in maternal mortality. The total fertility rate among Malaysian women is also declining and was estimated to be 2.2 per woman aged 15 to 49 years in 2007. Urbanization, late marriage and increased access to education and health care services, as well as more employment opportunities and family planning programmes, have contributed significantly to the decline in fertility.

The national maternal mortality ratio showed a reduction from 280 per 100 000 live birth in 1957 to 30 per 100 000 live birth in 2007. There has also been a gradual trend of improvement in the infant mortality rate (from 13.1 per 1000 live births in 1990 to 6.3 in 2007), the perinatal mortality rate (from 13.0 per 1000 births in 1990 to 7.3 per 1000 births in 2007) and the toddler mortality rate (from 0.9 per 1000 population aged 1-4 years in 1990 to 0.4 per 1000 population aged 1-4 years in 2007).

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health's Vision for Health is of a nation working together for better health. The Mission of the Ministry is to build partnerships for health to facilitate and support the people to attain fully their potential in health and to motivate them to appreciate health as a valuable asset and take positive action to improve further and sustain their health status to enjoy a better quality of life.

3.2 Organization of health services and delivery systems

The Malaysian population is served by both the public and private health sectors, which complement each other. While the Ministry of Health continues to play a pivotal role as the main provider of health services, there is a need to harness the collective involvement of all stakeholders in health to improve the health of the nation. With growth, development and maturity, it is expected that greater demands will be made on the health system. In response, health care delivery by the public and private sectors must be sustainable and affordable to their clientele, as well as responsive to public expectations. Quality, efficiency and integration in all health matters must be the byword of all health care providers. To enable the nation to deliver and meet heightened expectations, greater commitment and cooperation between the public and private sectors is required.

3.3 Health policy, planning and regulatory framework

Health planning in the Ministry of Health began in 1956 with the inception of the first Five-Year Malaya Plan (1956-1960). Since then, health planning has been carried out on five-yearly cycles. Each five-year Plan provides the direction for health and health-related agencies to address the health needs of the population.

The need for a national health policy was identified at the mid-term review of the 6th Malaysia Plan. The idea was proposed to enhance integration among health and health-related agencies towards achieving desired national objectives, the Vision for Health and ultimately help to realize Vision 2020. Since then, several draft 'national health policy' documents have been developed. In 2005, a national health policy framework was formulated and a draft entitled, the Malaysian National Health Policy Edition 1, 2007 (MNHP) was prepared. That draft delineated three main policy goals or objectives to be met over the years up to 2020 in the areas of: population health; national capacity building for health; and national capacity building towards competitiveness in the health market.

As health is a shared responsibility, it is imperative that views from all relevant stakeholders in health be considered. A meeting on the Malaysian National Health Policy, held in 2007 to discuss the proposed MNHP draft, saw active participation of members of 93 organizations from both the public and private sectors, including nongovernmental organizations. The proposed MNHP draft was amended, taking into consideration the input and recommendations of the participating organizations. The final draft was approved by the Planning and Policy Committee of the Ministry of Health, was subsequently endorsed by the Minister of Health and will be submitted to the Cabinet for approval.

3.4 Health care financing

Since the 8th Malaysia Plan, the Ministry of Health and the Economic Planning Unit (EPU) have renewed their efforts to develop a national health care financing mechanism (NHFM). The need for such a mechanism was further emphasized in the 9th Malaysia Plan 2006-2010. The Mid-term Review noted that the ever-increasing demand for better health services and the changing disease pattern were contributing to escalating health care costs. Accordingly, the Government plans to examine options to meet the rising cost of health care to ensure that services remain accessible, affordable and relevant to the people's needs. These efforts will contribute towards achieving better health for all. The NHFM project team will continue to work on development of the NHFM design.

The Malaysia National Health Accounts (MNHA) Unit, established in 2005, continues to gather and analyse health expenditure data using an internationally accepted framework. The second report on national health expenditures for the years 1997–2006 was published in 2008 and has been distributed to the main stakeholders of the health system, particularly the main data sources for MNHA. The report shows that private health expenditure, at RM13.74 billion (US$ 3.87 billion), has overtaken public health expenditure, at RM11.04 billion (US$ 3.10 billion). The main source of financing for private health expenditure is out-of-pocket payments (73.1%) followed by private health insurance (13.8%).

3.5 Human resources for health

The optimal utilization of available resources for delivery of health services requires, among others, enhancement of human capital, consolidation of physical facilities and services, strengthening of primary health care, greater integration in health, improvement of quality, and enhancement of the stewardship and governance role of the Ministry of Health. There is a need to formulate and implement strategic human resource planning and management mechanisms in terms of capacity and capability building. Research shows that investment in health promotion and prevention services is more efficient and effective in improving health status than investment solely in curative treatment. Therefore, in the 9th Malaysia Plan, priority in human resource allocation has been given to health promotion and prevention activities, with an increased number and category of personnel allocated to various fields. However, the quality and expertise of specialists in curative treatment cannot be ignored and must be improved in accordance with the needs of the population. Issues regarding the shortage and maldistribution of human resources, the 'brain drain' and career development have been given special emphasis.

Presently, the Ministry of Health has more than 140 000 posts, with 149 service schemes, making it the third largest government agency. However, a large number of those posts remain empty, with an aveeage of 3.2% being filled annually. Relatively rapid facility expansion that is out of step with the human resource planning process may have contributed to the vacancies. The introduction of compulsory service for the three main professionals, namely doctors, dentists and pharmacists, has had a significant impact in reducing the number of vacant posts. Better remuneration and promotional prospects have also made public service more attractive.

3.6 Partnerships

The health system consists of various stakeholders: the Ministry of Health, local government, the academic community, professional organizations, the private sector and others. The Ministry works very closely with all these satkeholders to strengthen its health priority areas. Effective collaboration and coordination minimizes the gaps between agencies.

Considering the marked improvement in the health status of the nation and the existing issues and challenges, it is inevitable that great commitment and effort will be required to achieve better health. Therefore, in view of the limited resources and the current urgency, the thrust of the 9th Malaysia Plan is more focused towards achieving better health through consolidation of services than the 8th Plan, which was geared towards greater integration in health and the promotion of partnerships.

3.7 Challenges to health system strengthening

The numerous issues and challenges faced by the nation have created a need for change and reform. The main challenges are increasing demand and changing disease patterns, leading to increasing health care costs. A more educated and affluent public with easy access to information, coupled with demographic changes and rapid advances in medical technology, has led to rising consumer demand for better health care and expensive new technology. Prioritization is vital if significant changes are to be achieved.

Changes in the disease burden and disease pattern due to lifestyle are among the challenges facing the nation. Others include the need to enhance human capital; research and development, including research into vaccines and biotechnology; and crisis and disaster management. The threats versus the opportunities of globalization, the liberalization of health, the harnessing of health technology and ICT, the strengthening of the health management information system, intersectoral coordination and collaboration and maximization of the role of the private sector and nongovernmental organizations are also important challenges that need to be addressed.

Realizing these issues and challenges, and to ensure that national health care provision meets required international standards, the Ministry of Health strongly advocates the implementation of various quality assurance initiatives. Guided by the Vision for Health, the Mission of the Ministry of Health and Vision 2020, Malaysia is striving towards achieving a healthy and developed nation. At the onset of the 8th Malaysia Plan, the Government presented its national vision, outlining the country's priorities for the next 10 years. It is essential that new knowledge, new technology and innovations are implemented appropriately and effectively. Currently, the 9th Plan has as its theme the achievement of better health through consolidation of services. To achieve this, six major goals have been set to ensure more efficient and equitable health. These are: to prevent and reduce the disease burden; to enhance the health care delivery system; to optimize resources; to enhance research and development; to manage crises and disasters effectively; and to strengthen the health information management system.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Social statistics bulletin*
Operator	:	Department of Statistics, Malaysia
Specification	:	Includes Information on population, socioeconomic indicators
Web address	:	www.statistics.gov.my
Title 2	:	*Economic report 2007/2008*
Operator	:	Treasury department Ministry of Finance, Malaysia
Specification	:	Chapter 1, Economic Management and Outlook
Web address	:	www.treasury.gov.my
Title 3	:	*Country Health Plan, 9th Malaysia Plan 2006-2010*
Operator	:	Planning and Development Division, MOH
Specification	:	Framework of 9th Malaysia Plan, National Health Priorities, Programme and activities

Title 4	:	Draft of *Disease Control Division annual report 2007 (Malay version)*
Operator	:	Disease Control Division, Ministry of Health
Specification	:	Report on communicable and non communicable disease report, outbreaks of diseases
Web address	:	www.dph.gov.my

Title 5	:	Drafts on women's health for report on health status of the nation
Operator	:	Family Health Division, Ministry of Health

Title 6	:	*Burden of disease, Malaysia*
Operator	:	Public Health Institute
Specification	:	Findings on Borden of Disease study base on 2000 data

Title 7	:	*Second report of the National Cancer Registry, Cancer incidence in Malaysia, 2003*
Operator	:	Clinical Research Centre (CRC)
Specification	:	Findings on the incidence of Cancer in Malaysia
Web address	:	http://www.crc.gov.my

5. ADDRESSES

MINISTRY OF HEALTH

Office Address	:	Block E1, E6, E7 & E10, Parcel E Federal Government Complex Administrative Centre 62590 PUTRAJAYA, MALAYSIA
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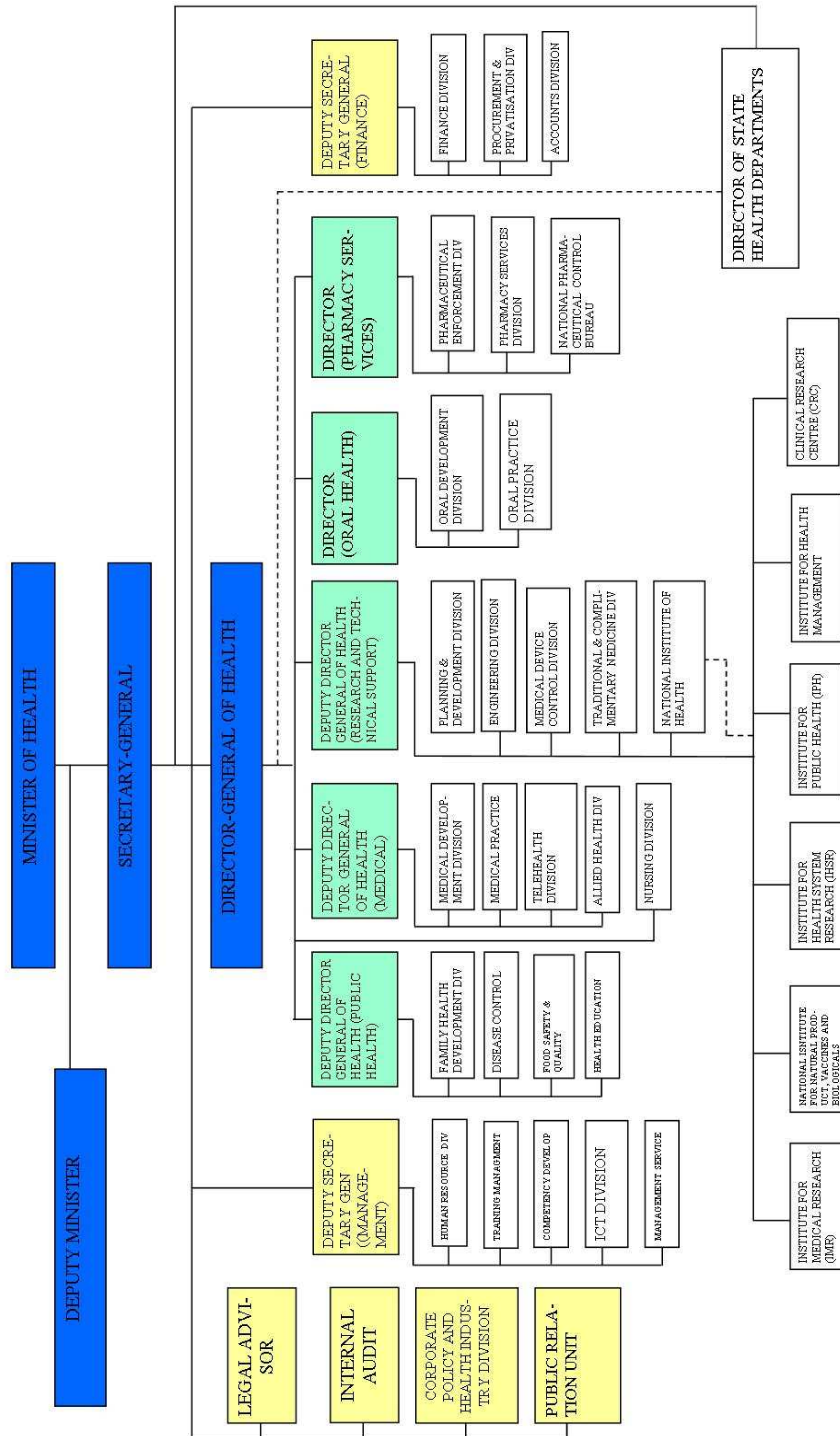
Official Email Address	:	webmaster@moh.gov.my
Telephone	:	Tel: 603-8883 3888
Office Hours	:	7.30 am – 5.30 pm
Website	:	http://www.moh.gov.my/

WHO REPRESENTATIVE IN MALAYSIA, BRUNEI DARUSSALAM AND SINGAPORE

Office Address	:	1st Floor, Wisma UN, Block C Komplek Pejabat Damansara Jalan Dungun, Damansara Heights 50490 Kuala Lumpur, Malaysia
Postal Address	:	P. O. Box 12550 50782 Kuala Lumpur, Malaysia
Official Email Address	:	who@maa.wpro.who.int
Telephone	:	(603) 209 39908 / 2092 1184
Fax	:	(603) 209 37446

6. ORGANIZATIONAL CHART: Ministry of Health



COUNTRY HEALTH INFORMATION PROFILE

MALAYSIA — **WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision**

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	330.80			2008	1
2	Estimated population ('000s)	27 728.70	14 114.30	13 614.40	2008	2
3	Annual population growth rate (%)	1.40	...	...	2007p	3
4	Percentage of population					
	- 0–4 years	11.41	...	...	2008	2
	- 5–14 years	20.60	...	...	2008	2
	- 65 years and above	4.44	...	...	2008	2
5	Urban population (%)	63.50	...	...	2008	4
6	Crude birth rate (per 1000 population)	17.50	17.70	17.20	2007p	3
7	Crude death rate (per 1000 population)	4.50	5.10	3.80	2007p	3
8	Rate of natural increase of population (% per annum)	1.30	1.27	1.34	2007p	3
9	Life expectancy (years)					
	- at birth	...	71.70	76.50	2007p	1
	- Healthy Life Expectancy (HALE) at age 60	...	10.90	12.00	2002 est	5
10	Total fertility rate (women aged 15–49 years)	2.20			2007p	3
	Socioeconomic indicators					
11	Adult literacy rate (%)	92.30	95.10	89.50	2007	4
12	Per capita GDP at current market prices (US$)	5937.00			2007	1
13	Rate of growth of per capita GDP (%) - at constant price	5.30			2007	1
14	Human development index	0.82			2006	6
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	...	...	...		
16	Health care waste generation (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	36	...	...	0	0	0	2008	7
	- Type B	886	...	...	13	...	...	2008	7
	- Type C	928	...	...	20	...	...	2008	7
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	93	...	...	2	...	...	2008	7
	Dengue/DHF	49 335	...	...	112	...	...	2008	C: 7,8 D: 7
	Encephalitis	20	...	...	2	...	...	2008	7
	Gonorrhoea	789	...	...	0	0	0	2008	7
	Leprosy	218	...	...	0	0	0	2008	7
	Malaria	7390	...	...	30	...	...	2008	7
	Plague	0	0	0	0	0	0	2008	7
	Syphilis	877	...	...	1	...	...	2008	7
	Typhoid fever	201	...	...	3	...	...	2008	7

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections (J00-J22)**	81 146	44 010	37 136	3241	1894	1347	2007	9
19	**Diarrhoeal diseases**	...	...	...	...	...	...		
20	**Tuberculosis**								
	- All forms	16 129 [e]	...	...	...	...	...	2007	8
	- New pulmonary tuberculosis (smear-positive)	9578 [e]	...	...	...	...	...	2007	8
21	**Cancers**								
	All cancers (malignant neoplasms only)	63 447	29 685	33 762	4862	2623	2239	2007	9
	- Breast	8273	104	8169	508	10	498	2007	9
	- Colon and rectum	9533	5417	4116	461	278	183	2007	9
	- Cervix			3069			141	2007	9
	- Oesophagus	837	538	299	84	56	28	2007	9
	- Leukaemia	6147	3412	2735	304	158	146	2007	9
	- Lip, oral cavity and pharynx	4382	3113	1269	276	190	86	2007	9
	- Liver	1846	1333	513	325	240	85	2007	9
	- Stomach	1526	967	559	175	115	108	2007	9
	- Trachea, bronchus, and lung	5871	4192	1679	910	664	246	2007	9
22	**Circulatory**								
	All circulatory system diseases	139 528	79 737	59 791	11 014	6504	4510	2007	9
	- Acute myocardial infarction	11 423	8541	2882	1885	1228	657	2007	9
	- Cerebrovascular diseases	20 835	11 985	8850	3664	2073	1591	2007	9
	- Hypertension	34 178	15 180	18 998	202	112	90	2007	9
	- Ischaemic heart disease	45 175	30 556	14 619	4286	2654	1632	2007	9
	- Rheumatic fever and rheumatic heart diseases	3311	1736	1575	101	46	55	2007	9
23	**Diabetes mellitus**	42 324	19 522	22 802	439	217	222	2007	9
24	**Mental disorders**	27 384	18 007	9377	6	4	2	2007	9
25	**Injuries**								
	All types	192 264	135 561	56 703	2479	1964	515	2007	9
	- Homicide and violence	6240	4145	2095	47	40	7	2007	9
	- Motor and other vehicular accidents	84 504	64 846	19 658	1584	1311	273	2007	9
	- Occupational injuries	...	...	...	...	...	...		
	- Suicide	3061	1135	1926	89	62	27	2007	9
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Normal delivery (single spontaneous delivery)	284 261 [b]			2130.80 [b]			2007	9
	2. Complications of pregnancy, childbirth and the puerperium	241 942 [b]			1813.58 [b]			2007	9
	3. Accidents (accidental injury)	172 494 [b]	124 538 [b]	47 956 [b]	634.79 [b]	900.30 [b]	359.47 [b]	2007	9
	4. Diseases of the respiratory system	145 025 [b]	81 104 [b]	63 921 [b]	533.70 [b]	586.31 [b]	479.15 [b]	2007	9
	5. Diseases of the circulatory system	139 528 [b]	79 737 [b]	59 791 [b]	513.47 [b]	576.43 [b]	448.19 [b]	2007	9
	6. Certain conditions originating in the perinatal period	131 977 [b]	70 715 [b]	61 262 [b]	485.68 [b]	511.21 [b]	459.21 [b]	2007	9
	7. Diseases of the digestive system	104 138 [b]	60 676 [b]	43 462 [b]	383.23 [b]	438.63 [b]	325.79 [b]	2007	9
	8. Diseases of the urinary system	69 970 [b]	34 837 [b]	35 133 [b]	257.49 [b]	251.84 [b]	263.35 [b]	2007	9
	9. Ill-defined conditions (symptoms and signs)	64 049 [b]	34 009 [b]	30 040 [b]	235.70 [b]	245.85 [b]	225.18 [b]	2007	9
	10. Malignant neoplasms	63 447 [b]	29 685 [b]	33 762 [b]	233.49 [b]	214.60 [b]	253.08 [b]	2007	9

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1.Heart diseases and diseases of pulmonary circulation	7104 [c]	4270 [c]	2834 [c]	26.14 [d]	30.87 [d]	21.24 [d]	2007	9
	2. Septicaemia	5764 [c]	3238 [c]	2526 [c]	21.21 [d]	23.41 [d]	18.93 [d]	2007	9
	3. Malignant neoplasms	4862 [c]	2623 [c]	2239 [c]	17.89 [d]	18.96 [d]	16.78 [d]	2007	9
	4. Cerebrovascular diseases	3664 [c]	2073 [c]	1591 [c]	13.48 [d]	14.99 [d]	11.93 [d]	2007	9
	5. Pneumonia	3203 [c]	1872 [c]	1331 [c]	11.79 [d]	13.53 [d]	9.98 [d]	2007	9
	6. Accident	2240 [c]	1791 [c]	449 [c]	8.24 [d]	12.95 [d]	3.37 [d]	2007	9
	7. Diseases of the digestive system	2096 [c]	1390 [c]	706 [c]	7.71 [d]	10.05 [d]	5.29 [d]	2007	9
	8. Certain conditions originating in the perinatal period	1771 [c]	956 [c]	815 [c]	6.52 [d]	6.91 [d]	6.11 [d]	2007	9
	9. Nephritis, ephritic syndrome and nephrosis	1763 [c]	990 [c]	773 [c]	6.49 [d]	7.16 [d]	5.79 [d]	2007	9
	10. Ill defined conditions	1099 [c]	663 [c]	436 [c]	4.04 [d]	4.79 [d]	3.27 [d]	2007	9
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**						1.36	2007	15
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**						90.00	2006	8
30	**Percentage of pregnant women with anaemia**						26.90	2007p	10
31	**Neonatal mortality rate (per 1000 live births)**		3.90		...		...	2007p	11
32	**Percentage of newborn infants weighing at least 2500 g at birth**		89.50		...		...	2007p	11
33	**Immunization coverage for infants (%)**								
	- BCG		95.00		...		...	2006	8
	- DTP3		90.00		...		...	2006	8
	- POL3		90.00		...		...	2006	8
	- Hepatitis B III		90.00		...		...	2006	8
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			36 065			12	2007	9
	- Eclampsia			450			6	2007	9
	- Haemorrhage			7846			1	2007	9
	- Obstructed labour			1914			1	2007	9
	- Sepsis			142			0	2007	9
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	...	...	...	...	...	...		
	- Diphtheria	4	...	...	1	0	0	2008	7
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	334	...	...	2	0	0	2008	7
	- Mumps	...	...	...	...	...	...		
	- Neonatal tetanus	13	...	...	0	0	0	2008	7
	- Pertussis (whooping cough)	11	...	...	0	0	0	2008	7
	- Poliomyelitis	0	0	0	0	0	0	2008	7
	- Rubella	...	...	...	...	...	...		
	- Total Tetanus	29	...	...	1	...	...	2008	7

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Facilities with HIV testing and counseling services**		1095		2008	8
37	**Health infrastructure**					
	Public health facilities	- General hospitals	14	13 290	2007	12
		- Specialized hospitals	6	18 145	2007	12
		- District/first-level referral hospitals	116	5 058	2007	12
		- Primary health care centres	2848	0	2007	12
	Private health facilities	- Hospitals	195	11 291	2007	12
		- Outpatient clinics	5950	0	2007	12
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)			8159.01	2007p	13
	- total expenditure on health as % of GDP			4.40	2007p	13
	- per capita total expenditure on health (in US$)			307.05 [d]	2007p	13
	Government expenditure on health					
	- amount (in million US$)			3621.22	2007p	13
	- general government expenditure on health as % of total expenditure on health			44.40	2007p	13
	- general government expenditure on health as % of total general government expenditure			6.90	2007p	13
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			…		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			55.60	2007p	13
	Exchange rate in US$ of local currency is: 1 US$ =			3.44	2007p	13
39	**Health insurance coverage as % of total population**			…		

	INDICATOR		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
40	**Human resources for health**										
	Physicians	- Number	25 102	…	…	…	…	15 096	10006	2008	12
		- Ratio per 1000 population	0.91	…	…	…	…	0.54	0.36	2008	12
	Dentists	- Number	3640	…	…	…	…	1922	1718	2008	12
		- Ratio per 1000 population	0.13	…	…	…	…	0.07	0.06	2008	12
	Pharmacists	- Number	4571 [a]	…	…	…	…	1250	3321	2007	11
		- Ratio per 1000 population	0.16 [a]	…	…	…	…	0.05	0.12	2007	11
	Nurses	- Number	54 208	0	54 208	…	…	38 575	15 633	2008	12
		- Ratio per 1000 population	1.95	0.00	1.95	…	…	1.39	0.56	2008	12
	Midwives	- Number	18 639	0	18 639	…	…	18 139	500	2008	12
		- Ratio per 1000 population	0.67	0.00	0.67	…	…	0.65	0.02	2008	12
	Paramedical staff	- Number	7948	…	…	…	…	7411	537	2007	11
		- Ratio per 1000 population	0.29	…	…	…	…	0.27	0.02	2007	11
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
41	**Annual number of graduates**	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	**Annual number of graduates**	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	**Workforce losses/ Attrition**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	**Prevalence of underweight children under five years of age**	7.70 [a]	...	...	2006	10
44	**Infant mortality rate (per 1000 live births)**	6.30	6.70	5.90	2007p	3
45	**Under-five mortality rate (per 1000 live births)**	8.10	8.70	7.50	2007p	3
46	**Proportion of 1 year-old children immunised against measles**	90.00	...	...	2006	8
47	**Maternal mortality ratio (per 100 000 live births)**	30.00			2007p	3
48	**Proportion of births attended by skilled health personnel**	98.58			2007	10
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.71			2007	10
	- Percentage of deliveries in health facilities (as % of total deliveries)	97.87			2007	10
49	**Contraceptive prevalence rate**	1.36	...	...	2007	15
50	**Adolescent birth rate**	...				
51	**Antenatal care coverage** - At least one visit	91.90			2007	10
	- At least four visits	...				
52	**Unmet need for family planning**	...	...	...		
53	**HIV prevalence among population aged 15-24 years**	0.10	...	...	2006-07	8
54	**Estimated HIV prevalence in adults**	0.30	...	...	2007	8
55	**Percentage of people with advanced HIV infection receiving ART**	35.00	...	....	2007	8
56	**Malaria incidence rate per 100 000 population**	26.70	...	...	2008	7
57	**Malaria death rate per 100 000 population**	0.10	...	...	2008	7
58	**Proportion of population in malaria-risk areas using effective malaria prevention measures**	...	...	...		
59	**Proportion of population in malaria-risk areas using effective malaria treatment measures**	...	...	...		
60	**Tuberculosis prevalence rate per 100 000 population**	121.00	...	...	2007	8
61	**Tuberculosis death rate per 100 000 population**	18.00	...	...	2007	8
62	**Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)**	80.00	...	...	2007	8
63	**Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)**	46.00	...	...	2006	8
		Total	Urban	Rural		
64	**Proportion of population using an improved drinking water source**	99.00	100.00	96.00	2006	14
65	**Proportion of population using an improved sanitation facility**	94.00	95.00	93.00	2006	14
66	**Proportion of population with access to affordable essential drugs on a sustainable basis**	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Revised data
b	Figure refers to leading causes of hospitalization in Ministry of Health (MOH) hospitals
c	Figure refers to leading causes of mortality in Ministry of Health (MOH) hospitals
d	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
e	Figure based on the notified TB cases (New and Relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

Sources:	
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6	Human Development Report 2007/2008: Fighting climate change: Human solidarity in a divided world. United Nations Development Programme, New York USA 2007. [http://hdr.undp.org/en/reports/global/hdr2007-2008/].
7	Disease Control Division, Ministry of Health, Malaysia.
8	WHO Regional Office for the Western Pacific, data received from the technical units.
9	HIMS Subsystem Report, Medical Care, Health Informatics Centre (HIC), Planning & Development Division, Ministry of Health, Malaysia.
10	HIMS Subystem Report, Family Health, Health Informatics Centre (HIC), Planning & Development Division, Ministry of Health, Malaysia.
11	Health Facts 2007, Ministry of Health, Malaysia.
12	Health Facts 2008 (draft), Health Informatics Centre, Ministry of Health, Malaysia.
13	National health accounts: country information. Geneva, World Health Organization. Available from: [http://www.who.int/nha/country/en/index.html].
14	World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). *Progress on Drinking Water and Sanitation* : Special focus on Sanitation. UNICEF, New York and WHO, Geneva, 2008. [http://www.wssinfo.org/en/40_mdg2008.html].
15	HIMS Subystem Report, Family Planning, Health Informatics Centre (HIC), Planning & Development Division, Ministry of Health, Malaysia.

Marshall Islands

1. CONTEXT

1.1 Demographics

The Republic of the Marshall Islands covers an area of 181 square kilometres and comprises 29 atolls and five major islands that form two parallel groups: the Ratak (sunrise) chain and the Ralik (sunset) chain. The Marshallese are of Micronesian origin. The matrilineal culture revolves around a complex system of clans and lineages tied to land ownership. The last census took place in 1999 and the next is scheduled for 2009. Available demographic data are, therefore, either from the 1999 census or are estimates derived from it.

In the area of gender equality in primary and secondary education, the Marshall Islands is essentially on target to meet the Millennium Development Goals, with enrolment rates indicating a roughly 50:50 female-to-male ratio. However, at both primary and secondary levels, female drop-out rates are higher than male, resulting in a higher proportion of males completing Grades 6, 8 and 12 than females. General consensus suggests that the increasing drop-out rates for females versus males are due to the following:

- the rise in teenage pregnancy rates;
- sociocultural expectations requiring females to be at home to help their parents take care of younger children and other family members;
- the high mobility of parents and families between islands, resulting in students being unable to complete the school year (both male and female); and
- cultural and familial expectations of young women requiring them to assist in events such as funerals, resulting in many students missing school for lengthy periods of time, often more than once during the school year (unable to catch up, many students will simply drop out of school.).

The Marshall Islands is fortunate not to have extreme poverty and hunger. However, current surveys and socioeconomic indicators suggest that poverty and hardship are on the rise, giving rise to concern as to whether the country has been developing, implementing and monitoring poverty-reduction strategies and programmes appropriately.

1.2 Political situation

An indirect presidential election was held in the Marshall Islands on 7 January 2008. The Parliament, elected in November 2007, elected a new President after it formally convened. The opposition coalition elected a new President, Litokwa Tomeing, with a vote of 18 to 15 in favour, beating the incumbent President Kessai Note. The Minister for Health is the Honourable Amenta Matthew.

The legislative branch of the Government consists of the *Nitijela* (Parliament), with an advisory council of high chiefs. The *Nitijela* has 33 members from 24 districts, elected for concurrent four-year terms. Members are called Senators. The President is elected by the *Nitijela* from among its members and the President picks his cabinet members from the *Nitijela*. The Republic of the Marshall Islands has four court systems: the Supreme Court, the High Court, district and community courts, and the traditional-rights courts. Trial is by jury or judge. The jurisdiction of the traditional-rights court is limited to cases involving titles or land rights, or other disputes arising from customary law and traditional practices.

Citizens of the Marshall Islands live with a relatively new democratic political system combined with a hierarchical traditional culture.

1.3 Socioeconomic situation

Government assistance from the United States of America is the mainstay of this small island economy. Agricultural production, primarily subsistence, is concentrated on small farms, the most important commercial crops being coconuts and breadfruit. Small-scale industry is limited to handicrafts, tuna

processing and copra. The tourist industry, now a small source of foreign exchange employing less than 10% of the labour force, remains the best hope for future added income. The islands have few natural resources, and imports far exceed exports. Under the terms of the Amended Compact of Free Association, the United States will provide millions of dollars per year to the Marshall Islands (RMI) until 2023, at which time a Trust Fund made up of United States and RMI contributions will begin perpetual annual payouts. Government downsizing, drought, a drop in construction, the decline in tourism, and less income from the renewal of fishing licenses have held gross domestic product (GDP) growth to an average of 1% over the past decade.

1.4 Risks, vulnerabilities and hazards

The country is affected by rising sea levels, desertification, pollution from ships, coral reef erosion and infrequent typhoons. Bikini and Enewetak atolls are former United States nuclear tests sites (67 atmospheric bomb tests from 1946 to 1958).

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

High population growth and crowded conditions in urban areas have caused the re-emergence and/or rise of certain communicable diseases, such as tuberculosis and leprosy. In addition, exposure to modern culture has brought about a rise in levels of adult obesity, noncommunicable disease, teenage pregnancy, suicide, alcoholism and tobacco use.

The Government focuses on training native Marshallese health professionals, strengthening community health care programmes, upgrading the quality of health care services, and improving the dissemination of health care information to its citizens. Other health-related issues include the need to reduce population growth, urban population density and malnutrition, and strengthen the capacity of the health sector. Recent initiatives have included training basketball players in reproductive health issues so they can lead advocacy programmes.

2.2 Outbreaks of communicable diseases

Communicable diseases continue to be a major cause of morbidity and mortality in the Marshall Islands, although, during 2008, only one discreet outbreak was reported. In January and early February, an outbreak of conjunctivitis occurred on Majuro, affecting approximately 250 individuals. The etiology was not confirmed. The outbreak was brought under control through active community education and distribution of hygiene products, such as alcohol-based hand gel.

2.3 Leading causes of mortality and morbidity

The latest available data (1999-2004) on major causes of morbidity and mortality still refer to communicable diseases, but cancer and other noncommunicable diseases are anecdotally emerging as the leading causes of disease and death. Marshall Islands have very high leprosy prevalence rate (6.4 per 10 000 population)[1].

2.4 Maternal, child and infant diseases

Sepsis and prematurity are reported as major causes of mortality among children less than 12 months of age, whereas severe malnutrition, drowning and vehicular accidents accounted for the majority of child deaths in 2004. No data are available on the prevalence of childhood diseases.

2.5 Burden of disease

No available information.

[1] Source: http://www.wpro.who.int/media_centre/fact_sheets/fs_20070129.htm (accessed June 9th 2009)

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The overarching principle guiding the activities of the Ministry of Health can be found in its mission statement: "To provide high quality, effective, affordable and efficient health services to all peoples of the Marshall Islands, through a primary health care programme to improve health status and build the capacity of each community, family and individual to care for their own health. To the maximum extent possible, the Ministry of Health pursues these goals using the national facilities, staff and resources of the Republic of the Marshall Islands."

3.2 Organization of health services and delivery systems

Medical and health services in the Marshall Islands are delivered in three distinct settings: two hospitals—in the urban areas of Majuro and Ebeye—and 58 health centres on the outer islands.

3.3 Health policy, planning and regulatory framework

In April 2000, the Ministry of Health and Environment (the title changed to the Ministry of Health in 2002) prepared a pivotal document to guide health policies: the *Fifteen Year Strategic Plan 2001-2015*. The document encompasses the *Fifteen Year Plan 2001 to 2015*, the *Strategic Five Year Plan 2001 to 2005* and the *Operational Plan 2001 to 2005*.

The national health priorities remain the same as in 2004 and are to:

- develop and strengthen the capabilities of indigenous personnel;
- institutionalize primary health care strategies, decentralize health care, promote community-based health care and take steps to make community-based health care systems as self-reliant as possible;
- strengthen and develop the health information system;
- secure a sustainable financial base from the Government, the community and the private sector for health care delivery;
- reduce the transmission of sexually transmitted diseases and develop HIV/AIDS/STI prevention programmes;
- reduce population growth and urban densities;
- address and manage the causes and effects of malnutrition;
- address, prevent and manage the rising number of cases of diabetes and their health and social impact;
- coordinate and strengthen the provision of health education; and
- coordinate all aspects of the health care delivery system through the National Health Services Board of the Ministry of Health.

3.4 Health care financing

In 2007, the total health expenditure amounted to US$ 22 million, 97.4% from the Government and only 2.6% from the private sector. Government expenditure on health represented 14.6% of the nation's total government expenditure. In line with its mission statement, the Ministry of Health continues to explore avenues to provide the best quality health care possible to the population despite its meagre funding and limited human and capital resources. A significant proportion of health services are funded under external aid or grant programmes, including United States Federal Health Grants and grants under the Compact of Free Association between the Marshall Islands and the United States of America.

3.5 Human resources for health

In 2008, the health work force comprised 38 physicians, 7 dentists, 2 pharmacists, and 172 nurses.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

The reliability of data, staff turnover and migration, and donors' multiple reporting requirements are current challenges.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Fifteen Year Strategic Plan 2001-2015*
Operator	:	Ministry of Health and Environment, April 2000
Title 2	:	*Ministry of Health annual report 2004-"Health is a shared responsibility"*
Operator	:	Ministry of Health and Environment
Title 3	:	*Ministry of Health statistical abstract 1999-2001*
Operator	:	Ministry of Health and Environment
Title 4	:	*Statistical yearbook 2003.*
Operator	:	Economic Policy Planning and Statistics Office
Title 5	:	Economic Policy, Planning and Statistics Office (EPPSO) interview
Web address	:	http://www.spc.int/prism
Title 6	:	*CIA world fact book*
Web address	:	http://www.cia.gov

5. ADDRESSES

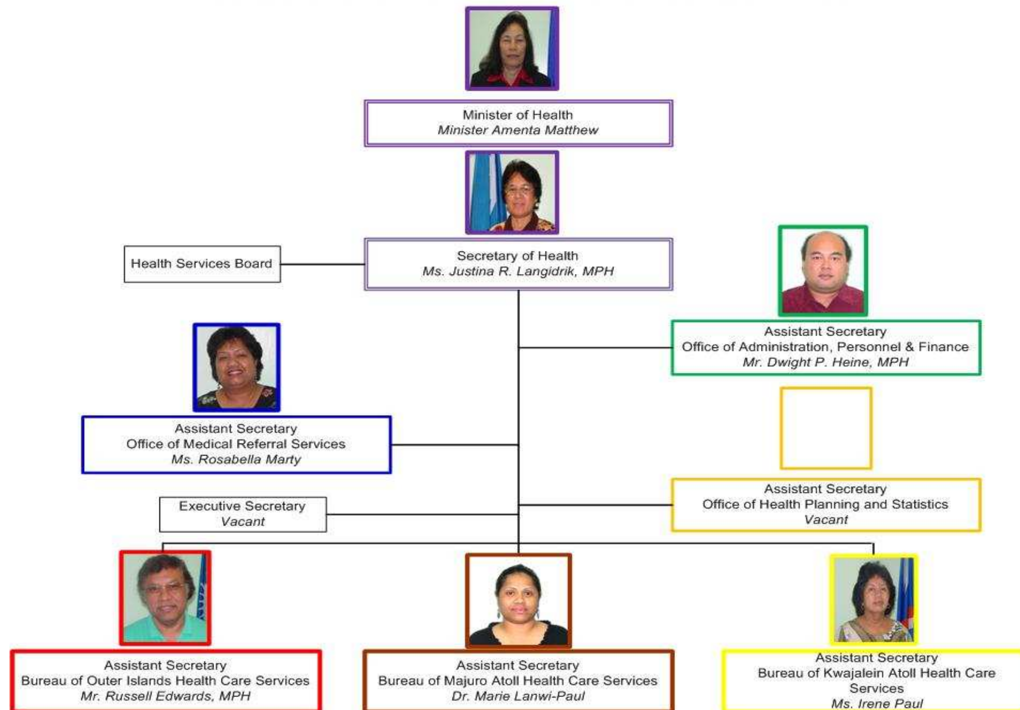
MINISTRY OF HEALTH

Postal Address	:	P.O. Box 16, Majuro, Marshall Islands
Official Email Address	:	rmimohe@ntamar.com
Telephone	:	+ (692) 625 7246/5660/5661
Fax	:	+ (692) 625 3432/4543/4372
Office Hours	:	8:00 – 12:00 and 13:00 – 17:00

WHO REPRESENTATIVE IN THE SOUTH PACIFIC

Office Address	:	Level 4 Provident Plaza One Downtown Boulevard, 33 Ellery Street, Suva
Postal Address	:	P.O. Box 113, Suva, Fiji
Official Email Address	:	who@sp.wpro.who.int
Telephone	:	(679) 3234 100
Fax	:	(679) 3234 166; 3234 177
Office Hours	:	0800 – 1700
Website	:	http://www.wpro.who.int/southpacific

6. ORGANIZATIONAL CHART: Ministry of Health



MARSHALL ISLANDS

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	0.18						2008	1
2	Estimated population ('000s)	53.23		27.29		25.93		2008 est	1
3	Annual population growth rate (%)	1.00		...		...		2008	1
4	Percentage of population								
	- 0–4 years	12.20		12.20		12.30		2008 est	2
	- 5–14 years	22.20		22.10		22.20		2008 est	2
	- 65 years and above	5.10		4.80		5.70		2008 est	2
5	Urban population (%)	70.70 [a]		...		...		2007 est	3
6	Crude birth rate (per 1000 population)	32.40		...		...		2008 est	1
7	Crude death rate (per 1000 population)	6.30		...		...		2008 est	1
8	Rate of natural increase of population (% per annum)	2.61 [b]		...		...		2008 est	1
9	Life expectancy (years)								
	- at birth	...		67.00		70.60		2004	4
	- Healthy Life Expectancy (HALE) at age 60	...		9.80		10.70		2002	5
10	Total fertility rate (women aged 15–49 years)	4.40						2006	10
	Socioeconomic indicators								
11	Adult literacy rate (%)	...		...		...			
12	Per capita GDP at current market prices (US$)	2851.00						2007	1
13	Rate of growth of per capita GDP (%)	...							
14	Human development index	...							
	Environmental indicators	Total		Urban		Rural			
15	Proportion of vehicles using unleaded gasoline (%)	...		...		...			
16	Health care waste generation (metric tons per year)	...		...		...			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	12	...	...	...	...	...	2002	6
	- Type B	104	...	...	...	...	...	2008	11
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	0	0	0	0	0	0	2005	7
	Dengue/DHF	0	0	0	0	0	0	2007	7
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	27	...	...	...	...	...	2008	11
	Leprosy	47	...	...	...	...	...	2008	11
	Malaria	...	...	...	...	...	...		
	Plague	...	...	...	...	...	...		
	Syphilis	302	...	...	...	...	...	2008	11
	Typhoid fever	14	...	...	...	...	...	2005	7

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	3703	...	...	...	...	...	2002	6
19	**Diarrhoeal diseases**	1954	...	...	...	...	...	2002	6
20	**Tuberculosis**								
	- All forms	132	...	...	...	...	...	2008	11
	- New pulmonary tuberculosis (smear-positive)	30	...	...	...	...	...	2008	11
21	**Cancers**								
	All cancers (malignant neoplasms only)	58	31	27	22	8	14	2008	11
	- Breast	4	0	4	2	0	2	2008	11
	- Colon and rectum	3	3	0	3	2	1	2008	11
	- Cervix			5			4	2008	11
	- Oesophagus	...	...	...	...	...	...		
	- Leukaemia	4	2	2	0	0	0	2008	11
	- Lip, oral cavity and pharynx	1	1	0	0	0	0	2008	11
	- Liver	3	2	1	3	2	2	2008	11
	- Stomach	0	0	0	0	0	0	2008	11
	- Trachea, bronchus, and lung	5	5	0	5	1	4	2008	11
22	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	...	...	...	8	7	1	2008	6
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	...	...	...	33	12	11	2008	6
	- Ischaemic heart disease	...	...	...	2	1	1	2008	6
	- Rheumatic fever and rheumatic heart diseases	...	...	...	1	0	1	2008	6
23	**Diabetes mellitus**	630	...	...	69	35	34	2008	6
24	**Mental disorders**	69	...	...	...	...	...	2008	6
25	**Injuries**								
	All types	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Motor and other vehicular accidents	...	...	...	5	3	2	2008	6
	- Occupational injuries	...	...	...	...	...	...		
	- Suicide	26	...	...	10	...	...	2008	6
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Influenza	5170	...	...	8 444.95 [c]	...	...	2004	4
	2. Conjunctivities	2632	...	...	4 299.25 [c]	...	...	2004	4
	3. Gastroenteritis	2041	...	...	3 333.88 [c]	...	...	2004	4
	4. Diarrhoea, Infantile	1640	...	...	2 678.86 [c]	...	...	2004	4
	5. Scabies	778	...	...	1 270.82 [c]	...	...	2004	4
	6. Chicken pox	426	...	...	695.85 [c]	...	...	2004	4
	7. Amoebiasis	312	...	...	509.64 [c]	...	...	2004	4
	8. Fish poisoning	251	...	...	410.00 [c]	...	...	2004	4
	9. Syphilis	172	...	...	280.95 [c]	...	...	2004	4
	10.								

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Sepsis/ Septicemia	44	...	...	83.65	...	...	FY2008	11
	2. Cancer (All types)	22	...	...	41.33	...	...	FY2008	11
	3. Pneumonia	14	...	...	26.30	...	...	FY2008	11
	4. Cardiopulmonary arrest	13	...	...	24.42	...	...	FY2008	11
	5. Cardiorespiratory failure and chronic renal failure	12	...	...	22.54	...	...	FY2008	11
	6. Cerebrovascular accident	10	...	...	18.78	...	...	FY2008	11
	7. Cardia arrest, chronic heart failure, CHD	5	...	...	9.39	...	...	FY2008	11
	8.								
	9.								
	10.								
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					20.49		2008	11
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					90.00		2007	7
30	**Percentage of pregnant women with anaemia**					...			
31	**Neonatal mortality rate (per 1000 live births)**	10.50		...		...		2008	11
32	**Percentage of newborn infants weighing at least 2500 g at birth**	86.00		...		...		2008	11
33	**Immunization coverage for infants (%)**								
	- BCG	92.00		...		...		2007	7
	- DTP3	93.00		...		...		2007	7
	- POL3	91.00		...		...		2007	7
	- Hepatitis B III	93.00		...		...		2007	7
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			0	2008	11
	- Eclampsia			...			0	2008	11
	- Haemorrhage			...			0	2008	11
	- Obstructed labour			...			0	2008	11
	- Sepsis			...			0	2008	11
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	6
	- Diphtheria	0	0	0	...	...	...	2008	6
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2008	6
	- Mumps	0	0	0	...	...	...	2008	6
	- Neonatal tetanus	0	0	0	...	...	...	2008	6
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	6
	- Poliomyelitis	0	0	0	...	...	...	2008	6
	- Rubella	0	0	0	...	...	...	2008	6
	- Total Tetanus	0	0	0	...	...	...	2008	6

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		...			
37	Health infrastructure					
	Public health facilities	- General hospitals	...	...		
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	...	...		
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)			22.00	2007p	8
	- total expenditure on health as % of GDP			14.70	2007p	8
	- per capita total expenditure on health (in US$)			372.88	2007p	8
	Government expenditure on health					
	- amount (in million US$)			21.00	2007p	8
	- general government expenditure on health as % of total expenditure on health			97.40	2007p	8
	- general government expenditure on health as % of total general government expenditure			14.60	2007p	8
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			...		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			2.60	2007p	8
	Exchange rate in US$ of local currency is: 1 US$ =			1.00	2007p	8
39	Health insurance coverage as % of total population			...		

	INDICATOR		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
40	Human resources for health										
	Physicians	- Number	38	...	...	...	...	...	...	2008	6
		- Ratio per 1000 population	0.71	...	...	...	...	...	...	2008	6
	Dentists	- Number	7	...	...	...	...	...	...	2008	6
		- Ratio per 1000 population	0.13	...	...	...	...	...	...	2008	6
	Pharmacists	- Number	2	...	...	...	...	...	...	2008	6
		- Ratio per 1000 population	0.04	...	...	...	...	...	...	2008	6
	Nurses	- Number	172	...	...	...	...	...	...	2008	6
		- Ratio per 1000 population	3.23	...	...	...	...	...	...	2008	6
	Midwives	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	Annual number of graduates	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	31.00	...	...	2008	6
45	Under-five mortality rate (per 1000 live births)	7.00	...	...	2008	6
46	Proportion of 1 year-old children immunised against measles	93.00	...	...	2008	6
47	Maternal mortality ratio (per 100 000 live births)	0.00			2008	6
48	Proportion of births attended by skilled health personnel	94.10 [d]			2004-07p	12
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	85.10 [d]			2004-07p	12
49	Contraceptive prevalence rate	45.00	...	...	2008	11
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	...				
	- At least four visits	77.10 [d]			2004-07p	12
52	Unmet need for family planning	8.10	...	...	2007	12
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults d	...	...	...		
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	...	...	...		
57	Malaria death rate per 100 000 population	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	281.00	...	...	2007	7
61	Tuberculosis death rate per 100 000 population	32.00	...	...	2007	7
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	33.00	...	...	2007	7
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	73.00	...	...	2006	7
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	87.00	82.00	96.00	2004	9
65	Proportion of population using an improved sanitation facility	82.00	93.00	58.00	2004	9
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Revised figure
b	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office of the Western Pacific
c	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office of the Western Pacific using the projected population for 2004 (61220)
d	Figure applies to births in the last three years

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MICRONESIA, FEDERATED STATES OF

1. CONTEXT

1.1 Demographics

The Federated States of Micronesia contains 607 volcanic islands and atolls scattered over 1 million square miles of the Pacific Ocean. The land area totals 704.6 square kilometres, with 7192 square kilometres of lagoon.

There are four states: Chuuk, Kosrae, Pohnpei and Yap. From east to west, Kosrae covers 111.9 square kilometres of land, Pohnpei contains 345.5 square kilometres among six islands, and Chuuk includes six major island groups with a total land area of 127.4 square kilometres. Chuuk proper is a complex of 98 islands (14 mountainous volcanic islands and 24 outer low islands and atolls). Yap State includes Yap proper and 15 outer islands with a total land area of 118.9 square kilometres.

In 2008, the estimated population was 108 026, 37.3% below 15 years of age and 3.4% aged 65 years and over. It is estimated that, despite migration, primarily to the United States of America and its territories, the population has increased by 6.6% since 2000. For every 100 females, there are about 101 males. The average age of the population is estimated to be 19 years. About 22.4% of the population reside in urban areas. Approximately 50% live in Chuuk State, 32% in Pohnpei, 11% in Yap and 7% in Kosrae.

1.2 Political situation

The Federated States of Micronesia is a constitutional federation of four states: Chuuk, Kosrae, Pohnpei and Yap, with the capital located in Palikir, Pohnpei. The Constitution provides for three separate branches of government at the national level: executive, legislative and judicial. It has a Declaration of Rights, similar to the Bill of Rights of the United States of America, specifying basic human rights standards consistent with international norms.

The Congress is unicameral and has 14 senators, one from each state, elected for a four-year term, and 10 who serve two-year terms, whose seats are apportioned by population. There are no formal political parties. The President and Vice-President are elected to four-year terms by the Congress. Elections were last held in March 2007 and, in May 2007, Congress elected Emmanuel Mori as President and Alik L. Alik as Vice-President.

The Division of Health is part of the Department of Health, Education and Social Affairs. The Secretary for Health, Education and Social Affairs is a Cabinet-level position, nominated by the President and requiring congressional confirmation. Currently, the Government is considering a proposal to split the Department into two Cabinet-level departments, one for Health and one for Education and Social Affairs.

1.3 Socioeconomic situation

Economic activity consists primarily of subsistence farming and fishing. Primary farm products include black pepper, tropical fruits and vegetables, coconuts, cassava, betel nuts, sweet potatoes, pigs and chickens. The islands have few mineral deposits worth exploiting, except for high-grade phosphate. The potential for a tourist industry exists, but the remote location, lack of adequate facilities and limited air connections hinder development.

In November 2002, the country experienced a further reduction in future revenues from the Compact of Free Association, the agreement with the United States of America by which Micronesia received US$ 1.3 billion in financial and technical assistance over a 15-year period until 2001. Under the new compact, the country will receive approximately US$ 92 million a year until 2023, including contributions to a jointly managed trust fund. A Joint Economic Management Committee (JEMCO), consisting of representatives of both countries, has been established to manage this compact assistance. Additional funding from the United States totalled US$ 57 million in 2004.

Employment declined from 16 119 in 2000 to 15 897 in 2005. Pohnpei had the highest number of employees, at 7060, and Kosrae the lowest number, at 1366. The three largest employers were the private sector, the state governments and government agencies. Around 43% were in the public sector, 19.8% in wholesale trade and repair and 7% in education. The unemployment rate is 16% and the average real wage rate is US$ 6037.

The country has a severe trade deficit. In 2005, total imports were valued at US$ 117.5 million and exports at only US$ 1.3 million. The tourism sector is small, with only 13 415 tourists reported for 2005. Private remittances are also limited, especially compared with other Pacific island countries.

The estimated gross domestic product (GDP) for the 2006 fiscal year was estimated to be US$ 244.7 million, representing a real growth rate of -0.7% over 2005. GDP is supplemented by aid averaging US$ 100 million annually. The nominal GDP per capita was estimated to be US$ 2254 for 2006, an increase of US$ 65 or 3% over 2005. The inflation rate is estimated at 1%.

1.4 Risks, vulnerabilities and hazards

The country's medium-term economic outlook appears fragile due, not only to the reduction in assistance from the United States of America, but also to the slow growth of the private sector. Geographical isolation and a poorly developed infrastructure remain major impediments to long-term growth.

Telecommunication costs have fallen, however Internet access is still expensive and most residential access is provided via dial-up accounts. While broadband Internet access (64 kbps or greater) is now available in some parts of the country, it is expensive. This lack of affordable broadband Internet access is a significant barrier to business growth and to improving education. FSM Telecom signed an agreement in 2009 with Tyco International for an undersea fibre optic cable that will connect Pohnpei and Guam. Although this cable will greatly increase the Internet bandwidth available to Pohnpei State, however, it will still leave the states of Chuuk, Kosrae, and Yap reliant on satellite communications. Funding for the cable is being provided through a loan from the Government of the United States of America.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The overall health situation remained unchanged between 2000 and 2005, with the population showing continuing susceptibility to both communicable and noncommunicable diseases. Citizens enjoy a high level of health care in comparison with the rest of the Pacific region. Micronesian doctors are taking the place of United States doctors in the health system as a result of such programmes as the, now defunct, Medical Officer Training Programme in Pohnpei.

2.2 Outbreaks of communicable diseases

The number of cases of vaccine-preventable disease has declined considerably. However, waterborne and foodborne diseases are major causes of hospital admission. Strategies need to be developed to improve the coverage of immunization and other health programmes that address disease. The highest immunization coverage rate (84.1%) was in 1992 and was the result of heavy campaigning at that time due to outbreaks of measles and the hepatitis B immunization campaign. A strategic plan is needed to continue improving health services, public health surveillance and information systems.

2.3 Leading causes of mortality and morbidity

The collection of data on mortality and morbidity is a problem due mainly to late reporting and a standardized reporting system. The problem with mortality data has to do with late filing of death certificates for mortality coding. This function is performed at the national level. However, based on current information (2006) collected from the four states with respect to mortality and morbidity data, the leading causes of mortality are endocrine, nutritional and metabolic diseases; diseases of the respiratory system; diseases of the circulatory system; and diseases of the digestive system. The incidence of neoplasms is also on the rise. As for the leading causes of morbidity, diseases of the respiratory and circulatory systems, certain infectious and parasitic diseases, injuries, poisonings and certain other consequences of external causes, along with external causes of morbidity and mortality (traffic accidents), are all evident. Pregnancy, childbirth and puerperium conditions continue to be the leading causes of outpatient visits and hospitalization for women of child-bearing age.

2.4 Maternal, child and infant diseases

Prenatal care is slowly improving in the state centres and is being expanded to remote areas. Deaths and illnesses due to diarrhoea and acute respiratory infections still make up a large portion of infant mortality and morbidity. In 2006, the country started implementing the WHO integrated management of childhood illness (IMCI) strategy curriculum as a way to strengthen the skills and capacity of health care workers, particularly those involved in maternal and child health, to reduce childhood illness.

2.5 Burden of disease

Although certain infectious and parasitic diseases are prevalent, the disease burden also includes chronic and noncommunicable diseases. Diabetes and endocrine, nutritional and metabolic diseases are major health problems. Contributing factors to these health conditions are believed to be a change in diet, lack of exercise, gender, age, occupation and, in some cases, drug abuse.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Division of Health has established five strategic health goals with the objective of improving health services:

- to improve primary health care services;
- to improve secondary health care services;
- to prioritize health promotion and services for major health problems;
- to develop a sustainable health care financing mechanism; and
- to improve capacity and accountability systems.

Ten outcome measures were developed and used during the period from 2003 to 2005 to indicate progress in meeting these goals. In 2005, modifications were proposed involving the addition of four new measures. These modifications will be effective when endorsed by all four State Directors, the Secretary, Assistant Secretary and programme managers, and will be effective for the next five years.

The proposed outcome measures involve increasing access to health services, improving immunization coverage, improving the availability of essential drugs, increasing the functionality of biomedical equipment, decreasing the average hospital stay, reducing infant mortality, reducing mental illness, increasing the number of individuals enrolled in a health insurance plan, reducing off-island medical referral costs, increasing the number of children under seven years of age receiving tooth sealant, reducing the incidence of diarrhoeal disease, reducing the incidence of hospitalization for diabetes, and implementing an efficient quality assurance system in all states. Baseline data have been collected in each of these areas and specific goals have been established to measure progress.

3.2 Organization of health services and delivery systems

The Division of Health of the Department of Health and Social Affairs does not have a direct role in the provision of health services. The Department of Health Services (DHS) in each state has primary responsibility for curative, preventive and public health services. This responsibility includes the main hospital, peripheral health centres and dispensaries (primary health centres). Only residents of urban centres have direct access to the main hospital in each state, with transportation issues often preventing residents who live on the outer islands from accessing these hospitals.

Dispensaries (similar to health clinics) are located in municipalities and outlying islands and are part of the State Health Department, with local mayors and the dispensary supervisors are responsible for their day-to-day operation. Diagnosis and treatment of common ailments are the primary services provided, with more advanced cases being referred to central hospitals. The location of dispensaries is based on population, need and political considerations.

The Secretary of the Department of Health and Social Affairs is responsible for the oversight of all health programmes and ensures compliance with all laws and executive directives. The Department's major functions include:

- providing overall supervision for the Division;
- setting priorities within financial, manpower and material constraints, as approved by the Secretary;
- conducting annual programme and staff performance audits and evaluations;
- enforcing departmental and national policies;
- improving accountability within the Division
- implementing national health strategies and the Strategic Development Plan, in accordance with the Secretary's directives;
- increasing external funding to support the implementation of health strategies;
- monitoring the compliance of both national and state programmes;
- developing and implementing property inventory systems; and
- coordinating financial support and assistance to the states.

The state-based delivery system is an effective way of administering health care. Given the geographical dispersal, remote nature and cultural diversity of the many island communities, the system has the best chance of developing more responsive and effective services to meet the needs of the community. In this environment of politically independent states, there are constraints on the implementation of national policies.

3.3 Health policy, planning and regulatory framework

The Division of Health of the Department of Health and Social Affairs provides health planning, donor coordination, and technical and training assistance. It also coordinates and manages the preventive medicine and public health programmes funded by the United States Department of Health and Human Services. While the Division does not have a direct role in the provision of health services, it has significant influence on their provision as a result of its managerial responsibilities. Most of the state health departments have very limited planning and programming capabilities.

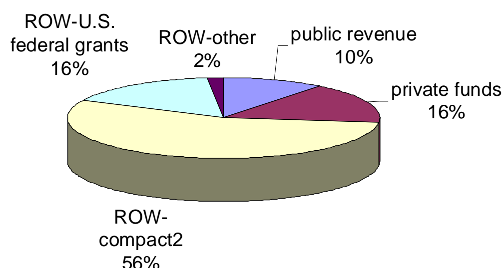
3.4 Health care financing

In 2007, the Federated States of Micronesia, with WHO support, conducted a series of exercises to estimate its national health care expenditure for 2005, which amounted to a total of US$ 30.6 million (see Table 1).

Table 1. National Health Expenditures and Indicators: Federated States of Micronesia, 1997-2005.

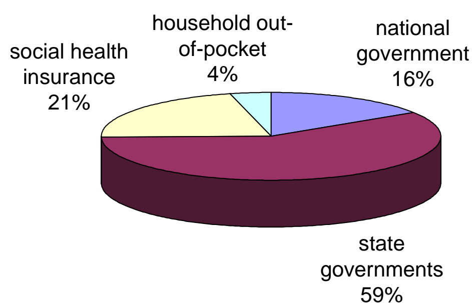
Year	NHE (in million US$)		Per capita Health Spending (in US$)		Health expenditure Indicators (in percent)		NHE by Financing Agent (in percent)				
	Nominal value	Real value	Nominal value	Real value	NHE/GDP	GGHE/GGE	National Government	State Government	Social Health Insurance	Household Out-of-Pocket	All FAs
1997	16.1	16.4	151	155	8.4	10.3	14.5	69.1	10.2	6.2	100.0
1998	15.3	15.3	144	144	7.4	7.9	13.9	67.3	11.8	6.9	100.0
1999	16.7	16.2	156	152	8.1	8.2	13.0	65.6	15.0	6.4	100.0
2000	18.3	17.6	171	164	8.4	8.0	10.3	63.4	20.1	6.1	100.0
2001	20.4	19.4	190	181	9.3	9.7	11.4	65.5	17.6	5.6	100.0
2002	19.0	18.2	177	169	8.5	9.6	9.9	66.3	17.7	6.1	100.0
2003	23.3	22.3	217	207	10.1	10.3	14.7	61.2	19.0	5.1	100.0
2004	24.8	23.3	230	216	11.1	12.7	13.8	61.7	19.8	4.7	100.0
2005	30.6	27.4	281	253	12.8	14.7	15.6	59.2	21.2	4.0	100.0

Figure 1. Health Expenditures by Type of Financing Source: Federated States of Micronesia, 2005



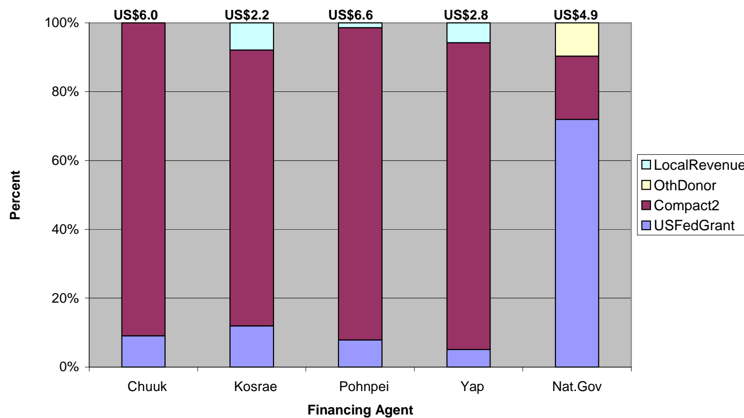
Health funds came mostly from rest-of-the-world or ROW sources (see Figure 1): 56% from the Compact 2 health sector grant; 16% from United States Federal Government agencies' grants; and 2% from other bilateral and multilateral grants and loans, such as those from the Asian Development Bank (ADB), WHO and the United Nations Population Fund (UNFPA). The remaining 16% and 10% came from private sources (household budgets and private sector employer funds) and from government domestic revenue sources, respectively.

Figure 2. Health Expenditures by Type of Spender (Financing Agent): Federated States of Micronesia, 2005



About 75% of health funds were channelled through the public sector (see Figure 2). The state Departments of Health Services operate state hospitals, dispensaries and public health clinics and thus

state government spending accounted for about 60% of total health spending in 2005. The National Government's health spending primarily went towards supporting the operations of public health clinics and state hospitals. Social health insurance spending came to a significant 21% share, while household out-of-pocket spending accounted for the lowest share, at about 4%. In 2005, there were two social health insurance schemes: MiCare, with national coverage; and the Chuuk Health Care Plan, covering only residents of Chuuk State.



The sources of funding for each government financing agent (National Government and individual states) are shown in Figure 3. While state governments obtain most of their health funds from Compact 2 grants(more than 90% for the State of Chuuk), the National Government relies more heavily on grants from United States Federal Government agencies (about 70%).

Of total national health expenditures of US$ 30.6 million, about US$ 27 million could be directly assigned as spending specific to a state. Expenditures such as those for national government general administration and for the management and operation of MiCare and the Chuuk Health Care Plan are among those not assigned to states.

The distribution of expenditures by state is illustrated in Figure 4, showing the distribution for each category of financing agent. For example, the bar for National Government (representing expenditures totalling US$ 3.5 million) shows that about 10% benefited the State of Yap, 35% Pohnpei, 18% Kosrae and 37% Chuuk. A bar showing the distribution of population by state has also been included as a reference. When the distribution of health expenditure by the national and state governments is compared with population distribution by state, the bars clearly show that Kosrae's share of expenditures is larger than its population share (i.e. about 18% of national government spending and about 12% of all state government spending versus a population share of about 7%). On the other hand, Chuuk accounts for about 37% of national government spending and about 33% of all state government spending versus a population share of about 50%.

Figure 4. Financing Agent Spending by State: Federated States of Micronesia, 2005

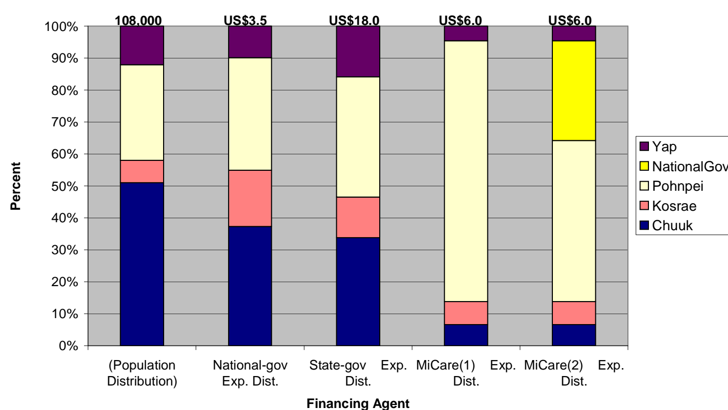
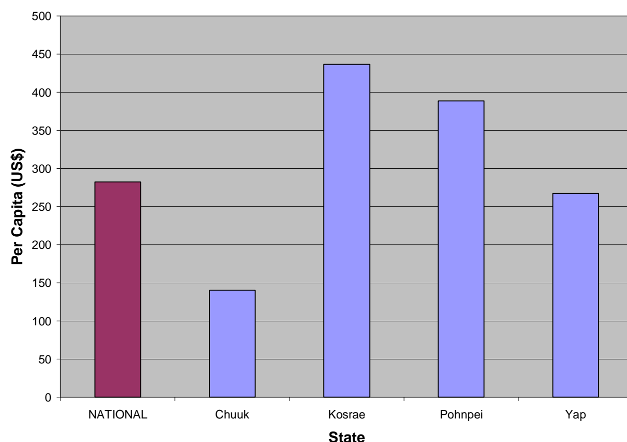


Figure 4 additionally shows the distribution of medical claims paid by MiCare by state of residence of the member. Two bars are shown for MiCare, the first bar showing all claims paid for Pohnpei members combined and the second bar showing the claims paid for Pohnpei members split between national government employees and other Pohnpei members. The National Government is located in Pohnpei and all claims made by its employees would therefore be reflected as Pohnpei claims. Even adjusting for national government employee claims, MiCare claims went mostly towards payment for health care for Pohnpei residents, close to 50% of claims versus 30% of the population.

Per capita health spending (covering all financing agent expenditures) is shown in Figure 5 for the national and state levels. The patterns observed in the state shares of health expenditures in Figure 4 are reflected in the per capita values derived. As expected, the Kosrae and Pohnpei had the highest per capita health expenditures, while Chuuk had the lowest. Yap came closest to the national level for per capita health spending.

Figure 5. Per Capita Health Expenditures by State: Federated States of Micronesia, 2005



3.5 Human resources for health

Development of the health workforce remains a government priority. The need has been partially met through overseas fellowship training and by the several dozen graduates of the Pacific Basin Medical Officer Training Programme from 1991 to 1996, but serious constraints remain. These include the lack of a nursing school and gaps in speciality training for both nurses and physicians. However, the National

Government, in collaboration with the College of Micronesia, is currently planning to establish a nursing school. In addition, Yap State has established a relationship with Palau Community College for the training of nurses.

Government health services also lack specialized allied health professional workers, particularly hospital administrators, epidemiologists, medical record administrators, pharmacists, laboratory technicians, radiologists and environmentalists. Due to limited resources, medical and nursing fellowships have been prioritized, based on state requests.

Four Pacific Open Learning Health Network (POLHN) centres have been established, one in each of the four states, and are providing access to online courses and resources. A full-time Coordinator has been hired to provide support for local health professionals in accessing and participating in online courses and continuing education.

3.6 Partnerships

Apart from the usual hospital-based health care, community participation in health promotion and disease prevention is critical to successful partnerships in the Federated States of Micronesia. Local civil societies, nongovernmental organizations and church groups have all played key roles in increasing public awareness of important health issues.

External partnerships with United States health agencies are largely in the form of funding assistance for programme activities. With the exception of funding through the Amended Compact, infrastructure and capacity development have been on an ad-hoc basis.

The ADB-funded loan, Basic Social Services, is approaching its end. The project was set up to assist the Government in providing capacities in health and education. Activities include training in primary health care and medical coding.

3.7 Challenges to health system strengthening

There are 10 key health system issues confronting the Federated States of Micronesia:

- improving health status;
- setting clear priorities to ensure the most efficient use of resources;
- establishing clear lines of inter- and intra-governmental accountability;
- establishing new health system funding and financial management approaches;
- building managerial capacity;
- testing innovative approaches in every aspect of the system to increase quality, including improving both access for, and responsiveness to, the community;
- introducing cost-effective new technologies;
- focusing on functions that constitute public goods;
- establishing national policies, measurable outputs and standards to be met, including their monitoring and regulation; and
- developing the private health sector.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : National Health Statistics Office

Title 2 : *2000 Population and Housing Census report*
Operator : Statistics Division, Department of Economic Affairs
Web address : http://www.spc.int/prism/

Title 3 : *FSM 2005 National health accounts*

Title 4 : Department of Health and Social Affairs

5. ADDRESSES

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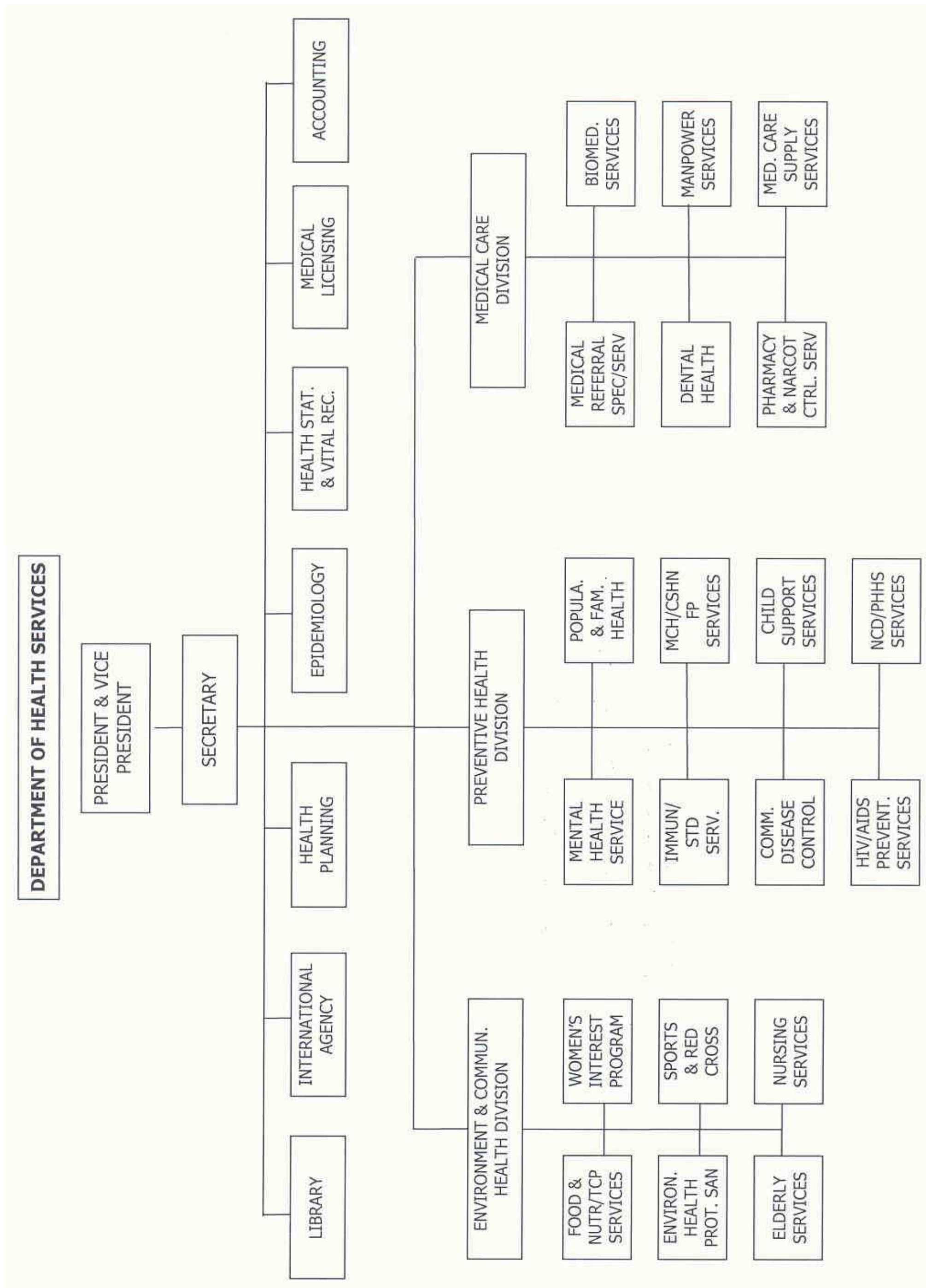
Postal Address	:	P.O. Box PS 70, Palikir, Pohnpei State, Federated States of Micronesia 96941
Official Email Address	:	health@fsmhealth.fm
Telephone	:	(691) 3202872
Fax	:	(691) 3205263
Office Hours	:	0800 – 1700 Mon. – Fri.

WHO REPRESENTATIVE IN THE SOUTH PACIFIC

Office Address	:	Level 4 Provident Plaza One, Downtown Boulevard 33 Ellery Street, Suva
Postal Address	:	P.O. Box 113, Suva, Fiji
Official Email Address	:	who@sp.wpro.who.int
Telephone	:	(679) 3234 100
Fax	:	(679) 3234 166/ 3234 177
Office Hours	:	0800 – 1700 Mon. – Fri.
Website	:	http://www.wpro.who.int/southpacific

6. ORGANIZATIONAL CHART: Department of Health and Social Affairs



MICRONESIA, FEDERATED STATES OF

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	0.70						2008	1
2	Estimated population ('000s)	108.03		54.35		53.68		2008 est	2
3	Annual population growth rate (%)	...		...		...			
4	Percentage of population								
	- 0–4 years	13.00		13.40		12.70		2008 est	3
	- 5–14 years	24.00		24.50		23.50		2008 est	3
	- 65 years and above	3.40		2.80		3.80		2008 est	3
5	Urban population (%)	22.40 [a]		...		...		2007 est	4
6	Crude birth rate (per 1000 population)	23.30		...		...		2003	5
7	Crude death rate (per 1000 population)	4.40		...		...		2003	5
8	Rate of natural increase of population (% per annum)	1.89 [b]		...		...		2003	5
9	Life expectancy (years)								
	- at birth	69.00		67.00		70.00		2006 est	6
	- Healthy Life Expectancy (HALE) at age 60	...		10.90		11.50		2002 est	7
10	Total fertility rate (women aged 15–49 years)	4.40						2000	5
	Socioeconomic indicators								
11	Adult literacy rate (%)	92.40		92.90		91.90		2000	8
12	Per capita GDP at current market prices (US$)	2254.00						FY2006 est	9
13	Rate of growth of per capita GDP (%)	0.60 [b]						FY2002 est	10
14	Human development index	...							
	Environmental indicators	Total		Urban		Rural			
15	Proportion of vehicles using unleaded gasoline (%)	...		...		...			
16	Health care waste generation (metric tons per year)	...		...		...			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	2	...	...	0	0	0	2006	5
	- Type B	1	...	...	5	...	...	2006	5
	- Type C	1	...	...	0	0	0	2006	5
	- Type E	...	...	...	...	...	...		
	- Unspecified	11	...	...	0	0	0	2006	5
	Cholera	0	0	0	0	0	0	2006	5
	Dengue/DHF	10	...	...	...	...	...	2008	11
	Encephalitis	0	0	0	0	0	0	2006	5
	Gonorrhoea	55	...	...	...	...	...	2005	10
	Leprosy	141	...	...	...	...	...	2007	11
	Malaria	...	...	...	...	...	...		
	Plague	0	0	0	0	0	0	2006	5
	Syphilis	293	...	...	...	...	...	2005	10
	Typhoid fever	0	0	0	0	0	0	2005	11

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	10 964	…	…	…	…	…	2006	5
19	**Diarrhoeal diseases**	3326	…	…	…	…	…	2006	5
20	**Tuberculosis**								
	- All forms	137 [i]	…	…	…	…	…	2007	11
	- New pulmonary tuberculosis (smear-positive)	47 [i]	…	…	…	…	…	2007	11
21	**Cancers**								
	All cancers (malignant neoplasms only)	…	…	…	51 [c]	…	…	2000	10
	- Breast	…	…	…	…	…	…		
	- Colon and rectum	…	…	…	…	…	…		
	- Cervix			…			…		
	- Oesophagus	…	…	…	…	…	…		
	- Leukaemia	…	…	…	…	…	…		
	- Lip, oral cavity and pharynx	…	…	…	4 [c]	…	…	2000	10
	- Liver	…	…	…	…	…	…		
	- Stomach	…	…	…	14 [c]	…	…	2000	10
	- Trachea, bronchus, and lung	…	…	…	8 [c]	…	…	2000	10
22	**Circulatory**								
	All circulatory system diseases	2864	…	…	…	…	…	2005	5
	- Acute myocardial infarction	…	…	…	…	…	…		
	- Cerebrovascular diseases	…	…	…	…	…	…		
	- Hypertension	2022	…	…	…	…	…	2005	5
	- Ischaemic heart disease	…	…	…	…	…	…		
	- Rheumatic fever and rheumatic heart diseases	…	…	…	…	…	…		
23	**Diabetes mellitus**	8686	…	…	…	…	…	2005	5
24	**Mental disorders**	…	…	…	0	0	0	2000	10
25	**Injuries**								
	All types	1313	…	…	…	…	…	2006	12
	- Homicide and violence	…	…	…	6 [c]	…	…	2000	10
	- Motor and other vehicular accidents	…	…	…	4 [c]	…	…	2000	10
	- Occupational injuries	…	…	…	…	…	…		
	- Suicide	…	…	…	11 [b]	…	…	2000	10
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Diseases of the respiratory system	10 063	…	…	9129.92	…	…	2006	5
	2. Diseases of the circulatory system	2864	…	…	2598.44	…	…	2006	5
	3. Infectious and parasitic diseases	2026	…	…	1838.14	…	…	2006	5
	4. Pregnancy, childbirth and diseases of the puerperium	1739		1739	1577.75		3209.08 [a]	2006	5
	5. Endocrine, nutritional and metabolic diseases	787	…	…	714.03	…	…	2006	5
	6.								
	7.								
	8.								
	9.								
	10.								

INDICATORS		DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Endocrine, nutritional and metabolic diseases	55	…	…	49.90	…	…	2006	5
	2. Diseases of the respiratory system	50	…	…	45.36	…	…	2006	5
	3. Diseases of the circulatory system	45	…	…	40.83	…	…	2006	5
	4. Infectious and parasitic diseases	30	…	…	27.22	…	…	2006	5
	5. Neoplasms	15	…	…	13.60	…	…	2006	5
	6.								
	7.								
	8.								
	9.								
	10.								
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					70.00		2000	12
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					NR		2007	11
30	**Percentage of pregnant women with anaemia**					51.00		2000	12
31	**Neonatal mortality rate (per 1000 live births)**	11.00		…		…		2004 est	6
32	**Percentage of newborn infants weighing at least 2500 g at birth**	82.00		…		…		2000	12
33	**Immunization coverage for infants (%)**								
	- BCG	82.00		…		…		2007	11
	- DTP3	79.00		…		…		2007	11
	- POL3	79.00		…		…		2007	11
	- Hepatitis B III	90.00		…		…		2007	11
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			…			4	2000	10
	- Eclampsia			…			…		
	- Haemorrhage			…			6	2000	10
	- Obstructed labour			…			…		
	- Sepsis			…			…		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	…	…	…	2007	11
	- Diphtheria	0	0	0	…	…	…	2007	11
	- Hib meningitis	…	…	…	…	…	…		
	- Measles	0	0	0	…	…	…	2007	11
	- Mumps	0	0	0	…	…	…	2007	11
	- Neonatal tetanus	0	0	0	…	…	…	2007	11
	- Pertussis (whooping cough)	47	…	…	…	…	…	2007	11
	- Poliomyelitis	0	0	0	…	…	…	2007	11
	- Rubella	0	0	0	…	…	…	2007	11
	- Total Tetanus	0	0	0	…	…	…	2007	11

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		…			
37	Health infrastructure					
	Public health facilities	- General hospitals	0	0	2006	12
		- Specialized hospitals	0	0	2006	12
		- District/first-level referral hospitals	4 [d]	303 [d]	2006	12
		- Primary health care centres	6 [e]	18 [e]	2006	12
	Private health facilities	- Hospitals	6 [f]	44 [f]	2006	12
		- Outpatient clinics	…	…		
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)			31.00	2007p	13
	- total expenditure on health as % of GDP			13.30	2007p	13
	- per capita total expenditure on health (in US$)			279.28	2007p	13
	Government expenditure on health					
	- amount (in million US$)			30.00	2007p	13
	- general government expenditure on health as % of total expenditure on health			95.80	2007p	13
	- general government expenditure on health as % of total general government expenditure			18.90	2007p	13
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			…		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			4.20	2007p	13
	Exchange rate in US$ of local currency is: 1 US$ =			1.00	2005	13
39	Health insurance coverage as % of total population			…		

	INDICATOR		DATA							Year	Source
40	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	62	…	…	…	…	…	…	2005	5
		- Ratio per 1000 population	0.54	…	…	…	…	…	…	2005	5
	Dentists	- Number	13	…	…	…	…	…	…	2005	5
		- Ratio per 1000 population	0.11	…	…	…	…	…	…	2005	5
	Pharmacists	- Number	16 [g]	…	…	…	…	…	…	2005	5
		- Ratio per 1000 population	0.14	…	…	…	…	…	…	2005	5
	Nurses	- Number	229	…	…	…	…	…	…	2005	5
		- Ratio per 1000 population	2.01	…	…	…	…	…	…	2005	5
	Midwives	- Number	20	…	…	…	…	…	…	2005	5
		- Ratio per 1000 population	0.18	…	…	…	…	…	…	2005	5
	Paramedical staff	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
41	Annual number of graduates	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	115	...	...	...	...	...	...	2001	10
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	33.00	33.00	33.00	2006 est	6
45	Under-five mortality rate (per 1000 live births)	41.00	41.00	41.00	2006 est	6
46	Proportion of 1 year-old children immunised against measles	92.00	...	...	2007	11
47	Maternal mortality ratio (per 100 000 live births)	317.00 [h]			2003	5
48	Proportion of births attended by skilled health personnel	...				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	...				
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	80.00			2000	12
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults a	...	...	...		
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	...	...	...		
57	Malaria death rate per 100 000 population	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	100.00	...	...	2007	11
61	Tuberculosis death rate per 100 000 population	9.00	...	...	2007	11
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	97.00	...	...	2007	11
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	60.00	...	...	2006	11
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	94.00	95.00	94.00	2006	14
65	Proportion of population using an improved sanitation facility	25.00	61.00	14.00	2006	14
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Revised data
b	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
c	Death certificates based on underlying causes
d	Figure refers to state hospitals
e	Figure refers to community health centers
f	Figure includes 1 private hospital with 36 beds and 5 private clinics with 8 beds
g	Figure refers only to pharmacy technicians
h	Figure is based on child-bearing age 15-44 years old
i	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

Sources:	
1	2008 Pocket Statistical Summary (PSS) Secretariat of the Pacific Community, Statistics and Demography. Accessed on 12 May 2009 from http://www.spc.int/sdp/
2	*FSM - Population Estimates and Projections* . Division of Statistics, Federated States of Micronesia [http://www.spc.int/prism/country/fm/stats/Projections/proj-index.htm]
3	*Demographic Tables for the Western Pacific 2005-2010* . Manila, World Health Organization Regional Office for the Western Pacific, 2005.
4	Urban and Rural Areas 2007. United Nations, Department of Economic and Social Affairs, Population Division. New York 2008. [http:///www.unpopulation.org].
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6	World Health Statistics 2008. Geneva, World Health Organization, 2008.
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9	FSM Department of Finance and Administrationl FSM Social Security Administration [www.spc.int/prism/country/fm/stats/Economic/Nacc't/gdp-current.htm].
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12	Department of Health and Social Affairs.
13	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html.
14	World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). *Progress on Drinking Water and Sanitation: Special focus on Sanitation* . UNICEF, New York and WHO, Geneva, 2008. [http://www.wssinfo.org/en/40_mdg2008.html]

MONGOLIA

1. CONTEXT

1.1 Demographics

Mongolia is the fifth largest country in Asia, with a total area of 1.6 million square kilometres. In 2008, the population reached 2.7 million, giving an overall population density of 1.7 persons per square kilometre, and making it the least densely populated country in the world.

The population is predominantly young, with 28.1% under the age of 15 years, 67.8% between five and 64 years of age, and only 4.1% aged 65 years or over. Of the total population, 61.4% is living in cities. Males comprise 48.8% of the total population. The adult literacy rate is reported to be 97.8%.

Since 1990, Mongolia has been undergoing a demographic transition defined by a reduction in fertility and death rates and an increase in ageing. The population growth rate decreased from 2.7% in 1990 to 1.17% in 2003-2006. In 2008, the rate reached 1.8%.

The crude birth rate per 1000 population fell by half between 1990 and 2003, from 35.3 to 18. It then remained fairly stable, before increasing to 23.7 in 2008. The total fertility rate fell by half during the period from 2000 to 2003 compared with the rate (4.3) in 1990. The rate was stable at 1.9 from 2004 to 2006, before increasing to 2.6 in 2008.

Due to increased urbanization and socioeconomic development in recent years, rural-to-urban migration has been increasing. In 2008, 38.6% of the population were residing in rural areas, a decrease from 42.8% in 2000.

1.2 Political situation

Mongolia is a democratic parliamentary country. The centralized governmental structure is divided into three branches: the executive, which is the Government, chaired by the Prime Minister; the legislative, represented at the national level by the Ikh Khural (the Parliament); and the judicial, led by the Supreme Court.

The President of Mongolia is a figurehead for the country and is directly elected for a four-year term. Political parties that have seats in Parliament are eligible to nominate their candidates to the Presidential election. Although most political power is held by the Prime Minister and Parliament, the President is Commander-in-Chief of the armed forces and heads the National Security Council, as well as appointing all the judges, the Prosecutor General, the Deputy Prosecutor General and ambassadors. The last parliamentary election was held in 2008. Presidential elections take place once every four years; the next will be held in mid-May 2009.

1.3 Socioeconomic situation

The Mongolian Statistical Yearbook shows 2007 as a good year for the general government budget. Total budget revenue and grants have been rising in recent years, increasing 2.6 times in 2007 compared with 2004. In comparison with 2006, expenditures for salaries and wages in the current year increased by 48.8%, while social security fund and social assistance fund expenditures increased by 47.3% and 53.5%, respectively, as a result of increases in salaries, pensions and welfare payments.

The overall budget deficit as a percentage of GDP was 1.8% in 2004. However, there was a budget surplus amounting to 2.6% of GDP in 2005, 3.3% in 2006, and 3.9% in 2007, based on preliminary estimations. The government budget surplus has been increasing since 1999. The budget surplus as a percentage of GDP was 10.0% in 2006, before increasing 0.6 points to 10.6 % in 2007.

The preliminary GDP figure for 2007, which is 4557.5 billion tugriks (US$ 3199.36 million) shows an increase of 9.9% or 299.1 billion tugriks (US$ 209.(7 million) compared with the previous year. This

increase was achieved mainly due to growth of 15.8% in the agriculture sector, 32.3% in manufacturing , 22.4% in construction, and 18.6% in transport, storage and communications.

The Mongolian Statistical Yearbook 2007 indicates that, according to the World Bank Atlas method, the preliminary estimate for per capita GDP in 2007 reached US$ 1496.2, an increase of US$ 290 compared with 2006.

The report of the 2006 Household Income and Expenditure Survey indicates that monthly average household income had increased by 16.4% in terms of 2005 prices. A comparison of poverty incidence, based on the results of the 2006 Household Income and Expenditure Survey and the 2002-2003 Living Standard Measurement Survey, shows that the poverty headcount, the poverty gap and poverty severity have all decreased since 2002.

The main indicator showing labour-market development and the economic activities of the population is the labour force participation rate. The rate has decreased slightly in the last few years. It reached 64.2% in 2007, a 0.2% decline from 2004 and 2006, and a 0.7% rise from 2005. In 2007, the number of people registered as unemployed was 29.9 thousand, a 15.8% fall from 2004, and 9.1% drop from 2005 and 2006. The male and female shares of the economically active population and employed population are close, while more females are registered as unemployed.

1.4 Risks, vulnerabilities and hazards

Mongolia has a unique geographical structure, with steppes, semi-deserts and deserts, high mountain ranges and dry, lake-dotted basins. The climatic conditions are predominantly reflected by its desert steppe, with diverse soil and vegetation patterns, by its range of natural biological features, and by its geomorphological structure. The climate is defined as semi-arid continental, with dry and very dry and cool-to-warm ranges. The average altitude is 1580 metres above sea level and the average rainfall is 203 millimetres per year. The country is prone to natural hazards, including drought, flood, steppe and forest fires, and human and animal epidemic diseases. As the Mongolian economy is heavily reliant on herding and agriculture, harsh winters and periodic droughts, not only have adverse effects on livestock and agriculture, but also on the health status of the disaster-affected population.

The annual report of National Emergency Management Agency indicates that, in 2008, a total of 155 steppe and forest fires were registered, affecting approximately 1 million hectares of land and causing losses amounting to 13.4 billion tugriks (US$ 9.40 million). In the same year, 37 natural hazards, such as storms, flood, heavy rain and thunder occurred, resulting in the deaths of 80 people and 904 996 head of livestock.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Since the beginning of the 1990s, the mortality pattern has shown a rapid epidemiological transition. Cardiovascular diseases, cancer and injuries and poisonings have increased, while deaths from communicable and respiratory diseases have declined. The end of the 1990s saw injuries and poisonings exceed respiratory diseases as a cause of death.

The Mongolian Steps Survey on the Prevalence of Non-Communicable Disease Risk Factors 2006, conducted by the Ministry of Health, revealed that nine out of every 10 people (90.6% of the surveyed population) had at least one risk factor for developing a noncommunicable disease (NCD), one in five people (20.7%) had three or more risk factors or were at high risk, and one in every two males aged 45 years and above were at high risk of developing an NCD. The National Programme on NCD Control and Prevention for 2006-2015 aims to reduce risk factors, thus contributing to a reduction in NCD morbidity and mortality.

2.2 Outbreaks of communicable diseases

In 2008, 43 793 cases of infectious disease were registered, with an incidence rate of 164.7 per 10 000 population, an increase from 157.1 in 2007. Sexually transmitted infections (40.3%), viral hepatitis (23.7%), tuberculosis (9.6%) are the most common infections.

The HIV epidemic in Mongolia is classified by WHO as low-prevalence. Although HIV/AIDS prevalence is low, however, the country is at high risk of an epidemic due to its relatively young population, the steady increase in cases of STIs in recent years, increased population migration, and growing HIV/AIDS epidemics in neighbouring countries, China and Russia. A National Committee on HIV/AIDS Prevention, chaired by the Deputy Prime Minister, has been established, which will contribute to MDG achievements by ensuring integrated coordination and management of HIV/AIDS prevention measures and facilitating intersectoral collaboration. The first HIV infection was reported in 1992. As of 2008, 49 HIV/AIDS cases had been reported, of which 13 were registered in 2008. Of the registered cases, 78.4% were male. Eight people have died of AIDS-related conditions.

Mongolia is among the seven countries in the WHO Western Pacific Region with the highest tuberculosis (TB) incidence. The TB incidence rate per 10 000 population increased from 11.7 in 1998 to 20.5 in 2007. New TB cases, which comprise 9.6% of all reported communicable diseases, reached 15.9 per 10 000 population in 2008, decreasing from 16.7 in 2007.

The country has succeeded in reducing the TB case fatality rate as a result of directly observed treatment, short-course (DOTS) implementation since 1995, with the proportion of TB cases cured under DOTS increasing from 80.0% in 2000 to 84.0% in 2007. The TB death rate per 100 000 population was 29.0 in 2007. However, despite the fact that diagnosis and treatment of tuberculosis have improved and the number of deaths due to TB has been decreasing, TB incidence is on the rise, making attainment of the MDG target by 2015 a challenge.

2.3 Leading causes of mortality and morbidity

Mongolia has been experiencing a gradual epidemiological transition in morbidity and mortality patterns since 1990. Consequently, lifestyle- and behaviour-dependent diseases, such as circulatory system diseases, cancer and injuries, have become the leading causes of morbidity and mortality.

As of 2008, the leading causes of morbidity per 10 000 population were diseases of the respiratory (972.86), digestive (839.45), genito-urinary (772.60), and circulatory (645.63) systems, and injuries and poisonings (422.44). The rates for genito-urinary, circulatory and digestive system diseases, and injuries and poisoning have increased year by year in recent years, with 2008 rates showing an increase of 25%-40% compared with 2001. When the incidence of the five leading causes of population morbidity were stratified by place of residence, urban vs rural, overall morbidity was seen to be higher in urban settings. However, the incidence rates of four of the leading causes of morbidity, except injuries, were higher in rural areas.

Diseases of the circulatory system, neoplasms and injuries have remained the leading causes of mortality since 2000. The statistics show that, in 2008, the leading causes of mortality per 10 000 population were diseases of the circulatory system (20.54), neoplasms (11.80), injuries and poisonings (9.33), diseases of digestive system (5.27), and certain conditions originating in the perinatal period (2.42). Deaths due to these diseases are increasing every year.

Each year 5500-6000 people (one in every three deaths) die due to diseases of the circulatory system, which remains the leading cause of mortality. The gender-specific mortality rates are 22.02 per 10 000 for males and 18.76 per 10 000 for females.

Neoplasms have remained the second leading cause of population mortality for the past 10 years. The gender-specific mortality rates for cancer per 10 000 population are 13.45 for males and 10.1 for females. Among males, the leading types of cancer are of the liver, stomach, lung, oesophagus and prostate. Among females they are of the liver, cervix, uterus, stomach, oesophagus and lung.

Mortality due to injuries and poisonings has increased sharply in recent years and was ranked the fifth leading cause of mortality in 1990, before moving to fourth place in 1994. It has been ranked third since 2000. The mortality rate per 10 000 population almost doubled from 2000 to 2008, from 7.6 to 9.33.

2.4 Maternal, child and infant diseases

As a result of successful implementation of the State Policy on Population Development, the State Policy on Public Health, the Maternal Mortality Reduction Strategy, the National Programme on Reproductive Health, and the Integrated Management of Childhood Illness (IMCI) strategy, maternal and child mortality has continued to fall in recent years.

The national maternal mortality ratio (MMR) per 100 000 live births for 1990-2000 was considered high compared with regional and developed countries (170 per 100 000 in 1996) but, by 2006, it had fallen to 69.7, which was the lowest for 10 years. However, due to the dramatic increase in the number of births in 2007, from 47 361 in 2006 to 55 634, the MMR per 100 000 live births in 2007 increased to 89.6. According to 2008 health statistics, the ratio reached 49.0, a decrease of 40.6 compared with 2007. Of the maternal mortality cases registered in 2008, 29.0% were due to both pregnancy complications and post-delivery complications. Birth complications and other health problems account for 9.7% and 32.3% of maternal mortality cases, respectively.

Mongolia has re-defined its MDG goals to reduce the under-five mortality rate to 21.0 per 1000 live births and the infant mortality rate to 15 per 1000 live births by 2015. The under-five mortality rate per 1000 live births decreased almost fourfold from 87.5 in 1990 to 23.4 in 2008. In addition, the infant mortality rate per 1000 live births decreased to 19.6 in 2008 from 63.4 in 1990. According to the 2007 short programme review for child health, the proportion of child deaths due to acute respiratory infection and diarrhoea has fallen, while neonatal causes and injuries have increased as proportional causes. Neonatal deaths represent 62% of infant deaths, and 80% of newborn deaths occur in the first week of life. Prevalence rates for wasting, underweight and stunting have generally fallen since 2000; stunting rates have decreased less rapidly, with 26.2% of children still stunted in 2004. Prevalence rates for iodine and iron deficiency have fallen in the last two to three years, but remain a problem, with 22% of children under five years of age being anaemic.

2.5 Burden of disease

As mentioned before, Mongolia has been experiencing an epidemiological transition over the last decade. The prevalence of lifestyle-related chronic diseases is increasing and has become an important public health issue. Currently, circulatory diseases, cancer, injuries and accidents are the leading causes of mortality.

Respiratory and gastrointestinal diseases still dominate the morbidity pattern. Morbidity due to infectious diseases is, however, still likely to rise. Infectious diseases like HIV/AIDS, STI, TB, viral hepatitis and zoonotic diseases, which are related primarily to risk factors such as behaviour, lifestyle choices and living conditions, are showing a tendency to increase.

In the last few years, an increasing number of deaths have been caused by suicide, homicide and traffic accidents. The suicide rate is four times higher among men than women and the homicide rate seven times higher, and men are five times more likely than women to die as a result of traffic accidents.

The First Mongolian Steps Survey on the Prevalence of NCD Risk Factors, conducted in 2005, showed that the surveyed population were exposed to many risk factors leading to noncommunicable diseases. The overall prevalence of current smokers was 28.0%, of which 24.2% were daily smokers and 3.4% non-daily smokers. The Survey showed that, over the preceding 12 months, about 60.8% (±0.02) of the population (65.1% of males and 56.2% of females) had been drinking occasionally, 5.0% had consumed alcohol in moderation (8.8% of males and 1.0% of females) and only 0.7 (±0.04)% had been drinking frequently (1.1% of males and 0.2% of females), indicating that a relatively small proportion of the population tends to drink alcohol on a frequent basis. In addition, about 23% of the surveyed population reported low levels of physical activity.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health is the Government's central administrative body responsible for health policy formulation, planning, regulation and supervision, and for ensuring implementation of health-related activities and standards by its implementing institutions and agencies.

The Ministry's mission is to build favourable living conditions for people by upgrading the quality of health care, public health services and health care preventive actions to international standards.

Within the scope of its mission, the Ministry of Health aims to fulfil the following strategic objectives:

- To develop health laws, policies, long and midterm strategies and programmes, and provide policy guidelines;
- to ensure leadership of public administration and human resources management and create effective, accountable and transparent work conditions;
- to administer and coordinate public health policy implementation to support health-promoting settings;
- to administer and coordinate health care and services policy implementation;
- to provide financial management for the health sector;
- to carry out monitoring and evaluation of the implementation and output of health laws, policies, programmes and projects, and provide information for clients;
- to administer and coordinate pharmaceutical and medical supplies policy implementation; and
- to develop and coordinate international cooperation in line with health sector policies, priorities and strategies.

3.2 Organization of health services and delivery systems

The health care system is characterized by three levels of care and its prevailing principle is to deliver an equitable, accessible and quality health care service to every person. Primary health care is provided mainly by family group practices in Ulaabaatar, the capital city, in *aimag* centres, and in *soum* and inter-*soum* hospitals in *aimag*s. Secondary care takes place in district general hospitals in Ulaanbaatar and in *aimag* general hospitals. Tertiary care is provided in major hospitals and specialized centres in Ulaanbaatar.

By 2008, 15 specialized hospitals, three regional diagnostic and treatment centres, 18 *aimag* general hospitals, 12 district general hospitals, six rural general hospitals, 35 inter-*soum* hospitals, 286 *soum* hospitals, 228 family group practices and 1063 private clinics were delivering health care and services to the population.

3.3 Health policy, planning and regulatory framework

Numerous laws, policies and national public health programmes are being implemented in the health sector. The State Public Health Policy, approved in November 2001, is an important policy document that clearly defines the policy principles, directions and implementation mechanisms. With the support of the Government of Japan, the Ministry of Health has developed the Health Sector Master Plan, a long-term policy framework for 2006-2015, which represents the Ministry's first comprehensive documentation of its future direction and incorporates the Government's commitment to the MDGs.

The Mid-Term Implementation Framework of the Health Sector Master Plan for the period of 2007-2010 was approved by the Health Minister's Order #43 of 2007. In the Health Sector Master Plan, seven key areas and 24 strategies have been incorporated to facilitate the delivery of socially responsive, equitable, accessible and quality services to all. The overall outcomes to be achieved by 2015 include increased life expectancy; a reduction in the infant mortality rate; a reduced child mortality rate; a reduced maternal mortality ratio; improved nutritional status, particularly micronutrient status among children and women; improved access to safe drinking water and basic sanitation; prevention of HIV/AIDS; sustainable population growth; reduced household health expenditure, especially among the poor; a more effective,

efficient and decentralized health system; and an increase in the number of client-centred and user-friendly health facilities and institutions.

3.4 Health care financing

The statistics for 2000-2008 shows that there has been an increase in health expenditure in recent years. Total health expenditure increased by 4.7 times in 2008 compared with 2000. Meanwhile, health expenditure as a percentage of GDP was stable at 3.3% in 2005-2006 and increased to 6.2% in 2007.

An overview of the health sector budget for the period from 2000 to 2008 by its main sources reveals the Government (79.0%) and the Health Insurance Fund (18.0 %) as the major contributors, followed by revenues from fees for services and supplementary activities (3.0%). The percentage of health financing from the government budget increased in 2006-2008, while the percentage from the Health Insurance Fund and from revenues from fees for services and other supplementary activities decreased.

Health insurance coverage (introduced in 1994) reached 78.3% of the population in 2007, an increase from 74.4% in the previous year. Health Insurance Fund income and expenditure have been increasing, year by year, since 2000. As of 2008, over 81.7% of Health Insurance Fund expenditure was on inpatient care, 14.3% on outpatient care, and the remaining 4.0 % on discounted drugs, sanatoriums and other costs.

In 2008, the health expenditure breakdown by level of care was: 28.57% to tertiary care, 39.26% to secondary care and 32.15% to primary health care.

3.5 Human resources for health

Despite government efforts to protect the health of the population, improve health care services, enhance health systems, create a favourable legal environment, increase the efficiency of public financing and improve the social protection of health workers, many challenging human resource issues remain. In particular, there is a shortage of health professionals in rural areas owing to great discrepancies in distribution. Rural health facilities, particularly *soum* and *intersoum* hospitals, are experiencing shortages of doctors and other health professionals. As of 2008, there were 2.8 physicians per 1000 population in urban areas, while there were 2.9 physicians per 1000 in rural areas, and nine *soums* had no medical doctors. In addition, the continued overproduction of physicians has resulted in a high physician-nurse ratio of 1:1.17, which is very distorted compared with international standards.

Most health sector human resource issues require the involvement and cooperation of multiple sectors. In that regard, a high level Inter-sectoral Coordinating Committee on Health Sector Human Resources, comprising representatives of the Government, ministries and international donors, has been established with a view to improving political commitment and donor support and funding to coordinate the implementation of health sector human resource policies and strategies at the national level. Priority areas and a strategy for action for the Committee have been approved by the Prime Minister and the Committee Chairman. Within the action plan, priority actions have been identified, including, among others, introducing a separate and independent labour-norm- and performance-based salary system for health professionals, varying according to differences in responsibility and geographical location; developing multiple-choice incentive packages to encourage specialists to work in rural, remote areas; and revising and renewing the accreditation criteria for medical training institutions.

3.6 Partnerships

Information technology contributes greatly to the health sector in terms of upgrading health service quality, providing patient-friendly health services, easing the workloads of health professionals, and improving the efficiency and quality of health information. In recent years, there has been an intensive programme to introduce the latest information and communication technologies into the health sector. As a developing country, donor support has been playing an important role in the development of telemedicine. Since 2001, the Cardiovascular Diagnostic Center project has been implemented with the support the Government of Luxembourg in eight selected *aimags*. Within the project, based on a telemedicine network linking the selected *aimags* and the Cardiovascular Center at Shastin's Clinical Hospital in Ulaanbaatar, cardiovascular diagnosis and treatment consultations have been provided to

remote areas. As a result of the project, not only has rural doctors' capacity for diagnosing and treating cardiovascular diseases increased, but also patients in rural areas have received good quality and accessible cardiovascular care, decreasing patient referrals from rural areas to Ulaanbaatar city.

In addition, the Ministry of Health has been implementing a project on Telemedicine Support to Promote Maternal and Newborn Health in Remote Areas, with financial support from the Government of Luxembourg and UNFPA, since 2007. The objective of the project is to establish a maternal and newborn health telemedicine network to effectively assist rural health care providers in delivering quality reproductive health services to remote populations. Through the operational telemedicine network on maternal and newborn health, it is aimed to strengthen the capacity of rural health providers in selected *aimags* to provide quality maternal and newborn services and build a multidisciplinary team to provide integrated quality care to women with complications during pregnancy and childbirth, as well as to newborn babies.

3.7 Challenges to health system strengthening

The Government Plan of Action for 2008-2012 aims to expand the inter-hospital network and telemedicine diagnosis and treatment. General hospitals and specialized centres (15 health organizations) in Ulaanbaatar have been connected to an inter-hospital network that will serve as a basis for the expansion of the network to *aimag* and district hospitals.

The use of e-medical records for patients is considered to be one of the important advantages of the network, which will help in ensuring timely, quality and accessible health services to the population and create a population health database. To ensure the network between health organizations functions well, certain issues need to be resolved in the coming years, including training and capacity building of information technology specialists, supply of equipment and devices to health organizations, use of e-hospital software for e-medical records and patient databases, and the legal framework for confidentiality and security of patient records.

In addition, although health expenditure as a percentage of GDP is 6.2% in 2007, total health expenditure has increased in recent years. An increase in the number of inpatients and outpatients has led to a growing demand for health services. Increasing the budget for the health sector and reducing the percentage of funding from direct fees for services is in accordance with the Regional Strategy on Health Financing. However, there is a also need for a policy on health financing to utilize an appropriate financing mechanism, expand the contribution of the Health Insurance Fund and protect the population from health-related poverty while ensuring the quality and accessibility of health services.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : *Health Sector Strategic Master Plan 2005*
Operator : Ministry of Health
Specification : Contains analyses, tables and graphs depicting the patterns of health care spending in the country

Title 2 : *Health indicators book 2008*
Operator : Government Implementing Agency- Department of Health
Specification : Describes trends in population mortality and morbidity, provides health statistics and financial indicators
Web address : http://doh.gov.mn

Title 3 : *Mongolian Steps Survey on the Prevalence of Non-Communicable Disease Risk Factors, 2006*
Operator : Ministry of Health
Specification : The first national representative survey on the prevalence of NCD risk factors, supported by WHO.
Web address : http://www.moh.mn/
Title 4 : *Statistical year book 2007*
Operator : National Statistics Office
Specification : Includes information on the social and economic indicators of the country.

Title 5	:	*Memorandum of understanding on health sector human resource development in Mongolia*
Operator	:	Ministry of Health, 2006
Specification	:	Health and non-health sectors, including education, social welfare, justice and economy, as well as international organizations, have agreed to collaborate on health sector human resource development issue to collectively fulfil action strategies
Title 6	:	*Priority areas and strategy for action for the Intersectoral Coordinating Committee on Health Sector Human Resource Development*
Operator	:	Ministry of Health, 2007
Specification	:	Plan of action in human resources development in the health sector approved by the Prime Minister of Mongolia and Chairman of the Committee
Title 7	:	*Report on population's morbidity and mortality state as of 2008*
Operator	:	Ministry of Health
Specification	:	A report prepared for the National Security Council and includes population's morbidity and mortality in the year of 2008
Title 8	:	*Introduction to the Ministry of Health, Mongolia*
Operator	:	Ministry of Health, 2007
Specification	:	The brochure, published in Ulaanbaatar in 2007, includes information regarding the mission and functions of Ministry of Health, departmental duties and organizational structure, as well as listing principal health policy documents etc.
Title 9	:	*Approval of strategic objectives, structural changes and organizational structure of Ministries*
Operator	:	Cabinet Secretariat of Mongolia, 2008
Specification	:	Resolution of the Government of Mongolia which approved strategic objectives, organizational structures and functions as well as staff of Ministries
Title 10	:	*Annual report of the National Emergency Management Agency for 2008*
Operator	:	National Emergency Management Agency
Features	:	Unpublished report
Specification	:	The report provides information on the numbers and types of emergencies that occurred, losses due to emergency situations and responses taken
Title 11	:	*Report of the Short Programme Review for Child Health*
Operator	:	WHO, 2007
Features	:	Meeting report
Specification	:	The report was prepared by the WHO Regional Office for the Western Pacific for Governments of Member States in the Region and for those who participated in the Short Programme Review for Child Health, held in Mongolia in 2007
Title 12	:	Current state of and challenges for the health sector
Operator	:	Ministry of Health
Features	:	Unpublished speech
Specification	:	The report prepared for hearing at Session of the Parliament of Mongolia

5. ADDRESSES

MINISTRY OF HEALTH

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Postal Address	:	Government Building-8, Olympic Street-2 Ulaanbaatar-210648, Mongolia
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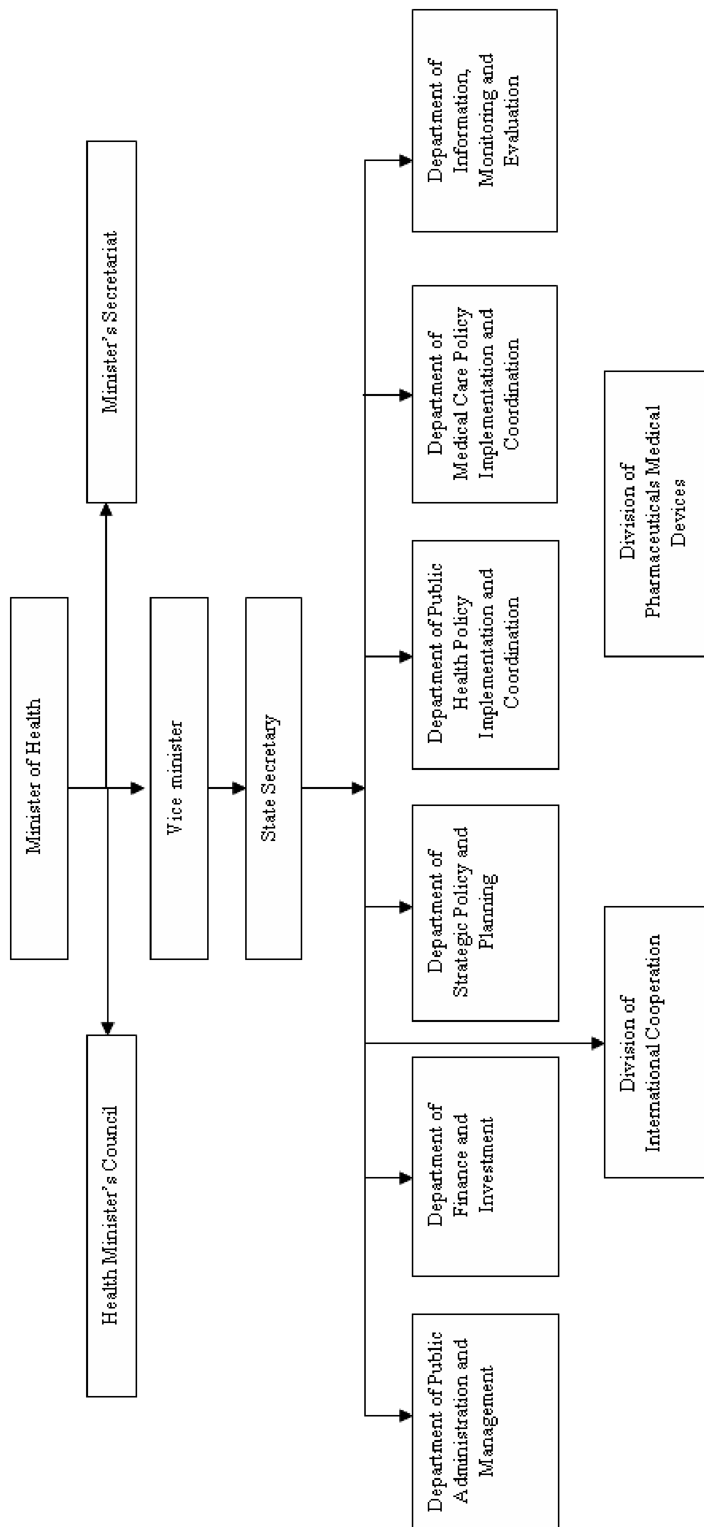
Fax	:	(976-11) 324683

6. ORGANIZATIONAL CHART: Ministry of Health



COUNTRY HEALTH INFORMATION PROFILE

MONGOLIA — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	1567.00			2008	1
2	Estimated population ('000s)	2683.52	1309.88	1373.64	2008	1
3	Annual population growth rate (%)	1.80	...	...	2008	1
4	Percentage of population					
	- 0–4 years	9.29	9.65	8.94	2008	1
	- 5–14 years	18.84	19.49	18.23	2008	1
	- 65 years and above	4.12	3.64	4.58	2008	1
5	Urban population (%)	61.40	...	...	2008	1
6	Crude birth rate (per 1000 population)	23.72	...	...	2008	1
7	Crude death rate (per 1000 population)	5.64	...	...	2008	1
8	Rate of natural increase of population (% per annum)	1.80	...	...	2008	1
9	Life expectancy (years)					
	- at birth	67.23	63.69	70.98	2008	1
	- Healthy Life Expectancy (HALE) at age 60	...	...	...		
10	Total fertility rate (women aged 15–49 years)	2.60			2008	1
	Socioeconomic indicators					
11	Adult literacy rate (%)	97.80	98.00	97.50	2007	1
12	Per capita GDP at current market prices (US$)	1496.20			2007	1
13	Rate of growth of per capita GDP (%)	20.90			2007	1
14	Human development index	0.72			2006	2
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	...	...	...		
16	Health care waste generation (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral	...	...	...	...	...	...		
	- Type A	9302 [a]	4844	4408	0	0	0	2008	3
	- Type B	911	520	391	27	12	15	2008	3
	- Type C	148	57	91	0	0	0	2008	3
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	0	0	0	0	0	0	2008	3
	Dengue/DHF	0	0	0	0	0	0	2007	4
	Encephalitis	11	9	2	2	2	0	2008	3
	Gonorrhoea	6141	2480	3661	0	0	0	2008	3
	Leprosy	0	0	0	...	...	...	2007	4
	Malaria	...	...	...	...	...	...		
	Plague	1	1		1	1	0	2008	3
	Syphilis	4979	1633	3346	6	4	2	2008	3
	Typhoid fever	5	1	4	0	0	0	2008	3

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	Acute respiratory infections	198 659	95 386	103 273	637	380	257	2008	5
19	Diarrhoeal diseases	23 600	11 841	11 759	0	0	0	2008	5
20	Tuberculosis								
	- All forms	4223	2246	1977	273	183	90	2008	3
	- New pulmonary tuberculosis (smear-positive)	3339	1826	1513	210	144	66	2008	3
21	Cancers								
	All cancers (malignant neoplasms only)	4267	2172	2095	3123	1755	1368	2008	6
	- Breast	97	0	97	35	0	35	2008	6
	- Colon and rectum	119	56	63	70	32	38	2008	6
	- Cervix			411			44	2008	6
	- Oesophagus	301	163	138	268	145	123	2008	6
	- Leukaemia	48	27	21	34	20	14	2008	6
	- Lip, oral cavity and pharynx	70	40	30	42	26	16	2008	6
	- Liver	1546	874	672	1346	763	583	2008	6
	- Stomach	641	417	224	444	291	153	2008	6
	- Trachea, bronchus, and lung	388	314	74	340	271	69	2008	6
22	Circulatory								
	All circulatory system diseases	171 696	65 926	105 770	5461	2884	2577	2008	5
	- Acute myocardial infarction	2127	1007	1120	10	4	6	2008	5
	- Cerebrovascular diseases	18 495	8136	10 359	2175	1125	1050	2008	5
	- Hypertension	64 242	22 836	41 406	28	14	14	2008	5
	- Ischaemic heart disease	43 548	18 498	25 050	730	492	238	2008	5
	- Rheumatic fever and rheumatic heart diseases	26 593	8156	18 437	94	43	51	2008	5
23	Diabetes mellitus	6763	3222	3541	65	33	32	2008	5
24	Mental disorders	91 935	38 362	53 573	33	15	18	2008	5
25	Injuries								
	All types	112 342	72 445	39 897	2482	2033	449	2008	5
	- Homicide and violence	...	...	...	259	220	39	2008	5
	- Motor and other vehicular accidents	...	...	...	499	392	107	2008	5
	- Occupational injuries	...	...	...	49	40	9	2008	5
	- Suicide	...	...	...	408	359	49	2008	5
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population			2008	
26	Leading causes of morbidity (inpatient care)	Total	Male	Female	Total	Male	Female		
	1. Diseases of the respiratory system	258 717	120 630	138 087	9728.59	9209.23	10 052.61	2008	5
	2. Diseases of the digestive system	223 240	91 884	131 356	8394.54	7014.68	9562.60	2008	5
	3. Diseases of the genitourinary system	205 460	49 431	156 029	7725.95	3773.70	11 358.77	2008	5
	4. Diseases of the circulatory system	171 696	65 926	105 770	6456.32	5032.97	7699.96	2008	5
	5. Injuries, poisoning and other consequences of external causes	112 342	72 445	39 897	4224.42	5530.65	2904.46	2008	5
	6. Diseases of the nervous system	91 935	38 362	53 573	3457.05	2928.66	3900.06	2008	5
	7. Diseases of the skin and subcutaneous tissues	90 854	40 371	50 483	3416.40	3082.03	3675.11	2008	5
	8. Infectious and parasitic diseases	63 722	27 494	36 228	2396.15	2098.96	2637.36	2008	5
	9. Diseases of the eye and adnexa	46 413	18096	28 317	1745.27	1381.49	2061.45	2008	5
	10. Mental and behavioural disorders	27 616	13839	13 777	1038.45	1056.50	1002.95	2008	5

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Diseases of the circulatory system	5461	2884	2577	205.35	220.17	187.60	2008	5
	2. Tumours and neoplasms	3137	1762	1375	117.96	134.52	100.10	2008	5
	3. Injuries, poisoning and other consequences of external causes	2482	2033	449	93.33	155.20	32.69	2008	5
	4. Diseases of the digestive system	1402	775	627	52.72	59.17	45.65	2008	5
	5. Certain conditions originating in the perinatal period	644	396	248	24.22	30.23	18.05	2008	5
	6. Diseases of the respiratory system	637	380	257	23.95	29.01	18.71	2008	5
	7. Infectious and parasitic diseases	339 [a]	217	112	12.75	16.57	8.15	2008	5
	8. Diseases of the genitourinary system	285	158	127	10.72	12.06	9.25	2008	5
	9. Diseases of the nervous system	253	152	101	9.51	11.60	7.35	2008	5
	10. Congenital malformations, deformations and chromosomal abnormalities	220	112	108	8.27	8.55	7.86	2008	5
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					52.60		2008	5
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
30	**Percentage of pregnant women with anaemia**					11.60		2008	5
31	**Neonatal mortality rate (per 1000 live births)**	12.80		...		...		2008	5
32	**Percentage of newborn infants weighing at least 2500 g at birth**	96.20		81.60		98.10		2008	5
33	**Immunization coverage for infants (%)**								
	- BCG	98.50		...		...		2008	4
	- DTP3	96.00		...		...		2008	4
	- POL3	95.30		...		...		2008	4
	- Hepatitis B III	96.00		...		...		2008	4
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			10 688			1	2008	5
	- Eclampsia			7337			2	2008	5
	- Haemorrhage			1263			8	2008	5
	- Obstructed labour			5685			0	2008	5
	- Sepsis			6262			2	2008	5
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	4
	- Diphtheria	0	0	0	0	0	0	2008	3,4
	- Hib meningitis	71	37	34	11	...	...	2008	3
	- Measles	31	...	...	...	...	...	2008	4
	- Mumps	560	308	252	0	0	0	2008	3,4
	- Neonatal tetanus	0	0	0	0	0	0	2008	3,4
	- Pertussis (whooping cough)	0	0	0	0	0	0	2008	3,4
	- Poliomyelitis	0	0	0	0	0	0	2008	3,4
	- Rubella	167	85	82	0	0	0	2008	3,4
	- Total Tetanus	1	...	...	..	...	..	2008	4

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		59		2008	3
37	Health infrastructure					
	Public health facilities	- General hospitals	36	4459	2008	5
		- Specialized hospitals	15	3983	2008	5
		- District/first-level referral hospitals	333	5332	2008	5
		- Primary health care centres	228	…	2008	5
	Private health facilities	- Hospitals	159	2295	2008	5
		- Outpatient clinics	904	…	2008	5
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)			240.28	2007p	7
	- total expenditure on health as % of GDP			6.20	2007p	7
	- per capita total expenditure on health (in US$)			91.40	2007p	7
	Government expenditure on health					
	- amount (in million US$)			181.82	2007p	7
	- general government expenditure on health as % of total expenditure on health			75.70	2007p	7
	- general government expenditure on health as % of total general government expenditure			12.20	2007p	7
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			…		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			24.30	2007p	7
	Exchange rate in US$ of local currency is: 1 US$ =			1170.96	2007p	7
39	Health insurance coverage as % of total population			78.3	2007	8

	INDICATOR		DATA							Year	Source
40	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	7584	1625	5959	4562	3022	6182	1402	2008	5
		- Ratio per 1000 population	2.83	0.61	2.22	2.77	2.92	2.30	0.52	2008	5
	Dentists	- Number	513	…	…	392	121	227 [c]	325 [c]	2008	5
		- Ratio per 1000 population	0.19	…	…	0.24	0.12	0.08	0.12	2008	5
	Pharmacists	- Number	1088	84	1004	867	221	1071	17	2008	5
		- Ratio per 1000 population	0.41	0.03	0.37	0.53	0.21	0.40	0.01	2008	5
	Nurses	- Number	8 912	195	8717	4211	4701	8044	868	2008	5
		- Ratio per 1000 population	3.32	0.07	3.25	2.56	4.54	3.00	0.32	2008	5
	Midwives	- Number	693	6	687	131	562	673	20	2008	5
		- Ratio per 1000 population	0.26	0.00	0.26	0.08	0.54	0.25	0.01	2008	5
	Paramedical staff	- Number	1177	93	1084	613	564	2817 [c]	259 [c]	2008	5
		- Ratio per 1000 population	0.44	0.03	0.40	0.37	0.54	1.05	0.10	2008	5
	Community health workers	- Number	61	…	…	31	30	…	…	2008	5
		- Ratio per 1000 population	0.02	…	…	0.02	0.03	…	…	2008	5
41	Annual number of graduates	Physicians	611	188	423	…	…	511	100	2008	9
		Dentists	110	15	95	…	…	85	25	2008	9
		Pharmacists	201	15	186	…	…	176	25	2008	10

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	**Annual number of graduates**	Nurses	867	57	810	...	...	692	175	2008	10
		Midwives	162	10	152	...	...	161	1	2008	10
		Paramedical staff	103	24	79	...	...	103	0	2008	10
		Community health workers	...	...	...	...	...	...	...	2008	10
42	**Workforce losses/ Attrition**	Physicians	88	...	...	...	...	...	...	2008	5
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	3	...	...	...	...	...	...	2008	5
		Nurses	125	...	...	...	...	...	...	2008	5
		Midwives	12	...	...	...	...	...	...	2008	5
		Paramedical staff	26	...	...	...	...	...	...	2008	5
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	**Total**	**Male**	**Female**		
43	**Prevalence of underweight children under five years of age**	6.30	...	...	2007	1
44	**Infant mortality rate (per 1000 live births)**	19.60	22.40	16.60	2008	5
45	**Under-five mortality rate (per 1000 live births)**	23.40	26.30	20.20	2008	5
46	**Proportion of 1 year-old children immunised against measles**	96.90	...	...	2008	4,5
47	**Maternal mortality ratio (per 100 000 live births)**	49.00			2008	5
48	**Proportion of births attended by skilled health personnel**	99.80			2008	5
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	52.20			2008	5
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.60			2008	5
49	**Contraceptive prevalence rate**	51.20	...	...	2008	5
50	**Adolescent birth rate**	6.30			2008	5
51	**Antenatal care coverage** - At least one visit	...			2008	
	- At least four visits	83.70 [b]			2008	5
52	**Unmet need for family planning**	...	...	...	2008	
53	**HIV prevalence among population aged 15-24 years**	0.00	0.00	0.00	2008	3
54	**Estimated HIV prevalence in adults**	0.00	0.00	0.00	2008	3
55	**Percentage of people with advanced HIV infection receiving ART**	100.00	100.00	0.00	2008	11
56	**Malaria incidence rate per 100 000 population**	...	...	...		
57	**Malaria death rate per 100 000 population**	...	...	...		
58	**Proportion of population in malaria-risk areas using effective malaria prevention measures**	...	...	...		
59	**Proportion of population in malaria-risk areas using effective malaria treatment measures**	...	...	...		
60	**Tuberculosis prevalence rate per 100 000 population**	234.00	...	...	2007	4
61	**Tuberculosis death rate per 100 000 population**	29.00	...	...	2007	4
62	**Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)**	76.00	...	...	2007	4
63	**Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)**	84.00	...	...	2006	4
		Total	**Urban**	**Rural**		
64	**Proportion of population using an improved drinking water source**	72.00	90.00	48.00	2006	12
65	**Proportion of population using an improved sanitation facility**	50.00	64.00	31.00	2006	12
66	**Proportion of population with access to affordable essential drugs on a sustainable basis**	75.00	...	...	2008	9

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Totals may not tally due to some reported cases without gender breakdown
b	Figure refers to pregnant women with antenatal care for at least six times during pregnancy
c	The figure for private and public dentists/paramedical staff may not add up to the total number of dentists (513) and paramedical staff (1177)

Sources:	
1	Mongolia Statistical Yearbook 2007. National Statistics Office of Mongolia.
2	United Nations Development Programme (UNDP) 2008. Human Development Indices: a statistical update. New York: UNDP.
	Available from [http://hdr.undp.org/en/media/HDI2008Tables.xls].
3	Statistical Report 2008, National Center for Communicable Disease, Mongolia.
4	WHO Regional Office for the Western Pacific, data received from the technical units.
5	*Health Indicators 2008* . Government Implementing Agency-Department of Health.
6	Statistical Report 2008, National Center for Cancer, Mongolia.
7	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html.
8	Health Indicators 2007, National Center for Health Development, Mongolia.
9	Ministry of Health, Mongolia.
10	Ministry of Education, Culture and Science, Mongolia.
11	UNGASS Country Progress Report.
12	Joint Monitoring Programme for Water Supply and Sanitation (JMP). Country files: Mongolia. Progress on Drinking Water and Sanitation:
	Special Focus on Sanitation. UNICEF and WHO. Available from http://www.wssinfo.org/en/welcome.html.

NAURU

1. CONTEXT

1.1 Demographics

The population of Nauru was estimated to be 10 163 in 2008, with about 38.5% of the population below 15 years of age and around 0.9% 65 years and above.

1.2 Political situation

The 18-member Parliament is elected every three years. The Parliament elects a President from among its members, who appoints a Cabinet of five to six people. The President is both head of state and head of government. On 18 April 2008, President Stephen declared a state of emergency and dissolved Parliament. This action was prompted by a stalemate in Parliament over the Speaker's introduction of a Bill to ban Members of Parliament holding dual citizenship. The last election was held on 26 April 2008, when President Stephen was re-elected.

1.3 Socioeconomic situation

Until recently, Nauru was a self-reliant country. Traditionally, revenues of this tiny island have come from exports of phosphate. At the height of phosphate mining activities, the country's gross domestic product (GDP) was one of the highest in the Pacific and living standards were comparable with those of high-income countries. However, phosphate reserves are expected to be exhausted soon, and the drastic decline in phosphate revenue has been followed, first by a decrease in disposable income, and then by aid-dependence.

The rehabilitation of mined land and the replacement of income from phosphate are serious long-term challenges. In anticipation of the exhaustion of Nauru's phosphate deposits, substantial amounts of phosphate income were invested in trust funds to help cushion the transition and provide for the country's economic future. As a result of heavy spending from the trust funds, however, the Government is facing bankruptcy. To cut costs, the Government has frozen wages and reduced overstaffed public service departments.

There are few resources other than phosphate. The central plateau has limited agricultural value, but some 202-243 hectares, mainly around the coastal belt, are available for cultivation. Coconut, banana and papaya are the main fruit crops and small quantities of vegetables are also grown. However, cultivated crops are for home consumption only and, apart from fish, most food is imported from Australia, including water. There are frequent disruptions of supplies of food, fuel, equipment and materials.

In 2001, a group of Afghani refugees rescued at sea was transferred to a camp on Nauru in exchange for a multimillion dollar aid package from Australia. Use of Nauru's isolated location and its Offshore Processing Centre was discontinued in February 2008 following a change in Australia's policy of holding asylum seekers on Nauru. Already heavily dependent on foreign support, mainly from Australia and Taiwan (China), Nauru has expressed a need for extra support now that Australia's Offshore Processing Centre has been closed.

Day-to-day difficulties in handling cash transactions (in Australian dollars) have been a major impediment to government activities. Nauru has been without banking services since the Bank of Nauru collapsed earlier this decade.

1.4 Risks, vulnerabilities and hazards

Nauru is particularly vulnerable due to its isolation, with overdependence on the national air carrier and its single aircraft. The lack of a safe harbour for berthing of ships hinders marine transportation links beyond container freight and phosphate carriers.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

As a result of an effective public health programme focused on water and sanitation, there have been no recent infectious disease outbreaks, but noncommunicable diseases, such as diabetes, hypertension, heart disease and cancer, have become leading causes of morbidity and mortality, and obesity rates are very high. The 2007 STEPS survey reported a diabetes prevalence rate of 16.2% among the 15-64 age group. Diabetes increases in prevalence with age and was found to be 24.1% in the 35-44 age group, 37.4 % among 45-55 year-olds and 45 % in the 55-64 age group.

2.2 Outbreaks of communicable diseases

See Section 2.1.

2.3 Leading causes of mortality and morbidity

See Section 2.1.

2.4 Maternal, child and infant diseases

According to the preliminary report of the 2007 Nauru Demographic and Health Survey (NDHS), almost all pregnant women (94.5%) reported having consulted with a health professional—doctor, nurse or midwife—at least once for prenatal care for the most recent pregnancy in the five-year period before the survey. Ninety-seven per cent of births are delivered by a health professional.

The 2006 estimated infant mortality rate (IMR) for Nauru was 25.0 per 1000 live births. Under-five mortality rate was 30.0 per 1000 live births.

According to the 2007 NDHS, only 5% of Nauruan children are underweight (2007), with boys slightly more likely to be underweight than girls. Almost a quarter (24%) of Nauruan children are stunted and 1% are wasted.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Nauru Ministry of Health endorses the statement in the preamble to the constitution of the World Health Organization that: "The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being without distinction of race, religion, political belief, economic or social condition."

In support of this, the Ministry acknowledges that it is the right of every citizen of the Republic of Nauru, irrespective of race, sex, colour, creed or socioeconomic status, to have access to a national health system that provides a quality, affordable health service, the principle function of which is to promote and maintain the health and well-being of the citizens of Nauru to the maximum extent possible with available resources.

The mission statement for the health system is:

> "To cater for the health needs of Nauru and to enhance the quality of life of the People of Nauru through appropriate and effective health care; and to reform and improve the health infrastructure through a well structured, co-ordinated long term policy of:
>
> - recruitment;
> - capacity building; and

- purchasing and maintenance of equipment and facilities."

The mission statement for curative services reads:

> "With a clear understanding of the health needs of the people and a full appreciation of the Nauruan culture, we shall provide an appropriate, accessible and affective health service that applies judicious use of all available resources to ensure the health of all patients on Nauru is enhanced; and provide a range of improved and efficient health services through a combination of:
>
> - educational programmes;
> - screening procedures;
> - registration of disease; and
> - establishment of emergency protocols and provision of services to meet the needs of all Nauruans."

The mission statement for public health services states:

> "We shall implement and sustain a range of public health policies and programmes that will enhance the quality of life for the people of Nauru by targeted risk-factor reduction and promotion of a healthy island lifestyle, and set in place a developed and legislated Healthy National Policy that promotes community awareness and participation to induce healthy choices that are early, easy, exciting and everywhere."

Values:

> "Customer focus:
> We aim to provide quality health care, respecting the dignity of all people.
>
> Equity:
> We strive to be fair in all our dealings: irrespective of ethnicity, religion, political affiliation, disability, gender and age.
>
> Quality:
> We seek a high quality outcome in all facets of our activities.
>
> Integrity:
> We are committed to the achievement of the highest ethical standards in all that we do."

3.2 Organization of health services and delivery systems

Nauru General Hospital (NGH) and the National Phosphate Corporation (NPC) Hospital amalgamated in July 1999 to become the Republic of Nauru Hospital. The Hospital has five doctors and employs a complement of nursing and clinical support staff.

3.3 Health policy, planning and regulatory framework

Like many developing countries, Nauru has committed to a range of Millennium Development Goals (MDGs). These MDGs have been included as high-level outcomes in the Ministry of Health's Operational Plan 2007. The Operational Plan aims to complement the major goal of the Nauru National Sustainable Development Strategy 2005-2025 (NNSDS): *"A future where individual, community, business and government partnerships contribute to a sustainable quality of life for all Nauruans".*

The NNSDS states: "Decreasing financial resources has led to a sharp drop in the provision of basic health services. Policies, programmes and projects are inadequate and regulations are largely ineffective. Limited programs to prevent malnutrition exist and implementation is weak. There are limited standards and epidemiological information available. Limited funding is available for preventative and curative services. Public resources do not achieve intended goals, especially community education. Limited policies for HIV/AIDS and TB are in place but awareness is inadequate. A growing proportion of the population cannot afford the financial burdens of illnesses including the care of women and children."

The health-specific goals of the NNSDS include the provision of effective preventative health services to reduce lifestyle-related illness. The recent Nauru NCD Risk Factors STEPS Report further highlighted

that Nauru has the poorest health indicators for NCDs (cardiovascular disease, diabetes, cancer and respiratory diseases) in the Pacific region. The Ministry of Health has responded by developing the Nauru NCD Action Plan, which details specific activities to reverse the declining health of the population and implement strategies that are known to be effective and have relevance and acceptability to the people.

As a signatory to United Nations conventions and treaties, the Government of Nauru has obligations to meet the requirement of these, which encompass the principles espoused in conventions such as the WHO Constitution, the Framework Convention on Tobacco Control, the International Convention on Population Development, Women Plan of Action and the Convention on the Rights of the Child.

It is a priority for the Ministry of Health to improve the reliability of the current health information system (HIM). In the absence of a robust HIM, the development of the Ministry's Operational Plan has relied on the resources of the Nauru Bureau of Statistics, the data contained in the Nauru NCD Risk Factors Steps Report and information contained in the Health Status and Health System Report 2003.

The primary health care approach to acute respiratory infections and diarrhoeal diseases is to be strengthened and the Expanded Programme of Immunization will extend its coverage of target diseases.

3.4 Health care financing

Over the last two financial years, the Ministry of Health has embarked on a greatly improved system of budget development. The health budget is prepared by senior staff in accordance with the NSDS guidelines by early May, refined and then presented to the Finance Department. Subsequently, the Secretary for Health is required to attend Cabinet to speak to the budget and answer any relevant questions that may arise. As part of the financial management reform process, departmental heads now receive a monthly financial statement detailing current expenditure and projected year-end results against allocated budgets.

In 2007, total health expenditure was estimated at US$ 6.7 million or 15.1% of GDP. Government expenditure on health was US$ 5 million or 70.9% of total health expenditure.

3.5 Human resources for health

The Government plans to make available a balanced supply of health care providers, including physicians, nurses and other specialized staff and community health workers. Currently 50% of professional staff are expatriates on contract, but investment in training of Nauruan nationals is well under way.

3.6 Partnerships

The Ministry of Health has partnerships with WHO, the Secretariat of the Pacific Community (SPC), the United Nations Children's Fund (UNICEF), the University of the South Pacific, the Global Fund and the Australian Agency for International Development (AusAID). Visiting medical specialists have included a team from the AusAID-funded PIPS programme, a mobile medical team from Taiwan (China), and Cuban and Israeli specialists.

3.7 Challenges to health system strengthening

The Ministry of Health acknowledges that peoples' lifestyles and the conditions in which they live, work and play strongly influence their health. The many social determinants of health are experienced differently by men and women, and these gender-based differences need to be recognised as the Ministry of Health seeks to increase the health status of the population. A comprehensive integrated approach to addressing social determinants of good health for men and women requires the mainstreaming of gender concerns into the day-to-day operations of the Ministry of Health. This will ensure that the basic right of every citizen, irrespective of sex, to have access to a national health system that provides a high quality of care appropriate to their needs is respected.

Whilst the Ministry of Health cannot address all of these issues alone, it recognizes the need to develop health outcomes and health improvements that are measured through improved health status of the population. Both health protection and promotion are now recognized as essential components when developing health outcome measures, with a move away from evaluating services based on activity alone.

The Ministry's commitment to the principles and philosophy of primary health care is based on the belief that success in achieving and maintaining health is not the responsibility of hospitals and the medical and/or curative model of care alone, but will come from a health-system-wide approach, working with all government departments, the nongovernmental sector and civil society.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Nauru Bureau of Statistics
Web address	:	http://www.spc.int/prism/country/nr/stats
Title 2	:	*Nauru Demographic and Health Survey 2007 (Preliminary report)*
Operator	:	Bureau of Statistics Nauru, Secretariat of the Pacific Community, Macro International Inc.
Title 3	:	Republic of Nauru hospital data
Title 4	:	*Nauru NCD Risk Factors STEPS Report*

5. ADDRESSES

MINISTRY OF HEALTH

Office Address	:	Government Offices, Yaren District, Nauru
Official Email Address	:	secretary.health@naurugov.nr
Telephone	:	+ 674 444 3805 Ext 261/262

WHO REPRESENTATIVE IN THE SOUTH PACIFIC

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Postal Address	:	P.O. Box 113, Suva, Fiji
Official Email Address	:	who@sp.wpro.who.int
Telephone	:	(679) 3234 100
Fax	:	(679) 3234 166; 3234 177
Office Hours	:	0800 – 1700
Website	:	http://www.wpro.who.int/southpacific

Country Health Information Profile

Nauru — **WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision**

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	0.01			2008	1
2	Estimated population ('000s)	9.20	...	...	2008 est	1
3	Annual population growth rate (%)	-1.00	...	...	2002-2006	1
4	Percentage of population					
	- 0–4 years	15.25	...	...	2008 est	1
	- 5–14 years	23.27	...	...	2008 est	1
	- 65 years and above	0.94	...	...	2008 est	1
5	Urban population (%)	100.00	100.00	100.00	2007 est	2
6	Crude birth rate (per 1000 population)	13.10	12.90	13.40	2008 est	1
7	Crude death rate (per 1000 population)	6.70	7.50	5.90	2008 est	1
8	Rate of natural increase of population (% per annum)	0.64	0.54	0.75	2008 est	1
9	Life expectancy (years)					
	- at birth	55.40	52.50	58.20	2008	3
	- Healthy Life Expectancy (HALE) at age 60	...	8.70	10.50	2002	1
10	Total fertility rate (women aged 15–49 years)	4.00			2008	3
	Socioeconomic indicators					
11	Adult literacy rate (%)	95.00	...	...	2005	4
12	Per capita GDP at current market prices (US$)	2773.00 [a]			2006	5
13	Rate of growth of per capita GDP (%)	...				
14	Human development index	...				
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	...	...	...		
16	Health care waste generation (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	0	0	0	0	0	0	2008	6
	- Type B	613	165	448	0	0	0	2008	6
	- Type C	0	0	0	0	0	0	2008	6
	- Type E	0	0	0	0	0	0	2008	6
	- Unspecified	0	0	0	0	0	0	2008	6
	Cholera	0	0	0	0	0	0	2008	6
	Dengue/DHF	0	0	0	0	0	0	2008	6
	Encephalitis	0	0	0	0	0	0	2008	6
	Gonorrhoea	268	96	172	0	0	0	2008	6
	Leprosy	4	4	0	0	0	0	2008	6
	Malaria	0	0	0	0	0	0	2008	6
	Plague	0	0	0	0	0	0	2008	6
	Syphilis	622	164	458	0	0	0	2008	6
	Typhoid fever	0	0	0	0	0	0	2008	6

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	Acute respiratory infections	669	340	329	5	3	2	2008	6
19	Diarrhoeal diseases	602 [c]	321	276	0	0	0	2008	6
20	Tuberculosis								
	- All forms	6	1	5	0	0	0	2008	6
	- New pulmonary tuberculosis (smear-positive)	0	0	0	0	0	0	2008	6
21	Cancers								
	All cancers (malignant neoplasms only)	11	3	8	4	2	2	2008	6
	- Breast	3	0	3	1	0	1	2008	6
	- Colon and rectum	0	0	0	0	0	0	2008	6
	- Cervix			3			1	2008	6
	- Oesophagus	0	0	0	0	0	0	2008	6
	- Leukaemia	0	0	0	0	0	0	2008	6
	- Lip, oral cavity and pharynx	0	0	0	0	0	0	2008	6
	- Liver	2	1	1	0	0	0	2008	6
	- Stomach	2	1	1	1	1	0	2008	6
	- Trachea, bronchus, and lung	1	1	0	1	1	0	2008	6
22	Circulatory								
	All circulatory system diseases	0	0	0	29	21	8	2008	6
	- Acute myocardial infarction	0	0	0	5	3	2	2008	6
	- Cerebrovascular diseases	5	2	3	0	0	0	2008	6
	- Hypertension	220	124	96	2	0	2	2008	6
	- Ischaemic heart disease	5	5	0	0	0	0	2008	6
	- Rheumatic fever and rheumatic heart diseases	84	32	52	0	0	0	2008	6
23	Diabetes mellitus	22	9	13	4	1	3	2008	6
24	Mental disorders	0	0	0	0	0	0	2008	6
25	Injuries								
	All types	0	0	0	0	0	0	2008	6
	- Homicide and violence	2	2	0	0	0	0	2008	6
	- Motor and other vehicular accidents	4	2	2	0	0	0	2008	6
	- Occupational injuries	1	1	0	0	0	0	2008	6
	- Suicide	0	0	0	0	0	0	2008	6
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	Leading causes of morbidity (inpatient care)	Total	Male	Female	Total	Male	Female		
	1. Pregnancy, childbirth and the pueperium	376	0	376	4086.96 [b]	…	…	2008	6
	2. Endocrine, nutritional and metabolic diseases	89	49	40	967.39 [b]	…	…	2008	6
	3. Diseases of the skin and subcutaneous tissue	72	35	37	782.61 [b]	…	…	2008	6
	4. Disease of the respiratory system	54	25	29	586.96 [b]	…	…	2008	6
	5. Certain conditions originating in the perinatal period	48	8	40	521.74 [b]	…	…	2008	6
	6. Diseases of the digestive system	31	21	10	336.96 [b]	…	…	2008	6
	7. Diseases of the genitourinary system	30	15	15	326.09 [b]	…	…	2008	6
	8. Diseases of the circulatory system	27	15	12	293.48 [b]	…	…	2008	6
	9. Infectious and parasitic diseases	22	12	10	239.13 [b]	…	…	2008	6
	10. Diseases of the musculoskeletal system and connective tissue	15	10	5	163.04 [b]	…	…	2008	6

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	Total	Male	Female	Total	Male	Female		
	1. Diseases of the circulatory system	36	23	13	391.30 [b]	…	…	2008	7
	2. Endocrine, nutritional and metabolic diseases	9	7	2	97.83 [b]	…	…	2008	7
	3. Diseases of the respiratory system	6	2	4	65.22 [b]	…	…	2008	7
	4. Certain conditions originating in the perinatal period	6	3	3	65.22 [b]	…	…	2008	7
	5. Pregnancy, childbirth and puerperium	5	3	2	54.35 [b]	…	…	2008	7
	6. Neoplasms	4	2	2	43.48 [b]	…	…	2008	7
	7. Diseases of the genitourinary system	3	2	1	32.61 [b]	…	…	2008	7
	8. Symptoms, signs and abnormal clinical and laboratory	1	1	0	10.87 [b]	…	…	2008	7
	9.								
	10.								
	Maternal, child and infant diseases	Total		Male		Female			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					25.10		2007	12
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					34.00		2008	8
30	**Percentage of pregnant women with anaemia**					20.00		2008	7
31	**Neonatal mortality rate (per 1000 live births)**	19.00		…		…		2008	7
32	**Percentage of newborn infants weighing at least 2500 g at birth**	96.20		…		…		2008	7
33	**Immunization coverage for infants (%)**								
	- BCG	100.00		100.00		100.00		2008	7,8
	- DTP3	100.00		100.00		100.00		2008	7,8
	- POL3	100.00		100.00		100.00		2008	7,8
	- Hepatitis B III	100.00		100.00		100.00		2008	7,8
		Number of cases			Number of deaths				
34	**Maternal causes**	Total	Male	Female	Total	Male	Female		
	- Abortion			5			0	2008	7
	- Eclampsia			2			0	2008	7
	- Haemorrhage			0			0	2008	7
	- Obstructed labour			3			0	2008	7
	- Sepsis			2			0	2008	7
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	0	0	0	2008	9
	- Diphtheria	0	0	0	0	0	0	2008	8, 9
	- Hib meningitis	0	0	0	0	0	0	2008	9
	- Measles	0	0	0	0	0	0	2008	8, 9
	- Mumps	0	0	0	0	0	0	2008	8,9
	- Neonatal tetanus	0	0	0	0	0	0	2008	8, 9
	- Pertussis (whooping cough)	0	0	0	0	0	0	2008	8, 9
	- Poliomyelitis	0	0	0	0	0	0	2008	8, 9
	- Rubella	0	0	0	0	0	0	2008	8, 9
	- Total Tetanus	0	0	0	0	0	0	2008	8, 9

INDICATORS			DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		...			
37	**Health infrastructure**					
	Public health facilities	- General hospitals	1	51	2007	10
		- Specialized hospitals	0	0	2007	10
		- District/first-level referral hospitals	0	0	2007	10
		- Primary health care centres	0	0	2007	10
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)			6.72 [b]	2007p	11
	- total expenditure on health as % of GDP			15.10	2007p	11
	- per capita total expenditure on health (in US$)			672.27 [b]	2007p	11
	Government expenditure on health					
	- amount (in million US$)			5.04 [b]	2007p	11
	- general government expenditure on health as % of total expenditure on health			70.90	2007p	11
	- general government expenditure on health as % of total general government expenditure			38.10	2007p	11
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			0.00 [b]	2006p	11
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			29.10	2007p	11
	Exchange rate in US$ of local currency is: 1 US$ =			1.19	2007p	11
39	**Health insurance coverage as % of total population**			...		

INDICATOR			DATA							Year	Source
40	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	10	8	2	...	...	...	...	2008	7
		- Ratio per 1000 population	1.00	0.80	0.20	...	...	...	...	2008	7
	Dentists	- Number	1	1	0	...	...	...	...	2008	7
		- Ratio per 1000 population	0.10	0.10	0.00	...	...	...	...	2008	7
	Pharmacists	- Number	1	0	1	...	...	...	...	2008	7
		- Ratio per 1000 population	0.10	0.00	0.10	...	...	...	...	2008	7
	Nurses	- Number	64	2	62	...	...	...	...	2008	7
		- Ratio per 1000 population	6.40	0.20	6.20	...	...	...	...	2008	7
	Midwives	- Number	5 [d]	0 [d]	5 [d]	...	...	...	...	2008	7
		- Ratio per 1000 population	0.50	0.00	0.50	...	...	...	...	2008	7
	Paramedical staff	- Number	19	11	8	...	...	...	...	2008	7
		- Ratio per 1000 population	1.90	1.10	0.80	...	...	...	...	2008	7
	Community health workers	- Number	14	2	12	...	...	...	...	2008	7
		- Ratio per 1000 population	1.40	0.20	1.20	...	...	...	...	2008	7
41	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	**Annual number of graduates**	Nurses	3	0	3	...	...	...	...	2008	7
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	**Workforce losses/ Attrition**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	**Total**	**Male**	**Female**		
43	**Prevalence of underweight children under five years of age**	4.80	...	...	2007	12
44	**Infant mortality rate (per 1000 live births)**	25.00	...	...	2006 est	13
45	**Under-five mortality rate (per 1000 live births)**	30.00	...	...	2006 est	13
46	**Proportion of 1 year-old children immunised against measles**	100.00	...	...	2008	8
47	**Maternal mortality ratio (per 100 000 live births)**	300.00			2002	14
48	**Proportion of births attended by skilled health personnel**	97.00			2007	12
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.00			2007	12
	- Percentage of deliveries in health facilities (as % of total deliveries)	96.00			2007	12
49	**Contraceptive prevalence rate**	35.60	...	...	2007	12
50	**Adolescent birth rate**	...				
51	**Antenatal care coverage** - At least one visit	94.50			2007	12
	- At least four visits	...				
52	**Unmet need for family planning**	...	...	...		
53	**HIV prevalence among population aged 15-24 years**	...	...	...		
54	**Estimated HIV prevalence in adults a**	...	...	...		
55	**Percentage of people with advanced HIV infection receiving ART**	...	...	...		
56	**Malaria incidence rate per 100 000 population**	...	...	...		
57	**Malaria death rate per 100 000 population**	...	...	...		
58	**Proportion of population in malaria-risk areas using effective malaria prevention measures**	...	...	...		
59	**Proportion of population in malaria-risk areas using effective malaria treatment measures**	...	...	...		
60	**Tuberculosis prevalence rate per 100 000 population**	33.00	...	...	2007	8
61	**Tuberculosis death rate per 100 000 population**	3.00	...	...	2007	8
62	**Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)**	90.00	...	...	2007	8
63	**Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)**	50.00	...	...	2006	8
		Total	**Urban**	**Rural**		
64	**Proportion of population using an improved drinking water source**	100.00	100.00	NR	2007	10
65	**Proportion of population using an improved sanitation facility**	100.00	100.00	NR	2007	10
66	**Proportion of population with access to affordable essential drugs on a sustainable basis**	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Health Information and Evidence for Policy Unit of WHO Regional Office for the Western Pacific using exchange rate USD 1= AUS$ 1.33
b	Computed by Health Information and Evidence for Policy Unit of WHO Regional Office for the Western Pacific
c	Totals may not tally due to some reported cases with no gender breakdown
d	Figure was included in the number of nurses

Sources:	
1	Nauru Bureau of Statistics. [http://www.spc.int/prism/country/nr/stats/Statistics/Economics/GDP/gdp_sum.htm]
2	Urban and Rural Areas 2007. United Nations, Department of Economic and Social Affairs, Population Division. New York 2008. [http:///www.unpopulation.org].
3	Pacific island populations- estimates and projections 2005-2015, Secretariat of the Pacific Community, Noumea, 2006. [http://www.spc.int/demog/en/index.html]
4	Ministry of Finance, Republic of Nauru
5	Nauru Bureau of Statistics 2007. Accessed from http://www.spc.int/prism/country/nr/stats/Statistics/stats_index.htm on 23 May 2009
6	RON Hospital inpatient record study from Jan to Dec 2008 (data from Health Planning Officer)
7	Republic of Nauru (RON) Hospital data from Jan - Dec 2008 (data from Health Planning Officer)
8	WHO Regional Office for the Western Pacific, data received from the technical units.
9	Documents from Director of Public Health 2007
10	Republic of Nauru (RON) Hospital data (data from Health Planning Officer)
11	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html
12	Nauru Demographic and Health Survey 2007 (Preliminary report). Bureau of Statistics Nauru, Secretariat for the Pacific Community, Noumea, New Caledonia, Macro International Inc. Calverton, Maryland, U.S.A., April 2008.
13	World Health Statistics 2008. Geneva, World Health Organization, 2008.
14	Nauru population profile. A guide for planners and policy makers. Noumea, Secretariat of the Pacific Community.

NEW CALEDONIA

1. CONTEXT

1.1 Demographics

New Caledonia is an archipelago consisting of a main island, the Grande Terre, and several smaller islands (the Belep archipelago, the Loyalty Islands, the Ile des Pins, the Chesterfield Islands and the Bellona Reefs). Noumea, located on the main island, is the capital.

According to the national census in 2004, the population of New Caledonia was 230 789 inhabitants; the estimated 2008 population is 249 000 inhabitants. The population is made up of 42.5% Melanesians, 37.1% Europeans, 8.4% Wallisians, 3.8% Polynesians, 3.6% Indonesians, 1.6% Vietnamese and 3% other nationalities. In 2008, the crude birth was 16.1 per 1000 population, the crude death rate was 4.7 per 1000 population and the population growth rate was 11.5 per 1000 population. The total fertility rate was 2.2, and the infant mortality rate 6.1 per 1000 live births.

City dwellers were estimated to make up 64.4% of the population by 2007. Life expectancy at birth is 75.9 years: 71.8 years for males and 80.3 years for females (2007 est.). There is a high level of adult literacy, estimated to be 91% of the total population (male 92%, female 90%).

1.2 Political situation

New Caledonia was an overseas territory of France until the signing of the Noumea Accords in May 1998 and their subsequent approved by the French National Assembly and Senate. It then become a self-governing French overseas country and was granted a new status, with more internal autonomy. Administratively, the archipelago is divided into three provinces (South Province; North Province; and Loyalty Islands Province) and has a three-tiered system of administration: metropolitan France (represented by the High Commissioner), the Territorial Congress and the provincial assemblies. The Noumea Accords diminished the hopes of those involved in the pro-independence movement, as the earliest possible date for independence for the country is now 2014. The Government of France has been represented by High Commissioner Yves Dassonville since 9 November 2007. The President of the New Caledonian Government is elected by the members of the Territorial Congress. The last election was held 7 August 2007, when Harold Martin was elected.

1.3 Socioeconomic situation

New Caledonia has about 25% of the world's known nickel resources. Only a small amount of the country's land is suitable for cultivation, and food accounts for about 20% of imports. In addition to nickel, substantial financial support from France (equal to more than 25% of GDP) and tourism are key to the economy. Substantial new investment in the nickel industry, combined with the recovery of the global nickel market, suggests a bright economic outlook for the next few years.

The mainstays of New Caledonia's booming economy are mining, cattle, shrimp farming, fishing, forestry agriculture and tourism. In 2007, the estimated GDP was 768.1 billion F.CFP (US$9.4 billion), with a GDP per capita of 3167 000 F.CFP (US$38 626).

The major exports are coffee, prawns, holoturies or bêche de mer, trochus, scallops and tuna. The country has an Exclusive Economic Zone of 1 740 000 square kilometres.

1.4 Risks, vulnerabilities and hazards

New Caledonia is vulnerable to natural hazards, and cyclones are common from November to March. Erosion caused by mining exploitation and forest fires are among the environmental issues facing the country.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Communicable diseases remain public health problems in New Caledonia. Common infections include: acute respiratory tract infections, including pneumonia; diarrhoeal diseases; sexually transmitted infections, including HIV infections; and rheumatic heart disease.

In 2007, 3372 acute respiratory infections (including pneumonia), 949 ear infections, 571 influenza cases and 375 cases of diarrhoeal diseases, 48 cases of tuberculosis (the incidence is 20/100 000) and two cases of leprosy were reported. The prevalence of rheumatic heart disease was estimated to be 7.2 per 1000 population.

Sexually transmitted infections (STI) have always been suspected of being highly prevalent. In 2007, 852 cases were notified, of which 17.4% were chlamydial infections, 9.6% were gonorrhoea, and 4.3% were syphilis. As of December 2007, there were 316 cumulative cases of HIV infection and 116 AIDS cases had been reported, with 70 AIDS-related deaths since 1986. Twenty-one new HIV infections were recorded in 2007.

Dengue and leptospirosis are endemic in the country, with 47 and 53 cases, respectively, in 2007.

Noncommunicable diseases constitute a major disease burden, with cardiovascular diseases, diabetes mellitus and cancers being the most common. In 2007, the most common conditions requiring long-term treatment included cardiovascular conditions (20 180 cases; 45.5%), diabetes mellitus (7822 cases; 17.6%), and psychosis (4004 cases; 9%). A total 3886 cases of malignant tumours were notified in 2006. This was followed by chronic respiratory failure (3642; 8.2%) and renal failure (969 cases; 2.2%).

2.2 Outbreaks of communicable diseases

In 2008, a dengue outbreak was notified by the health authorities, with 1179 cases reported by 31 December 2008. There was an increase in the number of acute respiratory infections in 2007, with 3372 cases reported by 31 December.

2.3 Leading causes of mortality and morbidity

The leading causes of mortality during 2007 included: tumours (328 cases); diseases of the circulatory system (292 cases), traumatic injuries and poisonings (181 cases); diseases of the respiratory system (123 cases); diseases of the digestive system (39 cases); infectious and parasitic diseases (35 cases); diseases of the genitourinary system (24 cases); endocrine, nutritional and metabolic diseases (24 cases); diseases of the nervous system (19 cases); and perinatal conditions (14 cases).

2.4 Maternal, child and infant diseases

New Caledonia has a well-functioning family planning programme. In 2005, it was estimated that 29.3% of the female population (one in every three women) had access to contraception and155 women per 1000 had used medical abortion as a mean of contraception in 2005. In 2006, 23 700 Pap smears were performed.

In 2008, vaccination coverage was 98% for BCG, 100% for DPT3, 100% for POL3, 98.6% for measles (MCV1), and 97.8% for hepatitis B III.

2.5 Burden of disease

Chronic health conditions that require long-term hospitalization constitute a major burden on the health system. At the same time, some communicable diseases, such as STI, HIV infection and acute respiratory infections, remain major public health issues for the country.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Government has endorsed the 'Health for All' principle, and primary health care is one of the priorities set by health offices of all three provinces. The main elements of the health strategy are:

- qualitative and quantitative improvements in health care;
- prevention of communicable diseases through immunization; and
- improvement of health status, housing and the environment by means of health education.

3.2 Organization of health services and delivery systems

At the provincial level, public health care services are provided by 26 medicosocial constituencies, managed by the Directions Provinciales des Affaires Sanitaires. Integrated services are delivered through seven medical social centres, with 46 hospital beds, and 19 medical centres that cover 14 nursing stations, 55 consultation facilities, and 22 dental care stations. There are four specialized medical centres based in Noumea (the Multi-Specialty Centre, the Mother and Child Health Centre, the School Health Centre and the Family Planning Centre).

At the territorial level, there are three public hospitals (CHT Gaston Bourret – CHT Magenta and CHN) and three private hospitals (Clinique BDC – Anse-Vata and Clinique Magnin).

The significant improvement in the health status of the population in recent years can be attributed to the economic growth of New Caledonia as well as to the quality of health care coverage. The whole population has access to health services.

3.3 Health policy, planning and regulatory framework

No available information.

3.4 Health care financing

In 2003, health expenditure amounted to 50 514.4 million XPF (US$ 476.6 million), with 8.7% of GDP being spent on health. Per capita expenditure on health was 205.8 XPF (US$ 1941.5). Various public mechanisms fund social welfare programmes, including national insurance, family allowances, industrial programmes and a pension scheme. Consequently, all citizens are comprehensively covered for their health and welfare needs. However, it requires a constant effort to balance the distribution of the available resources equally among the population.

3.5 Human resources for health

As of 1 September 2008, there were 545 practising medical doctors, 53.2% of whom were specialists and 46.8% of whom were practising general medicine. There were also 1091 nurses, 125 dentists, 106 midwives and 141 pharmacists.

3.6 Partnerships

In addition to its direct link with the French Government, la Direction des Affaires Sanitaires et Sociales works closely with its partners. The Secretariat of the Pacific Community and WHO are the main development partners in the health sector. New Caledonia is committed to implementing various global health initiatives, such as the International Health Regulations and the Stop TB Programme.

3.7 Challenges to health system strengthening

No available information.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Institut Territorial de la Statistique et des Etudes Economiques
Web address	:	http://www.isee.nc/
Title 2	:	*New Caledonia Health Profile. Key Features 2007*
Operator	:	La Direction des Affaires Sanitaires et Sociales
Web address	:	http://www.dass.gouv.nc/static/publications/chiffre.htm
Title 3	:	*Demographic tables for the Western Pacific 2005-2010*
Operator	:	World Health Organisation, Regional Office fore the Western Pacific
Web address	:	http://www.wpro.who.int/information_sources/databases/regional_statistics/rstat_demographics.htm
Title 4	:	*World Population Prospects: the 2007 Revision and the World Urbanization Prospects: the 2007 Revision*
Operator	:	United Nations Population Division
Web address	:	http://esa.un.org/unup
Title 5	:	*La Situation Sanitaire pour l'année 2007*
Operator	:	La Direction des Affaires Sanitaires et Sociales
Web address	:	http://www.dass.gouv.nc/static/publications/chiffre.htm
Title 6	:	*Rapport conjoint OMS/UNICEF de notification des activités de vaccination pour la période janvier-décembre 2007*
Operator	:	WHO Office for South Pacific
Title 6	:	*WHO Report 2008. Global Tuberculosis Control. Surveillance, Planning, Financing*
Operator	:	World Health Organization

5. ADDRESSES

DIRECTION DES AFFAIRES SANITAIRES ET SOCIALES DE NOUVELLE-CALÉDONIE

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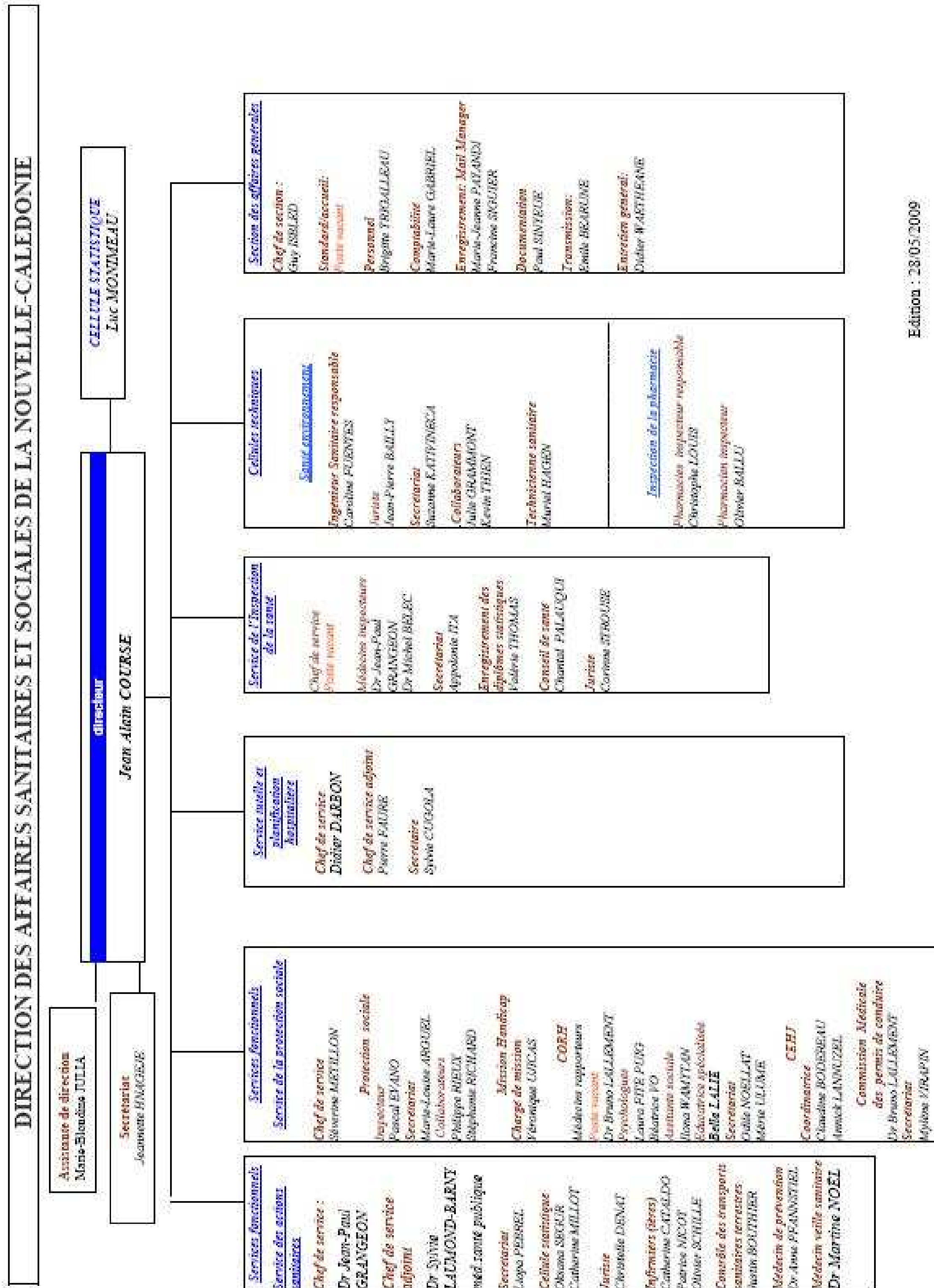
Office hours	:	0800 - 1700
Website	:	http://www.wpro.who.int/southpacific

6. ORGANIZATIONAL CHART: Direction Des Affaires Sanitaires et Sociales de Nouvelle-Caledonie



COUNTRY HEALTH INFORMATION PROFILE

NEW CALEDONIA — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	18.58			2008	1
2	Estimated population ('000s)	249.00	...	...	2008p	1
3	Annual population growth rate (%)	2.50	...	...	2006	2
4	Percentage of population					
	- 0–4 years	8.40	8.50	8.20	2008 est	3
	- 5–14 years	18.40	18.60	18.40	2008 est	3
	- 65 years and above	6.20	5.60	7.00	2008 est	3
5	Urban population (%)	64.40	...	...	2007 est	4
6	Crude birth rate (per 1000 population)	16.10	...	...	2008p	1
7	Crude death rate (per 1000 population)	4.70	...	...	2008p	1
8	Rate of natural increase of population (% per annum)	1.15 [f]	...	...	2008p	1
9	Life expectancy (years)					
	- at birth	75.90	71.80	80.30	2007	2
	- Healthy Life Expectancy (HALE) at age 60	...	...	...	...	
10	Total fertility rate (women aged 15–49 years)	2.20			2005	2
	Socioeconomic indicators					
11	Adult literacy rate (%)	91.00	92.00	90.00	2007	1
12	Per capita GDP at current market prices (US$)	38 300.14 [a]			2007 est	5
13	Rate of growth of per capita GDP (%)	...				
14	Human development index	...				
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	...	...	...		
16	Health care waste generation (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	922	...	...	...	...	...	2005	6
	- Type B	31	14	17	...	...	...	2007	2
	- Type C	2	1	1	...	...	...	2007	2
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	...	...	...	...	...	...		
	Dengue/DHF	1179	...	...	1	...	...	2008	7
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	82	52	30	...	...	...	2007	2
	Leprosy	2	...	...	...	...	...	2007	7
	Malaria	0	0	0				2007	2
	Plague	...	...	...	...	...	...		
	Syphilis	37 [b]	12	24	...	...	...	2007	2
	Typhoid fever	1	1	0	...	...	...	2007	2

INDICATORS		DATA						Year	Source
	Communicable and noncommunicable diseases	**Number of new cases**			**Number of deaths**				
		Total	**Male**	**Female**	**Total**	**Male**	**Female**		
18	**Acute respiratory infections**	3372	...	...	...	...	...	2007	2
19	**Diarrhoeal diseases**	375	...	...	...	...	...	2007	2
20	**Tuberculosis**								
	- All forms	47 [h]	...	....	....	....	....	2007	7
	- New pulmonary tuberculosis (smear-positive)	12 [h]	...	....	...	....	....	2007	7
21	**Cancers**								
	All cancers (malignant neoplasms only)	661	...	...	...	...	...	2006	2
	- Breast	83	...	...	...	...	...	2006	2
	- Colon and rectum	47	...	...	...	...	...	2006	2
	- Cervix			70 [c]			...	2006	2
	- Oesophagus	34	...	...	...	...	...	2006	2
	- Leukaemia	45	...	...	...	...	...	2006	2
	- Lip, oral cavity and pharynx	27	...	...	...	...	...	2006	2
	- Liver	5	...	...	...	...	...	2006	2
	- Stomach	90 [d]	...	...	...	...	...	2006	2
	- Trachea, bronchus, and lung	74	...	...	...	...	...	2006	2
22	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	250	...	...	...	...	...	2007	2
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	10 114	...	...	...	...	...	2007	2
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	1736 [e]	...	...	...	...	...	2007	2
23	**Diabetes mellitus**	7822	...	...	...	...	...	2007	2
24	**Mental disorders**	4004	...	...	...	...	...	2007	2
25	**Injuries**								
	All types	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Motor and other vehicular accidents	667	...	...	...	...	...	2007	2
	- Occupational injuries	3636	...	...	...	...	...	2007	2
	- Suicide	45	...	...	...	...	...	2007	2
	Leading causes of mortality and morbidity	**Number of cases**			**Rate per 100 000 population**				
26	**Leading causes of morbidity (inpatient care)**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Obstetric conditions	2572	...	...	1069.93	...	...	2006	8
	2. Orthopedic and rheumatogical conditions	1570	...	...	653.11	...	...	2006	8
	3. Digestive conditions	1340	...	...	557.43	...	...	2006	8
	4. Respiratory conditions	927	...	...	385.62	...	...	2006	8
	5. Neurological conditions	870	...	...	361.91	...	...	2006	8
	6. Cutaneous and sub-cutaneous conditions (incl operation linked with obesity)	867	...	...	360.66	...	...	2006	8
	7. Heart conditions	739	...	...	307.42	...	...	2006	8
	8. Ophtalmic conditions	370	...	...	153.92	...	...	2006	8
	9. Chemotherapy, radiotherapy, blood transfusion	355	...	...	147.68	...	...	2006	8
	10. Uro-nephorlogical conditions	323	...	...	134.36	...	...	2006	8

	INDICATORS	DATA						Year	Source
		Number of cases			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Tumors	328	...	...	134.10[f]	...	...	2007	2
	2. Diseases of the circulatory system	292	...	...	119.38[f]	...	...	2007	2
	3.Traumatic injuries and poisoning	181	...	...	74.00[f]	...	...	2007	2
	4. Diseases of the respiratory system	123	...	...	50.29[f]	...	...	2007	2
	5. Diseases of the digestive system	39	...	...	15.94[f]	...	...	2007	2
	6. Infectious and parasitic diseases	35	...	...	14.31[f]	...	...	2007	2
	7. Diseases of the genito-urinary system	24	...	...	9.81[f]	...	...	2007	2
	8. Endocrinic, nutritional and metabolic diseases	24	...	...	9.81[f]	...	...	2007	2
	9. Diseases of the nervous system	19	...	...	7.77[f]	...	...	2007	2
	10. Perinatal conditions	14	...	...	5.72[f]	...	...	2007	2
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					37.50		2007	9
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					...			
30	**Percentage of pregnant women with anaemia**					...			
31	**Neonatal mortality rate (per 1000 live births)**	2.50		...		...		2005	6
32	**Percentage of newborn infants weighing at least 2500 g at birth**	91.50		...		...		2006	8
33	**Immunization coverage for infants (%)**								
	- BCG	98.00		...		...		2008	7
	- DTP3	100.00		...		...		2008	7
	- POL3	100.00		...		...		2008	7
	- Hepatitis B III	97.80		...		...		2008	7
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			1322			0	2007	2
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	7
	- Diphtheria	0	0	0	...	...	...	2008	7
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2008	7
	- Mumps	...	...	...	...	...	...		
	- Neonatal tetanus	0	0	0	...	...	...	2008	7
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	7
	- Poliomyelitis	0	0	0	...	...	...	2008	7
	- Rubella	...	...	...	...	...	...		
	- Total Tetanus	0	0	0	...	...	...	2008	7

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Facilities with HIV testing and counseling services**		75		2008	2
37	**Health infrastructure**					
	Public health facilities	- General hospitals	3	...	2006	8
		- Specialized hospitals	4	184 [g]	2005	6
		- District/first-level referral hospitals	7	...	2006	8
		- Primary health care centres	19	...	2006	8
	Private health facilities	- Hospitals	3	...	2006	8
		- Outpatient clinics	...	...		
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)		476.59		2003	2
	- total expenditure on health as % of GDP		8.70		2003	9
	- per capita total expenditure on health (in US$)		1941.48		2003	2
	Government expenditure on health					
	- amount (in million US$)		476.59		2003	6
	- general government expenditure on health as % of total expenditure on health		...			
	- general government expenditure on health as % of total general government expenditure		...			
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health		...			
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health		...			
	Exchange rate in US$ of local currency is: 1 US$ =		...			
39	**Health insurance coverage as % of total population**		...			

	INDICATOR		DATA							Year	Source
40	**Human resources for health**		**Total**	**Male**	**Female**	**Urban**	**Rural**	**Public**	**Private**		
	Physicians	- Number	545	...	...	...	...	...	...	2008	2
		- Ratio per 100 000 population	2.19	...	...	...	...	...	...	2008	2
	Dentists	- Number	125	...	...	...	...	...	...	2008	2
		- Ratio per 100 000 population	0.50	...	...	...	...	...	...	2008	2
	Pharmacists	- Number	141	...	...	...	...	...	...	2008	2
		- Ratio per 100 000 population	0.57	...	...	...	...	...	...	2008	2
	Nurses	- Number	1091	...	...	...	...	...	...	2008	2
		- Ratio per 100 000 population	4.38	...	...	...	...	...	...	2008	2
	Midwives	- Number	106	...	...	...	...	...	...	2008	2
		- Ratio per 100 000 population	0.43	...	...	...	...	...	...	2008	2
	Paramedical	- Number	...	...	...	...	...	...	....		
		- Ratio per 100 000 population	...	...	...	...	...	...	....		
	Cummunity Health Workers	- Number	...	...	...	...	...	...	....		
		- Ratio per 100 000 population	...	...	...	...	...	...	....		
41	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	6.10 [e]	...	...	2007	2
45	Under-five mortality rate (per 1000 live births)	9.06	...	...	2002	10
46	Proportion of 1 year-old children immunised against measles	98.60	...	...	2008	7
47	Maternal mortality ratio (per 100 000 live births)	31.60			2007	8
48	Proportion of births attended by skilled health personnel	91.97			2005	11
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	4.37			2005	11
	- Percentage of deliveries in health facilities (as % of total deliveries)	87.60			2005	11
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	...				
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults a	...	...	...		
55	Percentage of people with advanced HIV infection receiving ART	...		...		
56	Malaria incidence rate per 100 000 population	0.00	0.00	0.00	2006	2
57	Malaria death rate per 100 000 population	0.00	0.00	0.00	2006	2
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	0.00	0.00	0.00	2006	2
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	0.00	0.00	0.00	2006	2
60	Tuberculosis prevalence rate per 100 000 population	25.00	...	...	2007	7
61	Tuberculosis death rate per 100 000 population	2.00	...	...	2007	7
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	90.00	...	...	2007	7
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	89.00	...	...	2006	7
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	...	...	...		
65	Proportion of population using an improved sanitation facility	...	...	...		
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
...	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Figure was converted using exchange rate for 2007 F.CFP 81.99 per US$
b	Totals may not tally due to some reported cases with no gender breakdown
c	Figure refer to cancer of female genital organs
d	Figure refer to cancer of digestive organs
e	Revised figure
f	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
g	Figure refers to 108 beds for psychiatric cases and 76 beds for geriatric cases
h	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

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New Zealand

1. CONTEXT

1.1 Demographics

New Zealand had a population of 4 143 279 in the 2006 census. There were 1 965 621 male and 2 062 328 female residents counted, around 104 women for every 100 men. The estimated resident population as of 30 June 2008 was 4 268 900, with 2 092 200 males and 2 176 700 females. The median age was 35.4 years for men and 37.2 years for women. In common with many other developed countries, New Zealand's population is ageing.

At total population level, the country's health continues to improve. Impressive longevity gains have been recorded: life expectancy at birth is 82.2 years for females and 78.0 years for males. These levels for 2006–2008 represent longevity gains of 1.1 years for females and 1.9 years for males since 2000–2002. Since 1975–1977, life expectancy at birth has increased by 6.8 years for females and 9.2 years for males. This has resulted from reductions in death rates at all ages.

The 2006 census results showed that the ethnic make-up of New Zealand had changed rapidly since 2001.

- Asian ethnic groups had grown the fastest, increasing almost 50% from 238 176 people in 2001 to 354 552 in 2006.
- Those identifying with Pacific peoples' ethnic groups had the second-largest increase, up almost 15% since 2001, to 265 974 people.
- The Māori ethnic group had increased by just over 7% to total 565 329 people. One in seven people identified with the Māori ethnic group.
- 'New Zealander' was a separate category for the first time in 2006; it was previously counted in the European category. Of those who identified themselves as New Zealanders, 12.9% also identified with at least one other ethnic group. New Zealander was the third-largest ethnic group, with 429 429 people or 11% of those who stated their ethnicity.
- European remained the largest of the major ethnic groups, totaling 2 609 592 people (67.6%).

1.2 Political situation

A national general election is held every three years under a mixed member proportional representation system. There are approximately 120 seats in Parliament and there is no upper house. The centre-right New Zealand National Party was elected in November 2008, resulting in a change of Government for the first time in nine years.

1.3 Socioeconomic situation

Due to the deteriorating international economic outlook, the New Zealand economy contracted by 1.9% over 2008. The main drivers of the decline in real production GDP were weaknesses in manufacturing, construction, wholesale trade and tourism, partly offset by strong agriculture and primary food production. The unemployment rate in 2008 rose to a five-year high of 4.7%.

1.4 Risks, vulnerabilities and hazards

Vulnerabilities and hazards derive from the geographical configuration of a relatively small island country in the Pacific Ocean. Biological hazards, such as pandemic (H1N1) influenza (swine flu), pose an imminent risk.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Diseases of the circulatory system, such as heart disease and stroke, were the major cause of mortality in 2005-2006 (the latest two years for which cause-of-death data has been processed by the national health information system), accounting for 38% of all deaths. Neoplasm (mainly cancer) was the next biggest cause of mortality, accounting for 29% of deaths.

Between 1996−1999 and 2001−2004 absolute inequality in all-cause mortality decreased, more so for Māori than for Pacific ethnic groups. This appears to have arrested a widening gap in inequality evident from the early 1990s. A substantial proportion of the decline in mortality for all ethnic groups over this period can be attributed to a progressive reduction in the incidence (improvements in smoking, diet and control of blood cholesterol and blood pressure) and case fatality rates for cardiovascular disease (CVD), coronary heart disease and stroke, in particular. At the same time, the contribution of cancer to ethnic mortality inequality increased.

In terms of health risk factors influenced by individual behaviour, tobacco consumption declined significantly during the period from 1976 to 1992, leveled off from 1992 to 1996, and has subsequently fallen further. Smoking remains a major contributor to inequalities in health. People living in more deprived areas have higher rates of smoking than people living in less deprived areas. Smoking rates among both Māori and Pacific people declined between 2002/2003 and 2006/2007, but the prevalence of smoking remains high among Māori (40.4%) and Pacific people (26.0%) compared with the total population prevalence (19.9%).

Obesity is one of the most important modifiable risk factors for a number of important diseases such as type 2 diabetes, ischaemic heart disease and stroke. Obesity and overweight are major health issues affecting over half the adult population and just under one-third of New Zealand children.

2.2 Outbreaks of communicable diseases

Compared with other developed countries, a relatively high incidence of waterborne diseases, including campylobacteriosis, giardiasis and cryptosporidiosis, is reported.

The Ministry of Health has acknowledged capability and capacity in the leadership and coordination of health sector activity during possible emergency events, such as outbreaks of severe acute respiratory syndrome (SARS), 'avian flu' or 'swine flu'. The National Influenza Pandemic Preparedness Plan serves as a valuable model for the Pacific region. The information in the plan is the outcome of work undertaken by intersectoral working groups covering health, biosecurity, law and order, emergency services, civil defense emergency management, welfare, education, border response, the economy, external response (international) infrastructure and workplaces.

The Ministry of Health is responsible for planning the national response to health service emergencies of all kinds, including outbreaks of communicable disease. The National Health Emergency Plan (NHEP) 2008 describes the larger context within which the Ministry of Health and all health services will function during any national health-related emergency, including the country's responsibilities under international agreements and regulations.

2.3 Leading causes of mortality and morbidity

Chronic or long-term conditions are the leading cause of preventable morbidity, mortality and unequal health outcomes. They include diabetes and cardiovascular disease, cancer, respiratory conditions, mental health conditions, such as anxiety and depression, and arthritis.

Together, cardiovascular disease and diabetes account for a significant burden of chronic illness and premature death. About 10500 New Zealanders die from cardiovascular disease each year, accounting for 40% of all deaths, and there are 7000 new stroke 'events' every year. Over 7000 people are newly diagnosed with diabetes each year and 4.5% of the population live with a diagnosis of diabetes.

The major causes of death (rate per 100 000) in 2005 were: malignant neoplasms (191.8); ischaemic heart diseases (141.6); cerebrovascular diseases (63.1); chronic lower respiratory diseases (39.0); other forms of heart disease (28.0); diabetes mellitus (20.5); organic, including symptomatic, mental disorders (16.1); intentional self-harm (12.5); transport accidents (11.9); and other degenerative diseases of the nervous system (11.7).

2.4 Maternal, child and infant diseases

The infant mortality rate continues to decrease, standing at 4.8 per 1000 live births in 2006, down from 5.7 in 1999 and 18.4 in 1969. The rate has fallen in association with a reduction in infectious diseases (and respiratory diseases), which were previously the main causes of infant death in the country.

In 2005, 99.1% (55 192) of total hospital births were liveborn babies and 0.7% (393) were stillbirths. The number of neonatal deaths remains relatively small, accounting for 179 cases (0.3%) of all hospital births. Europeans have markedly lower early neonatal death rates than all other ethnicities. The perinatal death rate for Pacific babies was the highest (14.2 perinatal deaths per 1000 total births) compared with the other ethnic groups. Among the 54 849 mothers in 2005, two-thirds (66.8%) had normal vaginal births and 23.8% had caesarean sections. The remaining 9.4% of deliveries involved assisted births or spontaneous breech births.

The major causes of infant mortality are sudden infant death syndrome (SIDS), congenital abnormalities and perinatal conditions (such as prematurity, perinatal infections and low birth weight). The SIDS death rate of 0.8 per 1000 live births in 2004 was 61.9% lower than in 1994. This rate is the lowest recorded since SIDS became a separate category in the International Classification of Diseases in 1979.

There were 64 160 live births registered in New Zealand in the year to March 2009, up 910 (1%) from the previous year. The birth rate was 2.2 births per woman, the highest rate of fertility since 1991.

In the year to March 2009, women aged 30–34 years had the highest fertility rate (125 births per 1000 women). The median age of women giving birth is now 30 years, and the median age of women giving birth to their first child is 28 years. A delayed fertility pattern is noticeable among women of European and Asian ethnic groups. There is also some evidence of delayed child-bearing among Pacific women.

2.5 Burden of disease

Within the scope of health and disability services, unequal health outcomes can largely be attributed to the disproportionate burden imposed by chronic or long-term conditions, especially CVD and type 2 diabetes, on Māori and Pacific peoples and those on low incomes.

Modern sedentary lifestyles and high-energy diets, combined with the effects of an ageing population and improvements in the management of acute cardiovascular disease (CVD), have resulted in an increase in the number of people living with CVD. Although mortality due to CVD has decreased significantly in the last 25 years, it is still a leading cause of death and a major source of disparity in health between Māori and non-Māori. For the first time, however, there are initial indications that the present decline in CVD risks may be starting to plateau, possibly due to the increasing prevalence of obesity and type 2 diabetes.

The prevalence of obese adults has been increasing since 1989. In 2006/2007 26% of females and just under 25% of males were obese. Childhood obesity remained stable from 2002 to 2006/2007, at around 9% of all 5-14 year-olds. Obesity is not evenly distributed throughout the population and is related to age, ethnicity and socioeconomic position. Pacific adults and children are at least 2.5 times more likely to be obese than all adults and children in the population, while Māori adults are 1.7 times and Māori children 1.4 times more likely to be obese than all adults and children in the population.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health is a policy advisor to the Minister of Health, an agent of the Minister for monitoring and overseeing District Health Boards (DHBs), a funder of DHBs and national services (such as national screening services), and a provider of regulatory and other functions (e.g. public health).

The strategic direction of the Ministry of Health is "better, sooner, more convenient" services for all New Zealanders. The outcomes framework from the Ministry's Statement of Intent, describes the conditions to be achieved in the medium term in order to meet the Government's goal of all New Zealanders leading longer, healthier and more independent lives. The outcome areas are:

1. Workforce supply meets service demand.
2. Systems and services are more patient-centred.
3. More services delivered locally in the community and in primary care.
4. Faster access to high-quality hospital services.
5. Every dollar is spent in the best way to improve health outcomes.
6. Achieving Whānau Ora (supporting Māori families to achieve their maximum health and wellbeing)
7. Leadership and planning are clear, effective and coordinated.

3.2 Organization of health services and delivery systems

The New Zealand Public Health and Disability Act 2000 established DHBs. Governed by boards of directors that include locally elected members and ministerial appointees, the 21 DHBs are responsible for planning, funding and delivering most publicly funded health services to New Zealanders. DHBs' provider arms encompass hospital care, specialty care, community nursing and other functions.

Primary health care is provided by primary health organizations (PHOs), which contract with DHBs for the bulk of their funding. The first PHOs were introduced in 2002 as the cornerstone of implementation of the Primary Health Care Strategy. There are now 82 PHOs with over 4 million people enrolled (more than 95% of the New Zealand public), involving the vast majority of general practitioners and practice nurses. Governed by non-profit boards of directors, PHOs contract with DHBs to offer a range of preventive and curative services, as well as an increasing array of population health services. All New Zealanders enrolled with PHOs can avail themselves of low or reduced-cost primary care services, including office-based general practice care and pharmaceuticals (maximum of NZ$3.00 copayment).

Much health care is delivered by nongovernmental organizations (NGOs). These include providers with national contracts, such as the Royal New Zealand Plunket Society, which provides child health services, and providers that contract with their local DHB, such as community-based NGOs, providing services to people with experience of mental illness.

3.3 Health policy, planning and regulatory framework

The New Zealand Health Strategy and the New Zealand Disability Strategy sit alongside each other and together set the country's health and independence goals. Additional key strategies include *He Korowai Oranga* (the Māori Health Strategy), and the Primary Health Care Strategy, which aim to strengthen the comprehensiveness and integration of primary health care services throughout New Zealand.

A wide range of health information is collected nationally and held in various collections.

- The National Minimum Dataset is a single, integrated collection of secondary and tertiary hospital health discharge data.

- The Cancer Registry is a population-based tumour register of all primary malignant diseases, active since 1948.
- The Mortality Register contains coded causes of death for New Zealanders who die in New Zealand and is based on the legal death certificate, or coroner's report, and autopsy reports.
- The Mental Health Information National Collection contains information on specialist mental health and alcohol and drug services. This collection contains comprehensive information from DHBs and approximately 10% of NGOs.
- The National Booking Reporting System provides information, by health specialty and booking status, on how many patients are waiting for treatment, and also how long they have had to wait before receiving treatment.
- HealthPAC provides information and reports relating to payment and other health data.

3.4 Health care financing

Public sector funding is the major source of financing for health and disability support services. Approximately 78% of total health expenditure is paid for by government funds. Of total health expenditure, 67% is from Vote Health, which pays for core health services such as hospitals, primary care, public health care, mental health care, addiction services, and care for older people. Most of the remaining public funds (10%) are from the ACC (Accident Compensation Corporation), which pays for accident and injury prevention and treatment. Private insurance pays for less than 6% of total health expenditure, while out-of-pocket spending accounts for between 16% and 17%. These levels have remained roughly the same for the past 20 years.

Total Vote Health expenditure was NZ$ 12 240 million (US$ 7749 million) in 2008/2009. In 2008/2009, DHB appropriations totaled NZ$ 9032 million (US$ 5717 million). Most DHB funding is allocated using a population-based funding formula that gives each DHB the same opportunity, in terms of resources, to respond to its population's needs.

New Zealand has historically had a system of cost-sharing for doctors' visits and prescription drugs. The Commonwealth Fund survey shows relatively few New Zealanders had no out-of-pocket medical costs in 2007.

3.5 Human resources for health

Global demand for qualified health workers is projected to increase, and competition for workers in the health sector labour market will be vigorous. New Zealand will need to retain local graduates and attract suitable numbers of trained workers from overseas.

The health and disability workforce delivers services to over 4 million people and comprises over 130 000 health workers, over 5% of all workers in the country. Of these 130 000 health workers, 80 000 are registered practitioners and the remainder includes care and support workers[1], community health promoters, some technicians, service and food workers and administrators. DHBs are the largest health sector employers and directly employ approximately 65 000 health workers. Others work in residential or community settings in the private sector and in nongovernmental organizations. In some cases, these NGOs are funded for particular services by the Ministry or DHBs.

New Zealand's health and disability workforce can be characterized by:

- an ageing workforce, with 74% of dental therapists, 70% of midwives and 67% of nurses aged over 40 years;
- increasing specialization and subspecialization;

[1] Care and support workforce: the paid workforce that delivers services in the community in both residential and home-based settings, providing non-specialist support services to people with lifelong disabilities and age-related disability support needs.

- being highly reliant on overseas trained doctors (40%) and nurses (25%) when compared with other developed countries;
- supply pressures in some workforce areas, particularly midwives, junior doctors, GPs, some medical specialists and some nurses;
- significant underrepresentation of Māori and Pacific peoples among health professionals;
- difficulties in providing services in some rural areas.

Trends predict increasing health service demands based on an ageing population, growth in chronic diseases, and increased complexity of need. New Zealand is developing a stronger and more coordinated national approach to strategic workforce planning to assure a workforce that can deliver the services needed. Key priority areas for workforce planning and development include:

- retaining more of New Zealand's valued and skilled health professionals by ensuring they are fully engaged and satisfied in their jobs, and that their expertise is being used in the best way to treat patients;
- boosting the workforce in areas and specialties that are hard to staff, focusing particularly on rural and provincial areas, and on the workforce needed to support and deliver elective services;
- moving New Zealand towards self sufficiency in health workforce training;
- understanding likely future gaps in workforce and skills across critical services, and identifying the actions needed to fill them.

3.6 Partnerships

New Zealand is one of the three dominant development partners in the South Pacific, together with Australia and the European Union, with collaboration and partnerships at both bilateral and multilateral levels.

Based on the Pacific Leaders' vision, the Pacific Plan was adopted by Pacific Islands Forum countries in November 2005 as a blueprint for strengthening regional cooperation and integration. It covers the most significant common development challenges the Pacific island countries face and is seen to be, not just regionally, but also nationally owned. Health is embodied in the Pacific Plan under strategic objective No. 6. – Improved Health.

3.7 Challenges to health system strengthening

Rising public expenditures, workforce shortages, an ageing population, new technologies, persistent inequalities and a growth in long-term conditions are the main pressures on the New Zealand health system.

There are clear signs that the health system is contributing positively to the health of New Zealanders, such as increasing life expectancy, lower infant death rates (28% in the last decade), declining death rates from cardiovascular disease (10% between 2000 and 2004), and a reduced the gap between Māori and non-Māori death rates (approximately 15% between 1996−1999 and 2001−2004). These results have been achieved by a system that, overall, compares well from an efficiency standpoint with comparable countries. New Zealand incurs less than half the cost per acute inpatient day of Australia and Canada, health spending per capita is 80% of the OECD median and 75% of the Australian rate, and growth in pharmaceutical spending per capita is two times less than Canada and 2.5 times less than Australia.

While progress is being made in reducing inequalities in health outcomes between population groups, some inequalities remain. Māori and Pacific peoples have poorer health than non- Māori and non-Pacific people, and people with low socioeconomic status have poorer health than those with higher socioeconomic status. Five-year cancer survival rates, cardiovascular disease mortality and diabetes

diagnosis show marked disadvantages for Māori compared with non- Māori, and Māori and Pacific women and women living in deprived areas are less likely to receive cervical or breast cancer screening.

The causes of inequality are complex. The health and disability sector needs to continue to provide services that act to reduce inequalities between groups and to work across sectors to address the unequal distribution of the social determinants of health.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Health and Independence Report 2008*
Operator	:	Ministry of Health, New Zealand
Web address	:	http://www.moh.govt.nz/moh.nsf/indexmh/health-independence-report08
Title 2	:	New Zealand Ministry of Health
Web address	:	http://www.moh.govt.nz/moh.nsf
Title 3	:	New Zealand Health Information Service (NZHIS)
Operator	:	Ministry of Health, New Zealand
Features	:	The New Zealand Health Information Service (NZHIS) is a group within the New Zealand Ministry of Health responsible for the collection and dissemination of health-related data.
Web address	:	http://www.nzhis.govt.nz/
Title 4	:	*Statistics New Zealand*
Comments	:	Provides, among others, the 2006 Census data
Web address	:	http://www.stats.govt.nz/default.htm
Title 5	:	*Statement of Intent 2009–2012*
Operator	:	Ministry of Health, New Zealand
Web address	:	http://www.moh.govt.nz/soi

5. ADDRESSES

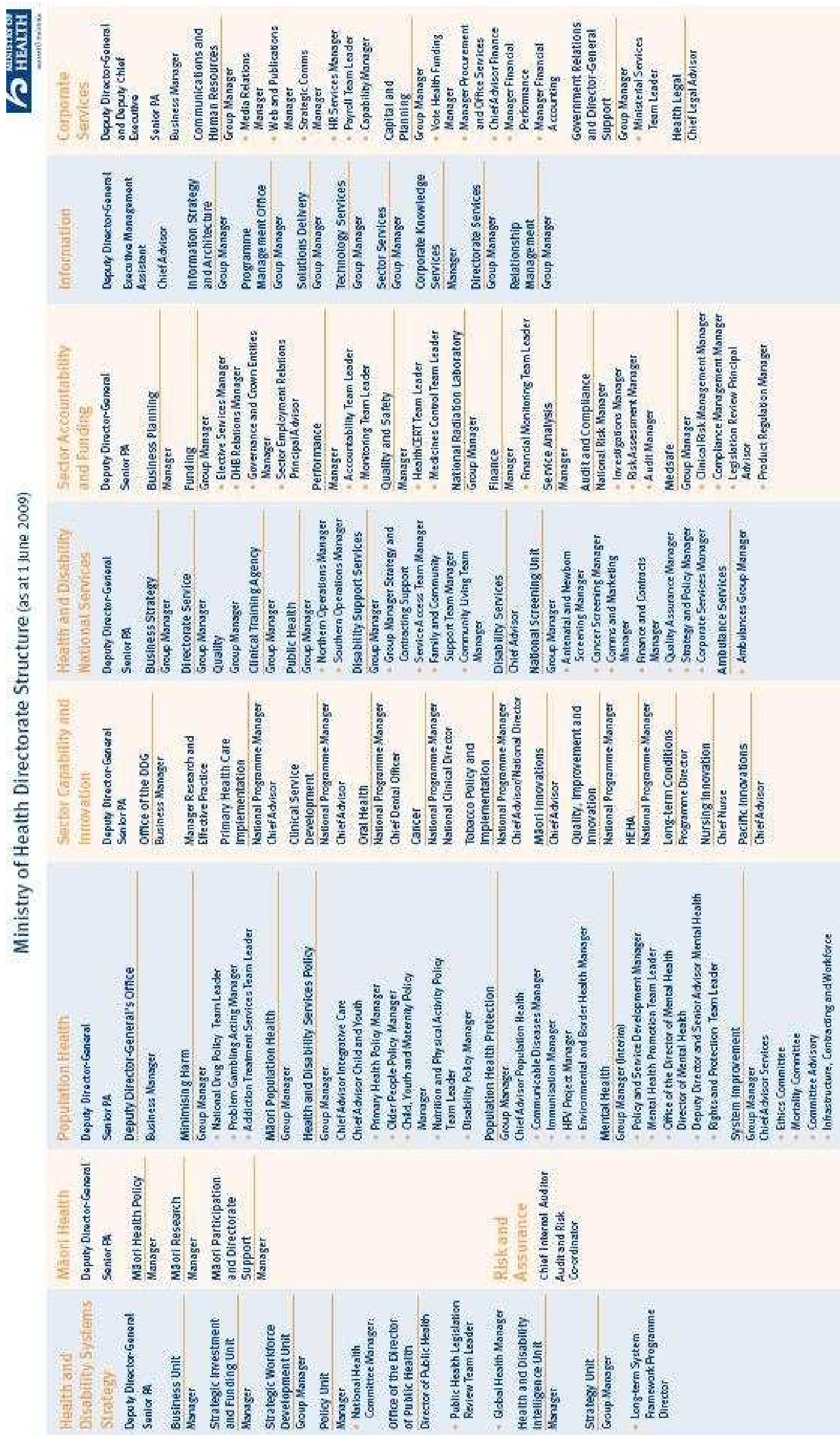
MINISTRY OF HEALTH

Office Address	:	1-3 The Terrace, P.O. Box 5013, Wellington 6011, New Zealand
Telephone	:	04 - 496-2000
Fax	:	04 - 496-2340
Website	:	http://www.moh.govt.nz

WHO REPRESENTATIVE IN THE SOUTH PACIFIC

Office Address	:	Level 4, Provident Plaza One, Downtown Boulevard, 33 Ellery Street, Suva
Postal Address	:	P.O. Box 113, Suva, Fiji
Official Email Address	:	who@sp.wpro.who.int
Telephone	:	(679) 3234 100
Fax	:	(679) 3234 166; 3234 177
Office hours	:	0800 – 1700
Website	:	http://www.wpro.who.int/southpacific

6. ORGANIZATIONAL CHART: MINISTRY OF HEALTH



NEW ZEALAND

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	270.69 [a]			2006	1
2	Estimated population ('000s)	4268.9 [b]	2092.2 [b]	2176.7 [b]	2008 est	1
3	Annual population growth rate (%)	1.00	...	...	2008 est	1
4	Percentage of population					
	- 0–4 years	7.03 [b]	7.35 [b]	6.72 [b]	2008 est	1
	- 5–14 years	13.81 [b]	14.43 [b]	13.20 [b]	2008 est	1
	- 65 years and above	12.60 [b]	11.60 [b]	13.56 [b]	2008 est	1
5	Urban population (%)	86.40 [c]	...	...	2007 est	2
6	Crude birth rate (per 1000 population)	14.91	...	...	2008	1
7	Crude death rate (per 1000 population)	6.67	...	...	2008	1
8	Rate of natural increase of population (% per annum)	0.82 [d]	...	...	2008	1
9	Life expectancy (years)					
	- at birth	80.20	78.00	82.20	2005-07	1
	- Healthy Life Expectancy (HALE) at age 60	...	16.00	18.20	2002	3
10	Total fertility rate (women aged 15–49 years)	2.15			2008	2
	Socioeconomic indicators					
11	Adult literacy rate (%)	89.00 [e]	...	...	2006	4
12	Per capita GDP at current market prices (US$)	24 996.00 [f]			2005	5
13	Rate of growth of per capita GDP (%)	4.80			2004-05	1
14	Human development index	0.94			2006	7
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	...	...	...		
16	Health care waste generation (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	91 [g]	58	31	0	0	0	2008	9
	- Type B	39 [g]	24	14	0	0	0	2008	9
	- Type C	23	12	11	0	0	0	2008	9
	- Type E	...	...	...	...	...	...		
	- Unspecified	2	0	2	0	0	0	2008	9
	Cholera	0	0	0	0	0	0	2008	9
	Dengue/DHF	114	58	56	0	0	0	2008	9
	Encephalitis	0	0	0	0	0	0	2005	8
	Gonorrhoea	...	...	...	0	0	0	2004	9
	Leprosy	5	2	3	0	0	0	2008	9
	Malaria	40 [g]	22	17	0	0	0	2008	9
	Plague	0	0	0	0	0	0	2008	9
	Syphilis	...	...	...	0	0	0	2004	9
	Typhoid fever	29	17	12	0	0	0	2008	9

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	29 108	15 707	13 401	398	144	254	C:2003-04 D:2005	9
19	**Diarrhoeal diseases**	6333	3182	3151	15	4	11	C:2003-04 D:2005	9
20	**Tuberculosis**								
	- All forms	302	162	140	5	3	2	2008	7
	- New pulmonary tuberculosis (smear-positive)	97	54	43	2	2	0	2008	7
21	**Cancers**								
	All cancers (malignant neoplasms only)	18 610	9647	8963	7865	4127	3738	2005	9
	- Breast	2479	21	2458	653	5	648	2005	9
	- Colon and rectum	2716	1331	1385	1222	608	614	2005	9
	- Cervix			154			54	2005	9
	- Oesophagus	219	148	71	196	130	66	2005	9
	- Leukaemia	575	331	244	307	159	148	2005	9
	- Lip, oral cavity and pharynx	285	195	90	126	88	38	2005	9
	- Liver	223	149	74	140	95	45	2005	9
	- Stomach	341	203	138	256	143	113	2005	9
	- Trachea, bronchus, and lung	1659	948	711	1451	864	587	2005	9
22	**Circulatory**								
	All circulatory system diseases	68 384 [h]	37 928 [h]	30 456 [h]	10 506	4916	5590	C:2003-04 D:2005	9
	- Acute myocardial infarction	12 127 [h]	7555 [h]	4572 [h]	3002	1579	1423	C:2003-04 D:2005	9
	- Cerebrovascular diseases	8474 [h]	4061 [h]	4413 [h]	2587	940	1647	C:2003-04 D:2005	9
	- Hypertension	894 [h]	346 [h]	548 [h]	256	91	165	C:2003-04 D:2005	9
	- Ischaemic heart disease	26 251 [h]	16 076 [h]	10 175 [h]	5807	3057	2750	C:2003-04 D:2005	9
	- Rheumatic fever and rheumatic heart diseases	684 [h]	309 [h]	375 [h]	175	59	116	C:2003-04 D:2005	9
23	**Diabetes mellitus**	7754 [h]	4132 [h]	3622 [h]	839	447	392	C:2003-04 D:2005	9
24	**Mental disorders**	20 898 [h]	9872 [h]	11 026 [h]	727	242	485	C:2003-04 D:2005	9
25	**Injuries**								
	All types	137 869 [i]	73 261 [i]	64 608 [i]	1708 [i]	1174 [i]	534 [i]	C:2003-04 D:2005	9
	- Homicide and violence	4242 [i]	3243 [i]	999 [i]	71 [i]	39 [i]	32 [i]	C:2003-04 D:2005	9
	- Motor and other vehicular accidents	13 125 [i]	8384 [i]	4741 [i]	488 [i]	353 [i]	135 [i]	C:2003-04 D:2005	9
	- Occupational injuries	...	...	...	...	...	...		
	- Suicide	5402 [i]	1744 [i]	3658 [i]	511 [i]	380 [i]	131 [i]	C:2003-04 D:2004	9
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Malignant neoplasms (C00-C96)	43 123	22 548	20 575	1075.49	1143.81	1009.42	2003-04	9
	2. Complications of labour and delivery (060-075)	29 160		29 160	727.25		1430.60	2003-04	9
	3. Ischaemic heart diseases (120-125)	26 251	16 076	10 175	654.70	815.50	499.19	2003-04	9
	4. Other forms of heart disease (130-152)	20 090	10 747	9343	501.05	545.17	458.37	2003-04	9
	5. Chronic lower respiratory diseases (J40-J47)	19 934	9672	10 262	497.16	490.64	503.46	2003-04	9
	6. Symptoms and signs involving the circulatory and respiratory systems (R00-R09)	19 878	9828	10 050	495.76	498.55	493.06	2003-04	9
	7. Maternal care related to the fetus and amniotic cavity and possible delivery problems	19 182		19 182	478.40		941.08	2003-04	9
	8. Symptoms and signs involving the digestive system and abdomen (R10-R19)	18 726	6342	12 384	467.03	321.72	607.57	2003-04	9
	9. Arthropathies (M00-M25)	17 636	9372	8264	439.84	475.42	405.44	2003-04	9
	10. General symptoms and signs (R50-R69)	14 733	7231	7502	367.44	366.81	368.05	2003-04	9

	INDICATORS	DATA						Year	Source
		Number of cases			Rate per 100 000 population				
27	**Leading causes of mortality**	Total	Male	Female	Total	Male	Female		
	1. Malignant neoplasms (C00-C96)	7865	4127	3738	191.80	204.52	179.48	2005	9
	2. Ischaemic heart diseases (I20-I25)	5807	3057	2750	141.61	151.49	132.04	2005	9
	3. Cerebrovascular diseases (I60-I69)	2587	940	1647	63.09	46.58	79.08	2005	9
	4. Chronic lower respiratory diseases (J40-J47)	1600	803	797	39.02	39.79	38.27	2005	9
	5. Other forms of heart disease (I30-I52)	1148	508	640	28.00	25.17	30.73	2005	9
	6. Diabetes mellitus (E10-E14)	839	447	392	20.46	22.15	18.82	2005	9
	7. Organic, including symptomatic, mental disorders (F00-F09)	662	204	458	16.14	10.11	21.99	2005	9
	8. Transport accidents (V01-V99)	511	380	131	12.46	18.83	6.29	2005	9
	9. Diseases of arteries, arterioles and capillaries (I70-I79)	488	353	135	11.90	17.49	6.48	2005	9
	10. Intentional self-harm (X60-X84)	481	177	304	11.73	8.77	14.60	2005	9
	Maternal, child and infant diseases	Total		Male		Female			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**						72.00	2002 est	10
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**						NR	2006	8
30	**Percentage of pregnant women with anaemia**						...		
31	**Neonatal mortality rate (per 1000 live births)**		2.00		...		...	2007	9
32	**Percentage of newborn infants weighing at least 2500 g at birth**		94.13		...		...	2007	9
33	**Immunization coverage for infants (%)**								
	- BCG		...		...		...		
	- DTP3		87.00		...		...	2007	8
	- POL3		87.00		...		...	2007	8
	- Hepatitis B III		88.00		...		...	2007	8
		Number of cases			Number of deaths				
34	**Maternal causes**	Total	Male	Female	Total	Male	Female		
	- Abortion			14 604			1	C:2003-04 D:2003	9
	- Eclampsia			71			0	C:2003-04 D:2003	9
	- Haemorrhage			4624			0	C:2003-04 D:2003	9
	- Obstructed labour			3119			0	C:2003-04 D:2003	9
	- Sepsis			287			0	C:2003-04 D:2003	9
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	0	0	0	2008	7
	- Diphtheria	0	0	0	0	0	0	2008	7
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	12	9	3	0	0	0	2008	7
	- Mumps	78	34	40	0	0	0	2008	7
	- Neonatal tetanus	0	0	0	0	0	0	2008	7
	- Pertussis (whooping cough)	433	181	248	0	0	0	2008	7
	- Poliomyelitis	0	0	0	0	0	0	2008	7
	- Rubella	9	5	4	0	0	0	2008	7
	- Total Tetanus	0	0	0	0	0	0	2008	7

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Facilities with HIV testing and counseling services**		…			
37	**Health infrastructure**					
	Public health facilities	- General hospitals	85	12 484	2002	9
		- Specialized hospitals	…	…		
		- District/first-level referral hospitals	…	…		
		- Primary health care centres	…	…		
	Private health facilities	- Hospitals	360	11 341	2002	9
		- Outpatient clinics	…	…		
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)		11 683.09		2007p	11
	- total expenditure on health as % of GDP		8.90		2007p	11
	- per capita total expenditure on health (in US$)		2763.26		2007p	11
	Government expenditure on health					
	- amount (in million US$)		8997.06		2007p	11
	- general government expenditure on health as % of total expenditure on health		77.00		2007p	11
	- general government expenditure on health as % of total general government expenditure		17.40		2007p	11
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health		0.00		2007p	11
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health		23.00		2007p	11
	Exchange rate in US$ of local currency is: 1 US$ =		1.36		2007p	11
39	**Health insurance coverage as % of total population**		…			

	INDICATOR		DATA							Year	Source
40	**Human resources for health**		**Total**	**Male**	**Female**	**Urban**	**Rural**	**Public**	**Private**		
	Physicians	- Number	9757	6065	3692	7715	2042	5048	4709	2007	9
		- Ratio per 1000 population	2.33	1.45	0.88	2.11	3.55	1.21	1.13	2007	9
	Dentists	- Number	1877 [g]	1360	635	2697 [j]	580 [j]	126	1751	2007	9
		- Ratio per 1000 population	0.45	0.31	0.14	0.74	1.01	0.03	0.42	2007	9
	Pharmacists	- Number	2889	1247	1642	…	…	…	…	2007	9
		- Ratio per 1000 population	0.69	0.3	0.39	…	…	…	…	2007	9
	Nurses	- Number	41 980	2872	39 108	35 745	6235	25 866	16 114	2007	9
		- Ratio per 1000 population	10.03	0.69	9.35	8.54	9.78	10.84	3.85	2007	9
	Midwives	- Number	2511 [g]	5	2501	…	…	1457 [k]	908 [k]	2007	9
		- Ratio per 1000 population	0.60	0.00	0.60	…	…	0.30	0.20	2007	9
	Paramedical staff	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
41	**Annual number of graduates**	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	4.80	...	...	2006	1
45	Under-five mortality rate (per 1000 live births)	6.34	...	...	2003	1
46	Proportion of 1 year-old children immunised against measles	98.00	...	...	2007	8
47	Maternal mortality ratio (per 100 000 live births)	6.81			2004	9
48	Proportion of births attended by skilled health personnel	100.00			2001	9
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	95.30			2004 est	9
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	100.00			2005	9
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults	0.10	...	...	2007	8
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	...	...	...		
57	Malaria death rate per 100 000 population	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	7.08	...	...	2007	8
61	Tuberculosis death rate per 100 000 population	1.00	...	...	2007	8
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	60.00	...	...	2007	8
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	...	...	...		
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	...	100.00	...	2006	12
65	Proportion of population using an improved sanitation facility	...	...	...		
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Figure excludes inland waters and oceanic areas
b	Figure refers to usual resident population. Usual resident population includes those residents who are present and those who are temporarily elsewhere in New Zealand. Residents who are temporarily overseas were not counted.
c	Revised data
d	Computed by Health Information and Evidence for Policy Unit, WHO Regional Office for the Western Pacific
e	Literacy defined as levels 2-5 using OECD PISA (Programme for Internaitonal Student Achievement) standards
f	Figure refers to GNP per capita (PPP US$).
g	Totals may not tally due to some reported cases with no gender breakdown
h	Figure refers to hospitalization in 2003-04
i	Figure refers to hospitalization- 1st reported e-code
j	The sum of dentists in urban and rural areas do not add up to total number of dentists
k	The sum of midwives in public and private practice do not add up to total number of midwives

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NIUE

1. CONTEXT

1.1 Demographics

The population of Niue decreased from a peak of 5194 in 1966, to 2322 in 1991, 1788 in 2001 and an estimated 1549 residents in 2008. There is substantial emigration to New Zealand because of Niue's lack of natural resources, its isolation and insufficient social and economic development, and because Niueans hold New Zealand citizenship. The 2001 New Zealand census listed 20 148 Niueans in the New Zealand population.

Population density is estimated at six persons per square kilometre, with 38% living in urban areas. Children under the age of 15 years make up 33.4% of the population, and adults 65 years and older accounting for 5.2%. The crude birth rate is 15.6 per 1000 population and the crude death rate 9.2 per 1000 population.

The groundwater supply is safe and potable for human consumption and sanitation facilities are available to 100% of the population (2004). AusAID supported the development of the national waste management plan.

1.2 Political situation

Niue is a self-governing nation in free association with New Zealand. The head of government is Premier Young Viviani of the Niue People's Party. The head of state is Queen Elizabeth II of the United Kingdom of Great Britain and Northern Ireland.

The Legislative Assembly is Niue's supreme law-making body. It has 20 members, six elected from a common roll and 14 as village representatives. The Legislative Assembly is responsible for electing the Premier. Elections are held every three years by secret ballot under a system of universal suffrage.

1.3 Socioeconomic situation

The economy is dependent on limited agricultural exports and the sale of fishing rights. The sale of postage stamps to foreign collectors is also an important source of revenue. The gap between domestic production and demand for goods and services is very wide. The resulting trade deficit makes the economy heavily dependent on foreign aid, most of which comes from New Zealand, and remittances from Niueans living abroad.

In 2003, the gross domestic product (GDP) was US$ 10 006 000; per capita GDP stood at US$ 5828.

The New Zealand High Commissioner's Office, the only diplomatic mission in Niue, manages the projects of the New Zealand Official Development Assistance (NZODA). Niue also receives aid from the Australian Agency for International Development (AusAID), the Government of Japan and other international and United Nations agencies, including WHO.

The monthly boat between New Zealand and Niue, which provides essential supplies for daily living, illustrates the country's isolation. Plans to develop tourism are under way, but are necessarily limited by dependence on other countries' airlines to service Niue.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

In general, health indicators are good, consistent with the country's high literacy rate (100% in 2003) and its well educated population.

Common childhood illnesses and traditional communicable diseases, such as tuberculosis and leprosy, have been substantially contained. The programme on elimination of filariasis is ongoing, with high coverage (88.05% among the total population at risk) of mass drug administration (MDA). Niue has a 0.2% antigenemia rate and is targeting filariasis elimination.

No case of HIV/AIDS has been reported and sexually transmitted infections are rare. With support from WHO and the Joint United Nations Programme on HIV/AIDS (UNAIDS), the Department of Health has been active in working with communities, nongovernmental organizations and the private sector to increase public awareness on reproductive health and HIV/ AIDS.

Although the prevalence of vectorborne parasitic diseases has been negligible in the last five years, mosquito control activities are ongoing. Because the mosquito population is large, control measures require strengthening.

Lifestyle-related health problems are increasing and the prevalence of risk factors for chronic diseases is high. In the 2006 census, 23% of residents aged 15 years and older said they smoked, with smoking twice as prevalent among men (31%) than women (16%). The proportion of alcohol drinkers is equal to the proportion of non-drinkers, but there are more male drinkers (62.7%) than female drinkers (37.4%).

Cancer incidence remains very low. Cervical screening procedures are available and women are encouraged to practise breast self-examination. Elderly males aged 55 and over are routinely checked for early signs of prostate problems.

The Government is committed to the Healthy Islands programme and the Tobacco Free Initiative, which are supported by WHO. The *Moui Olaola* Project (a Healthy Islands health promotion project) was started in 1996.

2.2 Outbreaks of communicable diseases

No available information.

2.3 Leading causes of mortality and morbidity

In 2001, the major causes of morbidity were hypertension, diabetes mellitus, infections of the skin and subcutaneous tissue, upper respiratory tract infections and influenza. The five leading causes of mortality were injuries from gunshots, diabetes and hypertension complications (cardiovascular and cerebrovascular diseases), premature births, pneumonia (one case) and accidental drowning (one case).

2.4 Maternal, child and infant diseases

Niue residents enjoy good maternal and child health care. No maternal death was recorded from 1999 to 2006. The fertility rate is 2.6 (2008 est) and estimated infant mortality rate is 7.8 per 1000 live births (2008). In 2008, there was 100% immunization coverage against vaccine-preventable diseases.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Department of Health is run by the Director of Health and a complement of three medical officers, two dental officers, one dental nurse, two technicians and one chair-side assistant, 15 nurses (one principal nursing officer, 13 hospital nurses and one maternal and child health nurse), four paramedical staff, two public health officers, one health promotion coordinator, one health service manager, two office assistants and four drivers (2005). The workforce development plan for the health sector (2000-2003), which was prepared for the Niue Training and Development Council in June 2000, identified training needs.

National health priorities are focused on public health prevention strategies to reduce risk factors associated with causes of morbidity/mortality and lifestyle diseases.

The national priorities are:

- to make Niue the healthiest country in the Pacific in terms of having healthy people and a healthy environment;
- to pursue health promotion, disease prevention and injury prevention strategies with more vigour; and
- to strengthen the capacity of human resources to effectively deliver primary care services and public health programmes.

3.2 Organization of health services and delivery systems

Community outreach is maintained through village visits by public health nurses and regular village inspections by public health officers. While medical services are free for local residents, payment is required for some prescribed medicines, such as contraceptives.

3.3 Health policy, planning and regulatory framework

See Section 3.1.

3.4 Health care financing

Niue's estimated total health expenditure in 2007 was US$ 2.21 million, with per capita total health expenditure of US$ 1102.94. General government expenditure on health was US$ 2.21 million, representing 98.6% of total health expenditure.

3.5 Human resources for health

The only hospital, Lord Liverpool Hospital, was destroyed by Cyclone Heta in January 2004. Hospital services were set up subsequently in a youth centre in Fonuakula, Alofi, which is near the airport, until a new hospital was constructed in Kaimiti, an inland location rather than a coastal area. Lord Liverpool Hospital had been the centre for all preventative and curative health services, dentistry services and school health services since the early 1990s and, from June 2001 to May 2002 the hospital underwent a US$ 2 million renovation project, with financial assistance provided by WHO, the New Zealand Agency for International Development (NZAID) and AusAID. The new hospital, constructed in 2005 with funding from WHO, the European Union and NZAid, was named Niue Foou Hospital. *'Foou'* literally means new.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

No available information.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Nine statistics*
Web address	:	http://www.who.int/entity/nha/country/MYS
Title 2	:	*National health accounts series*
Operator	:	World Health Organization
Web address	:	http://www.who.int/entity/nha/country/MYS
Title 3	:	*Niue population profile based on 2006 Census of Population and Housing: A guide for planner and policy-makers*
Operator	:	Niue Economics, Planning, Development & Statistics Unit SPC Statistics and Demography Programme Noumea, New Caledonia
Title 4	:	*Niue Millennium Development Goals 2006 report*
Operator	:	Economics Planning Development and Statistics Unit

5. ADDRESSES

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NIUE — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	**Total**	**Male**	**Female**		
1	**Area (1 000 km2)**	0.26			2009	1
2	**Estimated population ('000s)**	1.55	…	…	2008 est	2
3	**Annual population growth rate (%)**	-2.40	…	…	2008	2
4	**Percentage of population**					
	- 0–4 years	11.90	11.90	12.00	2008 est	3
	- 5–14 years	21.50 [a]	21.50 [a]	21.40 [a]	2008 est	3
	- 65 years and above	5.20 [a]	4.50 [a]	5.90 [a]	2008 est	3
5	**Urban population (%)**	38.00	…	…	2007 est	4
6	**Crude birth rate (per 1000 population)**	15.60	…	…	2008 est	2
7	**Crude death rate (per 1000 population)**	9.20	…	…	2008 est	2
8	**Rate of natural increase of population (% per annum)**	0.64 [a]	…	…	2008 est	2
9	**Life expectancy (years)**					
	- at birth	…	67.00	76.00	2008 est	2
	- Healthy Life Expectancy (HALE) at age 60	…	11.60	12.80	2002	5
10	**Total fertility rate (women aged 15–49 years)**	2.60			2008 est	2
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	100.00	100.00	100.00	2003	6
12	**Per capita GDP at current market prices (US$)**	5841.86			2003	7
13	**Rate of growth of per capita GDP (%)**	6.88 [a]			2003	7
14	**Human development index**	…				
	Environmental indicators	**Total**	**Urban**	**Rural**		
15	**Proportion of vehicles using unleaded gasoline (%)**	…	…	…		
16	**Health care waste generation (metric tons per year)**	…	…	…		

	Communicable and noncommunicable diseases	**Number of new cases**			**Number of deaths**				
17	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral	0	0	0	0	0	0	2005	8
	- Type A	0	0	0	0	0	0	2005	8
	- Type B	0	0	0	0	0	0	2005	8
	- Type C	0	0	0	0	0	0	2005	8
	- Type E	…	…	…	…	…	…		
	- Unspecified	…	…	…	…	…	…		
	Cholera	0	0	0	0	0	0	2005	8
	Dengue/DHF	2	…	…	…	…	…	2008	9
	Encephalitis	0	0	0	0	0	0	2005	8
	Gonorrhoea	0	0	0	0	0	0	2005	8
	Leprosy	0	0	0	…	…	…	2006	9
	Malaria	0	0	0	0	0	0	2005	9
	Plague	0	0	0	0	0	0	2005	8
	Syphilis	0	0	0	0	0	0	2005	8
	Typhoid fever	0	0	0	0	0	0	2005	8

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	...	...	...	...	...	...		
19	**Diarrhoeal diseases**	...	...	...	...	...	...		
20	**Tuberculosis**								
	- All forms	0 [c]	0 [c]	0 [c]	...	...	...	2007	9
	- New pulmonary tuberculosis (smear-positive)	0 [c]	0 [c]	0 [c]	...	...	...	2007	9
21	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	...	...	...		
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	...	...	...	...	...	...		
	- Cervix			...			...		
	- Oesophagus	...	...	...	...	...	...		
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	...	...	...	...	...	...		
	- Liver	...	...	...	...	...	...		
	- Stomach	...	...	...	...	...	...		
	- Trachea, bronchus, and lung	...	...	...	...	...	...		
22	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	343	...	...	...	...	...	2001	10
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
23	**Diabetes mellitus**	308	...	...	...	...	...	2001	10
24	**Mental disorders**	...	...	...	...	...	...		
25	**Injuries**								
	All types	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Motor and other vehicular accidents	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Suicide	...	...	...	...	...	...		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Hypertension	343	...	...	19 183.45	...	...	2001	10
	2. Diabetes mellitus	308	...	...	17 225.95	...	...	2001	10
	3. Infection of the skin and subcutaneous tissue	271	...	...	15 156.60	...	...	2001	10
	4. Upper respiratory tract infection, unspecified	270	...	...	15 100.67	...	...	2001	10
	5. Influenza	156	...	...	8724.83	...	...	2001	10
	6. Myalgia and myositis	148	...	...	8277.40	...	...	2001	10
	7. Other disease of the skin	110	...	...	6152.13	...	...	2001	10
	8. Open wounds	97	...	...	5425.06	...	...	2001	10
	9. Bronchitis	78	...	...	4362.42	...	...	2001	10
	10. Sprains and strains of joints and adjacent muscles	72	...	...	4026.85	...	...	2001	10

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Injuries from gunshots	...	...	...	...	...	...		
	2. Diabetes and hypertension complications	...	...	...	...	...	...		
	3. Premature births	...	...	...	...	...	...		
	4. Pneumonia	1	...	...	...	...	...	2001	11
	5. Drowning	1	...	...	...	...	...	2001	11
	6.								
	7.								
	8.								
	9.								
	10.								
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					22.00		2005	8
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					100.00		2008	9
30	**Percentage of pregnant women with anaemia**					2.00		2005	8
31	**Neonatal mortality rate (per 1000 live births)**	0.00		0.00		0.00		2005	6
32	**Percentage of newborn infants weighing at least 2500 g at birth**	100.00		100.00		100.00		2005	8
33	**Immunization coverage for infants (%)**								
	- BCG	100.00		...		...		2008	9
	- DTP3	100.00		...		...		2008	9
	- POL3	100.00		...		...		2008	9
	- Hepatitis B III	100.00		...		...		2008	9
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			...		
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	9
	- Diphtheria	0	0	0	...	...	...	2008	9
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2008	9
	- Mumps	0	0	0	...	...	...	2008	9
	- Neonatal tetanus	0	0	0	...	...	...	2008	9
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	9
	- Poliomyelitis	0	0	0	...	...	...	2008	9
	- Rubella	0	0	0	...	...	...	2008	9
	- Total Tetanus	0	0	0	...	...	...	2008	9

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Facilities with HIV testing and counseling services**		...			
37	**Health infrastructure**					
	Public health facilities	- General hospitals	1	8	2006	8
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	...	...		
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)		2.21 [a]		2007p	12
	- total expenditure on health as % of GDP		13.60		2007p	12
	- per capita total expenditure on health (in US$)		1102.94 [a]		2007p	12
	Government expenditure on health					
	- amount (in million US$)		2.21 [a]		2007p	12
	- general government expenditure on health as % of total expenditure on health		98.60		2007p	12
	- general government expenditure on health as % of total general government expenditure		10.80		2007p	12
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health		63.60 [a]		2007p	12
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health		1.40		2007p	12
	Exchange rate in US$ of local currency is: 1 US$ =		1.36		2007p	12
39	**Health insurance coverage as % of total population**		...			

	INDICATOR		DATA							Year	Source
40	**Human resources for health**		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	4	1	3	...	...	...	...	2006p	8
		- Ratio per 1000 population	2.58 [b]	0.65 [a,b]	1.94 [a,b]	...	...	...	...	2006p	8
	Dentists	- Number	3	3	3	...	...	...	...	2006p	8
		- Ratio per 1000 population	1.94 [b]	1.94 [a,b]	0.00	...	...	...	...	2006p	8
	Pharmacists	- Number	1	1	0	...	...	...	...	2006p	8
		- Ratio per 1000 population	0.65 [b]	0.65 [a,b]	0.00	...	...	...	...	2006p	8
	Nurses	- Number	13	1	12	...	...	...	...	2006p	8
		- Ratio per 1000 population	8.39 [b]	0.65 [a,b]	7.75 [a,b]	...	...	...	...	2006p	8
	Midwives	- Number	2	0	2	...	...	...	...	2006p	8
		- Ratio per 1000 population	1.29 [b]	0.00	1.29 [a,b]	...	...	...	...	2006p	8
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	**Annual number of graduates**	Nurses	0	0	0	0	0	0	0	2006p	8
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	…	…	…	…	…	…		
42	**Workforce losses/ Attrition**	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		
		Nurses	…	…	…	…	…	…	…		
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	…	…	…	…	…	…		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	**Total**	**Male**	**Female**		
43	**Prevalence of underweight children under five years of age**	0.00	0.00	0.00	2005	8
44	**Infant mortality rate (per 1000 live births)**	7.80	…	…	2008	2
45	**Under-five mortality rate (per 1000 live births)**	0.00	0.00	0.00	2006	13
46	**Proportion of 1 year-old children immunised against measles**	100.00	100.00	100.00	2008	9
47	**Maternal mortality ratio (per 100 000 live births)**	0.00			2006	13
48	**Proportion of births attended by skilled health personnel**	100.00			2006	13
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.00			2006	13
	- Percentage of deliveries in health facilities (as % of total deliveries)	100.00			2006	13
49	**Contraceptive prevalence rate**	22.60	…	…	2001	13
50	**Adolescent birth rate**	…				
51	**Antenatal care coverage** - At least one visit	10.00			2005	8
	- At least four visits	…				
52	**Unmet need for family planning**	…	…	…		
53	**HIV prevalence among population aged 15-24 years**	…	…	…		
54	**Estimated HIV prevalence in adults f**	…	…	…		
55	**Percentage of people with advanced HIV infection receiving ART**	…	…	…		
56	**Malaria incidence rate per 100 000 population**	…	…	…		
57	**Malaria death rate per 100 000 population**	…	…	…		
58	**Proportion of population in malaria-risk areas using effective malaria prevention measures**	…	…	…		
59	**Proportion of population in malaria-risk areas using effective malaria treatment measures**	…	…	…		
60	**Tuberculosis prevalence rate per 100 000 population**	0.00	…	…	2007	9
61	**Tuberculosis death rate per 100 000 population**	0.00	…	…	2007	9
62	**Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)**	…	…	…		
63	**Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)**	…	…	…		
		Total	**Urban**	**Rural**		
64	**Proportion of population using an improved drinking water source**	100.00	100.00	100.00	2006	14
65	**Proportion of population using an improved sanitation facility**	100.00	100.00	100.00	2006	14
66	**Proportion of population with access to affordable essential drugs on a sustainable basis**	…	…	…		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
b	Revised data
c	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

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8	Niue Foou Hospital Data Sources, 2006.
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Northern Mariana Islands, Commonwealth Of

1. CONTEXT

1.1 Demographics

The Commonwealth of the Northern Mariana Islands (CNMI) comprises 14 islands with a total land area of 454.8 square kilometres spread out over 683 760 square kilometres of the Pacific Ocean. The Commonwealth's population lives primarily on three islands; Saipan, the largest and most populated island, is 20.1 kilometres long and 8.8 kilometres wide. The other two populated islands are Tinian and Rota, and the nine far northern islands are very sparsely inhabited, with a combined population of about six people.

Since the 1980s, the number of residents has more than quadrupled. In the 2000 census, the total population numbered 69 221, with approximately 90% living in Saipan and 5% each in Tinian and Rota. With an estimated growth rate of -1.7%, the total population was estimated in 2008 at 62 969.

Local residents are primarily Chamorros and Carolinians, the two indigenous ethnic groups. Additionally, the Compact of Free Association with the United States of America permits the free movement of people between the freely associated states, flag territories, Hawaii and the mainland United States. These 'Compact' islands include the Republic of Palau, the Republic of the Marshall Islands and the Federated States of Micronesia. The Department of Public Health estimated in 1996 that it provided health care costing US$ 1480 000 to 'Compact' residents. The impact of meeting the chronic health care needs of these Micronesian residents within the struggling national health care system plays an important role in overwhelming the capacity of the system. Foreign contract workers from Asia (primarily Chinese and Filipino) represent almost half the population, working in the private and public sector in difficult-to-fill positions, although a recent slowdown in the garment industry has resulted in a decline in the number of these workers.

1.2 Political situation

The Northern Mariana Islands is a commonwealth of the United States of America, formed in 1978, and was formerly the United Nation's Trust Territory of the Pacific Region of Micronesia within Oceania. Negotiations for territorial status began in 1972 and a covenant to establish a commonwealth in political union with the United States of America was approved in 1975. Residents (excluding foreign contract workers) are United States citizens, but do not vote in federal elections and do not pay United States taxes.

It is important to note that the Commonwealth of the Northern Mariana Islands, its governing system and its infrastructure as an independent entity within a commonwealth agreement with the United States are only 30 years old.

The present administration was elected in November 2005, with the Honourable Governor Benigno Fitial taking office in January 2006 and appointing Joseph Kevin Villagomez as Secretary of Public Health. There are three branches of government: the executive, legislative and judicial. The Secretary of Public Health serves as an Executive Cabinet member and head of the Department of Public Health.

1.3 Socioeconomic situation

In addition to funds received from the United States of America, the economy largely depends on two major industries: tourism and garment manufacturing.

In a 2007 report by the United States Government Accountability Office, it was stated that "the CNMI's (Commonwealth of the Northern Mariana Islands) economic potential is constrained, in part, by its lack of diversification and faces serious challenges owing to declines in garment manufacturing and tourism, its two major industries. Among factors affecting the garment industry, liberalization in trade law in the early 2000s reduce the CNMI's trade advantage relative to low-wage countries such as China, causing CNMI exports to fall. The CNMI's tourism industry has been subject to fluctuations due to Asian economic trends in the late 1990s, as well as recent changes in airline practices. Until 2007, the CNMI's workforce was subject to a minimum wage set by the CNMI Government that was lower than the U.S. mainland's; however, Congress enacted a law in 2007 that applied the U.S. minimum wage to the CNMI and will gradually increase the CNMI minimum wage until it meets federal minimum wage requirements."

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Infectious diseases are once again emerging as a major public health concern. Of particular concern are tuberculosis, enteric foodborne illnesses, vaccine-preventable diseases, HIV infection and other sexually transmitted infections. At the same time, obesity, diabetes, hypertension and atherosclerotic vascular disease are increasing concerns facing the ageing population.

2.2 Outbreaks of communicable diseases

The Department of Public Health recently dealt with foodborne disease outbreaks involving salmonella and shigella.

2.3 Leading causes of mortality and morbidity

The Vital Statistics Office of the Department of Public Health monitors the number of deaths and the causes of death in the country each year. The Medical Director reviews these events to examine the data for trends in order to focus preventive health efforts.

In 2005, there were 183 deaths: 79 females and 104 males. Since there is no resident forensic pathologist, autopsies for non-suspicious deaths are not performed routinely.

The leading cause of death in 2005 was heart disease, followed by cancer, stroke, renal disease and sepsis.

The number of deaths due to strokes and heart attacks has been increasing in the last three years, with strokes becoming the third leading cause of death in 2005 and increasing among individuals under the age of 50. This disturbing trend is probably due to high rates of untreated diabetes and hypertension in the population. There is also growing evidence that use of methamphetamine ('ice') can contribute to deaths from heart attacks and strokes; ice use is prevalent in the Commonwealth of the Northern Mariana Islands.

Cancer diagnoses and most chemotherapy are carried out nationally, but radiation therapy is not available in the country and there is no resident oncologist. The Department of Public Health is increasing its public health efforts to improve cancer prevention in the community. A significant example was the 2007 launch of the HPV Vaccination Campaign, aimed at vaccinating girls in high school with the human papillomavirus (HPV) vaccine that immunizes against four HPV strains that can cause cervical cancer.

2.4 Maternal, child and infant diseases

Under the United States Division of Public Health, the Maternal and Child Health (MCH) Programme oversees primary and preventive health care services for mothers and children, including children with special health care needs, and is federally funded by a grant under the Health Resources and Services Administration (HRSA) within the Department of Health and Human Services (DHHS). The MCH

Programme authorizes appropriations to the Commonwealth of the Northern Mariana Islands to improve the health of all mothers and children applicable to health status goals and national health objectives. It enables the country to:

- provide and assure mothers and children access to maternal and child health services;
- reduce infant mortality and the incidence of preventable diseases, increase the number of children appropriately immunized against disease, and otherwise promote the health of mothers and infants by providing prenatal and postpartum care, and promote the health of children by providing preventive and primary care services; and
- provide and promote family-centred, community-based coordinated care for children with special health care needs.

The priority MCH concerns include, among others, childhood obesity, lack of or little prenatal care, access to women's health services, identification and referrals of infants for early intervention services, and decreasing the number of sexually transmitted infection among teenagers. In addition, more effort is being put into decreasing the burden of dental caries in children. An assessment of 480 students for the 2007-2008 school year found that every child had six or more dental caries.

Despite many challenges as regards prenatal care, the infant mortality rate (IMR) is exceptionally low, reported at 7.1 in 2005. This number compares favourably with the United States IMR of 6.5 for the same year, and only seven nations reported a lower rate. However, in view of the small numbers and large statistical variation, the Department of Public Health will continue to strive for improvements in perinatal care.

The most common diseases among infants during 2007 were acute upper respiratory infections, fetal/neonatal jaundice and acute bronchiolitis. In the 1-4 years age group, the most common diseases were acute upper respiratory infections and otitis media.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

Health care in the Commonwealth of the Northern Mariana Islands (CNMI) is facing major challenges in the areas of quality of care and financing of health care delivery. These problems have been recognized for many years but, with the recent deepening financial crisis, there is increasing pressure to find solutions.

The current leadership at the Department of Public Health has been working on many different plans to improve the current situation. Among the highest priorities have been stabilizing and improving the financial status of the Commonwealth Health Center (CHC) and restructuring the Department of Public Health in order to build a foundation that will allow overall improvements in the quality of health care delivery. The overall goal is to improve the health of the people.

As a way of focusing restructuring efforts, a strategic plan has been developed for prioritizing and implementing solutions to some of the more immediate problems affecting health care delivery, with financial stability the top priority. The Mission of the Department of Public Health is "to provide compassionate, quality health care and promote health for all people in the Commonwealth of the Northern Mariana Islands." To guide prioritization in attaining its stated mission, the Department of Public Health plans to deliver the best possible health care by improving its financial stability.

Goals were chosen from all possible solutions discussed as being the most likely to allow the Department of Public Health to attain its vision. Highest priority was placed on goals that could be attained relatively quickly within the current resources of the Department, including:

(1) movement towards more autonomy for CHC in the areas of operations, supply chain and finance (over-arching goal);
(2) installation of a new hospital information system and financial management programme (VISTA – a programme through the VA system);
(3) improvement of billing and processing of collections for CHC to improve revenue and cash flow;
(4) reform of Medicaid to improve available resources to CHC and on-island medical providers; and
(5) creation of autonomy in recruitment and retention of Department of Public Health personnel.

This is an ambitious list to accomplish in a relatively short time, but achievement of these goals will allow the development of more adequate resources to improve direct patient care and overall health. The plan will guide efforts in working towards the vision of creating a financially stable hospital to improve the health of all citizens.

3.2 Organization of health services and delivery systems

tThe Department of Public Health is made up of three divisions: the Division of Public Health, which provides preventive and community health programmes; the Hospital Division; and the Community Guidance Center (CGC), which delivers mental health and substance-abuse programmes. The Department of Public Health also oversees the Medicaid programme and the Medical Referral programme.

The Department of Public Health is the sole provider of comprehensive health care services and, through its primary health care facility, the Commonwealth Health Center (CHC) on the island of Saipan, provides a wide range of preventative (public health) and curative health services aimed at protecting and improving the health and quality of life of the population. CHC is an 86-bed, Medicare-certified hospital that opened in 1986 and was expanded in 2007. The hospital's scope of services includes emergency medicine, obstetrics, postpartum care, adult and neonatal intensive care, surgery, general medicine, paediatrics, physical therapy, dialysis, mental health and various outpatient services. CHC is a busy community hospital, with more than 60 000 outpatient visits each year. The hospital is also very full, with a daily census nearing 90% of capacity.

Sub-hospitals are located on the islands of Rota and Tinian and one public health wellness clinic is also located on the island of Saipan. There are six private clinics, all on Saipan, and the nearest United States tertiary medical centre is in Honolulu, Hawaii, over eight hours away by air.

The Department of Public Health strives to maintain full staffing of its health care workforce. Almost all CHC physicians are from the United States of America or Canada, despite challenges to recruitment and retention of clinicians due to highly competitive salaries in the United States. The Department of Public Health also supports efforts to increase training opportunities for the local health care workforce.

3.3 Health policy, planning and regulatory framework

The Department of Public Health is under the umbrella of the Commonwealth of the Northern Mariana Islands Government and has the power and responsibility to:

- maintain and improve health and sanitary conditions;
- minimize and control communicable disease;
- establish and administer programmes regarding vocational rehabilitation, crippled children's services, infant care, Medicaid, Medicare, mental health and related programmes, including substance abuse;
- establish standards for water quality; and
- administer all government-owned health care facilities.

3.4 Health care financing

The total health expenditure for CHC in 2005 amounted to US$ 44 741 490. For the 2007 fiscal year, health expenditure represented 25.4% of the total general government expenditures of US$ 170 556 456. It is notable that total health expenditure is declining because the budget is decreasing; in the last fiscal year, the health budget was only US$ 39 million, a fall from US$ 42 million in the previous year. Significant efforts are being made to maintain critical services in a world of soaring health care costs. CHC will likely privatize adult outpatient services in the near future to continue to improve patient access to the private sector.

3.5 Human resources for health

Building and improving local health care manpower to sustain public health programmes is imperative to improving the delivery of services to the community. This is also in line with the strategic plan for future health initiatives stated in the Institute of Medicine (IOM) report. One of the four recommended approaches includes promoting the education and training of the health care workforce. Through the University of Hawaii, John A. Burns School of Medicine, the Commonwealth of the Northern Mariana Islands has an Area Health Education Center (AHEC) grant. The AHEC's mission is to improve the health services of the Commonwealth by establishing a sustainable health care manpower programme through strengthening of the country's capacity to recruit and retain allied health professions to serve the health needs of the islands. The programme aims to develop competent, committed and compassionate health professionals, and its vision is to improve the quality of health care services and reduce disparities in health conditions in the Commonwealth. In addition, two Division staff are currently attending the Maternal and Child Health Certificate Program, through a grant, at the University of Hawaii; there is ongoing collaboration with WHO in supporting training for oral health and sanitation; and, in collaboration with the Pacific Islands Health Officers Association (PIHOA), a series of courses dealing with public health disease surveillance and investigation have been sponsored. A PIHOA consultant will visit the Commonwealth during 2008 to conduct a strategic planning meeting for HRH capacity building.

3.6 Partnerships

The Department of Public Health recognizes the need for partnerships with various governmental and private agencies, non-profit organizations and other organizations, on-island, regionally and internationally, to sustain and build effective health care programmes and services.

Key partners both on-island and abroad include, among others:

- The Public School System;
- Northern Marianas College;
- The Department of Community and Cultural Affairs;
- The Department of Commerce;
- The Workforce Investment Agency;
- The Developmental Disabilities Council;
- Karidat;
- The Ayuda Network, Inc.;
- The Commonwealth Cancer Association;
- The Diabetes Coalition;
- NAPU Life;
- The Substance Abuse Prevention Coalition (SAPC);
- The University of Hawaii, John A. Burns School of Medicine – Area Health Education Center (AHEC) and Maternal and Child Health Certificate Program through HRSA;
- Western Michigan University (Project Familia);
- The Secretariat of the Pacific Community (SPC);
- WHO;
- The Pacific Islands Health Officers Association (PIHOA);
- The United States Centers for Disease Control and Prevention (CDC);

- The Health Resources and Services Administration (HRSA);
- The Joint Task Force Homeland Defense;
- The Pacific Substance Abuse and Mental Health Collaborating Council (PSAMHCC);
- The Pacific Islands Mental Health Network (PIMHnet);
- The National Prevention Network (NPN);
- The National Asian Pacific American Families Against Substance Abuse, Inc. (NAPAFASA).

3.7 Challenges to health system strengthening

One of the greatest challenges is recruitment and retention of qualified personnel. Some of the main obstacles include the small human resources pool from which to recruit, the ever-rising costs of maintaining the Commonwealth Health Center, and the limited local funding available to sustain quality health care delivery.

Another challenge is the need to improve the Department of Public Health's data infrastructure, which impacts the way the Department plans activities for its programmes and evaluates the effectiveness of services provided to the community.

In addition, the isolation and disparities apparent in the Commonwealth of the Northern Mariana Islands create unique and challenging barriers to a struggling health care system.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Commonwealth Health Center Website*
Operator	:	CNMI Department of Public Health's Commonwealth Health Center
Features	:	Organization Description, Jobs, Island Lifestyle
Web address	:	http://www.dphsaipan.com/

Title 2	:	*2008 Pocket statistical summary (PSS)*
Operator	:	Secretariat of the Pacific Community, Statistics and Demography.
Web address	:	http://www.spc.int/sdp/

Title 3	:	*Urban and rural areas 2007.*
Operator	:	United Nations, Department of Economic and Social Affairs, Population Division. New York
Features	:	World Population Prospects, International Migration and Development
Web address	:	http:///www.unpopulation.org

5. ADDRESSES

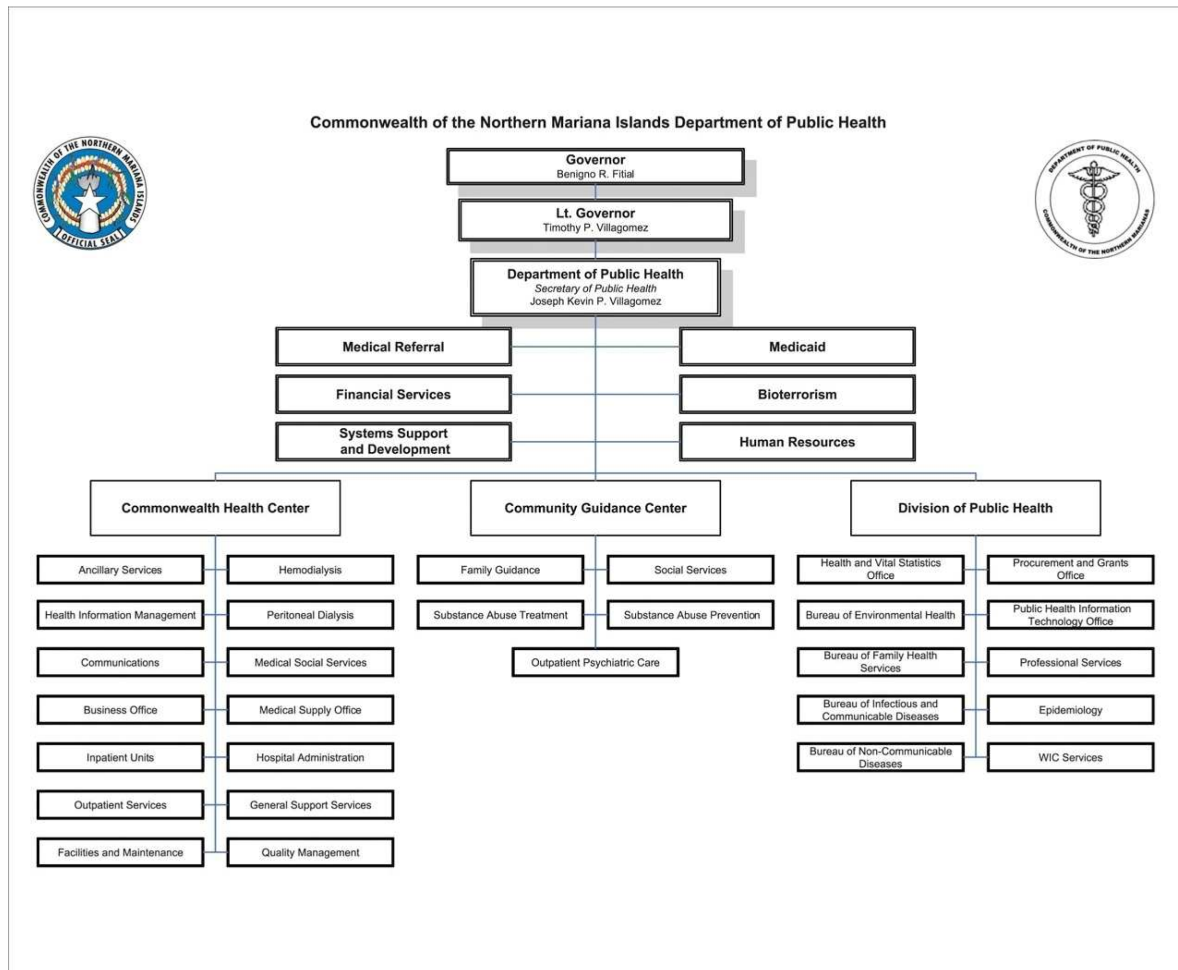
DEPARTMENT OF PUBLIC HEALTH

Office Address	:	CHC, Lower Navy Hill
Postal Address	:	P.O. Box 500409 CK, Saipan MP 96950, Commonwealth of the Northern Mariana Islands
Telephone	:	(670) 234-8950
Fax	:	(670) 234-8930
Website	:	http://www.dphsaipan.com

WHO REPRESENTATIVE IN THE SOUTH PACIFIC

Office Address	:	Level 4 Provident Plaza One, Downtown Boulevard, 33 Ellery Street, Suva
Postal Address	:	P.O. Box 113, Suva, Fiji
Official Email Address	:	who@sp.wpro.who.int
Telephone	:	(679) 3234 100
Fax	:	(679) 3234 166; 3234 177
Office hours	:	0800 – 1700
Website	:	http://www.wpro.who.int/southpacific

6. ORGANIZATIONAL CHART: Department of Public Health



NORTHERN MARIANA ISLANDS, COMMONWEALTH OF

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	0.47			2008	1
2	Estimated population ('000s)	62.97	...	...	2008 est	1
3	Annual population growth rate (%)	-1.70	...	...	2008 est	1
4	Percentage of population					
	- 0–4 years	12.10	12.10	12.20	2008 est	2
	- 5–14 years	22.20	22.10	22.30	2008 est	2
	- 65 years and above	5.20	4.80	5.60	2008 est	2
5	Urban population (%)	91.00	...	...	2007 est	3
6	Crude birth rate (per 1000 population)	17.30	...	...	2008 est	1
7	Crude death rate (per 1000 population)	2.80	...	...	2008 est	1
8	Rate of natural increase of population (% per annum)	1.45 [a]	...	...	2009 est	1
9	Life expectancy (years)					
	- at birth	75.88	73.31	78.61	2005 est	4
	- Healthy Life Expectancy (HALE) at age 60	...	...	...		
10	Total fertility rate (women aged 15–49 years)	1.27			2005 est	4
	Socioeconomic indicators					
11	Adult literacy rate (%)	...	...	...		
12	Per capita GDP at current market prices (US$)	12 638.00			2005	1
13	Rate of growth of per capita GDP (%)	...				
14	Human development index	...				
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	...	...	...		
16	Health care waste generation (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral	...	...	...	...	...	...		
	- Type A	...	...	...	...	...	...		
	- Type B	...	...	...	...	...	...		
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	...	...	...	...	...	...		
	Dengue/DHF	0	0	0	...	...	...	2004	5
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	...	...	...	...	...	...		
	Leprosy	0	0	0	...	...	...	2007	5
	Malaria	...	...	...	...	...	...		
	Plague	...	...	...	...	...	...		
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	**Number of new cases**			**Number of deaths**				
		Total	**Male**	**Female**	**Total**	**Male**	**Female**		
18	**Acute respiratory infections**	4242	…	…	…	…	…	2000	6
19	**Diarrhoeal diseases**	10	…	…	…	…	…	2000	6
20	**Tuberculosis**								
	- All forms	44 [b]	…	…	…	…	…	2007	5
	- New pulmonary tuberculosis (smear-positive)	14 [b]	…	…	…	…	…	2007	5
21	**Cancers**								
	All cancers (malignant neoplasms only)	437	…	…	…	…	…	2000	6
	- Breast	…	…	…	…	…	…		
	- Colon and rectum	0	0	0	…	…	…	2000	6
	- Cervix			11			…	2000	6
	- Oesophagus	…	…	…	…	…	…		
	- Leukaemia	0	0	0	…	…	…	2000	6
	- Lip, oral cavity and pharynx	0	0	0	…	…	…	2000	6
	- Liver	0	0	0	…	…	…	2000	6
	- Stomach	1	…	…	…	…	…	2000	6
	- Trachea, bronchus, and lung	12	…	…	…	…	…	2000	6
22	**Circulatory**								
	All circulatory system diseases	2265	…	…	…	…	…	2000	6
	- Acute myocardial infarction	16	…	…	…	…	…	2000	6
	- Cerebrovascular diseases	98	…	…	…	…	…	2000	6
	- Hypertension	1758	…	…	…	…	…	2000	6
	- Ischaemic heart disease	28	…	…	…	…	…	2000	6
	- Rheumatic fever and rheumatic heart diseases	39	…	…	…	…	…	2000	6
23	**Diabetes mellitus**	2490	…	…	…	…	…	2000	6
24	**Mental disorders**	1197	…	…	…	…	…	2000	6
25	**Injuries**								
	All types	5742	…	…	…	…	…	2000	6
	- Homicide and violence	389	…	…	…	…	…	2000	6
	- Motor and other vehicular accidents	555	…	…	…	…	…	2000	6
	- Occupational injuries	510	…	…	…	…	…	2000	6
	- Suicide	43	…	…	…	…	…	2000	6
	Leading causes of mortality and morbidity	**Number of cases**			**Rate per 100 000 population**				
26	**Leading causes of morbidity (inpatient care)**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1.								
	2.								
	3.								
	4.								
	5.								
	6.								
	7.								
	8.								
	9.								
	10.								

	INDICATORS	DATA						Year	Source
		Number of cases			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Heart disease	...	...	...	...	...	...	2005	7
	2. Cancer	...	...	...	...	...	...	2005	7
	3. Stroke	...	...	...	...	...	...	2005	7
	4. Renal disease	...	...	...	...	...	...	2005	7
	5. Sepsis	...	...	...	...	...	...	2005	7
	6.								
	7.								
	8.								
	9.								
	10.								
	Maternal, child and infant diseases	Total		Male		Female			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					64.00		2000	8
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					NR		2006	5
30	**Percentage of pregnant women with anaemia**					4.55		2000	6
31	**Neonatal mortality rate (per 1000 live births)**	...		...		...			
32	**Percentage of newborn infants weighing at least 2500 g at birth**	81.01		...		...		2000	6
33	**Immunization coverage for infants (%)**								
	- BCG	NR		NR		NR		2008	5
	- DTP3	96.70		...		...		2008	5
	- POL3	94.70		...		...		2008	5
	- Hepatitis B III	96.10		...		...		2008	5
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			0			0	2000	6
	- Eclampsia			...			...		
	- Haemorrhage			0			0	2000	6
	- Obstructed labour			...			...		
	- Sepsis			...			...		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	5
	- Diphtheria	0	0	0	...	...	...	2008	5
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2008	5
	- Mumps	0	0	0	...	...	...	2008	5
	- Neonatal tetanus	0	0	0	...	...	...	2008	5
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	5
	- Poliomyelitis	0	0	0	...	...	...	2008	5
	- Rubella	0	0	0	...	...	...	2008	5
	- Total Tetanus	0	0	0	...	...	...	2008	5

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Facilities with HIV testing and counseling services**		...			
37	**Health infrastructure**					
	Public health facilities	- General hospitals	1	74	2000	6
		- Specialized hospitals	0	0	2000	6
		- District/first-level referral hospitals	2	8	2000	6
		- Primary health care centres	1	0	2000	6
	Private health facilities	- Hospitals	5	0	2000	6
		- Outpatient clinics	6	...	2007	7
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)		42.14		2000	9
	- total expenditure on health as % of GDP		...			
	- per capita total expenditure on health (in US$)		519.00		2000	9
	Government expenditure on health					
	- amount (in million US$)		170.56		FY 2007	7
	- general government expenditure on health as % of total expenditure on health		25.39		FY 2007	7
	- general government expenditure on health as % of total general government expenditure		...			
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health		...			
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health		...			
	Exchange rate in US$ of local currency is: 1 US$ =		NR			
39	**Health insurance coverage as % of total population**		...			

	INDICATOR		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
40	**Human resources for health**										
	Physicians	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Dentists	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Pharmacists	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Nurses	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Midwives	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	**Annual number of graduates**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	7.11	7.05	7.17	2005 est	4
45	Under-five mortality rate (per 1000 live births)	...	...	...		
46	Proportion of 1 year-old children immunised against measles	100.00	...	...	2008	5
47	Maternal mortality ratio (per 100 000 live births)	0.00			2000	6
48	Proportion of births attended by skilled health personnel	...				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	...				
49	Contraceptive prevalence rate	64.00	...	...	2000	8
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	75.67			2000	6
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults b	...	...	...		
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	...	...	...		
57	Malaria death rate per 100 000 population	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	72.00	...	...	2007	5
61	Tuberculosis death rate per 100 000 population	7.00	...	...	2007	5
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	90.00	...	...	2007	5
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	42.00	...	...	2006	5
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	98.00	98.00	97.00	2006	10
65	Proportion of population using an improved sanitation facility	94.00	94.00	96.00	2006	10
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
b	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

Sources:	
1	*2008 Pocket Statistical Summary (PSS).* Secretariat of the Pacific Community, Statistics and Demography. Accessed on 12 May 2009 from http://www.spc.int/sdp/
2	*Demographic tables for the Western Pacific Region 2005-2010. Manila, WHO Regional Office for the Western Pacific, 2005.*
3	*Urban and Rural Areas 2007* . United Nations, Department of Economic and Social Affairs, Population Division. New York 2008. [http:///www.unpopulation.org].
4	United States Census Bureau, International Programs Center (http://www.spc.int/prism).
5	WHO Regional Office for the Western Pacific, data received from the technical units.
6	Data analyzed through the RPMS computerized system. Birth and Death Database Registry, Office of Health Planning and Statistics, Division of Public Health, Department of Public Health.
7	Information furnished by the WHO Representaitive in the South Pacific, 15 April 2008.
8	Family Planning Programme, Division of Public Health, Department of Public Health.
9	Hospital Division, Department of Public Health.
10	World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). Progress on Drinking Water and Sanitation: Special focus on Sanitation. UNICEF, New York and WHO, Geneva, 2008. [http://www.wssinfo.org/en/40_mdg2008.html].

PALAU

1. CONTEXT

1.1 Demographics

The estimated multi-ethnic population of Palau in 2008 was 20 729, with an estimated annual population growth rate of 0.6%. The population consists of 69.9% Palauans (who are a conglomeration of Micronesian with Malayan and Melanesian admixtures), 15.3% Filipinos, 4.9% Chinese, 2.4% other Asian, 1.9% Causacian, 1.4% Carolinian and 4.2% other or unspecified groups (2000 estimate). The 2006 estimate indicates a population density of 46 persons per square kilometre. In 2007, approximately 77% of the Palauan population were living in the capital city of Koror on Koror Island.

Since the 1990 census, life expectancy at birth has been higher for women than men; the 2008 estimate stood at 72.1 years for women and 66.3 years for men.

1.2 Political situation

Palau is a democratic republic with directly elected executive and legislative branches. Presidential elections take place every four years to select the President and the Vice-President. Elections were held in 2008. His Excellency Johnson Toribiong is the current Head of State and President of the Republic of Palau. The Vice-President is Kerai Mariur.

The Palau National Congress (Olbiil era Kelulau) has two houses: the Senate and the House of Delegates. The Senate has 13 members, while the House of Delegates has 16 members, one from each of Palau's states. All legislators serve four-year terms, for a maximum of three cycles or 12 years. Each state also elects its own governor and legislature.

The Council of Chiefs is an advisory body to the President that contains the highest traditional chiefs from each of the 16 states. The Council is consulted on matters concerning traditional laws and customs.

The judicial system consists of the Supreme Court, the National Court, the Court of Common Pleas, and the Land Court. The Supreme Court has trial and appellate divisions and is presided over by the Chief Justice.

1.3 Socioeconomic situation

Palau's real per capita gross domestic product (GDP) of US$ 8423 (2007 estimate) makes it one of the wealthier Pacific island states. The economy consists primarily of tourism, subsistence agriculture and fishing. The Government is the major employer, relying heavily on financial assistance from the United States of America. Business and tourist arrivals numbered 89 151 in 2007. Long-term prospects for the key tourist sector have been greatly bolstered by the expansion of air travel in the Pacific, the rising prosperity of leading East Asian countries, and the willingness of foreigners to finance infrastructure development.

1.4 Risks, vulnerabilities and hazards

The population of Palau is at risk for a high number of hazards, including a uniquely high hydrometeorological and geological risk. Due to its geographical location as the United States of America's westernmost border with Asia, Palau is also more vulnerable to hazards emerging in Asia, such as infectious diseases.

Vulnerability analysis shows that Palau is 19.25 times more vulnerable to hazards than the United States of America. It should not be understated that the most significant risk factor in vulnerability to disasters is poverty. The population of Palau is made of 69.9% Palauans, as well as a large population of young, impoverished, foreign worker households mixed with smaller population factions of local lower- and middle-class households. Economic stability is dependent upon United States federal support, immigration, tourism, and the United States and Asian stock, commodity and import/export markets, as

well as fuel/energy prices. It is unfortunate that this most difficult of vulnerabilities to alter is also the most significant.

Palau's isolation from the United States mainland increases logistical demands. Supply chains, communication networks and air runways are limited options. Improving long-distance communication and logistical coordination that may lessen the "tyranny of distance" for any emergency response measure would help to reduce Palau's vulnerability to public health disasters.

Over the past five years, public health preparedness in Palau has improved significantly, and a comprehensive all-hazard public health emergency operations plan has been developed, although it still needs to be tested and validated by field exercises and is lacking standard operating procedures. The Department of Public Health has developed an extensive level of awareness regarding disaster preparedness and response, yet much still has to be done in terms of education of clinicians and the public. All components of preparedness, planning, training, hazard monitoring, warning, population protection are much more cost-effective than emergency response after an event.[1]

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The population of Palau faces a heavy burden of both infectious and chronic diseases. Like many developing nations, the country has recently undergone an epidemiological shift from diseases of the developing world, such as malnutrition and infectious diseases, to an increasing burden of diseases of the developed world, like diabetes, heart disease, obesity and kidney failure. This places an inordinate burden on the already low human, material and fiscal resources.

The health of Palauans seems to have improved a little, as manifested in health indicators such as a decreased crude death rate, increased life expectancy at birth, and a low maternal mortality ratio. Sanitation coverage declined in 2006, however, with only 67% of the population having access to excreta disposal facilities.

It is expected that environmental problems will increase with more foreign investment and workers on the islands in coming years. Water pollution is a major concern due to the lack of sufficient land area for proper waste disposal. Progressive industrial development will continue to worsen both air and marine quality. Marine life and reefs will be affected by pollution. Other negative health impacts of globalization, such as reduced physical activity and consumption of processed rather than locally produced foods, are already encroaching insidiously beyond Koror and Airai, where over 79% of the population resides.

2.2 Outbreaks of communicable diseases

Palau has one of the best communicable diseases surveillance systems of all the Pacific island countries and regularly reports outbreaks of infectious disease on PacNet. In 2007, the Ministry of Health reported a large gastroenteritis outbreak due to norovirus, a varicella outbreak and a dengue outbreak. Collaborative initiatives among principal health officials, health specialists and multisectoral community leaders have been a positive step forward in monitoring events and communicable diseases outbreaks.

2.3 Leading causes of mortality and morbidity

While tuberculosis remains a problem and the prevalence of leprosy has increased slightly, modern lifestyle-related diseases remain at the top of the list of major causes of death. Based on information furnished by the Ministry of Health, the reported leading causes of mortality in 2007 were heart disease; injuries; cancer; cerebrovascular accidents; septicaemia; respiratory disease and kidney disease. The leading causes of hospitalization were diseases of the respiratory system; diseases of the genitourinary system; disease of the digestive system; normal childbirth and delivery; diseases of the endocrine and metabolic system; diseases of the circulatory system; infectious and parasitic diseases; injury and poisoning; diseases of the nervous system; and complications of pregnancy, childbirth and puerperium.

[1] Rykken D, Keim M. Republic of Palau, Public Health Hazard Vulnerability Assessment, June 2006.

2.4 Maternal, child and infant diseases

Great progress is being made toward improving maternal health in Palau, with no maternal deaths in 2007.

The under-five mortality rate fell from 34 per 1000 live births in 1990 to 7.2 in 2007, a fairly low level among Pacific island countries. However, the percentage decline in the 1990s was lower than during the pre-1990s, indicating that further reduction in under-five mortality becomes progressively more difficult as the mortality rate declines.

Infant mortality decreased from 25 to 17 per 1000 live births in the 1990s, then further to 7.2 per 1000 live births in 2007.

Based on the 2008 WHO-UNICEF joint reporting form on immunization, official estimated coverage for DTP3 was 92% and 97% for measles first dose (MCV1).

2.5 Burden of disease

To paraphrase the 11th Annual Report on the Republic of Palau's Implementation of the Compact of Free Association fiscal year 2006, the best description for health in Palau is "in transition". The transition of culture, political systems, economic development and technology has moved the health emphasis from communicable to noncommunicable diseases. Most of the reported leading causes of death are due to noncommunicable diseases related to lifestyle-associated risk factors, and are therefore preventable. Such a transitional status has led to pending issues that need to be evaluated, such as the cost of off-island medical referrals, the cost of hemodialysis services and intensive care services, and the financial sustainability of a secondary health care facility in a small island community such as Palau.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

'Health for all' remains a top priority in the socioeconomic development of Palau. The Government aims to provide sufficient trained and qualified staff to provide quality services in all outlying dispensaries, including the more remote areas and islands, as well as at the main hospital in Koror.

The national health priorities are:

- to deliver quality health care, including community-based health care, in order to improve the health of the population and contribute towards building a balanced economy;
- to control communicable and noncommunicable diseases;
- to improve the nutritional status of community members through implementation of a national action plan for food and nutrition;
- to protect environmental health;
- to increase the accessibility of health services through establishment of outlying dispensaries/health centres;
- to train and certify health workers and allied health workers in proper training institutions;
- to establish a national insurance policy; and
- to improve and enhance the health information system.

3.2 Organization of health services and delivery systems

A high percentage of health services are supported by grant funds and technical assistance from the Federal Government of the United States of America, in addition to the provision of technical support and limited funding from a number of United Nations agencies. However, future resource requirements to sustain the operations of the health system will still be dependent on the country's successful economic development.

The Belau National Hospital (BNH), built with United States funding, is the main health facility in the country. BNH has undergone recent upgrades that will significantly mitigate its vulnerability to both national and technological disasters, including: installation of two generators to allow for one month of independent power generation; enhancement of respiratory isolation and PPE capabilities; equipping and training of hazardous materials teams; updating of the hospital disaster plan; and upgrading of staff communications. Challenges remain, however, in that, by nature, BNH represents a centralized dependency for inpatient and outpatient care that increases the vulnerability of the health system. It is not economically feasible to decentralize inpatient care, but steps to build inpatient capacity and capabilities in the other islands may add some limited additional secondary capability.

Four community health centres, known as superdispensaries, are located strategically throughout Palau, three in the big island of Babeldaob and one in the southern island of Peleliu for the Southern Lagoon population. In addition, four additional satellite dispensaries serve hard-to-reach outlying localities, Kayangel in the north, and Angaur and the South-West Islands in the south.

3.3 Health policy, planning and regulatory framework

In June 2005, the Ministry of Health adopted a vision and a mission statement, framed by Article VI of the Constitution of the Republic of Palau, which embraced a holistic definition of health that stated that the health of Palauans is influenced by health services, the environment, behaviour and heredity. These issues were discussed at the 1st Public Health Convention in December 2005.

During the Leadership Symposium (February 2006), certain priorities were identified, including addressing the burden of noncommunicable diseases; solid and liquid waste management; human resources in health; and improvement of the legal frameworks for health in Palau. Operationalization of the health system is based on a conscious decision to make health a domain owned by the community. This clarifies certain strategies that will help move Palau towards a more sustainable health care system. Strategic health planning, improved fiscal control, enhanced primary health care through community health centres, strengthening of community advocacy through the creation of a community advocacy programme, and improvements to the health information system, have all given the health sector in Palau the ability to plan better for the future. These activities are also enhanced by the decision to address human resource, procurement and grant issues. All these initiatives at the Ministry of Health and at the national level to increase accountability and promote sound and sustainable development have provided the impetus for implementation of the Integrated Planning Process 2006-2008 for the entire executive branch of government. This process will streamline health system development and ensure greater health worker productivity and an improvement in health status for all people living in Palau.

3.4 Health care financing

The total expenditure on health was 10.8% of GDP in 2007, with 78.4% coming from the Government. External resources for health accounted for 32% of total health expenditure. Total per capita expenditure on health was US$ 900.

3.5 Human resources for health

In 1998, the health workforce comprised 20 doctors, two dentists, 26 nurses, one midwife, one pharmacist and 106 other health personnel. In 2003, the number of doctors increased to 25. In 2005, there were 111 nurses. In 2006, there were 26 doctors, 117 nurses and one midwife. In 2007, there were five dentists and one pharmacist. More staff are needed as a result of the expanded main health facility and completion of the superdispensaries, and training of more local health workers is needed to allow them to replace expensive expatriate staff. Since enactment of the mandatory retirement law, there has been a rapid reduction in the number of health workers, due to retirement of ageing staff. This has resulted in a critical shortage of health workers, particularly among the nursing force and allied health personnel.

Vigorous efforts are under way between the Ministry of Health and the Ministry of Education to ensure that an increased number of high school graduates can stream into health careers. These include a United States federal grant from the Department of Education to the Ministry of Education to develop a Health

Academy in the only public high school, the Palau High School. The Ministry of Health is a key partner in this initiative. Marketing efforts to increase the number of high school students choosing nursing, medicine and allied health professions as careers are under way through development of two marketing videos – "Careers in nursing" and "Careers in health for Palau, the region and the world".

A nursing programme was established in the Palau Community College in 1998 and continues to produce a minimum of two graduates a year, but numbers are insufficient to meet the current staffing requirements. Bridging programmes in nursing and other allied health fields are currently in place in the Palau Community College and within the Ministry of Health.

Since 2001, the Ministry of Health has been partnered with Palau Community College to participate in the College's Palau Area Health Education Center (AHEC), which is funded through the United States Department of Health and Human Services/Health Resources and Services Administration. The Palau AHEC is part of the Hawaii-Pacific Basin AHEC, which is managed by the John A. Burns School of Medicine (JABSOM)/University of Hawaii. JABSOM has funnelled over US$ 2 million since 2001 to promote health worker training in Palau and Micronesia. The Palau AHEC has sponsored most of the 98 courses conducted by the Fiji School of Medicine School of Public Health (now Department of Public Health) and all courses conducted by the University of Auckland, Faculty of Medicine (8) in the region. Fifty-six physicians, nurses, environmental health workers, health administrators, and nutrition workers from Palau have graduated with FSMed undergraduate and postgraduate certificates and diplomas. Four physicians from Palau have been awarded Postgraduate Diplomas in General Practice from the University of Auckland, Faculty of Medicine. Most of these activities have been achieved through the efforts of the Ministry of Health–PCC AHEC partnership.

3.6 Partnerships

Partnerships developed by the Ministry of Health fall under three levels: bilateral, regional and institutional. The Ministry has developed bilateral relationships with the governments of Czechoslovakia, India, Israel, Japan (JICA), the Philippines, the Republic of Korea, Spain, and the United States of America, among others. Regional partnership include those with the Pacific Islands Health Officers Association (PIHOA), the Secretariat of the Pacific Community (SPC), the Pacific Forum, the Pacific Emergency Health Initiative (PEHI), the Health Research Council of the Pacific (HRCP) (formerly Pacific Health Research Council), and the Pacific Open Learning Health Net (POLHN).

Partner institutions in various countries in the region have been developed for the purpose of training and medical referrals for patients requiring tertiary care and services not provided by Belau National Hospital. Partner institutions for education and training include the Fiji School of Medicine (FSMed), and the Good Samaritan Hospital in Los Angeles, United States of America, among others.

Other partner institutions provide specialized services in adult and paediatric cardiology, EENT and ophthalmology, either on an annul basis or every two years. Recent developments will add to the current list of services provided by visiting specialists on an ad hoc basis. Ministry of Health physicians and other health professionals provide training for student interns in partner institutions, such as the University of Washington in Seattle, United States of America, and the University of Hawaii, among others.

3.7 Challenges to health system strengthening

- The numbers and distribution of the health workforce (in medicine, nursing, allied health fields) are inadequate and pose a continuing challenge. In addition, the majority of those already working are underprepared.

- A health resource development services department is needed within the Ministry of Health to provide the necessary support services to Ministry personnel.

- Quality assurance performance measures are needed, not only for service providers, but for all personnel.

- Infrastructure development in the country, particularly in the health sector, is still limited, which hinders the maximum utilization of limited resources for service provision in all aspects of health care, from primary to secondary and tertiary, including off-island medical referrals.

- Health care financing is inadequate and will continue to be, necessitating ongoing lobbying with local legislature and vigorous solicitation efforts for assistance from regional and international organizations and institutions, as well as bilateral negotiations for sources of support via various forms of technical assistance.

- The health information system (HIS) infrastructure is already established, the hardware is already in place and qualified personnel are on board, but not in sufficient numbers and in the necessary specialized areas. There is a great need to increase the capacity of the HIS for monthly compilation, analysis and reporting of data from the various data sources. Integration of data and better management still need to take place. Much progress has taken place, but further support and development is needed to respond to all the competing reporting requirements and needs of the Ministry of Health.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : *Palau Government statistics*
Operator : Palau Government
Features : Government website
Web address : http://www.palaugov.net

Title 2 : *World fact book, 2007*
Operator : *Central Intelligence Agency, United States of America*
Features : Website
Comments : Most updated information about the country
Web address : https://www.cia.gov/library/publications/the-world-factbook/print/ps.html

Title 3 : *Palau statistics and key health indicators*
Operator : Secretariat of the Pacific Community
Features : Website
Comments : Information related to MDG goals
Web address : http://www.spc.int/prism

Title 4 : *Health indicators*
Operator : Ministry of Health
Features : Reports

Title 5 : *National expenditure on health*
Operator : WHO
Features : Website
Web address : http://www.who.int/nha/country/plw/en/

5. ADDRESSES

DEPARTMENT OF HEALTH

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Office Hours	:	0800 – 1700
Website	:	http://www.wpro.who.int/southpacific

PALAU — **WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision**

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	0.44			2008	1
2	Estimated population ('000s)	20.73	...	...	2008p	1
3	Annual population growth rate (%)	0.60	...	...	2008p	1
4	Percentage of population					
	- 0–4 years	12.10	12.10	12.20	2008 est	2
	- 5–14 years	22.20	22.10	22.20	2008 est	2
	- 65 years and above	5.10	4.80	5.70	2008 est	2
5	Urban population (%)	79.60 [a]	...	...	2007est	3
6	Crude birth rate (per 1000 population)	13.80	14.99	12.39	2007	4
7	Crude death rate (per 1000 population)	7.50	9.29	5.45	2007	5
8	Rate of natural increase of population (% per annum)	0.63 [b]	...	...	2007	1
9	Life expectancy (years)					
	- at birth	...	66.30	72.10	2008 est	1
	- Healthy Life Expectancy (HALE) at age 60	...	10.20	12.00	2002	6
10	Total fertility rate (women aged 15–49 years)	2.00			2007	4
	Socioeconomic indicators					
11	Adult literacy rate (%)	99.90 [c]	99.90 [c]	99.80 [c]	2005	7
12	Per capita GDP at current market prices (US$)	8423.00			2007	1
13	Rate of growth of per capita GDP (%)	...				
14	Human development index	...				
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	...	...	...		
16	Health care waste generation (metric tons per year)	83.00 [d]	...	...	2007	8

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	0	0	0	0	0	0	2007	9
	- Type B	67	42	25	0	0	0	2007	9
	- Type C	17	14	3	0	0	0	2007	9
	- Type E	0	0	0	0	0	0	2007	9
	- Unspecified	...	...	...	...	...	...		
	Cholera	0	0	0	0	0	0	2007	9
	Dengue/DHF	204	...	...	1	...	...	2008	10
	Encephalitis	0	0	0	0	0	0	2007	9
	Gonorrhoea	17	5	12	0	0	0	2007	9
	Leprosy	4 [a]	...	...	...	...	...	2007	10
	Malaria	0	0	0	0	0	0	2007	9
	Plague	0	0	0	0	0	0	2007	9
	Syphilis	12	8	4	0	0	0	2007	9
	Typhoid fever	0	0	0	0	0	0	2007	9

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	1984	...	...	0	0	0	2007	5, 11
19	**Diarrhoeal diseases**	987	494	493	0	0	0	2007	5, 11
20	**Tuberculosis**								
	- All forms	11 [j]	...	...	...	...	...	2007	10
	- New pulmonary tuberculosis (smear-positive)	5 [j]	...	...	...	...	...	2007	10
21	**Cancers**								
	All cancers (malignant neoplasms only)	36	16	20	22	13	9	2007	5, 12
	- Breast	3	0	3	3	0	3	2007	5, 12
	- Colon and rectum	1	1	0	0	0	0	2007	5, 12
	- Cervix			2			2	2007	5, 12
	- Oesophagus	0	0	0	0	0	0	2007	5, 12
	- Leukaemia	2	1	1	0	0	0	2007	5, 12
	- Lip, oral cavity and pharynx	5	1	4	0	0	0	2007	5, 12
	- Liver	4	3	1	5	3	2	2007	5, 12
	- Stomach	0	0	0	0	0	0	2007	5, 12
	- Trachea, bronchus, and lung	5	5	0	5	5	0	2007	5, 12
22	**Circulatory**								
	All circulatory system diseases	4185	...	...	...	...	...	2007	11
	- Acute myocardial infarction	14 [f]	...	...	10	5	5	2007	5, 11
	- Cerebrovascular diseases	721 [f]	...	...	18	13	5	2007	5, 11
	- Hypertension	2176 [f]	...	...	7	6	1	2007	5, 11
	- Ischaemic heart disease	155 [f]	...	...	9	7	2	2007	5, 11
	- Rheumatic fever and rheumatic heart diseases	399 [f]	...	...	3	1	2	2007	5, 11
23	**Diabetes mellitus**	2754 [f]	...	...	21 [g]	5	6	2007	5, 11
24	**Mental disorders**	707 [f]	...	...	7	6	1	2007	5, 11
25	**Injuries**								
	All types	3493 [f]	...	...	22	19	3	2007	5, 11
	- Homicide and violence	21 [f]	...	...	0	0	0	2007	5, 11
	- Motor and other vehicular accidents	95 [f]	...	...	2	2	0	2007	5, 11
	- Occupational injuries	...	...	...	...	...	...		
	- Suicide	12 [f]	...	...	6	5	1	2007	5, 11
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Disease of the respiratory system	211	...	...	1043.00	...	...	2007	11
	2. Disease of the genitourinary system	170	...	...	840.00	...	...	2007	11
	3. Disease of the digestive system	136	...	...	672.00	...	...	2007	11
	4. Normal childbirth and delivery	128	...	...	634.00	...	...	2007	11
	5. Endocrine & metabolic system	118	...	...	583.00	...	...	2007	11
	6. Disease of the circulatory system	112	...	...	554.00	...	...	2007	11
	7. Infectious and parasitic diseases	109	...	...	539.00	...	...	2007	11
	8. Injury and poisoning	103	...	...	509.22	...	...	2007	11
	9. Disease of the nervous system	98	...	...	485.00	...	...	2007	11
	10. Complications of pregnancy, childbirth, and puerperium	74	...	...	366.00	...	...	2007	11

	INDICATORS	DATA						Year	Source
		Number of cases			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Heart disease	31	20	11	153.26	183.98	117.57	2007	5
	2. Injury (intentional and unintentional)	22	19	3	108.77	174.79	32.06	2007	5
	3. Cancer	22	13	9	108.77	119.58	96.19	2007	5
	4. Cerebrovascular accidents	18	13	5	88.99	119.58	53.44	2007	5
	5. Septicemia	16	8	8	79.1	73.59	85.51	2007	5
	6. Respiratory disease	16	11	5	79.1	101.19	53.44	2007	5
	7. Kidney disease	8	8	0	39.55	73.59	0.00	2007	5
	8.								
	9.								
	10.								
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**						22.83	2006	4
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**						100.00	2008	10
30	**Percentage of pregnant women with anaemia**						...		
31	**Neonatal mortality rate (per 1000 live births)**		7.17		6.13		8.62	2007	8
32	**Percentage of newborn infants weighing at least 2500 g at birth**		91.00		91.40		90.52	2007	4
33	**Immunization coverage for infants (%)**								
	- BCG		NR [h]		NR [h]		NR [h]	2007	10, 13
	- DTP3		92.00		...		...	2008	13
	- POL3		92.00		...		...	2008	13
	- Hepatitis B III		92.00		...		...	2008	13
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			30			0	2007	14
	- Eclampsia			9			0	2007	14
	- Haemorrhage			3			0	2007	14
	- Obstructed labour			8			0	2007	14
	- Sepsis			7			0	2007	14
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	0	0	0	2008	10
	- Diphtheria	0	0	0	0	0	0	2008	10
	- Hib meningitis	0	0	0	0	0	0	2007	5, 11
	- Measles	0	0	0	0	0	0	2008	10
	- Mumps	0	0	0	0	0	0	2008	10
	- Neonatal tetanus	0	0	0	0	0	0	2008	10
	- Pertussis (whooping cough)	0	0	0	0	0	0	2008	10
	- Poliomyelitis	0	0	0	0	0	0	2008	10
	- Rubella	0	0	0	0	0	0	2008	10
	- Total Tetanus	0	0	0	0	0	0	2008	10

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Facilities with HIV testing and counseling services**		2		2007	15
37	**Health infrastructure**					
	Public health facilities	- General hospitals	1	90	2007	16
		- Specialized hospitals	0	0	2007	16
		- District/first-level referral hospitals	0	0	2007	16
		- Primary health care centres	4	10	2007	16
	Private health facilities	- Hospitals	0	0	2007	16
		- Outpatient clinics	2	0	2007	16
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)		18.00		2007p	17
	- total expenditure on health as % of GDP		10.80		2007p	17
	- per capita total expenditure on health (in US$)		900.00 [b]		2007p	17
	Government expenditure on health					
	- amount (in million US$)		14.00		2007p	17
	- general government expenditure on health as % of total expenditure on health		78.40		2007p	17
	- general government expenditure on health as % of total general government expenditure		12.70		2007p	17
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health		41.14 [b]		2007p	17
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health		21.60		2007p	17
	Exchange rate in US$ of local currency is: 1 US$ =		1.00		2007p	17
39	**Health insurance coverage as % of total population**		...			

	INDICATOR		DATA							Year	Source
40	**Human resources for health**		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	26	...	...	...	...	...	...	2006	18
		- Ratio per 1000 population	1.30 [a]	...	...	...	...	...	...	2006	18
	Dentists	- Number	5	2	3	5	0	5	0	2007	16
		- Ratio per 1000 population	0.25	0.10	0.15	0.25	0.00	0.25	0.00	2007	16
	Pharmacists	- Number	1	1	0	1	0	1	0	2007	16
		- Ratio per 1000 population	0.05	0.05	0.00	0.05	0.00	0.05	0.00	2007	16
	Nurses	- Number	117	...	...	...	...	...	...	2006	18
		- Ratio per 1000 population	5.88	...	...	...	...	...	...	2006	18
	Midwives	- Number	1	...	...	...	...	...	...	2006	18
		- Ratio per 1000 population	0.05	...	...	...	...	...	...	2006	18
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	**Annual number of graduates**	Physicians	0	0	0	0	0	0	0	2007	19
		Dentists	0	0	0	0	0	0	0	2007	19
		Pharmacists	0	0	0	0	0	0	0	2007	19

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	2	...	...	...	...	...	...	2007	20
		Midwives	0	0	0	0	0	0	0	2007	19
		Paramedical staff	0	0	0	0	0	0	0	2007	19
		Community health workers	0	0	0	0	0	0	0	2007	19
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	7.17	6.13	8.62	2007	4, 5
45	Under-five mortality rate (per 1000 live births)	7.17	6.13	8.62	2007	4, 5
46	Proportion of 1 year-old children immunised against measles	97.00	...	...	2008	10
47	Maternal mortality ratio (per 100 000 live births)	0.00			2007	4
48	Proportion of births attended by skilled health personnel	100.00			2007	14
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	0.00			2007	14
	- Percentage of deliveries in health facilities (as % of total deliveries)	100.00			2007	14
49	Contraceptive prevalence rate	12.08	...	...	2007	4
50	Adolescent birth rate	18.40			2007	4
51	Antenatal care coverage - At least one visit	95.00			2006	4
	- At least four visits	79.00			2006	4
52	Unmet need for family planning	...	...	....		
53	HIV prevalence among population aged 15-24 years	0.00	0.00	0.00	2007	15
54	Estimated HIV prevalence in adults	0.15	...	...	2007	15
55	Percentage of people with advanced HIV infection receiving ART	0.15 [i]	...	...	2007	15, 21
56	Malaria incidence rate per 100 000 population	NR	NR	NR	2007	9
57	Malaria death rate per 100 000 population	NR	NR	NR	2007	9
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	NR	NR	NR	2007	9
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	NR	NR	NR	2007	9
60	Tuberculosis prevalence rate per 100 000 population	71.00	...	...	2007	10
61	Tuberculosis death rate per 100 000 population	8.00	...	...	2007	10
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	90.00	...	...	2007	10
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	40.00	...	...	2006	10
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	89.00	79.00	94.00	2006	22
65	Proportion of population using an improved sanitation facility	67.00	96.00	52.00	2006	22
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
...	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Revised data
b	Computed by Health Information and Evidence for Policy Unit of WHO Regional Office for the Western Pacific
c	Figure refers to 15-24 years old
d	Figure refers to hospital waste only and excludes dispensaries
e	Figure refers to confirmed cases only
f	Figure refers to number of hospital encounters
g	Diabetes was an underlying condition in these deaths, not the direct cause of death. Totals may not tally due to some reported cases with no gender breakdown
h	This is not part of the routine immunization
i	Total of 3 cases
j	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

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13	Immunization Program, Bureau of Public Health, Ministry fo Health, Palau.
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PAPUA NEW GUINEA

1. CONTEXT

1.1 Demographics

Papua New Guinea has an estimated population of around 6.5 million, 40% under the age of 15. Around 800 languages are spoken in the country, each language group having a distinct culture, and there are large sociocultural differences between and within provinces. The official languages are English, Pidgin and Motu.

Access to widely scattered rural communities (86% of the country's population is living in rural areas) is often difficult, slow and expensive. Only 3% of the roads are paved and many villages can only be reached on foot. Most travel between provinces is by air. The capital, Port Moresby, is not linked by road with the rest of the country.

Papua New Guinea has made some progress in social development over the last 30 years. For example, literacy rates have risen from 32% to 56%. However, only half of all women aged 15 years and above and two-thirds of all men aged 15 years and older have ever attended school, and enrolment rates vary significantly across provinces. Women have a very high fertility rate of 4.4 births per woman. Life expectancy has risen from 49 to 54 years and, in 2000, the crude death rate was 12.0 per 1000 population. Papua New Guinea's Human Development Index has risen from 0.4 to 0.5. However, progress has slowed in recent years.

1.2 Political situation

Papua New Guinea is divided administratively into four regions: Southern Coastal (Papuan) Region, Northern Coastal (MoMaSe = Morobe, Madang and Sepik provinces) Region, Highlands Region, and New Guinea Islands Region. The governance system is a parliamentary democracy based on the Westminster model. As a member of the Commonwealth, the head of the Independent State of Papua New Guinea is Queen Elizabeth II of the United Kingdom of Great Britain and Northern Ireland, represented by the Governor-General, who is elected by the National Parliament for a five-year term.

The current single-chamber Parliament has 109 members, comprising one representative from each of the nineteen provinces and the National Capital District and one representative from each of the 89 open constituencies. Every five years, the political leaders are elected at the two tiers of government: national and local. Presently, there is only one woman representative in the national Parliament. There is a decentralized system of government. At the subnational level, there are three levels of administration: provincial, district and local (including several communes, with their villages).

1.3 Socioeconomic situation

During the 1990s, economic performance was mixed, although the economy benefited greatly from major mining and petroleum projects. While there was the potential for economic and social development, the period was largely characterized by negative economic growth and macroeconomic instability. As a result, the economy grew very little in real terms, with growth in the non-mining sector more sluggish than that in the mining sector. The reasons for the economic stagnation were complex. External contributing factors included the worldwide economic depression, the negative development in commodity prices, and unfavourable trade conditions, among others, while internal factors included a series of inappropriate policy regimes and fiscal failures, the catastrophic civil war in Bougainville from 1989 to 1999, and a series of devastating national disasters.

In recent years, the economic parameters have shown a more stable situation and a slightly more positive trend. However, this has been caused by the rising prices of mining products on the international markets rather than by improved internal performance.

Because of the economic situation, as well as the widespread evidence of deterioration in public services, especially in rural areas, it is a widely held view that living standards for a significant number of Papua New Guineans have declined since 1990. Furthermore, in spite of the increasing cost of living, salaries have changed very little over a long period, contributing to a static or possibly worsening poverty situation, particularly in the urban sector. In 2003, Papua New Guinea developed a poverty-reduction strategy that is intended to give an added focus to poverty in the national Medium-Term Development Strategy (MTDS, 2003–2007, not updated since). The country is a signatory to the Millennium Development Declaration, with its first MDG progress report being published in 2005.

1.4 Risks, vulnerabilities and hazards

Papua New Guinea is prone to numerous chronic natural hazards, as well as the occasional acute disaster situation, on a scale greater than any of its Pacific neighbours. The repertoire of hazards that continually hamper the development process in urban and rural remote locations of the country include volcanic eruptions, earthquakes, tsunamis, tropical cyclones, large-scale landslides, flooding, sporadic droughts, frosts in highland areas, the impact of climate change and variability and rising sea levels. There is also a high risk of technical and human-made disasters, such as oil spills, industrial pollution and unregulated and destructive land-use practices.

Papua New Guinea is situated on the boundary between the Pacific and the Australian tectonic plates. The country has eight active volcanoes and is subject to regular earthquakes every year, with secondary effects of this activity including tsunamis and landslides. The most recent disasters have included:

- November 2004 Volcanic activity on Manam Island, displacing about 10 000 people.
- July 2006: Bialla (West New Britain Province) seismo-volanic event, which displaced about 2000 people; no deaths were reported.
- October 2006: Tavurvur (East New Britain Province) volcanic eruption, which displaced about 1200 people; no deaths were directly attributable to the eruption.
- December 2007: Cyclone Guba, with torrential rains, affected 10 000 people through flooding in Oro Province.
- December 2008: sea-level swell with flooding along the northern coast of Papua New Guinea and its outlying islands.

A major challenge to improving health is related to perceptions of illness and health among the general population. There is a widespread lack of awareness regarding risk-related and health-promoting behaviour, and little involvement by local communities in health-promoting activities. Key risks include behaviour and environments that increase the risks of communicable disease; risks of noncommunicable disease, such as chewing Betel and smoking tobacco; and the risks associated with unsafe sexual behaviour.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Communicable diseases remain the major causes of morbidity and mortality in all age groups. However, significant progress has been made in some areas. In 2000, the country was declared poliomyelitis-free. In addition, the national leprosy elimination target of less than one case per 10 000 population was reached.

Malaria is the leading cause of all outpatient visits and the third leading cause of hospital admissions and deaths. The disease is now endemic in every province, including those that were once malaria-free. An average of 1.5-1.8 million suspected cases of malaria are seen at health care facilities annually, and malaria mortality rates for 2007 were estimated to be 8.4 per 100 000. Together, malaria and pneumonia account for one-third of all recorded deaths.

According to WHO estimates (WHO Report 2009, Global Tuberculosis Control), in 2007, Papua New Guinea has an estimated tuberculosis prevalence rate of 430/100 000, a TB death rate of 60/100 000 per year, and a total of 15 002 cases for all types of TB. However, it is very likely that these

are underestimates because the prevalence and incidence rates are based on case notifications, and cases are generally underreported. According to the same WHO report, it is estimated that the incidence rate for new smear-positive cases was 108/100 000 per year in 2007. Thus TB remains a major public health problem, particularly in view of the current HIV epidemic. The directly observed treatment, short-course (DOTS) programme is gradually expanding and is currently operational in eight provinces. Reasons for the slower-than-planned expansion of DOTS include a number of system constraints common to other disease control programmes: central-level staffing; weak infrastructure and support services; and delays in access to funds, which have limited training, supervision and other local-level support.

Papua New Guinea was declared to have a generalized HIV/AIDS epidemic in 2003. A consensus workshop, held in February 2006, estimated that there were 23 000 to 91 000 HIV-positive individuals in the sexually active population of 15-49 years. HIV prevalence among women attending antenatal clinics is between 0.6% and 3.7% (2005) and AIDS-related death is the leading cause of death in adult inpatients at the Port Moresby General Hospital. The main mode of HIV transmission is heterosexual. The incidence of other sexually transmitted infections (STI) is also rising, with the high incidence of sexual assaults on women contributing to their risk of contracting an STI.

Filariasis is endemic, although the size of the problem is unknown. Mass drug administration through the Elimination of Lymphatic Filariasis (ELF) programme is ongoing.

The incidence of noncommunicable diseases is rising, creating the double burden observed in most developing countries. Cases of tobacco-related and alcohol-related illness appear to be increasing, while data from Port Moresby General Hospital suggest that diabetes and hypertension are also on the increase. The three leading cancers in Papua New Guinea—oral, hepatic and cervical—have largely preventable causes (beetle chewing and tobacco smoking).

Another ongoing health concern is related to injuries caused by road traffic accidents and all forms of violence (domestic, criminal and tribal).

2.2 Outbreaks of communicable diseases

Papua New Guinea still remains susceptible to outbreaks of vaccine-preventable diseases due to suboptimal immunization coverage. Efforts are also required to strengthen the EPI disease surveillance systems. Of 898 suspected measles cases reported in 2008, only 48 were adequately investigated (including laboratory confirmation) and, while no investigated cases were confirmed as measles, the true status of measles virus circulation in the country is unclear.

Diarrhoeal diseases remain common. Intestinal infectious diseases, including diarrhoeal diseases and typhoid, are major causes of morbidity, with an estimated combined incidence of 434/100 000 year. Contaminated food and water are the major contributing factors, with only 40% of the population using an improved drinking water source, and poor hygiene conditions resulting in unsafe food-handling practices.

Malaria outbreaks in different parts of the country are yearly events. Papua New Guinea still seems to be free of the A(H5N1) avian influenza virus.

2.3 Leading causes of mortality and morbidity

Communicable diseases, including pneumonia, malaria, tuberculosis, diarrhoeal diseases, meningitis and, increasingly, HIV/AIDS, remain the leading cause of morbidity and account for around 50% of mortality. Information on the true impact of HIV on mortality and morbidity in Papua New Guinea is lacking, but AIDS-related death is now the leading cause of death in adult inpatients at the Port Moresby General Hospital.

Perinatal conditions account for over 10% of all recorded deaths and maternal mortality estimates are high and have increased in past years, indicating a decrease in access to quality health services.

The noncommunicable diseases epidemic in Papua New Guinea is firmly established and increasing, but remains largely unrecognized in reported data. Tobacco-related and alcohol-related illnesses, diabetes and hypertension are on the increase, as are the three leading cancers (oral, hepatic and cervical), along with breast and lung cancers.

2.4 Maternal, child and infant diseases

Maternal and child morbidity and mortality are not improving. Maternal mortality estimates vary widely, but all are high. The 2006 DHS established a maternal mortality ratio of 733 per 100 000 live births. The causes of maternal mortality include postpartum haemorrhage, puerperal sepsis, antepartum haemorrhage, eclampsia and anaemia. Almost 53% of pregnant women are cared for by trained health personnel and about 52% of births are in health facilities. About 24.3% of women are using modern family planning methods (2006).

Perinatal conditions account for over 10% of all recorded deaths. The infant mortality rate is estimated at 56.7 per 1000 live births (2006) compared with 82 in 1991 and 72 from the 1981 National Census. Overall, 30% of children are considered to be moderately to severely malnourished and 31% of children aged 0–5 are stunted, while wasting is comparatively low. Again, there are marked regional variations.

Child health problems are being addressed through improved immunization and the joint United Nations Children's Fund (UNICEF)/WHO child survival strategy, with a focus on the integrated management of childhood illness (IMCI) approach.

2.5 Burden of disease

The health status of Papua New Guineans, the lowest in the Pacific region, steadily improved during the 1980s before declining in the 1990s. Life expectancy (2006) is estimated to be 53.7 years for men and 54.8 years for women, and 15% of a woman's lifetime is estimated to be affected by some form of disability or morbidity. The estimations of mortality and morbidity patterns in the population are very approximate, as data are almost entirely facility-based and laboratory confirmation of clinical diagnoses is rare.

Since 1990, performance towards achieving the MDGs in Papua New Guinea has been mixed. Although progress has been made in some areas, in others there has been stagnation or even deterioration. Overall, progress has been limited due to the adverse development context, the restricted institutional framework, severe resource limitations and the many socioeconomic, cultural, political and other constraints. Furthermore, disparities in most MDG-related indices at the provincial and subprovincial levels are very large by any standard. In some cases, the gaps between the provinces have widened further. The most obvious, cost-effective and easiest way of making progress towards achieving the MDGs, and in the process closing the gaps within the country, would be to concentrate on the low-achieving provinces.

3. HEALTH SYSTEM

3.1 National Department of Health's mission, vision and objectives

The overall mission of the National Department of Health is to promote the physical, social, mental and spiritual well-being of people in their communities, and to promote and encourage the maintenance of community health at an acceptable level by planning and delivering preventive and curative medical and other health services.

The vision of the Department is of a nation of healthy individuals, families and communities where self-reliance prepares all for healthy living in a healthy island environment, with the ultimate goal of improving the health of all Papua New Guineans through the development of a health system that is responsive, effective, affordable, acceptable and accessible to the majority of people.

The Government is focusing its efforts on improving child health and reducing malaria, tuberculosis and HIV/AIDS through specific programmes. To be a nation of healthy individuals, families and communities, and in the spirit of the National Goals and Directive Principles as enshrined in the National Constitution, Papua New Guineans strive for a future in which:

- fewer infants and children die before they have had a chance to experience life;
- fewer mothers die in childbirth from preventable causes;
- all Papua New Guineans have access to basic health care and good nutrition;
- fewer Papua New Guineans die from preventable and treatable diseases including malaria, pneumonia, tuberculosis, diarrhoea and HIV/AIDS;
- women and men live healthier, longer, productive lives and age with dignity;
- villages have safe drinking water and a clean environment; and
- individuals make informed choices as regards health behaviour.

3.2 Organization of health services and delivery systems

Health services are provided by government and church providers (both of which are financed primarily from public sector funds); enterprise-based services (e.g. the mines); a small, modern private sector; and traditional healers (undocumented amount). Within the public sector, management responsibility for hospitals and rural health services within provinces is divided. The National Department of Health manages the provincial hospitals, while provincial and local governments are responsible for all other services (health centres and subcentres, rural hospitals and aid posts), known collectively as 'rural health services'.

The National Health Conference 2001 supported a proposal to create a unified provincial health system. The proposal envisaged a single provincial health authority responsible for both hospital and rural health services, headed by a provincial director of health who would report to both the national and provincial governments. Thus far this system has only been implemented in four provinces.

Strategies to ease managerial difficulties include: amendment of selected public finance and management procedures; quarantining (earmarking) of health funds in provincial grants; delegation of powers over district health staff from the provincial administrator to the provincial health adviser; and alignment of treasury warrants to provincial budgets. Stronger monitoring mechanisms are being developed. A review of functions has recommended that provincial health budgets should make provision for each rural health facility individually, which may have implications for the current budget structure if all resources going to facilities from several different programme heads are to be captured comprehensively. This too still needs to be actually put in place.

3.3 Health policy, planning and regulatory framework

The National Health Plan 2001-2010 and the Medium-Term Expenditure Framework 2005-2007, with its 2007-2009 update, identify some explicit priorities. These include maternal and child health, immunization, malaria control, TB DOTS, HIV/AIDS, and water and sanitation programmes. Work on the development of the next National Health Plan 2011-2020 has started.

3.4 Health care financing

Overall health spending is falling despite receiving a high share of government funds. Total health expenditure as a share of GDP rose steadily from 3.2% to 4.4% between 1997 and 2001. In 2007, however, it decreased back down to 3.2% and total health expenditure per capita fell to US$ 31.3 (from US$ 32 US dollars in 1997). Over 80% of recurrent provincial health budgets were allocated to salaries in 2006. Increased income from the mining sector in the same year provided for an additional US$ 60 million for the health sector, which allowed the undertaking of long-awaited renovation work in hospitals and the addressing of human resource issues, such as staff housing.

Papua New Guinea receives significant levels of official development assistance (ODA), estimated to have amounted to US$ 203 million, or 7.2% of GNP, in 2001. Over recent years, ODA for health has fluctuated, but has been around 24% (2004) of total health spending.

A major new source of funds for health was opened up in 2005 with the signing for a US$ 30 million grant from the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) for the country's HIV/AIDS programme. In 2004, the Global Fund committed US$ 20 million for malaria over five years.

A further proposal of US$ 21 million for TB was accepted in 2006 and, in 2008, a malaria proposal of over US$ 152.2 million.

Papua New Guinea does not have any form of private health insurance, although there is an initiative to have mandatory staff health insurance introduced in the formal sector. In principle, health services are free. In most provinces, however, a fee is charged for outpatient visits. It is not clear in how much this acts as a deterrent to people accessing health services.

3.5 Human resources for health

The nurse-to-population ratio is estimated at 1:2271 population. An additional 600 nurses, 600 community health workers and 100 midwives are estimated to be needed to fill vacant posts, but current production rates are insufficient to fill the gaps. The doctor-to-population ratio is estimated at 1:19 399 population, the majority of doctors being in Port Moresby.

Churches are important providers of care, especially in rural areas, where they provide up to 80% of health services. They share many of the problems of public facilities, but appear to perform better in a number of areas. Papua New Guinea trains most of its health workforce and the churches run five of the seven nursing schools and all of the community health worker training schools.

3.6 Partnerships

Papua New Guinea has relatively few development partners. According to statistics provided by the Organisation of Economic Co-operation and Development (OECD), 96% of ODA for health in 1998-2000 came from Australia. Since then, other major external agencies providing loans or grants have included: the Asian Development Bank (ADB); United Nations agencies, including WHO; and the governments of Japan (JICA) and New Zealand (NZAID). Smaller contributions have been made by the United States Agency for International Development (USAID), the European Union and the World Bank.

In the last few years, there have been major government and partner efforts to ensure a more unified approach to health sector development. The 2001-2010 National Health Plan was developed after extensive consultation. There is now one annual activity plan for the National Department of Health and all donor partners. A Medium-Term Expenditure Framework was developed for 2004-2006, and was further refined to become a rolling plan. There are formal annual reviews of achievements, most importantly by the National Health Conference, attended by the National Department of Health, donor partners, churches and provincial government staff. In 2004, two bilateral (AusAID, NZAID) and three multilateral partners (UNICEF, UNFPA and WHO) signed a 'partnership arrangement' with the National Department of Health, formally entering into a sectorwide approach called the Health Sector Improvement Programme (HSIP), which ADB joined in 2006. This arrangement, through its management structure, has clearly strengthened day-to-day operations and coordination among development partners and with the National Department of Health. A jointly managed and financed Independent Monitoring and Review Group, which spends a couple of weeks in-country twice a year, is a key instrument in assessing the performance of the health sector in general and interactions between development partners and the Government, mainly the National Department of Health. This group provides recommendations on lessons learnt and best practices and guides the discussion on strategy development for the health sector.

The Country Coordination Mechanism (CCM), a requirement of the Global Fund to execute programme activities, has had a further impact on overall cooperation between the different stakeholders in Papua New Guinea's health sector.

In 2006, under the leadership of the Resident Representative of the United Nations to Papua New Guinea, the EXCOM agencies (UNDP, UNICEF and UNFPA), as well as the other in-country and non-resident United Nations agencies (WHO, UNHCR, OCHA, UNIFEM, UNESCO and FAO), agreed to pilot a 'Delivering as one UN' approach in the country. Although Papua New Guinea (referred to as a 'self-starter') has not been formally included in the first eight pilot countries, there are

indications that the Papua New Guinea common United Nations Country Programme is more advanced in the process. The bearing of this on the health sector remains to be seen.

3.7 Challenges to health system strengthening

Under the *Organic Law on Provincial Governments and Local Level Governments*, district and local governments are given responsibility to manage and support their health services, each level of government having different powers and functions in relation to health. The National Department of Health is responsible for policy, standards, training, medical supplies, specialist services, public hospitals and monitoring, while the provincial and local governments are responsible for implementation of health policies, standards and funding programmes. However, due to other district and local government priorities, almost all rural health services in the country are underfunded.

Nurses and community health workers form the backbone of primary health care services in rural areas, and both are considered to be in short supply and dramatically reduced. These shortages constitute a serious constraint in implementing the National Health Plan, including the priority programmes. Some provinces and many districts have no doctor.

The passing of the Organic Law exacerbated existing problems in health staff supervision and support. Provincial health advisers lost much of their authority to supervise and discipline district health staff. National Department of Health oversight of provincial staff is also limited. Reasons include the limited capacity of programme units at the central level; the lack of funds for travel; the lack of economies of scale through joint training and supervision across programmes; and delayed disbursement of funds. As a result, rural health services are poor and deteriorating.

A function and expenditure review in 2001 described the health system in rural areas as being in a state of "slow breakdown and collapse, currently being saved from complete collapse by donors". The review stated, "About 600 rural facilities are closed or not functioning effectively. Where services remain, the breadth and quality of the services are diminishing." This dire situation has worsened since then, and more facilities have closed down. In spite of this being acknowledged for some time, little has been done yet to seek redress. The scarcity and maldistribution of human resources for health has not been addressed effectively, and there have only been limited and not very coordinated efforts in training and other approaches to capacity-building. Recommendations from the Human Resources for Health Forum, conducted in 2008, included the urgent need to upscale health care worker training and to develop a human resource development plan. Action on these recommendations is still pending.

There has been no proper assessment of the National Health Information and Surveillance System for many years, resulting in a lack of timely and reliable information for decision-making. The surveillance system is weak and there is a lack of capacity for conducting proper surveillance. Most information on communicable disease outbreaks come from the media rather than the National Health Information and Surveillance System.

At all levels, there are very limited capacities for outbreak response. Current central government policy of putting a ceiling on staff numbers does not allow for recruitment of more staff for the health system, especially in the peripheral areas. The National Department of Health is making an effort to strengthen communicable disease surveillance and to build outbreak response capacities by re-establishing its Disease Control Branch and recruiting staff for communicable disease surveillance and outbreak response, but the process is still ongoing.

There is some laboratory capacity and a laboratory network in Papua New Guinea, but laboratory services are generally weak. The Central Public Health Laboratory (CPHL) in Port Moresby is responsible for overall coordination of operations for communicable disease diagnosis, while the regional and provincial hospital laboratories form the backbone of the country's laboratory network. Some health centres also have some limited laboratory diagnostic capacities.

Medical supply and drug procurement and distribution face many challenges and 'stock-outs' are common occurrences. The distribution system is often dependent on ad hoc solutions. A 2006 survey showed a high level of susceptibility to corruption in the pharmaceutical sector. Although the necessary regulations

are in place, they are not being enforced and there seems to be collusion between the approving and procuring authorities. There is anecdotal evidence that the prices paid for drugs may be up to several times higher than those available on international markets. In 2008, on the advice of an independent drug procurement mission, procurement was separated from the regulatory side in medical supply.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : 2000 National Census
Operator : National Statistical Office (NSO)

Title 2 : Papua New Guinea Demographic and Health Survey, 2006 (not yet published)
Operator : National Statistical Office
Features : Includes information on health outcomes, family planning etc.

Title 3 : *Millennium Development Goals progress report for Papua New Guinea 2004*.
Operator : Government of Papua New Guinea, United Nations in Papua New Guinea
Features : Tables, graphs and maps on MDG indicators by province

Title 4 : Papua New Guinea National Department of Health Information System,
Operator : Monitoring and Research Branch
Features : Yearly compiled tables of all collected and compiled data by province

Title 5 : *Papua New Guinea National Health Plan 2001-2010 (volume III)*
Features : Tables, graphs and maps of major health indicators by districts 1995 – 1999

Title 6 : *Discharge reports 2004*
Operator : Monitoring and Research Branch National Department of Health
Features : Survey of compiled data drawn from health facility discharge reports

Title 7 : *Annual Health Sector Review*
Operator : National Department of Health, Monitoring and Research Branch
Specification : Compiled Provincial Reports with tables and graphs on regularly collected indicators

Title 8 : *National inventory of health facilities 2003*
Operator : National Department of Health
Features : Tables (& graphs) on staff and equipment of all health facilities as foreseen by the health coverage plan (gazetteer)

Title 9 : *Medium Term Development Strategy 2005 - 2010*, (November 2004)
Operator : Department of National Planning and Rural development
Features : Financial information of all sectors, including health (Annex 1)

Title 10 : *Report of the 2004 National Consensus Workshop of Papua New Guinea*
Operator : National AIDS Council / National Department of Health
Features : Tables and graphs on the HIV/AIDS situation in PNG

Title 11 : *Strategic Plan 2006 – 2008, (formerly Medium Term Expenditure Framework)*
Operator : National Department of Health
Features : Outlines current situation and the way forward in priority areas in health

Title 12 : Reports of the Independent Review Group, reports (Nov. 2005, May 2006 & Nov. 2006, May 2007 & November 2007)
Operator : National Department of Health with all Development Partners united under the Sector Wide Approach (Health Service Improvement Programme)
Features : Narratives on Health Sector Situation

5. ADDRESSES

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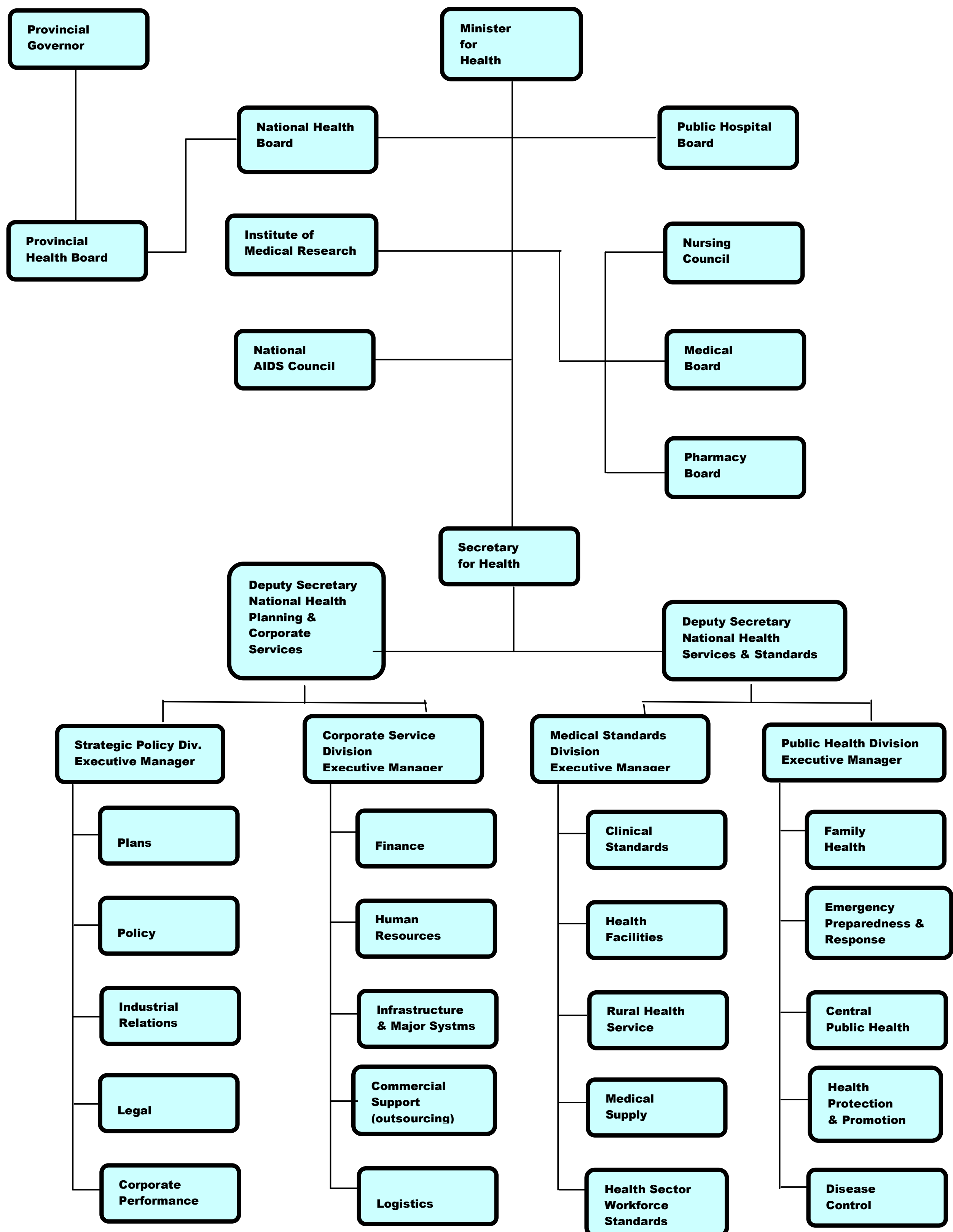
6. ORGANIZATIONAL CHART: National Department of Health



PAPUA NEW GUINEA

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	**Area (1 000 km2)**	462.84			2004	1
2	**Estimated population ('000s)**	6460.00	…	…	2008 est	2
3	**Annual population growth rate (%)**	2.70	…	…	2006 est	2
4	**Percentage of population**					
	- 0–4 years	14.00	…	…	2008 est	2
	- 5–14 years	26.00	…	…	2008 est	2
	- 65 years and above	2.30	2.32	2.00	2008 est	2
5	**Urban population (%)**	12.50 [a]	…	…	2007 est	3
6	**Crude birth rate (per 1000 population)**	35.00	…	…	2000	2
7	**Crude death rate (per 1000 population)**	12.00	…	…	2000	2
8	**Rate of natural increase of population (% per annum)**	2.30	…	…	2000	2
9	**Life expectancy (years)**					
	- at birth	54.20	53.70	54.80	2006	4
	- Healthy Life Expectancy (HALE) at age 60	…	10.10	10.60	2002	5
10	**Total fertility rate (women aged 15–49 years)**	4.40			2006	4
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	56.20 [b]	61.20 [b]	50.90 [b]	2000	2
12	**Per capita GDP at current market prices (US$)**	844.95 [a]			2006p	6
13	**Rate of growth of per capita GDP (%)**	…				
14	**Human development index**	0.52			2006	7
	Environmental indicators	Total	Urban	Rural		
15	**Proportion of vehicles using unleaded gasoline (%)**	…	…	…		
16	**Health care waste generation (metric tons per year)**	…	…	…		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	**Selected communicable diseases**	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	…	…	…	…	…	…		
	- Type B	392 575	…	…	…	…	…	2002	8
	- Type C	…	…	…	…	…	…		
	- Type E	…	…	…	…	…	…		
	- Unspecified	81	55	26	2	2	0	2000	9
	Cholera	0	0	0	0	0	0	2000	9
	Dengue/DHF	…	…	…	…	…	…		
	Encephalitis	…	…	…	…	…	…		
	Gonorrhoea	34	14	20	0	0	0	2000	9
	Leprosy	270	…	…	…	…	…	2007	10
	Malaria	87 961	…	…	534	…	…	2007	10
	Plague	…	…	…	…	…	…		
	Syphilis	184	66	118	8	3	5	2000	9
	Typhoid fever	5145	2546	2599	164	95	69	2000	9

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	442 650	...	...	...	...	...	2008	8
19	**Diarrhoeal diseases**	193 355	...	...	...	...	...	2008	8
20	**Tuberculosis**								
	- All forms	15 002 [f]	...	...	...	...	...	2007	10
	- New pulmonary tuberculosis (smear-positive)	2087 [f]	...	...	...	...	...	2007	10
21	**Cancers**								
	All cancers (malignant neoplasms only)	2213	889	1324	225	130	95	2004	9
	- Breast	184	0	184	7	0	7	2000	9
	- Colon and rectum	20	14	6	4	3	1	2004	9
	- Cervix			518			22	2004	9
	- Oesophagus	51	37	14	7	5	2	2000	9
	- Leukaemia	82	46	36	24	14	10	2004	9
	- Lip, oral cavity and pharynx	324	189	135	16	9	7	2004	9
	- Liver	306	207	99	70	54	16	2004	9
	- Stomach	34	19	15	8	3	5	2004	9
	- Trachea, bronchus, and lung	45	32	13	15	13	2	2004	9
22	**Circulatory**								
	All circulatory system diseases	590	283	307	54	31	23	2004	9
	- Acute myocardial infarction	32	27	5	4	1	3	2004	9
	- Cerebrovascular diseases	4	0	4	0	0	0	2004	9
	- Hypertension	430	223	207	27	19	8	2004	9
	- Ischaemic heart disease	87	63	24	5	2	3	2004	9
	- Rheumatic fever and rheumatic heart diseases	137	70	67	18	9	9	2004	9
23	**Diabetes mellitus**	312	161	151	30	19	11	2004	9
24	**Mental disorders**	600	347	253	2	1	1	2004	9
25	**Injuries**								
	All types	18 114	11 024	7090	171	119	52	2004	9
	- Homicide and violence	326	72	254	1	0	1	2004	9
	- Motor and other vehicular accidents	349	220	129	13	8	5	2004	9
	- Occupational injuries	0	0	0	0	0	0	2004	9
	- Suicide	46	7	39	2	1	1	2004	9
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Normal deliveries (incl. BBA)	49 423		49 423	867.79		1796.04	2004	9
	2. Pneumonia	27 357	15 247	12 110	480.34	517.98	440.08	2004	9
	3. Malaria	27 356	13 787	13 569	480.33	468.38	493.10	2004	9
	4. Perinatal conditions	8148	4348	3800	143.07	147.71	138.09	2004	9
	5. Direct obstetric causes	7330		7330	128.70		266.37	2004	9
	6. Diarrhoea	6827	3811	3016	119.87	129.47	109.60	2004	9
	7. Open wounds and injury to blood vessels	6291	4053	2238	110.46	137.69	81.33	2004	9
	8. Diseases of the digestive system	6082 [c]	2992	3900	106.79	101.65	141.73	2004	9
	9. Tuberculosis	6004	3133	2871	105.42	106.44	104.33	2004	9
	10. Anaemia	3947 [c]	1623	2342	69.30	55.14	85.11	2004	9

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Pneumonia	693	402	291	11.97	13.39	10.44	2004	9
	2. Perinatal conditions	648	354	294	11.19	11.79	10.55	2004	9
	3. Malaria	487	257	230	8.41	8.56	8.25	2004	9
	4. Tuberculosis	486	282	204	8.39	9.39	7.32	2004	9
	5. Meningitis	293	161	132	5.06	5.36	4.74	2004	9
	6. Heart diseases	213	109	104	3.68	3.63	3.73	2004	9
	7. Diseases of the digestive system	192	133	59	3.32	4.43	2.12	2004	9
	8. Diarrhoea	186	123	63	3.21	4.1	2.26	2004	9
	9. Anaemia	171	78	93	2.95	2.6	3.34	2004	9
	10. Diseases of the respiratory system	161	90	71	2.78	3	2.55	2004	9
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					24.30 [a]		2006	4
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					34.00		2008	10
30	**Percentage of pregnant women with anaemia**					40.30		2005	11
31	**Neonatal mortality rate (per 1000 live births)**	29.10 [a]		...		...		2006	4
32	**Percentage of newborn infants weighing at least 2500 g at birth**	90.70		...		...		2006	8
33	**Immunization coverage for infants (%)**								
	- BCG	68.50		...		...		2008	10
	- DTP3	51.80		...		...		2008	10
	- POL3	65.00		...		...		2008	10
	- Hepatitis B III	56.30		...		...		2008	10
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			3309 [a]			11	2004	9
	- Eclampsia			473 [a]			4	2004	9
	- Haemorrhage			1665 [a]			33	2004	9
	- Obstructed labour			63 [a]			3	2004	9
	- Sepsis			712 [a]			17	2004	9
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	...	...	...	...	...	...		
	- Diphtheria	...	...	...	...	...	...		
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2008	10
	- Mumps	...	...	...	...	...	...		
	- Neonatal tetanus	...	...	...	...	...	...		
	- Pertussis (whooping cough)	...	...	...	...	...	...		
	- Poliomyelitis	0	0	0	...	...	...	2008	10
	- Rubella	4	...	...	...	...	...	2008	10
	- Total Tetanus	...	...	...	...	...	...		

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		256		2007	12
37	Health infrastructure					
	Public health facilities	- General hospitals	19	...	2003	13
		- Specialized hospitals	4	...	2003	13
		- District/first-level referral hospitals	201	...	2003	13
		- Primary health care centres	2875	...	2003	13
	Private health facilities	- Hospitals	3	...	2003	13
		- Outpatient clinics	...	...		
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)		197.98		2007p	14
	- total expenditure on health as % of GDP		3.20		2007p	14
	- per capita total expenditure on health (in US$)		31.27		2007p	14
	Government expenditure on health					
	- amount (in million US$)		161.95		2007p	14
	- general government expenditure on health as % of total expenditure on health		81.80		2007p	14
	- general government expenditure on health as % of total general government expenditure		7.30		2007p	14
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health		...			
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health		18.20		2007p	14
	Exchange rate in US$ of local currency is: 1 US$ =		2.97		2007p	14
39	Health insurance coverage as % of total population		...			

	INDICATOR		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
40	Human resources for health										
	Physicians	- Number	333	...	...	...	...	...	...	2008	15
		- Ratio per 1000 population	0.05 [d]	...	...	...	...	...	...	2008	15
	Dentists	- Number	46	...	...	...	...	...	...	2008	15
		- Ratio per 1000 population	0.01 [d]	...	...	...	...	...	...	2008	15
	Pharmacists	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Nurses	- Number	2844	...	...	...	...	...	...	2008	15
		- Ratio per 1000 population	0.44 [d]	...	...	...	...	...	...	2008	15
	Midwives	- Number	315			...	...	...	...	2008	15
		- Ratio per 1000 population	0.05 [d]			...	...	...	...	2008	15
	Paramedical staff	- Number	2262	...	...	...	...	...	...	2008	15
		- Ratio per 1000 population	0.35 [d]	...	...	...	...	...	...	2008	15
	Community health workers	- Number	3883	...	...	...	...	...	...	2008	15
		- Ratio per 1000 population	0.60 [d]	...	...	...	...	...	...	2008	15
41	Annual number of graduates	Physicians	36 [a]	...	...	...	...	...	...	2008	16
		Dentists	5	...	...	...	...	...	...	2008	16
		Pharmacists	20	...	...	...	...	...	...	2008	16

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	…	…	…	…	…	…	…		
		Midwives	64 [e]	…	…	…	…	…	…	2008	16
		Paramedical staff	73	…	…	…	…	…	…	2008	16
		Community health workers	…	…	…	…	…	…	…		
42	Workforce losses/ Attrition	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		
		Nurses	…	…	…	…	…	…	…		
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	…	…	…	…	…	…		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	28.00	…	…	2007	8
44	Infant mortality rate (per 1000 live births)	56.70 [a]	…	…	2006	4
45	Under-five mortality rate (per 1000 live births)	74.40 [a]	…	…	2006	4
46	Proportion of 1 year-old children immunised against measles	54.00	…	…	2008	10
47	Maternal mortality ratio (per 100 000 live births)	733.00 [a]			2006	4
48	Proportion of births attended by skilled health personnel	53.00			2006	4
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.30			2006	4
	- Percentage of deliveries in health facilities (as % of total deliveries)	51.70 [a]			2006	4
49	Contraceptive prevalence rate	25.50	24.30	…	2006	4
50	Adolescent birth rate	12.90			2006	4
51	Antenatal care coverage - At least one visit	77.50			2006	4
	- At least four visits	54.90			2006	4
52	Unmet need for family planning	…	…	…		
53	HIV prevalence among population aged 15-24 years	59.54	…	…	2007	12
54	Estimated HIV prevalence in adults	1.61	…	…	2007	12
55	Percentage of people with advanced HIV infection receiving ART	38.00	…	…	2007	12
56	Malaria incidence rate per 100 000 population	1389.00	…	…	2007	10
57	Malaria death rate per 100 000 population	8.43	…	…	2007	10
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	51.00 [a]	…	…	2007	8
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	60.00	…	…	2007	8
60	Tuberculosis prevalence rate per 100 000 population	430.00	…	…	2007	10
61	Tuberculosis death rate per 100 000 population	60.00	…	…	2007	10
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	15.00	…	…	2007	10
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	59.00	…	…	2006	10
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	40.00	88.00	32.00	2006	17
65	Proportion of population using an improved sanitation facility	45.00	67.00	41.00	2006	17
66	Proportion of population with access to affordable essential drugs on a sustainable basis	…	…	…		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Revised data
b	Figure refers to population aged 10 years and over
c	Totals may not tally due to some reported cases with no gender breakdown
d	Computed by Health Information and Evidence for Policy Unit of WHO Regional Office for the Western Pacific
e	Due to non-accreditation of the programs no graduates are eligible for registration unless they undertake further clinical training and competency assessment
f	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

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	Special focus on Sanitation. UNICEF, New York and WHO, Geneva, 2008. [http://www.wssinfo.org/en/40_mdg2008.html].

PHILIPPINES

1. CONTEXT

1.1 Demographics

The population of the Philippines, as of the last census in 2007, numbered 88 574 614, with a population density of 295 per square kilometre. This translates to an average annual population growth rate of 2.04% for the period 2000 to 2007. Thus far, this is the lowest annual population growth rate recorded for the Philippines since the 1960s. Among the 14 regions of the country, Calabarzon (Region IV-A) had the largest population, with 11.74 million, followed by the National Capital Region (NCR), with 11.55 million, and Central Luzon (Region III), with 9.72 million. These three regions comprised more than one third (37.3% of the Philippine population.

The country's population is predominantly young, with the 0-14 year age group representing 33.8% and those aged 65 years and above comprising only 4.4%. There is an almost equal number of males and females. The crude birth rate is 20.5 per 1000 population and crude death rate is 4.8 per 1000 population. Life expectancy for both sexes is 67 years, with that of males being 64 years and females being 70 years.

1.2 Political situation

The Philippines is a democratic and republican state subscribing to the presidential form of government. There are three branches of government – the executive, legislative and judicial branches. The country has a unitary form of government and a multiparty political system. Executive power is vested in the President, who is the head of state and commander-in-chief of the armed forces. The Cabinet members are the heads of agencies and assist the President in drafting executive laws, policies and government programmes. The Constitution ensures direct election by the people for all elective positions from the President down to members of the *barangay* (village) councils.

In 1991, the Local Government Code transferred some of the powers of the national government to local government officials. The Code devolved basic services, including health, giving responsibility to local government units (LGU). The country is made up of political local government units of provinces, cities, municipalities and *barangays*. A local chief executive heads each LGU. Administrative autonomy enables the LGUs to raise local revenues, to borrow and to determine types of local expenditure, including expenditure on health care.

The country is preparing itself for the forthcoming presidential and local elections scheduled for May 2010. The elected president will become the 15th President of the Republic.

1.3 Socioeconomic situation

The Philippine economy was at its strongest in 2007, with the gross domestic product (GDP) real growth rate averaging 7.3%, the highest in 31 years. The economy continued to keep pace with population growth in the fourth quarter of 2007 as per capita GDP grew by 5.3% from 3.4 %.

The challenge for the Government is to make these economic gains felt among the poorer sectors of society. The 2006 official poverty statistics revealed an increase of 2.5 percentage points to 26.9% from 24.4% in 2003, meaning a total of 4.7 million poor families in 2006 compared with the 4.0 million estimated in 2003. In terms of population, the number of poor Filipinos reached 27.6 million in 2006, 16% more than the 23.8 million estimated in 2003, while food-poor individuals increased to 12.2 million, 14% more than in 2003. In the presence of the country's gains in economic growth, the Government's move to realign the national budget towards social services is a good opportunity to focus on the education and health needs of the population in tandem with an effective population management programme.

The gender gap appears to be in favour of girls as far as participation in basic education, technical-vocational education and training and higher education are concerned. There is a need for the

Government and other education stakeholders to look more seriously at the low completion and retention rates among boys in the school system. Although indicators to reflect gender equality, such as the country' Gender Development Index (GDI) and Gender Empowerment Measure (GEM) reflect gains, these do not necessarily translate into positive measurable changes in the roles of and status of women, given the continuing incidence of violence against women, the predominance of female child-abuse victims, the trafficking of women and children for sexual exploitation, and female forced labour, among others.

The slow decline in maternal mortality means that the country is unlikely to meet the Millennium Development Goal maternal mortality target of 80% access to reproductive health services by 2015. The reasons include the inadequate access to integrated reproductive health services (such as contraceptives, family planning, and responsible-parenthood education) by women, including poor adolescents, and men.

1.4 Risks, vulnerabilities and hazards

There is constant concern about the high population growth rate and it being a limiting factor for broad-based growth and poverty reduction.

The Philippines is still considered a low-HIV-prevalence country, with a prevalence rate of only 0.02%. However, the country is experiencing a steep rise in the number of new HIV cases reported. As of May 2009, there were 85 new HIV antibody seropositive individuals reported to the HIV and AIDS Registry. This was a 143% increase compared with the same period in 2008 (n=35 in 2008) and the highest ever reported in a month. Moreover, there is a shift in the epidemic scenario from predominantly hetero-sexual transmission to homo/ bisexual transmission; and those newly reported cases belong to the younger population group.

Due to its geographical location, the country faces various natural disasters such as typhoons, landslides, volcanic eruptions and earthquakes. Basic and emergency health services are readily mobilized to the affected population.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Tuberculosis continues to plague a sizeable segment of the population although, in recent years, effective case-finding, disease management using the directly observed treatment, short-course (DOTS) strategy, and partnership with the private sector have made inroads in the prevention and control of the disease.

Mosquito-borne diseases, such as malaria, dengue and filariasis, are an ever-present danger in endemic areas. Although malaria is no longer a leading cause of death, it remains among the leading causes of morbidity in the country, particularly in rural areas. High-risk groups include upland subsistence farmers, forest-related workers, indigenous peoples and settlers in frontier areas, as well as migrant agricultural workers.

Dengue fever also remains a threat, with cyclical outbreaks every three to five years. Early in 2008, there was a resurgence in the number of cases.

Mortality and morbidity rates for noncommunicable diseases have been increasing steadily since the 1970s. In 1990, diseases of the heart dislodged infectious diseases as the leading cause of mortality. Latest statistics (2004) show that cardiovascular diseases, cancers, chronic respiratory diseases and diabetes continue to be among the country's top 10 killers. Hypertension and diseases of the heart ranked 4th and 7th among the ten leading causes of illness in 2006.

Noncommunicable diseases are often linked by common preventable risk factors related to lifestyle. The risk factors involved are tobacco use, unhealthy diet, physical inactivity and alcohol use. In a study conducted by the Food and Nutrition Research Institute in 2003, it was found that 90% of Filipinos had one or more of the following risk factors: physical inactivity, smoking, obesity, hypertension, diabetes and

abnormal cholesterol. Among adults, 20% were overweight and 5% were obese, 22.5% were hypertensive, 60.5% were physically inactive, and a significant number had high blood cholesterol and sugar. More than half (56%) of adult males and 12% of adult females are currently smokers, while alcohol use has risen steadily since the 1960s.

Alarmingly, more and more children and adolescents are becoming exposed to NCD risks. The obesity trend, for instance, is catching up with the young. Prevalence of overweight among adolescents aged 9-11 years doubled from 2.4% in 1993 to 4.8% in 2005. Similarly, the prevalence rate of overweight for children aged 6-10 years doubled from 0.8% in 2001 to 1.6% in 2005. Numerous studies have shown a tendency for obese children to remain obese in adulthood.

Twenty-two per cent of teenagers currently smoke cigarettes. About 2% of teenage students are overweight and 30% are physically inactive, spending three or more hours per day sitting and watching television, playing computer games, talking with friends, or doing other sedentary activities.

2.2 Outbreaks of communicable diseases

A total of 7880 dengue cases were admitted to different sentinel hospitals nationwide from January 1 to March 29, 2008, 20.6% more than during the same time period in 2007 (6532). Cases had exceeded and reached the alert threshold in weeks 1, 8 and 9, and went above the epidemic threshold on weeks 2 to 7. Ages of cases ranged from <1 month to 87 years (median 12 years), the majority being male (53%). The age group with a case fatality ratio greater than 1 was the age group 1-10 years.

2.3 Leading causes of mortality and morbidity

Noncommunicable diseases (NCDs) are considered a major public health concern in the Philippines; more than half (58%) of total deaths in the country in 2003 were caused by NCDs. Diseases of the heart and vascular system are the leading causes of mortality, comprising nearly one-third (30.2%) of all deaths. Other NCDs in the top list include malignant neoplasms, chronic obstructive pulmonary disease (COPD) and diabetes mellitus.

Accidents of all types, including road traffic crashes, rank fourth among the causes of mortality for all age groups. Road traffic accidents constitute the second leading cause of injury death, with a mortality rate of 7.8/100 000. Among children aged 0-17 years, it is the second leading cause of injury death (mortality rate of 5.85/100,000), next to drowning.

Eight of the 10 leading causes of morbidity in the country are caused by infections. They are: acute lower respiratory tract infection and pneumonia; acute watery diarrhoea; bronchitis/bronchiolitis; influenza; tuberculosis; malaria; acute febrile illness; and dengue fever. Among these communicable diseases, pneumonia and tuberculosis continue to be among the 10 leading causes of mortality, causing a significant number of deaths across the country.

At the same time as deaths due to preventable diseases have been in a decline, lifestyle-related diseases have begun to dominate in the leading causes of death, particularly heart diseases, vascular system diseases, malignant neoplasms, diabetes mellitus, and chronic lower respiratory diseases. However, certain conditions originating in the perinatal period are also among the 10 leading causes of mortality, illustrating the vulnerability of the newborn child.

Accidents and injuries, other leading causes of death, are among the neglected disease conditions of public health importance. The mortality rate from accidents gradually increased from 18.7 deaths per 100 000 populations in 1980 to 23 per 100 000 in 1996. An abrupt increase has been observed since then, reaching a level of 41.3 per 100 000 in 2004, almost double the 1996 rate. Among the causes, 36% are assaults, followed by deaths due to transport accidents, at 25%.

2.4 Maternal, child and infant diseases

The Philippines is one of 55 countries accounting for 94% of all maternal deaths in the world and is statistically off-track for achievement of MDG 5 by 2015. Maternal deaths are closely linked with neonatal deaths.

Nearly half of all pregnancies every year are unintended, resulting in women having one-third more children than they desire, one-third being born less than two years apart, and 15% ending in abortion. For completed pregnancies, the majority (60%) of deliveries are home-based, two-thirds of them attended by an unskilled attendant.

The vast majority of maternal deaths are due to haemorrhage, hypertensive diseases, sepsis, obstructed labour and problems related to abortion, all conditions that are treatable if deliveries are attended by skilled health workers able to identify and treat them. They would also be less prevalent if mothers had only their desired number of children, spaced by at least two years.

For every maternal death, there are 20 neonatal, infant and child deaths. While the probability of reducing the under-five mortality rate by two thirds by 2015 has been adjudged highly probable, it may not be realized unless deaths during the first 28 days (neonatal period) are dealt with, as they account for 40% of deaths among the under-fives (17 per 1000 live births). In fact, half of neonatal deaths occur during the first two days of life. Progress to curtail neonatal deaths is dismal, with death rates among this age group showing only the barest decline over the past 20 years.

As mentioned, conditions originating in the perinatal period is among the leading cause of mortality; the top cause of death being pneumonia, followed by bacterial sepsis. Other causes of mortality are related to pregnancy, events during delivery and congenital malformations.

Undernutrition remains a challenge. Only 68% of children under five have the normal weight-for-age using the National Center for Health Statistics/WHO standards. In 2005, the prevalence of underweight pre-school children (0-5 years) was 24.6%, while 26.3% were stunted, 4.8% were wasted and 2.0% were overweight. In its *State of the world's children 2004*, the United Nations Children's Fund (UNICEF) reported that 20% of infants have a low birth weight, while according to the 2003 NDHS, 13% of babies are of low birth weight.

Exclusive breast-feeding is on the decline, with only 34% of children exclusively breast-fed up to the age of six months.

Other nutritional challenges faced by the Filipino child include:

- anaemia – With prevalence rates among children aged 6-12 months and 6-11 years of age still increasing, and presently at the high levels of 66% and 37.4%, respectively.
- vitamin A deficiency – The level among children aged six months to five years increased from 35% in 1993 to 40% in 2003.
- iodine deficiency – There are an estimated 1.5 million schoolchildren aged 6-12 years who are at risk of mental retardation due to iodine deficiency.

2.5 Burden of disease

Tuberculosis is still among the leading causes of morbidity and mortality; the country has the 9th highest TB incidence in the world and the 2nd highest in the Western Pacific Region. The WHO-estimated prevalence for all forms of TB in the country is 500 per 100 000 population: 130 per 100 000 population for sputum smear-positive TB and 290 per 100 000 population for all types of TB. The estimated mortality caused by TB was 41 per 100 000 population in 2007. The Drug Resistance Survey (DRS) conducted in 2004 revealed the primary MDR-TB rate was 4.0% and the acquired MDR-TB rate was 20.9%. As a result, there are expected to be approximately 5000 smear-positive MDR-TB cases annually. The TB burden is disproportionately high among the poor, the elderly and the male population, although the death rate is highest among older persons. Since TB principally affects the productive age group, it is estimated that the country loses some Php 26 billion (US$ 540 million) annually due to premature deaths from TB.

Environment-related health risks have been cited as a significant problem, with air pollution, water pollution, poor sanitation and unhygienic practices contributing to an estimated 22% of reported disease

cases and nearly 6% of reported deaths, and costing Php 14.3 billion (US$ 287 million) per year in lost income and medical expenses.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Department of Health's vision is to be "The leader of health for all in the Philippines". Its mission is to "guarantee equitable, sustainable and quality health care for all Filipinos, especially the poor, and to lead the quest for excellence in health".

The goals of the health department align with the WHO health systems framework, with better health for the entire population being the primary goal. This means making the health status of the people as good as possible over the entire life cycle. The second goal is related to how the health system performs in meeting people's expectations and satisfaction with the services it provides. Equitable health care financing is the third goal, because health and illness involves large and unexpected costs that may result in poverty for many people.

The strategic thrusts to achieve the three primary health goals mentioned above are anchored in the current programme of health reform, 'FOURmula ONE for Health.' It is designed to undertake critical reforms with speed, precision and effective coordination, with the end goal of improving the efficiency, effectiveness and equity of the Philippine health system. Vital reforms are organized into four major implementation components: health financing; health regulations; health service delivery; and good governance in health. Implementation focuses on four general objectives: (1) health financing, the general objective of which is to secure increased, better and sustained investments in health to provide equity and improve health outcomes, especially for the poor; (2) health regulation, which aims to assure access to quality and affordable health products, devices, facilities and services, especially those commonly used by the poor; (3) health service delivery, where health interventions are aimed at improving the accessibility and availability of social and essential health care for all, particularly the poor; and (4) good governance in health, aimed at improving health system performance at the national and local levels.

Efficiency in implementation, through integration of health service delivery and harmonization of systems and processes, is being promoted. Implementation of reforms also follows a sectorwide approach, covering the entire health sector, and an investment portfolio that encompasses all sources. The capacities of LGUs are being enhanced to improve public health conditions in their respective jurisdictions. The national Government, on the other hand, maintains institutional influence over the LGUs by leveraging with incentives and regulatory functions.

3.2 Organization of health services and delivery systems

The power of the Department of Health diminished significantly with the transfer of responsibility for health to about 1600 LGUs under the Local Government Code of 1991. With the devolution of health services to LGUs, fragmentation of services became evident. The provincial governments now oversee provincial and district hospitals, while the municipal governments manage rural health units (RHUs) and *barangay* (village) health stations. The Department of Health, however, maintains specialty hospitals, regional hospitals and medical centres. Sub-national Department of Health offices or "centres for health development" are located in 16 regions.

Service provision is regarded as 'dual', consisting of both the public and private sectors. The public sector has three largely independent segments or sets of providers: (1) national government providers, which include, among others, hospitals run by national government agencies (e.g., hospitals of the Department of Health and the Department of National Defense), central and regional offices of the Department of Health; (2) provincial government providers, which include provincial hospitals, provincial blood banks and the Provincial Health Office; and (3) local (municipal or city) government providers, including rural health units or RHUs, city health centers and *barangay* health stations or BHSs. Each BHSs is staffed by a midwife, and each RHU is staffed by a doctor, a nurse and midwives.

The Department of Health has taken steps to address the challenges of devolution. It developed the Health Sector Reform Agenda (HSRA) in 1999, which set the strategic direction in promoting and ensuring effective and efficient provision of adequate health care to the population, despite devolution. The National Health Insurance Program (NHIP) is envisioned as the main lever to effect desired changes and outcomes. The Department's role now focuses on regulation, technical guidelines/orientation, planning, evaluation, and inspection, while the provincial government is responsible for provincial and municipal hospitals, health centers and health posts, although funding flows do not exactly match responsibility. The municipal government-level role is not well defined and capacity is reportedly weak.

With the decentralization of service delivery, local chief executives became core players in the health sector. The number of actors involved multiplied and hence the need for coordination and policy monitoring. On health financing, for instance, the Department of Health and the Central Government are no longer in control of resource allocation. The need for better coordination and a better working relationship with the local government units and other stakeholders is well recognized.

Ongoing reforms in health service delivery are aimed at improving the accessibility and availability of basic and essential health care for all, particularly the poor. Public primary health facilities are perceived as being low quality, and are thus frequently bypassed. Clients are dissatisfied due to long waiting times; perceived inferior medicines and supplies; poor diagnosis, resulting in repeated visits; and perceived lack of medical and people skills of the personnel available, especially in rural areas. The result is that secondary and tertiary facilities are inundated with patients needing primary health care. Since public primary facilities are more accessible to households and are mostly visited by the poor, improving the quality of those services particularly demanded by the poor would improve their health. Furthermore, referral mechanisms among different health facilities across local government units need to be strengthened.

Private providers are predominantly located in highly urbanized areas. The private sector consists of a wide range of privately operated facilities, such as pharmacies, physicians in solo or group practices, small hospitals and maternity centres, diagnostic centres, employer-based outpatient facilities, secondary and tertiary hospitals, traditional birth attendants and indigenous healers.

Pharmaceutical challenges remain due to asymmetric information, income distribution and the inadequacy of the regulatory system. This stems from various factors such as massive campaigns and lucrative incentives from multinational drug firms, prolonged patent rights and a lack of appropriate public understanding regarding generics.

3.3 Health policy, planning and regulatory framework

The Government's policy to achieve improvements in health includes a perspective on the integral value of health for any nation, the coordination of resources from all sectors, the right to access to quality care, and the presence of socioeconomic fundamentals. While the Government provides the leadership and stewardship to ensure that all efforts in the health sector lead to a common goal, greater support to local health systems development and emphasis on strong management and administrative support systems at all levels of governance is likewise critical. Better coordination between national policies and external development partner priorities would also play a major role in fostering harmonization of resources for health. In the context of securing sustained financing for ongoing health sector reforms, budget reforms are also underway such that resources that are within the direct control of the Department of Health are aligned and utilized in support of the LGU plans for health.

Major government policy reforms include: (1) the Cheaper Medicines Act of 2008, which amends the "Intellectual property code" to enhance competition in the drug industry; (2) the conditional cash-transfer programme, which includes visiting health centres and sending children to school as conditions for receiving cash assistance; (3) expansion of social health insurance benefit packages; (4) Sin Tax Law, which mandates that excise tax on cigarettes and alcohol be increased every two years; and (5) Value-Added Tax (VAT), where half of LGUs' shares of incremental VAT collection is earmarked for social and economic services; among many others.

At the local level, the provinces develop five-year medium term plans called "province-wide investment plans for health", using the health sector reform framework, which ensures that health system as well as programme-related issues are addressed.

The Department of Health has adopted a sectoral development approach for health, which is a way of organizing the planning and management of international and national support for the health reforms in FOURmula ONE. Corresponding memorandums of agreement are signed between the Department of Health and the provinces to formalize their collaboration in the implementation of their provincial health plans, with defined roles and responsibilities for the stakeholders involved.

The Department of Health remains inadequate in regulating the quality of health service in the country. This is attributed to the immense gaps in health regulations caused by the lack of specific legal mandates, inadequate expertise and an inadequate number of health regulation officers; a lack of expertise and infrastructure in specialized services and laboratory facilities; and weak health regulatory systems and processes.

3.4 Health care financing

The financial burden on individual families remains high. For many years, the most common source of funds for health has consistently been out-of-pocket payments (around 49%), and paying for health care is an issue because of its impact on poverty. Based on the latest national health accounts, most health care financing resources are spent on hospital-based curative services, with a lesser share going to preventive and promotive health services. These are signs that the Philippines is not spending adequately or effectively on health. The subsidies for health services are poorly targeted, as the true poor are not adequately captured in the indigent programme of social health insurance. Meanwhile, the large hospitals in Metropolitan Manila and other urban areas get the biggest share of spending. Non-hospital health services, on the other hand, face difficulties in securing adequate funding.

Meanwhile, the national health insurance programme, PhilHealth, has a relatively slow and cautious increase in its share of total health expenditure. The depth of the coverage of the national health insurance programme is currently not high enough, at 76%. The limited financial protection of PhilHealth is also closely related to the current provider-payment system. As physicians provide more services and raise prices under the current fee-for-service system, medical care expenses increase rapidly. PhilHealth pays only up to a rather low benefit ceiling and patients pay the rest of the expense. As a result of the low benefit ceiling and physicians' freedom to extra-bill without fee regulation, it is easy to extract profit out of patients' insurance benefits. Discussions are now ongoing to explore the feasibility of extending benefit coverage by raising the benefit ceiling.

Public health facilities are funded through a mix of public subsidies, such as Philhealth reimbursements, user fees and, to a lesser degree, private health insurers. At the primary level, public subsidies and Philhealth capitation allocations are funding services for both insured and non-insured members and for both public health and personal care. At the local level, several schemes are in operation, depending on local priorities and management styles. Drugs are mainly purchased out-of-pocket from private for-profit retailers. The Government has recently introduced thousands of non-profit community outlets, but their impact on access and costs supported by patients remains to be seen.

Based on the Local Government Code, local government units with higher fiscal capacity (using per capita income as a measure of financial base) tend to get higher per capita internal revenue allocations than those with lower fiscal capacity. Many municipalities and provinces have experienced financial shortfalls, causing the diversion of health funds to other priorities.

The national health care financing strategy is aimed at improving health care financing polices that would realistically enhance access, equity and effectiveness in resource mobilization and allocation, as well as use of health services. Dialogues with key stakeholders, from legislators and policy-makers to implementers, are ongoing and would have to be sustained in order to engender support for the operationalization of the strategy.

3.5 Human resources for health

The country is purportedly the leading exporter of nurses to the world and the second major exporter of physicians. Paradoxically, there are shortages of physicians and a fast turnover of nurses in the country, especially in rural areas. The high unemployment rates of health professionals, in spite of the considerable number of vacancies in rural areas, is another irony. Prevailing challenges include unmanaged emigration of Filipino health workers, a weak and inadequate HRH information system, and the existing distribution imbalance, among others. Responses to HRH issues in the past have more often been stopgap measures, and the interventions of the agencies concerned have not been coordinated.

In order to address such complex and multifaceted issues, a comprehensive master plan for human resources for health has been developed and implementation of activities is underway. A high-level coordinating body and multisectoral working group was established in 2006 to mobilize the political commitment, donor/partner support and funding needed to accomplish the priority activities of the master plan. Called the Human Resources for Health (HRH) network, this group was able to successfully convene a policy forum to advocate their policy agenda, which aims to resolve issues related to the production, entry and retention of health professionals, as well as their exit and re-entry.

Strategic thrusts for 2005-2010 include development of HRH policies and strategies to address outmigration; sustaining incentive mechanisms for HRH distribution and complementation in underserved areas; and making education, training and skills development more appropriate to local needs. The strategies that are being undertaken include, among others, the institutionalization of the HRH management and development system; improvement of the technical competence and relevant skills of health professionals through education and training; provision of targeted and performance-linked compensation benefits; strengthening of the coordination mechanism between the education sector, regulatory agencies and HRH users; and installation of an HRH information system.

3.6 Partnerships

The attainment of national health goals has progressed significantly, thanks to the well-defined, commonly–shared vision and framework for health ('FOURmula ONE'). The Department of Health has learnt from previous experience that better harmonization of efforts among the various stakeholders at all levels is critical. Currently, assistance for the health sector comes mainly in the form of grants, loans and technical assistance. A sectorwide development approach for health between the Government and its partners is being initiated to maximize investments, minimize duplication of initiatives and generate the necessary resources for the health sector. The Department of Health is working closely with international organizations and global initiatives to strengthen implementation of priority health programmes.

3.7 Challenges to health system strengthening

The publicly funded health system has been undergoing a major reform programme since 1999. At the broadest level, this has included a review of the Department of Health's primary functions, roles and responsibilities, as well as the suitability of the existing organizational structure to support these at both the strategic and service-delivery level. Introduction and pilot-testing the different concepts and strategies of heath sector reform in selected provinces showcased some gains in health systems development. However, one of the gaps was the absence of a comprehensive operational framework to implement the reform strategies. Thus, the "FOURmula ONE for Health" was launched in August 2005 to set the direction and implementation arrangements for strengthening the way health care is delivered, governed, regulated and financed.

FOURmula ONE is now in its fourth year of implementation and both the Department of Health and the LGUs are being challenged with operational issues, such as procurement. In addition, the health care delivery system has yet to address some major issues and challenges, such as the absence of data disaggregated at provincial/municipal levels (for baseline and monitoring); the absence of a workable means of identifying the poor for targeted health interventions; the minimal involvement of the private sector in the delivery of public health programmes; the still excessive reliance on use of high-end hospital services rather than primary care; the slow improvement in maternal mortality reduction; and population

growth. Issues such as geographic inequity, where people who live in rural and isolated communities receive less and lower quality health services, and socioeconomic inequity, where the poor do not receive health services due to inaccessibility and/or unaffordability, continue to abound in the country.

More specific issues like emigration of skilled health workers, low salaries/ wages and a lack of incentives, as well as poor work environments, including shortages of basic medical equipment and supplies, continue to contribute to the worsening shortage of workers in rural areas, where health needs are greatest. Hospitals, both public and private, all over the country lament the loss of senior, experienced nurses and doctors. The University of the Philippines-Philippine General Hospital (UP-PGH), the largest hospital in the country, loses 300 to 500 nurses of their 2000 nurse workforce every year. Midwives, the front-liners in providing health services, are also seeking jobs as caregivers in other countries in need.

There is a lack of reliable, disaggregated and integrated health and health-related data, evidence and information, and the inability to use health information to ensure knowledge-based policies and programmes remains a major challenge. There is also low investment in health research and development systems, as well as in information management systems.

In the area of health care financing, the following challenges remain: high out-of pocket spending; inadequate government spending on health; low spending for cost-effective public health interventions; low social health insurance benefit spending; and identification of the 'true' poor for social health insurance (sponsored programme).

The high cost of drugs and medicines also remains a major challenge, as prices range from twice to as much as 30 times higher than in Canada or other neighbouring Asian countries.

The devolution of health services created new challenges for the Government in overseeing that local actions are in accordance with national policies and goals. Good governance in health at the local level, particularly in improving transparency and accountability in finance and procurement, and logistics management remains a big challenge. With FOURmula ONE, systems of accountability and transparency are being established to minimize unscrupulous behaviour, thereby ensuring efficient use of available resources for health.

The country's commitment to achievement of the MDGs, particularly those concerning universal access to education, maternal mortality and access to reproductive health services, remains an immense challenge.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : Republic of the Philippines (official website)
Web address : www.gov.ph

Title 2 : National Statistics Office.
Web address : http://www.nso.gov.ph/

Title 3 : 2007 Government of the Philippines Year-End Report
Web address : http://www.gov.ph/faqs/yearend_reports.asp

Title 4 : Philippine Environment Monitor 2006
Operator : The World Bank Group
Web address : http://www.worldbank.org.ph/pem

Title 5 : National Epidemiology Center
Operator : Department of Health, Philippines
Web address : http://www2.doh.gov.ph/nec/

Title 6 : 2007 Philippines Development Forum.
8-9 March 2007, Cebu City, Philippines.

Title 7 : 2005-2010 National Objectives for Health,
Operator : Department of Health, Philippines.

Title 8	:	National Nutrition and Health Survey (NNHeS): Atherosclerosis-related Disease and Risk Factors, Philippine Journal of Internal Medicine, 43:103-115, May-June 2005
Operator	:	Antonio Dans, Dante Morales, Felicidad Velandria, Teresa Abola, Artemio Roxas Jr., Felix Eduardo Punzalan, Rosa Allyn Gy, Elizabeth Paz-Pacheco, Lourdes Amarillo and Maria Vanessa Villaruz
Title 9	:	Philippines. Food and Nutrition Research Institute. *6th National Nutrition Survey*. Taguig, Metro Manila, 2003.

5. ADDRESSES

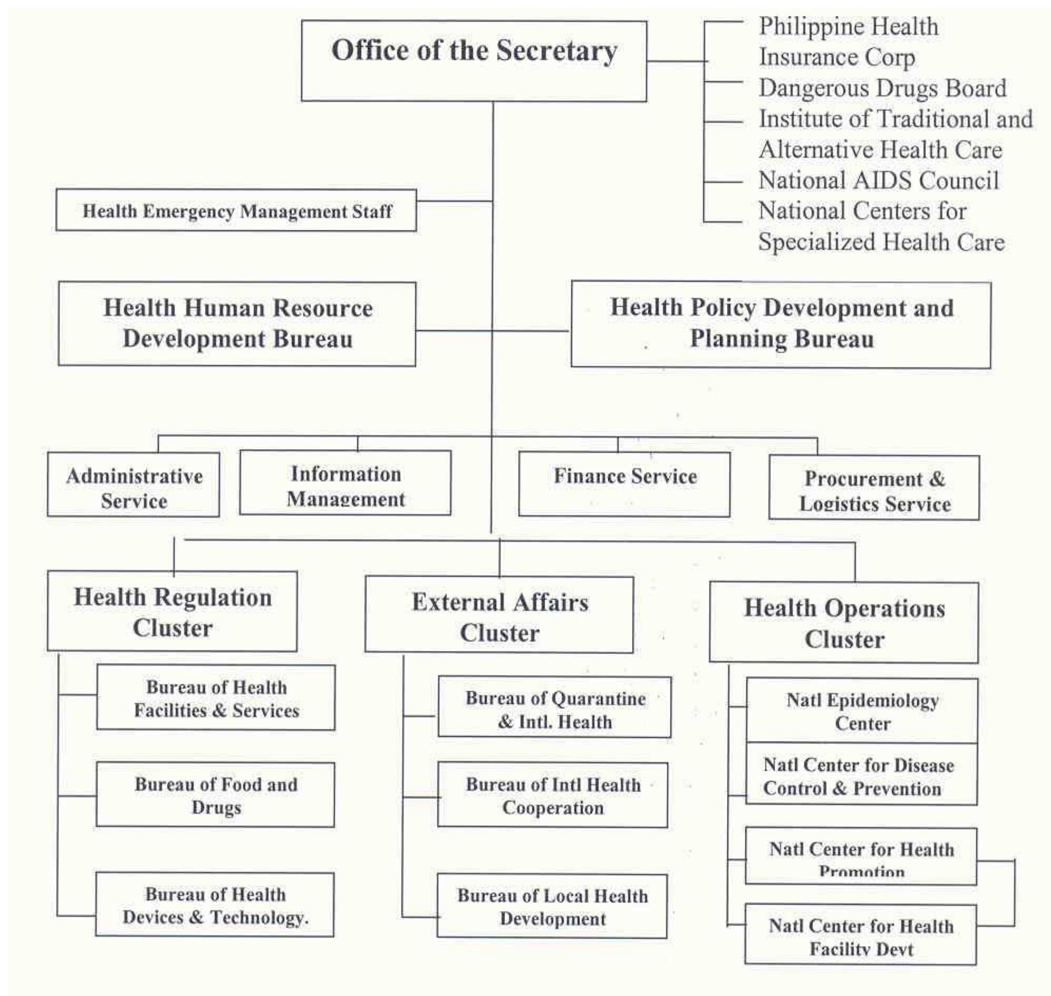
DEPARTMENT OF HEALTH

Office Address	:	San Lazaro Compound, Tayuman, Sta. Cruz, Manila
Official Email Address	:	info@doh.gov.ph
Telephone	:	(632) 743-8301
Fax	:	(632) 743-1829
Website	:	http://www.doh.gov.ph

WHO REPRESENTATIVE IN THE PHILIPPINES

Office Address	:	National Tuberculosis Centre Building Second Floor, Bldg. 9, Department of Health San Lazaro Hospital Compound, Sta. Cruz, Manila, Philippines
Postal Address	:	P.O. Box 2932, Manila
Official Email Address	:	who@phl.wpro.who.int
Telephone	:	(632) 338-7479/ 338-8605
Fax	:	(632) 338-8605

6. ORGANIZATIONAL CHART: Department of Health



PHILIPPINES — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	299.76				1
2	Estimated population ('000s)	88 574.61	…	…	2007	2
3	Annual population growth rate (%)	2.04	…	…	2000-07	2
4	Percentage of population					
	- 0–4 years	11.47	11.64	11.29	2005	3
	- 5–14 years	22.28	22.70	21.87	2005	3
	- 65 years and above	4.40	4.02	4.78	2005	3
5	Urban population (%)	64.20 [a]	…	…	2007 est	4
6	Crude birth rate (per 1000 population)	20.50	…	…	2004	5
7	Crude death rate (per 1000 population)	4.80	…	…	2004	5
8	Rate of natural increase of population (% per annum)	1.57 [b]	…	…	2004	5
9	Life expectancy (years)					
	- at birth	67.00	64.00	70.00	2004	5
	- Healthy Life Expectancy (HALE) at age 60	…	10.60	12.10	2002	6
10	Total fertility rate (women aged 15–49 years)	3.18			2005-15	7
	Socioeconomic indicators					
11	Adult literacy rate (%)	92.60	…	…	1995-2005	8
12	Per capita GDP at current market prices (US$)	1638.60			2007	9
13	Rate of growth of per capita GDP (%)	8.10			2007	9
14	Human development index	0.75			2006	10
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	30.20	…	…	2003	10
16	Health care waste generation (metric tons per year)	…	…	…		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral	…	…	…	…	…	…		
	- Type A	…	…	…	…	…	…		
	- Type B	…	…	…	…	…	…		
	- Type C	…	…	…	…	…	…		
	- Type E	…	…	…	…	…	…		
	- Unspecified	…	…	…	…	…	…		
	Cholera	…	…	…	36	24	12	2004	12
	Dengue/DHF	39 620	…	…	373	…	…	2008	11
	Encephalitis	34	22	12	…	…	…	2006	12
	Gonorrhoea	2218	84	1374	…	…	…	2006	12
	Leprosy	2514	…	…	…	…	…	2007	11
	Malaria	36 226	…	…	72	…	…	2007	11
	Plague	…	…	…	…	…	…		
	Syphilis	63	41	22	…	…	…	2006	12
	Typhoid fever (includes paratyphoid fever)	11 374 [c]	5869 [c]	5505 [c]	…	…	…	2006	12

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	690 566 [d]	348 992	328 956	…	…	…	2006	12
19	**Diarrhoeal diseases**	…	…	…	3538	2069	1469	2004	5
20	**Tuberculosis**								
	- All forms	140 588 [f]	…	…	…	…	…	2007	11
	- New pulmonary tuberculosis (smear-positive)	86 566 [f]	…	…	…	…	…	2007	11
21	**Cancers**								
	All cancers (malignant neoplasms only)	106 884 [e]	51 980 [e]	54 864 [e]	42 686	22 551	20 135	C: 2005 D: 2004	13, 5
	- Breast	14 043 [e]	0	14 043 [e]	4254	55	4199	C: 2005 D: 2004	13, 5
	- Colon and rectum	8585 [e]	4737 [e]	3848 [e]	2230	1234	996	C: 2005 D: 2004	13, 5
	- Cervix			7277 [e]			1111	C: 2005 D: 2004	13, 5
	- Oesophagus	992 [e]	647 [e]	345 [e]	452	307	145	C: 2005 D: 2004	13, 5
	- Leukaemia	4202 [e]	2243 [e]	1959 [e]	2460	1234	1226	C: 2005 D: 2004	13, 5
	- Lip, oral cavity and pharynx	4113 [e]	2140 [e]	1973 [e]	1927	1201	726	C: 2005 D: 2004	13, 5
	- Liver	7629 [e]	5660 [e]	1969 [e]	…	…	…	C: 2005 D: 2004	13, 5
	- Stomach	3932 [e]	2368 [e]	1564 [e]	1439	811	628	C: 2005 D: 2004	13, 5
	- Trachea, bronchus, and lung	17 238 [e]	13 273 [e]	3965 [e]	7240	5446	1794	C: 2005 D: 2004	13, 5
22	**Circulatory**								
	All circulatory system diseases	…	…	…	54 045	30 598	23 447	2004	5
	- Acute myocardial infarction	…	…	…	28 663	18 571	10 092	2004	5
	- Cerebrovascular diseases	…	…	…	43 077	24 322	18 755	2004	5
	- Hypertension	…	…	…	15 617	8614	7003	2004	5
	- Ischaemic heart disease	…	…	…	13 915	7065	6850	2004	5
	- Rheumatic fever and rheumatic heart diseases	…	…	…	2183	930	1253	2004	5
23	**Diabetes mellitus**	…	…	…	16 552	7970	8582	2004	5
24	**Mental disorders**	…	…	…	1104	799	305	2004	5
25	**Injuries**								
	All types	…	…	…	…	…	…		
	- Homicide and violence	…	…	…	12 646	11 613	1033	2004	5
	- Motor and other vehicular accidents	…	…	…	6976	5312	1664	2004	5
	- Occupational injuries	…	…	…	…	…	…		
	- Suicide	…	…	…	1818	1400	418	2004	5
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. ARI and pneumonia	670 231	342 989	327 242	828.80	794.50	767.20	2006	12
	2. Acute watery diarrhoea	572 259	295 827	276 432	707.70	685.30	648.10	2006	12
	3. Bronchitis/bronciolitis	537 100	265 320	271 780	689.90	614.60	637.20	2006	12
	4. Hypertension	404 141	177 059	227 082	522.80	410.20	532.40	2006	12
	5. Influenza	337 275	161 446	175 829	435.00	374.00	412.20	2006	12
	6. TB respiratory	130 608	82 969	47 639	169.90	192.20	111.70	2006	12
	7. Diseases of the heart	38 482	17 946	20 536	49.30	41.60	48.10	2006	12
	8. Acute febrile illness	25 400	12 675	12 725	32.50	29.40	29.80	2006	12
	9. Malaria	22 284	12 128	10 156	27.60	28.10	23.80	2006	12
	10. Dengue fever	15 279	8076	7203	19.60	18.70	17.00	2006	12

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Heart diseases	70 861	40 361	30 500	85.72	96.99	74.30	2004	5
	2. Vascular system diseases	51 680	28 930	22 750	62.52	69.52	55.42	2004	5
	3. Malignant neoplasm	40 524	21 395	19 129	49.02	51.42	46.60	2004	5
	4. Accidents	34 483	28 041	6442	41.30	67.39	15.69	2004	5
	5. Pneumonia	32 098	15 822	16 276	38.83	38.02	39.65	2004	5
	6. Tuberculosis, all form	25 870	17 841	8029	31.30	42.87	19.56	2004	5
	7. Ill-defined and unknown causes of mortality	21 278	10 916	10 362	25.74	26.23	25.24	2004	5
	8. Chronic lower respiratory diseases	18 975	13 084	5891	22.95	31.44	14.35	2004	5
	9. Diabetes mellitus	16 552	7970	8582	20.02	19.15	20.91	2004	5
	10. Certain conditions originating in the perinatal period	13 180	7809	5371	15.94	18.77	13.08	2004	5
	Maternal, child and infant diseases	**Total**		**Male**			**Female**		
28	**Percentage of women in the reproductive age group using modern contraceptive methods**						35.90	2006	14
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**						49.00	2008	11
30	**Percentage of pregnant women with anaemia**						43.90	2003	15
31	**Neonatal mortality rate (per 1000 live births)**	12.00		...			...	2006	14
32	**Percentage of newborn infants weighing at least 2500 g at birth**	86.10		...			...	2003	12
33	**Immunization coverage for infants (%)**			...			...		
	- BCG	88.00		...			...	2008	11
	- DTP3	86.00		...			...	2008	11
	- POL3	86.00		...			...	2008	11
	- Hepatitis B III	83.00		...			...	2008	11
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			....			152	2004	5
	- Eclampsia			....			...		
	- Haemorrhage			....			317	2004	5
	- Obstructed labour			....			...		
	- Sepsis			....			...		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	...	...	...	...	...	...		
	- Diphtheria	65	...	...	...	...	...	2008	11
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	341	...	...	...	...	...	2008	11
	- Mumps	...	...	...	...	...	...		
	- Neonatal tetanus	132	...	...	...	...	...	2008	11
	- Pertussis (whooping cough)	46	...	...	...	...	...	2008	11
	- Poliomyelitis	0	0	0	...	...	...	2008	11
	- Rubella	280	...	...	...	...	...	2008	11
	- Total Tetanus	813	...	...	...	...	...	2008	11

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		52		2008	11
37	Health infrastructure					
	Public health facilities	- General hospitals	90 [a,g]	…	2006	17
		- Specialized hospitals	21	…	2006	17
		- District/first-level referral hospitals	282 [a]	…	2006	17
		- Primary health care centres	331 [a,h]	…	2006	17
	Private health facilities	- Hospitals	1068	44 296	2006	17
		- Outpatient clinics	…	…		
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)		5567.15		2007p	18
	- total expenditure on health as % of GDP		3.90		2007p	18
	- per capita total expenditure on health (in US$)		63.29		2007p	18
	Government expenditure on health					
	- amount (in million US$)		1940.32		2007p	18
	- general government expenditure on health as % of total expenditure on health		34.90		2007p	18
	- general government expenditure on health as % of total general government expenditure		6.80		2007p	18
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health		…			
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health		65.10		2007p	18
	Exchange rate in US$ of local currency is: 1 US$ =		46.15		2007p	18
39	Health insurance coverage as % of total population		76.00		2008	19

	INDICATOR		DATA							Year	Source
40	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	93 862	…	…	…	…	…	…	2004	20
		- Ratio per 1000 population	1.14	…	…	…	…	…	…	2004	20
	Dentists	- Number	45 903	…	…	…	…	…	…	2004	20
		- Ratio per 1000 population	0.55	…	…	…	…	…	…	2004	20
	Pharmacists	- Number	49 667	…	…	…	…	…	…	2004	20
		- Ratio per 1000 population	0.60	…	…	…	…	…	…	2004	20
	Nurses	- Number	352 398	…	…	…	…	…	…	2004	20
		- Ratio per 1000 population	4.26	…	…	…	…	…	…	2004	20
	Midwives	- Number	136 036	…	…	…	…	…	…	2004	20
		- Ratio per 1000 population	1.65	…	…	…	…	…	…	2004	20
	Paramedical staff	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
41	Annual number of graduates	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	**Annual number of graduates**	Nurses	…	…	…	…	…	…	…		
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	…	…	…	…	…	…		
42	**Workforce losses/ Attrition**	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		
		Nurses	…	…	…	…	…	…	…		
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	…	…	…	…	…	…		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	**Prevalence of underweight children under five years of age**	27.60	…	…	2003	15
44	**Infant mortality rate (per 1000 live births)**	24.00	…	…	2006	14
45	**Under-five mortality rate (per 1000 live births)**	32.00	…	…	2006	14
46	**Proportion of 1 year-old children immunised against measles**	86.00	…	…	2008	11
47	**Maternal mortality ratio (per 100 000 live births)**	162.00			2006	14
48	**Proportion of births attended by skilled health personnel**	63.70			2006	14
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	20.30			2006	14
	- Percentage of deliveries in health facilities (as % of total deliveries)	42.40			2006	14
49	**Contraceptive prevalence rate**	50.60	…	…	2006	14
50	**Adolescent birth rate**	4.80			2006	14
51	**Antenatal care coverage** - At least one visit	…				
	- At least four visits	59.00			2006	12
52	**Unmet need for family planning**	15.70	…	…	2006	12
53	**HIV prevalence among population aged 15-24 years**	…	…	…		
54	**Estimated HIV prevalence in adults**	0.17	…	…	2007	21
55	**Percentage of people with advanced HIV infection receiving ART**	…	…	…		
56	**Malaria incidence rate per 100 000 population**	41.00	…	…	2007	11
57	**Malaria death rate per 100 000 population**	0.08	…	…	2007	11
58	**Proportion of population in malaria-risk areas using effective malaria prevention measures**	17.00	…	…	2006	22
59	**Proportion of population in malaria-risk areas using effective malaria treatment measures**	85.00	…	…	2006	22
60	**Tuberculosis prevalence rate per 100 000 population**	500.00	…	…	2007	11
61	**Tuberculosis death rate per 100 000 population**	41.00	…	…	2007	11
62	**Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)**	75.00	…	…	2007	11
63	**Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)**	80.00	…	…	2006	11
		Total	Urban	Rural		
64	**Proportion of population using an improved drinking water source**	93.00	96.00	88.00	2006	16
65	**Proportion of population using an improved sanitation facility**	78.00	81.00	72.00	2006	16
66	**Proportion of population with access to affordable essential drugs on a sustainable basis**	…	…	…		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Revised data
b	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
c	Figure includes parathyroid fever
d	Totals may not tally due to some reported cases with no gender breakdown
e	Estimated figure
f	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO
g	Figure refers to Level 3 and 4 hospitals
h	Figure refers to Level 1 hospitals

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22	National Malaria Control Program, Department of Health, Philippipnes.

PITCAIRN ISLANDS

1. CONTEXT

1.1 Demographics

The Pitcairn Islands, officially named the Pitcairn, Henderson, Ducie and Oeno Islands, constitute a group of islands in the southern Pacific Ocean.

The only permanently inhabited island, Pitcairn, is only accessible by boat through Bounty Bay. It is also one of the most remote places on earth, lying halfway between New Zealand and Peru. The nearest inhabited island is Mangareva in French Polynesia, a 30-hour boat trip away.

Of the total of 52 people living on Pitcairn (2009), 17.3% are 0-14 years old, 61.5% are 15-64 years old and 21.2% are 65 years and above. About 11 additional outside persons, working as teachers, prison staff, health staff, etc., also reside on the island.

Two languages are spoken: English, the official language, and Pitkern, a mixture of an 18th century English dialect and a Tahitian dialect. Pitkern is spoken as a first language by the population and is taught alongside standard English at the island's only school. It is closely related to the Creole language, Norfuk, spoken on Norfolk Island, because Norfolk was repopulated in the mid-nineteenth century by Pitcairners.

Out-migration, primarily to New Zealand, has thinned the population from a peak of 233 in 1937 to around 50 permanent inhabitants. In September 2003, the first baby was born on the islands in 17 years. Another child was born on Pitcairn on 3 March 2007. There have been three births and two deaths in the last five years.

1.2 Political situation

Pitcairn Islands is the smallest British protectorate in the world and is governed from the United Kingdom of Great Britain and Northern Ireland by an appointed Governor, whose office is in Wellington, New Zealand. A Commissioner for the island, who handles most ongoing, practical matters for Pitcairn, is located in Auckland, New Zealand.

Pitcairn Islands is held by the United Kingdom to have come under the jurisdiction of the British High Commission for the Western Pacific in 1898 and, in 1952, the Pitcairn Island Order in Council transferred the responsibility for administration to the person of the Governor of Fiji, following separation of the offices of Governor and High Commissioner. When Fiji gained independence in 1971, the administration was transferred to Auckland, within the jurisdiction of the British High Commissioner to New Zealand, who conjointly holds office as Governor of Pitcairn Islands.

Pitcairn Islands is also notable for being the least populated jurisdiction in the world (although it is not a sovereign nation). The United Nations Committee on Decolonization includes the Pitcairn Islands on the United Nations list of non-self-governing territories.

1.3 Socioeconomic situation

Pitcairn islanders exist on fishing, subsistence farming, handicrafts and sales of postage stamps. The fertile soil of the valleys produces a wide variety of fruits and vegetables, including citrus, sugarcane, watermelons, bananas, yams and beans. Bartering is an important part of the economy. The major sources of revenue are the sale of postage stamps to collectors and the sale of handicrafts to passing ships.

In October 2004, more than one-quarter of Pitcairn's labour force was arrested, which negatively affected the economy as they were thus unable to supply their services to load and unload passing ships.

Trade is restricted by the jagged geography of the island, which lacks a harbour or airstrip, forcing all trade to be made by longboat to visiting ships. Occasionally, passengers from expedition-type cruise ships come ashore for a day, weather permitting. In 2004, the island had a labour force of 15 men and women.

1.4 Risks, vulnerabilities and hazards

While no specific data are available in the information sources listed, the vulnerabilities and hazards facing Pitcairn Islands are similar to those of other tiny and remote Pacific island countries and areas. Remoteness from each other and from trading/supply partners, with resulting high transportation costs, raises the cost of social and protection services, as well as the cost of business.

2. HEALTH SITUATION AND TREND

No specific information is available. However, the outcomes of the biennial Ministers of Health Meetings in the Pacific, especially the 2005 Samoa Commitment – Achieving Healthy Islands, apply by and large to most Pacific island countries and areas.

Three themes have emerged at all seven biennial meetings of the Ministers of Health (1995 – 2007):

- the predominant and growing burden of noncommunicable diseases;
- the lingering burden of infectious diseases and the danger of their re-emergence; and
- the need to support health systems so that they can cope with this double burden of communicable and noncommunicable disease.

2.1 Communicable and noncommunicable diseases, health risk factors and transition

In March 2002, a blood survey was carried out by the Pacific Elimination of Lymphatic Filariasis Programme (PacELF) to detect lymphatic filariasis. The survey did not detect anyone with antigenemia and confirmed the Pitcairn Islands to be non-endemic for filariasis.

2.2 Outbreaks of communicable diseases

Outbreaks of respiratory and gastro-enteric infection have occurred in the past six months.

2.3 Leading causes of mortality and morbidity

The five leading causes of overall mortality are likely to be cardiovascular disease, cancer, diabetes, respiratory disease and accidents.

The five leading causes of overall morbidity are likely to be diabetes, cardiovascular disease, asthma, degenerative joint disease and dental caries.

2.4 Maternal, child and infant diseases

No available information.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

There is a subsidized national health system on Pitcairn and a purpose-built, fully equipped Grade 2 medical centre (1997) with a large reception area, a consulting room, a utility room, a small dispensary, an X-ray room, a dental room and a two-bed ward with en-suite bathroom. There is good basic equipment and a well stocked dispensary.

The current medical officer is an expat general practitioner on a one-year contract. One Pitcairner acts as facility manager and medical assistant. The medical officer is contracted to provide comprehensive primary care on a 24-hour basis. One Pitcairner has basic training in dental and X-ray work.

The Pacific Public Health Surveillance Network provides infectious disease bulletins. The medical officer gives public health advice to the Pitcairn Island Council.

3.2 Organization of health services and delivery systems

See section 3.1.

3.3 Health policy, planning and regulatory framework

No available information.

3.4 Health care financing

Health care is financed by the United Kingdom/Government of Pitcairn. Health expenditure as a proportion of GDP is unknown.

3.5 Human resources for health

See section 3.1.

3.6 Partnerships

Authorities collaborate in regional initiatives for the prevention and control of infectious diseases with the Secretariat of the Pacific Community -Pacific Public Health Surveillance Network (SPC/PPHSN).

3.7 Challenges to health system strengthening

No available information.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : *Pitcairn Islands Office website*
Operator : Pitcairn Islands Office
Comments : No information on health aspects
Web address : http://government.pn/

Title 2 : *Pacific Programme to Eliminate Lymphatic Filariasis – PacELF*
Operator : PacELF and WHO
Web address : http://www.pacelf.org/regions/pitcairn.html

Title 3 : *Samoa Commitment – achieving healthy islands*
Web address : http://www.wpro.who.int/NR/rdonlyres/CE800376-BC67-45D6-A3B9-01EDDE4FCB7B/0/Samoa_Commitment_2005.pdf

Title 4 : *European Overseas Countries and Territories Needs Assessment*
Operator : European Centre for Disease Prevention and Control Office
Comments : Completed by Dr Peter Cardon, Pitcairn Islands Medical Officer

5. ADDRESSES

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REPUBLIC OF KOREA

1. CONTEXT

1.1 Demographics

The population of the Republic of Korea, as of 2008, numbered 48 606 790, with a population density of 494 persons per square kilometre. The Republic saw its population grow by an annual rate of 3% during the 1960s, but growth slowed to 2% over the next decade. In 2008, the rate stood at 0.31% and is expected to decline further to 0.02% by 2020.

The population is getting increasingly older. The 2009 population estimate revealed that 10.32% of the total population was 65 years or older, while those aged 15 to 64 years of age accounted for 72.3%. In the 1960s, the country's population distribution formed a pyramid shape, with a high fertility rate and relatively short life expectancy. However, age-group distribution is now shaped more like a bell because of the low fertility rate and extended life expectancy. Youths (15 and younger) will make up a decreasing portion of the total by 2020, while senior citizens (65 and older) will account for some 15.6% of the total.

In recent years, the low fertility rate has emerged as a serious social challenge. The total fertility rate dropped from 4.53 in the 1970s to 1.26 in 2007, among the lowest in member countries of the Organisation for Economic Co-operation and Development (OECD). The Government is working to tackle the issue by establishing comprehensive plans to create family-friendly workplace environments and bolster childcare policies.

1.2 Political situation

The tension between the Republic of Korea and the Democratic People's Republic of Korea continues to play a major role in life and decision-making on the Korean peninsula. In 2008, inter-Korean relations went through an adjustment of mutual benefits and common prosperity. Since October 2008, however, the Democratic People's Republic has intensified its intimidation against the Republic, particularly with a threat to cut-off all inter-Korean relations.

Nonetheless, exchanges and cooperation between the two Koreas, led by the private sector, continued steady growth. There were 186 775 cross-border travellers in 2008 and the volume of trade between the two Koreas amounted to US$ 1.8 billion, a 17.3% and 1.2% increase, respectively, when compared with the previous year. In addition, the Government of the Republic of Korea continued to provide aid to the Democratic People's Republic through NGOs (amounting to Won 16.4 billion [US$ 12.73 million]) and international organizations, including WHO and the United Nations Children's Fund (UNICEF), (amounting to US$16 million), to support their programmes in the Democratic People's Republic in such areas as rural development, public health, medical services and social welfare.

1.3 Socioeconomic situation

Over the past few decades, the Republic of Korea has transformed itself from an agrarian society to an industrialized nation. The Government has been making efforts to upgrade living standards through vigorous reforms in education, housing, social welfare and the environment. In 2007, the gross domestic product (GDP) was US$ 969.9 billion, and the per capita gross national income (GNI) was US$ 20 045.

The employment structure has undergone remarkable changes since the beginning of industrialization in the early 1960s. In 1960, workers in the agricultural, forestry and fishery sectors accounted for 63% of the total labour force. However, that figure had dropped to 7.3% by 2007. By contrast, the share of tertiary industry (service sector) grew from 28.3 % of the total labour force in 1960 to 75.0% in 2007.

Along with the country's success in economic development, the overall health of Koreans has improved significantly over the past three decades. In 1960, life expectancy was 51 years for males and 54 for females. These figures had increased to 76.1 for males and 82.7 for females by 2007. The infant mortality rate has likewise declined sharply, as has maternal mortality.

Korean women today are actively engaged in a wide variety of fields, making a significant contribution to society. Recently, women have been making major inroads in some areas, particularly in the government sector. For example, the number of female Members of Parliament has increased considerably; there were 16 (5.9%) in the 16th National Assembly (2000-2004) but the number has increased to 43 (14.4%) in the 18th national Assembly (2008-2012).

Recently, the Republic of Korea has been in a temporary economic recession as a result of the global financial crisis. The Government is taking a variety of policy steps to prevent the economic slump from threatening the lives and health of the population. As part of the safety net for those with low incomes who are hit hardest in difficult times, the Government has decided to expand support for the poor. In 2009, an additional 184.3 billion won (US$143.02 million) of subsistence, housing and medical benefits will be awarded for the 1.66 million recipients of the National Basic Livelihood Security System.

Moreover, the Government has provided 101.8 billion won (US$ 78.99 million) in emergency support for those who have fallen into poverty temporarily due to closure and suspension of businesses or loss of jobs. Subsistence benefits amounting to around 418.1 billion won (US$ 324.45 million) have also been provided to 500 000 households of low income-earners who are unable to work.

1.4 Risk, vulnerabilities and hazards

With one of the world's lowest fertility rates and fastest ageing populations, the Republic of Korea saw its total fertility rate drop to 1.26 in 2007, about a half of the replacement rate.

The country became an ageing society (7% of the population old) in 2000 as a result of low fertility and prolonged life expectancy and is expected to become an aged society (14% of the population old) by 2018 and a super-aged society (20% of the population old) by 2026. It has taken France 115 years to move from an ageing to an aged society and 40 years to move from an aged to a super-aged society. It took 72 and 16 years, respectively in the United States of America, and 24 and 14 years in Japan. Considering such examples, 18 and 8 years for the Republic of Korea would be the world's shortest transition.

This rapid population ageing is causing concern regarding sustainable development as it will reduce the economically active population, hold back economic growth, narrow the tax base, and lead to tensions between generations.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Changes in socioeconomic structure and lifestyle, as well as improvements in health and medical care, have drastically changed the leading causes of death in the Republic of Korea. In the past, the main causes of mortality were acute and communicable diseases, but these have been replaced by chronic and noncommunicable diseases.

Beginning in the 1980s, the incidence of noncommunicable disease began to rise. Among the top 10 causes of death in 2007, six were chronic diseases: cancer, cerebrovascular disease, diabetes, chronic lower respiratory disease, liver disorders, and high blood pressure. In addition, the proportion of deaths from noncommunicable diseases out of total deaths has increased from 12% to over 60 % during the past two decades.

The prevalence of major noncommunicable diseases is also high. For example, the prevalence rates for high blood pressure and diabetes stood at 25.6% and 9.7%, respectively, in 2007. The growing prevalence of noncommunicable diseases is considered to be largely attributable to rapid population ageing, increases in obesity and overweight, a decrease in physical activity, and an increased smoking population.

According to a 2005 study, a high proportion of adults were obese (BMI $\geq$ 25), 35.2% of males and 28.3% of females, and childhood obesity almost doubled from 6.8% in 1998 to 12% in 2005. Lack of

physical activity was found to be a serious problem, with only 38% of adults aged 19 and older engaging in moderate levels of physical activity on a regular basis.

Thanks to strong smoking-control policies, the male smoking population dropped drastically from 67.4% to 46.6% in 2008, but it is still second highest ratio in the world. Youth smoking stood at a high level of 14.1% in 2006 and the age of starting smoking fell from 15 in 1998 to 12 in 2006, indicating a serious smoking problem among the country's young people.

While per capita alcohol consumption of the Republic of Korea, which is increasing steadily, was 8.1% in 2005, a trend towards heavy drinking and a high death rate due to alcohol are troubling the nation. The annual socioeconomic costs attributable to alcohol drinking were estimated amount to 2.9% of GDP: 38.8% for reduction of productivity, 26.9% for loss of the workforce, 22.2% for alcoholic beverage, 5.3% for direct medical costs, 2.3% for loss of productivity, 1.9% for direct non-medical costs, 1.5% for administrative costs and 0.97% for loss of property.

2.2 Outbreaks of communicable diseases

With vaccinations and improved hygiene, the incidence of acute communicable diseases has been decreasing steadily since the 1960s. However, global climate change and increasing overseas travel have increased the incidence of imported tropical diseases. In addition, the growing distribution of food materials, an increase in dining out, and contamination of water resources have the potential to trigger massive outbreaks of waterborne and foodborne infectious diseases. Avian influenza, which has been reported annually in the country since 2006, is also a concern.

A total of 14 670 cases of acute communicable disease (excluding chicken pox) were notified in 2007, giving an incidence rate of 29.7 per 100 000 population, an increase of 17% from 25.3 in the previous year. Among these diseases, measles increased 592% year on year, while the increase was 118% for mumps and 177% for dengue fever. In particular, the incidence of chicken pox rose 1.8 times from 2006 to over 20 000, accounting for 58.4% of total acute communicable disease cases in 2007.

2.3 Leading causes of mortality and morbidity

The number one cause of death in the Republic of Korea is cancer, accounting for 27.6% in 2007, followed by cerebrovascular disease at 12.0% and heart disease at 8.8%.

The number of people dying from cancer rose steadily from 111.9 per 100 000 in 1996 to 137.5 in 2007. Among the major cancers, the number of deaths from stomach cancer has been decreasing, while those from lung and colon cancers have increased.

The number of deaths from cerebrovascular diseases has dropped from 10 years ago. However, the incidence and prevalence rates for the diseases jumped from 1.6 and 6.2 per 1000 in 1998 to 2.3 and 10, respectively, in 2003. The hike means an increase in disabilities related to stroke, adding to the burden of disease.

Cardiovascular diseases are not as prevalent in the Republic of Korea as in many Western countries, but have been showing an upward trend. The number of deaths from ischaemic heart disease more than doubled between 1996 and 2006, from 13.0 to 29.2 per 100 000.

The recent increase in the number of suicides is notable. In 1996, 14.1 persons out of 100 000 killed themselves, making suicide the ninth most common cause of death. In 2007, however, suicide became the fourth largest cause of death, with 24 out of every 100 000 persons committing suicide.

Among the major noncommunicable diseases, high blood pressure, arthritis and dental caries have the highest morbidity rates. The prevalence rate for hypertension was 27.9% in 2005, showing that one-third of all adults in the country were suffering high blood pressure. Furthermore, out of every 1000, 703.9 were suffering from dental caries and 102.5 from osteoarthritis, according to a study of prevalence rates among adults aged 19 and older.

2.4 Maternal, child and infant diseases

The mortality risks for infants and young children, as well as for pregnant women, have decreased dramatically. The infant mortality rate fell from 61.0 per 1000 live births in the 1960s to an estimated 4.1 in 2006, while the maternal mortality ratio stood at 15.0 per 100 000 live births in 2006.

The focus of public health programmes in this area is now not just on reducing mortality rates, but improving health for a longer period by developing the group's health potential. For example, a life-course approach has been taken to deal with age-specific needs for good health. Medical check-ups are made available to infants and pregnant women at health centres across the country, and medical advice and services are available to promote the health of infants and young children in a timely manner. Pre- and post-pregnancy services are also provided to detect and control any health risks related to pregnancy.

2.5 Burden of disease

According to a study of the disease burden in the country carried out using disability adjusted life years (DALYs), an indicator developed by WHO and the Global Burden of Disease Study Group, years of life lost (YLL) is highest for cancer, followed by injuries and cardio/cerebrovascular diseases, while years lost due to disability (YLD) is highest for gastrointestinal diseases, followed by respiratory diseases and diabetes.

Of the major diseases, excluding injuries, the DALY (YLL+YLD) for cancer per 100 000 was the highest, at 1525 or 17.1% of the total, followed by cardio/cerebrovascular diseases, with 1492 or 16.7%; gastrointestinal diseases, with 1140 or 12.8%; diabetes, with 970 or 10.9%; and respiratory diseases, with 951 or 10.6%.

Looking at individual diseases rather than disease groups, diabetes was found to have the highest DALY, followed by stroke, asthma, peptic ulcer, and ischaemic heart disease.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The mission of the Ministry for Health, Welfare and Family Affairs is to contribute to the quality of life of the public and to national development by protecting the public from social risks, promoting social integration, investing in human resources, and offering social services. The Ministry envisions healthy and happy lives for all citizens. To carry out its mission and realize its vision, the Ministry has set the following objectives:

(1) Expand the social safety net by:
- reforming the National Pension;
- stabilizing the National Health Insurance fund;
- improving the benefit system of the National Basic Livelihood Security; and
- enhancing the quality of life for people with disabilities.

(2) Pursue forward-looking family policies by:
- strengthening comprehensive family policies;
- restructuring child care policies;
- fostering healthy children and youths; and
- introducing long-term care insurance for the elderly.

(3) Protect public health and safety by:
- establishing a public health safety net;
- implementing preventive health care; and
- strengthening food-safety management.

(4) Strengthen economic growth hand in hand with health and welfare by:
- fostering the health care industry;

- creating the market for welfare services;
- pursuing welfare through work ; and
- operating the National Pension Fund strategically.

With these strategies, the mission of the Ministry for Health, Welfare and Family Affairs will pursue proactive welfare by creating jobs for those capable of work and extending a helping hand to those in need of support.

3.2 Organization of health services and delivery systems

Public health in the Republic of Korea has improved dramatically, especially in terms of life expectancy and infant mortality. The strengthened health care system, as well as increased incomes and improved living conditions have played a significant role.

As regards health care resources, the number of doctors increased from 22 183 in 1975 to 112 486 in 2008 (including 17 473 traditional medicine doctors). The number of hospital-level institutions (hospitals and traditional hospitals with 30 or more beds, as well as dental hospitals) rose from 178 in 1975 to 2240 in 2007.

Total health expenditure amounted to 6.9% of GDP in 2007. Although this is a relatively low rate compared with other developed countries, the Government is able to offer comparatively good quality health care services. However, health expenditure is growing continuously because of increased use of health care services driven by a greater public desire for healthy lives and implementation of the National Health Insurance scheme. To respond effectively to the fast-changing health care environment, it is necessary to comprehensively examine the existing health care system and set a new policy direction to advance it.

3.3 Health policy, planning and regulatory framework

The Ministry for Health, Welfare and Family Affairs focuses on the following areas in its health policy, planning and regulatory framework:

- establishing a lifetime health maintenance system;
- establishing an efficient health care delivery system;
- enhancing National Health Insurance coverage and strengthening the role of the Government in health care; and
- fostering the health care industry.

3.4 Health care financing

Since 1 July 1989, every citizen of the Republic of Korea has received health care benefits through either National Health Insurance (NHI) or the Medical Aid programme. As of the end of 2008, 96.3% of the total population or 48.2 million people were covered by the NHI, while the rest, 1.8 million people, including beneficiaries of the National Basic Livelihood Security System and patriots and veterans, were benefiting from the Medical Aid programme. The NHI is divided into employee insurance and self-employed insurance. Employee insurance covers employees, employers, public servants and teachers. All residents in rural areas and the self-employed in cities, except those covered by employee insurance and their dependents, are covered by self-employed insurance.

The National Health Insurance system is operated by the Ministry for Health, Welfare and Family Affairs, the National Health Insurance Corporation (NHIC), and the Health Insurance Review Agency (HIRA). The Ministry for Health, Welfare and Family Affairs is in charge of supervision and management of the overall operation of the NHI, while the NHIC oversees everyday tasks, such as determining the eligibility of the insured and their dependents, assessing and collecting insurance premiums and other fees, and making benefit payments. The HIRA reviews health care benefits and evaluates health care performance, independent of insurers, providers and other involved parties.

The finances of the NHI mainly comprise contributions from the insured and their employers, along with government subsidies, including the National Health Promotion Fund. For an insured employee, the

contribution is determined by the level of the standard monthly wage, the calculation of which is based on the wages earned by the employee over a specific period of time. Fifty per cent of the contribution is paid by the employee and 50% by his/her employer. For the self-employed, contributions are calculated per household unit, and the amount is determined by considering the insured person's assets and income, as well as other factors.

Since the introduction of the self-employed insurance scheme in 1998, the Government has subsidized health care benefits and the operation of the insurance programmes for the self-employed to relieve their financial burden. The Government annually supports 14% of the expected insurance premium for the year out of government funds, and 6% out of the National Health Promotion Fund.

3.5 Human resources for health

The qualifications for health workers are strictly stipulated by law, and only those licensed by the Government can provide medical treatment and public health services. The Medical Service Act stipulates that the Ministry for Health, Welfare and Family Affairs licenses doctors, dentists, traditional medicine doctors, midwives and nurses. The Act prescribes nurses' aides, bonesetters, acupuncturists, moxibustionists and masseurs as quasi-medical persons.

There were 95 013 physicians, 23 912 dentists, 58 363 pharmacists and 246 837 nurses in the country as of 2008.

3.6 Partnerships

The Ministry for Health, Welfare and Family Affairs is making an effort to contribute to improved health and quality of life for the public by responding to the new challenges of low fertility and population ageing. The Ministry works with the public, nongovernmental groups, local governments and expert groups and includes all of them in its policy formation, implementation and assessment procedures. The partnership helps the Ministry to fulfil the real needs of the public.

At the same time, the Ministry also works in close partnership with international organizations, including WHO and OECD, to resolve pending global health issues. The Republic of Korea strives to play a leadership role in making people of the world healthy and sound by exchanging knowledge, experience and technology, and sharing human, physical and intellectual resources with international partners, as well as by signing memorandums of understanding in the field of health care with foreign governments.

3.7 Challenges to health system strengthening

Challenges to health system strengthening in the Republic of Korea include:

- the increase in chronic disease;
- the ageing population and low fertility rate; and
- the inequity in income distribution.

Each challenge suggests health policy issues:

- The growing incidence of chronic disease highlights the need to put a stronger emphasis on such diseases in the current health system.
- The ageing population may mean an increase in the number of elderly people with health problems and higher health-related expenditure.
- Income disparities may lead to inequity in health status.

To respond to these issues, the Government is making an effort to prevent disease, enhance National Health Insurance coverage, strengthen its own role in health care, and establish a financially sustainable health care delivery system.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : *Cadastral statistical annual report, 2007*
Operator : Ministry of Public Administration and Security, 2008
Web address : www.mopas.go.kr

Title 2 : *Population projections for Korea*
Operator : National Statistical Office
Web address : www.nso.go.kr

Title 3 : *Annual report on the cause of death statistics, 2008*
Operator : National Statistical Office
Web address : www.nso.go.kr

Title 4 : *In-depth analysis of the 3rd Korea Health and Nutrition Examination Survey*
Operator : Korea Centre for Disease Control and Prevention,
Korea Health Industry Development Institute
Web address : www.cdc.go.kr, www.khidi..or.kr

Title 5 : *Annual report of the Ministry of Health and Welfare, 2006*
Operator : Ministry of Health & Welfare
Web address : www.mw.go.kr

Title 6 : *2007 Population and Housing Census report*
Operator : Korea National Statistical Office, 2006
Web address : www.nso.go.kr

5. ADDRESSES

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6. ORGANIZATIONAL CHART: Ministry of Health, Welfare and Family Affairs

REPUBLIC OF KOREA

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	99.70			2006	1
2	Estimated population ('000s)	48 606.79	24 415.88	24 190.90	2008	2
3	Annual population growth rate (%)	0.31 [a]	…	…	2008	2
4	Percentage of population					
	- 0–4 years	4.64	4.79	4.49	2008	2
	- 5–14 years	12.76	13.35	12.17	2008	2
	- 65 years and above	10.32	8.32	12.33	2008	2
5	Urban population (%)	81.30 [a]	…	…	2007 est	3
6	Crude birth rate (per 1000 population)	10.10	10.40	9.90	2007	4
7	Crude death rate (per 1000 population)	5.00	5.50	4.50	2007	4
8	Rate of natural increase of population (% per annum)	0.51	0.49	0.54	2007	4
9	Life expectancy (years)					
	- at birth	79.56	76.13	82.73	2007	5
	- Healthy Life Expectancy (HALE) at age 60	15.74	14.86	16.41	2005	6
10	Total fertility rate (women aged 15–49 years)	1.26			2007	4
	Socioeconomic indicators					
11	Adult literacy rate (%)	97.90	99.20	96.60	2002	7
12	Per capita GDP at current market prices (US$)	20 045.00 [a]			2007	8
13	Rate of growth of per capita GDP (%)	8.90			2007	8
14	Human development index	0.93			2006	9
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	…	…	…		
16	Health care waste generation (metric tons per year)	…	…	…		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	2233	1306	927	…	…	…	2007	1
	- Type B	8574	1000	7574	…	…	…	2007	1
	- Type C	5179	2776	2403	…	…	…	2007	1
	- Type E	…	…	…	…	…	…		
	- Unspecified	…	…	…	…	…	…		
	Cholera	7	3	4	0	0	0	2007	1
	Dengue/DHF	97	65	32	…	…	…	2007	1
	Encephalitis	…	…	…	…	…	…		
	Gonorrhoea	3115	2578	537	…	…	…	2007	1
	Leprosy	12	…	…	…	…	…	2007	10
	Malaria	2192	…	…	1	…	…	2007	10
	Plague	0	0	0	0	0	0	2007	1
	Syphilis	1415	585	830	…	…	…	2007	1
	Typhoid fever	223	109	114	0	0	0	2007	1

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	…	…	…	4590	2344	2246	2007	11
19	**Diarrhoeal diseases**	…	…	…	…	…	…		
20	**Tuberculosis**								
	- All forms	34 710	20 277	14 433	2376	1642	734	2007	11, 12
	- New pulmonary tuberculosis (smear-positive)	10 927	6600	4327	…	…	…	2007	10, 12
21	**Cancers**								
	All cancers (malignant neoplasms only)	…	…	…	67 561	42 778	24 783	2007	11
	- Breast	…	…	…	1678	8	1670	2007	11
	- Colon and rectum	…	…	…	6650	3761	2889	2007	11
	- Cervix			…			987	2007	11
	- Oesophagus	…	…	…	1449	1320	129	2007	11
	- Leukaemia	…	…	…	1447	824	623	2007	11
	- Lip, oral cavity and pharynx	…	…	…	949	746	203	2007	11
	- Liver	…	…	…	11 144	8389	2755	2007	11
	- Stomach	…	…	…	10 563	6875	3688	2007	11
	- Trachea, bronchus, and lung	…	…	…	14 278	10 545	3733	2007	11
22	**Circulatory**								
	All circulatory system diseases	…	…	…	57 574	27 411	30 163	2007	11
	- Acute myocardial infarction	…	…	…	10 628	5784	4844	2007	11
	- Cerebrovascular diseases	…	…	…	29 277	13 941	15 336	2007	11
	- Hypertension	…	…	…	5402	1810	3592	2007	11
	- Ischaemic heart disease	…	…	…	14 497	7636	6861	2007	11
	- Rheumatic fever and rheumatic heart diseases	…	…	…	248	74	174	2007	11
23	**Diabetes mellitus**	…	…	…	11 272	5691	5581	2007	11
24	**Mental disorders**	…	…	…	4219	1821	2398	2007	11
25	**Injuries**								
	All types	…	…	…	30 137	20 076	10 061	2007	11
	- Homicide and violence	…	…	…	703	369	334	2007	11
	- Motor and other vehicular accidents	…	…	…	7604	5614	1990	2007	11
	- Occupational injuries	…	…	…	2493	…	…	2005	13
	- Suicide	…	…	…	12 174	7747	4427	2007	11
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Diseases of the respiratory system	575 192	260 791	314 401	1194.80	1077.70	1313.00	2005	14
	2. Diseases of the musculoskeletal system & connective tissues	397 384	137 803	259 581	825.40	569.50	1083.90	2005	14
	3. Diseases of the digestive system	340 475	160 360	180 115	708.50	664.30	753.10	2005	14
	4. Injury , poisoning and certain other consequences of external causes	185 052	98 502	86 550	384.60	407.50	361.40	2005	14
	5. Diseases of the circulatory system	162 604	69 632	92 972	337.80	287.90	388.20	2005	14
	6. Diseases of the skin and subscutaneous tissue	95 814	46 968	48 846	199.00	194.10	203.90	2005	14
	7. Diseases of the genitourinary system	91 938	26 472	65 466	191.00	109.50	273.30	2005	14
	8. Diseases of the eye and adnexa	80 898	31 703	49 195	168.10	131.00	205.50	2005	14
	9. Endocrine nutritional and metabolic diseases	67 857	28 793	39 064	141.00	119.00	163.10	2005	14
	10. Certain infectious and parasitic diseases	57 248	27 072	30 176	118.90	111.80	126.00	2005	14

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	Total	Male	Female	Total	Male	Female		
	1. Malignant neoplasms	67 561	42 778	24 783	137.50	173.70	101.10	2007	11
	2. Cerebrovascular diseases	29 277	13 941	15 336	59.60	56.60	62.60	2007	11
	3. Heart diseases	21 494	10 897	10 597	43.70	44.30	43.20	2007	11
	4. Intentional self-harm	12 174	7747	4427	24.80	31.50	18.10	2007	11
	5. Diabetes mellitus	11 272	5691	5581	22.90	23.10	22.80	2007	11
	6. Transport accidents	7604	5614	1990	15.50	22.80	8.10	2007	11
	7. Chronic lower respiratory disease	7523	4604	2919	15.30	18.70	11.90	2007	11
	8. Diseases of the liver	7314	5868	1446	14.90	23.80	5.90	2007	11
	9. Hypertensive diseases	5402	1810	3592	11.00	7.34	14.70	2007	11
	10. Pneumonia	4556	2392	2227	9.30	9.50	9.10	2007	11
	Maternal, child and infant diseases	Total		Male		Female			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**						79.90	2006	15
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**						...		
30	**Percentage of pregnant women with anaemia**						...		
31	**Neonatal mortality rate (per 1000 live births)**		2.50		2.70		2.20	2006	16
32	**Percentage of newborn infants weighing at least 2500 g at birth**		...		...		...		
33	**Immunization coverage for infants (%)**								
	- BCG		96.00		...		...	2008	10
	- DTP3		94.00		...		...	2008	10
	- POL3		92.00		...		...	2008	10
	- Hepatitis B III		94.00		...		...	2008	10
		Number of cases			Number of deaths				
34	**Maternal causes**	Total	Male	Female	Total	Male	Female		
	- Abortion			...			5	2006	16
	- Eclampsia			...			8	2006	16
	- Haemorrhage			...			11	2006	16
	- Obstructed labour			...			0	2006	16
	- Sepsis			...			0	2006	16
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	...	...	...	...	...	...		
	- Diphtheria	0	0	0	...	...	...	2008	10
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	1	...	...	...	...	...	2008	10
	- Mumps	4 474	...	...	...	...	...	2008	10
	- Neonatal tetanus	...	...	...	...	...	...		
	- Pertussis (whooping cough)	7	...	...	...	...	...	2008	10
	- Poliomyelitis	0	0	0	...	...	...	2008	10
	- Rubella	31	...	...	...	...	...	2008	10
	- Total Tetanus	14	...	...	...	...	...	2008	10

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		261		2008	23
37	Health infrastructure					
	Public health facilities	- General hospitals	295	124 090	2006	17
		- Specialized hospitals	111	39 802	2006	17
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	3442	0	2006	17
	Private health facilities	- Hospitals	1676	253 495	2006	17
		- Outpatient clinics	...	...		
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)			64 411.57	2007p	18
	- total expenditure on health as % of GDP			6.60	2007p	18
	- per capita total expenditure on health (in US$)			1329.28	2007p	18
	Government expenditure on health					
	- amount (in million US$)			36 513.65	2007p	18
	- general government expenditure on health as % of total expenditure on health			56.70	2007p	18
	- general government expenditure on health as % of total general government expenditure			12.50	2007p	18
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			0.00	2007p	18
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			43.30	2007p	18
	Exchange rate in US$ of local currency is: 1 US$ =			929.26	2007p	18
39	Health insurance coverage as % of total population			96.30	2008	11

	INDICATOR		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
40	Human resources for health										
	Physicians	- Number	95 013	72 140	19 253	...	...	...	...	2008	19
		- Ratio per 1000 population	1.95	1.48	0.40	...	...	...	...	2008	19
	Dentists	- Number	23 912	18 407	5865	...	...	...	...	2008	19
		- Ratio per 1000 population	0.49	0.38	0.12	...	...	...	...	2008	19
	Pharmacists	- Number	58 363	20 821	37 542	...	...	...	...	2008	19
		- Ratio per 1000 population	1.20	0.43	0.77	...	...	...	...	2008	19
	Nurses	- Number	246 837	2130	244 707	...	...	...	...	2008	19
		- Ratio per 1000 population	5.08	0.04	5.03	...	...	...	...	2008	19
	Midwives	- Number	8565	4	8561	...	...	...	...	2008	19
		- Ratio per 1000 population	0.18	0.00	0.18	...	...	...	...	2008	19
	Paramedical staff	- Number	164 913	55 955	108 958	...	...	...	...	2008	19
		- Ratio per 1000 population	3.39	1.15	2.24	...	...	...	...	2008	19
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	Annual number of graduates	Physicians	3601	2368	1233	...	...	...	...	2008	20
		Dentists	880	525	355	...	...	...	...	2008	20
		Pharmacists	1492	627	865	...	...	...	...	2008	20

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	16 118	560	15 558	...	...	...	...	2008	20
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	4.10	4.50	3.70	2006	16
45	Under-five mortality rate (per 1000 live births)	5.70	6.10	5.30	2006	5
46	Proportion of 1 year-old children immunised against measles	92.00	...	...	2008	10
47	Maternal mortality ratio (per 100 000 live births)	15.00			2006	16
48	Proportion of births attended by skilled health personnel	100.00			2007	4
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.10			2007	4
	- Percentage of deliveries in health facilities (as % of total deliveries)	98.90			2007	4
49	Contraceptive prevalence rate	79.60	38.90	40.70	2006	15
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	99.90			2006	15
	- At least four visits	98.60			2006	15
52	Unmet need for family planning	...				
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults	...	...	...		
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	4.00	...	...	2006	10
57	Malaria death rate per 100 000 population	0.00	...	...	2006	10
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	126.00	...	...	2007	10
61	Tuberculosis death rate per 100 000 population	4.90	...	...	2007	11
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	14.00	...	...	2007	10
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	78.00	...	...	2006	10
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	...	97.00	...	2006	21
65	Proportion of population using an improved sanitation facility	83.50	...	...	2005	22
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Revised data

Sources:	
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23	Unpublished Data, local public health center(253) & VCT(8).

SAMOA

1. CONTEXT

1.1 Demographics

In 2008, estimates put Samoa's population at 188 359, with around 41.6% composed of young people aged less than 15 years and only 2.6% aged 65 years and over. Life expectancy was 73.2 according to the 2006 census, compared with 72.8 years in 2001.

The country is divided into four major statistical regions: Apia Urban Area (AUA), North West Upolu, Rest of Upolu (including Manono and Apolima Islands) and Savaii. AUA represents the urban area, while the other three regions make up the rural population.

Gender issues, such as the promotion and protection of women's rights, gender equity and women and HIV/AIDS are of high importance in Samoan society. The level of women's participation in the paid labour force is relatively high, and their access to education and achievement in the formal educational system is virtually equal to men. Women occupy a number of senior positions in the public sector. The church plays a key role in influencing public opinion and in education through the provision of schools at all levels.

The United Nations Development Programme (UNDP) Human Development Index (HDI) ranks Samoa 77th out of 177 countries. Based on the HDI, Samoa has one of the higher levels of social development rankings in the Pacific, showing higher overall educational and health standards than other Pacific islands.

1.2 Political situation

Democratic traditions and a strong social system based on village communities and extended family ties continue to play a major role in maintaining peace in Samoan society. The extended family, the *aiga*, is the foundation of the *fa'a-samoa* (traditional way of life). The head of each *aiga* is the *matai* (customary chief), who is elected by family members. Traditionally, the family *matai* is responsible for maintaining the family's dignity and well-being by administrating family affairs. More than 80% of the population lives under the *matai* system. Particularly strong in the rural areas and at village level, it functions as a safety net in providing social and financial security. Many Samoans who are resident abroad continue to honour their 'social obligations' by sending significant amounts of money to their extended families and churches.

The national system of government is based on the British Westminster model, with a combination of traditional and democratic features. Universal suffrage has applied since 1991 but, with the exception of two seats reserved for voters considered to be outside the governance of the *matai* system (out of a total of 49 seats), only *matai* can stand for parliament. The Human Rights Protection Party has been in power continuously for almost 20 years. The coalition forming the opposition comprises the Samoan National Development Party and eight independent members.

During 40 years of independence, Samoa has been able to create a stable political environment and to stimulate economic growth through sound macroeconomic management. Over the past 10 years, it has sought to address the challenges of social and economic reforms. Since the early 1990s, the Government has committed itself to the promotion of good governance. Human rights are respected overall. The ongoing Economic and Public Sector Reform Programme (since 1996) has instigated institutional reforms in public services and in several public sector agencies, which has led to improvement of the governance framework. Performance budgeting has encouraged greater efficiency, accountability and transparency. Equally, economic reforms are considered to be crucial for Samoa in the pursuit of the Government's goals to improve the living standards and the welfare of the people.

Since 1996/1997, the Government's national policy framework and development strategies have been set out in statements of economic strategy (SES), currently the *Strategy for the development of Samoa 2008–2012*, which highlight the vision of "improved quality of life for all".

1.3 Socioeconomic situation

The economy of Samoa has traditionally been dependent on development aid, family remittances from overseas, and agriculture and fishing. Agriculture still plays an important role in the economy. Village agriculture provides food security and support to the agro-based industries, such as coconut cream, oil and desiccated coconut, which have been major export products in the past. The manufacturing sector mainly processes agricultural products. Tourism is an expanding sector. The Government has called for deregulation of the financial sector, encouragement of investment, and continued fiscal discipline, while protecting the environment. Development efforts in the area of trade, at both national and international levels, are considered relatively advanced compared with other Pacific islands. However, Samoa is ecologically fragile and vulnerable to natural disasters, such as cyclones and disease infestations.

Gross domestic product (GDP) per capita in 2007 was US$ 2892.75. Economic growth in 2001 was estimated at 6.5%, with an annual rate of inflation of 4% by the end of the year. Manufacturing, transport and communications, and commerce contributed most to the growth. Agriculture production, on the other hand, dropped by 12% as a direct result of the limited market outlets for copra, cocoa, kava and coconut cream. Gross tourism receipts rose only marginally, by 0.7%. The sharp slowdown in growth was seen as a direct result of the 11 September 2001 terrorist attack in the United States of America. While exports improved by 16.8% compared with 2000, imports increased by 28% in 2001. As a result, the current account deficit widened to 11.2% of GDP. Remittance inflows continued to increase at a lower rate than in 2000. At the current level, they are equivalent to 18% of GDP. At the end of 2001, foreign reserves stood at WST 174 .84 million (US$ 66.7 million), equivalent to approximately 4.1 months of import cover. Grants from development partners in 2000/2001 added up to WST 65.09 million (US$ 23 million), equalling some 25% of total revenue.

1.4 Risks, vulnerabilities and hazards

Rural-to-urban migration exacerbates the diminishing agriculture and fishery industry in rural areas. The settlement along the coastal areas of Samoa allows for potentially greater accessibility to services. Tropical vegetation, tidal mudflats and mangrove areas situated along the coastline, with high humidity, create a prime environment for vectorborne diseases, such as dengue, and for complications of conditions such as wound-healing and tropical ulcers.

Samoa's susceptibility to cyclones and other natural disasters raises the importance of developing well-planned mechanisms for disaster preparedness.

Rural-to-urban migration is also impacting upon the health of urban communities in Samoa. The ready access to unhealthy food, combined with smoking, alcohol and physical inactivity, is contributing to the increasing prevalence of noncommunicable diseases.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The health status of the population has improved significantly, and Samoans now enjoy relatively good health. However, persistently high mortality and morbidity rates for communicable diseases call for a renewed control, management and surveillance commitment.

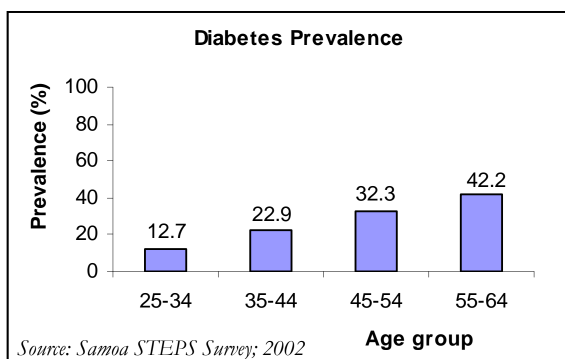
Typhoid and dengue are both endemic and periodically reach epidemic levels. Lymphatic filariasis is also endemic, with a standardized antigen prevalence rate of 1.6% in 2003. As the Government has made a firm commitment to eliminate lymphatic filariasis by 2005, intensive mass drug administration (MDA) campaigns have been carried out, with 96% coverage in 2001, 60.3% in 2002 and 80% in 2003.

There were 25 tuberculosis cases (all forms) diagnosed in 2006, 13 with sputum-smear-positive pulmonary TB. The calculated case-detection rate was 80% in 2006. The directly observed treatment, short-course (DOTS) strategy has been established throughout the country and functions well.

The incidence of HIV/AIDS is low, with a cumulative total of 12 known cases since 1990. Other sexually transmitted infections (STI), however, are present at extremely high rates, with 38% of women attending antenatal clinics being found to have at least one STI in a study carried out in Apia in 1999-2000. Women aged less than 25 years were significantly more likely to have an STI. The surprising results of this study indicate the potential for rapid spread of HIV, but also the urgent need to tackle the STI epidemic in its own right. Given the high prevalence and death rates caused by noncommunicable diseases, such as diabetes and suicide, resources for HIV/AIDS programmes are often limited. Whilst the supportive policy and national structures are in place for the coordination and management of HIV/AIDS activities nationally, this infrastructure has been, until recently with the release of funding from the Global Fund, severely underresourced.

Noncommunicable diseases (NCD), including obesity, diabetes, heart disease, high blood pressure, stroke and cancer, are a top health priority, with high and increasing prevalence rates: the obesity rate is currently 57.0%, the diabetes rate is 23.1% and high blood pressure rate is 21.4%. NCD are now appearing in younger age groups and complications are more common. NCD are very costly, accounting for 43.3% of total health care expenditure in 2000. If their prevalence continues to increase, the Government will be unable to continue financing the rising health care costs; hence prevention must remain the mainstay of national NCD management and control. The four main risk factors are smoking (tobacco), poor nutrition, excessive alcohol consumption and physical inactivity (SNAP). To reduce these risk factors changes in the lifestyles and the behaviour of individuals, families and communities are necessary, requiring a coordinated, multisectoral, national response.

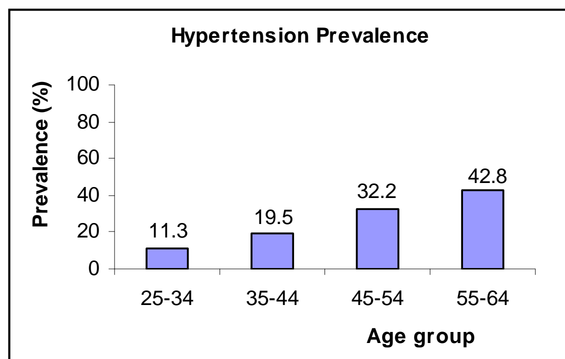
The total prevalence of diabetes is 23.1%: 22.9% in males and 23.3% in females. Prevalence increases with age and overall has doubled since a previous survey in 1991. The disease is more common in urban areas, (Apia 27%, Rural Upolu 19.7% and Savaii 20.3%), and the trend is similar for males and females.



Source: Samoa STEPS Survey; 2002

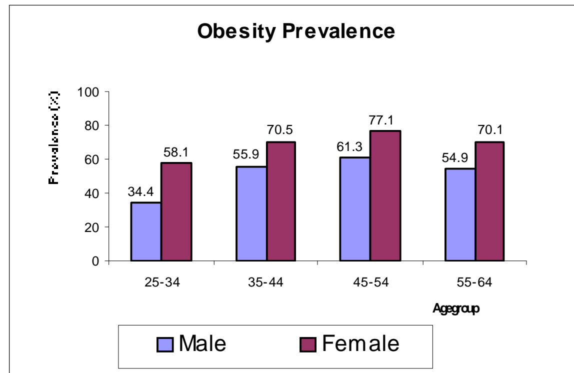
In general, for every known case of diabetes that is diagnosed, almost three cases remain undiagnosed, with the ratio a lot higher in the younger age groups, (in males, for every known case there are 12 unknown cases). Of those with a known history of diabetes, 56.8% of males and 68.5% of females are taking tablets, and only 4% of males and 5.3% of females are taking insulin.

The total prevalence of hypertension is 21.4%, and is higher in males (24.2%) than females (18.2%) and increases with age in both males and females. High blood pressure is more common in urban areas (Apia 23.5%; Rural Upolu 18.6%; Savaii 21.2%).



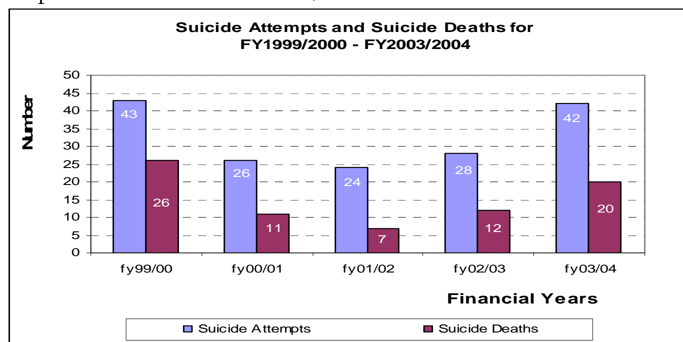
In general, for every known case of high blood pressure that is diagnosed, another four remain undiagnosed. This ratio is higher in the younger age group, (for every known case there are 22 unknown cases). Most people (more than 90%) with high blood pressure do not know that they have it.

The total prevalence of obesity is 57.0% (48.4% in males and 67.4% in females) and increases with age. It is more common in urban areas. (For males, Apia 53.1%; Rural Upolu 48%; Savaii 40.2%. For females, Apia 69.3%, Rural Upolu 65.9%, Savaii 65.4%).



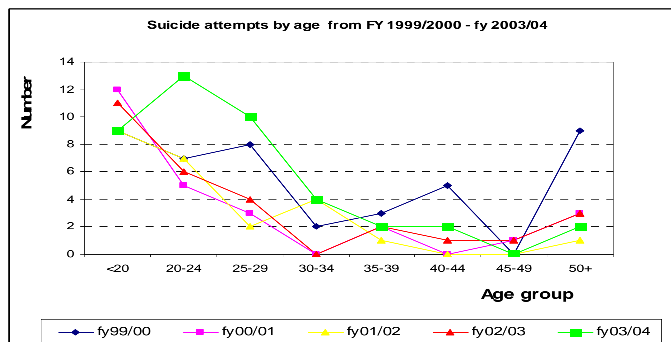
Many risk factors for noncommunicable disease are present among the Samoan population, including: smoking (40% of the total population are smokers: 56.3% of males and 21.8% of females.); poor nutrition: (35.6% of the population eat virtually no fruit[1].); alcohol consumption (current levels of alcohol consumption place 37.6 % of males and 19.6 % of females at moderate to high risk of developing an NCD); and lack of physical activity (21% of the population do very little or no physical activity). People in Apia are more likely to be inactive (28%) than people in rural areas (15%) and women (27.3%) are more likely to be inactive than men (14.8%). There is a lack of regular health checks. In the last 12 months, only 35% of the population had a blood sugar check and only 44.9% had a blood pressure check. Males and younger people are less likely to have checks.

The number of suicide attempts is increasing. However, the proportion resulting in death was only 47.6% in 2003/2004, compared with 60.5% in 1999/2000.



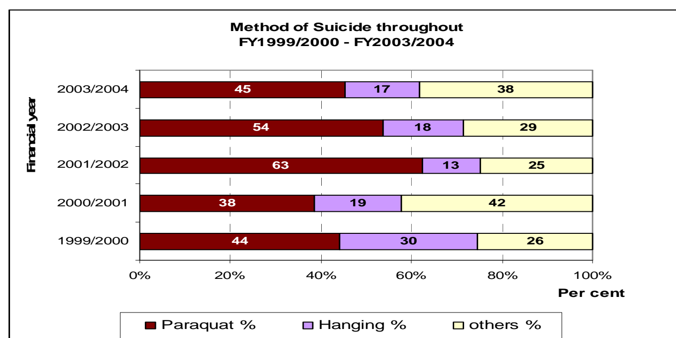
Source: Health Information System, Ministry of Health

The ages of those attempting suicide ranged from 10 to 76 years during the period from 1999 to 2004, with most aged below 30. Paraquat ingestion is the most common mode of suicide. Its use decreased in 2000/2002 then increased to more than 60% in 2001/2002 before exhibiting a slow deceleration in the last few years.



Source: Health Information System, Ministry of Health

[1] No fruit or less than one serving per day



Source: Health Information System, Ministry of Health

2.2 Outbreaks of communicable diseases

No available information.

2.3 Leading causes of mortality and morbidity

See Section 2.1.

2.4 Maternal, child and infant diseases

The infant mortality rate increased from 19.3 per 1000 live births in 2001 to 20.4 in 2006, while the under-five mortality rate dropped from 17.8 per 1000 live births in 2000 to 13.0 in 2003-2004. The maternal mortality ratio also dropped from 19.6 per 100 000 live births in 2002, to 10.7 in 2003 and 3.0 in 2005-2006.

Tetanus and diphtheria have been virtually eradicated in Samoa, and the whole Pacific region is poliomyelitis-free.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health, as the principal agent of the Government in the area of health, takes the lead role in working with government agencies, NGOs, the private and traditional health sectors and consumers of health services to promote a high quality, comprehensive, sustainable, integrated national health system founded on the Samoan lifestyle. The Ministry is specifically charged with implementing health legislation pertaining to public health issues and advising the Government on issues related to health care delivery, health funding and health status. It is the major provider of publicly funded health services and is responsible for the management of the publicly funded health sector.

More specialized care not available in Samoa is provided to some patients through overseas treatment, either through programmes funded by the Samoan and New Zealand Governments or at personal expense.

3.2 Organization of health services and delivery systems

See Section 3.1.

3.3 Health policy, planning and regulatory framework

National priorities in health are identified in the *Strategy for the development of Samoa 2008-2012*.

The *Health Sector Plan 2008–2018* presents the vision of "A healthy Samoa," and a mission "to regulate and provide quality, accountable and sustainable health services through people working in partnership."

To realise the vision and fulfil the mission, four crucial challenges must be met:

- rapidly increasing levels of noncommunicable diseases (NCDs) and their impact on the health system community mortality and morbidity and the economy;
- ensuring reproductive and maternal and child health for the long term health of the community;
- emerging and re-emerging infectious diseases; and
- injury as a significant cause of death and disability

Six strategic areas have been identified to meet these challenges, underpinned by the guiding principles of accountable governance, sharing, accessibility, affordability and cultural appropriateness:

- Health promotion and primordial prevention (strengthened).
- Quality health care service delivery (access improved and quality strengthened).
- Governance, human resources for health and health systems (governance, human resources and leadership strengthened).
- Partnership commitment (health system strengthened).
- Financing health (financial management and long-term planning of health financing strengthened).
- Donor assistance (increased partner participation).

The publicly funded health system has been undergoing major reform since 1996. At the broadest level this has included a review of the Ministry of Health's primary functions, roles and responsibilities and the suitability of the existing organizational structure to support these at both the strategic and service delivery levels. The themes of this reform have been: (1) Function before form; and (2) Client-based development. The reform process indicated a need for a more defined separation of the governance role from the service delivery role. This has culminated in the formal separation of the existing Ministry of Health into two new bodies, the revised Ministry of Health as a governance and regulatory body and the newly established National Health Service (NHS) to take responsibility for service delivery.

The Government's reform agenda is not only about organizational reform, but is also focused on reorienting the sector towards a population-health approach. The introduction of the Integrated Community Health Services (ICHS) model was a major step forward in that approach, the objective being to provide services closer to home, to strengthen primary health care services and to improve health services for the most vulnerable groups. Greater emphasis is also being placed on health promotion, protection and prevention services. It is acknowledged that this will be most effectively realized through partnering with other groups in the health sector, other sectors, private enterprise and communities.

While increasing the focus on a population-health approach, there is a need to sustain, integrate and enhance the delivery of primary care services to the community. The Ministry of Health has developed a services planning model that is documented in the National Health Services Planning Framework.

3.4 Health care financing

Total national health expenditure in Samoa amounted to US$ 27.1 million in 2008, with per capita spending of US$ 144.92. In the same period, health spending as a share of gross domestic product (GDP) came to 5.4% (6% in 1998/1999), public expenditures for health comprised 84.5% of total health spending (62% in 1998/1999), and private spending for health comprised 15.5% of total health spending (23% in 1998/1999).

3.5 Human resources for health

In 2005, Samoa's health workforce comprised 50 physicians, 6 dentists, 3 pharmacists, 136 nurses, 37 midwives, and 73 other nursing/ auxiliary staff.

3.6 Partnerships

The review of the *Health Sector Strategic Plan* for the period 2006-2010 highlighted some of the specific objectives and strategies that the Ministry is promoting to improve health services and health outcomes in partnership with other members of the sector. Partnership is thus a major theme of the *Health Sector Plan 2008–2018* and is pertinent given the changes occurring within the sector. Government-funded health services are undergoing major reforms and there are rapid developments in the private health care industry. There is also a need to continue developing and strengthening collaboration with traditional health practitioners, as well as community-based and nongovernmental organizations.

3.7 Challenges to health system strengthening

No available information.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Samoa National Health Service Planning Framework April 2002; Department of Health Annual Report 1999-2000 (leading cause of mortality); Department of Health Annual Report 2002/2003 & 2003/2004; Review of the Health Sector Plan 2006-2010 (Draft)
Operator	:	Department of Health
Title 2	:	Samoa National Health Accounts Report for FY 2002-2003; Samoa National Health Account for FY 2000/2001 (Executive summary)
Operator	:	Ministry of Health and the World Bank
Title 3	:	*Strategy for the Development of Samoa 2005-2007: Enhancing People's Choices*
Title 4	:	*Strategy for the development of Samoa 2008-2012*
Title 5	:	Review of the Rural Health Services Plan 2006 (Draft)
Title 6	:	Report of the PacELF 5th Annual Meeting 2003
Title 7	:	*Samoa Suicide Prevention Strategy 2002-2006: An introduction 'Faataua le Ola' (FLO)*
Title 8	:	Collins V, Dowse GK, Toelupe et al. *Increasing prevalence of NIDDM* in *Pacific Islands population*
Title 9	:	Hodge AM, Dowse GK, Toelupe et al. Dramatic increase in the prevalence of obesity in Western Samoa over the 13 years period of 1978-1991. *International journal of obesity*, 1994; 18:419-428
Title 10	:	Dr Viali Lameko et al. *Review of the National Tuberculosis Control Programme in Samoa from the internal medicine perspective*, 20 June 2002.
Title 11	:	Review of the National Tuberculosis Control Programme in May 2001 (WHO mission report by Dr Pierre Yves Norval).
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Operator	:	Ministry of Health

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SAMOA — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	2.94			2009	1
2	Estimated population ('000s)	188.36	98.12	90.24	2008 est	2
3	Annual population growth rate (%)	0.50	...	...	2001-2006	3
4	Percentage of population					
	- 0–4 years	15.40	15.50	15.30	2008 est	4
	- 5–14 years	26.20	26.40	25.90	2008 est	4
	- 65 years and above	2.60	2.50	2.70	2008 est	4
5	Urban population (%)	22.70	...	...	2007	5
6	Crude birth rate (per 1000 population)	27.30	...	...	2006	3
7	Crude death rate (per 1000 population)	4.00	4.30	3.80	2006	3
8	Rate of natural increase of population (% per annum)	2.33 [a]	...	...	2006	3
9	Life expectancy (years)					
	- at birth	73.20	71.50	74.20	2006	3
	- Healthy Life Expectancy (HALE) at age 60	...	10.90	11.60	2002	6
10	Total fertility rate (women aged 15–49 years)	4.20			2006	3
	Socioeconomic indicators					
11	Adult literacy rate (%)	...	89.00 [b]	92.00 [b]	2006	3
12	Per capita GDP at current market prices (US$)	2892.75 [a,c]			2007	8
13	Rate of growth of per capita GDP (%)	...				
14	Human development index	0.76			2006	9
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	...	...	...		
16	Health care waste generation (metric tons per year)	73.00	...	...	2005	10

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	2	1	1	0	0	0	2002	11
	- Type B	10	4	6	0	0	0	2004	12
	- Type C	0	0	0	0	0	0	2002	11
	- Type E	...	...	...	...	...	...		
	- Unspecified	34	13	21	0	0	0	2004	12
	Cholera	0	0	0	0	0	0	2004	7
	Dengue/DHF	677	...	...	1	...	...	2008	13
	Encephalitis	1	1	0	0	0	0	2004	7
	Gonorrhoea	0	0	0	0	0	0	2004	7
	Leprosy	5	...	...	...	...	...	2006	13
	Malaria	...	...	...	...	...	...		
	Plague	0	0	0	0	0	0	2004	7
	Syphilis	0	0	0	0	0	0	2004	7
	Typhoid fever	254	151	103	0	0	0	2004	7

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	349	206	143	0	0	0	2004	7
19	**Diarrhoeal diseases**	322	184	138	5	2	3	2004	7
20	**Tuberculosis**								
	- All forms	25 [l]	…	…	…	…	…	2006	13
	- New pulmonary tuberculosis (smear-positive)	13 [l]	…	…	…	…	…	2006	13
21	**Cancers**								
	All cancers (malignant neoplasms only)	73	43	30	66	…	…	C:2004 D:2006	C:7 D:3
	- Breast	…	…	…	…	…	…		
	- Colon and rectum	6	5	1	3	2	1	2004	7
	- Cervix			6			0	2004	7
	- Oesophagus	…	…	…	…	…	…		
	- Leukaemia	17	10	7	2	1	1	2004	7
	- Lip, oral cavity and pharynx	7	5	2	0	0	0	2004	7
	- Liver	8	4	4	2	1	1	2004	7
	- Stomach	8	6	2	0	0	0	2004	7
	- Trachea, bronchus, and lung	21	13	8	5	4	1	2004	7
22	**Circulatory**								
	All circulatory system diseases	301	143	158	175 [a,d]	…	…	C:2004 D:2006	C:7 D:3
	- Acute myocardial infarction	39	15	24	1	0	1	2004	7
	- Cerebrovascular diseases	77	26	51	51 [a,e]	…	…	C:2004 D:2006	C:7 D:3
	- Hypertension	45	206	143	44 [a,f]	…	…	C:2004 D:2006	C:7 D:3
	- Ischaemic heart disease	72	52	20	3	2	1	2004	7
	- Rheumatic fever and rheumatic heart diseases	113	50	63	27	5	22	2004	7
23	**Diabetes mellitus**	7195 [g]	…	…		…	…	2004-05	14
24	**Mental disorders**	141	74	67	…	…	…	2006	3
25	**Injuries**								
	All types	733	556	177	44	…	…	C:2002 D:2006	C:11 D:3
	- Homicide and violence	…	…	…	…	…	…		
	- Motor and other vehicular accidents	129	103	26	4	3	1	2002	11
	- Occupational injuries	…	…	…	…	…	…		
	- Suicide	45	26	19	7	…	…	C:2004-05 D:2006	C:2 D:3
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Influenza and pneumonia	789	…	…	427.29	…	…	FY2005-06	7
	2. Complications of labour and delilvery	648		648	350.93		…	FY2005-06	7
	3. Injury, wounds, poisoning and certain other consequences of external causes	531	…	…	287.57	…	…	FY2005-06	7
	4. Infections of the skin and subcutaneous tissue	319	…	…	172.76	…	…	FY2005-06	7
	5. Diabetes mellitus	264	…	…	142.97	…	…	FY2005-06	7
	6. Other acute lower respiratory infections	237	…	…	128.35	…	…	FY2005-06	7
	7. Intestinal infectious diseases	235	…	…	127.27	…	…	FY2005-06	7
	8. Respiratory & cardiovascular disorders specific to the perinatal period	232	…	…	125.64	…	…	FY2005-06	7
	9. Chronic lower respiratory diseases	197	…	…	106.69	…	…	FY2005-06	7
	10. Malignant neoplasms	182	…	…	98.56	…	…	FY2005-06	7

INDICATORS		DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Diabetes	46	16	20	24.91	...	...	FY2005-06	7
	2. Cancer all sites	41	18	23	22.20	...	...	FY2005-06	7
	3. Injuries and wounds	40	31	9	21.66	...	...	FY2005-06	7
	4. Hypertensive diseases	39	19	20	21.12	...	...	FY2005-06	7
	5. Pneumonia	23	12	11	12.46	...	...	FY2005-06	7
	6. Cerebrovascular diseases	23	16	7	12.46	...	...	FY2005-06	7
	7. Other forms of heart disease	20	10	10	10.83	...	...	FY2005-06	7
	8. Chronic lower respiratory diseases	16	9	7	8.67	...	...	FY2005-06	7
	9. Ischaemic heart diseases	13	8	5	7.04	...	...	FY2005-06	7
	10. Septicaemia	9	6	3	4.87	...	...	FY2005-06	7
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**						30.00 [h]	1997-2005	9
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**						27.00	2008	13
30	**Percentage of pregnant women with anaemia**						...		
31	**Neonatal mortality rate (per 1000 live births)**		4.20		...		...	2002	11
32	**Percentage of newborn infants weighing at least 2500 g at birth**		98.80					2004	15
33	**Immunization coverage for infants (%)**								
	- BCG		99.00		...		...	2008	13
	- DTP3		46.00		...		...	2008	13
	- POL3		78.00		...		...	2008	13
	- Hepatitis B III		38.00		...		...	2008	13
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			134			0	2004	7
	- Eclampsia			7			0	2004	7
	- Haemorrhage			15			0	2004	7
	- Obstructed labour			7			0	2004	7
	- Sepsis			23			1	2002	7
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2006	13
	- Diphtheria	0	0	0	...	...	...	2006	13
	- Hib meningitis	1	...	...	...	...	...	2005	13
	- Measles	0	0	0	...	...	...	2006	13
	- Mumps	0	0	0	...	...	...	2006	13
	- Neonatal tetanus	1	...	...	...	...	...	2006	13
	- Pertussis (whooping cough)	53	...	...	...	...	...	2008	13
	- Poliomyelitis	0	0	0	...	...	...	2008	13
	- Rubella	0	0	0	...	...	...	2006	13
	- Total Tetanus	4	...	...	...	...	...	2006	13

	INDICATORS		DATA: Number	DATA: Number of beds	Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		...			
37	Health infrastructure					
	Public health facilities	- General hospitals	2	177 [i]	2005	16
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	6	55	2004	17
		- Primary health care centres	19	0	2005	17
	Private health facilities	- Hospitals	1	21	2004	17
		- Outpatient clinics	...	...		

	INDICATORS	DATA	Year	Source
	Health care financing			
38	Total health expenditure			
	- amount (in million US$)	27.10 [a]	2007	18
	- total expenditure on health as % of GDP	5.40	2007	18
	- per capita total expenditure on health (in US$)	144.92 [a]	2007	18
	Government expenditure on health			
	- amount (in million US$)	22.90	2007	18
	- general government expenditure on health as % of total expenditure on health	84.51 [a]	2007	18
	- general government expenditure on health as % of total general government expenditure	10.50	2007	18
	External source of government health expenditure			
	- external resources for health as % of general government expenditure on health	5.16 [a]	2006	18
	Private health expenditure			
	- private expenditure on health as % of total expenditure on health	15.50 [a]	2007	18
	Exchange rate in US$ of local currency is: 1 US$ =	2.62	2007	18
39	Health insurance coverage as % of total population	...		

	INDICATOR		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
40	Human resources for health										
	Physicians	- Number	50	33	17	...	...	...	...	2005	19
		- Ratio per 1000 population	2.74	...	...	...	...	...	...	2005	19
	Dentists	- Number	6	3	3					2005	20
		- Ratio per 1000 population	0.33	...	...	...	...	...	...	2005	20
	Pharmacists	- Number	3	3	0	...	...	...	...	2005	21
		- Ratio per 1000 population	0.16	0.16	0.00	...	...	...	...	2005	21
	Nurses	- Number	136	...	...	...	...	...	...	2005	22
		- Ratio per 1000 population	7.47	...	...	...	...	...	...	2005	16
	Midwives	- Number	37	...	...	...	...	...	...	2005	16
		- Ratio per 1000 population	2.03	...	...	...	...	...	...	2005	16
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	Annual number of graduates	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	20.40 [j]	18.20 [j]	22.90 [j]	2006	3
45	Under-five mortality rate (per 1000 live births)	13.00	...	...	2003-2004	23
46	Proportion of 1 year-old children immunised against measles	45.00	...	...	2008	13
47	Maternal mortality ratio (per 100 000 live births)	3.00 [k]			2005-06	7
48	Proportion of births attended by skilled health personnel	100.00			2004	24
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	9.00			2004	24
	- Percentage of deliveries in health facilities (as % of total deliveries)	91.00			2004	24
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	100.00			2004	24
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults	...	...	...		
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	...	...	...		
57	Malaria death rate per 100 000 population	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	25.00	...	...	2007	13
61	Tuberculosis death rate per 100 000 population	3.00	...	...	2007	13
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	80.00	...	...	2006	13
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	91.00	...	...	2005	13
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	88.00	90.00	87.00	2006	22
65	Proportion of population using an improved sanitation facility	100.00	100.00	100.00	2006	22
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
est	Estimate
a	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
b	Figure refers to literacy rate in Samoan language of persons aged 15-24 years
c	Computed using the exchange rate (NCU per US$) provided by the WHO-National Health Accounts
d	Figure refers to deaths due to heart problems (80), diabetes/hypertension (46) and stroke/tuaula (51)
e	Figure refers to deaths caused by stroke/tuaula
f	Figure refers to deaths caused by hypertension/diabetes
g	Figure refers to registered patients
h	Data refer to a year or period other than that specified, differ from the standard definition or refer to only part of a country
i	Figure includes 157 beds in Tupua Tamasese Meaole Hospital, and 20 beds in Maliettoa Tanumafili II Hospital
j	Figure derived from total number of children born to women aged 15-49 and number of live births in the 12 months preceding the 2006 census
k	Figure refers to hospital reported MMR
l	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

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SINGAPORE

1. CONTEXT

1.1 Demographics

Singapore is a small country with a total land area of 710 square kilometres. The total population is about 4.8 million, with a resident population of 3.6 million in 2008. While the population is relatively young, with only 8.7% of the resident population aged 65 and over, the proportion of residents aged 65 and over is projected to increase to 19% by 2030.

In 2007, life expectancy at birth for males was 78.4 years and 83.2 years for females. The crude birth rate for 2008 was 10.3 per 1000 resident population and the crude death rate was 4.4 per 1000 resident population. The total fertility rate per resident female is 1.3. The infant mortality rate is very low, at 2.1 per 1000 resident live births.

1.2 Political situation

Singapore is a parliamentary republic that obtained independence from Malaysia on 9 August 1965. The Constitution was established on 3 June 1959 and amended in 1965 (based on the pre-independence State of Singapore Constitution). The legal system is based on English common law.

The head of state is President S R Nathan (since 1 September 1999), the head of government is Prime Minister Lee Hsien Loong (since 12 August 2004), and the Deputy Prime Ministers are S Jayakumar (since 12 August 2004), and Wong Kan Seng (since 1 September 2005). The Cabinet is appointed by the President and is responsible to the Parliament. The President is elected by popular vote for a six-year term. President Sellapan Ramanathan was re-elected for his second term in August 2005.

The legislative branch is unicameral parliament (84 seats; members elected by popular vote to serve five-year terms). The judicial branch has a supreme court headed by the Chief Justice who is appointed by the President on the advice of the Prime Minister.

1.3 Socioeconomic situation

Singapore is characterized by a highly developed and successful free-market economy. It has a very open and corruption-free business environment. With trade 3.6 times the size of gross domestic product (GDP), external demand is the main driver of the economy. The Singapore economy grew by 7.7% in 2007. Per capita gross domestic product amounted to US$ 37 597 in 2008.

Singapore continues to position itself as a vibrant global city and a hub of talent, enterprise and innovation in order to succeed in a globalized world.

1.4 Risks, vulnerabilities and hazards

Singapore suffers from few physical hazards. The island city-state is protected from typhoons and monsoons by neighbouring landmasses. Being a small country, Singapore's key challenge arises from its size and limited natural resources. As such, human resources are its key strength and great emphasis is given to the development of its population. Singapore is one of the world's most open economies, highly dependent on the foreign investment, trade and health of other economies. This openness, coupled with a high population density, makes Singapore particularly vulnerable to outbreaks of infectious diseases, such as sever acute respiratory syndrome (SARS).

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Over previous decades, national efforts to combat traditional and vaccine-preventable communicable diseases have achieved great success. However, the SARS and Nipah virus outbreaks highlighted the regional vulnerability to new and emerging infectious diseases; the lessons learnt from the global SARS epidemic have been applied to enhance surveillance and outbreak response for endemics, as well as emerging and re-emerging infectious diseases.

The effective implementation of the childhood immunization programme against major vaccine-preventable diseases has contributed a significant reduction in their incidence. The incidence of acute hepatitis B showed a rapid decline from 9.5 per 100 000 in 1985 to 1.7 per 100 000 population in 2007, and no acute hepatitis B case has been reported in children below 15 years of age since 1998. Similarly, the incidence of measles was 0.3 per 100 000 in 2007, a decline from 2.3 per 100 000 population in 2004. Despite being in a region endemic for malaria, Singapore has maintained the malaria-free status accorded by the WHO since 1982. The incidence of malaria was 3.1 per 100 000 population in 2008, with the majority of cases imported from endemic countries.

Chronic infectious diseases, such as tuberculosis and HIV/AIDS, are still considered public health problems. The morbidity rate for HIV/AIDS increased steadily from 0.8 per million in 1985 to 117.8 per million in 2007. After a rapid decline in TB incidence during the period from 1960 to 1987, the incidence rate has been stable at a low level. The TB incidence rate (all types) was 27 per 100 000 in 2007, a decline from 40 per 100 000 in 2004.

Noncommunicable diseases, like cancer, heart disease and cerebrovascular disease, remain the leading causes of death, together accounting for 58% of all deaths. This is in contrast to the 1950s, when infectious diseases like tuberculosis featured among the leading causes of death.

National representative population-based health surveys showed that the prevalence of chronic diseases, such as diabetes mellitus and hypertension, and health risk factors, such as smoking, physical inactivity, obesity and high blood cholesterol, declined between 1992 and 2004. The age-standardized prevalence of diabetes mellitus fell from 10% to 8%, and the percentage of the population smoking declined from 18% to 14%. The age-standardized prevalence of high blood cholesterol also dropped, from 21% to 18%, and the proportion of Singaporeans engaging in regular physical activity rose from 14% to 22.5%. The age-standardized prevalence of hypertension stabilized at 24%, but that of obesity rose from 5% to 7%. Table 1 shows the trends in the prevalence of diabetes mellitus, hypertension and health risk factors between 1992 and 2004, or 2007 where available.

Table 1: Prevalence of risk factors for cardiovascular diseases, 1992, 1998, 2004 and 2007

Risk factor#	Prevalence	1992	1998	2004	2007
Diabetes mellitus [plasma glucose 2 hours post-OGTT ≥ 11.1 mmol/l]	Crude Age-standardized	8.6% 10.0%	9.0% 9.5%	8.2% 7.8%	… …
Hypertension [systolic pressure ≥ 140 mmHg or diastolic pressure ≥ 90 mmHg]	Crude Age-standardized	22.2% 24.0%	27.3% 28.0%	24.9% 24.0%	… …
High blood cholesterol [Total cholesterol ≥ 6.2 mmol/l]	Crude Age-standardized	19.4% 21.4%	25.4% 26.0%	18.7% 18.1%	… …
Obesity [BMI ≥ 30 kg/m²]	Crude Age-standardized	5.1% 5.3%	6.0% 6.2%	6.9% 6.8%	… …
Cigarette smoking [smoked cigarettes at least once a day]	Crude Age-standardized	18.3% 17.8%	15.2% 15.0%	12.6% 12.5%	13.6% 14.2%
Physical activity [exercised ≥ 20 minutes for ≥ 3 days per week]	Crude Age-standardized	13.6% 13.5%	16.8% 17.0%	24.9% 25.0%	23.6% 22.5%

Risk factor for age group 18-69, except for hypertension, which is for age group 30-69

Sources: National Health Survey 1992, 1998 and 2004; National Health Surveillance Survey 2007

2.2 Outbreaks of communicable diseases

To prevent the introduction and spread of infectious diseases with outbreak potential, the Ministry of Health maintains a comprehensive and well-established system of disease surveillance and control, involving the epidemiological investigation of specific notifiable diseases under the Infectious Diseases Act, as well as some emerging infectious diseases of public health importance. In the control of vectorborne diseases, such as dengue and malaria, the Ministry works closely with the National Environment Agency, which is responsible for eliminating the vector through larval-source-reduction activities, environmental controls, public education and community mobilization.

2.3 Leading causes of mortality and morbidity

Cancer has been the leading cause of death since 1991. In 2008, it accounted for 30% of all deaths. Men have a much higher cancer death rate than women, but death rates for both genders have been declining slowly since 1995. In 2008, the age-standardized death rates for men and women were 144 and 93 per 100 000 resident population, respectively. The cancer incidence rate in men has slowly declined since the early 1980s, due mainly to declines in lung, stomach, liver, nasopharyngeal and oesophageal cancers. Of note is the fact that colorectal and prostate cancers are increasing in men. The cancer incidence rate in women has increased, due mainly to increases in breast and colorectal cancers, despite declines in cervical, stomach, liver and oesophageal cancers. In the five-year period from 2003 to 2007, the five most common cancers were colorectal, lung, prostate, liver and stomach in men, and cancers of the breast, colorectum, lung, corpus uteri and ovary in women.

Heart diseases constitute the second most common cause of death. Coronary heart disease death rates have shown consistent declines over the past 15 years, with men having almost twice the death rates of women. The difference in rates has remained constant over the years. In 2008, the age-standardized death rate for men was 105 per 100 000 resident population, compared with 56 for women. The incidence of acute myocardial infarction events among adults has generally decreased since 1990. The incidence rate for men is about twice that for women; in 2007, the age-standardized incidence rate for men was 179 per 100 000 resident population, compared with 79 for women.

Stroke has been among the leading causes of mortality since 1970. In 2008, it was the fourth leading cause of death, accounting for 9% of all deaths. Nonetheless, death rates for both genders have fallen

noticeably over the years. In 2008, the age-standardized death rates from stroke for men and women were 36 and 31 per 100 000 resident population, respectively.

2.4 Maternal, child and infant diseases

The number of maternal deaths declined sharply from 86 deaths in 1950 to 12 deaths in 1975, and has dropped further to less than eight deaths per year since. There were two maternal deaths in 2007. The corresponding maternal mortality ratio fell in tandem from 180 per 100 000 live births and stillbirths in 1950 to 30 in 1975, and has remained at a low of between 10 and 20 since then. The maternal mortality ratio was 7.6 per 100 000 live births in 2007.

The infant mortality rate also fell sharply from 82.2 per 1000 live births in 1950 to 6.6 in 1990, and has continued to drop steadily since. The rate was 2.1 in 2007. The main causes of infant death are perinatal conditions, congenital anomalies and pneumonia.

2.5 Burden of disease

The growing demand for health services in spite of limited resources has always been a challenge. To cope with this growing demand, careful health policy planning and wise allocation of resources are needed so as to respond to people's health needs. Inadequate information to guide decisions on health policies and resource allocation is one of the obstacles for better policy development. Therefore, the Ministry of Health, in 2004, conducted Singapore's first Burden of Disease (SBoD) study, which provides a comprehensive and detailed assessment of the size and distribution of health problems in the country and was the first local study to use disability-adjusted life years (DALYs) to quantify total disease burden. The Study in general applied the methods developed for the original Global Burden of Disease (GBD) study to data specific to Singapore to compute DALYs. DALYs stratified by gender and age group were calculated for more than 130 specific health conditions for the resident population for the year 2004.

More than 360 thousand years of 'healthy' life (that is DALYs) were lost due to premature deaths and ill-health in Singapore in 2004. This translates to 104 DALYs lost per 1000 residents or, in other words, an average probability of 0.104 of losing health due to illness or death in the population. Cardiovascular diseases and cancers were the leading causes of disease and injury burden, accounting for 38% of total DALYs. More than fourth-fifths (83%) of that burden was due to mortality. Ischaemic heart disease and stroke dominated the burden of cardiovascular diseases. Lung, colorectal and breast cancers were the top specific causes of cancer.

Mental disorders, diabetes, and neurological and sense disorders were the next largest contributors, together accounting for another 33% of total DALYs. Less than one-tenth (7%) of the burden from those groups was due to mortality. Anxiety and depression, schizophrenia and autism spectrum disorders were the main specific causes of mental disorder. The leading neurological and sense disorder conditions were Alzheimer's and other dementias, adult-onset hearing loss and vision disorders.

The distribution of DALYs between men and women was approximately equal (52% vs 48%). The nonfatal burden was responsible for 47% of the males' total burden and 57% of the females' total burden. For musculoskeletal diseases and mental disorders, DALYs were notably higher in women. Conversely, men experienced higher burden for injuries, chronic respiratory diseases and cardiovascular diseases.

The five leading specific causes of disease in men were ischaemic heart disease (12.5%), diabetes (10.4%), stroke (7.2%), lung cancer (4.8%) and anxiety and depression (3.9%). The five leading specific causes in women were diabetes (11.4%), anxiety and depression (8.5%), ischaemic heart disease (7.8%), stroke (6.9%), and breast cancer (5.4%).

Ischaemic heart disease (16.1%), followed by stroke (11.6%), diabetes (8.2%), Alzheimer's and other dementias (6.5%), and lung cancer (5.3%) were the top five leading causes of DALYs among the elderly aged 65 years and above.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The vision of the Ministry of Health is to develop the world's most cost-effective health care system to keep Singaporeans in good health. Its mission is to promote good health and reduce illness, ensure access to good and affordable health care, and pursue medical excellence. This is to be achieved through three strategies:

- Promote good health and reduce illness
- Ensure access to good and affordable health care
- Pursue medical excellence

3.2 Organization of health services and delivery systems

Health services are provided through three cooperating ministries, as well as the private sector.

The Ministry of Health is responsible for providing preventive, curative and rehabilitative health services. The Ministry formulates national health policies, coordinates the development and planning of the private and public health sectors, and regulates health standards.

The Ministry of Environment manages water resources and the supply of drinking water to the nation. It is responsible for weather forecasting services; environmental and public health services, such as collection and treatment of used water, pollution and toxic chemicals and poisons; control of vectors that could spread diseases; and the hygienic preparation of food. The Ministry also licenses food-stall proprietors and looks after all public markets and food centres, public toilets and public cemeteries and crematoria.

The Ministry of Manpower is responsible for the health, safety and welfare of employed persons. The Ministry enforces requirements on employment conditions under the Employment Act, has provisions in the Workplace Safety and Health Act to safeguard the health and safety of the workforce, and administers the Workmen's Compensation Act to ensure fair compensation for persons with work-related injuries and diseases.

There is a dual system of health care delivery. The public system is managed by the Government, while the private system is provided by private hospitals and general practitioners. The health care delivery system comprises primary health care provision at outpatient polyclinics and private medical practitioners' clinics, and secondary and tertiary specialist care in public and private hospitals. Eighty per cent of primary health care services are provided by private practitioners, while government polyclinics provide the remainder. For hospital care, the ratios are reversed, with 80% provided by the public sector and the remainder by the private sector.

In 1999, the public health care delivery system was reorganized into two vertically integrated delivery networks, the National Healthcare Group (NHG) and Singapore Health Services (SHS). These two integrated networks enable comprehensive, yet affordable quality health care services through cooperation and collaboration between public health care establishments. The clustering of the health care delivery system encourages cooperation amongst the institutions within the cluster, fosters vertical integration of services and enhances synergy and economies of scale. The friendly competition between the two clusters encourages them to innovate and improve the quality of their care while ensuring that medical costs remain affordable.

Patients are free to choose their health care providers within the dual health care delivery system, and can walk in for a consultation at any private clinic or any government polyclinic. For emergency services, patients can access the 24-hour accident and emergency departments located in government hospitals. The Singapore Civil Defence Force runs an emergency ambulance service to transport accident and trauma cases and medical emergencies to the acute general hospitals.

Primary health care involves the provision of primary medical treatment, preventive health care and health education. Primary health care is provided through an island network of 17 outpatient polyclinics and over 1400 private medical practitioners' clinics. Each polyclinic is an affordable, subsidized one-stop health centre, providing outpatient medical care, follow-up of patients discharged from hospital, immunization, health screening and education, investigative facilities and pharmacy services. The needy elderly receive further help through the Primary Care Partnership Scheme (PCPS). PCPS is most helpful for those who cannot travel to polyclinics. The private clinics are located in close proximity to population centres in the city, housing estates and satellite towns. The average outpatient consultation fee is between S$ 10 (US$ 6.00) and S$15 (US$ 9.00), well within the means of Singaporeans. At government polyclinics, Singapore citizens aged 65 and above, children up to 18 years of age and all schoolchildren are given a discount of up to 57% on their consultation and treatment fees. Other Singapore citizens are given a 50% discount.

There are about 11 547 hospital beds in the 29 public and private hospitals and speciality centres, giving a ratio of 3.2 beds per 1000 population; 72.5% of the beds are in the 13 public-sector, specialty centres and hospitals, each with between 185 and 2430 beds. The 16 private-sector hospitals are smaller, with a capacity of between 16 and 505 beds. The Government's role as the dominant provider of secondary and tertiary care allows it to manage the supply of hospital beds, the adoption of high-tech/ high-cost medicine, and cost increases in the public sector, which serves as a price benchmark for the private sector.

The seven public hospitals comprise five general hospitals, a women's and children's hospital and a psychiatric hospital. The general hospitals provide inpatient and specialist outpatient services, and a 24-hour emergency department. Seventy-five per cent of public hospital beds are heavily subsidized. There are also six national specialty centres for oncology, cardiology, ophthalmology, dermatology, neuroscience and dentistry. Tertiary specialist care in the areas of cardiology, renal medicine, haematology, neurology, oncology, radiotherapy, plastic and reconstructive surgery, paediatric surgery, neurosurgery, cardiothoracic surgery and transplant surgery is centralized in two of the larger general hospitals, the Singapore General Hospital and the National University Hospital. The private hospitals have similar specialist disciplines and comparable facilities.

The Government has restructured all its 13 hospitals and specialty institutes into private companies wholly owned by the Government and managed as not-for-profit organizations. This has granted the public hospitals management autonomy and flexibility to respond more promptly to the needs of their patients. In the process, greater financial discipline and accountability have been introduced. Unlike private hospitals, the restructured public hospitals receive an annual government subsidy for the provision of subsidized patient care, and are subject to broad government policy guidance through the Ministry of Health. The Government has also introduced low-cost community hospitals for intermediate health care for the convalescent sick and aged who do not require the more expensive care provided by the acute general hospitals.

Support services for the hospital and primary health care programmes include forensic pathology, pharmaceutical services and the blood transfusion service. Except for forensic pathology and the blood transfusion service, which are centralized in the Ministry of Health, most of the other services can be found in both the public and private sectors.

Dental care begins with preventive dentistry promoted through the Health Promotion Board. The Board targets students through a network of 200 static clinics located in schools, as well as 30 mobile dental clinics. This, plus fluoridation of potable water and availability of fluoridated toothpaste, has greatly diminished dental decay and tooth loss. Public dental services are available in some polyclinics and hospitals, and in the National Dental Centre.

3.3 Health policy, planning and regulatory framework

The Singapore health care philosophy emphasizes the building of a healthy population through preventive health care programmes and the promotion of healthy living. Singaporeans are encouraged, through the public health education programme, to adopt healthy lifestyles and be responsible for their health, and are made aware of the adverse consequences of harmful habits like smoking, alcohol consumption, bad diet and sedentary lifestyles. The child immunization programme, which targets infectious diseases like

tuberculosis, poliomyelitis, diphtheria, whooping cough, tetanus, measles, mumps, rubella and hepatitis B, is offered at government polyclinics, as well as private primary health care clinics. Health screening programmes have been introduced for the early detection of common ailments, such as cancer, heart disease, hypertension and diabetes mellitus. These are available in both primary and secondary care settings.

The Government ensures that good and affordable basic medical services are made available to all Singaporeans through heavily subsidized medical services at public hospitals and government clinics. The basic medical package includes evidence-based medical practices, and is delivered cost-effectively by trained personnel. Experimental, non-evidence-based treatments, as well as cosmetic and aesthetic treatments may be excluded.

The health care regulatory framework consists mainly of two parties; the regulator (comprising the Ministry of Health along with its statutory boards) and the regulated (comprising public and private providers). All hospitals, clinics, clinical laboratories and nursing homes are required to maintain a good standard of medical services through licensing by the Ministry. Health care professionals are self-regulated by their relevant professional bodies:

- Singapore Medical Council,
- Singapore Dental Council,
- Singapore Nursing Board, and the
- Singapore Pharmacy Council, and the
- Traditional Chinese Medicine Practitioners Board
- Optometrists and Opticians Board

In addition, health-related products, such as medicines and medical devices, are regulated by the Health Sciences Authority.

3.4 Health care financing

In FY2007, Singapore spent about S$ 9.4 billion (US$ 6.2 billion) or 3.7% of GDP on health care. Out of this, the Government expended S$2.2 billion (US$1.5 billion) or 0.8% of GDP on health services.

The philosophy of Singapore's public health care delivery system is one of strong government support combined with individual responsibility and community support. The Government heavily subsidizes public health care for Singaporeans. At the same time, patients are expected to co-pay their medical expenses. The level of co-payment varies according to the level of non-medical service delivered to the customer, for example the availability of air-conditioning and the physical ward accommodation. To help Singaporeans to pay for their medical expenses, the Government has put in place a financing framework, which consists of Medisave, MediShield, ElderShield and Medifund.

Individuals are encouraged to take responsibility for their own health by saving for their medical expenses. Medisave is a national savings scheme that helps individuals put aside part of their income into Medisave accounts to meet their personal or immediate family's hospitalization expenses. Under the Medisave scheme, every working person is required by law to save 6.5%-9% of his or her income in a personal Medisave account.

In 2006, the Ministry of Health initiated the Medisave for Chronic Disease Management Programme, a coordinated, nationwide effort to transform care for the four most common chronic illnesses. Participating medical institutions include all public hospitals and polyclinics, as well as about half of the 1400 private primary care clinics in the country. In 2007, the programme was further extended to cover asthma and chronic obstructive pulmonary disease (COPD). The programme seeks to improve chronic disease care through two chief avenues: (1) enhancing access and (2) improving care. By liberalizing the use of Medisave to cover outpatient treatments for the four diseases (enhancing access) and implementing evidence-based disease management programmes, together with clinical quality improvement efforts (improving care), complications arising from these chronic diseases can be better prevented. Correspondingly, patients will be healthier and the risks of expensive hospitalization and potential disabilities will be reduced. The programme is supported by the participation of medical and allied health

professionals in the public and private sectors, enhancements to IT systems to improve sharing of essential medical data, and education tools to improve patients' ability to manage their conditions.

MediShield is a low-cost, catastrophic illness insurance scheme designed to help members meet the medical expenses from major or prolonged illnesses, for which their Medisave balance would not be sufficient. Annual premiums for MediShield can be paid from the individual's Medisave account. There are also private supplementary insurance products offering additional coverage. These are integrated with MediShield to provide a national risk pool for basic coverage.

Medifund is an endowment fund set up by the Government as a safety net to help poor Singaporeans pay for their medical care. Medifund is meant to be an avenue of last resort for patients who, despite heavy Government subsidies, are unable to pay for their medical expenses. Therefore, no Singaporeans are denied access into the health care system or turned away by the public hospitals because of their inability to pay. In 2007, part of Medifund was specifically set aside to be dedicated to needy, elderly patients (65 years and above).

ElderShield is an affordable, severe-disability insurance scheme, designed to provide Singaporeans with basic financial protection against expenses required in the event of severe disability, especially in old age. Introduced in June 2002, it was further reformed in 2007 to improve its benefits, and private insurers are now allowed to provide supplementary products with higher coverage.

Public sector health services are provided to cater to the lower income groups who cannot afford the private sector charges, and also to set the benchmark for the private sector on professional standards and charges. To support the latter objective, the Government requires public hospitals to publish basic consultation and ward charges for greater price transparency.

The Ministry of Health also publishes hospital pricing data and bill sizes for common conditions on its website.

3.5 Human resources for health

In 2008, Singapore had 7841 doctors in its health care delivery system, giving a doctor-to-population ratio of 1:620. Thirty-eight per cent of the doctors were trained specialists.

There were 1484 dentists, giving a dentist-to-total population ratio of 1:3235 in 2008. A new register for oral health therapists was started in 2008. There were 243 oral health therapists, giving an oral health therapist-to-total population ratio of 1:19753 in 2008. The Singapore Dental Council also expanded its list of registerable basic dental degrees in 2008 to enable more overseas-trained dentists to practise.

Singapore had 1546 registered pharmacists in 2008, giving a pharmacist-to-population ratio of 1:3105. The number of pharmacists is expected to increase to meet demand due to growing health care needs and anticipated growth in the biomedical and pharmaceutical sectors.

In 2008, Singapore had 24 209 nurses and 322 registered midwives, giving a nurse-to-population ratio of 1:198 or five nurses per 1000 population. Over the next five years, the population of nurses is expected to grow by 40% to meet expanding health care demands.

As the population grows and patient expectations rise, there is a need for greater investment in human resources for health. Besides increasing the number of health care professionals, the skills of the workforce must also change as chronic diseases become more prevalent with the ageing of the population. Efforts are being made to increase local training capacity and to facilitate mid-career conversions, as well as the movement of overseas-trained health care professionals to Singapore. For example,

- The intake of medical students was recently increased to 260, while the number of overseas medical schools recognized by the Singapore Medical Council has increased steadily.

- The Duke-NUS Graduate Medical School, which offers a postgraduate Doctoral Medicine (MD) programme, began their inaugural academic year in 2007 with a batch of 26 students, followed by an increased intake of 48 students in 2008.
- The intake of nursing students has also expanded over the years, with the Diploma in Nursing being offered in two polytechnics. A third Diploma in Nursing course offered by a private college was accredited by the Singapore Nursing Board in 2008. In 2006, the National University of Singapore introduced the Bachelor of Science (Nursing) programme, a full-time undergraduate degree programme and the numbers will be increased over the years. To meet the needs of an ageing population, an advanced diploma nursing course in palliative care is in the pipeline.
- In 2007, the Professional Conversion Programme was also expanded to help mid-career entrants pursue a career in allied health.

To prepare the workforce for the changing skills required to look after an ageing population, efforts have also been made to enhance their capabilities. For example,

- The Singapore Nursing Board implemented an Advanced Practice Nurse Register in 2006.
- Qualifying examinations were also implemented in the same year to ensure that foreign allied health professionals in physiotherapy, occupational therapy, diagnostic radiography and radiation therapy have the required knowledge and skills to provide good care to patients.
- The Ministry also offers post-graduate scholarships for health care professionals to further their training locally or overseas.

Policy efforts will continue to be geared towards ensuring adequate health care manpower to meet the evolving health care demands of the growing and rapidly ageing population.

3.6 Partnerships

Harnessing and forging strong partnerships is important for the attainment of national health goals. The Ministry of Health maintains strong partnerships and strategic alliances with voluntary welfare organizations and charities involved in health to ensure that their activities are aligned with the national health care framework. The Ministry of Health continues to work with health care institutions, organizations, professional associations, private general practitioners and other partners to develop health services in an integrated manner throughout the continuum of primary, intermediate and long-term care services.

3.7 Challenges to health system strengthening

Singapore is facing an ageing population. It is projected that the number of residents aged 65 years or older will increase from the current 8.5% to 19% by 2030, and careful planning is needed to ensure that this population is provided for. To this end, the Government has set up a Ministerial Committee on Aging to spearhead a whole-of-Government response to the opportunities and challenges presented by the ageing population. The Government aims to achieve its vision of successful ageing for Singapore by creating an environment where Singaporeans can look forward to leading healthy, active and productive lives as they grow old.

The health workforce also faces the challenges of an ageing population, as well as new technologies, lifestyle medicine and higher demands for good medical care. There are shortages of professional staff that will have to be filled. At the same time, the growth of the private sector may lead to higher attrition from the public sector. High quality care will be delivered by health care professionals who are trained in an holistic way to meet the required standards of care in a changing, more sophisticated population. The challenge is to ensure adequate numbers of such health care professionals are trained in different disciplines, especially in those health care disciplines that are currently undersubscribed.

Chronic diseases are another area of concern. An estimated one million Singaporeans suffer from four major chronic diseases: diabetes, hypertension, lipid disorder and stroke, and the numbers are expected to rise with the ageing population base.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Ministry of Health website
Features	:	Information on health policies, facilities and statistics
Web address	:	www.moh.gov.sg

Title 2	:	Singapore Department of Statistics website
Features	:	Information on general Singapore statistics
Web address	:	www.singstat.gov.sg

5. ADDRESSES

MINISTRY OF HEALTH

Office Address	:	Ministry of Health, College of Medicine Building, 16 College Road, Singapore 169854
Official Email Address	:	moh_info@moh..gov.sg
Telephone	:	(65) 6325 9220
Fax	:	(65) 6224 1677
Office Hours	:	8.30am – 5.30pm
Website	:	http://www.moh.gov.sg

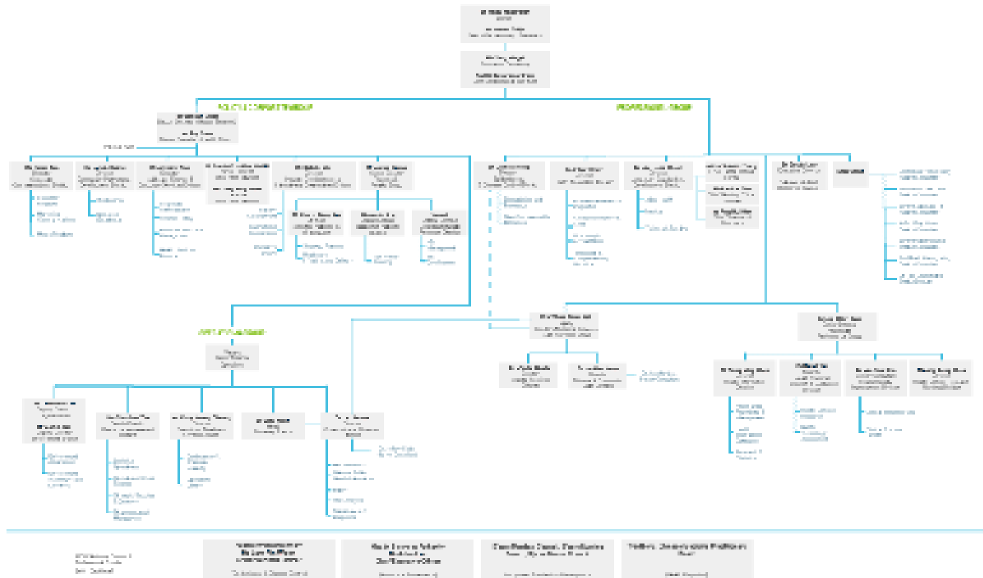
WHO REPRESENTATIVE IN MALAYSIA, BRUNEI DARUSSALAM AND SINGAPORE

Office Address	:	1st Floor, Wisma UN, Block C Komplek Pejabat Damansara Jalan Dungun, Damansara Heights 50490 Kuala Lumpur, Malaysia
Postal Address	:	P. O. Box 12550 50782 Kuala Lumpur, Malaysia
Official Email Address	:	who@maa.wpro.who.int
Telephone	:	(603) 209 39908 / 2092 1184
Fax	:	(603) 209 37446

6. ORGANIZATIONAL CHART: Ministry of Health

MINISTRY OF HEALTH
SINGAPORE

ORGANISATION CHART



Click to view the complete Organisation Chart

SINGAPORE — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	**Total**	**Male**	**Female**		
1	Area (1 000 km2)	0.71			2008p	1
2	Estimated population ('000s)	3642.70 [a]	…	…	2008p	1
3	Annual population growth rate (%)	1.70 [a]	…	…	2008p	1
4	Percentage of population					
	- 0–4 years	…	…	…		
	- 5–14 years	18.43 [b]	…	…	2008p	1
	- 65 years and above	8.70	…	…	2008p	1
5	Urban population (%)	100.00	…	…	2007 est	2
6	Crude birth rate (per 1000 population)	10.30 [a]	…	…	2008p	3
7	Crude death rate (per 1000 population)	4.40 [a]	…	…	2008p	3
8	Rate of natural increase of population (% per annum)	0.59 [a]	…	…	2008p	3
9	Life expectancy (years)					
	- at birth	80.60 [a]	78.40 [a]	83.20 [a]	2007	1
	- Healthy Life Expectancy (HALE) at age 60	19.10 [c]	17.30 [c]	20.60 [c]	2007	4
10	Total fertility rate (women aged 15–49 years)	1.29 [d]			2007	1
	Socioeconomic indicators					
11	Adult literacy rate (%)	96.00 [e]	…	…	2008p	1
12	Per capita GDP at current market prices (US$)	37 597.00			2008p	1
13	Rate of growth of per capita GDP (%)	3.33			2008p	1
14	Human development index	0.92			2006	5
	Environmental indicators	**Total**	**Urban**	**Rural**		
15	Proportion of vehicles using unleaded gasoline (%)	…	…	…		
16	Health care waste generation (metric tons per year)	…	…	…		

	Communicable and noncommunicable diseases	**Number of cases**			**Number of deaths**				
17	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral								
	- Type A	107	76	31	0	0	0	2008	6
	- Type B	87	72	15	0	0	0	2008	6
	- Type C	13	6	7	0	0	0	2008	6
	- Type E	54	42	12	0	0	0	2008	6
	- Unspecified	0	0	0	0	0	0	2008	6
	Cholera	1	1	0	0	0	0	2008	6
	Dengue/DHF	7031	4287	2744	7	4	3	2008	6
	Encephalitis	40	28	12	0	0	0	2008	6
	Gonorrhoea	2518	2120	398	0	0	0	2008	6
	Leprosy	10	7	3	0	0	0	2008	6
	Malaria	152	133	19	0	0	0	2008	6
	Plague	0	0	0	0	0	0	2008	6
	Syphilis	1141	757	384	0	0	0	2008	6
	Typhoid fever	84	53	31	0	0	0	2008	6

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	8665 [f,g]	4710 [f]	3954 [f]	3	2	1	2007p	6, 7
19	**Diarrhoeal diseases**	...	...	...	...	...	...		
20	**Tuberculosis**								
	- All forms	1394 [l]	968 [l]	426 [l]	80 [l]	65 [l]	15 [l]	2007	6
	- New pulmonary tuberculosis (smear-positive)	507 [a]	380 [a]	127 [a]	NA	NA	NA	2007	6
21	**Cancers**								
	All cancers (malignant neoplasms only)	9036 [h]	4393 [h]	4643 [h]	4745	2622	2 123	2007	7, 8
	- Breast	1363 [h]	3 [h]	1360 [h]	359	1	358	2007	7, 8
	- Colon and rectum	1455 [h]	780 [h]	675 [h]	718	376	342	2007	7, 8
	- Cervix			202 [h]			83	2007	7, 8
	- Oesophagus	84 [h]	67 [h]	17 [h]	91	75	16	2007	7, 8
	- Leukaemia	239 [h]	135 [h]	105 [h]	126	64	62	2007	7, 8
	- Lip, oral cavity and pharynx	481 [h]	352 [h]	128 [h]	238	193	45	2007	7, 8
	- Liver	450 [h]	340 [h]	110 [h]	440	337	103	2007	7, 8
	- Stomach	452 [h]	275 [h]	177 [h]	334	194	140	2007	7, 8
	- Trachea, bronchus, and lung	1139 [h]	766 [h]	374 [h]	1 071	715	356	2007	7, 8
22	**Circulatory**								
	All circulatory system diseases	...	...	...	5835	3239	2596	2007	7
	- Acute myocardial infarction	5992 [h]	3885 [h]	2107 [h]	1574	907	667	2007	7, 8
	- Cerebrovascular diseases	5401 [h]	2970 [h]	2431 [h]	1490	686	804	2007	7, 8
	- Hypertension	298 000 [i]	153 000 [i]	145 000 [i]	435	245	190	2007	7
	- Ischaemic heart disease	14 770	10 621	4149	3394	2022	1372	C: 2008p D: 2007	6, 7
	- Rheumatic fever and rheumatic heart diseases	...	...	...	22	9	13	2007	7
23	**Diabetes mellitus**	115 000 [i]	63 000 [i]	52 000 [i]	609	262	347	2007	7, 9
24	**Mental disorders**	12 466 [f,g]	6671 [f]	5795 [f]	4	1	3	2007p	6, 7
25	**Injuries**								
	All types	...	...	...	1036 [h]	712	321	2007	7
	- Homicide and violence	...	...	...	20	15	5	2007	7
	- Motor and other vehicular accidents	...	...	...	228	181	47	2007	7
	- Occupational injuries	...	...	...	...	...	...		
	- Suicide	...	...	...	374	215	159	2007	7
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Accidents, poisoning & violence (ICD9: 800-999)	38 651	22 825	15 826	845.0 [a]	...	...	2008p	6
	2. Cancer (ICD9: 140-208)	22 555	11 195	11 360	491.7 [a]	...	...	2008p	6
	3. Ischemic heart disease (ICD9: 410 - 414)	14 770	10 621	4149	344.0 [a]	...	...	2008p	6
	4. Pneumonia (ICD9: 480 - 486)	10 584 [g]	5377	5205	271.8 [a]	...	...	2008p	6
	5. Obstetric complications affecting fetus or newborn (ICD9: 761 - 763)	10 546	5832	4714	264.8 [a]	...	...	2008p	6
	6. Chronic obstructive lung disease (ICD9: 490 - 493, 496)	9568	5202	4366	244.1 [a]	...	...	2008p	6
	7. Other heart diseases (ICD9: 393 - 398, 402, 415 - 429)	9319	5667	3652	244.5 [a]	...	...	2008p	6
	8. Cerebrovascular disease (ICD9: 430 - 438)	8852	4978	3874	223.0 [a]	...	...	2008p	6
	9. Intestinal infectious infections (ICD9: 001 - 009)	8191	5237	2954	194.5 [a]	...	...	2008p	6
	10. Complications related to pregnancy (ICD9: 640 - 648)	7620		7620	184.7 [a]		...	2008p	6

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	Total	Male	Female	Total	Male	Female		
	1. Cancer (ICD9: 140-208)	5038	2793	2245	131.36 [a]	…	…	2008p	7
	2. Ischemic heart disease (ICD9: 410 - 414)	3470	2073	1397	89.93 [a]	…	…	2008p	7
	3. Pneumonia (ICD9: 480 - 486)	2387	1188	1199	62.73 [a]	…	…	2008p	7
	4. Cerebrovascular disease (ICD9: 430 - 438)	1435	650	785	37.72 [a]	…	…	2008p	7
	5. Accidents, poisioning & violence (ICD9: E800-E999)	1006	745	261	21.96 [a]	…	…	2008p	7
	6. Other heart disease(ICD9: 393 - 398, 402, 415 - 429)	691	380	311	17.19 [a]	…	…	2008p	7
	7. Diabetes mellitus (ICD9: 250)	463	190	273	12.52 [a]	…	…	2008p	7
	8. Chronic obstructive lung disease (ICD9: 490 - 493, 496)	435	332	103	11.37 [a]	…	…	2008p	7
	9. Urinary tract infections (ICD9: 599.0)	370	177	193	9.72 [a]	…	…	2008p	7
	10. Nephritis, nephrotic syndrome & nephrosis (ICD9: 580 - 589)	360	111	249	9.72 [a]	…	…	2008p	7
	Maternal, child and infant diseases	Total		Male		Female			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					72.50		2003	10
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					…			
30	**Percentage of pregnant women with anaemia**					…			
31	**Neonatal mortality rate (per 1000 live births)**	1.50		…		…		2008p	3
32	**Percentage of newborn infants weighing at least 2500 g at birth**	90.70		…		…		2007	7
33	**Immunization coverage for infants (%)**								
	- BCG	99.40		…		…		2008	11
	- DTP3	96.60		…		…		2008	11
	- POL3	96.60		…		…		2008	11
	- Hepatitis B III	95.60		…		…		2008	11
		Number of cases			Number of deaths				
34	**Maternal causes**	Total	Male	Female	Total	Male	Female		
	- Abortion			4189 [f]			1	2007p	6, 7
	- Eclampsia			2 [f]			0	2007p	6, 7
	- Haemorrhage			1959 [f]			1	2007p	6, 7
	- Obstructed labour			218 [f]			0	2007p	6, 7
	- Sepsis			11 [f]			0	2007p	6, 7
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	2	0	0	…	…	…	2008	11
	- Diphtheria	0	0	0	…	…	…	2008	6, 11
	- Hib meningitis	1	1	0	…	…	…	2008	6
	- Measles	18	8	10	…	…	…	2008	6, 11
	- Mumps	801	461	340	…	…	…	2008	6, 11
	- Neonatal tetanus	0	0	0	…	…	…	2008	6, 11
	- Pertussis (whooping cough)	33	17	16	…	…	…	2008	6, 11
	- Poliomyelitis	0	0	0	…	…	…	2008	6, 11
	- Rubella	180	108	72	…	…	…	2008	6
	- Total Tetanus	0	0	0	…	…	…	2008	6, 11

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		6		2008	11
37	Health infrastructure					
	Public health facilities	- General hospitals	5	5292	2007	6
		- Specialized hospitals	2	2891	2007	6
		- District/first-level referral hospitals	6	185	2007	6
		- Primary health care centres	19	0	2007	6
	Private health facilities	- Hospitals	16	3179	2007	6
		- Outpatient clinics	...	...		
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)			6190.54	FY2007p	1, 6
	- total expenditure on health as % of GDP			3.70	FY2007p	1, 6
	- per capita total expenditure on health (in US$)			1349.14	FY2007p	1, 6
	Government expenditure on health					
	- amount (in million US$)			1448.96	FY2007p	6
	- general government expenditure on health as % of total expenditure on health			23.40	FY2007p	1, 6
	- general government expenditure on health as % of total general government expenditure			6.70	FY2007p	6, 12
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			NA		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			76.70	FY2007p	1, 6
	Exchange rate in US$ of local currency is: 1 US$ =			1.52	FY2007p	12
39	Health insurance coverage as % of total population			84.00 [j]	2008	6

	INDICATOR		DATA							Year	Source
40	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	7841	...	...	...	...	...	...	2008	13
		- Ratio per 1000 population	1.62	...	...	...	...	...	...	2008	13
	Dentists	- Number	1484	...	...	...	...	...	...	2008	14
		- Ratio per 1000 population	0.31	...	...	...	...	...	...	2008	14
	Pharmacists	- Number	1546	...	...	...	...	...	...	2008	15
		- Ratio per 1000 population	0.32	...	...	...	...	...	...	2008	15
	Nurses	- Number	24 209	...	...	...	...	...	...	2008	16
		- Ratio per 1000 population	4.54	...	...	...	...	...	...	2008	16
	Midwives	- Number	322	...	...	...	...	...	...	2008	16
		- Ratio per 1000 population	0.07	...	...	...	...	...	...	2008	16
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	Annual number of graduates	Physicians	227	...	...	...	...	...	...	2007	17
		Dentists	36	...	...	...	...	...	...	2007	17
		Pharmacists	86	...	...	...	...	...	...	2007	17

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	1524	...	...	...	...	...	...	2007	18, 19
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	14.00	...	...	1995-2003	10
44	Infant mortality rate (per 1000 live births)	2.10 [a]	...	...	2008p	3
45	Under-five mortality rate (per 1000 live births)	3.40	...	...	2008p	3
46	Proportion of 1 year-old children immunised against measles	95.00	...	...	2008	11
47	Maternal mortality ratio (per 100 000 live births)	7.60			2007	7
48	Proportion of births attended by skilled health personnel	...				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	99.74 [k]			2008p	3
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	100.00			2006	6
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults	0.09	0.16	0.02	2008	6
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	3.10	5.30	0.80	2008	6
57	Malaria death rate per 100 000 population	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	27.00	...	...	2007	11
61	Tuberculosis death rate per 100 000 population	3.00	...	...	2007	11
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	96.00	...	...	2007	11
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	70.00	...	...	2006	11
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	100.00	...	...	2007	6
65	Proportion of population using an improved sanitation facility	100.00	...	...	2007	6
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Figure applies or refers to resident population
b	Figure refers to 0-14 years old
c	Figure refers to life expectancy at age 65 among the resident population
d	Figure refers to resident women aged 15-49 years
e	Figure applies to residents aged 15 years and over
f	Figure refers to number of inpatient discharges
g	Totals may not tally due to some reported cases with no gender breakdown
h	Revised figure refers to average of total number of new cases between 2003 and 2007
i	Revised figure refers to number of known cases (told by doctor to have the condition and on medication)
j	Figure refers to MediShield and Integrated Shield plans regulated by the Ministry of Health, as a % of total resident population
k	Figure refers to livebirths
l	Figure refers to new and relapse cases among Singapore residents

Sources:	
1	Statistics Singapore- Key Annual Indicators, Department of Statistics [http://www.singstat.gov.sg/stats/keyind.html#demoind].
2	Urban and Rural Areas 2007. United Nations, Department of Economic and Social Affairs, Population Division. New York 2008. [http:///www.unpopulation.org].
3	Singapore Demographic Bulletin, December 2008. Registry of Births and Deaths, Immigration and Checkpoints Authority.
4	Singapore Disease of Burden Study 2004, Ministry of Health Singapore.
5	United Nations Development Programme (UNDP) 2008. Human Development Indices: a statistical update. New York: UNDP.
	Available from [http://hdr.undp.org/en/media/HDI2008Tables.xls]
6	Ministry of Health Singapore [http://www.moh.gov.sg/mohcorp/default.aspx].
7	Report on Registration of Births and Deaths, 2007. Registry of Births and Deaths, Immigration and Checkpoints Authority.
8	National Disease Registries Office, Health Promotion Board Singapore.
9	National Health Surveillance Survey 2007, Ministry of Health Singapore.
10	Study on Marriage and Procreation, Perception and Policies in Singapore, 2003. Ministry of Community Development and Sports.
11	WHO Regional Office for the Western Pacific, data received from the technical units.
12	Ministry of Finance Singapore [http://app.mof.gov.sg/index.asp].
13	Singapore Medical Council.
14	Singapore Dental Council.
15	Singapore Pharmacy Council.
16	Singapore Nursing Board.
17	National University of Singapore.
18	Nanyang Polytechnic.
19	Institute of Technical Education.

SOLOMON ISLANDS

1. CONTEXT

1.1 Demographics

Solomon Islands is a double-chain archipelago of more than 900 coral atolls located in the south-west Pacific about 1800 kilometres north-east of Australia. Its total land area of 28 370 square kilometres is widely scattered over 1.3 million square kilometres (Exclusive Economic Zone) of the Pacific Ocean, with most of its smaller islands uninhabited.

The population of Solomon Islands was estimated to be 535 007 in 2008. The growing population and its relatively young structure dominate concerns about future development. In 2005, estimated life expectancy at birth was 60.6 years for males and 61.6 years for females. According to the 1999 national population census, 93% of the total population are Melanesians, 4% are Polynesians and 3% are from other ethnic groups. During 2000-2005, the total population is estimated to have increased by about 59 000 persons, and about 42% of the population is below 15 years of age according to United Nations population projections. This demographic trend is creating increasing pressure on infrastructures and jobs, as well as raising growing environmental issues.

1.2 Political situation

The country has continued its peaceful development since 2003 with the help of the Regional Assistance Mission to Solomon Islands (RAMSI). RAMSI comprises soldiers and policemen from Cook Islands, Fiji, New Zealand, Papua New Guinea, Samoa and Tonga, led by the Australian Army and Police. With the restoration of law and order, RAMSI has been scaled back to 302 police officers and 120 soldiers, in addition to civilian technical advisors, since the end of 2004.

Since December 2007, the Prime Minister has been Derek Sikua.

1.3 Socioeconomic situation

Since 2004, the country's economy has shown a positive recovery along with the restoration of law and order. Total government revenue collection was SBD 625 million (around US$ 86 million) during 2005, SBD 75 million (US$ 10 million) more than expected. Contributions to government revenue were derived mainly from export duties on timber and growth in both company and personal income taxation receipts.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Solomon Islands is in a phase of epidemiological transition. Having to deal with both the control of infectious diseases and an increasing incidence of noncommunicable diseases, with very limited resources, poses a major challenge for the Government.

With the dissipation of ethnic conflict during 1999-2003 and with support in 2004 from the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund), the Australian Agency for International Development (AusAID), the World Bank and Rotary International, progress has been made in malaria control. Compared with 2003, 2004 saw a 3.5% reduction and 2005 a 17.7% reduction, in national malaria incidence. Impressive progress was seen in Isabel Province (49% reduction), Choiseul Province (45% reduction) and Western Province (34% reduction) in 2005 compared with 2004. The national malaria goal is to reduce the annual incidence rate to below 80 cases per 1000 population and malaria mortality to less

than 25 cases by 2010. The achievement of these targets is dependent on maintenance of efforts and continuous financial support.

A total of 397 tuberculosis cases were reported by the Central Registry in 2007. The National TB Programme is progressing well with its implementation at both provincial and national levels and is set to achieve an 85% cure rate in the near future (seven out of nine provinces have achieved a more than 85% cure rate).

2.2 Outbreaks of communicable diseases

There was no major disease outbreak in 2004/2005. However, the worldwide threats of avian influenza and HIV/AIDS have resulted in the development of new policies and strategies to strengthen and revitalize disease prevention, control and surveillance, as well as preparedness for action.

2.3 Leading causes of mortality and morbidity

Although infectious diseases are still the major causes of morbidity and mortality, there is some evidence that noncommunicable diseases like cancer (cervical and breast cancers are reported to be the most common, followed by lung cancer), diabetes mellitus, hypertension, tobacco-related diseases and mental illness are increasing.

In 2005, cardiovascular diseases, neoplasms, malaria, respiratory diseases and neonatal causes were major public health problems in terms of mortality.

2.4 Maternal, child and infant diseases

A reduction in childhood mortality and morbidity from diarrhoeal diseases is attributed to the improved status of sanitation, water supply, personal hygiene and breast-feeding. A reduction in mortality due to neonatal causes is attributed to the improved status of maternal/safe motherhood programmes and services, supported by much improved paediatric care and the focus on the integrated management of childhood illness (IMCI) approach.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health and Medical Services' *Corporate Plan for 2006-2008*, based on the gains made during 2004 and 2005, has the following eight priority areas:

- improvement of management and supervision of services;
- improvement of access to quality care;
- management and development of human resources for health care;
- mortality and morbidity reduction;
- maintenance of healthy environments;
- promotion of healthy living and lifestyles;
- improvement of reproductive health and family planning and;
- forging of partnerships in health development.

The Plan details future directions in terms of strategies and plans for the three years it covers, demonstrating the Government's commitment to meeting the Millennium Development Goals and those set by the International Conference on Population and Development (Cairo, Egypt, 1994). However, improving public health and primary health care functions, focusing on the prevention and control of noncommunicable diseases and STI/HIV/AIDS, will be among the top priorities.

3.2 Organization of health services and delivery systems

See Section 3.5.

3.3 Health policy, planning and regulatory framework

See Section 3.1

3.4 Health care financing

In 2007, total expenditure on health in Solomon Islands amounted to US$ 27.06 million, with per capita spending of US$ 54.55. In the same period, health spending as a share of gross domestic product (GDP) came to 5.1%. Government expenditure on health was US$ 25.0 million, or 15.4% of total government expenditure.

3.5 Human resources for health

Seven of the nine provinces have a public hospital: Guadalcanal Province is serviced by the National Referral Hospital, and Rennel/Bellona Province has no hospital. Additionally, there is one private hospital in the Western Province, one in Malaita Province and one in Choiseul Province. This gives a total of eight public and three private hospitals throughout the country. The public hospital in Choiseul has recently upgraded from health centre status, while the Central Province Hospital is still without a doctor.

All provincial hospitals were at full operational capacity during 2005, although the total number of available hospital beds is unconfirmed. Infrastructure and refurbishment work is in progress. The area and rural health centres and nurse aide posts are well distributed throughout the provinces, based on the size and geographical distribution of their populations.

At end of 2005, a total of 89 doctors (19 doctors per 100 000 population), 52 dentists (11 dentists per 100 000 population) and 53 pharmacists (11 pharmacists per 100 000 population) were employed by the Government and were working in the country. In terms of nurses, a total of 620 nurses, including nurse aides, were employed by the Ministry of Health (130 nurses per 100 000 population).

3.6 Partnerships

Overseas development assistance increased from US$ 60 million in 2003 to US$ 122 million in 2004, with key contributions from Australia (US$ 85.6 million), New Zealand (US$ 8.9 million), the European Union (US$ 4.1 million) and Japan (US$ 2.3 million).

Although the Government is the major source of funding for health services at both the central and provincial levels, there is still heavy reliance on external financial assistance. In 2005, expenditure by the Ministry of Health and Medical Services amounted to SBD 87 087 310 (around US$ 12 million), representing a 73% increase compared with 2004.

An increase in the recurrent budget would undoubtedly strengthen the provision of quality health care services and also enhance the implementation of the WHO programme of assistance.

3.7 Challenges to health system strengthening

No available information.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Goals and Strategies, Corporate Plan 2006-2008; IMCI Annual Report 2004; Reproductive Health Annual Report 2004; Tuberculosis Unit Annual Report 2005; EPI Annual Report 2004; National Vector Borne Disease Control Programme Annual Report 2005; Year 2006 Approved Recurrent Estimates*
Operator	:	Honiara, Ministry of Health and Medical Services
Title 2	:	*Solomon Islands Health Status Assessment Report.*
Operator	:	Australian Agency for International Development, Canberra, 2005.
Title 3	:	*Health Workforce for the Solomon Islands, 2005*
Operator	:	Nursing School

Title 4	:	*Death records 2005*
Operator	:	Heath Statistics Unit, Ministry of Health and Medical Services
Title 5	:	Press releases 2005
Operator	:	Department of Prime Minister and Cabinet
Web address	:	http://www.pmc.gov.sb/
Title 6	:	*Statistical Profiles of the Least Developed Countries*
Operator	:	United Nations, New York 2005

5. ADDRESSES

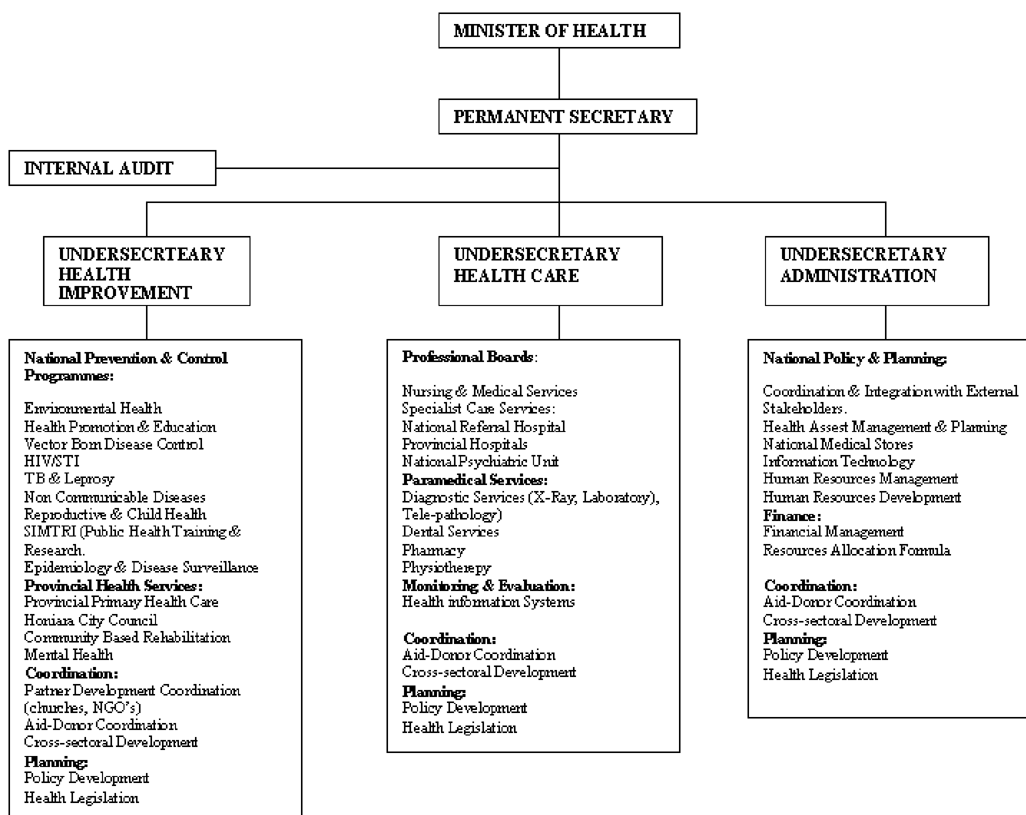
MINISTRY OF HEALTH

Office Address	:	Ministry of Health and Medical Services, Chinatown
Postal Address	:	P.O. Box 349, Honiara, Solomon Islands
Official Email Address	:	malefoasi@solomon.com.sb / pshealth@pmc.gov.sb
Telephone	:	+677 20830
Fax	:	+677 20085
Office Hours	:	8:00 – 16:30

WHO COUNTRY LIAISON OFFICER IN SOLOMON ISLANDS

Office Address	:	Ministry of Health and Medical Services, Chinatown
Postal Address	:	P.O. Box 22, Honiara, Solomon Islands
Official Email Address	:	who@sol.wpro.who.int
Telephone	:	+677 23 406
Fax	:	+677 21 344
Office Hours	:	8:00 – 16:30

6. ORGANIZATIONAL CHART: Ministry of Health



COUNTRY HEALTH INFORMATION PROFILE

SOLOMON ISLANDS — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	28.37						2008	1
2	Estimated population ('000s)	535.01		275.29		259.72		2008 est	2
3	Annual population growth rate (%)	2.70		...		...		2008 est	2
4	Percentage of population								
	- 0–4 years	15.40		15.50		15.30		2008 est	3
	- 5–14 years	26.20		26.40		25.90		2008 est	3
	- 65 years and above	2.60		2.50		2.70		2008 est	3
5	Urban population (%)	17.60 [a]		...		...		2007 est	4
6	Crude birth rate (per 1000 population)	34.90		...		...		2008 est	2
7	Crude death rate (per 1000 population)	7.60		...		...		2008 est	2
8	Rate of natural increase of population (% per annum)	2.73 [b]		...		...		2008 est	2
9	Life expectancy (years)								
	- at birth	...		60.60		61.60		2008	1
	- Healthy Life Expectancy (HALE) at age 60	...		10.90		11.60		2002	5
10	Total fertility rate (women aged 15–49 years)	4.80						2008	1
	Socioeconomic indicators								
11	Adult literacy rate (%)	...		...		...			
12	Per capita GDP at current market prices (US$)	753.00						2006	1
13	Rate of growth of per capita GDP (%)	...							
14	Human development index	0.59						2006	6
	Environmental indicators	Total		Urban		Rural			
15	Proportion of vehicles using unleaded gasoline (%)	...		...		...			
16	Health care waste generation (metric tons per year)	...		...		...			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	...	...	...	...	...	...		
	- Type B	...	...	...	...	...	...		
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	...	...	...	...	...	...		
	Dengue/DHF	0	0	0	0	0	0	2004	7
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	...	...	...	...	...	...		
	Leprosy	15	...	...	...	...	...	2007	7
	Malaria	65 404	...	...	15	...	...	2007	7
	Plague	...	...	...	...	...	...		
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	**Number of new cases**			**Number of deaths**				
		Total	**Male**	**Female**	**Total**	**Male**	**Female**		
18	**Acute respiratory infections**	178 327	...	...	...	...	...	2004	8
19	**Diarrhoeal diseases**	14 565	...	...	...	...	...	2004	8
20	**Tuberculosis**								
	- All forms	397 [i]	...	...	...	...	...	2007	7
	- New pulmonary tuberculosis (smear-positive)	142 [i]	...	...	...	...	...	2007	7
21	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	...	...	...		
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	...	...	...	...	...	...		
	- Cervix			...			...		
	- Oesophagus	...	...	...	...	...	...		
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	...	...	...	...	...	...		
	- Liver	...	...	...	...	...	...		
	- Stomach	...	...	...	...	...	...		
	- Trachea, bronchus, and lung	...	...	...	...	...	...		
22	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	...	...	...	...	...	...		
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
23	**Diabetes mellitus**	...	...	...	...	...	...		
24	**Mental disorders**	...	...	...	...	...	...		
25	**Injuries**								
	All types	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Motor and other vehicular accidents	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Suicide	...	...	...	...	...	...		
	Leading causes of mortality and morbidity	**Number of cases**			**Rate per 100 000 population**				
26	**Leading causes of morbidity (inpatient care)**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Clinical and presumptive malaria	314 665 [c]	...	...	35 136.80 [c]	...	...	2006	8
	2. Acute respiratory infection	243 600 [c]	...	...	50 426.10 [c]	...	...	2006	8
	3. Skin disease	47 329 [c]	...	...	9797.30 [c]	...	...	2006	8
	4. Ear infection	31 378 [c]	...	...	6495.40 [c]	...	...	2006	8
	5. Red eye	22 828 [c]	...	...	4725.50 [c]	...	...	2006	8
	6. Yaws	20 371 [c]	...	...	4217.80 [c]	...	...	2006	8
	7.								
	8.								
	9.								
	10.								

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Cardiovascular diseases	...	...	...	...	...	...	2005	9
	2. Neoplasm	...	...	...	...	...	...	2005	9
	3. Malaria	...	...	...	...	...	...	2005	9
	4. Respiratory diseases (pneumonia as the leading causes)	...	...	...	...	...	...	2005	9
	5. Neonatal causes	...	...	...	...	...	...	2005	9
	6.								
	7.								
	8.								
	9.								
	10.								
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					25.00		2005	13
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					60.00		2008	7
30	**Percentage of pregnant women with anaemia**					...			
31	**Neonatal mortality rate (per 1000 live births)**	12.00 [d]		...		...		2002	5
32	**Percentage of newborn infants weighing at least 2500 g at birth**	...							
33	**Immunization coverage for infants (%)**								
	- BCG	81.00		...		...		2008	7
	- DTP3	78.00		...		...		2008	7
	- POL3	78.00		...		...		2008	7
	- Hepatitis B III	77.00		...		...		2008	7
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			...			...		
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	7
	- Diphtheria	0	0	0	...	...	...	2008	7
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2008	7
	- Mumps	0	0	0	...	...	...	2008	7
	- Neonatal tetanus	0	0	0	...	...	...	2008	7
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	7
	- Poliomyelitis	0	0	0	...	...	...	2008	7
	- Rubella	0	0	0	...	...	...	2008	7
	- Total Tetanus	0	0	0	...	...	...	2008	7

	INDICATORS		DATA		Year	Source
	Health facilities		**Number**	**Number of beds**		
36	**Facilities with HIV testing and counseling services**		…			
37	**Health infrastructure**					
	Public health facilities	- General hospitals	8	691 [e]	2005	11
		- Specialized hospitals	…	…		
		- District/first-level referral hospitals	…	…		
		- Primary health care centres	145 [f]	…	2005	11
	Private health facilities	- Hospitals	3	…	2005	11
		- Outpatient clinics	…	…		
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)			27.06 [b]	2007	12
	- total expenditure on health as % of GDP			5.10	2007	12
	- per capita total expenditure on health (in US$)			54.55 [b]	2007	12
	Government expenditure on health					
	- amount (in million US$)			24.97 [b]	2007	12
	- general government expenditure on health as % of total expenditure on health			92.40	2007	12
	- general government expenditure on health as % of total general government expenditure			15.40	2007	12
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			18.21 [b]	2007	12
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			7.60	2007	12
	Exchange rate in US$ of local currency is: 1 US$ =			7.65	2007	12
39	**Health insurance coverage as % of total population**			…		

	INDICATOR		DATA							Year	Source
40	**Human resources for health**		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	89	87	2	…	…	…	…	2005	13
		- Ratio per 1000 population	0.19	0.18	0.01	…	…	…	…	2005	13
	Dentists	- Number	52	29	23	…	…	…	…	2005	13
		- Ratio per 1000 population	0.11	0.06	0.05	…	…	…	…	2005	13
	Pharmacists	- Number	53	40	13	…	…	…	…	2005	13
		- Ratio per 1000 population	0.11	0.08	0.03	…	…	…	…	2005	13
	Nurses	- Number	620	…	…	…	…	…	…	2005	13
		- Ratio per 1000 population	1.30	…	…	…	…	…	…	2005	13
	Midwives	- Number	74	…	…	…	…	…	…	2005	13
		- Ratio per 1000 population	0.16	…	…	…	…	…	…	2005	13
	Paramedical staff	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
41	**Annual number of graduates**	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		

	INDICATORS		DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	43	…	…	…	…	…	…	2005	13
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	…	…	…	…	…	…		
42	Workforce losses/ Attrition	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		
		Nurses	…	…	…	…	…	…	…		
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	…	…	…	…	…	…		

	INDICATORS	DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	…	…	…		
44	Infant mortality rate (per 1000 live births)	66.00	…	…	2008	1
45	Under-five mortality rate (per 1000 live births)	52.00	55.00	49.00	2005 est	14
46	Proportion of 1 year-old children immunised against measles	60.00	…	…	2008	7
47	Maternal mortality ratio (per 100 000 live births)	236.00			2005	15
48	Proportion of births attended by skilled health personnel	…				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	…				
	- Percentage of deliveries in health facilities (as % of total deliveries)	43.00 [g]			2003	16
49	Contraceptive prevalence rate	…	…	…		
50	Adolescent birth rate	…				
51	Antenatal care coverage - At least one visit	76.00 [h]			2003	16
	- At least four visits	…				
52	Unmet need for family planning	…	…	…		
53	HIV prevalence among population aged 15-24 years	…	…	…		
54	Estimated HIV prevalence in adults h	…	…	..		
55	Percentage of people with advanced HIV infection receiving ART	…	…	…		
56	Malaria incidence rate per 100 000 population	13 186.00	…	…	2007	7
57	Malaria death rate per 100 000 population	3.02	…	…	2007	7
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	…	…	…		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	…	…	…		
60	Tuberculosis prevalence rate per 100 000 population	180.00	…	…	2007	7
61	Tuberculosis death rate per 100 000 population	21.00	…	…	2007	7
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	50.00	…	…	2007	7
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	73.00	…	…	2006	7
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	70.00	94.00	65.00	2006	17
65	Proportion of population using an improved sanitation facility	32.00	98.00	18.00	2006	17
66	Proportion of population with access to affordable essential drugs on a sustainable basis	…	…	…		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Revised figure
b	Computed by Health Information and Evidence for Policy Unit of WHO Regional Office for the western Pacific
c	Figre refers to primary health care data
d	Estimates derived by regression and similar estimation methods
e	Figure refers to total beds in public health facilities
f	Figure refers to 29 primary health care centres and 116 dispensaries
g	Figure applies to clinics only
h	Figure reported as the antenatal coverage
i	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

Sources:	
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2	Solomon Islands Statistics (http://www.spc.int/prism).
3	Demographic Tables for the Western Pacific 2005-2010. Manila, World Health Organization Regional Office for the Western Pacific, 2005.
4	Urban and Rural Areas 2007. United Nations, Department of Economic and Social Affairs, Population Division. New York 2008. [http:///www.unpopulation.org].
5	World health report 2004. Changing history. Geneva, World Health Organization, 2004.
6	United Nations Development Programme (UNDP) 2008. Human Development Indices: a statistical update. New York: UNDP.
	Available from [http://hdr.undp.org/en/media/HDI2008Tables.xls].
7	WHO Regional Office for the Western Pacific, data received from the technical units.
8	Health Information System Annual Report 2006, Health Statistic Unit, MOHMS.
9	Information provided by Country Liaison Officer for Solomon Islands, 04 April 2006.
10	Reproductive Health, MOHMS.
11	List of Clinic, Ministry of Health, 2005.
12	World Health Organization - National health accounts series [http://www.who.int/entity/nha/country/MYS.pdf].
13	Registry Department, Nursing School and Registry of Reproductive Health Unit, 2005.
14	World Population Prospects: The 2006 Revision Population Database (Medium Variant), United Nations Department of Economic and Social Affairs,
	(http://esa.un.org/unpp/p2k0data.asp).
15	National Health Report 2005, MOHMS, Solomon Islands.
16	Solomon Islands Millennium Development Goals report 2004: Scoring fundamental goals (Draft). Department of National Reform and Planning,
	United Nations Country Team for Solomon Islands.
17	World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). Progress on Drinking Water and Sanitation:
	Special focus on Sanitation. UNICEF, New York and WHO, Geneva, 2008. [http://www.wssinfo.org/en/40_mdg2008.html]

TOKELAU

1. CONTEXT

1.1 Demographics

The estimated resident population of Tokelau in 2006 was 1466, 35% below 15 years of age and 7.4% above 65 years. Life expectancy at birth is 67.8 years for males and 70.4 years for females (2008). The crude birth rate is 23.9 per 1000 population (2008 est) and the crude death rate is 7.3 per 1000 population (2008 est).

1.2 Political situation

The constraints of atoll life and limited opportunities have led some 6000 Tokelauans to settle in New Zealand and a few hundred more in Samoa. Tokelauans have linguistic, family and cultural links with other Pacific islands, notably Samoa and Tuvalu. The family and extended family constitute the core of social organization, with the village (*nuku*) being the foundation of Tokelauan society. Community welfare is paramount in what has been traditionally a subsistence environment.

1.3 Socioeconomic situation

Per capita gross national product (GNP) was NZ$ 1000 in 2003, or about US$ 612.50. The economy is basically subsistence, although cash is now becoming an important part of everyday life. The country's resource base is fragile, as very little land is available for any agricultural endeavour without substantial preparation and support. Marine resources have not been fully explored as yet, and ocean and lagoon fish form a stable constituent of the local diet. While there is no significant agricultural activity owing to the limited and infertile coral land, Tokelauans raise pigs and chickens and have access to traditional crops, such as coconut and breadfruit, as well as limited quantities of pandanus fruit and taro. However, there is increasing evidence of over-reliance on imported, processed foods, which is contributing to lifestyle-related diseases.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The overall health status is reasonably good, but changes have been observed in the last few years. There has been an increase in noncommunicable diseases, with cerebrovascular disease the leading cause of death. The mortality rate due to cardiovascular diseases increased from 31.0% of the total in 1981 to 37.8% in 2003. Blood pressure recordings of 90 mm Hg diastolic and greater are seen in 36% of women and 23% of men aged 30 years and over. Random blood sugar levels of 7 mmol/litre and above for the same group appear in 18% of men and 28% of women.

Tobacco and alcohol consumption is relatively high among the adult population, but is more prominent in males. Obesity is common and is attributed to diet and physical inactivity, with prevalence rates of 70% for men and 83% for women between the ages of 30 and 39. There is an observable diet shift from local to imported foods.

2.2 Outbreaks of communicable diseases

No available information.

2.3 Leading causes of mortality and morbidity

See Section 2.1.

2.4 Maternal, child and infant diseases

The infant mortality rate is 38.0 per 1000 live births (2008). The maternal mortality ratio is 0 per 100 000 live births (2001-2002) and the total fertility rate is 4.5 (2008).

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Health Department operates the health care system. Its main office is located in Atafu. The Department also has an office in the Tokelau Apia Liaison Office (TALO) in Samoa. Its main purpose is to facilitate referral of patients to Samoa and New Zealand. The TALO Health Office also serves as the storage and distribution point for medical supplies.

3.2 Organization of health services and delivery systems

Hospitals in each of the three atolls provide primary health care to their communities. Preventive health services are also provided by the Health Department. Water and sanitation programmes are ongoing, as well as maternal and child health programmes that are supported by women's committees.

3.3 Health policy, planning and regulatory framework

Tokelau's national health plan and priorities are the following:

(1) Healthy islands and communities: Support existing community groups and structures that will enhance the ability to provide a healthy environment for the people.

(2) Promotion of healthy lifestyles: Support community members and health workers to lead healthy and improved diverse lifestyles.

(3) Development of health partnerships: Establish long-term strategic relationships with key partners in government, external donors, other relevant institutions and community groups in health development.

(4) Development of accessible primary health care services: Develop and improve primary health care services that are effective and relevant to communities.

(5) Successful community participation: Develop a successful participative strategy for an effective, combined approach to service delivery by community groups and health service providers.

(6) Development and improvement of health service system: Improve the accessibility and quality of health services, which will increase people's confidence and participation in the total health system and add value to existing services.

3.4 Health care financing

For the financial year 2003/2004, the Tokelau GNP forecast was NZ$ 11 381 770 (US$ 8 115 604). Health was allocated 12.5%, or about NZ$ 1 424 502 (US$ 1 015 452). For the previous financial year, health was allocated 8.2%. The national budget is made up of locally generated resources and a grant from the New Zealand Government as part of its constitutional responsibility for Tokelau. Other assistance comes from international partner agencies including WHO, the United Nations Development Programme (UNDP), the United Nations Children's Fund (UNICEF), the United Nations Population Fund (UNFPA), and the Australian Agency for International Development (AusAID).

3.5 Human resources for health

Each of the three atolls has a 12-bed hospital, manned by a medical officer, four to five staff nurses, one dental nurse, four to five nurse's aides and a handyman. There is ongoing renovation of the three hospitals and the bed capacity has been reduced to six in each. There are only three dentists working in Tokelau (2003). The doctor-to-population ratio is 1:757, the dentist-to-population ratio 1:757, and the nurse-to-population ratio 1:151. In December 2003, there were three doctors on the island plus the Director of Health, who is also a practising medical officer. Tokelau relies on the 'locum' scheme in recruiting doctors. It is envisioned that this will go on for the next three years, by which time new graduates will be expected to fill the vacancies.

In 2002-2003, Tokelau experienced an unexpected shortage of nurses. This was attributed to the fact that local nurses migrated overseas, specifically to New Zealand.

The three hospitals are similarly equipped. The only X-ray facility available is in the Nukunonu Hospital.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

No available information.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*2006 Tokelau Census of Population and Dwellings: 2006 Census Tabular Report.*
Web address	:	[http://www.spc.int/prism/NSO-News/TK/2006%20Census%20Tabular%20Report%20-%20Final.pdf]
Title 2	:	Tokelau Department of Health

5. ADDRESSES

DEPARTMENT OF HEALTH

Office Address	:	Nukunonu, Tokelau
Official Email Address	:	tokelau.health@clear.net.nz , talo.health@clear.net.nz
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WHO REPRESENTATIVE IN SAMOA

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Official Email Address	:	who@sma.wpro.who.int
Telephone	:	(685) 23756; (685) 24976
Fax	:	(685) 23765

TOKELAU — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	0.01			2008	1
2	Estimated population ('000s)	1.47 [a]	0.74	0.73	2006	2
3	Annual population growth rate (%)	…	…	…		
4	Percentage of population					
	- 0–4 years	11.32 [a]	5.73 [a]	5.59 [a]	2006	2
	- 5–14 years	23.74 [a]	12.28 [a]	11.46 [a]	2006	2
	- 65 years and above	7.37 [a]	3.07 [a]	4.30 [a]	2006	2
5	Urban population (%)	0.00	…	…	2007 est	4
6	Crude birth rate (per 1000 population)	23.90	…	…	2008	1
7	Crude death rate (per 1000 population)	7.30	…	…	2008	1
8	Rate of natural increase of population (% per annum)	2.40 [b]	…	…	2008	1
9	Life expectancy (years)					
	- at birth	…	67.80	70.40	2008	1
	- Healthy Life Expectancy (HALE) at age 60	…	…	…		
10	Total fertility rate (women aged 15–49 years)	4.50			2008	1
	Socioeconomic indicators					
11	Adult literacy rate (%)	86.50	…	…	2003	6
12	Per capita GDP at current market prices (US$)	612.50 [c]			2003	7
13	Rate of growth of per capita GDP (%)	…				
14	Human development index	…				
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	…	…	…		
16	Health care waste generation (metric tons per year)	…	…	…		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	…	…	…	…	…	…		
	- Type B	…	…	…	…	…	…		
	- Type C	…	…	…	…	…	…		
	- Type E	…	…	…	…	…	…		
	- Unspecified	…	…	…	…	…	…		
	Cholera	…	…	…	…	…	…		
	Dengue/DHF	…	…	…	…	…	…		
	Encephalitis	…	…	…	…	…	…		
	Gonorrhoea	…	…	…	…	…	…		
	Leprosy	0	0	0	…	…	…	2005	8
	Malaria	…	…	…	…	…	…		
	Plague	…	…	…	…	…	…		
	Syphilis	…	…	…	…	…	…		
	Typhoid fever	…	…	…	…	…	…		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	...	...	...	...	...	...		
19	**Diarrhoeal diseases**	...	...	...	...	...	...		
20	**Tuberculosis**								
	- All forms	0 [g]	0 [g]	0 [g]	...	...	...	2007	8
	- New pulmonary tuberculosis (smear-positive)	0 [g]	0 [g]	0 [g]	...	...	...	2007	8
21	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	...	...	...		
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	...	...	...	...	...	...		
	- Cervix			...			...		
	- Oesophagus	...	...	...	...	...	...		
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	...	...	...	...	...	...		
	- Liver	...	...	...	...	...	...		
	- Stomach	...	...	...	...	...	...		
	- Trachea, bronchus, and lung	...	...	...	...	...	...		
22	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	...	...	...	...	...	...		
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
23	**Diabetes mellitus**	...	...	...	...	...	...		
24	**Mental disorders**	...	...	...	...	...	...		
25	**Injuries**								
	All types	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Motor and other vehicular accidents	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Suicide	...	...	...	...	...	...		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Upper and lower respiratory diseases	1000	...	...	65 061.81 [b]	...	...	2003	3
	2. Diseases of the skin and subcutaneous tissues	439	...	...	28 562.13 [b]	...	...	2003	3
	3. Diseases of the digestive system	400	...	...	26 024.72 [b]	...	...	2003	3
	4. Diseases of the musculoskeletal system	151	...	...	9824.33 [b]	...	...	2003	3
	5. Diseases of the circulatory system	73	...	...	4749.51 [b]	...	...	2003	3
	6.								
	7.								
	8.								
	9.								
	10.								

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	Total	Male	Female	Total	Male	Female		
	1. Diseases of the circulatory system	…	…	…	37.80 [d]	…	…	2003	3
	2. Diseases of the respiratory system	…	…	…	20.70 [d]	…	…	2003	3
	3. Neoplastic diseases	…	…	…	15.90 [d]	…	…	2003	3
	4. Ill-defined and undiagnosed conditions	…	…	…	11.00 [d]	…	…	2003	3
	5. Congenital anomalies	…	…	…	4.90 [d]	…	…	2003	3
	6.								
	7.								
	8.								
	9.								
	10.								
	Maternal, child and infant diseases	Total		Male		Female			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					…			
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					100.00		2008	8
30	**Percentage of pregnant women with anaemia**					…			
31	**Neonatal mortality rate (per 1000 live births)**	40.00 [b]		…		…		2003	3
32	**Percentage of newborn infants weighing at least 2500 g at birth**	100.00						2003	3
33	**Immunization coverage for infants (%)**								
	- BCG	100.00		…		…		2008	8
	- DTP3	97.00		…		…		2008	8
	- POL3	97.00		…		…		2008	8
	- Hepatitis B III	97.00		…		…		2008	8
		Number of cases			Number of deaths				
34	**Maternal causes**	Total	Male	Female	Total	Male	Female		
	- Abortion			…			…		
	- Eclampsia			…			…		
	- Haemorrhage			…			…		
	- Obstructed labour			…			…		
	- Sepsis			…			…		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	…	…	…	2008	8
	- Diphtheria	0	0	0	…	…	…	2008	8
	- Hib meningitis	0	0	0	…	…	…	2005	8
	- Measles	0	0	0	…	…	…	2008	8
	- Mumps	0	0	0	…	…	…	2008	8
	- Neonatal tetanus	0	0	0	…	…	…	2008	8
	- Pertussis (whooping cough)	0	0	0	…	…	…	2008	8
	- Poliomyelitis	0	0	0	…	…	…	2008	8
	- Rubella	0	0	0	…	…	…	2008	8
	- Total Tetanus	0	0	0	…	…	…	2008	8

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Facilities with HIV testing and counseling services**		...			
37	**Health infrastructure**					
	Public health facilities	- General hospitals	3	18	2003	7
		- Specialized hospitals	...	...		
		- District/first-level referral hospitals	...	...		
		- Primary health care centres	...	...		
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)			0.51 [e]	1999-2000	9
	- total expenditure on health as % of GDP			...		
	- per capita total expenditure on health (in US$)			341.07 [e]	1999-2000	9
	Government expenditure on health					
	- amount (in million US$)			1.42 [e]	FY2003-2004	7
	- general government expenditure on health as % of total expenditure on health			...		
	- general government expenditure on health as % of total general government expenditure			12.50	FY2003-2004	7
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			...		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			...		
	Exchange rate in US$ of local currency is: 1 US$ =			...		
39	**Health insurance coverage as % of total population**			...		

	INDICATOR		DATA							Year	Source
40	**Human resources for health**		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	4 [a]	...	...	...	...	...	...	2003	7
		- Ratio per 1000 population	2.00 [a]	...	...	...	...	...	...	2003	7
	Dentists	- Number	3	...	...	...	...	...	...	2003	7
		- Ratio per 1000 population	2.00 [a]	...	...	...	...	...	...	2003	7
	Pharmacists	- Number	0	0	0	0	0	0	0	2000	9
		- Ratio per 1000 population	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2000	9
	Nurses	- Number	10	...	...	...	...	...	...	2003	7
		- Ratio per 1000 population	6.67 [a]	...	...	...	...	...	...	2003	7
	Midwives	- Number	3	...	...	...	...	...	...	2000	9
		- Ratio per 1000 population	2.00 [a]	...	...	...	...	...	...	2000	9
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	**Annual number of graduates**	Physicians	....	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	38.00	...	...	2008	1
45	Under-five mortality rate (per 1000 live births)	...	...	...		
46	Proportion of 1 year-old children immunised against measles	92.00	...	...	2008	8
47	Maternal mortality ratio (per 100 000 live births)	0.00			2001-02	7
48	Proportion of births attended by skilled health personnel	...				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	...				
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	...				
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults	...	...	...		
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	...	...	...		
57	Malaria death rate per 100 000 population	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	0.00	...	...	2007	8
61	Tuberculosis death rate per 100 000 population	0.00	...	...	2007	8
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	...	...	...		
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	...	...	...		
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	88.00	NA	88.00	2006	10
65	Proportion of population using an improved sanitation facility	78.00	NA	78.00	2006	10
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
FY	Fiscal year
a	Revised data
b	Computed by Health Information and Evidence for Policy Unit of WHO Regional Office for the Western Pacific
c	Figure refers to per capita GNP at current market prices (US $)
d	Figure refers to percentage of deaths reported
e	Figure is in New Zealand dollars
f	Figure includes the Director of Health practicing as a medical officer
g	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

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TONGA

1. CONTEXT

1.1 Demographics

Tonga's estimated population for 2008 was 102 724, giving a population density of 158 per square kilometre. About 24.4% of the population live in urban settings. The population is young, with 36% in the 0-14 year-old age group. The fertility rate remains high, although it has been falling slowly, decreasing from 4.1 in 1986 to 3.7 in 2007. The population growth rate is around 0.4%, a low figure taking into consideration a crude birth rate of about 28.5 per 1000 and the fact that child mortality rates are the lowest in the Pacific. The explanation is found in the high net emigration rate, which averaged 19.8% between 1986 and 1996. It is estimated that as many as 100 000 Tongans live overseas, most of them in Australia, New Zealand and the United States of America. The Tongan community in New Zealand alone accounts some 50 000 people.

1.2 Political situation

Tonga is a constitutional monarchy with almost absolute power given to the head of state, King Siaosi Tupou V, who succeeded his father in 2006. The King's Cabinet consists of the Prime Minister, the ministers of the Crown and the governors of Vava'au and Ha'apai, all directly appointed by the King. The unicameral Parliament consists of the cabinet members, the Speaker of the House (appointed by the King), nine nobles elected by the peers from among Tonga's 33 hereditary title holders, and nine democratically elected peoples' representatives.

The political situation remains stable and peaceful overall despite growing discontent with the undemocratic system of rule and, in some aspects, the feudal structure of society, as well as mounting pressure for constitutional reform.

Tonga has been a member of the United Nations since 1999. The churches are influential in Tonga and religion, traditional customs and hierarchy play important roles in policy development and the government decision-making process.

1.3 Socioeconomic situation

Agriculture forms the backbone of the economy, and the export of pumpkins for the Japanese market plays a particularly important role as a foreign exchange earner. The second biggest industry, fishing, is in recession due to decreasing catches over several years. Tourism is slowly increasing in importance, although the prospects of Tonga developing a mass-tourism industry are limited. Remittances from relatives living abroad play an increasingly important role in the economy. The total value of private remittances was estimated at TOP 200 million (US$ 105 million) in 2004, roughly 55% of the gross domestic product (GDP), which was estimated at TOP 361 million (US$ 189.6 million). The Government is heavily dependent on development support for capital investments.

Economic development has been sluggish in recent years and real growth in GDP fell from 2.3% in 1998-1999 and 5.4% in 1999-2000 to only 1.4% in 2003-2004. The figure was 2.5% in 2004-2005, giving an average GDP growth per year for 1998-2005 of 2.9% per year. The Government has liberalized the economy in recent years and has abolished government monopolies and allowed competition in several areas, including telecommunications, power supply and civil aviation.

Tonga joined the World Trade Organization in December 2005 in an agreement that saw Tonga reduce its import tariffs for most goods to 15% and open its domestic markets, including health care provision and education, to foreign investors. A 15% consumption tax was introduced on goods and services in April 2005 and compensates for the loss of income from import duties. The tax base is small, with only about 4000 people having a taxable income, and income tax is low (10%) and non-progressive, resulting in a revenue from income taxation of less than TOP 2 million (US$ 1.05 million) per year. Property taxation is negligible and land ownership is concentrated among the royal family, churches and nobles.

The labour force participation rate in 2003 (Labour Force Survey 2003) was 64% (75% for men and 53% for women).

The literacy rate is very high (99%) and most children complete compulsory primary school classes. Education absorbed 14% of the national budget in 2004. While most primary schools teach in Tongan, secondary education is mainly conducted in English. The education rate is similar for both genders, with some advantages for girls at the secondary level. Despite equal opportunities in education, the number of women in leading positions remains limited. An important step was taken in 2005 when the first female Member of Parliament was elected. Tonga has ratified the Convention of the Rights of the Child (CRC), but has failed to fulfil the reporting requirements. It has yet to sign the Convention on the Elimination of all forms of Discrimination Against Women (CEDAW). Women continue to be discriminated against in legislation, including land ownership rights, child support rights and inheritance laws.

The standard of living has improved dramatically over the last 50 years and there is now little absolute poverty. The country is placed 55th in the United Nations Development Programme's Human Development Index ranking (HDI), the highest ranking of any Pacific island state, reflecting the comparatively high gross domestic product (GDP) per capita of US$ 2 319 (2006), high life expectancy and near-universal literacy. Disposable income per capita is considerably higher than GDP per capita as a result of remittances from Tongans working abroad. The value of those remittances is also increasing much faster than the domestic economy and official development assistance, and the strong performance in the HDI is partly explained by the high disposable income. However, many families are dependent for food security on what they can produce on their farmland, and limited access to such land is an increasing problem. An estimated 4% of the population live on less than US$ 1.00 per day and about 6.7% of households live below the food poverty line. The Government uses the term 'hardship' to describe economically disadvantaged groups in Tonga and hardship is defined as "having difficulties in meeting basic needs, such as education and transport". When translated into monetary terms, hardship is the equivalent of living on less than TOP 28.17 (US$ 14.79) per week (indexed value), and an estimated 23% of the population falls into that category. People who live on the outer islands, where access to education and health care is poor, transport costs are high and income opportunities few, have higher rates of hardship.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Tonga has gone through an epidemiological transition since the 1950s, with increasing life expectancy and falling fertility rates, childhood mortality rates and maternal mortality. Life expectancy at birth increased from 40 years in 1939 to 67.3 years for males and 73 years for females in 2008. The proportion of deaths caused by infectious diseases fell from 32% in the 1950s to 6% in the 1990s, while the proportion of deaths from diseases of the circulatory system grew from 5.6% to 38% during the same period. However, there is likely to be considerable underreporting for many noncommunicable diseases. Post-mortem examinations are limited to criminal cases and death certificates are, at best, based on clinical findings and frequently on reports from relatives. More importantly, as many as 18% of deceased people do not have a proper death certificate stating the cause of death, and unknown cause of death actually ranks as number 2 when included in the list of leading causes of death. While the mortality data are considered to be fairly consistent over time for those who die in hospital, there are clearly distortions in morbidity reporting caused by misclassification and inconsistent ICD-10 coding, particularly for communicable diseases.

The steep increase in the burden of noncommunicable disease (NCD) is worrying and is the most important current health problem. Obesity, diabetes and cardiovascular diseases have increased to levels of epidemic proportion and prevalence rates now surpass those of most industrialized countries. Tonga developed a multisectoral national strategy to prevent and control NCD in 2003. There are multiple

reasons for the rapidly growing NCD burden, of which the most important include increasing rates of overweight and obesity, reduced physical activity, smoking, and, to some extent, the ageing of the population. Economic development, motorization, improved access to processed imported food and the adoption of 'western' dishes with high fat and high sugar contents have had a strong negative impact on people's health.

Food, gifts of food and feasting traditionally play an important role in Tongan culture. Higher economic standards, improved communications and better access to processed and high-fat and high-sugar foods have led to a rapidly increasing overweight and obesity problem. Figures from 2004 show that the average weight for a Tongan male increased over 30 years by 17.4 kg to 95.7 kg, while the average weight for a woman increased by 21.1 kg to 95.0 kg, a rise in body weight with few comparisons in the world. There are indications that people are becoming overweight and obese earlier in life; girls and young women in particular tend to gain weight during adolescence and pregnancy. The overall adult obesity rate (BMI>30) was 60% in the 2004 survey. Women have higher obesity rates than men over all age groups and they are more obese (mean BMI 34.5 compared with 31.0 for men). As a consequence, they have higher rates of diabetes than men, with 19.1% of women and 16.5% of men meeting the definition of diabetic. Most people continue to perceive fatty food as something desirable, a taste that may be explained partly by the scarcity of fat in the traditional fishing and farming society and by historic periods of food shortage. Other findings indicate that the quantity of food consumed by Tongan adults is as much to blame as its composition. Studies have shown that the average Tongan male consumes double the quantity of food and amount of calories consumed by the average Australian male. Women are more overweight than men, while men have a higher prevalence of other risk factors, including hypertension, elevated blood lipids and smoking.

The overall adult prevalence of diabetes type II has increased from 7% to 18% over the last 30 years. A community survey in 2000 showed that as many as 80% of people with diabetes remains undiagnosed and untreated. Access to health services for people with diabetes and its complications has improved, but the health system does not have the capacity to provide quality care for all those who need it, and primary and secondary prevention have so far not been enough. The number of registered diabetic patients at the specialist clinic at the referral hospital on Tongatapu increased by 54% between 1999 and 2003 from 1463 to 2247, which corresponds to more than 9% of the serviced population aged 30 years and more. A hereditary predisposition towards impaired glucose tolerance is likely to play some role in the high rates of diabetes, but this is a non-modifiable factor and has in itself has little to contribute to the design of public health interventions.

Physical inactivity is also thought to be an important cause of overweight, particularly for women and middle-aged people. It is unusual today for people to walk or bicycle, as the number of vehicles is increasing rapidly. The increasing number of cars on the roads, together with outdated traffic safety measures, contributed to the record 24 traffic-related deaths in 2003, a figure that puts Tonga ahead of the United States of America in the number of traffic deaths per 100 000 population. Seatbelts are not compulsory and only 1% of drivers were found to be using them in a Ministry of Health survey in 2004. The single most important cause of traffic injury is driving under the influence of alcohol, kava or marijuana. All 24 deaths in 2003 were caused directly or indirectly by intoxication. The section on alcohol in the current Traffic Act is antiquated and not enforceable in practice, and neither the health services nor the police have the equipment to measure blood alcohol or to 'breathalize' motorists. The health and social problems caused by the harmful use of alcohol has received increasing attention in Tonga lately and this will hopefully result in measures aimed at reducing access to alcohol and enforcing drink-driving controls in the future.

The incidence of cancer is perceived to be increasing, but weaknesses in diagnosis, surveillance and reporting do not allow for reliable analysis of trends. The sharp increase in overall cancer incidence is likely to be partly or entirely explained by changes in reporting rather than by a true increase. Diagnostic capacity is limited for many malignancies, and it is not always obvious when the reported figure refers to cytological diagnoses or when clinical (non-confirmed) diagnoses have been included. A cancer register was established in 2004 to capture both clinically determined cancers and laboratory-confirmed cases. Although this important development improved the statistical information on cancer incidence, the proportion of cytologically and histologically confirmed cancer cases remains low compared with overall

cancer incidence, and the autopsy rate is very low. A pilot project on Pap-smear screening for cervical cancer was started in 2005. Mammography is not available. Liver cancer, which is closely related to hepatitis B virus infection (HBV), is common in Tonga, where HBV infection rates in the adult population are hyperendemic (10%-14%). It will take another two to three generations until immunization against HBV, which was introduced in 1989, impacts on incidence. Lung cancer now ranks among the three most common cancers, a result of smoking, and it is expected that the incidence will continue to increase.

Of the 17 hospital-certified deaths in the 1-4 age group in 2003, eight were from infectious causes, one from dehydration, two from malignancies and two from road trauma. Of the eight children who died as a result of infection, six were from septicaemia and CNS infection, one from dengue fever and one from pneumonia. This picture resembles the situation in an industrialized country more than that of a poor developing one. There is limited information available on childhood morbidity, but the two deaths from road trauma indicate that child safety is a potential area for improving child health.

Infectious diseases have, to a large extent, been brought under control in the last 30-40 years, with some important exceptions. Tonga does not have the vector for malaria, but a few imported cases are diagnosed each year in people returning from visits to areas with malaria transmission.

A fifth and final round of mass drug administration (MDA) for the eradication of lymphatic filariasis took place in 2005, with 100% geographical coverage and an estimated population coverage of >90%. A nationwide post MDA campaign serosurvey was conducted in 2006 to evaluate the results.

Leprosy has, in practice, been eradicated, although the latest infection was diagnosed in 2004. This was an imported case in a Tongan adult who returned after having lived his entire life in American Samoa. The last case of indigenous transmission was in 1998 and today there are a handful of well documented people living with complications of leprosy.

Hepatitis B is highly endemic in Tonga and screening of blood donors, government employees and visa applicants shows that more than 10% of the adult population are positive for HbsAg. A survey in pregnant women in 2005 found an HbsAg-positive rate of 13.9%. Childhood immunization against hepatitis B started in 1989 and the first immunized cohorts are now entering reproductive life. A serosurvey of 211 preschool children in 1998 found a 3.8% prevalence of chronic hepatitis B infection, indicating a lower-than-expected efficacy for hepatitis B immunization. Increasing efforts are now being made to improve particularly the timeliness of hepatitis B vaccine delivery. A study using convenience testing for HbsAg in children admitted to Vaiola Hospital started in 2005 for surveillance purposes; of more than 100 children tested so far, none has been positive for HbsAg.

Poor household hygiene and sanitation, as well as contamination of drinking water sources, are thought to contribute to the average 10-20 cases of typhoid fever recorded annually (22 confirmed cases in 2003). The Ministry of Health places great importance on finding and treating asymptomatic chronic typhoid carriers through contact tracing and stool sampling, and this limits the spread of typhoid. However, it can be argued that Tonga is in the position to eliminate typhoid fever altogether if adequate coordinated resources were to be allocated to treat carriers, improve sanitary practices and ensure the supply of safe water in all villages.

Twenty-three new cases of tuberculosis (all types) were reported in 2007. All tuberculosis treatment follows the directly observed treatment, short-course (DOTS) strategy and there is active contact tracing. The cure rate for patients diagnosed in 2006 was 100%.

HIV prevalence remains very low in Tonga. Fourteen people have been diagnosed with HIV infection over the last 16 years and, as of January 2006, there was only one person known to be living with HIV infection. The volume of HIV serology testing is high, with an average of 2500-3000 HIV tests carried out annually as part of screening of blood donors, government employees and visa applicants, and an estimated 45 000 HIV tests have been carried out since the start in the 1980s. A pilot trial of voluntary counselling and testing (VCT) at the antenatal clinic at the referral hospital reported a very high uptake, but no decision has been taken to continue to offer antenatal screening. Risk behaviour surveillance and

high-risk group serosurveillance started in 2005 and will provide valuable information on the risk of transmission. Antiretroviral treatment (ART) is not available through the public health system and there are no officially endorsed guidelines for treatment of HIV infection or prevention of mother-to-child transmission.

The diagnostic capacity for sexually transmitted infections (STIs) is limited to gonorrhoea and syphilis (with the exception of HIV). The number of cases is thought to be much higher than revealed by the statistics, as many patients are treated by private practitioners who do not notify the Ministry of Health. The ratio of men to women receiving treatment for gonorrhoea is 10:1, indicating weak contact tracing and a lack of appropriate services for women. A serosurvey in pregnant women in 2005 found a high overall prevalence of chlamydial infection of 14.5%. The rate was 27.5% in women <25 years of age, an indication that transmission may be increasing in younger women. The RPR-positive rate for syphilis was 3.2%, which is alarming considering that the Ministry of Health took the controversial decision to discontinue syphilis screening in pregnancy a few years ago. The same study also asked questions about sexual risk behaviour, which showed that the condom use rate is very low and that condoms are primarily seen as a method of contraception to be used within marriage and not to protect against STIs.

2.2 Outbreaks of communicable diseases

The country experienced a large outbreak of dengue fever (serotype 1) in 2003, causing six deaths in children, and transmission continued into 2005. The outbreak was confined to the main island of Tongatapu in the first year, but transmission then spread to all island groups except the Niuas. Two adult deaths due to dengue were recorded in 2005. It is unlikely that dengue will become endemic in Tonga because the population is not large enough to sustain transmission over time. However, vector control and vector surveillance is poor and the measures introduced to prevent fatalities and control transmission during outbreaks are suboptimal. It looks inevitable that the introduction of another serotype will cause a new outbreak of dengue fever, with fatalities.

Tonga experienced an outbreak of watery diarrhoea from December 2005 to February 2006, with altogether six fatalities in children below one year of age. This was an unusually large outbreak and, for the first time, Rota virus was confirmed in a sample sent to the Pasteur Institute in New Caledonia.

2.3 Leading causes of mortality and morbidity

See Section 2.1.

2.4 Maternal, child and infant diseases

More than 98% of pregnant women attend antenatal clinics, 98.5% deliver in a health facility and 100% of deliveries are attended by trained staff. The maternal mortality ratio (MMR) was 36.5 per 100 000 live births in 2007. Indicators that are based on relatively uncommon events, such as MMR and IMR, will show large variations between years due to chance and it can be more informative to either compare absolute numbers or to examine rates over five-year or 10-year periods. The mean MMR for the five-year period from 1999 to 2003 was 39.4 per 100 000 live births, which translates to one death per year. It is of concern that the MMR has been stable over the last two decades and that it has proven very difficult to reduce it further. The absolute majority of maternal deaths took place in hospital, which is an indication that patient monitoring and emergency services, such as availability of blood for transfusion, needs strengthening.

Tonga is the best performing country in the Pacific in terms of infant and child mortality. The unusually low infant mortality rate of 9.1 deaths per 1000 live births at the 1990 baseline for the Millennium Development Goals (MDGs), together with the fact that the IMR has remained unchanged for the last decade, makes it unrealistic for the country to achieve the MDG for infant mortality. There are several explanations for the low IMR, but at the core is the Government's commitment to delivering key interventions, such as immunizations, antenatal care and trained delivery care to the entire population. The result shows that it is possible to provide high coverage of essential services in an island state with isolated populations, and that it pays off.

There is little absolute poverty in Tonga, no chronic undernutrition (stunting), no important micronutrient deficiencies and no malaria, all factors that contribute to well nourished and healthy mothers and children. The comparatively low teenage (<20 years) pregnancy rate (4.1% in the 2000-2003 period) is another protective factor. Breast-feeding promotion is receiving increasing attention as an important public health intervention. The goal of establishing Vaiola Hospital as a baby-friendly hospital in 2005 was, unfortunately, not achieved. This would have meant that two-thirds of all children in Tonga would be born in a baby-friendly environment. Work has started to translate the International Code on Marketing of Breast-milk Substitutes into national law and regulations.

The challenge for child health lies in protecting the impressive gains made so far while at the same time identifying and implementing affordable and sustainable interventions that will reduce mortality rates further. Mortality from *Haemophilus influenzae* type B (Hib) infection lies almost entirely in the 0-1 age group and the introduction of routine childhood immunizations against Hib in 2005 is a good example of an affordable new intervention to improve child health.

Immunization rates are higher than in many industrialized countries, and neonatal tetanus and poliomyelitis have been eliminated. Rubella vaccine (measles-rubella [MR] vaccine) was added to the immunization schedule in 2002 in response to a large outbreak of the disease. There have been no detected cases of congenital rubella syndrome (CRS) following the outbreak. The immunization campaign with MR vaccine to break the epidemic included all children of 0-15 years and all women up to 45 years of age, with a coverage rate of above 80%, meaning that population immunity against measles can be expected to be high. The last confirmed measles infection was in 1998 and Tonga set 2007 as a target for measles elimination. Immunization against Hib was introduced in April 2005, with a catch-up immunization campaign for children below two years of age. It has been estimated that Hib vaccine will prevent one to two infant deaths and several more cases of severe sequelae per year caused by Hib meningitis. The hospital paediatric departments are documenting the impact of Hib vaccine on admissions for meningitis and pneumonia.

2.5 Burden of disease

See Section 2.1.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

No available information.

3.2 Organization of health services and delivery systems

The Ministry of Health works in four programme areas: (1) policy formulation and administration; (2) preventive health services; (3) curative health services; and (4) dental health services.

Government health services are provided free of charge and physical access to care is good for the majority of people, with the exception of small populations living on isolated islands. Primary curative care and preventive services are delivered through a system of 14 health centres.

There are four hospitals in Tonga: the tertiary Vaiola Hospital in Nuku'alofa, with 196 beds; and three district hospitals, Prince Ngu's hospital in Vava'u, Niu'ui hospital in Ha'apai and Niu'eki hospital in Eua. The overall bed occupancy rate is low, 34% in 2003, an indication that the hospital system is oversized and has not adapted to the changes in the disease pattern and to improvements in physical access. However, transportation between islands remains difficult and acute referrals to the tertiary hospital are uncommon, making centralization of services problematic. The four hospitals also serve the populations on their respective islands with primary health care and they all run busy outpatient and emergency departments.

Patients requiring specialist care that is not available in Tonga can be referred to New Zealand under two treatment schemes, one funded by the Government of Tonga and one by the Government of New Zealand. The decision to refer is made on a case-by-case basis by the Medical Transfer Board. Specialist

treatment teams in such areas as eye surgery, plastic surgery, corrective orthopaedic surgery and rheumatic heart disease visit Tonga regularly.

3.3 Health policy, planning and regulatory framework

See Section 3.2

3.4 Health care financing

A 2003 household survey on health care expenditure showed that 89% of all health services were delivered by public hospitals and only 6.2% by health centres. The Government covers 45% of total expenditure on health, households 23% and donors 32%. However, when expenditure on traditional healers and international referrals is excluded, it becomes obvious that the Government covers the absolute majority of both curative and preventive care costs and that 'out-of-pocket' payments for health care are low. About 12% of the population have some kind of health insurance. The private sector is still small and consists mainly of traditional healers and 'after-hours' practising government-employed doctors. About 14% of total expenditure on health is for traditional healers, although they are mostly paid in kind. Expenditure on drugs accounts for approximately 7.8% of total expenditure on health. There is a health insurance system, but it only covers government employees.

3.5 Human resources for health

There are large variations in equipment, staffing and catchment populations depending on location but, on average, a health centre serves 7200 people and is typically staffed by a health officer and one to three nurses. There were 58 physicians in 2007 (0.39 doctors per 1000 population). In the same year, there were 302 nurses (2.9 nurses per 1000 population). In 2003, there were 13 dental officers and 10 dental therapists. The number of private providers is increasing, but the majority of private doctors remain government employees and run part-time private clinics, many out of their homes.

The Ministry of Health had a total of 945 established posts in 2002, with an overall vacancy rate of 25%, making it one of the biggest employers in the country. Doctors normally train in Australia, Fiji or New Zealand, often on bilateral scholarships or WHO fellowships. Three-year health officer training courses are organized by the Ministry of Health when required. Nurses train at the Queen Salote School of Nursing in Tonga. On average, 30 nurses graduate each year from the basic nursing training programme. A decision has been made to increase the intake several-fold in order to make up for the continuous loss of nurses to Australia, New Zealand and the United States of America. The Nursing School also runs a postgraduate certificate training programme in collaboration with the nursing department at the Auckland University of Technology, New Zealand. The first training programme in intensive care nursing started in 2005 and postgraduate training programmes in midwifery, internal medicine, surgery and public health were offered in 2006-2007.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

The most critical question for the health system today is how to increase the resources available for health. Government health expenditure is about US$ 100 per capita per year and, given that this pays for free medical treatment and free drugs, it is fair to say that Tongans get a lot of value for their money. Around 10%-15% of the Government's total budget has been spent on health for the last two decades and it is unlikely that share will increase substantially in the future. Since government income is likely to grow only slowly in the coming years, there will be little space for growth in health sector spending within the current health financing system. At the same time, the pressure on the health system will increase with the increasing burden of noncommunicable diseases and the ageing of the population. Identifying alternative sources of health care financing is thus one of the top priorities of the Ministry of Health. In December 2005, Cabinet approved the introduction of user fees. A decision has also been made to introduce social health insurance within the next three to five years. Initially it will cover civil servants, but the intention is to gradually include larger sections of the population. Tonga has achieved many of the health goals within its reach given its existing health spending level and the challenge now is to increase

the resources for health promotion and health care without jeopardizing the health of poor and disadvantaged groups in the population.

The increase in noncommunicable diseases (NCD) has now reached epidemic proportions. In addition to human suffering, NCD can have a negative impact on family economies. The loss of income due to disease and the cost of treating chronic conditions can put enormous strain on families and destroy years of work to improve a family's situation. Ultimately there will be a negative impact on the country's economic development as more resources have to be used for health care and productive and experienced middle-aged people in the workforce are lost to chronic disease or death. Identifying and implementing effective population-targeted preventive measures that can slow the increase of disease and, in the future, reverse the trend, are of the highest priority. The national multisectoral strategy for the control and prevention of noncommunicable diseases, developed in 2003, is a sign that the Government takes the issue very seriously. There are plans to establish a Health Promotion Foundation with funding from dedicated taxation on tobacco and alcohol. Such a mechanism could provide crucial resources for health promotion, an area of health that is currently heavily dependent on external support.

There is a recognized need to improve both the quality of and access to health care, particularly for NCD, in view of the increasing burden of the ageing population. A large proportion of patients with diabetes and cardiovascular disease remain undiagnosed and untreated. It is therefore a priority to both increase access to care and improve the quality of care for people with noncommunicable diseases. This must include solutions for financing the treatment of chronic conditions and for increasing patients' knowledge of their condition and their responsibility for care. Active participation in treatment and patient empowerment are essential for successful treatment of chronic conditions.

There is a need to strengthen both the collection of information and the analysis and dissemination of health statistics for decision-making. The outcomes of investments in health care financing and prevention of NCD must be able to be evaluated so that strategies can be modified when needed. The information must be easily available, cheap and reliable, and should therefore be based on ongoing surveillance rather than repeated and costly surveys. A first step towards such a system is the strengthening of vital statistics on births and deaths, as well as a consistent hospital-based diagnosis registration system. The Government has already started important work in this area, but there is a need to strengthen the system of data collection as well as increase the capacity to process and interpret the information gathered. The Ministry of Health is expected to invest substantially in the area of health information in the coming years, partly with resources made available through a World Bank loan.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Annual reports 1995 to 2004;* *Ministry of Health Corporate Plan 2001-2004;* *Ministry of Health Corporate Plan 2005-2008;* *EPI and Reproductive Health Services annual reports 2000-2003*
Operator	:	Ministry of Health
Title 2	:	Tonga Department of Statistics
Web address	:	http://www.spc.int/prism/country/to/stats
Title 3	:	*Social and economic update and pro-poor policy formulation, Tonga.* Pacific Island Economic Report series
Operator	:	Asian Development Bank TA6245 (reg)
Title 4	:	*Tonga's report on progress towards the Millennium Development Goals (MDGs)*
Title 5	:	*Annual report of the National Reserve Bank 2003-2004*
Title 6	:	Health Sector Support Project (HSSP/WB) Project Implementation Plan (PIP)
Title 7	:	*National Health Accounts report of July 2004*
Title 8	:	*Tonga's health 2000*

5. ADDRESSES

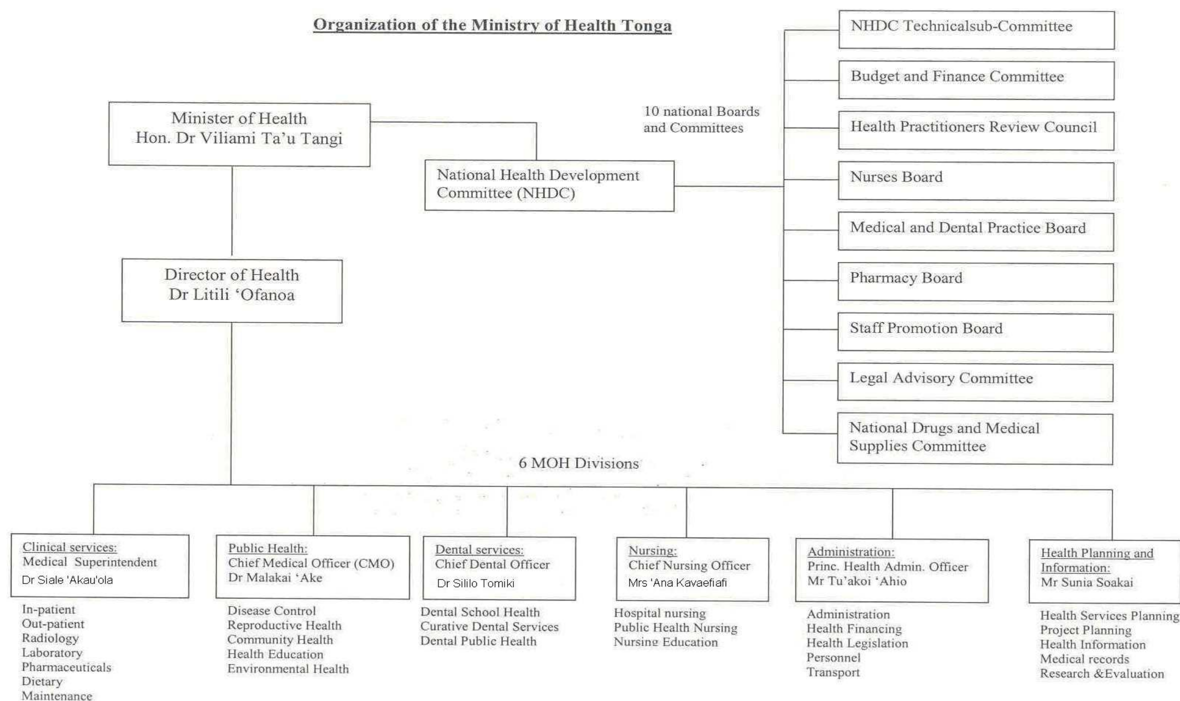
MINISTRY OF HEALTH

Office Address	:	Ministry of Health, Vaiola hospital
Postal Address	:	P.O. Box 59, Nuku'alofa, Kingdom of Tonga
Official Email Address	:	mohtonga@kalianet.to
Telephone	:	(676) 23 200
Fax	:	(676) 24 291
Office Hours	:	08.30 – 16.30

WHO COUNTRY LIAISON OFFICER IN TONGA

Office Address	:	Ministry of Health, Nuku'alofa, Tonga
Postal Address	:	P.O. Box 70, Nuku'alofa, Tonga
Official Email Address	:	who@ton.wpro.who.int
Telephone	:	(676) 23217 / 25522
Fax	:	(676) 23 938
Office Hours	:	08.30 – 16.30 Time zone Manila +5 hrs, CET + 12 hrs

6. ORGANIZATIONAL CHART: Ministry of Health



TONGA — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	**Total**	**Male**	**Female**		
1	**Area (1 000 km2)**	0.65			2008	1
2	**Estimated population ('000s)**	102.72	...	...	2008 est	1
3	**Annual population growth rate (%)**	0.40	...	...	2008	1
4	**Percentage of population**					
	- 0–4 years	12.90	13.00	12.70	2008 est	2
	- 5–14 years	23.10 [a]	23.70 [a]	22.60 [a]	2008 est	2
	- 65 years and above	5.70 [a]	4.90 [a]	6.40 [a]	2008 est	2
5	**Urban population (%)**	24.40 [b]	...	...	2007	3
6	**Crude birth rate (per 1000 population)**	28.50	...	...	2008 est	1
7	**Crude death rate (per 1000 population)**	6.80	...	...	2008 est	1
8	**Rate of natural increase of population (% per annum)**	2.17 [a]	...	...	2008 est	1
9	**Life expectancy (years)**					
	- at birth	...	67.30	73.00	2008 est	1
	- Healthy Life Expectancy (HALE) at age 60	...	11.90	12.00	2002	4
10	**Total fertility rate (women aged 15–49 years)**	3.70			2007	5
	Socioeconomic indicators					
11	**Adult literacy rate (%)**	99.00	98.80	99.00	1995-2005	6
12	**Per capita GDP at current market prices (US$)**	2319.00			2006 est	1
13	**Rate of growth of per capita GDP (%)**	...				
14	**Human development index**	0.77			2006	7
	Environmental indicators	**Total**	**Urban**	**Rural**		
15	**Proportion of vehicles using unleaded gasoline (%)**	...	...	...		
16	**Health care waste generation (metric tons per year)**	...	...	...		

	Communicable and noncommunicable diseases	**Number of new cases**			**Number of deaths**				
17	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral								
	- Type A	2	0	2	0	0	0	2002	8
	- Type B	5	4	1	5	3	2	2002	8
	- Type C	0	0	0	0	0	0	2002	8
	- Type E	...	...	...	...	...	...		
	- Unspecified	0	0	0	0	0	0	2002	8
	Cholera	0	0	0	0	0	0	2002	8
	Dengue/DHF	195	...	...	2	...	...	2008	9
	Encephalitis	2	...	...	...	...	...	2003	8
	Gonorrhoea	42	...	...	...	...	...	2003	10
	Leprosy	0	0	0	...	...	...	2007	9
	Malaria	...	...	...	...	...	...		
	Plague	0	0	0	0	0	0	2002	8
	Syphilis	0	0	0	0	0	0	2002	8
	Typhoid fever	23	...	...	...	...	...	2003	11

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	20 891	…	…	…	…	…	2004	11
19	**Diarrhoeal diseases**	1682	…	…	…	…	…	2004	11
20	**Tuberculosis**								
	- All forms	23 [c]	15 [c]	8 [c]	…	…	…	2007	5, 9
	- New pulmonary tuberculosis (smear-positive)	14 [c]	8 [c]	6 [c]	…	…	…	2007	5, 9
21	**Cancers**								
	All cancers (malignant neoplasms only)	101	46	55	76	42	34	2002	12
	- Breast	…	…	…	…	…	…		
	- Colon and rectum	3	3	0	0	0	0	2002	12
	- Cervix			7			3	2002	12
	- Oesophagus	…	…	…	…	…	…		
	- Leukaemia	1	0	1	1	0	1	2002	12
	- Lip, oral cavity and pharynx	6	3	3	3	0	3	2002	12
	- Liver	6	3	3	8	6	2	2002	12
	- Stomach	8	6	2	5	4	1	2002	12
	- Trachea, bronchus, and lung	7	7	0	13	11	2	2002	12
22	**Circulatory**								
	All circulatory system diseases	…	…	…	196	128	68	2007	5
	- Acute myocardial infarction	…	..	…	21	15	6	2007	5
	- Cerebrovascular diseases	…	…	…	…	…	…		
	- Hypertension	49	…	…	1	0	1	2007	5
	- Ischaemic heart disease	100	…	…	7	6	1	2007	5
	- Rheumatic fever and rheumatic heart diseases	90	…	…	0	0	0	2007	5
23	**Diabetes mellitus**	176	…	…	…	…	…	2007	5
24	**Mental disorders**	199	130	69	0	0	0	2002	12
25	**Injuries**								
	All types	…	…	…	…	…	…		
	- Homicide and violence	…	…	…	0	0	0	2007	5
	- Motor and other vehicular accidents	…	…	…	0	0	0	2007	5
	- Occupational injuries	…	…	…	0	0	0	2007	5
	- Suicide	…	…	…	1	1	0	2007	5
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Acute respiratory infections	20 819	…	…	20 437.83 [a]	…	…	2004	11
	2. Influenza	20 057	…	…	19 689.79 [a]	…	…	2004	11
	3. Bronchiopneumonia	1947	…	…	1911.35 [a]	…	…	2004	11
	4. Diarrhoea (adult)	1011	…	…	992.49 [a]	…	…	2004	11
	5. Diarrhoea (children)	671	…	…	658.71 [a]	…	…	2004	11
	6.								
	7.								
	8.								
	9.								
	10.								

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	Total	Male	Female	Total	Male	Female		
	1. Diseases of the circulatory system	196	...	...	191.59	...	...	2007	5
	2. Neoplasms	62	...	...	60.61	...	...	2007	5
	3. Symptoms, signs and ill-defined conditions	58	...	...	56.70	...	...	2007	5
	4. Diseases of the respiratory system	54	...	...	52.79	...	...	2007	5
	5. Certain infectious and parasitic disease	35	...	...	34.21	...	...	2007	5
	6.								
	7.								
	8.								
	9.								
	10.								
	Maternal, child and infant diseases	Total		Male		Female			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					27.70		2007	5
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					99.00		2008	9
30	**Percentage of pregnant women with anaemia**					...			
31	**Neonatal mortality rate (per 1000 live births)**	5.40		...		...		2007	5
32	**Percentage of newborn infants weighing at least 2500 g at birth**	97.50						2002	12
33	**Immunization coverage for infants (%)**								
	- BCG	99.00		...		...		2008	9
	- DTP3	99.60		...		...		2008	9
	- POL3	99.60		...		...		2008	9
	- Hepatitis B III	98.00		...		...		2008	9
		Number of cases			Number of deaths				
34	**Maternal causes**	Total	Male	Female	Total	Male	Female		
	- Abortion			91			0	2007	5
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	9
	- Diphtheria	0	0	0	...	...	...	2008	9
	- Hib meningitis	0	0	0	...	...	...	2005	9
	- Measles	0	0	0	...	...	...	2008	9
	- Mumps	0	0	0	...	...	...	2008	9
	- Neonatal tetanus	0	0	0	...	...	...	2008	9
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	9
	- Poliomyelitis	0	0	0	...	...	...	2008	9
	- Rubella	0	0	0	...	...	...	2008	9
	- Total Tetanus	0	0	0	...	...	...	2008	9

TONGA

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	**Facilities with HIV testing and counseling services**		…			
37	**Health infrastructure**					
	Public health facilities	- General hospitals	1	196	2007	5
		- Specialized hospitals	…	…		
		- District/first-level referral hospitals	3	70	2007	5
		- Primary health care centres	14	…	2007	5
	Private health facilities	- Hospitals	…	…		
		- Outpatient clinics	…	…		
	Health care financing					
38	**Total health expenditure**					
	- amount (in million US$)			12.69 [a]	2007p	13
	- total expenditure on health as % of GDP			4.90	2007p	13
	- per capita total expenditure on health (in US$)			124.42 [a]	2007p	13
	Government expenditure on health					
	- amount (in million US$)			9.64 [a]	2007p	13
	- general government expenditure on health as % of total expenditure on health			74.00	2007p	13
	- general government expenditure on health as % of total general government expenditure			11.70	2007p	13
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			46.54 [a,c]	2006p	13
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			26.00	2007p	13
	Exchange rate in US$ of local currency is: 1 US$ =			1.97	2007p	13
39	**Health insurance coverage as % of total population**			12.00	FY 2002-2003	11

	INDICATOR		DATA							Year	Source
40	**Human resources for health**		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	58 [d]	…	…	…	…	…	…	2007	5
		- Ratio per 1000 population	0.39	…	…	…	…	…	…	2007	5
	Dentists	- Number	23 [e]	…	…	…	…	…	…	2003	11
		- Ratio per 1000 population	0.23	…	…	…	…	…	…	2003	11
	Pharmacists	- Number	4	3	1	…	…	…	…	2002	12
		- Ratio per 1000 population	0.04	0.06	0.02	…	…	…	…	2002	12
	Nurses	- Number	302	…	…	…	…	…	…	2007	5
		- Ratio per 1000 population	2.95	…	…	…	…	…	…	2007	5
	Midwives	- Number	21	0	21	…	…	…	…	2002	12
		- Ratio per 1000 population	0.21	0.00	0.21	…	…	…	…	2002	12
	Paramedical staff	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
	Community health workers	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
41	**Annual number of graduates**	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	0	0	0	0	0	0	0	2007	5

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	20	...	...	...	...	...	...	2007	5
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	0	0	0	0	0	0	0	2007	5
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	11.80	...	...	2007	5
45	Under-five mortality rate (per 1000 live births)	13.90	...	...	2002	14
46	Proportion of 1 year-old children immunised against measles	100.00	...	...	2008	9
47	Maternal mortality ratio (per 100 000 live births)	36.50			2007	5
48	Proportion of births attended by skilled health personnel	100.00			2007	5
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.50			2007	5
	- Percentage of deliveries in health facilities (as % of total deliveries)	98.50			2007	5
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	98.70			2007	5
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults	...	...	...		
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	...	...	...		
57	Malaria death rate per 100 000 population	1.00	...	...	2000 est	9
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	28.00	...	...	2007	9
61	Tuberculosis death rate per 100 000 population	2.00	...	...	2007	9
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	129.00	...	...	2007	9
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	100.00	...	...	2006	9
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	100.00	100.00	100.00	2006	15
65	Proportion of population using an improved sanitation facility	96.00	98.00	96.00	2006	15
66	Proportion of population with access to affordable essential drugs on a sustainable basis	>95.00	...	...	2002	14

Notes:	
...	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Health Information and Evidence for Policy Unit of WHO Regional Office for the Western Pacific
b	Revised data
c	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO
d	Figure refers to government doctors
e	Figure refers to dental officers and dental therapists

Sources:	
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7	United Nations Development Programme (UNDP) 2008. Human Development Indices: a statistical update. New York: UNDP. Available from [http://hdr.undp.org/en/media/HDI2008Tables.xls]
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10	Tonga Statistics Department (http://www.spc.in/prism).
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15	WHO and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). 2008. Progress on Drinking Water and Sanitation.New York/Geneva: UNICEF/WHO. Available from: <http://www.wssinfo.org/en/40_mdg2008.html> (Accessed 20 April 2009).

TUVALU

1. CONTEXT

1.1 Demographics

By population, Tuvalu is the smallest member of the United Nations. The population has more than doubled since 1980 and was estimated to reach 9729 in 2008. About 33.6% are in the 0-14 year age group, 61.3% in the 15-64 year age group and 5.1% are 65 years or older. The median age is 24.2 years. The population growth rate is estimated at 0.3% (2008), and the crude birth rate at 21.8 per 1000 population.

The population is primarily of Polynesian ethnicity, with about 4% Micronesian. Life expectancy at birth is 63.6 years for both sexes: 61.7 years for males and 65.1 years for female in 2002.

The Tuvaluan language is spoken by virtually everyone, while a language very similar to Gilbertese is spoken on Nui. English is also an official language, but is not spoken in daily use. Parliamentary and official functions are conducted in Tuvaluan.

1.2 Political situation

The islands came under Britain's sphere of influence in the late 19th century. In 1974, the Ellice Islanders voted for separate British dependency status as Tuvalu, separating from the Gilbert Islands, which became Kiribati upon independence. Tuvalu became fully independent within the Commonwealth in 1978.

Tuvalu is a constitutional monarchy and Commonwealth realm, with Queen Elizabeth II recognized as Queen of Tuvalu. She is represented in Tuvalu by a Governor General, who is appointed upon the advice of the Prime Minister. The local unicameral parliament, or *Fale I Fono*, has 15 members and is elected every four years. The members elect a Prime Minister as head of government. The Cabinet is appointed by the Governor General on the advice of the Prime Minister. Some elders also exercise informal authority on a local level. There are no formal political parties and election campaigns are largely on the basis of personal/family ties and reputation.

The highest court in Tuvalu is the High Court. There are also eight island courts with limited jurisdiction. Rulings from the High Court can be appealed to the Court of Appeal in Fiji.

Tuvalu has no regular military force and spends no money on defence. The police force includes the Maritime Surveillance Unit for search and rescue missions and surveillance operations. The police have a Pacific-class patrol boat (*Te Mataili*), provided by Australia under the Pacific Patrol Boat Program, for use in maritime surveillance and fishery patrol.

1.3 Socioeconomic situation

Tuvalu has almost no natural resources, its main source of income being foreign aid. Virtually the only jobs in the islands that pay a steady wage or salary are with the Government. Subsistence farming and fishing remain the primary economic activities, particularly off the capital island of Funafuti. Government revenues largely come from the sale of stamps and coins, issuing of fishing licenses and worker remittances.

The traditional community system still survives to a large extent. Each family has its own task, or *salanga*, to perform for the community, such as fishing, house-building or defence. The skills of a family are passed on from father to son.

About 800 Tuvaluans previously worked in Nauru in the phosphate mining industry or aboard foreign ships as sailors. When phosphate mining ceased in Nauru, 378 Tuvaluans were stranded in the country until they were repatriated in 2006 by a joint programme in which Australia, New Zealand and the

European Union paid most of the cost of their return passage, and Taiwan (China) paid the back wages they were owed. Substantial income is received annually from an international trust fund established in 1987 by Australia, New Zealand and the United Kingdom and also supported by Japan and the Republic of Korea. This fund grew from an initial US$ 17 million to over US$ 35 million in 1999. The United States Government is also a major revenue source for Tuvalu, with 1999 payments from a 1988 treaty on fisheries valued at about US$ 9 million, a total that is expected to rise annually. In an effort to reduce the country's dependence on foreign aid, the Government is pursuing public sector reforms, including privatization of some government functions and personnel cuts of up to 7%.

In 1998, Tuvalu began deriving revenue from use of its area code for '900' lines and from the sale of its '.tv' Internet domain name. In 2000, Tuvalu negotiated a contract leasing its Internet domain name '.tv' for US$ 50 million in royalties. However, the Canadian entrepreneur who negotiated the deal was unable to raise the US$ 50 million in the contracted time period, and the contract eventually fell into other hands.

Due to its remoteness, tourism does not provide much income, with only a handful of tourists visiting the country annually. Almost all visitors are government officials, aid workers, officials of nongovernmental organizations or consultants.

1.4 Risks, vulnerabilities and hazards

In terms of land area, Tuvalu is the fourth smallest country in the world. The land is very low-lying, with narrow coral atolls, and the highest elevation is only five metres (16 ft) above sea level. Because of this low elevation, the islands that make up the nation may be threatened by any future rise in sea levels due to global warming. Under such circumstances, the population may evacuate to New Zealand, Niue or the Fijian island of Kioa.

Tuvalu has very poor land and the soil is hardly usable for agriculture. There is almost no reliable supply of drinking water.

The country has westerly gales and heavy rain from November to March and tropical temperatures moderated by easterly winds from March to November.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Communicable diseases are reported as the major cause of morbidity, with alarming numbers of skin infections, acute respiratory infections and eye infections reported. An increase in tuberculosis prevalence has resulted in strengthening of the TB programme and a filariasis mass drug administration programme is in place. Vector control is an ongoing activity.

A new communicable disease surveillance system was implemented in 2003, which is appropriately simple and sustainable and addresses the right priority diseases. However, not all cases of infectious disease are reported. As in other Pacific island countries, diseases like dengue and typhoid fever occur from time to time. One problem is the limited microbiological testing capability on the island; many specimens need to be shipped to overseas laboratories for confirmation and this limits the sensitivity and timeliness of surveillance. The high number of domesticated pigs suggests that there may be a risk of leptospirosis, although this disease has not been reported on the island for several years. This low reporting may also be linked to the lack of microbiological testing available on the main island.

There is a limited supply of fresh (rain) water, which means that there is a risk of communicable diseases spreading through drinking water. Groundwater is brackish and is not generally considered safe for consumption.

Lifestyle-related diseases are also evident, with the leading causes of mortality including heart disease and diabetes.

2.2 Outbreaks of communicable diseases

No outbreaks of infectious diseases have been reported in recent years.

2.3 Leading causes of mortality and morbidity

The leading causes of morbidity and mortality are communicable diseases. However, noncommunicable diseases, such as obesity, heart disease and diabetes, are a growing concern.

2.4 Maternal, child and infant diseases

The infant mortality rate in 2003 was high, at 21.6 per 1000 live births. The total fertility rate was estimated at 3.7 in 2008.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

No available information.

3.2 Organization of health services and delivery systems

Health services are working to meet the new demands of the changing lifestyles (especially regarding diet) of the population.

There is one hospital, located on the main island of Funafuti. The outer islands have clinics staffed by trained nurses.

3.3 Health policy, planning and regulatory framework

The national health policy goals for Tuvalu are:

- to prevent diseases, promote healthy lifestyles and raise the standard of living;
- to provide high quality primary, secondary and tertiary health services;
- to continually improve the effectiveness and efficiency of the health care delivery system;
- to develop all health services as customer-focused; and
- to produce and retain high quality personnel for the health services.

To meet these goals, major activities of the Ministry of Health are geared towards:

- strengthening the existing communicable diseases programmes (special attention is to be given to tuberculosis, filariasis, skin infections and primary eye care); and
- assessing the prevalence and incidence of noncommunicable diseases and developing corresponding preventive and control programmes (particular attention is to be given to diabetes mellitus and hypertension).

3.4 Health care financing

As in other developing countries, health care financing remains a problem. However, the Government is working towards improving it.

3.5 Human resources for health

Human resources are a major weak spot for the health care system. The workforce, consisting of seven physicians and approximately 54 trained nurses, provides for limited surge capacity and is very sensitive to brain drain to countries such as Australia and New Zealand.

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

Human resources are the main challenge. There needs to be an ongoing effort to strengthen the knowledge and expertise of the existing staff.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : Central Statistics Department
Operator : Government of Tuvalu
Web address : http://www.spc.int/prism/country/tv/stats/

Title 2 : Secretariat of the Pacific Community – *Prism.*
Web address : http://www.spc.int/prism/country/tv/tv_index.html

Title 3 : *2008 Pocket statistical summary (PSS)*
Operator : Secretariat of the Pacific Community, Statistics and Demography
Web address : http://www.spc.int/sdp/

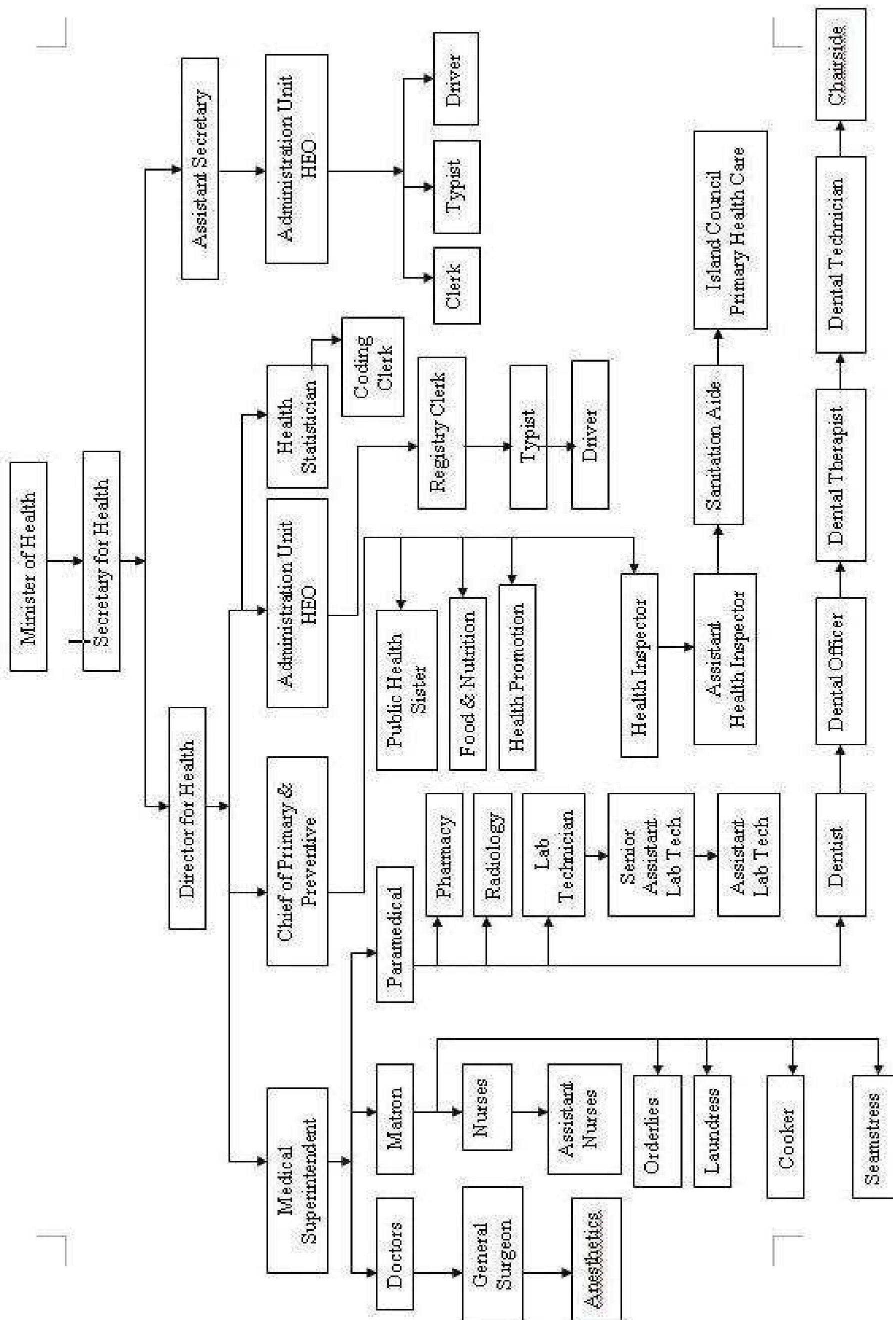
Title 4 : Household Income and Expenditure Survey (HIES) 2004/2005
Operator : Government of Tuvalu Central Statistics Division
Web address : http://www.spc.int/prism/Country/TV/Stats/Publictn/Tuvalu%20HIES%20Report.pdf

5. ADDRESSES

MINISTRY OF HEALTH
Office Address : Vaiaku, Funafuti, Tuvalu
Postal Address : P.O. Box 36, Funafuti, Tuvalu
Official Email Address : soh@tuvalu.tv
Telephone : Health Division: (688) 20403
Fax : Health Division: (688) 20832
Office Hours : 0800-1600

WHO REPRESENTATIVE IN THE SOUTH PACIFIC
Office Address : Level 4, Provident Plaza One,
Downtown Boulevard,
33 Ellery Street, Suva
Postal Address : P O Box 113, Suva, Fiji
Official Email Address : who@sp.wpro.who.int
Telephone : (679) 3234 100
Fax : (679) 3234 166; 3234 177
Office Hours : 0800 – 1700
Website : http://www.wpro.who.int/southpacific

6. ORGANIZATIONAL CHART: Ministry of Health



COUNTRY HEALTH INFORMATION PROFILE

TUVALU — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA						Year	Source
	Demographics	**Total**		**Male**		**Female**			
1	**Area (1 000 km2)**	0.03						2008	1
2	**Estimated population ('000s)**	9.73		...		...		2008 est	1
3	**Annual population growth rate (%)**	0.30		...		...		2008	1
4	**Percentage of population**								
	- 0–4 years	12.30		12.20		12.30		2008 est	2
	- 5–14 years	21.30		21.30		21.40		2008 est	2
	- 65 years and above	5.10		4.50		5.80		2008 est	2
5	**Urban population (%)**	49.00		...		...		2007 est	3
6	**Crude birth rate (per 1000 population)**	21.80		...		...		2008 est	1
7	**Crude death rate (per 1000 population)**	9.50		...		...		2008 est	1
8	**Rate of natural increase of population (% per annum)**	1.23 [a]		...		...		2008 est	1
9	**Life expectancy (years)**								
	- at birth	63.60		61.70		65.10		1997-2002	4
	- Healthy Life Expectancy (HALE) at age 60	...		9.70		10.30		2002	5
10	**Total fertility rate (women aged 15–49 years)**	3.70						2008 est	1
	Socioeconomic indicators								
11	**Adult literacy rate (%)**	...		...		...			
12	**Per capita GDP at current market prices (US$)**	1139.32						2002	4
13	**Rate of growth of per capita GDP (%)**	...							
14	**Human development index**	...							
	Environmental indicators	**Total**		**Urban**		**Rural**			
15	**Proportion of vehicles using unleaded gasoline (%)**	...		...		...			
16	**Health care waste generation (metric tons per year)**	...		...		...			
	Communicable and noncommunicable diseases	**Number of new cases**			**Number of deaths**				
17	**Selected communicable diseases**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	Hepatitis viral								
	- Type A	0	0	0	0	0	0	2001	6
	- Type B	0	0	0	0	0	0	2001	6
	- Type C	0	0	0	0	0	0	2001	6
	- Type E	...	...	...	...	...	...		
	- Unspecified	23	...	...	0	0	0	2001	6
	Cholera	0	0	0	0	0	0	2005	6
	Dengue/DHF	0	0	0	0	0	0	2007	6
	Encephalitis	0	0	0	0	0	0	2005	6
	Gonorrhoea	...	...	...	...	...	...		
	Leprosy	1	...	...	...	...	...	2007	6
	Malaria	...	...	...	...	...	...		
	Plague	0	0	0	0	0	0	2001	6
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	0	0	0	0	0	0	2005	6

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	2950	…	…	…	…	…	2003	7
19	**Diarrhoeal diseases**	967	…	…	1	…	…	2002	7
20	**Tuberculosis**								
	- All forms	18 [d]	…	…	…	…	…	2007	6
	- New pulmonary tuberculosis (smear-positive)	12 [d]	…	…	…	…	…	2007	6
21	**Cancers**								
	All cancers (malignant neoplasms only)	1	…	…	0	0	0	2004	7
	- Breast	…	…	…	…	…	…		
	- Colon and rectum	…	…	…	…	…	…		
	- Cervix			…			…		
	- Oesophagus	…	…	…	…	…	…		
	- Leukaemia	…	…	…	…	…	…		
	- Lip, oral cavity and pharynx	…	…	…	…	…	…		
	- Liver	…	…	…	…	…	…		
	- Stomach	…	…	…	…	…	…		
	- Trachea, bronchus, and lung	…	…	…	…	…	…		
22	**Circulatory**								
	All circulatory system diseases	…	…	…	…	…	…		
	- Acute myocardial infarction	…	…	…	…	…	…		
	- Cerebrovascular diseases	…	…	…	…	…	…		
	- Hypertension	344	…	…	…	…	…	2002	7
	- Ischaemic heart disease	…	…	…	…	…	…		
	- Rheumatic fever and rheumatic heart diseases	…	…	…	…	…	…		
23	**Diabetes mellitus**	281	…	…	…	…	…	2002	7
24	**Mental disorders**	…	…	…	…	…	…		
25	**Injuries**								
	All types	…	…	…	…	…	…		
	- Homicide and violence	…	…	…	…	…	…		
	- Motor and other vehicular accidents	1	…	…	0	0	0	2001	8
	- Occupational injuries	32	…	…	…	…	…	2002	7
	- Suicide	…	…	…	…	…	…		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Septic sores	1667	…	…	17 274.61 [a]	…	…	2007	4
	2. Headache	1504	…	…	15 585.49 [a]	…	…	2007	4
	3. Acute respiratory infection	1298	…	…	13 450.78 [a]	…	…	2007	4
	4. Body ache	1186	…	…	12 290.16 [a]	…	…	2007	4
	5. Cough	1067	…	…	11 056.99 [a]	…	…	2007	4
	6. Abdominal pain	992	…	…	10 279.79 [a]	…	…	2007	4
	7. Ringworm	732	…	…	7585.49 [a]	…	…	2007	4
	8. Conjunctivitis	553	…	…	5730.57 [a]	…	…	2007	4
	9. Tooth decay	536	…	…	5554.40 [a]	…	…	2007	4
	10.								

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	Total	Male	Female	Total	Male	Female		
	1. Senility	14	...	...	145.08 [a]	...	...	2007	4
	2. Cardiac arrest	8	...	...	82.90 [a]	...	...	2007	4
	3. Diabetes	5	...	...	51.81 [a]	...	...	2007	4
	4. Pneumonia	4	...	...	41.45 [a]	...	...	2007	4
	5. Hypertension	3	...	...	31.09 [a]	...	...	2007	4
	6. Congestive heart failure	3	...	...	31.09 [a]	...	...	2007	4
	7. Cerebrovascular accident	2	...	...	20.73 [a]	...	...	2007	4
	8. Stillbirth	2	...	...	20.73 [a]	...	...	2007	4
	9. Pulmonary tuberculosis	2	...	...	20.73 [a]	...	...	2007	4
	10. Tuberculosis & others	2	...	...	20.73 [a]	...	...	2007	4
	Maternal, child and infant diseases	Total		Male		Female			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					28.50		2001	8
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					100.00		2008	6
30	**Percentage of pregnant women with anaemia**					...			
31	**Neonatal mortality rate (per 1000 live births)**	...		...		...			
32	**Percentage of newborn infants weighing at least 2500 g at birth**	95.00						2000	8
33	**Immunization coverage for infants (%)**								
	- BCG	100.00		...		...		2008	6
	- DTP3	99.20		...		...		2008	6
	- POL3	99.00		...		...		2008	6
	- Hepatitis B III	99.00		...		...		2008	6
		Number of cases			Number of deaths				
34	**Maternal causes**	Total	Male	Female	Total	Male	Female		
	- Abortion			...			...		
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	0	0	0	...	...	...	2008	6
	- Diphtheria	0	0	0	...	...	...	2008	6
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2008	6
	- Mumps	0	0	0	...	...	...	2008	6
	- Neonatal tetanus	0	0	0	...	...	...	2008	6
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	6
	- Poliomyelitis	0	0	0	...	...	...	2008	6
	- Rubella	0	0	0	...	...	...	2008	6
	- Total Tetanus	0	0	0	...	...	...	2008	6

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		…			
37	Health infrastructure					
	Public health facilities	- General hospitals	1	40	2001	8
		- Specialized hospitals	…	…		
		- District/first-level referral hospitals	…	…		
		- Primary health care centres	8	16	2001	8
	Private health facilities	- Hospitals	0	0	2001	8
		- Outpatient clinics	…	…		
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)			3.36	2007p	9
	- total expenditure on health as % of GDP			10.60	2007p	9
	- per capita total expenditure on health (in US$)			305.58	2007p	9
	Government expenditure on health					
	- amount (in million US$)			2.52	2007p	9
	- general government expenditure on health as % of total expenditure on health			92.00	2007p	9
	- general government expenditure on health as % of total general government expenditure			16.10	2007p	9
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			4.33	2006p	9
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			8.00	2007p	9
	Exchange rate in US$ of local currency is: 1 US$ =			1.19	2007p	9
39	Health insurance coverage as % of total population			…		

	INDICATOR		DATA							Year	Source
40	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	7	3	4	…	…	…	…	2008	10
		- Ratio per 1000 population	0.72	0.31	0.41	…	…	…	…	2008	10
	Dentists	- Number	2	…	…	…	…	…	…	2008	10
		- Ratio per 1000 population	0.21	…	…	…	…	…	…	2008	10
	Pharmacists	- Number	1	…	…	…	…	…	…	2008	10
		- Ratio per 1000 population	0.10	…	…	…	…	…	…	2008	10
	Nurses	- Number	54 [b]	…	…	…	…	…	…	2008	10
		- Ratio per 1000 population	5.55	…	…	…	…	…	…	2008	10
	Midwives	- Number	10	…	…	…	…	…	…	2008	10
		- Ratio per 1000 population	1.03	…	…	…	…	…	…	2008	10
	Paramedical staff	- Number	…	…	…	…	…	…	…		
		- Ratio per 1000 population	…	…	…	…	…	…	…		
	Community health workers	- Number	0	0	0	0	0	0	0	2008	10
		- Ratio per 1000 population	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2008	10
41	Annual number of graduates	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	**Annual number of graduates**	Nurses	…	…	…	…	…	…	…		
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	…	…	…	…	…	…		
42	**Workforce losses/ Attrition**	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		
		Nurses	…	…	…	…	…	…	…		
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	…	…	…	…	…	…		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	**Prevalence of underweight children under five years of age**	…	…	…		
44	**Infant mortality rate (per 1000 live births)**	21.60	…	…	2003	11
45	**Under-five mortality rate (per 1000 live births)**	32.40	…	…	2003	11
46	**Proportion of 1 year-old children immunised against measles**	93.00	…	…	2008	6
47	**Maternal mortality ratio (per 100 000 live births)**	0.00 [c]			2003	12
48	**Proportion of births attended by skilled health personnel**	100.00			2002	12
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	…				
	- Percentage of deliveries in health facilities (as % of total deliveries)	…				
49	**Contraceptive prevalence rate**	32.00	…	…	2002	12
50	**Adolescent birth rate**	…				
51	**Antenatal care coverage** - At least one visit	99.00			2001	8
	- At least four visits	…				
52	**Unmet need for family planning**	…	…	…		
53	**HIV prevalence among population aged 15-24 years**	…	…	…		
54	**Estimated HIV prevalence in adults**	…	…	…		
55	**Percentage of people with advanced HIV infection receiving ART**	…	…	…		
56	**Malaria incidence rate per 100 000 population**	…	…	…		
57	**Malaria death rate per 100 000 population**	…	…	…		
58	**Proportion of population in malaria-risk areas using effective malaria prevention measures**	…	…	…		
59	**Proportion of population in malaria-risk areas using effective malaria treatment measures**	…	…	…		
60	**Tuberculosis prevalence rate per 100 000 population**	203.00	…	…	2007	6
61	**Tuberculosis death rate per 100 000 population**	17.00	…	…	2007	6
62	**Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)**	152.00	…	…	2007	6
63	**Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)**	75.00	…	…	2006	6
		Total	Urban	Rural		
64	**Proportion of population using an improved drinking water source**	93.00	94.00	92.00	2006	13
65	**Proportion of population using an improved sanitation facility**	89.00	93.00	84.00	2006	13
66	**Proportion of population with access to affordable essential drugs on a sustainable basis**	…	…	…		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
b	Figure refers to bachelor and diploma graduate nurses
c	There is only one maternal death in the last 5 years
d	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

Sources:	
1	2008 Pocket Statistical Summary (PSS) Secretariat of the Pacific Community, Statistics and Demography. Accessed on 12 May 2009 from http://www.spc.int/sdp/
2	Demographic Tables for the Western Pacific 2005-2010. Manila, World Health Organization Regional Office for the Western Pacific, 2005.
3	Urban and Rural Areas 2007. United Nations, Department of Economic and Social Affairs, Population Division. New York 2008. [http:///www.unpopulation.org].
4	Tuvalu Central Statistics Division (http://www.spc.int/prism).
5	World health report 2004. *Changing history* . Geneva, World Health Organization, 2004.The world health report 2004: changing history. Geneva, World Health Organization, 2004.
6	WHO Regional Office for the Western Pacific, data received from technical units.
7	PMH health report 2002. Ministry of Health.
8	Information furnished by the Health Department, Government of Tuvalu, 18 March 2003.
9	National health accounts: country information. Geneva, World Health Organization. Available from: http://www.who.int/nha/country/en/index.html
10	University of New South Wales. Mapping of human resources for health, Pacific Island Countries, April 2009
11	*Pacific Island Regional Millennium Development Goals report 2004* . Noumea, Secretariat of the Pacific Community UN/ CROP MDG Working Group, November 2004.
12	*Tuvalu Millennium Development Goals Report 2006* . Government of Tuvalu, and United Nations Development Programme, 2006.
13	World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). *Progress on Drinking Water and Sanitation:* Special focus on Sanitation. UNICEF, New York and WHO, Geneva, 2008. [http://www.wssinfo.org/en/40_mdg2008.html]

VANUATU

1. CONTEXT

1.1 Demographics

According to the last national census in 1999, the population of Vanuatu was 186 678; the 2008 mid-year estimated population was 233 000. Vanuatu has a young population, with nearly 50% below 15 years of age. Life expectancy at birth is 65.6 for males and 69.0 for females and 3% of the population is over 65 years of age. The median age is 19.4 years, with a dependency ratio of 80.

The 2008 estimated crude birth rate was 31.1 per 1000 population and the estimated crude death rate was 5.5. The infant mortality rate was 25 per 1000 live births in 2008. The annual growth rate is 2.6% a year and the population is expected to double by 2030.

The urban population was estimated to make up 24.3% of the total population by 2007 and urban migration is very severe, particularly from rural islands to Port Vila and other main cities, as people seek employment or education. Most of the population are employed in subsistence agriculture the rest being in government posts, service industries and light industry.

1.2 Political situation

Vanuatu has a republican political system headed by a President who has primarily ceremonial powers. The President is elected for a five-year term by a two-thirds majority in the Electoral College, consisting of Members of Parliament and the presidents of Regional Councils. The Prime Minister, who is the head of the Government, is elected by a majority vote by a three-fourths quorum of Parliament. The Prime Minister appoints the Council of Ministers, whose number may not exceed one-fourth of parliamentary representatives. The Prime Minister and the Council of Ministers constitute the Executive Government. The Parliament has 52 members who are elected every four years by popular vote. The legal system of the country is based on British common law.

Vanuatu has had a relatively prolonged period of political stability. The current Government is a coalition, formed on 23 July 2004, comprising the National United Party (NUP), with Prime Minister Ham Lini Vanuaroroa and Minister of Health Morking Stevens Iatika; the People's Progressive Party (PPP); the Melanesian Progressive Party (MPP); the Vanua'aku Party (VP); the Vanuatu Republican Party (VRP) and the Green Alliance (GA).

1.3 Socioeconomic situation

The economy is based primarily on subsistence or small-scale agriculture, which provides a living for 65% of the population. Fishing, offshore financial services and tourism are other mainstays of the economy. A small light industry sector caters to the local market. Economic development is hindered by dependence on relatively few commodity exports, vulnerability to natural disasters and the long distances from main markets.

The average gross domestic product (GDP) growth rate has been about 3% over the last decade. As part of plans to improve the economic status of the country, the Government has introduced a priority action agenda: a long-term investment plan to expand the economy and improve the living standards of the people of Vanuatu. The agenda relies mainly on foreign aid for investment, with Australia, China, the European Union, Japan, Malaysia and New Zealand being the main donors.

The traditional economic staples, such as copra and kava, are not likely to sustain economic growth into the future. The Government currently subsidizes copra and demand is not increasing to meet production. Kava (*Rhizoma Piperis Methystici*) has been subjected to investigations into its possible detrimental effect on health, specifically liver toxicity. Cocoa could be an important export if sufficient quantities could be produced. The economy is moving towards complete dependence on the tourism industry, which will not

be sustainable for economic development. Very few new jobs are created annually in all sectors of the economy, especially for returned trainees and graduates.

1.4 Risks, vulnerabilities and hazards

Vanuatu is highly vulnerable to natural disasters as the country is in an earthquake zone. Volcanic eruptions, earthquakes, tsunamis and cyclones are the main culprits damaging the country. Most of the islands of Vanuatu are mountainous and of volcanic origin and have tropical or subtropical climates. There are several active volcanoes, including several under water. Volcanic activity is common, with the ever-present danger of a major eruption.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

Malaria is the major public health problem in the country, other communicable disease concerns being tuberculosis; sexually transmitted infections; acute respiratory tract infections, including pneumonia; diarrhoeal diseases; viral hepatitis; typhoid fever; and measles.

In 2008, the rapid diagnostic test for malaria was progressively introduced in all health facilities. Annual parasite incidence decreased from a baseline of 73.9 positive cases per 1000 inhabitants to 23.3 per 1000 in 2007. This remarkable decline has opened up the prospect of further reduction and eventual elimination of malaria. The Ministry of Health has introduced long-lasting, insecticide-treated nets, using funding from the Global Fund to Fight HIV/AIDS, Tuberculosis and Malaria, to combat malaria. The use of bednets now seems to be widespread, with 65.3% of children sleeping under nets and 69.3% of households having at least one long-lasting, treated net. Nevertheless, concentrated efforts are still needed to achieve the elimination target.

Tuberculosis (TB) is a national concern in both urban and rural settings. From 2000 to 2007 the average yearly prevalence rate was six cases per 10 000 inhabitants, which corresponds to 120 TB cases a year. The Ministry of Health has implemented the directly observed treatment, short-course (DOTS) strategy, and the case detection rate is 52%. The programme is now concentrating on quality, consistency and sustainability issues.

Dengue fever, dengue haemorrhagic fever and filariasis are also very significant communicable diseases, and the Directorate of Public Health has implemented an extensive vectorborne disease control programme over the past 20 years. The five rounds of mass drug administration against filariasis have been completed and the programme is now in an evaluation and surveillance phase.

Sexually transmitted infections (STI) have always been suspected of being highly prevalent, and data from health facilities indicate high prevalence and incidence rates. Azythromycin-based presumptive treatment for pregnant women has been ongoing at Vila Central Hospital since January 2001. In 2000, a survey of women visiting the antenatal clinic at the Vila Central Hospital showed incidence rates of 27.5% for *Trichomonal vaginalis* and 21.5% for *Chlamydia trachomatis*. However, the results of a cervical cancer screening project carried out in 2007 in 500 women in Efate found chlamydial infection in only 2% of the sample. On the other hand, the survey revealed that 9% of the sample had cervical pre-cancer or cancer lesions. A number of STI were also identified, such as syphilis in 4% of the sample.

Vanuatu officially reported its first HIV-positive case on 25 September 2002. There was considerable public interest in the case, giving impetus to health service improvements in the areas of counselling, blood safety and testing. There has been an increase in the number of people requesting HIV tests. Three confirmed HIV cases have been reported to date, with one AIDS-related death in 2006 and one in 2007.

Other major health concerns are acute respiratory infections (ARI) and diarrhoeal diseases, which contribute significantly to the morbidity burden. Children under two years of age account for about 50% of all hospital admissions for ARI. The introduction of the integrated management of childhood illness

(IMCI) strategy and the support for integrated health services may reduce the burden on the health system caused by advanced cases of ARI and diarrhoeal disease.

Noncommunicable diseases, especially diabetes and hypertension, have come to the attention of the Ministry of Health in the last few years; in 2006, diabetes was the eighth leading cause of morbidity (inpatient care) and hypertension the 10th leading cause. Lifestyle changes and the growing urban population appear to be the main causes.

2.2 Outbreaks of communicable diseases

The country needs to develop a good disease surveillance system for early reporting of disease incidence in order to respond to outbreaks properly. During 2006, there was an outbreak of typhoid fever on the island of Tanna, which was successfully controlled by the Southern Health Care Directorate. There were also sporadic outbreaks of diarrhoeal diseases. In June 2008, a workshop on the International Health Regulations (IHR 2005) was organized and a national surveillance action plan is being developed.

2.3 Leading causes of mortality and morbidity

The 10 leading causes of morbidity (inpatient) during 2006 were: acute respiratory infection, including pneumonia (566); cutaneous abscess (251); malaria (249); asthma (241); diarrhoea (214); injuries (181); food poisoning (88); diabetes (85); chronic obstructive pulmonary disease (75); and hypertension (62). The quality of diagnosis is often hampered by inadequate laboratory investigation facilities and is mainly based on clinical judgement.

The leading causes of mortality reported in 2006 were: heart disease (112), cancer (48), asthma (42), stroke (30), pneumonia (24), liver diseases (20), neonatal death (11), diabetes mellitus (8), septicaemia (8), and hypertension (8). The mortality pattern over the years shows a clearly increasing trend towards noncommunicable diseases becoming the leading cause of mortality in the country.

2.4 Maternal, child and infant diseases

The Maternal and Child Health (MCH) Programme conducts clinics for antenatal mothers, child immunizations and family planning. In addition to care, it offers support, information and advice regarding parenting, child health and development, maternal health and well-being, child safety, immunization, breast-feeding, nutrition and birth spacing.

During 2006, the five hospitals in the country treated 168 maternity cases: 109 for abortions, 7 for eclampsia, 11 for haemorrhage, 33 for obstructed labour and 8 for sepsis. There were six maternal deaths reported during the year.

A total of 8567 births were reported for 2006: 2507 (29%) were delivered in hospitals; 5296 (61%) were delivered in health centres; 156 (2%) were delivered outside health facilities, assisted by skilled health personnel; and 608 (7%) were delivered by traditional birth attendants (TBA). Of the total births reported, 92.9% were attended by skilled health personnel and 95.49% of the newborn babies weighed more than 2500g.

Only 70% of pregnant women receive a second dose of tetanus toxoid (TT2). In 2007, DTP3 coverage was 76.0%, POL3 was 76.0%, and hepatitis B III was 76.3%.

2.5 Burden of disease

Given that nearly 50% of the population is under 15 years of age and the annual population growth rate is 2.6%, the population is expected to continue to grow, with higher numbers of births every year. At the same time, life expectancy at birth is also increasing. This will lead to a double burden of disease: childhood diseases will continue in importance while, at the same time, diseases of the elderly will rise. Hypertension and its complications, heart disease, cancer, diabetes and injuries are the diseases that will place a serious burden on the health services in coming years.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The vision of the Ministry of Health is to protect and promote the health of all people living in Vanuatu. The Ministry's mission is to establish an integrated and decentralized health system to promote effective, efficient and equitable development and services for the well-being of all people across the country, based on the following values:

> Customer focus: Customers are the first priority and concern in the provision of quality care and access, while respecting their geographic situation, economic circumstances, and social and cultural beliefs and values.
>
> Equity: In cultural, ethnic, religious and political diversity, and irrespective of disability, gender and age, fairness, respect and honesty must prevail in all dealings.
>
> Quality: High quality outcomes will be pursued using safe and affordable interventions and science and technology will be applied to maximize benefits, while minimizing risks in all facets of activities.
>
> Integrity: The health system will strive for improvement and will commit to the highest ethical standards in all that is done in providing quality care in Vanuatu.

The objectives are:

- to restructure the Ministry to ensure effective, efficient and responsive service delivery;
- to strengthen health partnerships to ensure effective, efficient and coordinated service delivery;
- to plan and provide equitable service delivery for the people of Vanuatu;
- to further develop a range of public health programmes and initiatives, including programmes for tuberculosis, leprosy, malaria and HIV/AIDS;
- to provide and promote effective and efficient reproductive health services;
- to improve and strengthen the drug and medical supply system;
- to plan new primary health care facilities based on population numbers;
- to review and develop the patient referral system;
- to develop hospital service standards, policy and regulations to assure quality and customer-focused services;
- to strengthen the national health information system to support planning, management and effective service delivery to patients and customers; and
- to further develop human resource management and development to achieve a well-managed and well-trained workforce.

3.2 Organization of health services and delivery systems

The Ministry of Health is responsible for the provision of curative and preventive health services. The Ministry formulates national health policies, coordinates the development and planning of public health sectors, and regulates health standards.

The six public and one private hospital provide inpatient and specialist outpatient services. Of the six hospitals, there is one tertiary referral public hospital located in both Port Vila and Luganville. Specialized tertiary services are not available in Vanuatu and are referred for overseas treatment, mainly to Australia and New Zealand.

There are 32 health centres (referred to as district/first-level referral hospitals in the databank), about six in each province. They provide outpatient and inpatient services (mostly deliveries), health promotion and preventive health services, such as immunization. Each of these health centres is staffed by a nurse practitioner, who is also the manager, a midwife and a general nurse. The health centres are the referral centres for dispensaries (referred to as PHC centres in the health databank) and aid posts. There are 89 active dispensaries providing primary care. All the islands have at least one dispensary, which is usually staffed by a general nurse.

Aid posts have been established in most villages and are funded by the community, while the Ministry of Health provides basic medicine and training for the staff. There are about 180 aid posts in the country, each staffed by a village health worker.

The support services for hospitals and primary health care programmes include pharmaceutical, blood-transfusion and laboratory services.

The six public hospitals in the country have a total of 480 beds and the health centres have 376 beds; this results in 2.10 hospital beds per 1000 population. In 2006, 14 856 inpatients and 356 236 outpatients attended clinics. Thus, the bed occupancy rate was 2.1 per 1000 population and 1.5 outpatient visits per person.

3.3 Health policy, planning and regulatory framework

Based on an overarching primary health care philosophy, the policy objectives for the health sector are:

- to improve the health status of the people;
- to improve access to services;
- to improve the quality of the services delivered; and
- to make more effective use of resources

The strategies to achieve these objectives are as follows:

- Base health services delivery on a primary health care approach to ensure access to sustainable provincial services, including strong links with provincial governments.
- Improve the health status of the people by:
    - reducing illness and death in children under five years of age;
    - promoting birth spacing and reducing teenage pregnancies; and
    - reducing disability and deaths amongst productive adults.
- Improve access to services through:
    - adoption of the role delineation tool to distribute resources more fairly based on community health needs;
    - implementation of mechanisms to evaluate tertiary services and provide guidance for their access both within Vanuatu and beyond;
    - development of an integrated primary health care strategy and public health care strategy for Vanuatu; and
    - giving a higher priority to improving transportation and communication to (1) improve access for patients, (2) reduce the isolation of health workers, and (3) improve and strengthen partnerships for and ownership of health programmes through the coordination of donors, NGOs, other sectors of Government, chiefs, churches, etc.
- Improve the quality of services delivered through:
    - implementation of a comprehensive hospital and health service quality and safety standards programme; and
    - recognition of the potential for a key role to be played by health professionals in providing leadership and ensuring there is continued skills-base development and retention in the workforce.
- Make more effective use of resources by:
    - improving the collection of data to enable monitoring of health status and support health planning and management; and
    - adopting only those health initiatives that are cost-effective and proven in the South Pacific, and continuing to roll out the planning process to include high-priority services and new programmes.

The Ministry of Health's Master Services Plan contains strategies, targets and performance indicators to measure progress in the priority areas. Performance indicators to reflect overall progress in the sector include those on:

- infant and child mortality;

- maternal mortality;
- births attended by trained health personnel;
- immunization coverage;
- contraceptive prevalence;
- malaria, TB and noncommunicable disease incidence; and
- availability of timely and accurate health statistics.

3.4 Health care financing

Until 2005, Vanuatu had one financing scheme represented by national health services operated and funded by the Government and under the supervision of the Ministry of Health. The major sources of funding for the health sector were the government budget and donor contributions. Household contributions consisted of in-kind payments to traditional healers and fees-for-services at government facilities.

The fees-for-service scheme, a Ministry of Health cost-recovery scheme, realized the reasonable amount of 10 to 12 million Vatu (US$ 95 000 to US$ 114 000) between 2002 and 2005, representing 1% to 2% of the Ministry's executed budget. Unfortunately, these funds are not added to the Ministry of Health budget, but are treated as state revenue and go into the Ministry of Finance account.

National Health Account (NHA 2007) results found that, in 2005, almost 100% of inpatient and 60% of outpatient services were provided by Ministry of Health facilities. Recently, private sector health services have started up. New polyclinics have been established in the capital city of Port Vila and the major city of Luganville, and a private hospital (Vila Bay Hospital) established in Port Vila in 2006. The private insurance market in the country is utilized mainly by the large number of expatriates residing in the two major cities. Private insurance companies represented 3% of total health expenditure in 2005.

National health expenditure in 2007 totalled Vatu 2041 million (US$ 19.9 million), representing 4.7% of GDP. Almost 69.3% of the total budget was from public sources and 30.7% from private funds.

To date, there has been no social health insurance scheme based on the principles of mandatory contribution, risk-sharing and fund-pooling, but such a scheme is now being seriously considered.

3.5 Human resources for health

The Ministry of Health is responsible for development of the human resources required to provide health services in the country. A comprehensive Human Resource Development Plan has been prepared by the Ministry and is being implemented with the assistance of WHO and other donors.

There have been developments in the management of human resources in the Ministry of Health towards rationalization of salary levels and a review of career options for health workers. Currently, only clinicians have an established career path, but the Ministry is working towards establishing career paths for technical categories. Salary and career advancement will be tied to the new performance appraisal system.

The major challenge facing Vanuatu in the development and employment of its human resources for health is a health staff shortages. Almost 90% of the Vanuatu health workforce is based on nursing staff that perform both clinical and community health roles, as well as most management roles. The Vanuatu Centre for Nursing Education (VCNE) graduated 21 nurses in 2007 and an intake of 25 nurses will graduate in 2010. However, these graduates will hardly compensate for the 40 or 50 nurses who are due to retire in the next few years.

3.6 Partnerships

The Government and the Ministry of Health work very closely with partners. While WHO is the Ministry's main technical assistance partner, the United Nations Children's Fund (UNICEF), the United Nations Development Programme (UNDP), the United Nations Population Fund (UNFPA), the Japan International Cooperation Agency (JICA), the Australian Agency for International Development (AusAID), the New Zealand Agency for International Development (NZAID), the Asian Development Bank (ADB) and the Global Fund are the main development partners in the health sector. The Secretariat

of the Pacific Community (SPC) and the Pacific Island Forum also assist the country in health sector development programmes.

3.7 Challenges to health system strengthening

Vanuatu faces major challenges in the development and delivery of health services. Its citizens, numbering about 233 000, are spread over 80 islands and it is a huge task for the Ministry of Health to provide health services to such a dispersed population.

The Government also has to face challenges due to the rapid growth of the population. The number of people will have doubled by 2030 and the population base will keep expanding, resulting in a very young population. As a result, health services will have to provide more and more services in the areas of antenatal, natal and postnatal care, as well as neonatal care. Diseases of childhood will continue and more and more paediatric and obstetric care services will be required. At the same time, the elderly population will also keep increasing due to longer life expectancy, and the diseases of the elderly will be another serious problem.

With urbanization and changing lifestyles, the incidence of chronic diseases, such as diabetes, hypertension and stroke, are increasing. To address these issues properly, the health services need human resources trained in both the clinical and preventive health fields that are adequate in terms of both numbers and quality. Production of human resources for health will be the major challenge to be addressed in the near future.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1 : *1999 Vanuatu national population and housing census*
Operator : National Statistics Office
Specification : Include information on population structure & dynamics, social profile, educational characteristic, household characteristic and economic activity

Title 2 : *Vanuatu health situation report 2006*
Operator : HIS Unit/ Ministry of Health
Specification : Nationwide data compilation, as reported by health centres, dispensaries and hospitals
Comments : 20 to 30% of health facilities don't send in their monthly report, hence total are not accurate but gives the general trend.

Title 3 : *Statistical summary 2008*
Operator : Secretariat of the Pacific Community , Noumea, New Caledonia
Web address : http://wwv.spc.int/prisim/demog/

Title 4 : *Multiple cluster sampling survey (MIC) 2007, Vanuatu*
Operator : UNICEF
Web address : www.unicef.org/pacificislands/

Title 5 : *Vanuatu national health accounts 2005*
Operator : Vanuatu NHA team, Finance unit/ Ministry of Health
Web address : www.who.int/nha/country/vut/en/

Title 6 : *Republic of Vanuatu Master Health Service Plan (2004-2009)*
Operator : Ministry of Health

Title 7 : *World health statistics 2008*
Web address : http://www.who.int/statistics

5. ADDRESSES

MINISTRY OF HEALTH

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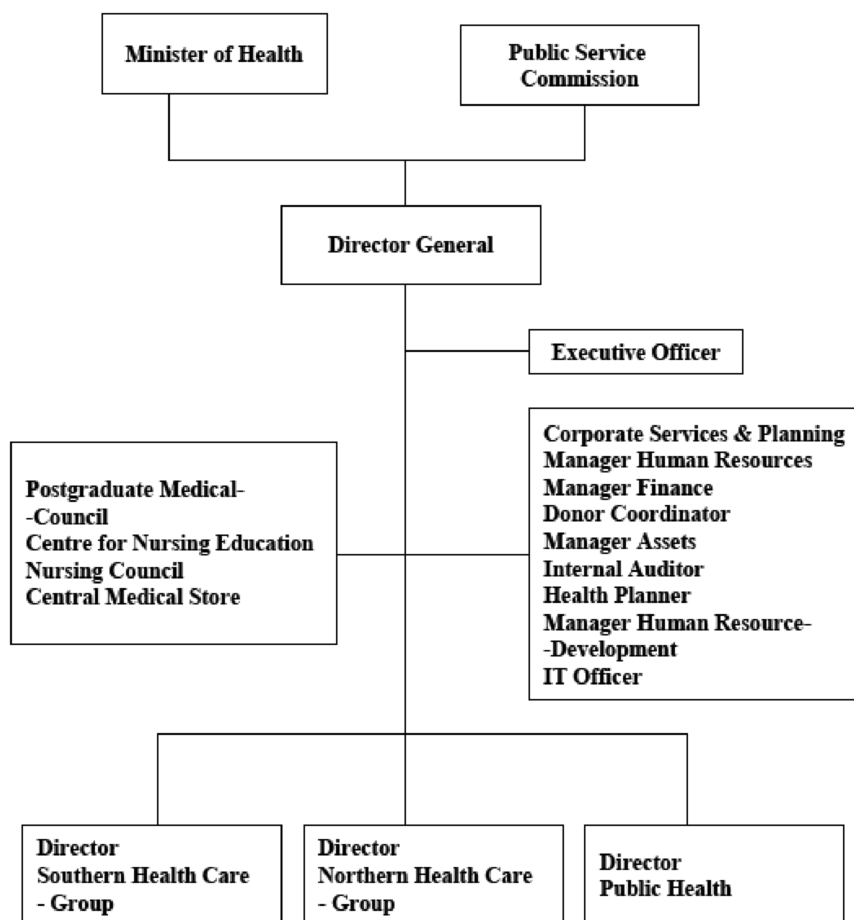
Postal Address	:	Private Mail Bag 009, Port Vila, Vanuatu
Official Email Address	:	mabel@Vanuatu.gov.vu
Telephone	:	(678) 22512
Fax	:	(678) 26 204
Office Hours	:	7.30 am to 11.30 am and 1.15pm to 4.30pm

WHO COUNTRY LIAISON OFFICER IN VANUATU

Office Address	:	George Pompidou Building Port Vila Vanuatu
Postal Address	:	World Health Organization P.O. Box 177 Port Vila Vanuatu, South Pacific
Official Email Address	:	who@van.wpro.who.int
Telephone	:	(678) 27 683
Fax	:	(678) 22 691
Office Hours	:	7.30 am to 12.00 am and 1.30pm to 5.00pm

6. ORGANIZATIONAL CHART: Ministry of Health



VANUATU — WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA						Year	Source
	Demographics	Total		Male		Female			
1	Area (1 000 km2)	12.19						2008	1
2	Estimated population ('000s)	233.03		118.86		114.17		2008 est	2
3	Annual population growth rate (%)	2.60		...		...		2008	1
4	Percentage of population								
	- 0–4 years	14.00		7.20		6.82		2008 est	2
	- 5–14 years	36.00		18.43		17.28		2008 est	2
	- 65 years and above	3.00		1.81		1.65		2008 est	2
5	Urban population (%)	24.30		...		...		2007	3
6	Crude birth rate (per 1000 population)	31.10		...		...		2008 est	2
7	Crude death rate (per 1000 population)	5.50		...		...		2008 est	2
8	Rate of natural increase of population (% per annum)	2.56		...		...		2008 est	2
9	Life expectancy (years)								
	- at birth	...		65.60		69.00		2008	1
	- Healthy Life Expectancy (HALE) at age 60	...		11.10		11.70		2002	4
10	Total fertility rate (women aged 15–49 years)	4.40						2008	1
	Socioeconomic indicators								
11	Adult literacy rate (%)	74.00		...		...		1995-2005	5
12	Per capita GDP at current market prices (US$)	2127.00						2006	1
13	Rate of growth of per capita GDP (%)	5.00						2007 est	6
14	Human development index	0.69						2006	7
	Environmental indicators	Total		Urban		Rural			
15	Proportion of vehicles using unleaded gasoline (%)	...		...		...			
16	Health care waste generation (metric tons per year)	...		...		...			
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	...	...	...	...	...	...		
	- Type B	2 [a]	...	...	...	...	...	2006	8
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	8 [a]	...	...	...	...	...	2006	8
	Cholera	1 [a]	0 [a]	1 [a]	...	...	...	2006	8
	Dengue/DHF	96	...	...	0	0	0	2008	9
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	910	910	0	0	0	0	2006	8
	Leprosy	3	...	...	...	...	...	2007	9
	Malaria	5483	...	...	...	...	...	2007	9
	Plague	...	...	...	...	...	...		
	Syphilis	192	93	99	0	0	0	2006	8
	Typhoid fever	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	25 411	...	...	14	...	...	2006	8
19	**Diarrhoeal diseases**	5657	...	...	2	...	...	2006	8
20	**Tuberculosis**								
	- All forms	122 [d]	...	...	...	...	...	2007	9
	- New pulmonary tuberculosis (smear-positive)	41 [d]	...	...	...	...	...	2007	9
21	**Cancers**								
	All cancers (malignant neoplasms only)	96 [a]	37 [a]	59 [a]	58 [a]	36 [a]	22 [a]	2006	8
	- Breast	6 [a]	0	6 [a]	2 [a]	0 [a]	2 [a]	2006	8
	- Colon and rectum	0 [a]	0 [a]	0 [a]	0 [a]	0 [a]	0 [a]	2006	8
	- Cervix			15 [a]			5 [a]	2006	8
	- Oesophagus	2 [a]	1 [a]	1 [a]	1 [a]	0 [a]	1 [a]	2006	8
	- Leukaemia	2 [a]	2 [a]	0 [a]	3 [a]	2 [a]	1 [a]	2006	8
	- Lip, oral cavity and pharynx	7 [a]	6 [a]	1 [a]	6 [a]	4 [a]	2 [a]	2006	8
	- Liver	1 [a]	1 [a]	0 [a]	0 [a]	0 [a]	0 [a]	2006	8
	- Stomach	15 [a]	11 [a]	4 [a]	8 [a]	7 [a]	1 [a]	2006	8
	- Trachea, bronchus, and lung	9 [a]	5 [a]	4 [a]	7 [a]	5 [a]	2 [a]	2006	8
22	**Circulatory**								
	All circulatory system diseases	414 [a]	216 [a]	198 [a]	53 [a]	35 [a]	18 [a]	2006	8
	- Acute myocardial infarction	10 [a]	8 [a]	2 [a]	6 [a]	5 [a]	1 [a]	2006	8
	- Cerebrovascular diseases	48 [a]	26 [a]	22 [a]	13 [a]	6 [a]	7 [a]	2006	8
	- Hypertension	137 [a]	65 [a]	72 [a]	4 [a]	3 [a]	1 [a]	2006	8
	- Ischaemic heart disease	34 [a]	26 [a]	8 [a]	10 [a]	8 [a]	2 [a]	2006	8
	- Rheumatic fever and rheumatic heart diseases	22 [a]	8 [a]	14 [a]	1 [a]	0 [a]	1 [a]	2006	8
23	**Diabetes mellitus**	120 [a]	58 [a]	62 [a]	8 [a]	5 [a]	3 [a]	2006	8
24	**Mental disorders**	26 [a]	12 [a]	14 [a]	...	...	...	2006	8
25	**Injuries**								
	All types	5166 [a]	...	...	3 [a]	...	...	2006	8
	- Homicide and violence	122 [a]	66 [a]	56 [a]	...	...	...	2006	8
	- Motor and other vehicular accidents	101	...	...	...	...	...	2006	8
	- Occupational injuries	3708	...	...	...	...	...	2006	8
	- Suicide	19 [a]	3 [a]	16 [a]	...	...	...	2006	8
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Acute respiratory infection including Pneumonia	566 [a]	409 [a]	157 [a]	252.63 [a]	182.56 [a]	70.08 [a]	2006	8
	2. Cutaneous Abscess	251 [a]	167 [a]	84 [a]	112.03 [a]	74.54 [a]	37.49 [a]	2006	8
	3. Malaria	249 [a]	137 [a]	112 [a]	111.14 [a]	61.15 [a]	49.99 [a]	2006	8
	4. Asthma	241 [a]	149 [a]	92 [a]	107.57 [a]	66.51 [a]	41.06 [a]	2006	8
	5. Diarrhoea	214 [a]	110 [a]	104 [a]	95.52 [a]	49.10 [a]	46.42 [a]	2006	8
	6. Injuries	181 [a]	125 [a]	56 [a]	80.79 [a]	55.79 [a]	25.00 [a]	2006	8
	7. Food poisoning	88 [a]	55 [a]	33 [a]	39.28 [a]	24.79 [a]	14.73 [a]	2006	8
	8. Non-Insulin-dependent diabetes mellitus	85 [a]	37 [a]	48 [a]	37.94 [a]	16.51 [a]	21.42 [a]	2006	8
	9. Chronic obstructive pulmonary disease	75 [a]	52 [a]	23 [a]	33.48 [a]	23.21 [a]	10.27 [a]	2006	8
	10. Hypertension	62 [a]	27 [a]	35 [a]	27.67 [a]	12.05 [a]	15.62 [a]	2006	8

INDICATORS		DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	Total	Male	Female	Total	Male	Female		
	1. Heart disease	112	56	56	49.99	25.00	25.00	2006	8
	2. Cancer	48	24	24	21.42	10.71	10.71	2006	8
	3. Asthma	42	21	21	18.75	9.37	9.37	2006	8
	4. Stroke	30	15	15	13.39	6.70	6.70	2006	8
	5. Pneumonia	24	10	14	10.71	4.46	6.25	2006	8
	6. Liver diseases	20	10	10	8.93	4.46	4.46	2006	8
	7. Neonatal death	11	8	3	4.91	3.57	1.34	2006	8
	8. Diabetes mellitus	8	6	2	3.57	2.68	0.89	2006	8
	9. Septicaemia	8	4	4	3.57	1.79	1.79	2006	8
	10. Hypertension	8	4	4	3.57	1.79	1.79	2006	8
	Maternal, child and infant diseases		Total		Male		Female		
28	**Percentage of women in the reproductive age group using modern contraceptive methods**						37.00	2007	10
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**						70.00	2008	9
30	**Percentage of pregnant women with anaemia**						3.00	2006	8
31	**Neonatal mortality rate (per 1000 live births)**		30.00		30.00		28.00	2006	8
32	**Percentage of newborn infants weighing at least 2500 g at birth**		98.00		...		...	2006	8
33	**Immunization coverage for infants (%)**								
	- BCG		97.00		...		...	2008	9
	- DTP3		76.00		...		...	2007	9
	- POL3		76.00		...		...	2007	9
	- Hepatitis B III		76.30		...		...	2007	9
		Number of cases			Number of deaths				
34	**Maternal causes**	Total	Male	Female	Total	Male	Female		
	- Abortion			109 [a]			...	2006	8
	- Eclampsia			7 [a]			...	2006	8
	- Haemorrhage			11 [a]			...	2006	8
	- Obstructed labour			33 [a]			...	2006	8
	- Sepsis			8 [a]			...	2006	8
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	NR	NR	NR	...	...	...	2008	9
	- Diphtheria	0	0	0	...	...	...	2008	9
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	0	0	0	...	...	...	2008	9
	- Mumps	0	0	0	...	...	...	2008	9
	- Neonatal tetanus	0	0	0	...	...	...	2008	9
	- Pertussis (whooping cough)	0	0	0	...	...	...	2008	9
	- Poliomyelitis	0	0	0	...	...	...	2008	9
	- Rubella	NR	NR	NR	...	...	...	2008	9
	- Total Tetanus	0	0	0	...	...	...	2008	9

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		...			
37	Health infrastructure					
	Public health facilities	- General hospitals	5	334	2008	11
		- Specialized hospitals	1	146	2008	11
		- District/first-level referral hospitals	32	376	2008	11
		- Primary health care centres	89	0	2008	11
	Private health facilities	- Hospitals	1	3	2008	11
		- Outpatient clinics	4	...	2008	11
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)			19.92 [b]	2007	12
	- total expenditure on health as % of GDP			4.70	2007	12
	- per capita total expenditure on health (in US$)			88.16 [b]	2007	12
	Government expenditure on health					
	- amount (in million US$)			13.8 [b]	2007	12
	- general government expenditure on health as % of total expenditure on health			69.28 [b]	2007	12
	- general government expenditure on health as % of total general government expenditure			11.40	2007	12
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			13.55 [b,c]	2007	12
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			30.70	2007	12
	Exchange rate in US$ of local currency is: 1 US$ =			102.44	2007	12
39	Health insurance coverage as % of total population			...		

	INDICATOR		DATA							Year	Source
40	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	26	20	6	26	0	22	4	2008	11
		- Ratio per 1000 population	0.11	0.09	0.03	0.46	0.00	0.09	0.02	2008	11
	Dentists	- Number	3	2	1	3	0	2	1	2008	11
		- Ratio per 1000 population	0.01	0.01	0.00	0.05	0.00	0.01	0.00	2008	11
	Pharmacists	- Number	2	0	2	2	0	2	0	2008	11
		- Ratio per 1000 population	0.01	0.00	0.01	0.04	0.00	0.01	0.00	2008	11
	Nurses	- Number	332	115	217	110	222	332	0	2008	11
		- Ratio per 1000 population	1.42	0.49	0.93	1.94	1.26	1.42	0.00	2008	11
	Midwives	- Number	48	2	46	18	30	48	0	2008	11
		- Ratio per 1000 population	0.21	0.01	0.20	0.32	0.17	0.21	0.00	2008	11
	Paramedical staff	- Number	58	37	21	47	30	58	0	2008	11
		- Ratio per 1000 population	0.25	0.16	0.09	0.83	0.17	0.25	0.00	2008	11
	Community health workers	- Number	212	112	100	0	212	212	0	2008	11
		- Ratio per 1000 population	0.91	0.48	0.43	0.00	1.20	0.91	0.00	2008	11
41	Annual number of graduates	Physicians	3	...	...	...	...	...	...	2008	13
		Dentists	1	...	...	...	...	...	...	2007	13
		Pharmacists	1	...	...	...	...	...	...	2008	13

	INDICATORS		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
41	**Annual number of graduates**	Nurses	21	...	...	...	...	...	...	2007	13
		Midwives	9	...	...	...	...	...	...	2008	13
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	**Workforce losses/ Attrition**	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

	INDICATORS	Total	Male	Female	Year	Source
	Health-related Millennium Development Goals (MDGs)	**Total**	**Male**	**Female**		
43	**Prevalence of underweight children under five years of age**	19.50	17.80	1.70	2007	10
44	**Infant mortality rate (per 1000 live births)**	25.00	...	...	2008	1
45	**Under-five mortality rate (per 1000 live births)**	36.00	36.00	34.00	2006	14
46	**Proportion of 1 year-old children immunised against measles**	65.00	...	...	2007	9
47	**Maternal mortality ratio (per 100 000 live births)**	70.04			2006	8
48	**Proportion of births attended by skilled health personnel**	92.90			2006	8
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	1.82			2006	8
	- Percentage of deliveries in health facilities (as % of total deliveries)	91.08			2006	8
49	**Contraceptive prevalence rate**	37.00	...	...	2007	10
50	**Adolescent birth rate**	21.00			2003	15
51	**Antenatal care coverage** - At least one visit	67.00			2006	8
	- At least four visits	...				
52	**Unmet need for family planning**	...	...	...		
53	**HIV prevalence among population aged 15-24 years**	0.00	...	...	2007	9
54	**Estimated HIV prevalence in adults**	0.00	...	...	2007	9
55	**Percentage of people with advanced HIV infection receiving ART**	100.00	...	...	2007	9
56	**Malaria incidence rate per 100 000 population**	2426.00	...	...	2007	9
57	**Malaria death rate per 100 000 population**	2.71	...	...	2006	9
58	**Proportion of population in malaria-risk areas using effective malaria prevention measures**	65.30	...	...	2007	10
59	**Proportion of population in malaria-risk areas using effective malaria treatment measures**	...	...	...		
60	**Tuberculosis prevalence rate per 100 000 population**	102.00	...	...	2007	9
61	**Tuberculosis death rate per 100 000 population**	12.00	...	...	2007	9
62	**Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)**	52.00	...	...	2007	9
63	**Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)**	88.00	...	...	2006	9
		Total	**Urban**	**Rural**		
64	**Proportion of population using an improved drinking water source**	60.00	86.00	52.00	2004	16
65	**Proportion of population using an improved sanitation facility**	50.00	78.00	42.00	2004	16
66	**Proportion of population with access to affordable essential drugs on a sustainable basis**	...	...	...		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Figure refers to hospital data only
b	Computed by Health Information and Evidence for Policy Unit of WHO Regional Office for the Western Pacific
c	Revised data
d	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

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VIET NAM

1. CONTEXT

1.1 Demographics

The estimated population of Viet Nam rose to 85 154 900 in 2007, 49.1% of them male. The population density is 260 persons per square kilometre, with most (72.6%) of the population living in rural areas. Over the past few years, Viet Nam has witnessed a gradual change in its population structure. In 2007, the percentage of the population aged 0-14 was 25.5%, a decrease of 6.3% in comparison with 2000. However, the proportion aged over 64 years increased rapidly (by 0.6 %) over the same seven-year period). This shows that fertility has continued to decline over recent years while the share of the elderly has been increasing gradually.

Viet Nam has 54 different ethnic groups, with the Kinh representing 87% of the total population. The rest are ethnic minorities scattered all over the country, mostly in mountainous and remote areas. Population migration is an important factor in rural-urban population growth differentials. The General Statistics Office survey on migration and family planning indicates that substantial spontaneous migration has been taking place and that migrants from rural to urban areas are numerous.

In 2007, life expectancy at birth was 70.2 for males and 75.6 for females. In the same year, the population growth rate was 1.19% per annum. The total fertility rate decreased from 2.33 in 1999 to 2.07 in 2007, reaching replacement-level fertility. In 2007, the crude birth rate was 16.9 per 1000 population and the crude death rate was 5.3 per 1000 population.

The maternal mortality ratio was 130/100 000 live births in 1990. By 2007 the ratio had fallen to 75.0/100 000 live births. However, the MDG target of 32.5 maternal deaths per 100 000 live births by the year 2015 is a real challenge and will require drastic efforts.

The under-five mortality rate was 55.4% in 1990 and fell by more than half to 25.9% by 2007. In order to achieve the MDG of 18.4% by 2015, however, progress must be accelerated.

1.2 Political situation

Viet Nam is a socialist republic and one-party state governed by the Communist Party of Viet Nam. The National Assembly is designated the highest representative body of the people and is the only organ with constitutional and legislative powers.

Beyond central government, the People's Committees at different levels are responsible for daily administration at the local level. Mass organizations, such as the Women's Union, Farmers' Union and Youth Union, exist to serve the interests of the people and to act as a link between the people and the Party.

Although the political system is stable, the country's senior leaders have raised concerns on a number of occasions about the lack of transparency, administrative inefficiency and corruption. Steps have been taken to strengthen open public debate and effective rule of law from the central to local level.

1.3 Socioeconomic situation

Vietnamese authorities have moved to implement a free-market economy with socialist orientation, to modernize the economy and to produce more competitive, export-driven industries. This has led to a strong GDP growth rate. Major economic achievements in the period 2001-2005 included, among others, a high level of economic growth, averaging 7.2% per year; comprehensive development; the solution of many social problems, especially hunger eradication and poverty reduction; and the improvement of people's living standards.

In 2000, the GDP per capita was only about US$ 400. It then increased to US$ 562 in 2004, higher than the mean of the lower income country group (US $530 per capita). By 2007, it stood at US$ 834, representing a 108% increase in comparison with 2000. It is expected that, by 2010, GDP will be 2.1 times higher, equivalent to US$ 1050-1100 in real terms.

The General Statistics Office defines the poverty line in terms of average expenditure per capita per month. Using this definition, the poverty rate fell from 37.4% in 1998 to 16% in 2006. Poverty is concentrated in rural areas (20.4%). According to the international standard definition of the poverty line (including both food and non-food poverty), the proportion of poor households decreased dramatically from 1993 to 2004, from 58.1% to 24.1%, reducing the number by nearly 60% in just over a decade.

During the period from 2001 to 2005, the economy created jobs for about 7.5 million workers. In 2005, 43 million people, about 52% of the population, were employed. The proportion of unemployed working-age people declined from 6.4% in 2001 to 5.3 % in 2005. It is planned that, by 2010, 8 million workers will be employed, reducing unemployment to 5%, and that farming will only involve 50% of the labour force.

Access to safe water and sanitation has also improved. In 2006, 92.0% of the population had access to an improved water source and 65.0% to improved sanitation.

About 21 000 tons of solid hospital waste is discharged each year from hospitals, sanatoriums and other health facilities. In the period from 1998 to 2002, there was considerable government investment in hospital waste treatment and disposal, mostly in the form of incinerators.

Air pollution sources include industry, traffic, construction, traditional handicrafts, forest fires and households. Of the facilities that pollute severely, 13% are cement factories, traditional handicraft villages using coal and wood, and waste collection facilities. In urban areas, traffic is the main cause of air pollution (70%).

1.4 Risks, vulnerabilities and hazards

Viet Nam is one of the most disasters-prone countries in the world. It extends over 11 latitudes, with a 3200 km coastline, and is located in an area ranging from a humid tropical to a sub-tropical climate, with complex topography and a dense river network.

Every year, the country suffers from many natural disasters, such as typhoons, tropical storms, floods, drought, seawater intrusion, landslides, forest fires and, occasionally, earthquakes. Disasters triggered by typhoons and floods are by far the most frequent and severe. In recent years, disasters have occurred continually all over the country, causing vast losses in human lives, property and socioeconomic and cultural infrastructure, as well as environmental degradation. During the period from 1997 to 2006, natural disasters, such as typhoons, floods and droughts, caused significant losses, including 7500 missing and dead people and damage equivalent to 1.5% of GDP. Natural disasters are becoming increasingly severe in terms of magnitude, frequency and volatility, due to climate change. Besides natural disasters, man-made disasters such as explosions, fires, technological accidents and traffic accidents are increasing.

In 2008, Viet Nam was affected by about 10 natural disasters, which affected a million people and caused more than 400 deaths and damage amounting to hundreds of millions of US dollars.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

There is a risk of many diseases breaking out or being imported from overseas, especially emerging diseases like severe acute respiratory syndrome (SARS), avian influenza A(H5N1) and encephalitis due to ARBO virus, which creates many difficult challenges as regards prediction, prevention and control. At the same time, the increasingly polluted environment, unusual weather patterns, natural disasters, rapid urbanization, lack of clean water in many residential areas and increasing contact between localities and

across countries creates favourable conditions for the development and spread of diseases, as well as complicating the disease situation and making it hard to control.

During the outbreak of SARS, the preventive health system developed control measures to prevent the spread of the disease and Viet Nam was the first nation to effectively control the syndrome. Since 2003, no new case of SARS has been detected in the country.

The first cases of avian influenza A(H5N1) in humans in Viet Nam were detected in the south of the country at the beginning of 2003. By 2005, there were 93 cases of confirmed A(H5N1) infection in humans, 42 of whom had died. It is predicted that avian influenza in humans will continue to be a complex issue in the future. In 2007, there were five new confirmed human cases, all fatal. As of 12 May 2009, there was a cumulative total of 111 cases, with 56 deaths.

Dengue and dengue hemorrhagic fever are big public health problems in Viet Nam. According to the Ministry of Health's Department of Preventive Medicine, the incidence of dengue fever is increasing, especially in the southern area of the country. In 2007, the incidence of dengue fever was 118.8 per 100 000 population, an increase of 47.6% compared with 2006 incidence. In 2008, there were 96 451 cases and 97 deaths. Although the mortality rate has declined, morbidity has not been controlled, with around 100 000 cases per year. Most cases and deaths are from the south, particularly the Mekong Delta region. Vector control is the main activity for dengue control, including reducing mosquito breeding sites, applying biological measures for larvae reduction, and insecticide spraying during outbreaks. Education about self-protection and mobilization of different sectors in dengue control at the community level are being strengthened.

The national malaria control programme successfully reduced the number of malaria cases from 22 637 in 2006 to 14 581 in 2007 and the number of malaria deaths over the same period from 41 to 20. The incidence of malaria was 17 per 100 000 population in the same year. In general, malaria has been prevented and reduced in the whole country with a reduction in morbidity and mortality and no occurrence of a malaria epidemic. Malaria is controlled in endemic areas. Insecticide-treated nets and indoor residual spraying are the main control activities, with about 12 million people at high risk being covered by such measures, and rapid diagnosis testing has been introduced at all levels. Artemisinin-based combination therapy (ACT) is used widely and is the first-line treatment for Plasmodium falciparum. The challenges for malaria control include the uncontrolled movement in and out malaria areas by forest-goers and people staying overnight in rice fields and coffee plantations; people crossing international borders; and remote and hard-to-reach areas where minority groups with a low level of education are living.

In 2006, pneumonia was among the leading causes of morbidity. According to 2007 hospital statistics, there were 290 820 new pneumonia cases and 1261 related deaths.

There were 19 047 new HIV infections, 8806 new cases of AIDS and 3928 reported deaths due to HIV/AIDS in 2007, with an estimated 293 000 people living with HIV/AIDS. The HIV epidemic remains largely concentrated among key populations at higher risk; there is a high level of HIV prevalence among injecting drug users (28.6%), female sex workers (4.4%) and their partners, and men having sex with men (9.4% and 5.3% in Hanoi and HCMC, respectively), while HIV prevalence among pregnant women remains low (0.37%). HIV prevention and care and treatment services are being expanded rapidly. At the end of 2008, more than 27 000 people were on ART, which is equivalent to more than 40% of the estimated number of people who need the treatment. A nationally representative facility-based survey showed 80% of patients were on treatment 12 months after initiation of ART. Methadone replacement therapy for drug addicts has begun.

In 2007, about 97 400 new cases of tuberculosis (all types) were detected, of which 54 457 were new pulmonary AFB-positive cases, 17 554 cases of pulmonary tuberculosis with negative AFB, and 18 675 cases of non-pulmonary tuberculosis. The number of tuberculosis-related deaths fell from 1936 in 2006 to 1865 in 2007. Most tuberculosis patients receive treatment under the DOTS strategy. With a high detection rate (82.0%) and high cure rate (90.0%), Viet Nam has reached WHO's target for TB control. However, the tuberculosis control programme is facing new challenges including drug-resistant bacillus (it

is estimated that about 30% of new cases are resistant to one drug and 2.3% resistant to more than one) and tuberculosis among HIV/AIDS patients.

Diarrhoea is also one of the leading causes of morbidity in the country. Cholera, typhoid fever and dysentery still exist in some areas where safe water supply and sanitary facilities remain inadequate.

The mortality and morbidity rates for leprosy are not high. In 2007, 588 new cases were reported, of which 25 were children under 15 years of age and 102 (18.4%) were suffering from established disabilities because of late detection. Viet Nam has reached WHO's leprosy elimination target on the national scale (the incidence rate is less than 1/10 000 people).

Noncommunicable diseases have shown a tendency to increase in the last two decades, with total morbidity rising from 39.0% in 1986 to 60.65% in 2007, and mortality from 41.1% to 60.13%. Economic growth, the ageing population and lifestyle changes are the leading causes of the increasing burden of noncommunicable disease. Some noncommunicable diseases are common among children, such as nutritional disorders, asthma, vision disorders, dental caries, congenital malformations, and disability due to accident or illness. These diseases are also found among adults. Diseases commonly found among the elderly include cardiovascular disease, diabetes and cancer.

Protein energy malnutrition and micro-nutrient deficiencies among under-five children have fallen significantly in the last period. Nevertheless, a new trend towards overweight and obesity in children in cities and more economically developed areas has developed and needs to be controlled in order to prevent the negative consequences that may result, such as diabetes and cardiovascular diseases.

The incidence rate of cancer has been increasing, with about 77 282 new cases per year. The case fatality rate is very high, and cancer accounts for around 12.0% of total deaths each year.

Lifestyle-related health problems are becoming increasingly important, particularly tobacco use, alcohol and drug abuse, injuries due to road accidents, violence, suicide and mental disorders. However, non-users, particularly women and children, may also suffer from external effects like passive or second-hand smoking, domestic violence, traffic accidents and exposure to HIV/AIDS. In 2002, the adult male smoking prevalence rate was 56.0% (compared with 50.0% in 1998). Males aged 15 years and over consume an average of 12.5 cigarettes per day and a female of the same age 8.1 cigarettes per day. The VNHS 2001-2002 showed that 45.7% of males and 1.9% of females aged 15 and over drink once or more and each drinks 100 ml of spirits/wine or one can/bottle of beer or more each time.

Injuries and accidents are causing serious concern. In the period from 2002 to 2006, morbidity due to accidents, injuries and poisonings increased from 9.2% of all hospital admissions to 12.7%, and hospital deaths related to accidents increased from 18.5% of all deaths in hospitals to 25.2%. Traffic accident is the sixth leading cause of mortality and the eighth leading cause of morbidity

2.2 Outbreaks of communicable diseases

In 2004, dengue fever was widespread in the Mekong delta, accounting for 84.0% of cases, with 9.0% in the south central coast, 5.0% in the central highlands, and only 2.0% in the north. Treatment currently consists of analgesic and antipyretic drugs, such as acetaminophen. The prevention methods being applied include activities to reduce vectors in the community and to monitor when there is an outbreak.

The health sector has made great efforts to reduce the incidence of dengue fever and, in 2007, only 85 deaths due to dengue were detected. However, the sustainability of these achievements and the potential reduction of morbidity and mortality are still in question. The disease made a comeback in 2008.

2.3 Leading causes of mortality and morbidity

In the past, most of the leading causes of morbidity were communicable diseases. However, in 2007, noncommunicable diseases were also among the leading causes (reported by public hospitals), with the incidence rate for hypertension being particularly high.

Currently the vital registration system in Viet Nam does not operate effectively and cannot provide accurate data on number of deaths, causes of death, or age, sex and socioeconomic status of those who die. Therefore, it is still necessary to rely on mortality data collected in public hospitals for assessment of mortality patterns and trends. According to 2007 data from hospitals, injuries, AIDS-related conditions, pneumonia, accidents, tuberculosis and some NCDs are the leading causes of mortality.

2.4 Maternal, child and infant diseases

The maternal mortality ratio (MMR) and the infant mortality rate (IMR) are lower than other Asia countries with the same level of economic development. More than 96.1% (2006) of pregnant women are cared for by skilled health personnel, and 94.3% of pregnant women were assisted by skilled health personnel during delivery in 2007. The MMR fell from 200 per 100 000 live births in the 1980s to 75.0 per 100 000 in 2007. However, there are huge differences in MMR across regions, with the highest in the northern mountainous area and the central highlands.

The IMR has fallen rapidly in the past two decades: from 55.0 per 1000 live births in 1983 it declined to 16.0 in 2007. In the five years to 2007, the IMR fell from 31.2 per 1000 live births to 16.0, a decline of more than one half, with an average reduction of 3.28% per year.

The under-five mortality rate (U5MR) fell from 42.0 in 1999 to 25.9 per 1000 live births in 2007, with an average decline of 2.3% per year. A recent study indicated that deaths among children under five years of age are concentrated in the perinatal period and are mainly due to premature birth, asphyxia at birth or multiple birth defects. For children beyond the perinatal period, mortality is mainly due to drowning, respiratory infection and encephalitis.

Child malnutrition is measured using two basic indicators: the proportion of children born with low birth weights and the proportion of children under five years of age who are malnourished. The proportion of babies born with low birth weights (under 2500g) declined from 7.3% in 2000 to 5.1% in 2007 and the under-five malnutrition rate fell from 33.8% to 21.2% over the same period. The problem of overweight children is beginning to appear, although it is still at an early stage, accounting for about 1.3% of children in the under-five age group and 0.8% in the 5-10 year age group.

2.5 Burden of disease

No available information, with the exception of a few specific diseases.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

The Ministry of Health is the government agency exercising state management in the field of people's health care, including preventive medicine; consultation and treatment; rehabilitation; traditional medicine; pharmaceuticals, including vaccine production; hazardous effects of cosmetics on human health; food hygiene and safety; medical equipment; health facilities; and health system development and management.

3.2 Organization of health services and delivery systems

The health system is a mixed public-private provider system, in which the public system plays a key role in health care, especially in policy, prevention, research and training. The private sector has grown steadily since the 'reform' of the health sector in 1989, but is mainly active in outpatient care; inpatient care is provided essentially through the public sector.

The health care network is organized under state administrative units: central, provincial, district, commune and village level, with the Ministry of Health at the central level. In the public sector, there are 777 general hospitals, 128 specialized hospitals and 11 544 primary health centres. The establishment of the grassroots health care network (including commune and district levels) as the foundation for health care has yielded many achievements, especially that of contributing towards attainment of national health care goals for the entire population. The health stations in communes provide primary health care

services, including consultation, outbreak prevention and surveillance, treatment of common diseases, maternal and child health care, family planning, hygiene and health promotion. The total number of private facilities rose from 56 000 facilities in 2001 to 65 000 in 2004. In the whole country, there were 77 private hospitals, accounting for 6.86 % of the total number of hospitals nationwide, with 5412 beds, accounting for 3.4% of the total number of hospital beds nationwide.

Health care is further strengthened by implementation of national health programmes to deal with diseases and health issues that are of important public health concern. For example, the tuberculosis control programme has made every effort to maintain, over many years, a high implementation rate, with DOTS now covering 100% of the affected population. WHO has highly commended the programme and has ranked it as being on par with those countries reaching the highest achievements in the world.

The expanded programme on immunization is also considered a successful child health care programme, with a marked reduction in vaccine-preventable diseases, including the eradication of poliomyelitis and the elimination of neonatal tetanus and leprosy, according to WHO definitions. However, current conditions for vaccine maintenance, vaccination timeliness and safety, as well as the fact that newly developed vaccines are insufficient to meet demand, are among the current challenges to the continued quality of the child immunization programme.

The HIV/AIDS control programme was a priority health programme for the period from 2001 to 2005. Through its implementation, more than 90% of state officials, members of popular organizations, servicemen and students, more than 80% of the urban population, and 70% of the rural and mountain-dwelling population gained good knowledge about HIV/AIDS and participated actively in HIV/AIDS intervention activities.

3.3 Health policy, planning and regulatory framework

The Government has set ambitious goals and targets in the *Ten-Year Socio-Economic Development Strategy, the Comprehensive Poverty Reduction and Growth Strategy* and the *National Strategy for People's Health Care 2001–2010*. These include substantially improving the human development index of the country and providing prevention and treatment services to the whole population.

The Minister of Health then promulgated a five-year plan for health sector, setting the following new targets for 2010:

- to increase average life expectancy to 72 years;
- to reduce the maternal mortality ratio to below 70 per 100 000 live births;
- to reduce the infant mortality rate to below 16 per 1000 live births;
- to reduce the under-five mortality rate to below 25 per 1000 live births;
- to reduce the percentage of low-birth-weight infants to below 6%;
- to reduce the percentage of malnourished under-five children to below 20%;
- to increase the average height of young people to at least 160 cm;
- to increase the ratio of medical doctors per population to 4.5/10 000 people;
- to increase the ratio of college-trained pharmacists to 1/10 000 people.

The *National Strategy* recognizes the important role of health and the need to invest in health for accelerated socioeconomic development and to improve the quality of life of each individual. The strategy is based on four principles:

- equity and efficiency of the health sector;
- the fight against the broad social determinants of bad health;
- the integration of traditional and modern medicines; and
- an appropriate public-private mix, with the Government in a position to protect the public interest.

The strategy outlines the Government's main policies and proposals for improving the overall level and distribution of health among the entire population (ethnic minority groups, women, children, the poor and the elderly). These include:

- using the government budget more effectively and moving to prepayment schemes in the medium term to finance health;
- reviewing and strengthening the organization of the health sector, and consolidating and developing primary health care/community-based services;
- strengthening preventive care and health promotion, improving curative care, and putting in place an effective referral system;
- developing human resources according to the needs of each level, and improving training;
- developing traditional medicines and implementing the national drug policy in order to promote rational and effective use of modern and traditional drugs;
- developing new technologies to catch up with other countries in the Region; and
- increasing the capacity of planning and management in all areas within the health sector.

As it stands today, the *National Strategy* provides a broad basis for further planning and can be seen as an orientation document for the development of the health sector. However, it does not provide specific solutions on how to: (1) ensure equal access to health care; (2) improve the performance of the health system and the quality of care; (3) rationalize the prescription and use of drugs and expenditure on medicines; and (4) respond to new public health problems, including noncommunicable diseases.

Some recent policies have begun to address these issues. In October 2002, the Prime Minister signed Decree 139 to establish the Health Care Fund for the Poor, which aims to provide free health services for 14.6 million people. As of December 2003, 11 million people had received health care through this financing mechanism. Earlier, in January 2002, the Ministry of Health published the Directive on Consolidating and Strengthening the Basic Health Care Network (06-CT/TW).

3.4 Health care financing

Since 2000, the State has continued building and adjusting health financing policies with greater concern for efficiency and development than in the past. The broad orientation of health financing was decided upon in the 1990s through development of a health insurance scheme, the partial user fee policy and the Government resolution on "social mobilization" in the areas of education, health and culture. These orientations have created a health financing system that combines partially subsidized state health services with health services that collect user fees from patients. Nevertheless, the partial user fees created some contradictions and have led to inequalities. Therefore, the Government had to pay attention to financial assistance for certain social groups, especially for the poor. Health financing underwent further major changes in the 1990s as the State began to strongly promote decentralization of public finance, which had major implications for the health sector.

Total health expenditure in 2007 was 7.1% of GDP, with government expenditure accounting for only 39.3% of total health expenditure. Most health finance is used for curative and preventive care (93%-98%): curative care accounts for 84%-86%, preventive care for 14%-16%, and there is some expenditure on scientific research and training (less than 2%). By 2007, within the sphere of the government system, the number of enrolees in public health insurance was over 36 million, accounting for 43.26% of the population, including compulsory insurance, voluntary insurance and insurance for the poor.

3.5 Human resources for health

Currently, the number of health workers per bed in general for the whole country is 1.37 (including contract workers). The number of medical doctors on average for the whole country is about 2.6 per 10 beds, while the number of nurses is about 3.0 per 10 beds. The number of doctors per 1000 population is 0.6, the number of nurses is 0.7, and the number of pharmacists is 0.1 (not including the private sector).

According to data from the Ministry of Health, of all health workers at the provincial level in the whole country, 81.8% are working in curative care, 13.0% in preventive medicine and those in management account for 4.0%.

Health staff are distributed according to facilities and levels, from central to provincial, district and commune level in all provinces. In 2004, health staff working at commune level accounted for 24.0% of the total number of health staff. These are the health workers who participate directly in providing

primary health care to the people. At district level, the number of health staff accounted for 31.0% and at provincial level, 45.0%.

3.6 Partnerships

The external relations line of the Party and the State is one of multilateralism, diversification and expansion of health cooperation with international NGOs and foreign partners to gain financial, technical and technological support. In implementation of this, international cooperation in health has created positive changes in terms of both quantity and quality. Since the 1990s, the number of donors/partners in health has increased considerably. However, aid for health still accounts for just 3% of total health expenditure and between 8% and 10% of government spending. As Viet Nam reaches middle-income-country status, the number of health partners is expected to decline; indeed, some partners with a global mandate to focus on the poorest countries have already announced their intention to leave the country. Nevertheless, aid to the health sector has been significant in certain areas, particularly HIV/AIDS and communicable disease control. ODA funds have come in diverse forms and have included grant aid from governments, international organizations, intergovernmental organizations and NGOs, and soft loans from international monetary institutions. While Viet Nam has a substantial general budget support programme, coordinated by the World Bank, there are no examples of budget or programmatic support in the health sector, where assistance remains heavily project-based (98% of health projects funded by a single donor).

3.7 Challenges to health system strengthening

Despite the important achievements recorded in health care, the country is still beset with many problems. The Party Politburo's Resolution No. 46 - NQ/TW on Health Care, Protection and Improvement for People in the new situation points out irrationalities of the health sector as follows:

- The health system is slow to renew and has not adapted itself to the development of a socialist-oriented market economy and changes in disease patterns
- The quality of health services has not met the increasingly diversified needs of the people.
- The health care conditions for the poor and those in remote areas and areas inhabited by ethnic groups remain very difficult.
- Pharmaceutical production and supply capacity remains weak; the price of pharmaceuticals remains high in comparison with people's incomes.
- The organization and operation of preventive medicine remain insufficient. A portion of the population lacks awareness about self-protection, self-care and health promotion. Environmental health and food safety have not been put under tight control.

Therefore, Viet Nam still faces a number of key challenges, such as:

- achieving adequate recognition that improved health outcomes are central to poverty reduction and economic growth and that health improvements require an intersectoral approach to address broad health determinants;
- developing a clear consensus among policy-makers on the road to developing an efficient equity-oriented health sector;
- achieving better coordination among ministries and across departments in the Ministry of Health and among partners;
- strengthening pro-poor health policies to meet the needs of the disadvantaged and ethnic minorities, particularly addressing the problems of financial access and the lack of responsiveness of health services to the needs of the poor;
- strengthening the public health agenda to address the incomplete agenda of infectious diseases and the problems brought about by urbanization, changing lifestyles and an ageing population;
- strengthening capacities at district and provincial levels to prioritize and implement successful interventions within an increasingly decentralized health system; and
- improving the enforcement of regulations and speeding up the implementation of public administration reform.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	*Health statistical year books, 1998-2004*.
Operator	:	Ministry of Health, 1999-2005.
Title 2	:	*Statistical sear book 2003*
Operator	:	General Statistics Office, 2004.
Title 3	:	*Vietnam development report: poverty.*
Features	:	Joint Donor Report to the Vietnam Consultative Group Meeting.
Title 4	:	*Reports on National Health Survey 2001*-2002.
Operator	:	Ministry of Health and General Statistics Office, 2003.
Web address	:	http://www.moh.gov.vn/tinbyt/ and http://www.gso.gov.vn/
Title 5	:	*Millennium Development Goals: closing the Millennium gaps.*
Features	:	Hanoi, *United* Nations, 2003.
Title 6	:	*Health policies and guidelines*
Operator	:	Health Policy Unit, Ministry of Health, 2002.
Web address	:	http://www.moh.gov.vn/tinbyt/
Title 7	:	*World health statistics 2007*
Operator	:	World Health Organization

5. ADDRESSES

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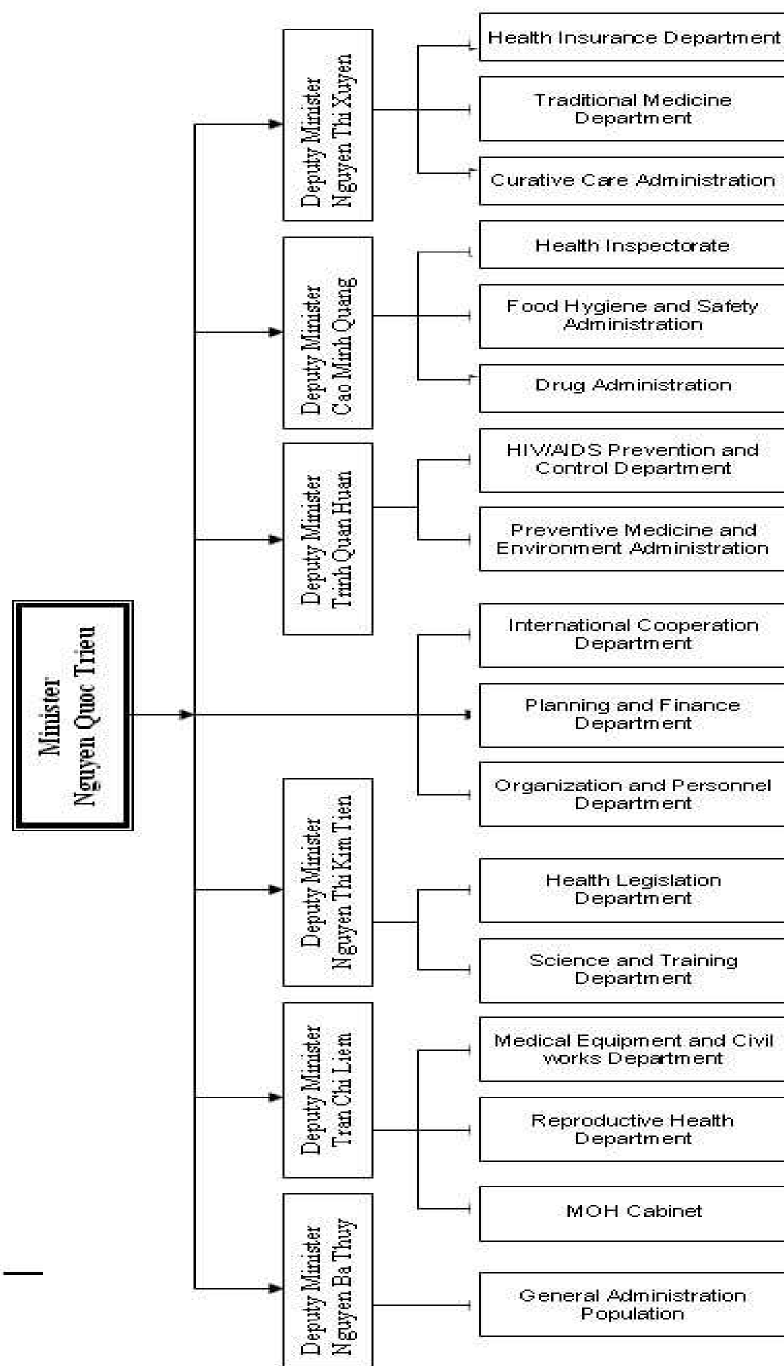
6. ORGANIZATIONAL CHART: Ministry of Health

Organization of the Ministry of Health and allocation of responsibilities among the leadership of the Ministry of Health in 2007



* This figure is adjusted based on Decree 188/2007/ND-Cp dated 27/12/2007 of the Government on the functions, powers, responsibilities of the organizational structure of the MOH

VIET NAM

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	331.21			2008	1
2	Estimated population ('000s)	85 154.90	41 855.30	43 299.6	2007 est	1
3	Annual population growth rate (%)	1.19	...	...	2007 est	1
4	Percentage of population					
	- 0–4 years	7.49	7.49	7.07	2007 est	1
	- 5–14 years	18.02	18.88	17.19	2007 est	1
	- 65 years and above	7.18	5.87	8.47	2007 est	1
5	Urban population (%)	27.30	...	...	2007 est	2
6	Crude birth rate (per 1000 population)	16.90	...	...	2007 est	1
7	Crude death rate (per 1000 population)	5.30	...	...	2007 est	1
8	Rate of natural increase of population (% per annum)	1.16	...	...	2007 est	1
9	Life expectancy (years)					
	- at birth	72.80	70.20	75.60	2007	1
	- Healthy Life Expectancy (HALE) at age 60	...	60.00	63.00	2002	3
10	Total fertility rate (women aged 15–49 years)	2.07			2007 est	1
	Socioeconomic indicators					
11	Adult literacy rate (%)	93.10 [a]	96.00 [a]	90.50 [a]	2007	1
12	Per capita GDP at current market prices (US$)	834.00			2007	1
13	Rate of growth of per capita GDP (%)	15.35			2007	1
14	Human development index	0.72			2006	4
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	...	...	...		
16	Health care waste generation (metric tons per year)	21.00	...	...	2005	5

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral	1987	...	...	2	...	...	2007	6
	- Type A	...	...	...	...	...	...		
	- Type B	...	...	...	...	...	...		
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	1907	0	0	0	0	0	2007	5
	Dengue/DHF	96 451	...	...	97	...	...	2008	7
	Encephalitis	1208	...	...	30	...	...	2007	5
	Gonorrhoea	5478	...	...	0	0	0	2007	5
	Leprosy	588	...	...	...	...	...	2007	7
	Malaria	14 581	...	...	20	...	...	2007	7
	Plague	0	0	0	0	0	0	2006	5
	Syphilis	2465	...	...	0	0	0	2007	5
	Typhoid fever	2142	...	...	1	0	0	2007	5

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	189 009	…	…	62	…	…	2007	5
19	**Diarrhoeal diseases**	301 686	…	…	173	…	…	2007	5
20	**Tuberculosis**								
	- All forms	97 400 [g]	…	…	…	…	…	2007	7
	- New pulmonary tuberculosis (smear-positive)	54 457 [g]	…	…	…	…	…	2007	7
21	**Cancers**								
	All cancers (malignant neoplasms only)	88 982	…	…	783	…	…	2007	5
	- Breast	8795	…	…	15	…	…	2007	5
	- Colon and rectum	8235	…	…	88	…	…	2007	5
	- Cervix			6867			18	2007	5
	- Oesophagus	1434	…	…	6	…	…	2007	5
	- Leukaemia	4155	…	…	67	…	…	2007	5
	- Lip, oral cavity and pharynx	6333	…	…	12	…	…	2007	5
	- Liver	5948	…	…	131	…	…	2007	5
	- Stomach	5868	…	…	178	…	…	2007	5
	- Trachea, bronchus, and lung	8659	…	…	157	…	…	2007	5
22	**Circulatory**								
	All circulatory system diseases	177 647	…	…	3013	…	…	2007	5
	- Acute myocardial infarction	8986	…	…	658	…	…	2007	5
	- Cerebrovascular diseases	90 179	…	…	1850	…	…	2007	5
	- Hypertension	202 130	…	…	309	…	…	2007	5
	- Ischaemic heart disease	30 893	…	…	110	…	…	2007	5
	- Rheumatic fever and rheumatic heart diseases	15 325	…	…	28	…	…	2007	5
23	**Diabetes mellitus**	27 378	…	…	53	…	…	2007	5
24	**Mental disorders**	47 006	…	…	32	…	…	2007	5
25	**Injuries**								
	All types	212 462	…	…	1175	…	…	2007	5
	- Homicide and violence	14 076	…	…	32	…	…	2007	5
	- Motor and other vehicular accidents	115 666	…	…	679	…	…	2007	5
	- Occupational injuries	4040	…	…	18	…	…	2007	5
	- Suicide	17 593	…	…	308	…	…	2007	5
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1. Pneumonia	290 820 [b]	…	…	412.20 [b]	…	…	2007	5
	2. Acute pharyngitis and acute tonsillitis	259 333 [b]	…	…	367.61 [b]	…	…	2007	5
	3. Acute bronchitis and acute bronchiolitis	189 009 [b]	…	…	267.92 [b]	…	…	2007	5
	4. Diarrhoea and gastroenteritis of presumed infectious origin	185 369 [b]	…	…	262.76 [b]	…	…	2007	5
	5. Essential(primary) hypertension	172 620 [b]	…	…	244.69 [b]	…	…	2007	5
	6. Arthropod-borne viral fevers and viral haemorrhagic fevers	151 638 [b]	…	…	214.95 [b]	…	…	2007	5
	7. Gastritis & duodenitis	116 866 [b]	…	…	165.66 [b]	…	…	2007	5
	8. Transport accident	115 666 [b]	…	…	163.96 [b]	…	…	2007	5
	9. Other acute upper respiratory infections	100 188 [b]	…	…	142.02 [b]	…	…	2007	5
	10. Fracture of other limb bones	96 007 [b]	…	…	136.09 [b]	…	…	2007	5

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	**Leading causes of mortality**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	1. Intracranial injury	2375 [b]	...	...	3.37 [b]	...	...	2007	5
	2. Human immuno deficiency virus disease	1314 [b]	...	...	1.86 [b]	...	...	2007	5
	3. Pneumonia	1261 [b]	...	...	1.79 [b]	...	...	2007	5
	4. Intracerebral haemorrhage	1022 [b]	...	...	1.45 [b]	...	...	2007	5
	5. Heart failure	700 [b]	...	...	0.99 [b]	...	...	2007	5
	6. Transport accident	679 [b]	...	...	0.96 [b]	...	...	2007	5
	7. Acute myocardial infarction	658 [b]	...	...	0.93 [b]	...	...	2007	5
	8. Septicemia	500 [b]	...	...	0.71 [b]	...	...	2007	5
	9. Stroke, not specified as haemorrhage or infarction	499 [b]	...	...	0.71 [b]	...	...	2007	5
	10. Respiratory tuberculosis	488 [b]	...	...	0.69 [b]	...	...	2007	5
	Maternal, child and infant diseases	**Total**		**Male**		**Female**			
28	**Percentage of women in the reproductive age group using modern contraceptive methods**					68.20		2007	1
29	**Percentage of pregnant women immunized with tetanus toxoid (TT2)**					87.80		2008	7
30	**Percentage of pregnant women with anaemia**					...			
31	**Neonatal mortality rate (per 1000 live births)**	...		...		...			
32	**Percentage of newborn infants weighing at least 2500 g at birth**	94.90		...		...		2007	5
33	**Immunization coverage for infants (%)**								
	- BCG	92.00		...		...		2008	7
	- DTP3	93.40		...		...		2008	7
	- POL3	93.50		...		...		2008	7
	- Hepatitis B III	86.80		...		...		2008	7
		Number of cases			Number of deaths				
34	**Maternal causes**	**Total**	**Male**	**Female**	**Total**	**Male**	**Female**		
	- Abortion			29 669			...	2007	5
	- Eclampsia			441			7	2007	5
	- Haemorrhage			2692			69	2007	5
	- Obstructed labour			...			...		
	- Sepsis			300			11	2007	5
35	**Selected diseases under the WHO-EPI**								
	- Congenital rubella syndrome	NR	...	...	...	...	...	2008	7
	- Diphtheria	17	...	...	...	...	...	2008	7
	- Hib meningitis	...	...	...	...	...	...		
	- Measles	352	...	...	...	...	...	2008	7
	- Mumps	...	...	...	...	...	...		
	- Neonatal tetanus	32	...	...	...	...	...	2008	7
	- Pertussis (whooping cough)	280	...	...	...	...	...	2008	7
	- Poliomyelitis	0	0	0	...	...	...	2008	7
	- Rubella	873	...	...	...	...	...	2008	7
	- Total Tetanus	221	...	...	...	...	...	2008	7

	INDICATORS		Number	Number of beds	Year	Source
	Health facilities					
36	**Facilities with HIV testing and counseling services**		244		2008	7
37	**Health infrastructure**					
	Public health facilities	- General hospitals	777	106 720	2007	5
		- Specialized hospitals	128	26 599	2007	5
		- District/first-level referral hospitals	610	49 022	2007	5
		- Primary health care centres	11 544	46 013	2007	5
	Private health facilities	- Hospitals	77	5412	2007	5
		- Outpatient clinics	...	...		

	INDICATORS	DATA	Year	Source
	Health care financing			
38	**Total health expenditure**			
	- amount (in million US$)	5023.68	2007p	8
	- total expenditure on health as % of GDP	7.10	2007p	8
	- per capita total expenditure on health (in US$)	57.50	2007p	8
	Government expenditure on health			
	- amount (in million US$)	1975.51	2007p	8
	- general government expenditure on health as % of total expenditure on health	39.30	2007p	8
	- general government expenditure on health as % of total general government expenditure	8.70	2007p	8
	External source of government health expenditure			
	- external resources for health as % of general government expenditure on health	4.07 [f]	2007p	8
	Private health expenditure			
	- private expenditure on health as % of total expenditure on health	60.70	2007p	8
	Exchange rate in US$ of local currency is: 1 US$ =	16 178.90	2007p	8
39	**Health insurance coverage as % of total population**	45.00	2007	9

	INDICATOR		Total	Male	Female	Urban	Rural	Public	Private	Year	Source
40	**Human resources for health**										
	Physicians	- Number	...	...	...	...	...	54 910	...	2007	5
		- Ratio per 1000 population	...	...	...	...	...	0.64	...	2007	5
	Dentists	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Pharmacists	- Number	...	...	...	...	...	10 270	...	2007	5
		- Ratio per 1000 population	...	...	...	...	...	0.12	...	2007	5
	Nurses	- Number	...	...	...	...	...	61 158	...	2007	5
		- Ratio per 1000 population	...	...	...	...	...	0.71	...	2007	5
	Midwives	- Number	...	...	...	...	...	20 920	...	2007	5
		- Ratio per 1000 population	...	...	...	...	...	0.24	...	2007	5
	Paramedical staff	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	**Annual number of graduates**	Physicians	4545 [c]	...	...	...	...	...	...	2006	5
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	…	…	…	…	…	…	…		
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	…	…	…	…	…	…		
42	Workforce losses/ Attrition	Physicians	…	…	…	…	…	…	…		
		Dentists	…	…	…	…	…	…	…		
		Pharmacists	…	…	…	…	…	…	…		
		Nurses	…	…	…	…	…	…	…		
		Midwives	…	…	…	…	…	…	…		
		Paramedical staff	…	…	…	…	…	…	…		
		Community health workers	…	…	…	…	…	…	…		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	**Prevalence of underweight children under five years of age**	21.20	…	…	2007	5
44	**Infant mortality rate (per 1000 live births)**	16.00	…	…	2007 est	1
45	**Under-five mortality rate (per 1000 live births)**	25.90	…	…	2007 est	5
46	**Proportion of 1 year-old children immunised against measles**	91.80	…	…	2008	7
47	**Maternal mortality ratio (per 100 000 live births)**	75.00			2007	5
48	**Proportion of births attended by skilled health personnel**	94.30 [d]			2007	5
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	…				
	- Percentage of deliveries in health facilities (as % of total deliveries)	…				
49	**Contraceptive prevalence rate**	79.00	…	…	2007	1
50	**Adolescent birth rate**	…				
51	**Antenatal care coverage** - At least one visit	96.10			2005	5
	- At least four visits	…				
52	**Unmet need for family planning**	4.80	…	…	2002 est	10
53	**HIV prevalence among population aged 15-24 years**	0.30	…	…	2005	11
54	**Estimated HIV prevalence in adults**	0.54	…	…	2007	12
55	**Percentage of people with advanced HIV infection receiving ART**	35.00 [e]	…	…	2007	13
56	**Malaria incidence rate per 100 000 population**	17.00	…	…	2007	7
57	**Malaria death rate per 100 000 population**	0.02	…	…	2007	7
58	**Proportion of population in malaria-risk areas using effective malaria prevention measures**	…	…	…		
59	**Proportion of population in malaria-risk areas using effective malaria treatment measures**	…	…	…		
60	**Tuberculosis prevalence rate per 100 000 population**	220.00	…	…	2007	7
61	**Tuberculosis death rate per 100 000 population**	24.00	…	…	2007	7
62	**Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)**	82.00	…	…	2007	7
63	**Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)**	90.00	…	…	2006	7
		Total	Urban	Rural		
64	**Proportion of population using an improved drinking water source**	92.00	98.00	90.00	2006	14
65	**Proportion of population using an improved sanitation facility**	65.00	88.00	56.00	2006	14
66	**Proportion of population with access to affordable essential drugs on a sustainable basis**	…	…	…		

Notes:	
…	Data not available
p	Provisional
est	Estimate
NR	Not relevant
a	Figure applies to population aged 10 years and above
b	Figure applies to public hospitals
c	Figure refers to physicians and pharmacists
d	Figure applies to public health facilities
e	Based on country reports as of end of December 2007
f	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific
g	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

Sources:	
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9	Vietnam Social Security, 28/5/2008 Report No. 1516/BHXH.GDYT.
10	United Nations, Department of Economic and Social Affairs, Population Division (2007). *World Contraceptive Use 2007* . Wallchart (United Nations publication, Sales No. E.08.XIII.6).
11	Viet Nam Population and AIDS indicator Survey 2005.
12	HIV estimates and projections, Ministry of Health, Viet Nam.
13	UNGASS Country Progress Report, 2008.
14	World Health Organization and United Nations Children's Fund Joint Monitoring Programme for Water Supply and Sanitation (JMP). *Progress on Drinking Water and Sanitation: Special focus on Sanitation* . UNICEF, New York and WHO, Geneva, 2008. [http://www.wssinfo.org/en/40_mdg2008.html].

WALLIS AND FUTUNA

1. CONTEXT

1.1 Demographics

The Futuna and Wallis Islands are located in the Oceania Islands in the South Pacific Ocean, about two-thirds of the way from Hawaii to New Zealand. The total area is 274 square kilometres and includes Ile Uvea (Wallis Island), Ile Futuna, Ile Alofi 20 islets.

The estimated population of Wallis and Futuna was 14 500 in 2008. About 26.7% were 0-14 years old and 7.1% were aged 65 years and older.

1.2 Political situation

The Futuna island group was discovered by the Dutch in 1616 and Wallis by the British in 1767, but it was the French who declared a protectorate over the islands in 1842. In 1959, the inhabitants of the islands voted to become a French overseas territory. The Chief of State is President Nicolas Sarkozy of France (since 16 May 2007), represented by the High Administrator, who is appointed by the French President on the advice of the French Ministry of the Interior. The High Administrator has been Phillippe Paolantoni since 28 July 2008. The head of the government is the President of the Territorial Assembly, currently Victor Brial (since 4 February 2009). The Council of the Territory consists of three kings with limited powers, appointed by the High Administrator on the advice of the Territorial Assembly. The presidents of the Territorial Government and the Territorial Assembly are elected by the members of the Assembly.

1.3 Socioeconomic situation

The economy is limited to traditional subsistence agriculture, with about 80% of the labour force involved in agriculture (coconuts and vegetables), livestock (mostly pigs) and fishing. About 4% of the population is employed by the Government. Revenues come from subsidies from the French Government, licensing of fishing rights to Japan and the Republic of Korea, import taxes and remittances from expatriate workers in New Caledonia. Gross domestic product (GDP) per capita was estimated at US$ 3800 in 2004.

1.4 Risks, vulnerabilities and hazards

No available information.

2. HEALTH SITUATION AND TREND

2.1 Communicable and noncommunicable diseases, health risk factors and transition

The leading noncommunicable diseases are: diabetes, obesity, rheumatism/gout and dental caries. For communicable diseases, they are leptospirosis, brucellosis, dengue, filariasis, tuberculosis, leprosy, hepatitis B, shigellosis and salmonellas.

2.2 Outbreaks of communicable diseases

Wallis and Futuna has suffered the following dengue outbreaks:

- 1971 – 500 cases reported (Type II)
- 1976 – 500 cases reported (Type I)
- 1979 – 300 cases reported (Type 4)
- 1989/1990 – 2361 cases reported (Type IV)
- 1998/1999 – 395 cases were reported (Type 2)

- 2002/2003 – 2045 cases reported, including 1535 suspected cases, 166 confirmed cases, 280 hospitalized cases and two cases resulting in death.

2.3 Leading causes of mortality and morbidity

No available information.

2.4 Maternal, child and infant diseases

The estimated infant mortality rate was 5.9 per 1000 live births in 2003. In 2007, immunization coverage for infants was 88% for DTP3 and POL3, 91% for hepatitis B III and 100% for BCG. Only 86% of infants received measles immunization. In 2002, about 70% of pregnant women were immunized with tetanus toxoid.

2.5 Burden of disease

No available information.

3. HEALTH SYSTEM

3.1 Ministry of Health's mission, vision and objectives

No available information.

3.2 Organization of health services and delivery systems

In 2008, there were one hospital and three dispensaries in Wallis, and one hospital and two dispensaries in Futuna. Hospitalization and treatment are free of charge.

Wallis hospital comprises an emergency ward, one medical ward with 21 beds, one surgical ward with 16 beds and two operating rooms, one delivery ward with two delivery rooms, one laboratory, one X-ray unit, two ultrasound rooms, one outpatient ward, one education room, and one pharmacy.

Futuna hospital comprises one emergency ward, one internal medicine ward with 15 beds, one post-delivery ward with seven beds, one labour ward, one laboratory, one X-ray and ultrasound unit, one pharmacy, one dental unit, and one medical evacuation unit.

3.3 Health policy, planning and regulatory framework

No available information.

3.4 Health care financing

The French Government provides funding to support the health services. In 2008, the Government spent an estimated US$ 35.2 million on health, 24% of total government expenditure.

3.5 Human resources for health

There are 80 medical staff in Wallis, including one general surgeon, one anaesthesiologist, one gynaecologist, one polyvalent medical practitioner, one emergency doctor, five general doctors, two dental surgeons, one pharmacist, one anaesthesiology nurse, seven midwives, two physical therapists and 38 nurses.

In Futuna, there are 28 medical staff, including three general doctors, four midwives (three authorized), one dental surgeon, one physical therapist and eight nurses (only four authorized).

3.6 Partnerships

No available information.

3.7 Challenges to health system strengthening

No available information.

4. LISTING OF MAJOR INFORMATION SOURCES AND DATABASES

Title 1	:	Pacific Regional Information System (PRISM)
Operator	:	Secretariat of the Pacific Community
Web address	:	http://www.spc.int/prism/
Title 2	:	SPC Statistics and Demographic Programme
Web address	:	http://www.spc.int/demog/en/stats/2006/Pacific%20Island%20Populations%202006-2015%20-%2030%
Title 3	:	Service territorial de la statistique
Web address	:	http://www.spc.int/prism/wf/
Title 4	:	*World factbook*
Web address	:	http://www.cia.gov/library/publications/the-world-factbook/geos/wf.html#Intro

5. ADDRESSES

MINISTRY OF HEALTH

Postal Address	:	B.P. 4G Mata Utu 98600 Uvea
Official Email Address	:	sante@adswf.org
Fax	:	(681) 72 23 99

WHO REPRESENTATIVE IN THE SOUTH PACIFIC

Office Address	:	Level 4 Provident Plaza One Downtown Boulevard, 33 Ellery Street, Suva
Postal Address	:	PO Box 113, Suva, Fiji.
Official Email Address	:	who@sp.wpro.who.int
Telephone	:	(679) 3234 100
Fax	:	(679) 3234 166/ 3234 177
Office hours	:	0800 – 1700
Website	:	http://www.wpro.who.int/southpacific

WALLIS AND FUTUNA

WESTERN PACIFIC REGION HEALTH DATABANK, 2009 Revision

	INDICATORS	DATA			Year	Source
	Demographics	Total	Male	Female		
1	Area (1 000 km2)	0.14			2003	1
2	Estimated population ('000s)	14.50	...	...	2008	2
3	Annual population growth rate (%)	...	...	...		
4	Percentage of population					
	- 0–4 years	12.20	12.20	12.20	2008 est	3
	- 5–14 years	21.30	21.30	21.40	2008 est	3
	- 65 years and above	5.10	4.60	5.80	2008 est	3
5	Urban population (%)	0.00	...	...	2005 est	3
6	Crude birth rate (per 1000 population)	19.40	...	...	2003	4
7	Crude death rate (per 1000 population)	5.90	...	...	2003	4
8	Rate of natural increase of population (% per annum)	1.35 [a]	...	...	2003	4
9	Life expectancy (years)					
	- at birth	74.30	73.10	75.50	2003 est	5
	- Healthy Life Expectancy (HALE) at age 60	...	...	...		
10	Total fertility rate (women aged 15–49 years)	3.10			2003 est	5
	Socioeconomic indicators					
11	Adult literacy rate (%)	78.80 [b]	78.20 [b]	78.20 [b]	2003	5
12	Per capita GDP at current market prices (US$)	3800.00			2004	2
13	Rate of growth of per capita GDP (%)	...				
14	Human development index	...				
	Environmental indicators	Total	Urban	Rural		
15	Proportion of vehicles using unleaded gasoline (%)	...	...	...		
16	Health care waste generation (metric tons per year)	...	...	...		

	Communicable and noncommunicable diseases	Number of new cases			Number of deaths			Year	Source
17	Selected communicable diseases	Total	Male	Female	Total	Male	Female		
	Hepatitis viral								
	- Type A	...	...	...	...	...	...		
	- Type B	...	...	...	...	...	...		
	- Type C	...	...	...	...	...	...		
	- Type E	...	...	...	...	...	...		
	- Unspecified	...	...	...	...	...	...		
	Cholera	...	...	...	...	...	...		
	Dengue/DHF	0	0	0	0	0	0	2008	6
	Encephalitis	...	...	...	...	...	...		
	Gonorrhoea	...	...	...	...	...	...		
	Leprosy	0	0	0	0	0	0	2007	6
	Malaria	...	...	...	...	...	...		
	Plague	...	...	...	...	...	...		
	Syphilis	...	...	...	...	...	...		
	Typhoid fever	...	...	...	...	...	...		

	INDICATORS	DATA						Year	Source
	Communicable and noncommunicable diseases	Number of new cases			Number of deaths				
		Total	Male	Female	Total	Male	Female		
18	**Acute respiratory infections**	...	...	...	...	...	...		
19	**Diarrhoeal diseases**	...	...	...	...	...	...		
20	**Tuberculosis**								
	- All forms	2 [g]	...	...	...	...	...	2007	6
	- New pulmonary tuberculosis (smear-positive)	1 [g]	...	...	...	...	...	2007	6
21	**Cancers**								
	All cancers (malignant neoplasms only)	...	...	...	...	...	...		
	- Breast	...	...	...	...	...	...		
	- Colon and rectum	...	...	...	...	...	...		
	- Cervix			...			...		
	- Oesophagus	...	...	...	...	...	...		
	- Leukaemia	...	...	...	...	...	...		
	- Lip, oral cavity and pharynx	...	...	...	...	...	...		
	- Liver	...	...	...	...	...	...		
	- Stomach	...	...	...	...	...	...		
	- Trachea, bronchus, and lung	...	...	...	...	...	...		
22	**Circulatory**								
	All circulatory system diseases	...	...	...	...	...	...		
	- Acute myocardial infarction	...	...	...	...	...	...		
	- Cerebrovascular diseases	...	...	...	...	...	...		
	- Hypertension	...	...	...	...	...	...		
	- Ischaemic heart disease	...	...	...	...	...	...		
	- Rheumatic fever and rheumatic heart diseases	...	...	...	...	...	...		
23	**Diabetes mellitus**	...	...	...	...	...	...		
24	**Mental disorders**	...	...	...	...	...	...		
25	**Injuries**								
	All types	...	...	...	...	...	...		
	- Homicide and violence	...	...	...	...	...	...		
	- Motor and other vehicular accidents	...	...	...	...	...	...		
	- Occupational injuries	...	...	...	...	...	...		
	- Suicide	...	...	...	...	...	...		
	Leading causes of mortality and morbidity	Number of cases			Rate per 100 000 population				
26	**Leading causes of morbidity (inpatient care)**	Total	Male	Female	Total	Male	Female		
	1.								
	2.								
	3.								
	4.								
	5.								
	6.								
	7.								
	8.								
	9.								
	10.								

	INDICATORS	DATA						Year	Source
		Number of deaths			Rate per 100 000 population				
27	Leading causes of mortality	Total	Male	Female	Total	Male	Female		
	1.								
	2.								
	3.								
	4.								
	5.								
	6.								
	7.								
	8.								
	9.								
	10.								
	Maternal, child and infant diseases	Total		Male		Female			
28	Percentage of women in the reproductive age group using modern contraceptive methods					...			
29	Percentage of pregnant women immunized with tetanus toxoid (TT2)					69.50		2002	6
30	Percentage of pregnant women with anaemia					...			
31	Neonatal mortality rate (per 1000 live births)	...		...		...			
32	Percentage of newborn infants weighing at least 2500 g at birth	...		...		...			
33	Immunization coverage for infants (%)								
	- BCG	100.00		...		...		2007	6
	- DTP3	88.00		...		...		2007	6
	- POL3	88.00		...		...		2007	6
	- Hepatitis B III	91.00		...		...		2007	6
		Number of cases			Number of deaths				
34	Maternal causes	Total	Male	Female	Total	Male	Female		
	- Abortion			...			...		
	- Eclampsia			...			...		
	- Haemorrhage			...			...		
	- Obstructed labour			...			...		
	- Sepsis			...			...		
35	Selected diseases under the WHO-EPI								
	- Congenital rubella syndrome	0	0	0	...	...	...	2007	6
	- Diphtheria	0	0	0	...	...	...	2007	6
	- Hib meningitis	0	0	0	...	...	...	2007	6
	- Measles	0	0	0	...	...	...	2007	6
	- Mumps	0	0	0	...	...	...	2007	6
	- Neonatal tetanus	0	0	0	...	...	...	2007	6
	- Pertussis (whooping cough)	0	0	0	...	...	...	2007	6
	- Poliomyelitis	0	0	0	...	...	...	2007	6
	- Rubella	0	0	0	...	...	...	2007	6
	- Total Tetanus	0	0	0	...	...	...	2007	6

	INDICATORS		DATA		Year	Source
	Health facilities		Number	Number of beds		
36	Facilities with HIV testing and counseling services		...			
37	Health infrastructure					
	Public health facilities	- General hospitals	2	59	2008	2
		- Specialized hospitals	0	0	2008	2
		- District/first-level referral hospitals	0	0	2008	2
		- Primary health care centres	5 [c]	0	2008	2
	Private health facilities	- Hospitals	...	...		
		- Outpatient clinics	...	...		
	Health care financing					
38	Total health expenditure					
	- amount (in million US$)			...		
	- total expenditure on health as % of GDP			...		
	- per capita total expenditure on health (in US$)			...		
	Government expenditure on health					
	- amount (in million US$)			35.20	2008	2
	- general government expenditure on health as % of total expenditure on health			...		
	- general government expenditure on health as % of total general government expenditure			24.00	2008	2
	External source of government health expenditure					
	- external resources for health as % of general government expenditure on health			...		
	Private health expenditure					
	- private expenditure on health as % of total expenditure on health			...		
	Exchange rate in US$ of local currency is: 1 US$ =			...		
39	Health insurance coverage as % of total population			...		

	INDICATOR		DATA							Year	Source
40	Human resources for health		Total	Male	Female	Urban	Rural	Public	Private		
	Physicians	- Number	16 [d]	...	...	...	...	...	...	2008	2
		- Ratio per 1000 population	1.10 [a]	...	...	...	...	...	...	2008	2
	Dentists	- Number	3	...	...	...	...	...	...	2008	2
		- Ratio per 1000 population	0.21 [a]	...	...	...	...	...	...	2008	2
	Pharmacists	- Number	1	...	...	...	...	...	...	2008	2
		- Ratio per 1000 population	0.07 [a]	...	...	...	...	...	...	2008	2
	Nurses	- Number	43 [e]	...	...	...	...	...	...	2008	2
		- Ratio per 1000 population	2.97 [a]	...	...	...	...	...	...	2008	2
	Midwives	- Number	10 [f]	...	...	...	...	...	...	2008	2
		- Ratio per 1000 population	0.69 [a]	...	...	...	...	...	...	2008	2
	Paramedical staff	- Number	52	...	...	...	...	...	...	2003	2
		- Ratio per 1000 population	3.48 [a]	...	...	...	...	...	...	2003	2
	Community health workers	- Number	...	...	...	...	...	...	...		
		- Ratio per 1000 population	...	...	...	...	...	...	...		
41	Annual number of graduates	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		

INDICATORS			DATA							Year	Source
			Total	Male	Female	Urban	Rural	Public	Private		
41	Annual number of graduates	Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		
42	Workforce losses/ Attrition	Physicians	...	...	...	...	...	...	...		
		Dentists	...	...	...	...	...	...	...		
		Pharmacists	...	...	...	...	...	...	...		
		Nurses	...	...	...	...	...	...	...		
		Midwives	...	...	...	...	...	...	...		
		Paramedical staff	...	...	...	...	...	...	...		
		Community health workers	...	...	...	...	...	...	...		

INDICATORS		DATA			Year	Source
	Health-related Millennium Development Goals (MDGs)	Total	Male	Female		
43	Prevalence of underweight children under five years of age	...	...	...		
44	Infant mortality rate (per 1000 live births)	5.90	...	...	2003 est	5
45	Under-five mortality rate (per 1000 live births)	...	...	...		
46	Proportion of 1 year-old children immunised against measles	86.00	...	...	2007	6
47	Maternal mortality ratio (per 100 000 live births)	...				
48	Proportion of births attended by skilled health personnel	...				
	- Percentage of deliveries at home by skilled health personnel (as % of total deliveries)	...				
	- Percentage of deliveries in health facilities (as % of total deliveries)	...				
49	Contraceptive prevalence rate	...	...	...		
50	Adolescent birth rate	...				
51	Antenatal care coverage - At least one visit	...				
	- At least four visits	...				
52	Unmet need for family planning	...	...	...		
53	HIV prevalence among population aged 15-24 years	...	...	...		
54	Estimated HIV prevalence in adults	...	...	...		
55	Percentage of people with advanced HIV infection receiving ART	...	...	...		
56	Malaria incidence rate per 100 000 population	...	...	...		
57	Malaria death rate per 100 000 population	...	...	...		
58	Proportion of population in malaria-risk areas using effective malaria prevention measures	...	...	...		
59	Proportion of population in malaria-risk areas using effective malaria treatment measures	...	...	...		
60	Tuberculosis prevalence rate per 100 000 population	25.00	...	...	2007	6
61	Tuberculosis death rate per 100 000 population	3.00	...	...	2007	6
62	Proportion of tuberculosis cases detected under directly observed treatment short-course (DOTS)	90.00	...	...	2007	6
63	Proportion of tuberculosis cases cured under directly observed treatment short-course (DOTS)	50.00	...	...	2006	6
		Total	Urban	Rural		
64	Proportion of population using an improved drinking water source	100.00	NA	100.00	2006	7
65	Proportion of population using an improved sanitation facility	...	...	...		
66	Proportion of population with access to affordable essential drugs on a sustainable basis	...	...	...		

Notes:	
...	Data not available
est	Estimate
a	Computed by Health Information and Evidence for Policy unit of the WHO Regional Office for the Western Pacific.
b	Figure applies to aged 19 years and above.
c	Figure refers to dispensaries.
d	Figure refers to physicians and specialists.
e	Figure includes 1 anaesthesiology nurse and excludes unauthorized nurses
f	Figure excludes 1 unauthorized midwife
g	Figure based on notified TB cases (New and relapse number, smear positive number), DOTS and non-DOTS combined, in Global Tuberculosis Control 2009, WHO

Sources:	
1	Pacific Islands Populations - Estimates and projections 2009-2050. Secretariat of the Pacific Community (SPC), Statistics and Demography. Accessed on 12 May 2009 from http://www.spc.int/sdp/index.php?option=com_docman&task=doc_download&gid=155&Itemid=42.
2	Information furnished by the WHO Representative to the South Pacific, 3 June 2009.
3	Demographic tables for the Western Pacific Region 2005-2010. Manila, WHO Regional Office for the Western Pacific, 2005.
4	Service de la statistique de wallis et futuna. Accessed from http://www.spc.int/prism/country/wf/stats/Social/demography.htm.
5	Service territorial de la statistique (http://www.spc.int/prism/wf/).
6	WHO Regional Office for the Western Pacific, data received from technical units.
7	Joint Monitoring Programme for Water Supply and Sanitation (JMP). Country files: Wallis and Futuna. Progress on Drinking Water and Sanitation: Special Focus on Sanitation. UNICEF and WHO. Available from http://www.wssinfo.org/en/welcome.html.

Statistical Tables

Table 1. Demographic Indicators

Country/ area	Population							
	Year	Total Population [1] ('000s)	Area [1] (1000 km^2)	Density [i] (per sq. km.)	Year	Urban [1] (%)	Year	Growth Rate [1] (%)
1 American Samoa	2008 est	66.11	(2006) 0.20	330.55	2007 est	92.00	2008 est	1.60
2 Australia	2008	21 542.49 [a]	7692.02	2.80	2007 est	88.60 [a]	2007-08p	1.71
3 Brunei Darussalam	2007	390.00	5.77	67.59	2007 est	74.40 [g]	2007	1.80
4 Cambodia	2008	13 388.91	181.04	73.96	2008	19.50	2008	1.54
5 China	2008	1 328 020.00	9600.00	138.34	2008	45.70		...
6 Cook Islands	2008p	22.20	0.24	92.50	2007 est	73.00 [g]	2007	1.70
7 Fiji	2007	837.27	18.33	45.68	2007 est	51.80 [g]	2007	0.70
8 French Polynesia	2008 est	264.00 [b]	3.52	75.00	2007	46.10 [g]	2002-07	1.20
9 Guam	2008	175.99	0.54	325.91	2007 est	93.10 [g]	2008	1.39
10 Hong Kong (China)	2008	6977.70	1.10	6343.36	2008	94.85	2008	0.75
11 Japan	2008	127 692.00 [c]	377.93	337.87	2007 est	66.30 [g]		...
12 Kiribati	2008 est	97.23	0.81	120.04	2007 est	43.70 [g]	2008	1.80
13 Lao People's Democratic Republic	2005	5621.00	236.80	23.74	2007 est	29.70	1995-2005	2.10
14 Macao (China)	2008	549.20 [d]	0.03	18 306.67	2008	100.00	2008	2.00
15 Malaysia	2008	27 728.70	330.80	83.82	2008	63.50	2007p	1.40
16 Marshall Islands	2008 est	53.23	0.18	295.72	2007 est	70.70 [g]	2008	1.00
17 Micronesia, Federated States of	2008 est	108.03	0.70	154.33	2007 est	22.40 [g]		...
18 Mongolia	2008	2683.52	1567.00	1.71	2008	61.40	2008	1.80
19 Nauru	2008 est	9.20	0.01	920.00	2007 est	100.00	2002-06	- 1.00
20 New Caledonia	2008p	249.00	18.58	13.40	2007 est	64.40	2006	2.50
21 New Zealand	2008 est	4268.90 [e]	270.69 [h]	15.77	2007 est	86.40 [g]	2008 est	1.00
22 Niue	2008 est	1.55	0.26	5.96	2007 est	38.00	2008	- 2.40
23 Northern Mariana Islands	2008 est	62.97	0.47	133.98	2007 est	91.00	2008 est	- 1.70
24 Palau	2008p	20.73	0.44	47.11	2007 est	79.60 [g]	2008p	0.60
25 Papua New Guinea	2008 est	6460.00	462.84	13.96	2007 est	12.50 [g]	2006 est	2.70
26 Philippines	2007	88 574.61	299.76	295.49	2007 est	64.20	2000-07	2.04
27 Pitcairn Islands	2008	0.05	0.04	1.25		...		...
28 Republic of Korea	2008	48 606.79	99.70	487.53	2007 est	81.30 [g]	2008	0.31 [g]
29 Samoa	2008 est	188.36	2.94	64.07	2007	22.70	2001-06	0.50
30 Singapore	2008p	3642.70 [f]	0.71	5130.56	2007 est	100.00	2008p	1.70 [f]
31 Solomon Islands	2008 est	535.01	28.37	18.86	2007 est	17.60 [g]	2008 est	2.70
32 Tokelau	2006	1.47 [g]	0.01	147.00	2007 est	0.00		...
33 Tonga	2008 est	102.72	0.65	158.03	2007 est	24.40 [g]	2008	0.40
34 Tuvalu	2008 est	9.73	0.03	324.33	2007 est	49.00	2008	0.30
35 Vanuatu	2008 est	233.03	12.19	19.12	2007	24.30	2008	2.60
36 Viet Nam	2007 est	85 154.90	331.21	257.10	2007 est	27.30	2007 est	1.19
37 Wallis and Futuna	2008	14.50	0.14	103.57	2005 est	0.00		...

% Distribution of Population [1]												
Year	0-4 years (%)	5-14 years (%)	65+ years (%)	Aged 60 years or older by gender (2008) [2] Male	Female	Year	Crude Birth Rate [1] (per 1000 popn)	Crude Death Rate [1] (per 1000 popn)	Year	Dependency Ratio [m] (%)	Total Fertility Rate (women 15-49 years) [1] Year	
2008 est	12.00	21.50	5.10	6.90	8.30	2008 est	26.30	4.50	2008 est	62.87	2008 est	4.00
2008	6.42	12.83	13.21	17.30	19.90	2007	13.57	6.60	2008	48.06	2007	1.93
2007	12.50	18.80	2.80	5.50	4.80	2007	16.20	3.00	2007	51.75	2007	1.70
2005	11.50	27.40	4.60	3.70	6.10	2004	25.00	6.70	2005	76.99	2005	3.40
2008	…	19.00 [j]	8.30	10.90	12.70	2008	12.14	7.06	2008	37.55	2001	1.90
2008 est	12.20	21.30	5.10	7.00	8.30	2008p	20.10 [k]	4.50 [k]	2008 est	62.87	2007	3.10
2007	9.88 [g]	19.16 [g]	4.64 [g]	6.40	7.90	2007	22.20	9.80	2007	50.78	2003	2.60
2008	8.30	17.65	5.80	7.70	7.90	2007	17.10	4.80	2008	46.52	2008	2.18
2008 est	10.50	19.60 [i]	6.50 [i]	9.60	10.00	2008	18.38	4.50	2008 est	57.73	2008	2.55
2008	3.16	9.77	12.61	15.80	16.10	2008p	11.29 [l]	5.95 [l]	2008	34.30	2008p	1.05
2008 est	4.23 [i]	9.21 [i]	22.24 [i]	25.90	31.60	2007	8.60	8.80	2008 est	55.47	2007	1.34
2008 est	12.20	22.20 [i]	5.10 [i]	7.50	8.30	2008 est	27.50	8.30	2008 est	65.29	2008 est	3.40
2005	12.45	26.56	4.00	4.90	5.70	2005	34.30	9.80	2005	75.47	2002-05	4.07
2008	3.60	9.20	7.20	11.60	11.80	2008	8.50	3.20	2008	25.00	2008	1.00
2008	11.41	20.60	4.44	7.10	8.00	2007p	17.50	4.50	2008	57.36	2007p	2.20
2008 est	12.20	22.20	5.10	7.50	8.30	2008 est	32.40	6.30	2008 est	65.29	2006	4.40
2008 est	13.00	24.00	3.40	4.70	5.70	2003	23.30	4.40	2008 est	67.79	2000	4.40
2008	9.29	18.84	4.12	5.10	6.40	2008	23.72	5.64	2008	47.60	2008	2.60
2008 est	15.25	23.27	0.94	7.50	8.20	2008 est	13.10	6.70	2008 est	65.18	2008	4.00
2008 est	8.40	18.40	6.20	9.50	10.20	2008p	16.10	4.70	2008 est	49.25	2005	2.20
2008 est	7.03 [e]	13.81 [e]	12.60 [e]	16.60	19.00	2008	14.91	6.67	2008 est	50.24	2008	2.15
2008 est	11.90	21.50 [i]	5.20 [i]	6.90	8.30	2008 est	15.60	9.20	2008 est	62.87	2008 est	2.60
2008 est	12.10	22.20	5.20	7.50	8.20	2008 est	17.30	2.80	2008 est	65.29	2005 est	1.27
2008 est	12.10	22.20	5.10	7.50	8.30	2007	13.80	7.50	2008 est	65.02	2007	2.00
2008 est	14.00	26.00	2.30	4.20	4.20	2000	35.00	12.00	2008 est	73.31	2006	4.40
2005	11.47	22.28	4.40	5.90	6.80	2004	20.50	4.80	2005	61.68	2005-15	3.18
	…	…	…	36.60	41.00		…	…		…		…
2008	4.64	12.76	10.32	12.10	15.90	2007	10.10	5.00	2008	38.35	2007	1.26
2008 est	15.40	26.20	2.60	5.00	7.40	2006	27.30	4.00	2008 est	79.21	2006	4.20
2008p	…	18.43 [j]	8.70	13.30	15.00	2008p	10.30 [f]	4.40 [f]	2008p	37.23	2007	1.29 [f]
2008 est	15.40	26.20	2.60	4.20	4.50	2008 est	34.90	7.60	2008 est	79.21	2008	4.80
2006	11.32 [g]	23.74 [g]	7.37 [g]	6.80	8.10	2008	23.90	7.30	2006	73.70	2008	4.50
2008 est	12.90	23.10 [i]	5.70 [i]	6.90	8.90	2008 est	28.50	6.80	2008 est	71.53	2007	3.70
2008 est	12.30	21.30	5.10	6.90	8.20	2008 est	21.80	9.50	2008 est	63.13	2008 est	3.70
2008 est	14.00	36.00	3.00	5.10	5.20	2008 est	31.10	5.50	2008 est	112.77	2008	4.40
2007 est	7.49	18.02	7.18	6.60	8.80	2007 est	16.90	5.30	2007 est	48.57	2007 est	2.07
2008 est	12.20	21.30	5.10	7.00	8.30	2003	19.40	5.90	2008 est	62.87	2003 est	3.10

Table 2. Socioeconomic Indicators

	Country/ area	Adult Literacy Rate [1]						Health Expenditure [1]			General Government Expenditure on Health as % of Total General Government Expenditure [1]
		Year	Total (%)	Male (%)	Female (%)	Year	Per capita GDP [1] (in US$)	Year	Per capita (US$)	As % of GDP (%)	2007
1	American Samoa		…	…	…	2003 est	8052.00 [l]	2003	500.00	…	(2003) 14.00
2	Australia	2006	86.60 [a]	81.60 [a]	91.70 [a]	2007-08	48 393.00 [m]	2007p	3886.00	8.71	17.51 p
3	Brunei Darussalam	2007	94.90	96.50	93.10	2007	31 228.60	2007p	543.32	1.80	5.10 p
4	Cambodia	2004	73.60	84.70	64.10	2008	635.00	2007p	35.51	5.90	11.20 p
5	China	2005	88.96	94.14	83.85	2008	3312.63 [n]	2007	112.37	4.52	10.30 p
6	Cook Islands	2007	100.00	…	…	2007p	9991.18 [n]	2007p	453.02 [n]	4.40	12.40 p
7	Fiji	2002	92.90 [b]	…	…	2007p	3312.10 [o]	2007p	151.02 [n]	3.80	9.10 p
8	French Polynesia	2007	94.70 [c]	93.70 [c]	95.60 [c]	2005	23 214.00	2008 est	3029.00	13.00	…
9	Guam		…	…	…	2005	22 661.00	2000	1032.36	…	(2005) 8.71 [z]
10	Hong Kong (China)	2008	94.54 [d]	97.40 [d]	92.04 [d]	2008p	30 891.74	FY2004/05	1283.00 [w]	5.20 [x]	(FY 2004/05) 14.50 [aa]
11	Japan	2000 est	99.00	…	…	2007	34 326.00	2007p	2750.80 [n]	8.00	17.90 p
12	Kiribati	2005	91.00	…	…	2006p	653.00	2007p	141.53 [n]	13.00	7.80 p
13	Lao People's Democratic Republic	2005	73.00	…	…	2007	580.00 [p]	2007	24.10	3.70	2.70
14	Macao (China)	2008	95.00 [e]	97.50 [e]	92.60 [e]	2008	39 036.00	2007	679.70	1.92	10.54
15	Malaysia	2007	92.30	95.10	89.50	2007	5937.00	2007p	307.05 [n]	4.40	6.90 p
16	Marshall Islands		…	…	…	2007	2851.00	2007p	372.88	14.70	14.60 p
17	Micronesia, Federated States of	2000	92.40	92.90	91.90	FY2006 est	2254.00	2007p	279.28	13.30	18.90 p
18	Mongolia	2007	97.80	98.00	97.50	2007	1496.20	2007p	91.40	6.20	12.20 p
19	Nauru	2005	95.00	…	…	2006	2773.00 [q]	2007p	672.27 [n]	15.10	38.10 p
20	New Caledonia	2007	91.00	92.00	90.00	2007 est	38 300.14 [r]	2003	1941.48	8.70	…
21	New Zealand	2006	89.00 [f]	…	…	2005	24 996.00 [s]	2007p	2736.26	8.90	17.40 p
22	Niue	2003	100.00	100.00	100.00	2003	5841.86	2007p	1102.94 [n]	13.60	10.80 p
23	Northern Mariana Islands		…	…	…	2005	12 638.00	2000	519.00	…	…
24	Palau	2005	99.90 [g]	99.90 [g]	99.80 [g]	2007	8423.00	2007p	900.00 [n]	10.80	12.70 p
25	Papua New Guinea	2000	56.20 [h]	61.20 [h]	50.90 [h]	2006p	844.95 [t]	2007p	31.27	3.20	7.30 p
26	Philippines	1995-2005	92.60	…	…	2007	1461.33	2007p	63.29	3.90	6.80 p
27	Pitcairn Islands		…	…	…		…		…	…	…
28	Republic of Korea	2002	97.90	99.20	96.60	2007	20 045.00 [t]	2007p	1329.28	6.60	12.50 p
29	Samoa	2006	…	89.00 [i]	92.00 [i]	2007.00	2892.75 [u]	2007p	144.92 [n]	5.40	10.50
30	Singapore	2008p	96.00 [j]	…	…	2008p	37 597.00	FY2007p	1349.14	3.70	(FY 2007) 6.70 p
31	Solomon Islands		…	…	…	2006	753.00	2007	54.55 [n]	5.10	15.40
32	Tokelau	2003	86.50	…	…	2003	612.50 [v]	1999-2000	341.07 [y]	…	(FY2003-04) 12.50
33	Tonga	1995-2005	99.00	98.80	99.00	2006 est	2319.00	2007p	124.42 [n]	4.90	11.70 p
34	Tuvalu		…	…	…	2002	1139.32	2007p	305.58	10.60	16.10 p
35	Vanuatu	1995-2005	74.00	…	…	2006	2127.00	2007	88.16 [n]	4.70	11.40
36	Viet Nam	2007	93.10 [h]	96.00 [h]	90.50 [h]	2007	834.00	2007p	57.50	7.10	8.70 p
37	Wallis and Futuna	2003	78.80 [k]	78.20 [k]	78.20 [k]	2004.00	3800.00		…	…	(2008) 24.00

Table 3. Health and Human Rights Instruments

Country/ area	Convention on the rights of the child [3]		Convention on the elimination of all forms of discrimination against women [3]		International covenant on economic, social and cultural rights [3]	
	Year of ratification [a]	Latest submission of report *(as of June 2009)*	Year of ratification [a]	Latest submission of report *(as of June 2009)*	Year of ratification [a]	Latest submission of report *(as of June 2009)*
1 American Samoa	...	...	...	...	...	...
2 Australia	1990	2003	1983	2008	1975	2007
3 Brunei Darussalam	1995	2001	2006	...	...	...
4 Cambodia	1992	1997	1992	2004	1992	2008
5 China	1992	2003	1980	2004	2001 [b]	2004 [c]
6 Cook Islands	1997	...	2006	2006	...	...
7 Fiji	1993	1996	1995	2000	...	...
8 French Polynesia	...	...	...	...	...	...
9 Guam	...	...	...	...	...	...
10 Hong Kong (China)	...	...	...	...	...	...
11 Japan	1994	2001	1985	2008	1979	1999
12 Kiribati	1995	2005	2004	...	...	...
13 Lao People's Democratic Republic	1991	1996	1981	2003	2007	...
14 Macao (China)	...	...	...	...	...	...
15 Malaysia	1995	2006	1995	2004	...	...
16 Marshall Islands	1993	2004	2006	...	...	...
17 Micronesia, Federated States of	1993	1996	2004	...	...	...
18 Mongolia	1990	2007	1981	2007	1974	1998
19 Nauru	1994	...	...	...	...	...
20 New Caledonia	...	...	...	...	...	...
21 New Zealand	1993	2001	1985	2006	1978	2001
22 Niue	1995	...	...	...	...	...
23 Northern Mariana Islands	...	...	...	...	...	...
24 Palau	1995	1998	...	...	...	...
25 Papua New Guinea	1993	2002	1995	...	2008	...
26 Philippines	1990	2008	1981	2004	1974	2006
27 Pitcairn Islands	...	...	...	...	...	...
28 Republic of Korea	1991	2000	1984	2006	1990	2007
29 Samoa	1994	2005	1992	2003	...	...
30 Singapore	1995	2002	1995	2004	...	...
31 Solomon Islands	1995	2001	2002	...	1982	2001
32 Tokelau	...	...	...	...	...	...
33 Tonga	1995	...	...	...	...	...
34 Tuvalu	1995	...	1999	...	...	...
35 Vanuatu	1993	1997	1995	2005	...	...
36 Viet Nam	1990	2002	1982	2005	1982	1992
37 Wallis and Futuna	...	...	...	...	...	...

Table 4. Poverty- and Gender-related Development Indicators

Country/ area	Human Development Index (HDI) value [1,4]	Population below income poverty line (%) [5]		Gender-related development index (GDI) value [5]	Gender-empowerment measure (GEM) value [5]	Seats in parliament held by women [5]	Ratio of estimated female to male earned income [5]
		$1 a day	National poverty line				
	2006	1990-2005 [a]	1990-2003 [a]	2005	2005-2007	(% of total) [e]	2005 [h]
1 American Samoa	…	…	…	…	…	…	…
2 Australia	0.97	…	12.20 [b]	0.96	0.85	28.30	0.70
3 Brunei Darussalam	0.92	…	…	0.89	…	… [f]	0.42
4 Cambodia	0.58	34.10	35.00	0.59	0.38	11.40	0.74
5 China	0.76	9.90	4.60	0.78	0.53	20.30	0.64
6 Cook Islands	…	…	…	…	…	…	…
7 Fiji	0.74	…	…	0.76	…	… [g]	0.48
8 French Polynesia	…	…	…	…	…	…	…
9 Guam	…	…	…	…	…	…	…
10 Hong Kong (China)	0.94	…	…	0.93	…	…	0.56
11 Japan	0.95	…	11.80 [c]	0.94	0.56	11.10	0.45
12 Kiribati	…	…	…	…	…	…	…
13 Lao People's Democratic Republic	0.61	27.00	38.60	0.59	…	25.20	0.51
14 Macao (China)	0.94	…	…	…	…	…	…
15 Malaysia	0.82	<2.00	15.50 [d]	0.80	0.50	13.10	0.36
16 Marshall Islands	…	…	…	…	…	…	…
17 Micronesia, Federated States of	…	…	…	…	…	…	…
18 Mongolia	0.72	10.80	36.10	0.70	0.43	6.60	0.50
19 Nauru	…	…	…	…	…	…	…
20 New Caledonia	…	…	…	…	…	…	…
21 New Zealand	0.94	…	…	0.93	0.81	32.20	0.70
22 Niue	…	…	…	…	…	…	…
23 Northern Mariana Islands	…	…	…	…	…	…	…
24 Palau	…	…	…	…	…	…	…
25 Papua New Guinea	0.52	…	37.50	0.53	…	0.90	0.72
26 Philippines	0.75	14.80	36.80	0.77	0.59	22.10	0.61
27 Pitcairn Islands	…	…	…	…	…	…	…
28 Republic of Korea	0.93	<2.00	…	0.91	0.51	13.40	0.40
29 Samoa	0.76	…	…	0.78	…	6.10	0.38
30 Singapore	0.92	…	…	…	0.76	24.50	0.51
31 Solomon Islands	0.59	…	…	…	…	0.00	0.50
32 Tokelau	…	…	…	…	…	…	…
33 Tonga	0.77	…	…	0.81	…	3.30	0.48
34 Tuvalu	…	…	…	…	…	…	…
35 Vanuatu	0.69	…	…	…	…	3.80	0.68
36 Viet Nam	0.72	…	28.90	0.73	0.56	25.80	0.70
37 Wallis and Futuna	…	…	…	…	…	…	…

Table 5. Health Status Indicators

	Country/ area	Life expectancy at birth [1]				Mortality rates [1]					
		Year	Total (years)	Male (years)	Female (years)	Year	Neonatal (per 1000 live births)	Infant (per 1000 live births)	Under-five (per 1000 live births)	Maternal mortality ratio Year	Maternal mortality ratio (per 100 000 live births)
1	American Samoa	2008 est	…	69.30	75.90	2007	6.20	(2008) 11.90	(2002) 4.90	2002	123.00
2	Australia	2005-07	…	79.00	83.70	2007	3.00	4.20	5.01	2003-05	8.40 [j]
3	Brunei Darussalam	2007	…	75.20	77.80	2007	4.40	7.60	9.50	2007	15.80
4	Cambodia	2008	…	63.10	67.50	2005	28.00	66.00	83.00	2005	472.00
5	China	2000	71.40	69.60	73.70	2007	10.70 [c]	15.30 [d]	18.10 [d]	2007	36.60 [d]
6	Cook Islands	2007 est	68.00 [a]	66.00 [a]	70.00 [a]	2005	9.90	(2007) 24.80	(2007) 90.00	2007	0.00
7	Fiji	2007	…	68.00	72.00	2007	11.90	18.40	22.40	2007	31.10
8	French Polynesia	2008	75.40	73.00	78.20	2007	2.90	6.80	7.90	2007	22.55 [k]
9	Guam	2008	77.84	74.79	81.06	2003	5.20	(2008) 6.17	(2005 est) 10.00	2003	0.00
10	Hong Kong (China)	2008p	…	79.40	85.46	2008p	1.03 [e]	1.77 [e]	2.16 [e]	2008p	2.54 [e]
11	Japan	2007	…	79.19	85.99	2007	2.60	2.60	3.50	2007	3.20
12	Kiribati	2008 est	61.00	58.90	63.10	2005	…	52.00	69.00	2005	158.00
13	Lao People's Democratic Republic	2005	61.00	59.10	63.00	2005	26.00	70.00 [f]	98.00 [f]	2005	405.00
14	Macao (China)	2004-07	82.00	79.00	84.80	2008	2.50	3.20	3.60	2008	0.00
15	Malaysia	2007p	…	71.70	76.50	2007p	3.90	6.30	8.10	2007p	30.00
16	Marshall Islands	2004	…	67.00	70.60	2008	10.50	31.00	7.00	2008	0.00
17	Micronesia, Federated States of	2006 est	69.00	67.00	70.00	2006est	(2004 est) 11.00	33.00	41.00	2003	317.00 [l]
18	Mongolia	2008	67.23	63.69	70.98	2008	12.80	19.60	23.40	2008	49.00
19	Nauru	2008 est	55.40	52.50	58.20	2006 est	(2008) 19.00	25.00	30.00	2002	300.00
20	New Caledonia	2007	75.90	71.80	80.30	2005	2.50	(2007) 6.10	(2002) 9.06	2007	31.60
21	New Zealand	2005-07	80.20	78.00	82.20	2007	2.00	(2006) 4.80	(2003) 6.34	2004	6.81
22	Niue	2008 est	…	67.00	76.00	2005	0.00	(2008) 7.80	(2006) 0.00	2006	0.00
23	Northern Mariana Islands	2005 est	75.88	73.31	78.61	2005 est	…	7.11	…	2000	0.00
24	Palau	2008 est	…	66.30	72.10	2007	7.17	7.17	7.17	2007	0.00
25	Papua New Guinea	2006	54.20	53.70	54.80	2006	29.10 [f]	56.70 [f]	74.40 [f]	2006	733.00 [f]
26	Philippines	2004	67.00	64.00	70.00	2006	12.00	24.00	32.00	2006	162.00
27	Pitcairn Islands		…	…	…		…	…	…		…
28	Republic of Korea	2007	79.56	76.13	82.73	2006	2.50	4.10	5.70	2006	15.00
29	Samoa	2006	73.20	71.50	74.20	2002	4.20	(2006) 20.40 [g]	(2003-04) 13.00	2005-06	3.00 [m]
30	Singapore	2007	80.60 [b]	78.40 [b]	83.20 [b]	2008p	1.50	2.10 [b]	3.40	2007	7.60
31	Solomon Islands	2008	…	60.60	61.60	2002	12.00 [h]	(2008) 66.00	(2005 est) 52.00	2005	236.00
32	Tokelau	2008	…	67.80	70.40	2003	40.00 [i]	(2008) 38.00	…	2001-02	0.00
33	Tonga	2008 est	…	67.30	73.00	2007	5.40	11.80	(2002) 13.90	2007	36.50
34	Tuvalu	1997-2002	63.60	61.70	65.10	2003	…	21.60	32.40	2003	0.00 [n]
35	Vanuatu	2008	…	65.60	69.00	2006	30.00	(2008) 25.00	36.00	2006	70.04
36	Viet Nam	2007	72.80	70.20	75.60	2007 est	…	16.00	25.90	2007	75.00
37	Wallis and Futuna	2003 est	74.30	73.10	75.50	2003 est	…	5.90	…		…

Table 6. Maternal, Child Care and Nutritional Indicators

	Country/ area	Maternal and Child Care					
		% of women in reproductive age group using modern contraceptive methods [1]		% deliveries attended by skilled health personnel [1]		% of deliveries in health facilities [1]	% deliveries at home attended by skilled health personnel [1]
		Year	(%)	Year	(%)	(%)	(%)
1	American Samoa	2000	33.00	2002	100.00	99.00	1.00
2	Australia	2001	65.00 [a]	2006	99.60	99.30	0.30
3	Brunei Darussalam		...	2007	99.90	99.88	0.02
4	Cambodia	2005	27.20	2008	58.00	39.00	19.00
5	China	2006	89.60	2007	...	91.70	...
6	Cook Islands	2007	29.00 [b]	2007	(2005) 100.00	97.80 [g]	1.42 [g]
7	Fiji	2005	42.29	2007	99.00 [e]	...	...
8	French Polynesia	2005	62.00 [c]	2004	100.00 [e]	99.00 [e]	1.00 [e]
9	Guam		...	2004	...	87.22	...
10	Hong Kong (China)		...	2008 est	100.00	100.00 [h]	0.00 [i]
11	Japan	2004 est	43.90	2007	99.97 [j]	99.76 [j]	0.19 [j]
12	Kiribati	2005	18.46	2005	89.65 [g]	85.00 [k]	4.65 [k]
13	Lao People's Democratic Republic	2005	36.60 [d]	2005	18.50	11.00	7.50
14	Macao (China)		...	2008	100.00	100.00	0.00
15	Malaysia	2007	1.36	2007	98.58	97.87	0.71
16	Marshall Islands	2008	20.49	2004-07p	94.10 [l]	85.10 [l]	...
17	Micronesia, Federated States of	2000	70.00		...	...	...
18	Mongolia	2008	52.60	2008	99.80	99.60	52.20
19	Nauru	2007	25.10	2007	97.00	96.00	1.00
20	New Caledonia	2007	37.50	2005	91.97	87.60	4.37
21	New Zealand	2002 est	72.00	2001	100.00	(2004 est) 95.30	...
22	Niue	2005	22.00	2006	100.00	100.00	0.00
23	Northern Mariana Islands	2000	64.00		...	...	...
24	Palau	2006	22.83	2007	100.00	100.00	0.00
25	Papua New Guinea	2006	24.30 [e]	2006	53.00	51.70 [e]	1.30
26	Philippines	2006	35.90	2006	63.70	42.40	20.30
27	Pitcairn Islands		...		...	...	...
28	Republic of Korea	2006	79.90	2007	100.00	98.90	1.10
29	Samoa	1997-2005	30.00 [f]	2004	100.00	91.00	9.00
30	Singapore	2003	72.50	2008p	...	99.74 [m]	...
31	Solomon Islands	2005	25.00	2003	...	43.00 [n]	...
32	Tokelau		...		...	...	...
33	Tonga	2007	27.70	2007	100.00	98.50	1.50
34	Tuvalu	2001	28.50	2002	100.00	...	...
35	Vanuatu	2007	37.00	2006	92.90	91.08	1.82
36	Viet Nam	2007	68.20	2007	94.30 [o]	...	...
37	Wallis and Futuna		...		...	...	...

Maternal and Child Care							
% of women given at least 2 doses of tetanus toxoid TT2+ [1]		% of newborn babies weighing at least 2500 grams at birth [1]				Proportion of 1-year old children protected against neonatal tetanus through immunization of their mothers	
Year	*%*	*Year*	*Total*	*Male*	*Female*	*Year*	
	…	2006	97.15 [p]	…	…		…
	…	2006	93.60	94.10	93.10		…
2007	64.00	2007	88.50	…	…		…
2008	57.00	2005	90.00 [q]	…	…	2006	82.00 [6]
	…	2006	97.78	…	…		…
2007	83.00 [e]	2007	94.40	…	…	2008	83.00 [8]
	…	2005	91.00	…	…		…
	…	2004	93.08	…	…		…
2006	NR	2004	91.54 [p]	…	…		…
	…	2007	94.63 [r]	95.10 [r]	94.11 [r]		…
2007	42.90	2007	90.30	91.40	89.20		…
2008	41.90	2005	91.80	92.30	91.40		…
2008	30.00		…	…	…	2008	33.00 [8]
	…	2008	92.60	93.90	91.20		…
2006	90.00	2007p	89.50	…	…		…
2007	90.00	2008	86.00	…	…		…
2007	NR	2000	82.00	…	…		…
	…	2008	96.20	81.60	98.10		… [s]
2008	34.00	2008	96.20	…	…		…
	…	2006	91.50	…	…		…
2006	NR	2007	94.13	…	…		…
2008	100.00	2005	100.00	100.00	100.00		100.00 [8]
2006	NR	2000	81.01	…	…		…
2008	100.00	2007	91.00	91.40	90.52		…
2008	34.00	2006	90.70	…	…		…
2008	49.00	2003	54.80	…	…	2008	75.00 [7]
	…		…	…	…		…
	…		…	…	…		…
2008	27.00	2004	98.80	…	…		…
	…	2007	90.70	…	…		…
2008	60.00		…	…	…	2008	68.00 [8]
2008	100.00	2003	100.00	…	…		…
2008	99.00	2002	97.50	…	…		…
2008	100.00	2000	95.00	…	…	2008	100.00 [8]
2008	70.00	2006	98.00	…	…		…
2008	87.80	2007	94.90	…	…	2008	84.08 [8]
2002	69.50		…	…	…		…

Table 6. Maternal, Child Care and Nutritional Indicators

	Country/ area	Maternal and Child Care				
		Proportion of babies <12 months of age with breastfeeding initiated within one hour of birth [7,9]		Proportion of babies exclusively breastfed for the first six months [8]	Proportion of babies aged 6-9 months receiving breastmilk and complementary food [8]	Vitamin A supplementation to children aged 6-59 months old [8]
		Year	(%)	(%)	(%)	(%)
1	American Samoa	1997	…	20.00 [t]	…	…
2	Australia	2001	…	46.00	…	…
3	Brunei Darussalam	2003	…	14.60	…	…
4	Cambodia	2008	(2005) 35.00	66.00 [10]	76.00 [10]	72.0 [10]
5	China	2000	…	48.70 (urban) 60.40 (rural) [u]	…	…
6	Cook Islands	1998	…	19.00	45.00	…
7	Fiji	1995	…	53.00	52.00	…
8	French Polynesia	2001	…	19.00	…	…
9	Guam		…	…	…	…
10	Hong Kong (China)		…	…	…	…
11	Japan	2000	…	41.00 [u]	97.90	…
12	Kiribati	1995-2003	…	80.00 [u]	…	(2003) 45.00
13	Lao People's Democratic Republic	2004-2006	60.00	26.40	6.94	18.10 [v]
14	Macao (China)		…	…	…	…
15	Malaysia	1995-2003	…	29.00 [u]	…	…
16	Marshall Islands	1995-2003	…	63.00 [u]	…	(2003) 23.00
17	Micronesia, Federated States of	1995-2003	…	60.00 [u]	…	(2003) 95.00 [w]
18	Mongolia	2005	77.50 [9]	38.30 [9]	30.50 [9]	64.60 [11]
19	Nauru		…	…	…	…
20	New Caledonia		…	…	…	…
21	New Zealand		…	…	…	…
22	Niue		…	…	…	…
23	Northern Mariana Islands		…	…	…	…
24	Palau	1995-2003	…	59.00 [u]	…	…
25	Papua New Guinea	2004	…	21.00-86.00	60.00	(2003) 1.00
26	Philippines	2008	(2003) 54.00	34.00 [7]	57.90 [7]	(2003) 76.60
27	Pitcairn Islands		…	…	…	…
28	Republic of Korea	1998	…	14.00 [t]	92.00	…
29	Samoa	1999	…	58.30 [t]	…	…
30	Singapore		…	…	…	…
31	Solomon Islands	2006/07	75.00	73.70 [7, x]	81.40	(2007) 62.00
32	Tokelau		…	…	…	…
33	Tonga	1999	…	61.00 [u]	37.00	…
34	Tuvalu		…	…	…	…
35	Vanuatu	1996	…	73.00 [t]	…	…
36	Viet Nam	2006	57.80	16.90	70.40	53.10 [y]
37	Wallis and Futuna		…	…	…	…

Maternal and Child Care				National underweight, stunting and wasting prevalence (age 0-59 months)			
Year	Proportion of children aged 0-59 months who had diarrhoea in the past 2 weeks and were treated with ORT [7,9] (%)	Year	Proportion of children aged 0-59 months who had suspected pneumonia in the past 2 weeks and were taken to an appropriate health care provider [7,9] (%)	Year	≤2 SD weight/ age [1] (%)	≤2 SD height/ age [8] (%)	≤2 SD weight/ height [8] (%)
	…		…		…	…	…
	…		…		…	…	…
	…		…		…	…	…
2005	58.40	2005	48.30 [e]	2005	28.00 [e]	43.70 [12]	8.30 [12]
	…		…	2002	7.80	(2005) 11.00 [13]	(2000) 2.20
	…		…		…	…	…
	…		…		…	…	…
	…		…		…	…	…
	…		…		…	…	…
	…		…		…	…	…
	…		…		…	…	…
	…		…		…	…	…
2006	50.50	2006	32.30	2006	37.10	40.00 [9,z]	7.00 [9,z]
	…		…		…	…	…
	…		…	2006	7.70 [e]	…	…
	…		…		…	…	…
	…		…		…	…	…
2005	63.00	2005	85.60	2007	6.30	(2005) 21.00 [9,z]	(2005) 2.00 [9,z]
	…		…	2007	4.80	…	…
	…		…		…	…	…
	…		…		…	…	…
	…		…	2005	0.00	…	…
	…		…		…	…	…
	…		…		…	…	…
	…		…	2007	28.00	…	…
2008	58.90	2008	46.30	2003	27.60	30.00	5.30
	…		…		…	…	…
	…		…		…	…	…
	…		…	1999	…	4.20	0.90
	…		…	1995-2003	14.00	(2000) 2.20	(2000) 2.40
	…		…		…	…	…
	…		…		…	…	…
	…		…		…	…	…
	…		…		…	…	…
	…		…	2007	19.50	(1996) 20.00	(1996) 6.00
2006	26.30 [e]	2006	82.70	2007	21.20	(2006) 36.00 [9]	(2006) 8.00 [9]
	…		…		…	…	…

Table 7. Environmental Health and Prevalence of Tobacco Use Indicators

	Country/ area	Percentage of population using				Estimated smoking prevalence among adults [8]				Smoking prevalence among youth (student aged 13-15 years) [8]			
		Improved drinking water source [1]		Improved sanitation facility [1]		Year	Total	Male	Female	Year of survey	Total	Boys	Girls
		Year	(%)	Year	(%)		(%)	(%)	(%)		(%)	(%)	(%)
1	American Samoa	2004	99.00	2004	99.00	2006	29.90	38.10	21.60	2005	16.70	18.30	15.10
2	Australia	2006	100.00	2006	100.00	2001	19.50	21.00	18.00		...	...	...
3	Brunei Darussalam	2007	99.90	2002	80.00	1997	...	36.10	6.40		...	...	...
4	Cambodia	2006	65.00	2006	28.00	1999	35.00	66.70	10.00	2003	2.50	4.60	0.20
5	China	2006	88.00	2006	65.00	1998	28.90	53.40	4.00	2005	1.70 [d]	2.70 [d]	0.80 [d]
6	Cook Islands	2006	95.00	2006	100.00	2006	33.30	37.50	28.90	2003	45.10	39.90	49.60
7	Fiji	2006	47.00	2006	71.00	2006	14.30 [c]	28.10 [c]	4.40 [c]	2005	5.00	6.70	3.10
8	French Polynesia	2006	100.00	2006	98.00	1995	...	36.00	36.00		...	...	...
9	Guam	2006	100.00	2006	99.00	1999	...	37.70	26.90	2002	22.60	25.30	19.70
10	Hong Kong (China)	2008	100.00	2008	99.00	1998	...	27.10	2.90	2004	9.60	11.52	7.62
11	Japan	2006	100.00	2006	100.00	2000	...	47.40	11.50		...	...	...
12	Kiribati	2006	65.00	2006	33.00	1999	42.00	56.50	32.30		...	...	...
13	Lao People's Democratic Republic	2006	60.00	2006	48.00	1995	38.00	41.00	15.00	2007	7.40 [e]	12.10 [e]	1.70 [e]
14	Macao (China)	2008	100.00	2008	100.00	1997	...	31.58	4.18	2005	10.40	11.00	9.80
15	Malaysia	2006	99.00	2006	94.00	1986	...	41.00	4.00	2003	20.20	36.30	4.20
16	Marshall Islands	2004	87.00	2004	82.00	2006	16.50	34.10	5.20		...	...	...
17	Micronesia, Federated States of	2006	94.00	2006	25.00	1994	...	42.00	0.60	2007	28.30	36.90	19.80
18	Mongolia	2006	72.00	2006	50.00	2006	24.20	43.10	4.10	2003	8.50	14.40	4.00
19	Nauru	2007	100.00	2007	100.00	2006	48.20	45.50	50.80		...	...	...
20	New Caledonia		...		...	1992	...	28.00	34.00		...	...	...
21	New Zealand	2006	100.00 [a]		...	2001	24.90	25.10	24.80	2007	18.00	13.00	23.90
22	Niue	2006	100.00	2006	100.00	1980	...	58.00	17.00		...	...	...
23	Northern Mariana Islands	2006	98.00	2006	94.00		...	...	...	2004	29.10	26.60	31.50
24	Palau	2006	89.00	2006	67.00	1998	...	14.00	4.00	2005	26.70	31.00	22.60
25	Papua New Guinea	2006	40.00	2006	45.00	1990	...	76.00	80.00	2007	43.80	52.10	35.80
26	Philippines	2006	93.00	2006	78.00	2001	23.50	50.60	8.00	2007	17.30	23.40	11.80
27	Pitcairn Islands		...		...		...	...	...		...	...	...
28	Republic of Korea	2006	97.00 [a]	2005	83.50	1997	...	65.00	4.40	2005	6.80	7.90	5.30
29	Samoa	2006	88.00	2006	100.00	2006	34.60	49.40	18.00	2007	15.20	16.00	12.70
30	Singapore	2007	100.00	2007	100.00	2001	...	24.20	3.50	2000	9.10	10.50	7.50
31	Solomon Islands	2006	70.00	2006	32.00	1989	...	...	33.00		...	...	...
32	Tokelau	2006	80.00 [b]	2006	78.00 [b]	2006	46.40	47.30	45.60		...	...	...
33	Tonga	2006	100.00	2006	96.00	1991	...	62.40	14.20		...	...	...
34	Tuvalu	2006	93.00	2006	89.00	1976	...	51.00	31.00	2007	26.60	33.20	22.10
35	Vanuatu	2004	60.00	2004	50.00	2006	12.60	23.50	4.60	2007	18.20	28.20	11.40
36	Viet Nam	2006	92.00	2006	65.00	1997	25.70	50.70	3.50	2007	3.30	5.90	1.20
37	Wallis and Futuna	2006	100.00 [b]		...	1996	...	42.00	18.00		...	...	...

Table 8. Summary of 2008 Emergencies in the Western Pacific Region

Country/ area	Emergency [a] (GLIDE number [b]) *Month*	Casualties			Number of individuals affected	Health facilities damaged/ destroyed/ affected	Estimated cost of damages (in million USD)	Health impact (reported)
		Dead	Injured	Missing				
1 China	Wenchuan earthquake (EQ-2008-000062-CHN) May	87 476 [14]	374 176	18 389	46 240 000	3400 [c]	85 000.00 [14]	…
	Landslide (LS-2008-000248-PHL) September	254	…	>100	1300	…	1.34	…
2 Lao People's Democratic Republic	Floods (FL-2008-000131-LAO) August	4	…	…	150 000	0	…	Water safety and supply; conjunctivitis, diarrhoea, skin diseases
3 Marshall Islands 4 Micronesia, Federated States of 5 Solomon Islands	Floods December	0 [g]	…	0 [g]	3000 [g]	0 [g]	…	Food supply, malnutrition, water safety and supply
6 Mongolia	State of emergency June	5	221	…	…	…	…	…
7 Papua New Guinea	Floods (LS-2008-000243-PNG) December	2	…	…	80 000 [d]	0	…	Water safety and supply; Food supply; Communicable diseases; Injuries
8 Philippines	Tropical cyclone Fengshen (TC-2008-000093-PHL) June	644 [14]	826	…	4 785 460 [14]	89	284.69 [14]	…
	Tropical disaster: ferry disaster (AC-2008-000108-PHL) June	173 [22]	56 [22]	637 [22]	866 [22,e]	…	…	Five pesticides in two different containers were present in the sunken ferry
	Complex emergency [f] August	163	135	…	162 000	…	5.20	…
	Landslide (LS-2008-000248-PHL) September	25	31	2	2643	0	…	…
9 Viet Nam	Tropical cyclone Kammuri (FF-2008-000128-VNM) August	112	81	45	2 687 800 [15]	61	43.00	Food and water safety and supply
Total		**70 317**	**375 470**	**18 536**	**53 594 743**	**3550**	**20 330.00**	

Table 9. Health Workforce and Infrastructure Indicators

	Country/ area	Health workforce [1]				
		Physicians			Nurses	
		Year	*Number*	*Rate per 1000*	*Number*	*Rate per 1000*
1	American Samoa	2003	49	0.78 [a]	127	2.03 [a]
2	Australia	2009p	62 800 [b]	2.93 [b]	188 300 [b,l]	8.79 [b,l]
3	Brunei Darussalam	2007	393	1.01	1 458	3.74
4	Cambodia	2008	3 393	0.25	8 491	0.63
5	China	2008	2 082 258 [c]	1.57	1 653 297	1.25
6	Cook Islands	2004	22	1.08 [a]	52	2.56 [a]
7	Fiji	2006	315	0.37 [d]	1 673	1.96 [d]
8	French Polynesia	2009p	531	2.01	1 147	4.34
9	Guam	2005	244 [e]	1.41	…	…
10	Hong Kong (China)	2008	12 215 [f]	1.74 [f,g]	37 447 [m]	5.34 [m,g]
11	Japan	2006	277 927	2.18	1 234 312 [n]	9.66
12	Kiribati	2006	30	0.32	(2004) 238	(2004) 2.56 [a]
13	Lao People's Democratic Republic	2005	1 283	0.23	5 291 [o]	0.93
14	Macao (China)	2008	1 712 [h]	3.12 [h]	1 415	2.58
15	Malaysia	2008	25 102	0.91	54 208	1.95
16	Marshall Islands	2008	38	0.71	172	3.23
17	Micronesia, Federated States of	2005	62	0.54	229	2.01
18	Mongolia	2008	7 584	2.83	8 912	3.32
19	Nauru	2008	10	1.00	64	6.40
20	New Caledonia	2008	545	2.19	1 091	4.38
21	New Zealand	2007	9 757	2.33	41 980	10.03
22	Niue	2006p	4	2.58 [a]	13	8.39 [a]
23	Northern Mariana Islands		…	…	…	…
24	Palau	2006	26	1.30 [a]	117	5.88
25	Papua New Guinea	2008	333	0.05 [d]	2 844	0.44 [d]
26	Philippines	2004	93 862	1.14	352 398	4.26
27	Pitcairn Islands		…	…	…	…
28	Republic of Korea	2008	95 013	1.95	246 837	5.08
29	Samoa	2005	50	2.74	136	7.47
30	Singapore	2008	7 841	1.62	24 209	4.54
31	Solomon Islands	2005	89	0.19	620	1.30
32	Tokelau	2003	4 [a]	2.00 [a]	10	6.67 [a]
33	Tonga	2007	58 [i]	0.39	302	2.95
34	Tuvalu	2008	7	0.72	54 [p]	5.55
35	Vanuatu	2008	26	0.11	332	1.42
36	Viet Nam	2007	54 910 [j]	0.64 [j]	61 158 [q]	0.71 [q]
37	Wallis and Futuna	2008	16 [k]	1.10 [d]	43 [r]	2.97 [d]

Health workforce [1]				Health infrastructure [1]		
Midwives		Total	Density [d]		Hospital beds	
Number	Rate per 1000	(physicians, nurses, midwives)	(per 1000 population)	Year	Number	Rate per 1000 population [d]
1	0.02 [a]	177	2.91 [a,w]	2003	128 [z,aa]	2.04
13 000 [b]	0.61 [b]	264 100	12.26 [w]	2006-07	82 583 [aa,ab]	3.91
457	1.17	2 308	5.92	2007	1 024 [ac]	2.63
3 245	0.24	15 129	1.13		…	…
(2001) 42 000	(2001) 0.03	… [y]	…	2008	3 997 383 [ad]	3.01
11	0.54 [a]	85	4.19 [w]	2005	127 [a,ae]	6.29
…	…	… [x]	…	2007	1 727 [ad]	2.06
124	0.47	1 802	6.83 [w]	2009p	697 [af]	2.64 [w]
…	…	… [x]	…	2005	187 [ag]	1.11
4 756	0.68 [g]	54 418	7.80	2008	35 048 [ah]	5.02
25 775	0.20	1 538 014	12.04	2007	1 775 316 [ai]	13.89
(2004) 32	(2004) 0.34 [a]	… [y]	…	2005	140 [aj]	1.51
…	…	… [x]	…	2005	6 739 [ag]	1.20
…	…	… [x]	…	2008	1 187 [ak]	2.16
18 639	0.67	97 949	3.53	2007	47 784 [al]	1.76
…	…	… [x]	…		…	…
20	0.18	311	2.73	2006	365 [ag]	3.31
693	0.26	17 189	6.41	2008	16 069 [am]	5.99
5 [s]	0.50 [s]	79	8.59	2007	51 [ad]	3.51
106	0.43	1 742	7.00	2005	184 [an]	0.80 [w]
2 511 [t]	0.60	54 248	13.47 [w]	2002	23 825 [ao]	6.18 [w]
2	1.29 [a]	19	12.34	2006	8 [aj]	5.19
…	…	…	…	2000	82 [ag]	1.15 [w]
1	0.05	144	7.19	2007	100 [al]	4.99
315	0.05 [d]	3 492	0.54		…	…
136 036	1.65	582 296	7.04	2006	44 296 [ap]	0.50
…	…	…	…		…	…
8 565	0.18	350 415	7.21	2006	417 387 [ak]	8.64
37	2.03	223	1.22 [w]	2005	177 [aq]	0.97 [w]
322	0.07	32 372	8.89	2007	11 547 [ag]	3.22
74	0.16	783	1.64	2005	691 [aj]	1.45
(2000) 3	(2000) 2.00 [a]	… [y]	…	2003	18 [aj]	12.00 [w]
(2002) 21	(2002) 0.21	… [y]	…	2007	266 [ar]	2.44
10	1.03	71	7.30	2001	56 [as]	5.56
48	0.21	406	1.74	2008	859 [ag]	3.69
20 920 [u]	0.24	136 988	1.61	2007	233 766 [ag]	2.75
10 [v]	0.69 [d]	69	4.76	2008	59 [ad]	4.07

Table 10. Morbidity and Mortality Indicators

	Country/ area	Communicable Diseases [1]										
		Cholera			Dengue fever/ DHF			Leprosy		Malaria		
		Year	*Cases*	*Deaths*	*Year*	*Cases*	*Deaths*	*Year*	*Cases*	*Year*	*Confirmed Cases*	*Deaths*
1	American Samoa	2003	0	0	2007	126	2	2007	0		…	…
2	Australia	2008p	4	(2006) 0	2008p	557 [e]	(2006) 0	2008p	10	2008	536 [i,j]	(2006) 0
3	Brunei Darussalam	2007	0	0	2008	16	0	2007	0	2007	12	0
4	Cambodia		…	…	2008	9 542	65	2008	306	2008	47 748 [k]	240
5	China	2008	168	0	2008	202	0	2007	1526	2007	29 247	18
6	Cook Islands	2005	0 [a]	0	2008	11	(2007) 0	2007	0	2005	0	…
7	Fiji	2007	0	0	2008	2014	0	2007	6	2007	1	…
8	French Polynesia	2007	0	0	2008	189 [f]	(2007) 0	2007	95	2007	0	0
9	Guam	2006	0	0	2007	1	…	2006	3	2006	3 [l]	…
10	Hong Kong (China)	2008p	7 [b]	0 [c]	2008p	42 [g]	0 [c]	2008p	5 [b]	2008p	25 [b]	0 [c]
11	Japan	2007	13	…	2008	101	…	2007	11	2007	52	…
12	Kiribati	2005	0	0	2008	831	…	2007	63		…	…
13	Lao People's Democratic Republic	2002	1 272	…	2008	4 149	21	2007	125	2008	17 503	…
14	Macao (China)	2008	0	0	2008	3	0	2008	1	2008	0	0
15	Malaysia	2008	93	2	2008	49 335	112	2008	218	2008	7 390	30
16	Marshall Islands	2005	0	0	2007	0	0	2008	47		…	…
17	Micronesia, Federated States of	2006	0	0	2008	10	…	2007	141		…	…
18	Mongolia	2008	0	0	2007	0	0	2007	0		…	…
19	Nauru	2008	0	0	2008	0	0	2008	4	2008	0	0
20	New Caledonia		…	…	2008	1179	1	2007	2	2007	0	…
21	New Zealand	2008	0	0	2008	114	0	2008	5	2008	40 [m]	0
22	Niue	2005	0	0	2008	2	…	2006	0	2005	0	0
23	Northern Mariana Islands		…	…	2004	0	…	2007	0		…	…
24	Palau	2007	0	0	2008	204	1	2007	4 [h]	2007	0	0
25	Papua New Guinea	2000	0	0		…	…	2007	270	2007	87 961	534
26	Philippines	2004	…	36	2008	39 620	373	2007	2514	2007	36 226	72
27	Pitcairn Islands		…	…		…	…		…		…	…
28	Republic of Korea	2007	7	0	2007	97	…	2007	12	2007	2 192	1
29	Samoa	2004	0	0	2008	677	1	2006	5		…	…
30	Singapore	2008	1	0	2008	7 031	7	2008	10	2008	152	0
31	Solomon Islands		…	…	2004	0	0	2007	15	2007	65 404	15
32	Tokelau		…	…		…	…	2005	0		…	…
33	Tonga	2002	0	0	2008	195	2	2007	0		…	…
34	Tuvalu	2005	0	0	2007	0	0	2007	1		…	…
35	Vanuatu	2006	1 [d]	…	2008	96	0	2007	3	2007	5 483	…
36	Viet Nam	2007	1907	0	2008	96 451	97	2007	588	2007	14 581	20
37	Wallis and Futuna		…	…	2008	0	0	2007	0		…	…

Vaccine preventable diseases --- Number of reported cases						
AFP [8] *2007*	**Congenital rubella [1]** *2008*	**Diptheria [1]** *2008*	**Hib meningitis [1,8]** *2007*	**Measles [1]** *2008*	**Mumps [1]** *2008*	**Neonatal tetanus [1]** *2008*
0	0	0	(2006) 0	0	0	0
27	0 [n]	0 [n]	(2008p) 25	65 [n]	286 [n]	0 [n]
4	…	(2007) 0	…	(2007) 11	(2007) 21	(2007) 0
94	…	7	…	4211	…	34
4 985	…	0	…	131 441	310 826	1 786
0	0	0	…	0	0	0
7 [h]	0	0	…	0	0	0
1	0	0	…	0	0	0
0	0	0	…	0	0	0
14	1 [b]	0 [b]	0 [b,n]	69 [b,n]	139 [b,n]	0 [b,n]
…	0	0	…	11015	65 361	…
0	0	0	…	0	0	0
19	…	2	…	174	…	5
0	0	0	0	4	99	0
106	…	4	…	334	…	13
0	0	0	…	0	0	0
0	(2007) 0	(2007) 0	…	(2007) 0	(2007) 0	(2007) 0
8	0	0	71	31	560	0
0	0	0	0	0	0	0
1	0	0	…	0	…	0
4	0	0	…	12	78	0
0	0	0	…	0	0	0
0	0	0	…	0	0	0
0	0	0	(2007) 0	0	0	0
25	…	…	…	0	…	…
502	…	65	…	341	…	132
…	…	…	…	…	…	…
26	…	0	…	1	4 474	…
1	(2006) 0	(2006) 0	(2005) 1	(2006) 0	(2006) 0	(2006) 1
12	2	0	1	18	801	0
3	0	0	…	0	0	0
0	0	0	(2005) 0	0	0	0
0	0	0	(2005) 0	0	0	0
0	0	0	…	0	0	0
0	NR	0	…	0	0	0
391	NR	17	…	352	…	32
0	(2007) 0	…	(2007) 0	(2007) 0	(2007) 0	(2007) 0

Table 10. Morbidity and Mortality Indicators

	Country/ area	Vaccine preventable diseases --- Number of reported cases					Immunization coverage (%)	
		Pertussis [1]	Poliomyelitis [1]	Rubella [1]	Total tetanus [1]	Yellow fever [8]	BCG [1]	DTP1 [8]
		2008	*2008*	*2008*	*2008*	*2008*	*2008*	*2008*
1	American Samoa	0	0	0	0	0	…	99.00
2	Australia	14 523 [i,n]	0	38 [n]	4 [n]	…	…	…
3	Brunei Darussalam	(2007) 1	(2007) 0	(2007) 4	(2007) 0	…	(2007) 100.00	…
4	Cambodia	1212	0	4211	324	…	98.00	95.00
5	China	2387	0	120 354	…	…	97.50	99.20
6	Cook Islands	0	0	0	0	NR	100.00	100.00
7	Fiji	0	0	0	0	0	100.00	99.70
8	French Polynesia	0	0	0	0	0	(2007) 99.00	(2007) 98.00
9	Guam	0	0	0	0	0	…	…
10	Hong Kong (China)	25 [b,n]	0 [b,n]	38 [b,n]	0 [b,n]	0	(2007) >95.00	95.00
11	Japan	6 753	0	303	123	0	89.50	100.00
12	Kiribati	0	0	0	0	0	82.60	97.00
13	Lao People's Democratic Republic	26	0	45	12	…	68.00	73.00
14	Macao (China)	2	0	9	0	0	99.60	93.40
15	Malaysia	11	0	…	29	…	(2006) 95.00	…
16	Marshall Islands	0	0	0	0	…	(2007) 92.00	(2007) 100.00
17	Micronesia, Federated States of	(2007) 47	(2007) 0	(2007) 0	(2007) 0	(2007) 0	(2007) 82.00	…
18	Mongolia	0	0	167	1	0	98.50	97.70
19	Nauru	0	0	0	0	0	100.00	100.00
20	New Caledonia	0	0	…	0	0	98.00	80.50
21	New Zealand	433	0	9	0	…	…	(2007) 91.00
22	Niue	0	0	0	0	0	100.00	100.00
23	Northern Mariana Islands	0	0	0	0	0	NR	99.90
24	Palau	0	0	0	0	0	(2007) NR [o]	100.00
25	Papua New Guinea	…	0	4	…	…	68.50	70.40
26	Philippines	46	0	280	813	0	88.00	89.00
27	Pitcairn Islands	…	…	…	…	…	…	…
28	Republic of Korea	7	0	31	14	0	96.00	95.00
29	Samoa	53	0	(2006) 0	(2006) 4	…	99.00	50.00
30	Singapore	33	0	180	0	0	99.40	97.90
31	Solomon Islands	0	0	0	0	0	81.00	78.00
32	Tokelau	0	0	0	0	0	100.00	100.00
33	Tonga	0	0	0	0	0	99.00	100.00
34	Tuvalu	0	0	0	0	0	100.00	99.60
35	Vanuatu	0	0	NR	0	NR	97.00	(2007) 79.00
36	Viet Nam	280	0	873	221	…	92.00	89.70
37	Wallis and Futuna	(2007) 0	(2007) 0	(2007) 0	(2007) 0	…	(2007) 100.00	(2007) 91.00

Immunization coverage (%)							
DTP3 [1] *2008*	HepB birth dose[8] *2008*	HepB3 [1] *2008*	Hib3 [8] *2008*	MCV1 [1] *2008*	MCV2 [8] *2008*	POL3 [1] *2008*	VitA1 [8] *2008*
94.00	100.00	89.00	72.00	86.00	57.00	92.00	...
91.80	...	94.40	...	93.90 [p]	...	91.70	...
(2007) 100.00	...	(2007) 100.00	...	(2007) 100.00	...	(2007) 100.00	...
91.00	46.00	91.00	...	89.00	...	91.00	88.00
97.10	90.60	94.80	...	(2007) 94.00	...	99.00	...
100.00	100.00	100.00	...	95.00	95.00	100.00	...
98.80	99.90	98.80	98.80	93.90	...	99.20	...
(2007) 98.00	(2007) 100	(2007) 99.00	(2007) 98.00	(2007) 96.00	(2007) 84.00	(2007) 98.00	...
(2006) 89.00	98.70	(2006) 91.00	...	(2006) 85.00	...	(2006) 85.00 [q]	...
(2007) >95.00	95.00	(2007) >95.00	...	(2007) >95.00	95.00	(2007) >95.00	...
98.30	...	...	...	97.40	77.90	94.70	...
81.80	58.70	83.30	83.30	72.20	...	74.10	93.00
61.00	9.00	61.00	...	52.00	...	60.00	92.00
91.30	99.90	91.30	80.60	89.70	87.20	90.80	...
(2006) 90.00	...	(2006) 90.00	...	(2006) 90.00	...	(2006) 90.00	...
(2007) 93.00	(2007) 90.00	(2007) 93.00	(2007) 83.00	93.00	(2007) 91.00 [h]	(2007) 91.00	(2007) 51.00
(2007) 79.00	(2007) 86.00	(2007) 90.00	(2007) 79.00	(2007) 92.00	(2007) 86.00	(2007) 79.00	(2007) 0.00
96.00	94.00	96.00	96.00	96.90	96.30	95.30	...
100.00	100.00	100.00	...	100.00	100.00	100.00	...
100.00	98.60	97.80	100.00	98.60	78.20	100.00	...
(2007) 87.00	...	(2007) 88.00	(2007) 68.00	(2007) 98.00	...	(2007) 87.00	...
100.00	100.00	100.00	100.00	100.00	100.00	100.00	...
96.70	100.00	96.10	78.50	100.00	81.00	94.70	...
92.00	67.00	92.00	92.00	97.00	77.00	92.00	...
51.80	26.60	56.30	...	54.00	54.00	65.00	...
86.00	21.00	83.00	...	86.00	...	86.00	87.00
...	...	...	...	...	...	...	...
94.00	94.00	94.00	...	92.00	100.00	92.00	...
46.00	81.00	38.00	32.00	45.00	61.00	78.00	...
96.60	(2007) 99.00	95.60	...	95.00	92.60	96.60	...
78.00	80.00	77.00	87.00	60.00	...	78.00	0.00
97.00	100.00	97.00	97.00	92.00	95.00	97.00	...
99.60	99.00	98.00	99.00	100.00	98.00	99.60	...
99.20	100.00	99.00	...	93.00	82.00	99.00	67.00
(2007) 76.00	73.00	(2007) 76.30	(2007) 0.00	(2007) 65.00	(2007) 0.00	(2007) 76.00	(2007) 0.00
93.40	24.50	86.80	...	91.80	96.60	93.50	97.70
(2007) 88.00	(2007) 100.00	(2007) 91.00	(2007) 88.00	(2007) 86.00	(2007) 98.00	(2007) 88.00	(2007) 0.00

Table 10. Morbidity and Mortality Indicators

Country/ area	HIV/AIDS					Lymphatic filariasis	
	HIV prevalence among population aged 15-24 years [1]		Estimated HIV prevalence in adults (%) [1]	% of people with advanced HIV infection receiving ART (2007)		Reported MDA coverage among total population at risk (%) [8]	Number of MDA rounds [8]
	Year	*Data*	*2007*	*Data* **[25]** [t]	*Data* **[1]**	*2008*	*2008*
1 American Samoa		…	…	…	…	52.90	7
2 Australia	2008	<0.10	(2008) 0.10	…	(2007 est) 80.00 [u]	… [aj]	…
3 Brunei Darussalam		…	(2005) <0.10	…	…	…	…
4 Cambodia		…	(2006) 0.90	67.00	(2008) >90.00	81.87	4
5 China		…	0.05	19.00	37.45	… [aj]	…
6 Cook Islands		…	…	…	…	79.20	6
7 Fiji		…	0.10	…	…	62.80	5
8 French Polynesia	2008	0.01	(2008) 0.07	…	(2008) 86.89	83.60	7
9 Guam		…	…	…	…	… [aj]	…
10 Hong Kong (China)		…	(2008) <0.10	…	(2008) 88.30 [v]	… [aj]	…
11 Japan		…	<0.10	…	…	… [aj]	…
12 Kiribati		…	…	…	…	57.80	5
13 Lao People's Democratic Republic		…	0.20	>95.00	100.00	61.00	2
14 Macao (China)		…	(2008) <0.10 [r]	…	…	… [aj]	…
15 Malaysia	2006-07	0.10	0.30	…	35.00	85.95	5
16 Marshall Islands		…	…	…	…	62.15	…
17 Micronesia, Federated States of		…	…	…	…	3.10	1--3
18 Mongolia	2008	0.00	(2008) 0.00	…	(2008) 100.00	… [aj]	…
19 Nauru		…	…	…	…	… [aj]	…
20 New Caledonia		…	…	…	…	…	0
21 New Zealand		…	0.10	…	…	… [aj]	…
22 Niue		…	…	…	…	88.05	5
23 Northern Mariana Islands		…	…	…	…	… [aj]	…
24 Palau	2007	0.00	0.15 [s]	…	0.15 [s]	…	…
25 Papua New Guinea	2007	59.54	1.61	38.00	38.00	85.80	2
26 Philippines		…	0.17	31.00	…	64.00	3--4--5
27 Pitcairn Islands		…	…	…	…	… [aj]	…
28 Republic of Korea		…	…	…	…	… [aj]	…
29 Samoa		…	…	…	…	74.20	7
30 Singapore		…	(2008) 0.09	…	…	… [aj]	…
31 Solomon Islands		…	…	…	…	… [aj]	..
32 Tokelau		…	…	…	…	… [aj]	…
33 Tonga		…	…	…	…	83.60	6
34 Tuvalu		…	…	…	…	69.20	5
35 Vanuatu	2007	0.00	0.00	…	100.00	77.90	6
36 Viet Nam	2005	0.30	0.54	26.00	35.00 [w]	83.80	5
37 Wallis and Futuna		…	…	…	…	59.30	6

Tuberculosis							
Estimated Prevalence rate (per 100 000 population) 2007 [1]	Estimated Incidence rate (per 100 000 population) 2007 [8]		Estimated Mortality rate (all cases per 100 000 population) [1]	Cure rate (smear positive cases in DOTS areas, %) [1]	Case detection rate of smear-positive cases (2007, %) [1]	
All forms	*All forms*	*Smear-positive*	*2007*	*2006*	*DOTS*	*Total*
5.00	5.00	0.00	0.00	(2005) 75.00	(2006) 115.00	(2006) 115.00
(2008p) 5.70	6.00	3.00	(2008p) 0.02	(2008p) 79.24	(2008p) 100.00	(2008p) 100.00
65.00	59.00	39.00	7.00	84.00	90.00	90.00
664.00	495.00	219.00	89.00	90.00	61.00	61.00
194.00	98.00	44.00	15.00	92.00	80.00	80.00
31.00	15.00	7.00	4.00	(2005) 100.00	(2005) 77.00	…
30.00	21.00	9.00	4.00	66.00	67.00	67.00
(2008) 18.50	27.00	8.00	(2008) 0.38	(2008) 73.00	(2008) 84.38	…
36.00	34.00	3.00	2.00	90.00	90.00	90.00
(2008) 82.12	62.00	28.00	(2008) 3.40	(2006) 78.00	87.00	75.00
28.00	21.00	9.00	3.00	20.00	77.00	78.00
423.00	365.00	164.00	49.00	61.00	66.00	66.00
289.00	151.00	67.00	24.00	88.00	78.00	78.00
63.00	63.00	28.00	6.88	90.28	102.00	102.00
121.00	103.00	45.00	18.00	46.00	80.00	80.00
281.00	215.00	97.00	32.00	73.00	33.00	33.00
100.00	97.00	44.00	9.00	60.00	97.00	97.00
234.00	205.00	92.00	29.00	84.00	76.00	76.00
33.00	33.00	33.00	3.00	50.00	90.00	90.00
25.00	22.00	6.00	2.00	89.00	90.00	90.00
7.08	7.00	3.00	1.00	…	60.00	60.00
0.00	0.00	0.00	0.00	…	…	…
72.00	58.00	19.00	7.00	42.00	90.00	90.00
71.00	60.00	27.00	8.00	40.00	90.00	90.00
430.00	250.00	108.00	60.00	59.00	15.00	31.00
500.00	290.00	130.00	41.00	80.00	75.00	75.00
…	…	…	…	…	…	…
126.00	90.00	40.00	4.90	78.00	14.00	56.00
25.00	19.00	8.00	3.00	(2005) 91.00	(2006) 80.00	(2005) 80.00
27.00	27.00	12.00	3.00	70.00	96.00	96.00
180.00	128.00	58.00	21.00	73.00	50.00	50.00
0.00	0.00	0.00	0.00	…	…	…
28.00	24.00	11.00	2.00	100.00	129.00	129.00
203.00	166.00	75.00	17.00	75.00	152.00	152.00
102.00	77.00	35.00	12.00	88.00	52.00	52.00
220.00	171.00	76.00	24.00	90.00	82.00	82.00
25.00	15.00	7.00	3.00	50.00	90.00	90.00

Table 10. Morbidity and Mortality Indicators

	Country/ area	Tuberculosis [8]				Anti-tuberculosis drug resistance [8]	
		DOTS coverage (%) 2007	TB Notification rate (per 100 000 population) 2007		Estimated HIV prevalence among TB cases (%) 2007	Proportion of MDR in new cases (%) 2007	Proportion of MDR in re-treatment cases (%) 2007
			All cases	*Smear-positive*			
1	American Samoa	100	4	0	…	…	…
2	Australia	100	5	1	3.20	…	…
3	Brunei Darussalam	100	53	35	0.00	2.00	20.00
4	Cambodia	100	246	134	7.80	<0.05	3.10
5	China	100	74	35	1.90	5.00	26.00
6	Cook Islands	…	…	…	…	…	…
7	Fiji	100	11	6	2.00	…	…
8	French Polynesia	100	24	7	…	2.10	20.00
9	Guam	100	31	3	…	…	…
10	Hong Kong (China)	100	74	21	…	0.90	8.00
11	Japan	99	19	7	0.50	0.70	10.00
12	Kiribati	100	351	108	…	3.10	20.00
13	Lao People's Democratic Republic	100	67	53	3.30	3.50	20.00
14	Macao (China)	100	71	29	…	2.30	16.00
15	Malaysia	100	61	36	16.00	0.10	<0.05
16	Marshall Islands	96	267	32	…	2.8	20.00
17	Micronesia, Federated States of	89	123	42	…	3	21.00
18	Mongolia	100	177	71	0.10	1.00	26.00
19	Nauru	100	30	30	…	…	…
20	New Caledonia	100	19	5	…	…	…
21	New Zealand	100	7	2	1.20	0.40	<0.05
22	Niue	100	0	0	…	…	…
23	Northern Mariana Islands	100	52	17	…	(2006) 11.10	…
24	Palau	100	54	25	…	2.20	20.00
25	Papua New Guinea	14	237	33	19.00	3.50	20.00
26	Philippines	100	160	98	0.30	4.00	21.00
27	Pitcairn Islands	…	…	…	…	…	…
28	Republic of Korea	100	78	23	1.00	2.70	14.00
29	Samoa	…	…	…	…	2.90	20.00
30	Singapore	100	31	11	3.40	0.20	1.00
31	Solomon Islands	100	80	29	…	…	…
32	Tokelau	0	0	0	…	…	…
33	Tonga	100	23	14	…	2.70	20.00
34	Tuvalu	100	171	114	…	…	…
35	Vanuatu	83	54	18	…	(2006) 0.00	…
36	Viet Nam	100	111	62	8.10	2.70	19.00
37	Wallis and Futuna	100	13	7	…	…	…

Noncommunicable diseases				Motor and other vehicular accidents [1]			Suicide rate (per 100 000 population) [1] [y]		
Cancer [1]		circulatory system [1]							
Year	*Deaths*	*Year*	*Deaths*	*Year*	*Cases*	*Deaths*	*Year*	*Male*	*Female*
2002	37	2002	88	2002	101	5		…	…
2006	38 721	2006	45 670	2003 est	41 151 [ab]	(2006) 1 652 [ab]	2006	13.63	3.88
2007	215	2007	333	2007	424	55	2007	4.35	0.55
	…		…	2007	27 403	…		…	…
2004-05	1 885 500 [x]		…		…	…		…	…
2007	13	2007	25	2007	79 [ac]	5 [ac]	2007	10.07 [ah]	10.37 [ah]
	…		…	2007	663 [ad]	59		…	…
2007	306	2007	292	2007	…	55	2007	… [ai]	… [ai]
2000	125	2000	246	2000	…	23	2000	… [ai]	… [ai]
2007	12 316 [c]	2007	10 738 [c]	2007	…	158 [c,ae]	2007	17.58	9.45
2007	336 468	2007	327 486	2007	…	8 268	2007	35.32	13.47
2005	27	2005	84	2005	…	3	2005	37.27	8.53 [h]
	…		…		…	…		…	…
2008	540	2008	485	2008	…	10	2008	16.33	8.94
2007	4 862	2007	11 014	2007	84 504	1 584	2007	0.45 [h]	0.20 [h]
2008	22		…	2008	…	5		…	…
2000	51 [y]		…	2000	…	4 [y]		…	…
2008	3 123	2008	5 461	2008	…	499	2008	27.41	3.57
2008	4	2008	29	2008	4	0	2008	0.00	0.00
	…		…	2007	667	…		…	…
2005	7 865	2005	10 506	2003-04	13 125 [af]	(2005) 488 [af]	2004	19.02 [h]	6.35 [h]
	…		…		…	…		…	…
	…		…	2000	555	…		…	…
2007	22		…	2007	95 [ag]	2	2007	46.00	10.68
2004	225	2004	54	2004	349	13	2004	… [ai]	… [ai]
2004	42 686	2004	54 045	2004	…	6 976	2004	3.36	1.02
	…		…		…	…		…	…
2007	67 561	2007	57 574	2007	…	7 604	2007	31.92 [ah]	18.42 [ah]
2006	66	2006	175 [z,aa]	2002	129	4		…	…
2007	4 745	2007	5 835	2007	…	228	2007	12.11	8.80
	…		…		…	…		…	…
	…		…		…	…		…	…
2002	76	2007	196	2007	…	0	2007	1.79	0.00
2004	0		…	2001	1	0		…	…
2006	58 [d]	2006	53 [d]	2006	101	…		…	…
2007	783	2007	3 013	2007	115 666	679		…	…
	…		…		…	…		…	…

Table 11. Risk factors for noncommunicable diseases

Country/ area	Behavioural measures								
	Daily smokers [26]			Current drinkers [27]			Binge drinkers [18]		
	Year	Age group	(%)	Year	Age group	(%)	Year	Age group	(%)
1 American Samoa	2007	25-64	29.90	2007	25-64	63.50	2007	25-64	M=49.60,F=33.90
2 Australia	2007	14+	16.60			...			...
3 Brunei Darussalam			...			...			...
4 Cambodia	2004	15+	21.70			...			...
5 China	2004	13-15	6.40 [a,b]			...			...
6 Cook Islands	2003	13-15	43.60 [c]			...			...
7 Fiji	2002	15-85	M=26.00, F=3.90	2002	15-64	23.80 [28]	2002	15-64	77.30 [28,g]
8 French Polynesia			...			...			...
9 Guam			...			...			...
10 Hong Kong (China)	2008	15+	11.80 [1]			...	2008	18-64	9.20 [1]
11 Japan	2006	20+	M=39.90, F=10.00 [c]			...	2003	20+	6.40 [h]
12 Kiribati			...			...			...
13 Lao People's Democratic Republic	2003	18+	35.70			...	2003	18+	3.00 [i]
14 Macao (China)			...			...			...
15 Malaysia	2006	25-64	21.20			...	2003	18+	0.30 [i]
16 Marshall Islands	2002	15-64	19.80			...			...
17 Micronesia, Federated States of	2002	25-64	25.50 [a]			...			...
18 Mongolia	2005	15-64	24.20	2005	15-64	66.50 [29]	2005	15-64	M=27.30, F=10.30 [29]
19 Nauru	2004	15-64	48.20	2004	15-64	46.20 [30]	2004	15-64	M=29.80, F=25.60 [30,g,j]
20 New Caledonia			...			...			...
21 New Zealand	2007	15+	18.10			...			...
22 Niue	2002	15+	26.10 [d]			...			...
23 Northern Mariana Islands			...			...			...
24 Palau	2001	13-15	58.50 [b]			...			...
25 Papua New Guinea			...			...			...
26 Philippines	2007	10-18	16.40 [e]			...	2003	18+	1.20 [i]
27 Pitcairn Islands			...			...			...
28 Republic of Korea	2005	20+	29.10 [c]			...			...
29 Samoa			...			...			...
30 Singapore	2004	18-69	12.60 [d]			...			...
31 Solomon Islands			...			...			...
32 Tokelau			...			...			...
33 Tonga	2000	15+	M=52.90, F=10.50 [d]	2000	15+	M=25.80,F=3.60			...
34 Tuvalu	2002	15+	37.90 [c]			...			...
35 Vanuatu			...			...			...
36 Viet Nam	2005	25-64	M=58.00,F=0.50 [f]			...	2003	18+	1.00 [i]
37 Wallis and Futuna			...			...			...

Behavioural measures						Physical measures		
Physically inactive [31]			Low fruit and vegetable consumption [32]			Raised blood pressure [33]		
Year	*Age group*	*(%)*	*Year*	*Age group*	*(<5 servings/day)*	*Year*	*Age group*	*%*
2007	25-64	62.20	2007	25-64	86.70	2007	25-64	34.20
2005	18+	M=33.60,F=34.40 [k,l]	2005	12+	Fruit=46.10, Vegetable=86.10 [y]	2005	18+	14.00 [ac]
		…			…			…
2004	25+	48.90 [m,n]			…	2004	25+	25.00 [m]
2003	10-18	71.00 [o,p,q]	2003	10-12	66.20 [o,z]	2002	18+	18.80
		…			…			…
2002	15-85	Work=41.00, Transport=14.80, Leisure=76.10 [28,r]	2002	15-85	M=94.80,F=96.40	2002	15-64	19.10 [28]
		…			…			…
		…			…			…
2008	18-64	22.70 [1,s]	2008	18-64	78.00 [1]			…
2004	15+	79.40 [t]			…	2000	30+	M=56.20, F=39.70
		…			…			
2003	18-69	12.10 [p]	2003	18+	80.90			
		…			…			
2006	25-64	60.10 [u]	2006	25-64	27.20 [z,aa]	2006	25-64	25.70
		…			…			…
		…			…			…
2005	15-64	23.10 [29]	2005	15-64	75.10	2005	15-64	22.20
2004	15-64	16.50	2004	15-64	96.90	2004	15-64	17.20
		…			…			…
2004	15+	13.10	2004	15+	Fruit=45.40, Vegetable=31.40 [aa,ab]	2004	15+	20.80 [ad]
		…			…			…
		…			…			…
		…			…			…
		…			…			…
2007	10-18	92.80 [p,v]	2007	10-18	78.20 [z]	2002	20-65	20.20 [o]
		…			…			…
2005	20+	78.20 [w]			…	2005	30+	27.90
		…			…			
2004	18-69	48.10 [x]			…	2004	18-69	20.10
		…			…			…
		…			…			…
		…			…			…
		…			…	2001	10-70	31.00 [a,ae]
		…			…			…
2003	18-69	8.20 [p]	2003	18+	84.00	2005	25-64	M=23.90,F=18.80 [f]
		…			…			…

Table 11. Risk factors for noncommunicable diseases

	Country/ area	Physical measures									
				Mean BMI [34]			Overweight [34]			Obese [34]	
		Year	Age group	*Total*	*Male*	*Female*	*Total*	*Male*	*Female*	*Male*	*Female*
1	American Samoa	2007	25-64	34.90	33.70	36.20	18.90	23.50	14.20	69.30	80.20
2	Australia	2008	18+	…	…	…	…	42.10	30.90	25.60	24.00
3	Brunei Darussalam	2005	15+	…	25.80	26.90	…	56.40	63.20	15.20	27.40
4	Cambodia	2006	15-49	…	…	20.90	…	13.30	9.30	…	1.20
5	China	2005	15+	…	23.70	22.80	…	33.10	24.70	1.60	1.90
6	Cook Islands	2005	15+	…	32.80	34.00	…	92.60	89.20	69.50	70.80
7	Fiji	2005	15+	…	24.50	27.60	…	43.90	65.60	8.70	32.50
8	French Polynesia			…	…	…	…	…	…	…	…
9	Guam			…	…	…	…	…	…	…	…
10	Hong Kong (China)	2008	18-64	…	…	…	39.40 [1,at]	54.00 [1,at]	26.70 [1,at]	…	…
11	Japan	2005	15+	…	23.10	21.90	…	27.00	18.10	1.80	1.50
12	Kiribati	2005	15+	…	27.80	28.80	…	73.20	73.90	29.80	41.00
13	Lao People's Democratic Republic	2005	15+	…	23.60	24.70	…	32.10	45.60	2.60	10.40
14	Macao (China)			…	…	…	…	…	…	…	…
15	Malaysia	2005	15+	…	22.50	23.70	…	22.70	37.20	1.60	8.20
16	Marshall Islands	2005	15+	…	…	…	…	…	51.80		…
17	Micronesia, Federated States of	2005	15+	…	32.20	34.70	…	92.10	90.10	66.20	72.90
18	Mongolia	2005	15-64	23.80	23.30	24.50	21.80	18.20	25.50	7.20	12.50
19	Nauru	2005	15+	…	35.80	36.50	…	96.50	92.40	83.20	78.80
20	New Caledonia			…	…	…	…	…	…	…	…
21	New Zealand	2005	15+	…	27.10	27.60	…	68.70	68.20	23.00	31.50
22	Niue	2005	15+	…	28.60	32.10	…	78.50	85.00	36.80	61.00
23	Northern Mariana Islands			…	…	…	…	…	…	…	…
24	Palau			…	…	…	…	…	…	…	…
25	Papua New Guinea			…	…	…	…	…	…	…	…
26	Philippines			…	…	…	…	…	…	…	…
27	Pitcairn Islands			…	…	…	…	…	…	…	…
28	Republic of Korea	2005	20+	23.60	24.00	23.30	31.80	35.20	28.30	4.10	10.10
29	Samoa	2005	15+	…	28.80	31.80	…	78.70	82.10	38.40	57.30
30	Singapore	2004	18-69	…	…	…	25.60	28.60	22.60	6.40	7.30
31	Solomon Islands	2005	15+	…	24.00	25.10	…	38.20	49.90	5.40	14.70
32	Tokelau			…	…	…	…	…	…	…	…
33	Tonga	1998-2000	15-70	32.30 [8]	30.20 [8]	33.80 [8]	…	…	…	…	…
34	Tuvalu			…	…	…	…	…	…	…	…
35	Vanuatu	2005	15+	…	25.70	26.80	…	56.30	62.90	13.40	26.30
36	Viet Nam	2005	25-64	…	…	…	3.50	3.00	4.00	…	…
37	Wallis and Futuna			…	…	…	…	…	…	…	…

Biochemical measures					
Raised blood cholesterol / lipids [35]			Raised blood glucose [37]		
Year	*Age group*	*(%)*	*Year*	*Age group*	*(%)*
2007	25-64	23.40 [36]	2007	25-64	41.10 [36]
2005	18+	8.90 [af]	2000	35+	M=7.80, F=6.80 [ak]
		…			…
		…	2004	25+	11.40 [m]
		…	2002	18+	2.60 [ak,al]
		…			…
2002	15-85	M=24.60, F=13.50 [ag]	2002	25-64	M=12.90, F=15.20 [28]
		…			…
		…			…
		…			…
2000	30+	M=25.70, F=34.10 [ah]	2000	30+	M=2.70, F=1.70 [am]
		…			…
		…			…
		…			…
2006	25-64	53.50	2006	25-64	11.00
		…			…
		…			…
2005	15-64	7.00	2005	15-64	8.20 [29,an]
2004	15-64	17.90	2004	15-64	16.20 [ao]
		…			…
2004	15+	15.50 [ai]			
		…			…
		…			…
		…			…
		…			…
2002	15-74	2.20 [o]	2002	20-65	5.30 [a]
		…			…
2005	30+	8.20 [aj]	2005	30+	8.10 [ap]
		…			
2004	18-69	18.70 [ag]	2004	18-69	8.20 [aq]
		…			…
		…			…
		…	2000	15+	M=9.50, F=11.00 [ar]
		…	2001	10-80	9.00 [aq]
		…			…
2001	25+	18.20 [o,ag]	2001	15+	6.60 [as]
		…			…

Table 12. Millennium Development Goals Indicators

	Country/ area	Goal 1: Eradicate extreme poverty and hunger		Goal 4: Reduce child mortality					
		Target 1C: Halve, between 1990 and 2015, the proportion of people who suffer from hunger		Target 4A: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate					
		Year	Prevalence of underweight children under five years of age [1]	Year	Under-five mortality rate [1]	Year	Infant mortality rate [1]	Year	Proportion of 1 year-old children immunised against measles [1,10]
1	American Samoa		…	2002	4.90	2008	11.90	2008	86.00
2	Australia		…	2007	5.01	2007	4.20	2008	93.90 [f]
3	Brunei Darussalam		…	2007	9.50	2007	7.60	2007	100.00
4	Cambodia	2005	28.00 [a]	2005	83.00	2005	66.00	2008	89.00
5	China	2002	7.80	2007	18.10 [b]	2007	15.30 [b]	2007	94.00
6	Cook Islands		…	2007	90.00	2007	24.80	2008	95.00
7	Fiji		…	2007	22.40	2007	18.40	2008	93.90
8	French Polynesia		…		…	2007	6.80	2007	96.00
9	Guam		…	2005 est	10.00	2008	6.17	2006	85.00
10	Hong Kong (China)		…	2008p	2.16 [c]	2008p	1.77 [c]	2007	>95.00 [a]
11	Japan		…	2007	3.50	2007	2.60	2008	97.40
12	Kiribati		…	2005	69.00	2005	52.00	2008	72.20
13	Lao People's Democratic Republic	2006	37.10	2005	98.00 [a]	2005	70.00 [a]	2008	52.00
14	Macao (China)		…	2008	3.60	2008	3.20	2008	89.70
15	Malaysia	2006	7.70 [a]	2007p	8.10	2007p	6.30	2006	90.00
16	Marshall Islands		…	2008	7.00	2008	31.00	2008	93.00
17	Micronesia, Federated States of		…	2006 est	41.00	2006 est	33.00	2007	92.00
18	Mongolia	2007	6.30	2008	23.40	2008	19.60	2008	96.90
19	Nauru	2007	4.80	2006 est	30.00	2006 est	25.00	2008	100.00
20	New Caledonia		…	2002	9.06	2007	6.10	2008	98.60
21	New Zealand		…	2003	6.34	2006	4.80	2007	98.00
22	Niue	2005	0.00	2006	0.00	2008	7.80	2008	100.00
23	Northern Mariana Islands		…		…	2005 est	7.11	2008	100.00
24	Palau		…	2007	7.17	2007	7.17	2008	97.00
25	Papua New Guinea	2007	28.00	2006	74.40 [a]	2006	56.70 [a]	2008	54.00
26	Philippines	2003	27.60	2006	32.00	2006	24.00	2008	86.00
27	Pitcairn Islands		…		…		…		…
28	Republic of Korea		…	2006	5.70	2006	4.10	2008	92.00
29	Samoa		…	2003-04	13.00	2006	20.40 [d]	2008	45.00
30	Singapore	1995-2003	14.00	2008p	3.40	2008p	2.10 [e]	2008	95.00
31	Solomon Islands		…	2005 est	52.00	2008	66.00	2008	60.00
32	Tokelau		…		…	2008	38.00	2008	92.00
33	Tonga		…	2002	13.90	2007	11.80	2008	100.00
34	Tuvalu		…	2003	32.40	2003	21.60	2008	93.00
35	Vanuatu	2007	19.50	2006	36.00	2008	25.00	2007	65.00
36	Viet Nam	2007	21.20	2007 est	25.90	2007 est	16.00	2008	91.80
37	Wallis and Futuna		…		…	2003 est	5.90	2007	86.00

Goal 5: Improve maternal health					
Target 5A: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio					
Year	Maternal mortality ratio [1]	Year	Proportion of births attended by skilled health personnel [1]	% of deliveries at home by skilled health personnel (as % of total deliveries) [1]	% of deliveries in health facilities (as % of total deliveries)[1]
2002	123.00	2002	100.00	1.00	99.00
2003-05	8.40 [g]	2006	99.60	0.30	99.30
2007	15.80	2007	99.90	0.02	99.88
2005	472.00	2008	58.00	19.00	39.00
2007	36.60 [b]	2007	...	...	91.70
2007	0.00	2005	100.00	(2007) 1.42 [l]	(2007) 97.80 [l]
2007	31.10	2007	99.00 [a]	...	...
2007	22.55 [h]	2004	100.00 [a]	1.00 [a]	99.00 [a]
2003	0.00	2004	...	...	87.22
2008p	2.54 [c]	2008 est	100.00	0.00 [m]	100.00 [n]
2007	3.20	2007	99.97 [p]	0.19 [p]	99.76 [p]
2005	158.00	2005	89.65 [l]	4.65 [q]	85.00 [q]
2005	405.00	2005	18.50	7.50	11.00
2008	0.00	2008	100.00	0.00	100.00
2007p	30.00	2007	98.58	0.71	97.87
2008	0.00	2004-07p	94.10 [r]	...	85.10 [r]
2003	317.00 [i]		...	...	...
2008	49.00	2008	99.80	52.20	99.60
2002	300.00	2007	97.00	1.00	96.00
2007	31.60	2005	91.97	4.37	87.60
2004	6.81	2001	100.00	...	(2004 est) 95.30
2006	0.00	2006	100.00	0.00	100.00
2000	0.00		...	...	...
2007	0.00	2007	100.00	0.00	100.00
2006	733.00 [a]	2006	53.00	1.30	51.70 [a]
2006	162.00	2006	63.70	20.30	42.40
	...		...	...	...
2006	15.00	2007	100.00	1.10	98.90
2005-06	3.00 [j]	2004	100.00	9.00	91.00
2007	7.60	2008p	...	...	99.74 [s]
2005	236.00	2003	...	...	43.00 [t]
2001-02	0.00		...	...	...
2007	36.50	2007	100.00	1.50	98.50
2003	0.00 [k]	2002	100.00	...	...
2006	70.04	2006	92.90	1.82	91.08
2007	75.00	2007	94.30 [u]	...	...
	...		...	...	...

Table 12. Millennium Development Goals Indicators

Country/ area	Goal 5: Improve maternal health								
	Target 5B: Achieve, by 2015, universal access to reproductive health								
	Year	Contraceptive prevalence rate [1]	Year	Adolescent birth rate [1]	Antenatal care coverage [1]			Year	Unmet need for family planning [1]
					Year	At least 1 visit	At least 4 visits		
1 American Samoa		…		…	2002	70.00	…		…
2 Australia	2001	65.00	2006	4.30 [w]	2001	99.60 [a,x]	…		…
3 Brunei Darussalam		…		…		…	…		…
4 Cambodia	2005	27.20 [a]	2005	5.20	2005	44.40	27.00	2005	25.00
5 China	2007	89.74		…	2007	90.90	…		…
6 Cook Islands	2007	29.00 [v]		…	2005	100.00	…		…
7 Fiji	2007	43.00	2007	8.50	2005	100.00	…		…
8 French Polynesia		…	2007	48.90	2004	100.00 [a,h]	(2004 est) 95.00		…
9 Guam		…		…	2001	92.05	…		…
10 Hong Kong (China)		…	2007	4.05		…	…		…
11 Japan		…		…		…	…		…
12 Kiribati		…		…	2005	100.00	…		…
13 Lao People's Democratic Republic	2005	38.40		…	2005	28.50	…		…
14 Macao (China)		…	2008	1.60	2007	89.20 [y]	…		…
15 Malaysia	2007	1.36		…	2007	91.90	…		…
16 Marshall Islands	2008	45.00		…	2004-07	…	77.10 [r]	2007	8.10
17 Micronesia, Federated States of		…		…	2000	80.00	…		…
18 Mongolia	2008	51.20	2008	6.30	2008	…	83.70 [b]		…
19 Nauru	2007	35.60		…	2007	94.50	…		…
20 New Caledonia		…		…		…	…		…
21 New Zealand		…		…	2005	100.00	…		…
22 Niue	2001	22.60		…	2005	10.00	…		…
23 Northern Mariana Islands	2000	64.00		…	2000	75.67	…		…
24 Palau	2007	12.08	2007	18.40	2006	95.00	79.00		…
25 Papua New Guinea	2006	25.50	2006	12.90	2006	77.50 [a]	54.90		…
26 Philippines	2006	50.60	2006	4.80	2006	…	59.00	2006	15.70
27 Pitcairn Islands		…		…		…	…		…
28 Republic of Korea	2006	79.60		…	2006	99.90	98.60		…
29 Samoa		…		…	2004	100.00	…		…
30 Singapore		…		…	2006	100.00	…		…
31 Solomon Islands		…		…	2003	76.00 [aa]	…		…
32 Tokelau		…		…		…	…		…
33 Tonga		…		…	2007	98.70	…		…
34 Tuvalu	2002	32.00		…	2001	99.00	…		…
35 Vanuatu	2007	37.00	2003	21.00	2006	67.00	…		…
36 Viet Nam	2007	79.00		…	2005	96.10	…	2002 est	4.80
37 Wallis and Futuna		…		…		…	…		…

Goal 6: Combat HIV/AIDS, malaria and other diseases						
Target 6A: Have halted by 2015 and begun to reverse the spread of HIV/AIDS				Target 6B: Achieve, by 2010, universal access to treatment for HIV/AIDS for all those who need it		
HIV prevalence among population aged 15-24 years [1]		Estimated HIV prevalence in adults [1]		% of people with advanced HIV infection receiving (ART)		
Year	*Data*	*Year*	*Data*	**Year**	*Data* **[25]** [ac]	*Data* **[1]**
	…		…		…	…
2008	<0.10	2008	0.10	2007 est	…	80.00 [ad]
	…	2005	<0.10		…	…
	…	2006	0.90	2007	67.00	(2008) >90.00
	…	2007	0.05	2007	19.00	37.45
	…		…		…	…
	…	2007	0.10		…	…
2008	0.01	2008	0.07	2008	…	(2008) 86.89
	…		…		…	…
	…	2008	<0.10	2008	…	88.30 [ae]
	…	2007	<0.10		…	…
	…		…		…	…
	…	2007	0.20	2007	>95.00	100.00
	…	2008	<0.10 [ab]		…	…
2006-07	0.10	2007	0.30	2007	…	35.00
	…		…		…	…
	…		…		…	…
2008	0.00	2008	0.00	2008	…	100.00
	…		…		…	…
	…		…		…	…
	…	2007	0.10		…	…
	…		…		…	…
	…		…		…	…
2007	0.00	2007	0.15	2007	…	0.15 [af]
2007	59.54	2007	1.61	2007	38.00	38.00
	…	2007	0.17	2007	31.00	…
	…		…		…	…
	…		…		…	…
	…		…		…	…
	…	2008	0.09		…	…
	…		…		…	…
	…		…		…	…
	…		…		…	…
	…		…		…	…
2007	0.00 [a]	2007	0.00	2007	…	100.00
2005	0.30	2007	0.54	2007	26.00	35.00 [ag]
	…		…		…	…

Table 12. Millennium Development Goals Indicators

	Country/ area	Goal 6: Combat HIV/AIDS, malaria and other diseases							
		Target 6C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases							
		Year	Incidence rate of confirmed malaria cases per 100 000 population [1]	Year	Malaria death rate per 100 000 population [1]	Year	Proportion of children under 5 sleeping under insecticide-treated bednets [1]	Year	Proportion of children under 5 with fever who are treated with appropriate anti-malarial drugs [1]
1	American Samoa		...		...		...		...
2	Australia	2008p	NR [ah]	2008p	NR [ah]	2008p	NR [ah]	2008p	NR [ah]
3	Brunei Darussalam		...		...		...		...
4	Cambodia	2007	294.00	2007	1.67		...		...
5	China	2007	2.00	2007	0.00		...		...
6	Cook Islands	2007	2.00	2007	0.00		...		...
7	Fiji		...		...		...		...
8	French Polynesia	2008	0.00	2008	0.00	2008	NR	2008	NR
9	Guam		...		...		...		...
10	Hong Kong (China)	2008p	0.36 [ai,aj]	2008p	0.00 [c]		...		...
11	Japan	2006	0.05	2006	0.00		...		...
12	Kiribati		...		...		...		...
13	Lao People's Democratic Republic	2008	292.00	2008	0.18	2008	85.00		...
14	Macao (China)	2008	0.00	2008	0.00		...		...
15	Malaysia	2008	26.70	2008	0.10		...		...
16	Marshall Islands		...		...		...		...
17	Micronesia, Federated States of		...		...		...		...
18	Mongolia		...		...		...		...
19	Nauru		...		...		...		...
20	New Caledonia	2006	0.00	2006	0.00	2006	0.00	2006	0.00
21	New Zealand		...		...		...		...
22	Niue		...		...		...		...
23	Northern Mariana Islands		...		...		...		...
24	Palau	2007	NR	2007	NR	2007	NR	2007	NR
25	Papua New Guinea	2007	1389.00	2007	8.43	2007	51.00 [a]	2007	60.00
26	Philippines	2007	41.00	2007	0.08	2006	17.00	2006	85.00
27	Pitcairn Islands		...		...		...		...
28	Republic of Korea	2006	4.00	2006	0.00		...		...
29	Samoa		...		...		...		...
30	Singapore	2008	3.10		...		...		...
31	Solomon Islands	2007	13 186.00	2007	3.02		...		...
32	Tokelau		...		...		...		...
33	Tonga		...	2000 est	1.00		...		...
34	Tuvalu		...		...		...		...
35	Vanuatu	2007	2426.00	2006	2.71	2007	65.30		...
36	Viet Nam	2007	17.00	2007	0.02		...		...
37	Wallis and Futuna		...		...		...		...

Goal 6: Combat HIV/AIDS, malaria and other diseases								
Target 6C: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases								
Year	TB incidence rate per 100 000 [8]	Year	TB prevalence rate per 100 000 [1]	Year	TB death rate per 100 000 [1]	Proportion of TB cases detected under directly observed treatment short course (DOTS) (2007) [1]	Proportion of TB cases cured under directly observed treatment short course (DOTS) (2006) [1]
2007	5.00	2007	5.00	2007	0.00	(2006) 115.00	(2005) 75.00
2007	6.00	2008p	5.70	2008p	0.02	(2008p) 100.00	(2008p) 79.24
2007	59.00	2007	65.00	2007	7.00	90.00	84.00
2007	495.00	2007	664.00	2007	89.00	61.00	90.00
2007	98.00	2007	194.00	2007	15.00	80.00	92.00
2007	15.00	2007	31.00	2007	4.00	(2005) 77.00	(2005) 100.00
2007	21.00	2007	30.00	2007	4.00	67.00	66.00
2007	27.00	2008	18.50	2008	0.38	(2008) 84.38	(2008) 73.00
2007	34.00	2007	36.00	2007	2.00	90.00	90.00
2007	62.00	2008	82.12	2008	3.40	87.00	(2006) 78.00
2007	21.00	2007	28.00	2007	3.00	77.00	20.00
2007	365.00	2007	423.00	2007	49.00	66.00	61.00
2007	151.00	2007	289.00	2007	24.00	78.00	88.00
2007	63.00	2007	63.00	2007	6.88	102.00	90.28
2007	103.00	2007	121.00	2007	18.00	80.00	46.00
2007	215.00	2007	281.00	2007	32.00	33.00	73.00
2007	97.00	2007	100.00	2007	9.00	97.00	60.00
2007	205.00	2007	234.00	2007	29.00	76.00	84.00
2007	33.00	2007	33.00	2007	3.00	90.00	50.00
2007	22.00	2007	25.00	2007	2.00	90.00	89.00
2007	7.00	2007	7.08	2007	1.00	60.00	...
2007	0.00	2007	0.00	2007	0.00	...	...
2007	58.00	2007	72.00	2007	7.00	90.00	42.00
2007	60.00	2007	71.00	2007	8.00	90.00	40.00
2007	250.00	2007	430.00	2007	60.00	15.00	59.00
2007	290.00	2007	500.00	2007	41.00	77.00	80.00
	...		...		...	...	...
2007	90.00	2007	126.00	2007	4.90	14.00	78.00
2007	19.00	2007	25.00	2007	3.00	(2006) 80.00	(2005) 91.00
2007	27.00	2007	27.00	2007	3.00	96.00	70.00
2007	128.00	2007	180.00	2007	21.00	50.00	73.00
2007	0.00	2007	0.00	2007	0.00	...	...
2007	24.00	2007	28.00	2007	2.00	129.00	100.00
2007	166.00	2007	203.00	2007	17.00	152.00	75.00
2007	77.00	2007	102.00	2007	12.00	52.00	88.00
2007	171.00	2007	220.00	2007	24.00	82.00	90.00
2007	15.00	2007	25.00	2007	3.00	90.00	50.00

Table 12. Millennium Development Goals Indicators

Country/ area		Goal 7: Ensure environmental sustainability						Goal 8. Develop a global partnership for development	
		Target 7C: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation						Target 8E: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries	
		Proportion of population using an improved drinking water source [1]			Proportion of population using an improved sanitation facility [1]			Proportion of population with access to affordable essential drugs on a sustainable basis [1]	
		Year	*Urban*	*Rural*	*Year*	*Urban*	*Rural*	*Year*	
1	American Samoa	2004	99.00	99.00	2004	99.00	99.00		…
2	Australia	2006	100.00	100.00	2006	100.00	100.00		…
3	Brunei Darussalam		…	…		…	…	2003	100.00
4	Cambodia	2006	80.00	61.00	2006	62.00	19.00		…
5	China	2006	98.00	81.00	2006	74.00	59.00		…
6	Cook Islands	2006	98.00	88.00	2006	100.00	100.00		…
7	Fiji	2006	43.00	51.00	2006	87.00	55.00		…
8	French Polynesia	2006	100.00	100.00	2006	99.00	97.00	2008	100.00
9	Guam	2006	100.00	100.00	2006	99.00	98.00		…
10	Hong Kong (China)		…	…		…	…		…
11	Japan	2006	100.00	100.00	2006	100.00	100.00		…
12	Kiribati	2006	77.00	53.00	2006	46.00	20.00		…
13	Lao People's Democratic Republic	2006	86.00	53.00	2006	87.00	38.00		…
14	Macao (China)	2008	100.00	…	2008	100.00	…		…
15	Malaysia	2006	100.00	96.00	2006	100.00	96.00		…
16	Marshall Islands	2004	82.00	96.00	2004	93.00	58.00		…
17	Micronesia, Federated States of	2006	95.00	94.00	2006	61.00	14.00		…
18	Mongolia	2006	90.00	48.00	2006	64.00	31.00	2008	75.00
19	Nauru	2007	100.00	…	2007	100.00	NR		…
20	New Caledonia		…	…		…	…		…
21	New Zealand	2006	100.00	…		…	…		…
22	Niue	2006	100.00	100.00	2006	100.00	100.00		…
23	Northern Mariana Islands	2006	98.00	97.00	2006	94.00	96.00		…
24	Palau	2006	79.00	94.00	2006	96.00	52.00		…
25	Papua New Guinea	2006	88.00	32.00	2006	67.00	41.00		…
26	Philippines	2006	96.00	88.00	2006	81.00	72.00		…
27	Pitcairn Islands		…	…		…	…		…
28	Republic of Korea	2006	97.00	…		…	…		…
29	Samoa	2006	90.00	87.00	2006	100.00	100.00		…
30	Singapore		…	…		…	…		…
31	Solomon Islands	2006	94.00	65.00	2006	98.00	18.00		…
32	Tokelau	2006	…	88.00	2006	…	78.00		…
33	Tonga	2006	100.00	100.00	2006	98.00	96.00	2002	>95.00
34	Tuvalu	2006	94.00	92.00	2006	93.00	84.00		…
35	Vanuatu	2004	86.00	52.00	2004	78.00	42.00		…
36	Viet Nam	2006	98.00	90.00	2006	88.00	56.00		…
37	Wallis and Futuna	2006	…	100.00		…	…		…

Notes

Table 1. Demographic indicators

- a Estimated figure includes Other Territories comprising Jervis Bay Territory, Christmas Island and the Cocos (Keeling) Islands.
- b Estimated population as of 31 January 2008.
- c Population as of 1 October 2008.
- d Population as of 31 December 2008.
- e Figure refers to usual resident population. Usual resident population inlcludes those residents who are present and those who are temporarily elsewhere in New Zeaaland. Residents who are temporarily overseas were not counted.
- f Figure applies or refers to resident population.
- g Revised data.
- h Figure excludes inland waters and oceanic areas.
- i Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
- j Figure refers to 0-14 years old.
- k Figure is computed per thousand resident population as of 1992.
- l The figure is compiled based on registered deaths and/or registered births.
- m Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific using data in columns 10-12 of this table.

Table 2. Socioeconomic indicators

- a Data for 15-year-old schoolchildren. Literacy defined as Levels 2-5 using OECD PISA (Programme for International Student Assessment) standards.
- b Figure refers to 1999/2000 SY and census data.
- c Figure refers to French as official language.
- d Figure refers to the percentage of population aged 15 years and above with primary or above educational attainment.
- e Refers to Macao population, excluding the marine population and those residing in collective living quarters, such as military camp, hospital, prison, student dormitory and elderly home. Data derived from the Employment Survey of Statistics and Census Service, Macao SAR.
- f Literacy defined as Levels 2-5 using OECD PISA (Programme for International Student Assessment) standards.
- g Figure refers to 15 -24 years old.
- h Figure refers to population aged 10 years and over.
- i Figure refers literacy rate in Samoan language of persons aged 15-24 years.
- j Figure refers to residents aged 15 years and over.
- k Figure applies to aged 19 years and above.
- l Figure refers to per capita GDP (goods and services).
- m Average exchange rate for 2007-2008
- n Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
- o Figure calculated using 2007 exchange rate FJD 1.61 per USD from WHO national health accounts.
- p Figure refers to atlas method
- q Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific using exchange rate USD 1= AUD 1.33.
- r Figure was converted using exchange rate for 2007, F.CFP 81.99 per USD.
- s Figure refers to GNP per capita (PPP US$).
- t Revised data.
- u Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific using exchange rate (NCU per USD provided by the WHO national health accounts)
- v Figure refers to per capita GNP at current market prices (US$).
- w The figure is compiled based on the summation of public health expenditure and private health expenditure in the financial year 2004/05 per mid-2004 population.
- x The figure is compiled based on the summation of public health expenditure and private health expenditure in the financial year 2004/05 as percentage of GDP in the financial year 2004/05.
- y Figure is in New Zealand dollars.

Notes

z Figure refers to percentage total expenditure on public health as to total government expenditure.

aa Figure refers to public health expenditure as percentage of overall public expenditure.

Table 3. Health and human rights instruments

a Ratification includes ratification, accession or succession

b Effective 1 July 1997 and 20 December 1999 respectively, Hong Kong and Macau became special administrative regions of China. Previously, Hong Kong have been administered by the United Kingdom of Great Britain and Northern Ireland (which had ratified CESCR on 19 May 1976), and Macau had been administered by Portugal (which had ratified CESCR on 30 July 1978). In official notifications to the Secretary General dated 20 June 1997 and 2 December 1999, respectively, the People's Republic of China advised that the CESCR would continue to be applicable to the territories of Hong Kong and Macau.

c China's state party report was received in 2003 however, the report states that the Secretariat received it in 2004.

Table 4. Poverty- and gender-related development indicators

a Data refers to the most recent year available during the period specified.

b Figure refers to those below 50% of median income.

c Figure refers to those below 50% of median income (smeeding, 1997).

d Data refer to a year or period other than that specified, differ from the standard definition or refer to only part of a country.

e Data are as of 31 May 2007, unless otherwise specified. Where there are lower and upper houses, data refer ot the weighted average of women's shares of seats in both houses.

f Brunei Darussalam does not currently have a parliament.

g Parliament has been dissolved or suspended for an indefinite period.

h Estimates are based on data for the most recent year avaialble between 1996 and 2005. Following the methodology implemented in the calculation of the GDI, the inome component of the GEM has been scaled downward for countries whose income exceeds the maximum goalpost GDP per capita value of 40,000 (PPP US$).

Table 5. Health status indicators

a Figures were estimated using complete life table method - health stats.

b Figure applies or refers to resident population.

c Figure refers to Surveillance Region (per 1000 live births)

d Figure includes TCM hospital, TCM-WM hospital, Minority hospital, specialized hospital and nursing hospital

e The figure is compiled based on registered deaths and/or registered births.

f Revised data

g Figure derived from total number of children born to women aged 15-49 and number of live births in the 12 months preceding the 2006 census.

h Estimates derived by regression and similar estimation methods.

i Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.

j This is the latest data for both direct and indirect maternal deaths.

k Figure refers to 1 maternal death out of 4434 births.

l Figure is based on childbearing age 15-44 years old.

m Figure refers to hospital reported MMR.

n There is only one maternal death in the last five years.

Table 6. Maternal, childcare and nutritional indicators

a Percentage of women aged 18-49 (or their partners) reporting using contraceptive methods (including hysterectomy, tubal ligation and partner vasectomy).

b Figure refers to percentage of women of child-bearing ages (15-44 years old) who are current users of any type of family planning contraceptive.

c Figure refers to women aged 15-39 years old.

d Figure refers to married women.

e Revised data

f Data refers to a year of period other than that specified, differ from the standard definition or refer only to a part of a country.

g Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.

Notes

h	Figure refers to the cases known to the maternity homes, public and private hospitals
i	Nearly all newborns were delivered in health facilities.
j	Figure refers to the percentage of live births (except foetal deaths).
k	Best estimated figure
l	Figure applies to births in the last three years.
m	Figure refers to live births.
n	Figure applies to clinics only.
o	Figure applies to public health facilities.
p	Figure refers to birthweight equal to 2501 grams and above.
q	Figure refers to children with normal birthweight among approximately 40% of children in Cambodia with reported birthweight.
r	The figure excludes those with unknown birthweight.
s	Neonatal tetanus eliminated.
t	Figure applies to babies at 4 months old.
u	Figure applies to babies less than 4 months.
v	Figure refers to those who recevied a high dose of Vitamin A supplement in the last 6 months, Lao PDR, 2006
w	Identifies countries that have achieved a second round of Vitamin A coverage ≥70%.
x	Figure refers to babies exclusively breastfed for the first 5 months.
y	Figure includes only children less than 3 years old.
z	Figure re-analyzed by UNICEF HQ.
	Table 7. Environmental health and prevalence of tobacco use indicators
a	Figure applies to urban areas only
b	Figure applies to rural areas only
c	Unweighted data
d	Data refers to China Shanghai only
e	Data applies to Luang Prabang province, Lao People's Democratic Republic.
	Table 8. Summary of 2008 Emergencies in the Western Pacific Region
a	The emergencies included in this summary only include events referred by country offices to the Regional Office for the Western Pacific.
	For more information, visit http://www.wpro.who.int/sites/eha/disasters/summary.htm
b	Global IDEntifier Number (GLIDE) is based in http://www.glidenumber.net/glide/public/about.jsp
c	Estimated figure
d	75 000 individuals were displaced
e	Figure excludes entire families of those directly affected
f	The complex emergency in Mindanao, Philippines, began in August 2008; peak of reports was in October and November 2008; as of July 2009,
	this emergency is still ongoing.
g	Figure is the sum for Marshall Islands, Federated States of Micronesia and Solomon Islands.
	Table 9. Health Workforce and Infrastructure Indicators
a	Revised data.
b	These data are subject to sampling variation and may not directly correspond to other Australian labour force data.
c	Figure refers to doctors and assistant doctors.
d	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
e	Figure refers to physicians in Guam Memorial Hospital and includes licensed military physicians working on part-time basis.
f	The number of doctors/dentists refers to the number of doctors/dentists with full registration on both the local and overseas lists.
	The figure does not include Chinese medicine practitioners.
g	Provisional data.
h	Figure refers to general practitioners and practitioners of Chinese medicine.
i	Figure refers to government doctors.

Notes

j Figure refers to public physicians.
k Figure refers to physicians and specialists.
l Figure refers to registered nurses.
m The figure refers to the number of registered nurses and enrolled nurses.
n Figure includes nurses, public nurses and assistant nurses.
o Figure includes medical assistants.
p Figure refers to bachelor and diploma graduate nurses.
q Figure refers to public nurses.
r Figure includes 1 anaesthesiology nurse and excludes unauthorized nurses.
s Figure is already included in the figure for nurses.
t Totals may not tally due to some reported cases with no gender breakdown.
u Figure refers to public midwives.
v Figure excludes 1 unathorized midwife.
w Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the western Pacific using available population data nearest the reference year needed.
x Incomplete data.
y Data have different reference years.
z Figure refers to general hospitals and primary health care centers.
aa Figure includes number of beds in Psychiatric hospitals and total number of available beds/chairs (average for year) in Private health facilities.
ab Figure refers to beds in general hospitals, specialized hospitals and private hospitals.
ac Figure refers to beds in general hospitals, district/first-level referral hospitals and private hospitals.
ad Figure refers to beds in public health facilities.
ae Figure refers to beds in general hospitals, specialized hospital, and district/first-level referral hospitals.
af Figure refers to beds in general hospitals, district/first-level referral hospitals and private health facilities
ag Figure refers to beds in public health facilities and private hospitals.
ah Figure refers to beds in general hospitals, primary health care centers, private hospitals and nursing homes.
ai Figure refers to general hospitals and private health facilities.
aj Figure refers to beds in general hospitals only.
ak Figure refers to beds in general hospitals, specialized hospitals, primary health care centers and private hospitals.
al Figure refers to beds in public health facilities and private health facilities.
am Figure refers to beds in general hospitals, specialized hospitals, district/first-level referral hospitals and private hospitals.
an Figure refers to beds in specialized hospitals only.
ao Figure refers to beds in general hospitals and private hospitals.
ap Figure refers to beds in private hospitals only.
aq Figure refers to beds in general hospitals, district/frist-level referral hospitals, primary health care centers and private hospitals.
ar Figure refers to beds in general hospitals and district/first-level referral hospitals.
as Figure refers to beds in general hospitals, primary health care centers and private hospitals.

Table 10. Morbidity and Mortality Indicators

a Figure refers to registered positive cases.
b The figure refers to the cases reported to the Department of Health for the listed Statutory Notifiable Infectious Diseases.
c The figure is compiled based on registered deaths and/or registered births.
d Figure refers to hospital data only.
e Figure includes imported and locally acquired cases.
f Figure refers to 189 dengue serotype 1 cases and 1 DHF.
g Figure refers to dengue fever cases only reported to the Department of Health for the listed Statutory Notifiable Infectious Diseases. There is no dengue haemorrhagic fever case and death in 2008.

Notes

h	Revised data.
i	Number includes records where sex was unknown/not reported.
j	Figure refers to cases not endemic, absence of local transmission.
k	Figure refers to new outpatient malaria cases, while there were 11 701 severe malaria inpatients.
l	Disease contracted "off-island."
m	Totals may not tally due to some reported cases with no gender breakdown.
n	Provisional data.
o	This is part of the routine immunization.
p	At 24-27 months.
q	Given as inactivated polio vaccine (IPV).
r	Estimated figure is 0.0083% and refers to Macao population.
s	Total of 3 cases.
t	Data have different reference years.
u	Prevalence is rounded to zero.
v	The figure only reflects those attending Department of Health's specialist clinic.
w	Based on country reports as of end of December 2007
x	The number of death is calculated according to the rates but not reported data.
y	Death certificates based on underlying causes.
z	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
aa	Figure refers to deaths due to heart problems (80), diabetes/hypertension (46) and stroke/tuaula (51).
ab	Total does not always equal the sum of its components due to incidence estimation process.
ac	Figure refers to hospital admissions due to transport accidents (ICD10 V01-V99).
ad	Figure refers to serious injuries (hospital) and slight injuries (non-hospital).
ae	According to the ICD 10th revision, when the morbid condition is classifiable under Chapter XIX as "injury, poisoning and certain other consequences of external causes," the codes under Chapter XIX for "external causes of morbidity and mortality" should be used as the primary cause of death.
af	Figure refers to hospitalization - 1sr reported e-code.
ag	Figure refers to number of hospital encounters.
ah	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific using available population nearest to reference year.
ai	No avalailable population size by gender.
aj	Non endemic for lymphatic filariasis.
	Table 11. Morbidity and Mortality Indicators
a	Figure refers to subnational data.
b	Figure refers to current users of any tobacco product on >= 1 occasion on the 30 days preceding the survey.
c	Figure refers to current users of any cigarette product.
d	Not specified if figure refers to current or daily user of any cigarette product.
e	Figure refers to students who used any tobacco product on one or more days during past 30 days preceding the survey.
f	Figure refers to subnational data from rural area.
g	Figure applies among current drinkers.
h	Figure refers to female binge drinkers defined as drinking alcohol amounting to ≥5 standard drinks.
i	Figure refers to heavy drinker which is defined as drinking alcohol amounting to ≥20g/day for females and ≥40g/day for males.
j	Revised data.
k	Figure refers to physical inactivity during leisure times.
l	Figure refers to energy expenditure of 100 MET-minutes/2 weeks in the last two weeks.
m	Figure refers to subnational data from peri-urban area.
n	Figure is complement data computed from the prevalence of the physically active.

Notes

o	Figure refers to subnational data from urban area.
p	Figure refers to IPAQ inactive which is defined as not meeting any of the following criteria: (1) 3 or more days of vigorous activity of at least 20 minutes per day OR, (2) 5 or more days of moderate-intensity activity or walking of at least 30 minutes per day OR, (3) 5 or more days of any combination of walking, moderate-intensity or vigorous intensity activities achieving a minimum of at least 600 MET-min/week
q	Figure refers to inadequately inactive which includes those classified as inactive during leisure times.
r	Figure refers to insufficient physical activity. Definition for insufficient physical activity, refer to cited source.
s	Figure refers to the population group classified as having a low level of physical activity.
t	Figure refers to those walking <10 000 steps a day.
u	Figure refers to energy expenditure of 600 MET-minutes/week during leisure time and work.
v	Figure refers to energy expenditure less than 60 minutes per occasion in less than 5 times per week during leisure time.
w	Figure refers to moderate intensity.
x	Figure refers to physical inactivity in 20 occasions during leisure time.
y	Figure refers to fruit intake of 1 serving or less, and vegetable intake of 4 servings or less.
z	Figure refers to fruit intake of <5 fruit and vegetable servings per day during the past 30 days.
aa	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
ab	Figure refers to population group having <2 servings of fruit and <3 servings of vegetable per day.
ac	Figure refers to population group (self-reported) previously diagnosed or on hypertensive medication.
ad	Figure refers to patients previously diagnosed by physician, other than during pregnancy, not necessarily treated.
ae	Figure excludes group with SBP=140mmHg.
af	Figure refers to population group (self-reported) previously diagnosed.
ag	Figure refers to population group having total cholesterol ≥6.2 mmol/L (240 mg/dl).
ah	Figure refers to population group having total cholesterol ≥5.7 mmol/L (240 mg/dl)
ai	Figure refers to population group (self-reported) previously diagnosed by physician, not necessarily treated.
aj	Figure refers to population group having total cholesterol ≥6.2 mmol/L (240 mg/dL) or currently using lipid lowering medication.
ak	Figure refers to results of fasting glucose blood sample and oral glucose tolerance test performed according to WHO specifications.
al	Figure refers to population group diagnosed by doctors and is being treated.
am	Figure refers to population group having plasma value of ≥200 mg/dl after not eating for 3 hours prior to fasting glucose blood sample exam.
an	Figure refers to total prevalence of diabetes in the surveyed population determined by questionnaire and laboratory test methods.
ao	Figure refers to fasting glucose blood test ≥ 7mmol/l in venous blood sample or currently being treated.
ap	Figure refers to population group having blood value (fasting glucose blood sample) of 126 mg/dl (not specified, whole blood or plasma) or were taking antidiabetic medication.
aq	Figure refers to population group having results of oral glucose tolerance test with blood value ≥11.10 mmol/l.
ar	Figure refers to population group having fasting blood glucose value ≥11.10 mmol/l and an elevated HbA1c diagnosed as having diabetes.
as	Figure refers to those detected by finger prick and qualifiers returned on different day for fasting plasma glucose. Refer to cited source for the cut-off of blood glucose.
at	Figure refers to overweight/obese.
	Table 12. Millennium Development Goals Indicators
a	Revised data.
b	Figure includes TCM hospital, TCM-WM hospital, Minority hospital, specialized hospital and nursing hospital.
c	The figure is compiled based on registered deaths and/or registered births.
d	Figure derived from total number of children born to women aged 15-49 and number of live births in the 12 months preceding the 2006 census.
e	Figure refers or applies to resident population.
f	Figure refers to children at 24-27 months.
g	This is the latest data for both direct and indirect maternal deaths.
h	Figure refers to 1 maternal death out of 4434 births.
i	Figure is based on child-bearing age 15-44 years old.

Notes

j	Figure refers to hospital-reported MMR.
k	There is only one maternal death in the last 5 years.
l	Computed by Health Information and Evidence for Policy Unit of the WHO Regional Office for the Western Pacific.
m	Nearly all newborns were delivered in health facilities.
n	Figure refers to the cases known to the maternity homes, public and private hospitals.
o	The figure refers to the cases known to the maternity homes, public and private hospitals.
p	Figure refers to the percentage of live births (except fetal deaths).
q	Best estimated figure.
r	Figure applies to births in the last three years.
s	Figure refers to livebirths.
t	Figure applies to clinics only.
u	Figure applies to public health facilities.
v	Figure refers to women currently practicing any type of family planning contraceptives.
w	Figure refers to births to women aged less than 20.
x	Incidence rate.
y	Figure refers to services provided by public health facilities.
z	Figure refers to pregnant women with antenatal care for at least six times during pregnancy.
aa	Figure reported as antenatal coverage.
ab	Estimated figure is 0.0083% and refers to Macao population.
ac	Data have different reference years.
ad	Prevalance is rounded to zero.
ae	The figure only reflects those attending Department of Health's specialist clinic.
af	Total of 3 cases.
ag	Based on country reports as of end of December 2007
ah	Not endemic, absence of local transmission.
ai	The figure refers to the cases reported to the Department of Health for the listed Statutory Notifiable Infectious Diseases.
aj	All are imported cases.
ak	Figure refers to results of fasting glucose blood sample and oral glucose tolerance test performed according to WHO specifications.
al	Figure refers to population group diagnosed by doctors and is being treated.

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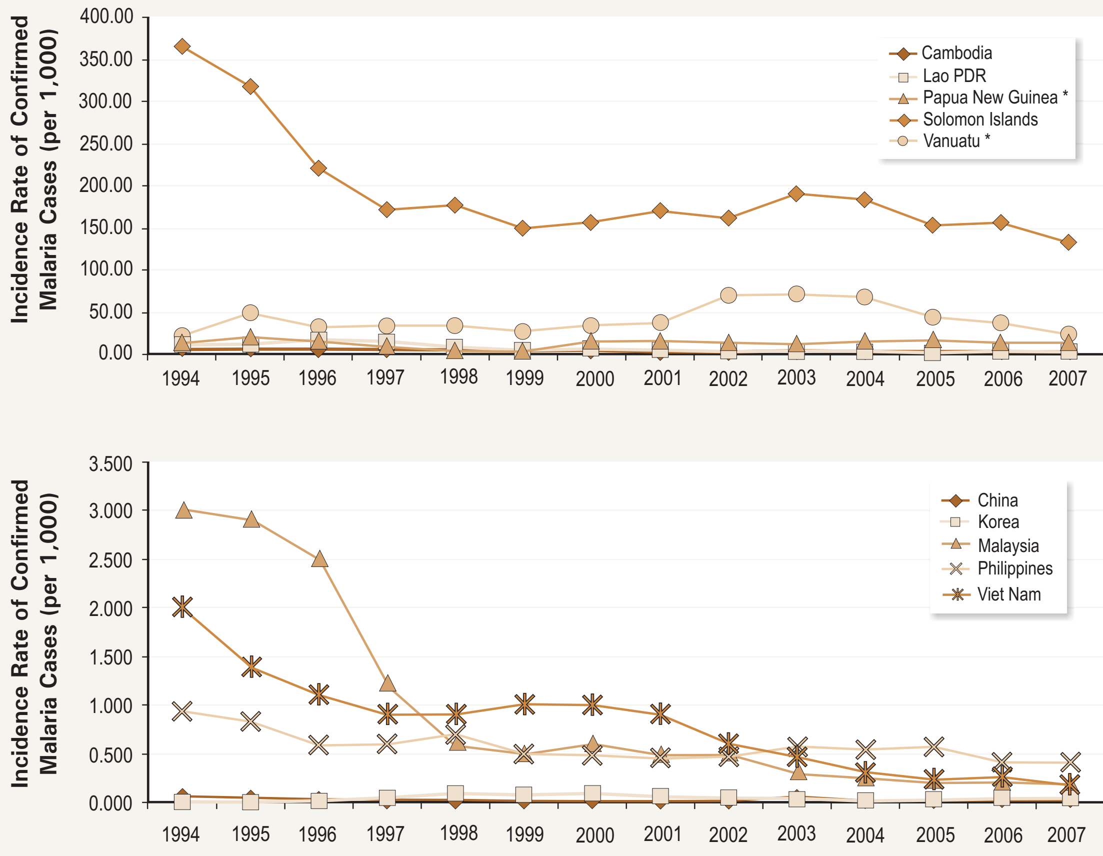
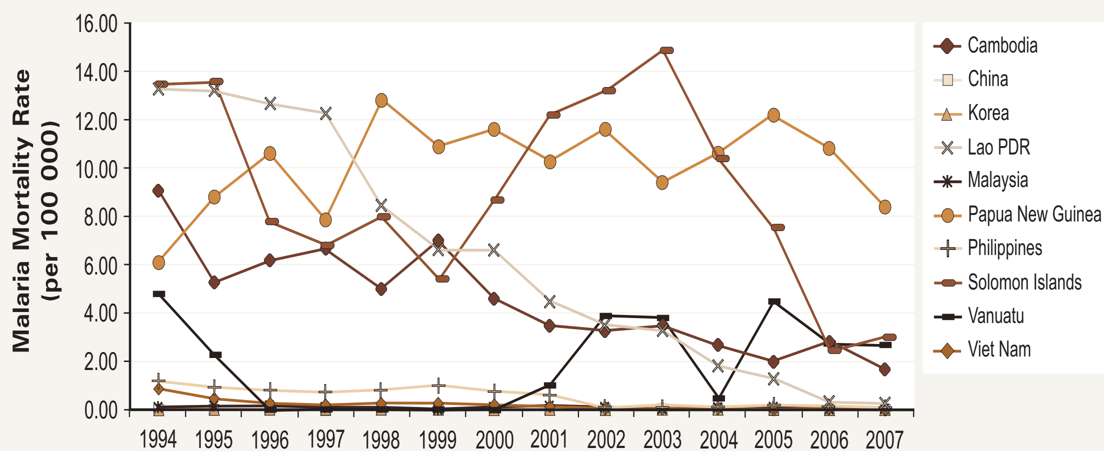
Annex Charts

Figure 1: Incidence rate of confirmed malaria cases (per 1000 population) in selected countries in the Western Pacific Region, 1994-2007

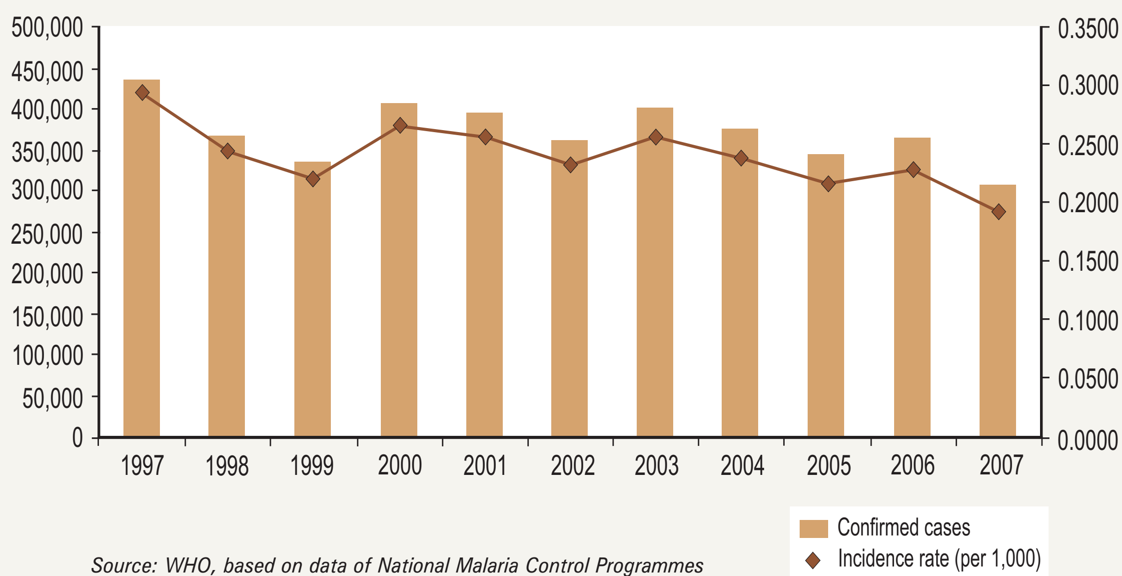


*Number of confirmed cases is not reflective of actual case numbers as laboratory confirmation is limited.
Source: WHO, based on data of National Malaria Control Programmes

Figure 2: Malaria mortality rate (per 100 000 population) in selected countries in the Western Pacific Region, 1994-2007

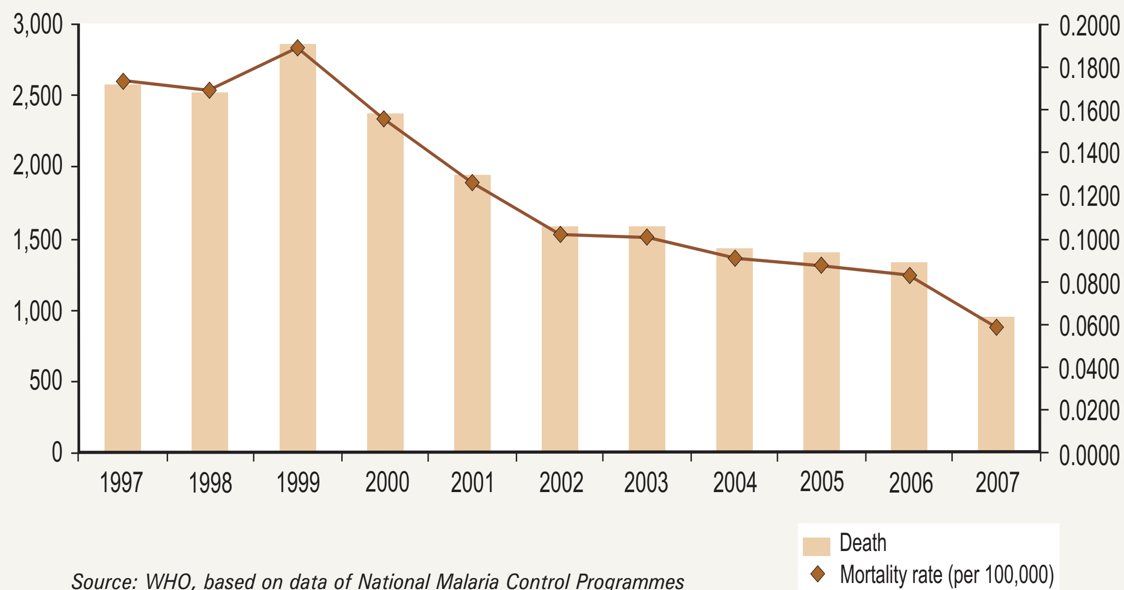


Source: WHO, based on data of National Malaria Control Programmes



Source: WHO, based on data of National Malaria Control Programmes

Figure 4: Malaria mortality rate (per 100 000 population), Western Pacific Region, 1997-2007



Source: WHO, based on data of National Malaria Control Programmes

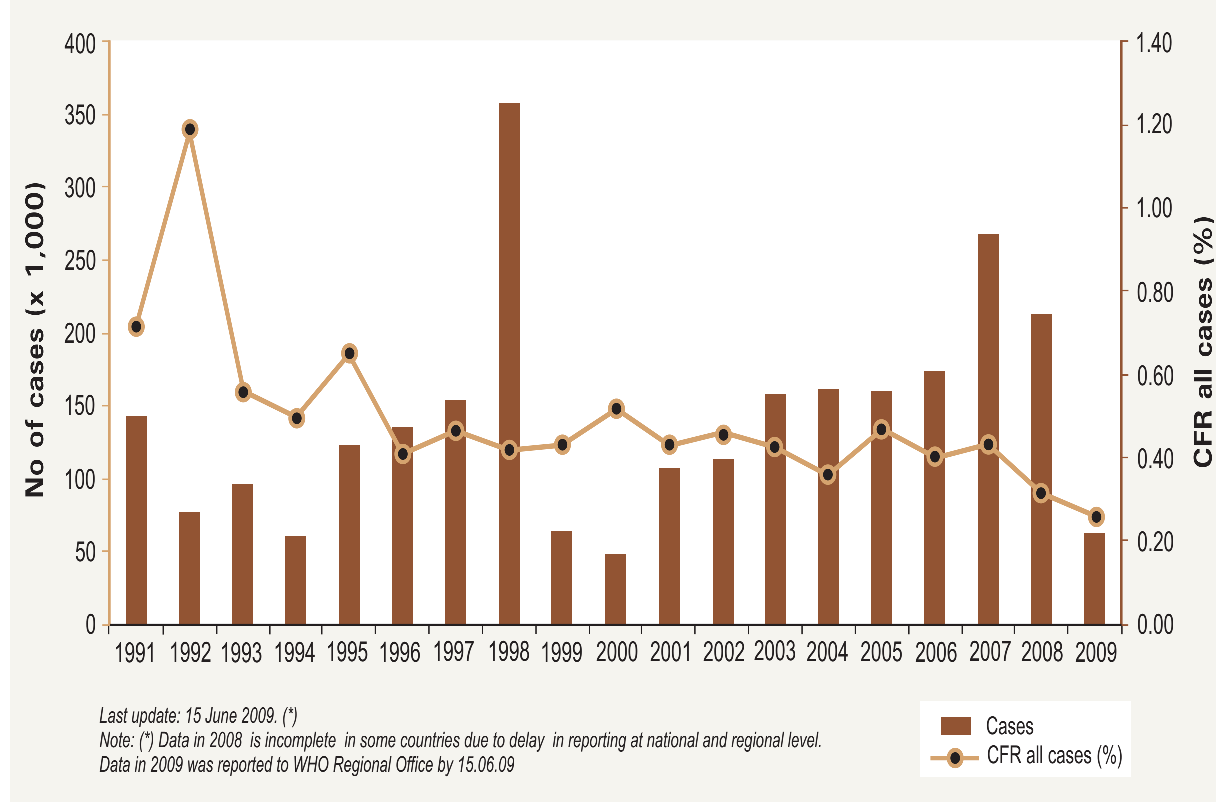


Figure 5: Number of reported DF/DHF cases and Case Fatality Rates in the Western Pacific Region, 1991-2009
No of cases (x 1,000)
CFR all cases (%)
400
350
300
250
200
150
100
50
0
1.40
1.20
1.00
0.80
0.60
0.40
0.20
0.00
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
Last update: 15 June 2009. (*)
Note: (*) Data in 2008 is incomplete in some countries due to delay in reporting at national and regional level.
Data in 2009 was reported to WHO Regional Office by 15.06.09
Cases
CFR all cases (%)

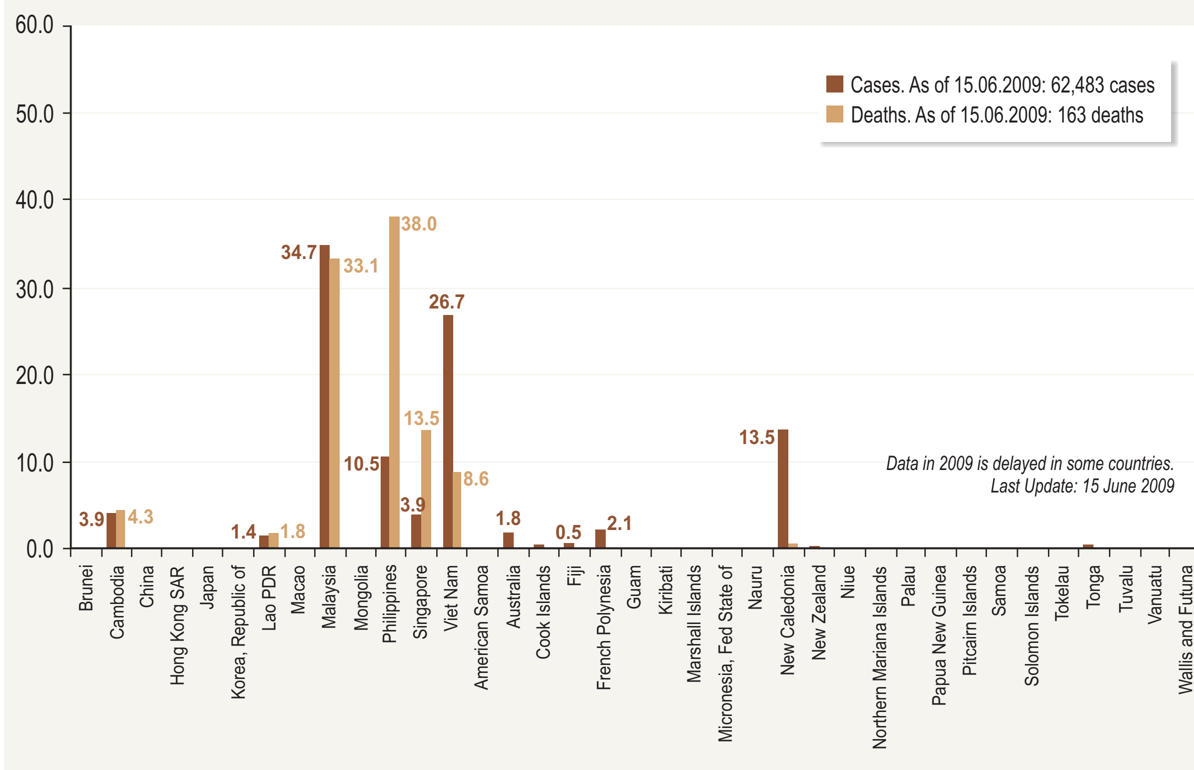


Figure 6: Dengue situation in Western Pacific Region as of 15 June 2009: Proportion of reported DF/DHF cases and deaths by countries over total number of reported cases and deaths for the Western Pacific Region
60.0
50.0
40.0
30.0
20.0
10.0
0.0
Cases. As of 15.06.2009: 62,483 cases
Deaths. As of 15.06.2009: 163 deaths
3.9
4.3
1.4
1.8
34.7
33.1
10.5
38.0
3.9
13.5
26.7
8.6
1.8
0.5
2.1
13.5
Data in 2009 is delayed in some countries.
Last Update: 15 June 2009
Brunei
Cambodia
China
Hong Kong SAR
Japan
Korea, Republic of
Lao PDR
Macao
Malaysia
Mongolia
Philippines
Singapore
Viet Nam
American Samoa
Australia
Cook Islands
Fiji
French Polynesia
Guam
Kiribati
Marshall Islands
Micronesia, Fed State of
Nauru
New Caledonia
New Zealand
Niue
Northern Mariana Islands
Palau
Papua New Guinea
Pitcairn Islands
Samoa
Solomon Islands
Tokelau
Tonga
Tuvalu
Vanuatu
Wallis and Futuna

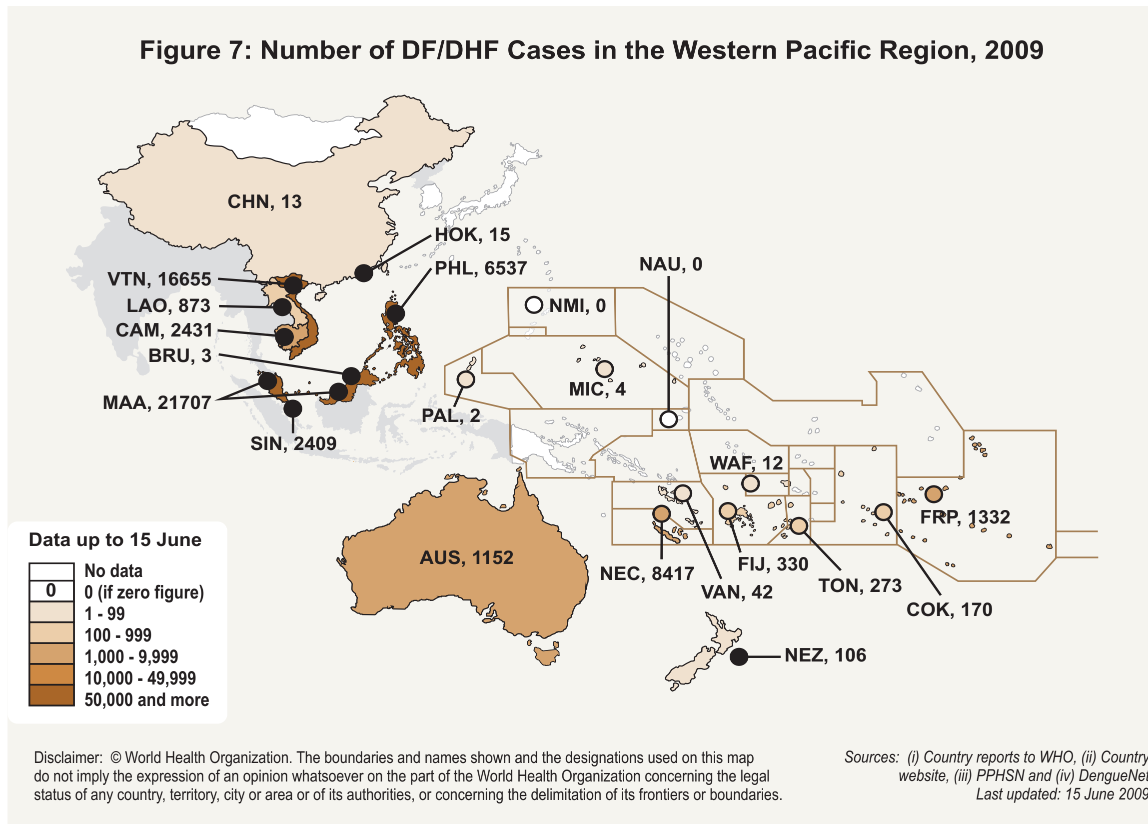
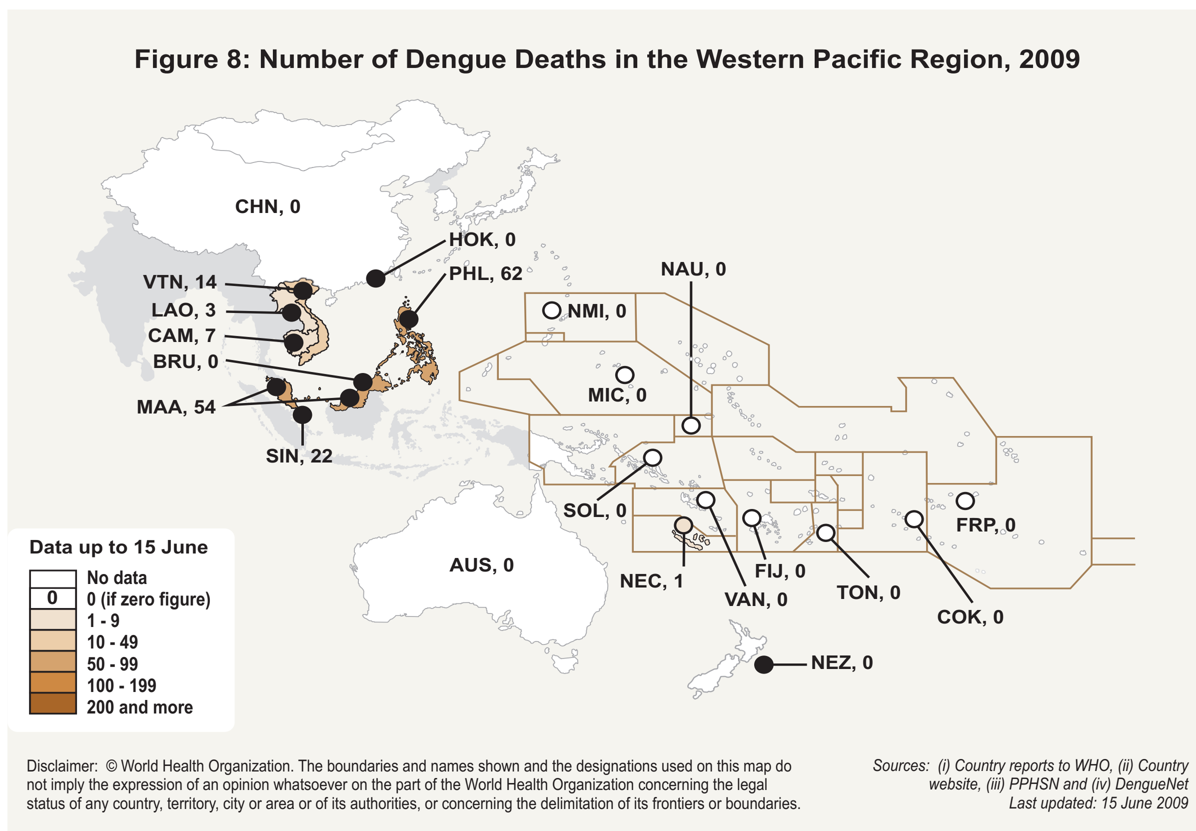


Figure 7: Number of DF/DHF Cases in the Western Pacific Region, 2009



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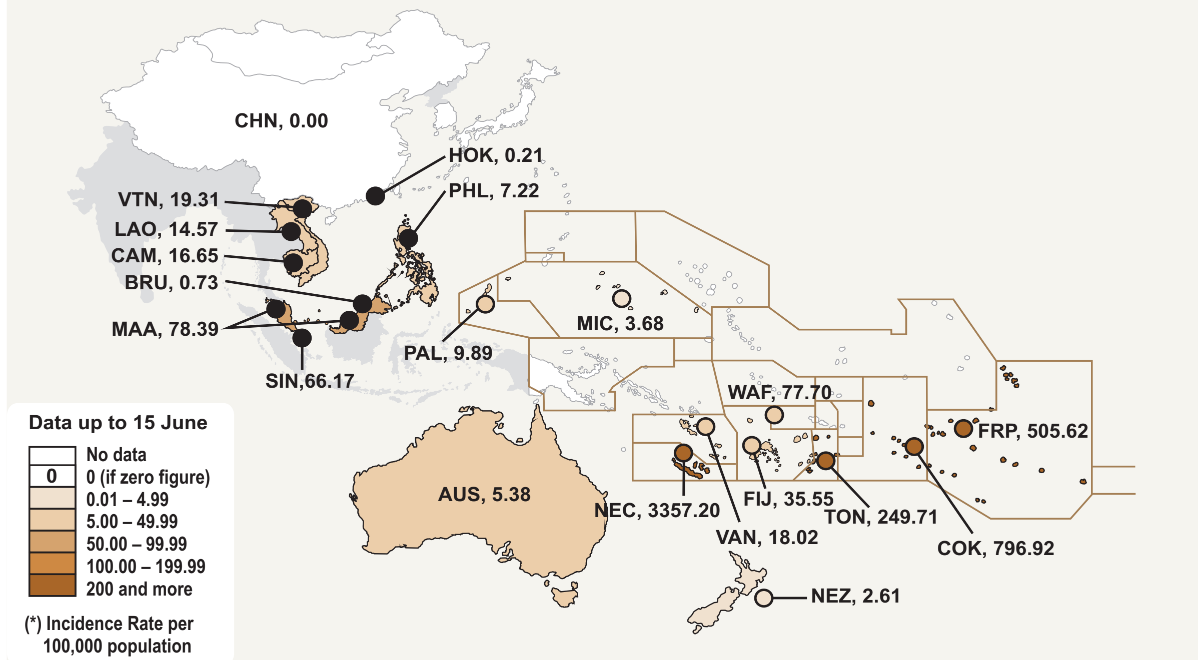
Sources: (i) Country reports to WHO, (ii) Country website, (iii) PPHSN and (iv) DengueNet
Last updated: 15 June 2009

Figure 9: Dengue Incidence Rate (*) in the Western Pacific Region, 2009



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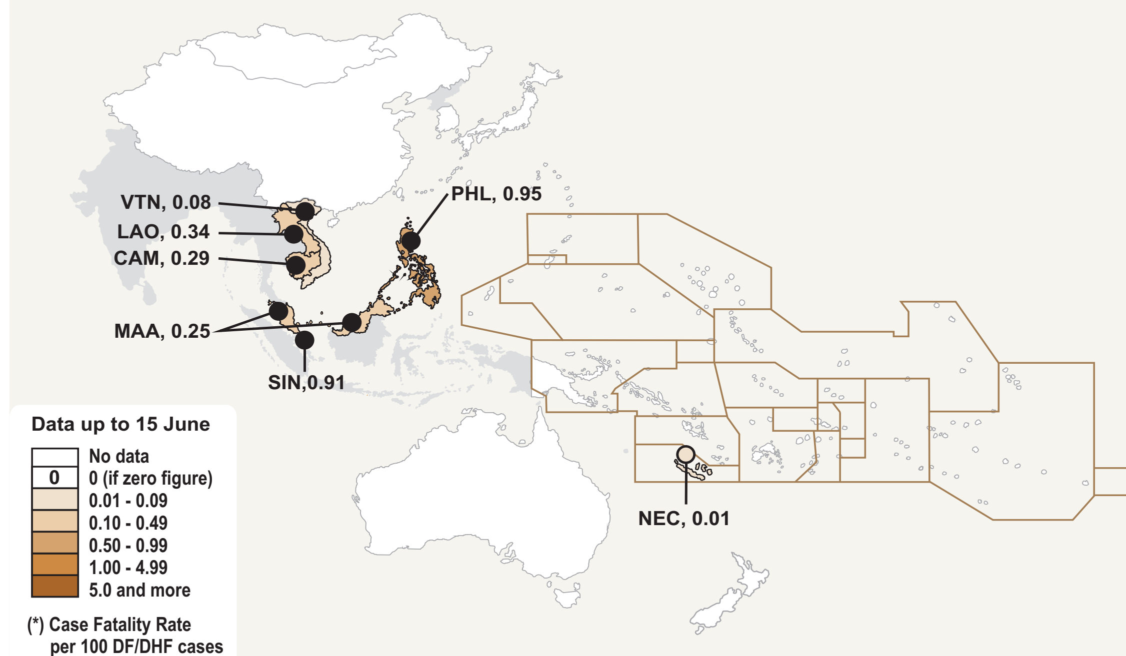
Sources: (i) Country reports to WHO, (ii) Country website, (iii) PPHSN and (iv) DengueNet
Last updated: 15 June 2009

Figure 10: Dengue Case Fatality Rate(*) in the Western Pacific Region, 2009



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Sources: (i) Country reports to WHO, (ii) Country website, (iii) PPHSN and (iv) DengueNet
Last updated: 15 June 2009

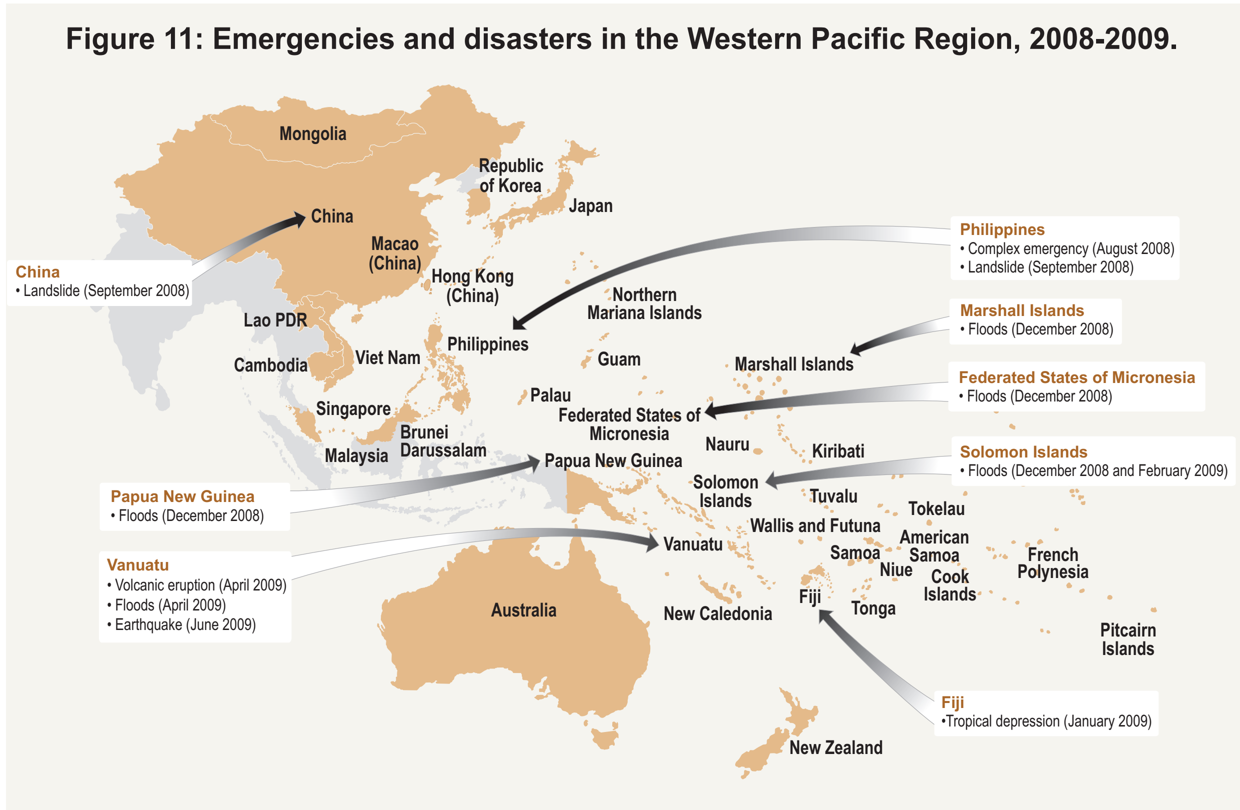

Figure 11: Emergencies and disasters in the Western Pacific Region, 2008-2009.

Appendix: Definition of Terms

Acute respiratory infections, cases and deaths. The recorded and estimated number of new cases of and deaths due to respiratory infections during the most recent year for which valid statistics are available. Disaggregated by gender.

Admission. Formal acceptance, by a health facility, of a patient who is to receive medical or paramedical care while occupying a health facility bed. Healthy babies born in hospital should not be counted if they do not require special care.

Adolescent birth rate. Annual number of live births to girls aged 15-19 years, per 1000 girls aged 15-19 years.

Adult literacy rate. The percentage of the total population aged 15 years and over who can, with understanding, both read and write a short simple statement on their everyday lives. Disaggregated by gender. Notes are made when a country has a different definition.

Annual number of graduates. Includes all students in the health education sector duly conferred with an academic degree or diploma signifying advancement to a new level of skill, achievement or activity.

Annual population growth rate. (See Population growth rate)

Antenatal care. Includes recording medical history, assessment of individual needs, advice and guidance on pregnancy and delivery, screening tests, education on self-care during pregnancy, identification of conditions detrimental to health during pregnancy, first-line management and referral if necessary.

Antenatal care coverage.

- **At least one visit.** Percentage of women who utilized antenatal care provided by skilled birth attendants for reasons related to pregnancy at least once during pregnancy as a percentage of live births in a given time period.
- **At least four visits.** Percentage of women who utilized antenatal care provided by skilled birth attendants for reasons related to pregnancy at least four times during pregnancy as a percentage of live births in a given time period.

Area. The total surface area comprising land area and all inland waters. Presented in 1000 square kilometres or actual value.

Beds. The number of beds regularly maintained and staffed for the accommodation and full-time care of a succession of inpatients and which are situated in wards or a part of the hospital where continuous medical care for inpatients is provided. The total number of such beds constitutes the normally available bed complement of the hospital. Cribs and bassinets maintained for use by healthy newborn babies who do not require special care are not included.

Body mass index (BMI). Calculated as weight in kilograms (kg) divided by height in square metres (m^2).

Cancers, cases and deaths. The number of new cases detected due to all types and specific types of cancer during the most recent year for which valid data are available. The number of deaths due to all types and specific types of cancer that occurred during the most recent year for which valid data are available. Disaggregated by gender.

Causes of morbidity. (See Leading causes of morbidity)

Causes of mortality. (See Leading causes of mortality).

Circulatory system diseases, cases and deaths. The number of cases and deaths resulting from any form of circulatory disease. Disaggregated by gender.

Contraceptive prevalence rate. Percentage of women between 15-49 years who are practising, or whose sexual partners are practising, any form of contraception.

Crude birth rate. The registered number of live births for every 1000 population in a given year or period of time. Disaggregated by gender.

Crude death rate. The registered number of deaths for every 1000 population in a given year or period of time. Disaggregated by gender.

Dependency ratio. The ratio of persons in the 'dependent' age groups (under 15 years plus 65 years and above) to those in the 'economically productive' age group (15-64 years), expressed as a percentage.

Diabetes mellitus, cases and deaths. The number of existing cases and deaths due to diabetes mellitus during the most recent

year for which valid statistics are available. Disaggregated by gender.

Diarrhoeal diseases, cases and deaths. The number of new cases of and/or recorded or estimated deaths from all types of diarrhoeal disease during the most recent year for which valid statistics are available. Disaggregated by gender.

Disaster. A serious disruption of the functioning of a community or a society involving widespread human, material, economic or environmental losses and impacts, which exceeds the ability of the affected community or society to cope using its own resources.

Discharges (including deaths). The number of persons, living or dead, whose stay in a health care facility has terminated and whose departure has been officially recorded.

Diseases of the circulatory system. (See Circulatory system diseases)

DOTS. Directly observed treatment, short-course (DOTS) is the recommended strategy for tuberculosis control. It comprises:

(1) government commitment to ensuring sustained, comprehensive tuberculosis-control activities;

(2) case detection by sputum-smear microscopy among symptomatic patients self-reporting to health services;

(3) standardized short-course chemotherapy, using regimens of six to eight months, for at least all confirmed smear-positive cases (Good case management includes DOTS during the intensive phase for all new sputum-smear-positive cases, the continuation phase of rifampicin-containing regimens and the whole re-treatment regimen.);

(4) a regular, uninterrupted drug supply of all essential antituberculosis drugs; and

(5) a standardized recording and reporting system that allows assessment of case-finding and treatment results for each patient and of the tuberculosis control programme's performance overall.

DOTS coverage. (See Tuberculosis DOTS coverage)

Emergency. A state in which normal procedures are suspended and extraordinary measures are taken in order to avert the impact of a hazard on the community. Authorities should be prepared to respond effectively to an emergency. If not managed properly, some emergencies will become disasters.

Estimated population. (See Population)

Estimated HIV prevalence in adults. Percentage of persons with HIV infection among persons aged 15-49 years.

Estimated HIV prevalence among TB cases. Estimated percentage of HIV-positive cases among TB cases.

External source of government health expenditure. Pertains to government expenditure on health coming from external sources, mainly in the form of grants passing through the Government or loans channelled through the national budget.

External resources for health as a percentage of general government expenditure on health. The ratio of external resources for health to total general government expenditure on health, expressed as a percentage.

Facilities with HIV testing and counselling services. Number of facilities where HIV testing and counselling is available, including both health and non-health facilities.

GDP per capita annual growth rate (%). Least squares annual growth rate, calculated from constant price GDP in local currency units.

Gender empowerment measure (GEM) value. A composite index measuring gender inequality in three basic dimensions of empowerment— economic participation and decision-making, political participation, and decision-making, and power over economic resources.

Gender-related development index (GDI) value. A composite index measuring average achievement in the three basic dimensions captured in the human development index—a long and healthy life, knowledge and a decent standard of living— adjusted to account for inequalities between men and women.

General government expenditure on health (excluding social security).

General government expenditure on health refers to expenditures incurred by central, state/regional and local government authorities, excluding social security schemes. Included are non-market, non-profit institutions that are controlled and mainly financed by government units.

Government expenditure on health. The sum of outlays by government entities to purchase health care services and goods, notably by ministries of health and social security agencies. The revenue base may comprise multiple sources, including external funds. (See also External source of government health expenditure)

(1) **Amount.** Government expenditure on health expressed in million US dollars or another indicated currency.

(2) **General government expenditure on health as a percentage of total expenditure on health.** The ratio of government expenditure on health to total expenditure on health, expressed as a percentage.

(3) **General government expenditure on health as a percentage of total general government expenditure.** The ratio of government expenditure on health to total government expenditure, expressed as a percentage.

Growth rate. (See also Population growth rate)

Growth rate of per capita GDP (%). Least squares annual growth rate, calculated from constant price GDP in local currency units.

Gross domestic product (GDP). The total output of goods and services for final use produced by residents and non-residents, regardless of the allocation to domestic and foreign claims.

Gross national income (GNI). The sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income (compensation of employees and property income) from abroad.

Gross national product (GNP). Comprises the gross domestic product (GDP), plus net factor income from abroad, which is the income residents receive from abroad for factor services (labour and capital) less similar payments made to non-residents who contributed to the domestic economy.

Hazard. A dangerous phenomenon, substance, human activity or condition that may cause loss of life, injury or other health impact, property damage, loss of livelihoods and services, social and economic disruption, or environmental damage.

Healthy life expectancy (HALE). The average number of years in full health a person (usually at age 60) can expect to live based on current rates of ill-health and mortality. Disaggregated by gender.

Health care waste generation (metric tons per year). The total weight of all solid and liquid waste generated by all public and private health care establishments, health research facilities, and health-related laboratories plus waste generated by home health care activities, such as dialysis, insulin injections, etc. during the course of a calendar year. Expressed as metric tons per year. Disaggregated by location, i.e. urban or rural.

Health expenditure per capita. (See Total health expenditure - Per capita total expenditure on health)

Health facilities. (See Health infrastructure)

Health infrastructure. Public (state/ government) health facilities

- **General hospital**. Hospital providing a range of different services for patients of various age groups and with varying disease conditions.

- **Specialized hospital**. Hospital admitting primarily patients suffering from a specific disease or affection of one system, or reserved for the diagnosis and treatment of conditions affecting a specific age group or of a long-term nature.

- **District/first-level referral hospital.** Hospital at the first referral level responsible for a district or a defined geographical area containing a defined population and governed by a politico-administrative organization, such as a district health management team. The role of a district hospital in primary health care has been expanded beyond being dominantly curative and rehabilitative to include promotional,

preventive and educational roles as part of a primary health care approach.

- **Primary health care centre**. Centre that serve as first point of contact with a health professional and provides outpatient medical and nursing care. Services are provided by general practitioners, dentists, community nurses, pharmacists and midwives, among others.

Health infrastructure. Private facilities.

- **Hospital.** Hospital not owned by government or parastatal organizations (includes both private not-for profit, e.g. owned by religious organizations, and private-for-profit).

- **Outpatient clinic.** Clinic not owned by government or parastatal organizations (includes both private-not-for-profit, e.g. owned by religious organizations, and private-for-profit).

Health insurance coverage as a percentage of total population. The percentage of the population covered by health insurance, both private and public health insurance schemes.

Health workforce.

- **Physicians**. Graduates of any faculty or school of medicine, licensed or registered to work in the country as medical doctors who apply preventive or curative measures and/or conduct research. Also expressed as number of physicians per 1000 population. Disaggregated by gender, area and sector.

- **Dentists**. Graduates of any faculty or school of dentistry, odontology or stomatology, duly licensed or registered to practise dentistry, and actually working in the country in any dental field to apply medical knowledge in the field of dentistry and/or conduct research. Also expressed as number of dentists per 1000 population. Disaggregated by gender, area and sector.

- **Pharmacists**. Graduates of any faculty or school of pharmacy, duly licensed or registered to practise pharmacy and actually working in the country in pharmacies, hospitals, laboratories, industry, etc. applying pharmaceutical concepts and theories by preparing and dispensing or selling medicaments and drugs. Also expressed as number of pharmacists per 1000 population. Disaggregated by gender, area and sector.

- **Nurses**. Persons who have completed a programme of basic nursing education and are qualified and registered or authorized to provide responsible and competent service for the promotion of health, prevention of illness, care of the sick, and rehabilitation, and are actually working in the country. Also expressed as number of nurses per 1000 population. Disaggregated by gender, area and sector.

- **Midwives**. Persons who have completed a programme of midwifery education and have acquired the requisite qualifications to be registered and/or legally licensed to practise midwifery, and are actually working in the country. The persons may or may not have prior nursing education. Also expressed as number of midwives per 1000 population. Disaggregated by sex, gendera and sector.

- **Paramedical staff.** Health care assistants, laboratory technicians, technologists, therapists, nutritionists, sanitarians, among others, who are actually working in the country and are graduates of 2- to 5-year health courses in recognized health training institutions. Also expressed as number of paramedical staff per 1000 population. Disaggregated by gender, area and sector.

- **Community health workers**. Lay members of communities who have a period of on-the-job training, sometimes formalized in apprenticeships, who work either for pay or as volunteers in association with the local health care system in both urban and rural environments and usually share ethnicity, language, socioeconomic status and life experiences with the community members they serve. Also expressed as number of community health workers per 1000 population. Disaggregated by gender, area and sector.

Area.

- **Urban**. Those working in urban areas or in planned metropolitan communities in developed areas designed to be self-sufficient, with their own housing, education, commerce and recreation.

- **Rural**. Those working rural areas or in areas outside cities and metropolitan areas generally regarded as underdeveloped in terms of infrastructure and specialized services.

Sector.

- **Public.** Those who are employed in the public sector, which is the portion of society controlled by national, state or provincial and local governments.

- **Private.** Those who are employed in the private sector, which comprises private corporations, households and non-profit institutions serving households.

HIV prevalence among population aged 15–24 years. The percentage of the population aged 15–24 whose blood samples tested positive for HIV.

Hospital beds. (See Beds)

Human Development Index (HDI). The HDI measures the average achievements in a country in three basic dimensions of human development—longevity, knowledge and a decent standard of living. A composite index, the HDI thus contains three variables: life expectancy, educational attainment (adult literacy and combined primary, secondary and tertiary enrolment) and real GDP per capita (in purchasing power parity or PPP$).

Immunization coverage for infants. (See Percentage of infants fully immunized with BCG, DTP3, POL3, measles (MCV1 and MCV2), hepatitis B3, Hib3, and DTP1, Hepb birth dose, and Vit A1).

Infant mortality rate. The number of registered deaths among infants (below one year of age) per 1000 live births in a given year or period of time. Disaggregated by gender.

Injuries, all types. Recorded or estimated number of diseases/injuries and deaths related to homicide and violence; motor and other vehicular accidents; work accidents; and suicide. Disaggregated by gender.

- **Homicide and violence, cases and deaths.** Total number of cases and deaths from injuries resulting from homicides and other forms of violence. Disaggregated by gender.

- **Motor and other vehicular accidents, cases and deaths.** The total number of cases refers to injuries (non-fatal and fatal) from motor and other vehicular accidents, while the total number of deaths refers only to the fatal injuries. Disaggregated by gender.

- **Occupational injuries, cases and deaths.** Total number of cases and deaths due to injuries arising out of or in the course of work. Disaggregated by gender.

- **Suicide, cases and deaths.** Total number of cases and deaths from self-inflicted injuries with the intention of taking one's life. Also expressed as a proportion to the general population. Disaggregated by gender.

Inpatient. A person admitted to a health care facility and who usually occupies a bed in that health care facility.

Leading causes of morbidity. The most frequently occurring causes of morbidity (usually 10) among inpatients for which the greatest number of cases have been reported during a given year. The crude morbidity rate is usually expressed as the number of cases of disease per 100 000 population for a given year, disaggregated by gender.

Leading causes of mortality. The most frequently occurring causes of mortality (usually 10) under which the greatest number of deaths have been reported during a given year. Causes of mortality are all those diseases, morbid conditions, or injuries which either resulted in or contributed to death, and the circumstances of the accident or violence that produced any such injuries. The crude mortality rate is usually expressed as the number of deaths from a specific cause per 100 000 population for a given year. Disaggregated by gender.

Life expectancy at birth. The average number of years a newborn baby is expected to live if mortality patterns at the time of its birth were to prevail throughout the child's life. Disaggregated by gender.

Live birth. The complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of the pregnancy, which, after such separation, breathes or shows other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been

cut or the placenta is attached. Each product of such a birth is considered liveborn.

Malaria death rate. The number of malaria deaths per 100 000 population. Disaggregated by gender.

Malaria incidence rate. The number of cases of malaria per 100 000 population. Disaggregated by gender.

Maternal causes, cases and deaths. The number of cases and deaths due to abortion, eclampsia, haemorrhage, obstructed labour and sepsis among women while pregnant or within 42 days of termination of pregnancy, irrespective of the duration or site of the pregnancy. Maternal causes of death may be subdivided into two groups:

(1) **direct obstetric death**, resulting from obstetric complications of the pregnant state (pregnancy, labour and the puerperium), from interventions, omissions, incorrect treatment or from a chain of events resulting from any of the above; and

(2) **indirect obstetric death,** resulting from previous existing disease or disease that developed during pregnancy and that was not due to direct obstetric causes, but was aggravated by the physiological effects of pregnancy.

Maternal mortality ratio. The number of registered deaths among women, from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy, childbirth or within 42 days of termination of pregnancy, irrespective of the duration or site of the pregnancy, for every 100 000 live births in a given year or period of time.

Mental disorders, cases and deaths. The number of cases and deaths from any form of mental disorder, i.e. clinical, behavioural or psychological syndrome, characterized by the presence of distressing symptoms or significant impairment of functioning. Disaggregated by gender.

Mortality rate. An estimate of the proportion of a population that dies during a specified period. The numerator is the number of persons dying during the period; the denominator is the total number of people in the population, usually estimated as the mid-year population. This rate is an estimate of the person-time death rate, i.e., the death rate per 10^n person-years. If the rate is low, it is also a good estimate of the cumulative death rate. This rate is also called the **crude death rate**.

Motor and other vehicular accidents. The total number of cases refers to injuries (non-fatal and fatal) from motor and other vehicular accidents, while the total number of deaths refers only to the fatal injuries.

Multidrug-resistant tuberculosis (MDR-TB). Describes strains of tuberculosis that are resistant to at least the two main first-line TB drugs— isoniazid and rifampicin.

National poverty line. The percentage of the population living below the poverty line deemed appropriate for a country by its authorities. National estimates are based on population-weighted subgroup estimates from household surveys.

National underweight, stunting and wasting prevalence.

- **Underweight**. Low weight for age or weight for age more than a standard deviation of 2 below the median value of the reference (healthy) population.
- **Stunting.** Low height for age or height for age more than a standard deviation of 2 below the median value of the reference (healthy) population.
- **Wasting.** Low weight for height or weight for height more than a standard deviation of 2 below the median value of the reference (healthy) population.

Natural rate of increase. A measure of population growth (in the absence of migration) comprising addition of newborn infants to the population and subtraction of deaths. Expressed as a percentage per annum. Disaggregated by gender.

Neonatal mortality rate. The number of registered deaths in the neonatal period per 1000 live births in a given year or period of time. Disaggregated by gender.

Neonatal period. Commences at birth and ends 28 completed days after birth.

Noncommunicable risk factors.

- **Behavioural measures.**
  (1) **Daily smokers**. Those who smoke any tobacco product every day.

  (2) **Current drinkers**. Those who have consumed a drink containing alcohol in the last 12 months.

(3) **Binge drinkers**. Consuming ≥5 (males) or ≥4 (females) standard drinks in a sitting. Standard drinks defined as: beer (285 ml), spirits (30 ml), wine (120 ml), aperitif (60 ml).

(4) **Physically inactive**. Less 600 MET minutes/ week. MET is defined as the Activity Metabolic Rate divided by the Resting Metabolic Rate (=1 MET) across 3 domains (work, leisure and transport) and 2 levels (moderate and vigorous).

(5) **Low fruit and vegetable consumption**. Total number of fruit and vegetable servings consumed each day per person.

- **Physical measures.**
  (1) **Raised blood-pressure**. Systolic BP≥140 mmHg and/or diastolic BP≥90 mmHG or receiving treatment.
  (2) **Overweight**. BMI≥25 to <30

  (3) **Obese**. BMI≥30

- **Biochemical measures.**
  (1) **Raised blood-cholesterol/ lipids**. Total cholesterol≥5.2 mmol/Lor 200 mg/dl whole blood.

  (2) **Raised blood glucose**. BG≥110 mg/dl or 6.1 mmol/L of whole blood without having known diabetes or being on treatment. Diabetes as diagnosed by medical doctor.

Number of mass drug administration (MDA) rounds for lymphatic filariasis. Number of rounds of mass drug administration of diethylcarbamazine or ivermectin in combination with albendazole conducted for prevention of lymphatic filariasis.

Obese. A person whose calculated body mass index (BMI) is greater than or equal to 30 kg/m^2.

Outpatient. A person who goes to a health care facility for consultation, is not admitted to the facility and does not occupy a hospital bed for any length of time.

Overweight. A person whose calculated body mass index (BMI) is greater than or equal to 25 kg/m^2 but less than 30 kg/m^2.

Per capita gross domestic product (GDP) at current market prices. Gross domestic product divided by mid-year population (or population size if mid-year population is not available).

Per capita gross national income (GNI). Gross national income divided by mid-year population (or population size if mid-year population is not available).

Per capita gross national product (GNP). The per capita GNP is obtained by dividing the total gross national product by the total population.
(1) the gross domestic product (GDP), which measures the total output of goods and services for final use produced by residents and non-residents, regardless of the allocation to domestic and foreign claims, plus
(2) net factor income from abroad, which is the income residents receive from abroad for factor services (labour and capital) less similar payments made to non-residents who contributed to the domestic economy.

Per capita health expenditure (US$). The average health expenditure (in United States dollars) per person in a year.

Per capita income. Income per person in a population. Per capita income is often used to measure a country's standard of living.

Percentage distribution of population aged 60 years or older by gender. The percentage of the male and the female populations aged 60 years or older in a given period of time.

Percentage distribution of population less than 15 years. (See Percentage of the population below 15 years of age or above 65 years of age.)

Percentage distribution of population above 65 years. (See Percentage of the population below 15 years of age or above 65 years of age.)

Percentage of deliveries attended by skilled health personnel. The percentage of deliveries attended by personnel trained: to give the necessary supervision, care and advice to women during pregnancy, labour and the postpartum period; to conduct deliveries on their own; and to care for newborn infants. Estimated in this CHIPS publication using two indicators:

(1) **Percentage of deliveries at home attended by skilled health**

personnel. Percentage of deliveries that take place at home and are attended by personnel trained: to give the necessary supervision, care and advice to women during pregnancy, labour and the postpartum period; to conduct deliveries on their own; and to care for newborn infants. Expressed as a percentage of total deliveries.

(2) **Percentage of deliveries in health facilities.** Percentage of total deliveries in public and private hospitals, clinics and health centres, irrespective of who attended the delivery at those facilities.

Percentage of infants fully immunized with BCG, DTP3, POL3, measles (MCV1 and MCV2), hepatitis B3, Hib3, and DTP1, HepB birth dose, and VitA1. Percentage of children under one year of age who have received immunization against tuberculosis (BCG), diphtheria, pertussis, tetanus (DTP3 and DTP1), poliomyelitis (POL3), measles (at least one dose and two doses) and hepatitis B3 and HepB birth dose. Also includes coverage with vitamin A1.

Percentage of newborn infants weighing at least 2500 grams at birth. The percentage of newborn infants whose birth weight is equal or greater than 2500 grams, the measurement being taken preferably within the first hours of life before significant postnatal weight loss has occurred. Disaggregated by gender. Notes are made when a country has a different definition.

Percentage of people with advanced HIV infection receiving ART. Percentage of people with advanced HIV infection who are receiving antiretroviral therapy (ART) according to a nationally approved treatment protocol (or WHO/Joint UN Programme on HIV and AIDS standards) among the estimated number of people with advanced HIV infection.

Percentage of the population: 0- 4 years of age; 5-14 years old; or 65 years and older. The percentage of the total population aged 0 to 4 years, 5 to 14 years, or 65 years and above in a given period of time. Disaggregated by gender.

Percentage of the population with access to safe water. (See Proportion of the population using improved drinking water source.)

Percentage of the population with access to excreta disposal facilities. (See also Proportion of the population using improved sanitation facilities.)

Percentage of pregnant women immunized with tetanus toxoid (TT2). The percentage of pregnant women adequately immunized against tetanus, having received at least two doses of tetanus toxoid during pregnancy. Expressed as a percentage of all live births since the number of pregnant women is generally not available.

Percentage of pregnant women with anaemia. Percentage of pregnant women aged 15 to 49 years with a blood concentration of haemoglobin below 110 grams per litre (or 6.83 millimoles per litre) or haematocrit below 33%.

Percentage of women given at least 2 doses of TT2+. (See also Percentage of pregnant women immunized with tetanus toxoid (TT2).

Percentage of women in the reproductive age group using modern contraceptive methods. The percentage of women aged 15-49 in marital or consensual unions who are practising, or whose male partners are practising, any form of modern contraception, including female and male sterilization, oral contraceptives, injectables or implants, intrauterine devices, condoms, spermicidal foams, jelly, cream, sponges, among others. Notes are made when specific female populations are pertained to, such as only married women.

Person with midwifery skills. A person who has successfully completed the prescribed course in midwifery and is able to give the necessary supervision, care and advice to women during pregnancy, labour and the postpartum period, to conduct deliveries alone, to provide lifesaving obstetric care, and to care for the newborn infant.

Population. All the inhabitants of a given country or area considered together. Estimates are based on a recent census, official national data or United Nations projections. Presented in thousands or actual value. Disaggregated by gender.

Population density. Population per square kilometre.

Population growth rate. The average exponential population growth of the

population in a given period of time. Expressed as a percentage. Disaggregated by gender.

Prevalence of underweight children under five years of age. Percentage of children under five years of age whose weight for age is less than a standard deviation of 2 from the median for the international reference population (often referred to as the National Centre for Health Statistics/ WHO reference population) aged 0-59 months. Disaggregated by gender.

Prevalence rate. The proportion of the population with the health condition or disease in a given time. Expressed in 100, 1000, 10 000 or 100 000 population.

Private health expenditure. The sum of total outlays on health by private entities, notably commercial insurance, non-profit institutions and households acting as complementary funders to the previously cited institutions or disbursing unilaterally on health commodities. This includes out-of-pocket health expenditure, patient co-payments, private health insurance premiums, and health expenditures by nongovernmental organizations.

Private expenditure on health as a percentage of total expenditure on health. Ratio of private expenditure on health to total expenditure on health, expressed as a percentage.

Proportion of babies exclusively breast-fed for the first six months. Proportion of babies exclusively breast-fed for the first six months, i.e. given only breast milk except for drops or syrups consisting of vitamins, minerals or medicines.

Proportion of babies aged 6-9 months receiving breast milk and complementary food. Proportion of babies aged 6-9 months receiving breast milk and complementary food, i.e. any food, whether home prepared or industrially processed, suitable as a complement to breast milk to satisfy the nutritional requirements of the infant.

Proportion of babies less than 12 months of age with breast-feeding initiated within one hour of birth. Proportion of infants less than 12 months of age who were breast-fed by their mothers within one hour after birth, based on mother's recall.

Proportion of children 0-59 months who had diarrhoea in the past two weeks and were treated with ORT. Proportion of children ages 0-59 months with diarrhoea in the two weeks preceding the survey who received oral rehydration therapy (oral rehydration therapy solutions or recommended homemade fluids) or increased fluids and continued feeding.

Proportion of children 0-59 months of age who had suspected pneumonia in the past two weeks and were taken to an appropriate health care provider. Proportion of children ages 0-59 months with suspected pneumonia in the two weeks preceding the survey taken to an appropriate health care provider.

Proportion of 1-year old children immunized against measles. Percentage of children under one year of age who have received at least one dose of measles vaccine.

Proportion of 1-year old children protected against neonatal tetanus through immunization of their mothers. Proportion of infants whose mothers had two Tetanus Toxoid doses during the last pregnancy or had received at least TT2 (3 years protection), TT3 (5 years protection), TT4 (10 years protection) or TT5 (lifetime protection).

Proportion of population in malaria-risk areas using effective malaria prevention measures. Percentage of children aged 0–59 months sleeping under insecticide-treated bednets.

Proportion of population in malaria-risk areas using effective malaria treatment measures. Proportion of children aged 0–59 months who were ill with fever in the two weeks before the survey and who received appropriate antimalarial drugs.

Proportion of population with access to affordable essential drugs on a sustainable basis. The percentage of the population that has access to a minimum of 20 of the most essential drugs. Access is defined as having drugs continuously available and affordable at public or private health facilities or drug outlets that are within one hour's walk of the population. Essential drugs are drugs that satisfy the health care needs of the majority of the population.

Proportion of population using an improved sanitation facility.

Percentage of the population with access to facilities that hygienically separate human excreta from human, animal and insect contact. Facilities such as sewers or septic tanks, pour-flush latrines and simple pit or ventilated improved pit latrines are assumed to be adequate provided that they are not public, according to the World Health Organization (WHO) and United Nations Children's Fund (UNICEF) *Global Water Supply and Sanitation Assessment 2000 Report*. To be effective, facilities must be correctly constructed and properly maintained. Disaggregated by location: urban or rural.

Proportion of population using an improved drinking water source. The percentage of the population who use any of the following types of water supply for drinking: piped water, public tap, borehole or pump, protected well, protected spring or rainwater. Improved water sources do not include vendor-provided waters, bottled water, tanker trucks or unprotected wells and springs. Disaggregated by location: urban or rural.

Proportion of tuberculosis cured under directly observed treatment short-course (DOTS). The proportion of new smear-positive tuberculosis cases registered under DOTS in a given year that successfully completed treatment, whether with bacteriological evidence of success ('cured') or without ('treatment completed'). Expressed as a percentage.

Proportion of tuberculosis detected under directly observed treatment short-course (DOTS). The percentage of estimated new infectious tuberculosis cases under the DOTS strategy. Expressed as a ratio of the number of DOTS-detected cases to the estimated number of new cases.

Proportion of vehicles using unleaded gasoline (%). The percentage of total motor vehicles that use unleaded gasoline as their primary fuel. Disaggregated by location: urban or rural.

Public expenditure on health. (See Government expenditure on health.)

Public health facilities. (See Health infrastructure.)

Purchasing power parity (PPP). The rates of conversion that equalize purchasing power across the full range of goods and services contained in total expenditure and gross domestic product of a country.

Rate of growth of per capita GDP (%) (See Growth rate of per capita GDP.)

Rate of natural increase of population. (See Natural rate of increase.)

Reported mass drug administration (MDA) coverage for lymphatic filariasis among total population. Proportion of the population in identified filaria-endemic areas covered by MDA.

Risks. Potential consequences of a hazard affecting communities (deaths, injuries, disease, disabilities, displacement, damage, destruction, contamination, unemployment, etc.).

Selected communicable diseases, cases and deaths. The number of new cases and deaths due to hepatitis (types A, B and C, E and unspecified), cholera, dengue fever/dengue haemorrhagic fever (DHF), encephalitis, gonorrhoea, leprosy, malaria, plague, syphilis and typhoid fever in a given year. Disaggregated by gender.

Selected diseases under the WHO expanded programme on immunization (EPI), cases and deaths. The number of reported cases and deaths due to a specific disease among selected preventable diseases (AFP, congenital rubella syndrome, diphtheria, hib meningitis, measles, mumps, neonatal tetanus, pertussis [whooping cough], poliomyelitis, rubella, total tetanus and yellow fever) in a specific country or area over a given year.

Skilled health personnel or skilled birth attendants. Those who are properly trained and who have appropriate equipment and drugs. Excludes traditional birth attendants, even if they have received a short training course.

Smoking prevalence among adults. Proportion of the adult population (15 years and over) who are smokers (both daily and occasional) at a point in time.

Smoking prevalence among youth. Proportion of young people (aged 13-15 years) who smoked during one or more of the 30 days preceding the survey (regardless of amount used).

Stunting. (See National underweight, stunting and wasting prevalence.)

Surface area. (See Area.)

Total fertility rate. The number of children who would be born per woman if the woman was to live to the end of her child-bearing years and bear children at each age in accordance with prevailing age-specific fertility rates.

Total health expenditure. The sum of general government expenditure on health (commonly called public expenditure on health) and private expenditure on health. (See also Government expenditure on health and Private health expenditure.)

(1) **Amount.** Total health expenditure expressed in million US dollars or another indicated currency.

(2) **Total expenditure on health as a percentage of GDP (or GNP).** The percentage share of total expenditure on health with respect to a country's GDP (or GNP).

(3) **Per capita total expenditure on health.** Total expenditure on health divided by the mid-year population (or population size if mid-year population is not available).

Traditional birth attendant. A traditional birth attendant (TBA) who initially acquired her ability by delivering babies herself or through apprenticeship to other TBAs and who has undergone subsequent extensive training and is now integrated into the formal health care system.

Tuberculosis case. A patient in whom tuberculosis has been bacteriologically confirmed or has been diagnosed by a clinician.

- **All forms, cases and deaths**. The sum of new smear-positive pulmonary, relapse, new pulmonary smear-negative pulmonary, and extrapulmonary tuberculosis cases and deaths.

- **New pulmonary tuberculosis (smear-positive), cases**. Patients who have never received treatment for tuberculosis or have taken antituberculosis drugs for less than 30 days and who have one of the following:
  (1) two or more initial sputum smear examinations positive for acid fast bacilli (AFB);

  (2) one sputum examination positive for AFB plus radiographic abnormalities consistent with active pulmonary tuberculosis, as determined by a clinician; or

  (3) one sputum specimen positive for AFB and at least one sputum specimen that is culture-positive for AFB.

Tuberculosis case detection. Tuberculosis is diagnosed in a patient and is reported within the national surveillance system, and then to WHO.

Tuberculosis case detection rate, total. The ratio of new smear-positive cases notified to the estimated number of new smear-positive cases for a given year.

Tuberculosis case detection rate under directly observed treatment, short-course (DOTS). The percentage of estimated new infectious tuberculosis cases detected under the DOTS strategy. Expressed as a ratio of the number of DOTS-detected cases to the estimated number of new cases. (See also Tuberculosis case detection.)

Tuberculosis cure rate. (See Tuberculosis success rate.)

Tuberculosis death rate. Estimated number of deaths due to TB for a given year. Includes deaths from all forms of TB and deaths from TB in people with HIV. Expressed as deaths per 100 000 population per year.

Tuberculosis DOTS coverage. The percentage of the national population living in areas where health services have adopted the DOTS strategy.

Tuberculosis incidence rate, all forms. Estimated number of tuberculosis cases arising in a given period of time. Includes all forms of TB, including cases of people co-infected with HIV. Expressed as a per capita rate.

Tuberculosis prevalence, all forms. Estimated number of cases of tuberculosis in a population in a year or given period of time. Includes all forms of TB, including cases co-infected with HIV. Expressed as number of cases per 100 000 population in a given year.

Tuberculosis prevalence, sputum-smear-positive. Estimated number of sputum-smear-positive cases of tuberculosis in a population in a year or given period of time. Expressed as the number of sputum-smear-positive cases per 100 000 population in a given year.

Tuberculosis success rate under directly observed treatment, short-course (DOTS). The proportion of new smear-positive tuberculosis cases registered under

DOTS in a given year that successfully completed treatment, whether with bacteriological evidence of success ('cured') or without ('treatment completed'). Expressed as a percentage.

Tuberculosis case notification rate, all cases. The number of tuberculosis cases reported per 100 000 population in a given year. Includes all forms of TB.

Tuberculosis case notification rate, sputum smear-positive. The number of new smear-positive pulmonary tuberculosis cases reported per 100 000 population in a given year.

Under-five mortality rate. The probability (expressed as a rate per 1000 live births) of a child born in a specified year dying before reaching the age of five if subject to current age-specific mortality rates. Disaggregated by gender.

Underweight. (See National underweight, stunting and wasting prevalence.)

Urban population. The total population living in areas termed as 'urban' by that country. Typically, the population living in towns of 2000 or more or in national and provincial capitals is classified as 'urban'. Expressed as a percentage. Disaggregated by gender.

Unmet need for family planning. Percentage of currently married women aged 15-49 who want to stop having children or to postpone the next pregnancy for at least two years, but who are not using contraception.

Vitamin A supplementation to children 6-59 months old. Percentage of children aged 6-59 months who have received a high dose of vitamin A capsules within the last six months.

Vulnerabilities. Factors that determine the severity of the risks a community faces from hazards. Vulnerabilities are described in terms of people, property/infrastructure, services, livelihoods and environment.

Wasting. (See National underweight, stunting and wasting prevalence.)

Women of reproductive age (or women of child-bearing age). Refers to all women aged 15 to 49 years, unless otherwise specified.

Workforce losses/ attrition. Number of persons who have left the local health workforce due to retirement, death, outmigration or resignation in a given period of time. Disaggregated by gender, area and sector.

Each **country health information profile** contains data on the demographic, socioeconomic and political conditions, health situation and trends, and health system of each of the countries and areas of the WHO Western Pacific Region. The data are either supplied by the respective health ministries or compiled from national databases and reference libraries.

The 2009 edition includes the following:

- **Country context** – Provides a picture of the country's population size and distribution, as well as its rate of population growth and movement. The political structure and situation are also described, as well as how major government initiatives and political events impact on health. Major economic determinants of health, such as the country's economic performance, the level of poverty, employment and working conditions, and government spending on health, are also explained and quantified. There is an overview of the environmental conditions and prevailing gender and human-rights issues affecting health, and the major vulnerabilities of the country, which may be natural, biological, technological or societal, are illustrated.
- **Health situation and trend** – Illustrates the major communicable and noncommunicable diseases afflicting the country, its health transition experience, and the leading causes of morbidity and mortality. Maternal health conditions, as well as diseases specifically affecting children and infants, are discussed. Burden-of-disease estimates are also presented, as well as results of national surveys on health risk factors.
- **Health system** – Orients readers on the mission, vision and objectives of the Ministry of Health, describes the organization of the country's health services and delivery systems, and presents the framework for health policy, planning and regulation. It outlines the Government's long-term objectives for the health sector, highlighting policies and directions, legislation recently passed or pending, health reform proposals and health system strengthening strategies. An overview is given of the health care financing system, and major financing issues are discussed. It also provides an overview of key areas and priorities in relation to human resources for health.
- **Major information sources and databases** – Lists key resources for additional information on the country. Includes websites, major publications and policy documents, surveys and databases.
- **Health ministry/department organizational chart** (if available)

Annexed to each country profile is a **health databank**, a summary table of indicators on the country's demographic and socioeconomic conditions; health status regarding leading causes of morbidity and mortality, and the number of cases and deaths from selected diseases; the health system as regards health workforce and infrastructure; health service coverage, such as immunization of infants; and status in relation to the health-related Millennium Development Goals.

To facilitate intercountry comparisons, a statistical annex is made available at the end of the publication. It summarizes most of the information in the health databanks and includes other indicators on selected health conditions and practices, such as HIV and obesity, smoking and drinking behaviour, and child care. It also contains human-rights, poverty and gender-related development indicators, as well as major emergencies in the Region over the last two years.

Individual country profiles and the CHIPS volume as a whole are accessible on the website of the WHO Regional Office for the Western Pacific (http://www.wpro.who.int/).

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