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Preface

The SEAMIC HEALTH STATISTICS has been issued annually since 1979 as one of the SEAMIC/IMFJ publications. It has been presenting, in a uniform manner, information relevant to health developments in the countries participating in the SEAMIC. The publication has been appreciated by users both in those countries and in others.

Part I presents comparative statistics from the participating countries on selected health and related topics. Part II describes the organizational aspects of the health statistics system of each country, providing the background information as to how the statistics included in Part I have been collected, processed and produced.

The changes introduced in the items included in the present edition are as follows:

- A new Table 4 – 7 has been added, showing the proportion of pregnant women with anaemia.
- A new Table 6 – 7 has been added, showing the proportion of low birth-weight infants.
- A new Table 6 – 8 has been added, showing the proportion of underweight children under 5 years old.
- In Table 7 – 2, two new indicators have been added, viz., the net primary enrolment ratio and the net secondary enrolment ratio.

In Part II, a new section has been inserted on the recent health policy developments, at the beginning of the description for each country.

The whole contents of this edition, as well as the previous editions for 1998, 1999 and 2000, are also accessible on the SEAMIC/IMFJ website (http://www.seamic-imfj.or.jp).

In view of the evolving information needs of the users, the contents of the publication will continue to be reviewed to make it more relevant, as done in the past. Suggestions in this regard from the users would be much appreciated.

The Editorial Board wishes to express its warmest thanks to all those in the participating countries who have made valuable contributions to the compilation of the present edition.

March 2002

Kazuo Uemura, Ph.D.
Chairman
Editorial Board
SEAMIC HEALTH STATISTICS

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Part II An Outline of Health Statistics in SEAMIC Countries

Part I

Health Statistics

Notes on Tables and Graphs

1. Population

1 – 1: This table gives statistics obtained at the latest population census conducted in each country, together with data on the average annual increase, surface area, and population density. Population censuses are undertaken every 10 years, usually in or around years ending with 0. Japan carries out its population censuses every 5 years ending with 0 and 5.

1 – 2: This table provides the trends in the estimated mid-year population since 1970.

1 – 3: This table shows population projections prepared by each country from the year 2000 onwards.

1 – 4 and Fig. 1: Population by age and sex is presented in the table in absolute numbers, and its percentage distribution is shown graphically as the population pyramid. The population figures shown in table 1 – 4 are used in the computation of rates presented in this publication. The figures for most countries relate to the mid-year population, but those for Japan relate to 1 October and those for Malaysia to 31 December.

1 – 5: This table presents the trends in the proportions of the 3 age groups, 0 –14, 15– 64, and 65 years and over, in the population of each country. It shows the decreasing proportion of the child population and the tendency of the ageing of the population in most countries.

1 – 6: The definition of the term "urban" varies among countries. The statistics presented in this table are those as reported by each country, by applying its own definition of the term.

2. General Vital Statistics and Life Tables

2 – 1 and Fig. 2: The trends in the crude live-birth rate are presented in tabular and graphic forms. The crude live-birth rate is computed by:

[(Number of live-births during a year) / (Population at the middle of the year)] × 1,000

2 – 2 and Fig. 3: The trends in the crude death rate are presented in tabular and graphic forms. The crude death rate is computed by:

[(Number of deaths during a year) / (Population at the middle of the year)] × 1,000

2 – 3: This table shows the vital statistics rates.

The crude marriage rate is computed by:

[(Number of marriages during a year) / (Population at the middle of the year)] × 1,000

The crude divorce rate is computed by:

[(Number of divorces during a year) / (Population at the middle of the year)] × 1,000

The general fertility rate is computed by:

[(Number of live-births during a year) / (Population of women aged 15–49 years at the middle of the year)] × 1,000

The infant mortality rate is computed by:

[(Number of deaths under 1 year of age during a year) / (Number of live-births during the year)] × 1,000

2 – 4: This table shows statistics on natality and mortality by sex and the natural increase rate.

The natural increase rate is computed by:

(Crude live-birth rate) – (Crude death rate), which is expressed per 1,000 population.

2 – 5: This table shows the number of deaths and the death rate by age and sex. The death rate for an age group (i.e. the age-specific death rate) is computed by:

[(Number of deaths in a specific age group during a year) / (Population in the age group at the middle of the year)] × 100,000

2 – 6: The expectation of life is computed by each country by means of a life table method. There are certain minor differences among countries in the method applied.

Fig. 4: The trends in the expectation of life at birth since 1975 are presented separately for male and for female.

2 – 7 and Fig. 5: The number of survivors (per 100,000 births) at specified ages is computed by each country by means of a life table method. There are certain minor differences among countries in the method applied.

3. Causes of Death

3 – A: This list of cause-of-death groups is used for the ranking of cause-of-death groups. The list has been applied to the detailed statistics presented in table 3 – 3. In establishing this list the following points were taken into consideration:

— In view of the importance of diarrheal diseases as causes of death in some of the countries, intestinal infectious diseases were taken together as a single group.

— In order to highlight the growing importance of malignant neoplasms as a leading cause of death, they were taken as a single group.

— Myocardial infarction is becoming an important cause of death, but it appears under-diagnosed in some countries in which less specific

terms are used frequently in the death certificates. To achieve a greater comparability of statistics among the countries, all heart diseases were combined into a single group.

— As influenza often seems to lead to the death certificate diagnosis of pneumonia, these two conditions were combined for the purpose of ranking causes of death.

— The "remainder categories" were excluded from the ranking process.

— Senility and ill-defined conditions were excluded from the ranking process.

3 – 1 and 3 – 2: The list given in 3 – A was used to establish these tables, as indicated above. The tables also show the percentage of each cause among all deaths assigned to "specific" causes of death, namely by using

(All deaths) – (Deaths due to senility) – (Deaths assigned to ill-defined conditions)

for the denominator. Here the rubric used for senility is 465 of ICD-9 and R54 of ICD-10, while the rubrics for ill-defined conditions are 460–464, 466, 467 and 469 of ICD-9, and R00–R53 and R55–R99 of ICD-10.

3 – 3: This table shows the number of deaths and the death rate by causes, for each sex. Some of the countries have introduced ICD-10 in coding causes of death, while others are still using ICD-9. There are minor differences in the contents of some of the disease categories between the two versions of ICD, as mentioned in the footnotes to this table.

3 – 4: This table shows the percentages of deaths which are medically certified and those not certified.

4. Child and Maternal Health

4 – 1: The following definitions are used for the perinatal events:

Fetal death: Fetal death after at least 22 weeks of gestation.

Neonatal death: Death under four weeks.

Post-neonatal death: Death from 4 weeks to under 1 year.

Perinatal death: Fetal death and death under 1 week.

The rates corresponding to these deaths, except the perinatal mortality rate, are computed per 1,000 live-births.

For the perinatal mortality rate, the total number of births, i.e. fetal deaths plus live-births, is used for the denominator.

4 – 2: The columns for "– 1 day", "2 – 6" and "7 – 27" together refer to neonatal mortality. The column "28 – 365" refers to post-neonatal mortality.

Fig. 6: This graph shows the trends in the infant mortality rate since 1976.

4 – 3: This table shows the under-5 mortality rete, which is defined as the probability of dying before reaching 5 years of age. The probability is expressed per 1,000 live-births, and has been computed by the following formula, on the basis of the life table survivors shown in table 2 – 7:

Under-5 mortality rete = [100,000 – (Survivors at age 5 years)] / 100.

4 – 4 and Fig. 7: The trends in the maternal mortality rate are presented in tabular and graphic forms. Maternal mortality concerns death due to complications of pregnancy, childbirth and the puerperium (Chapter XI of ICD-9, or Chapter XV of ICD-10), and the rate is computed by

Maternal mortality rate = [(Number of maternal deaths during a year) / (Number of live-births during the year)] × 100,000

4 – 5: This table shows the percentage of women of childbearing age who currently use contraceptive methods. The percentages for the methods may add up to over 100, as some women use more than one method.

4 – 6: This table shows the percentage of women who received prenatal care at least 4 times from trained health personnel during the entire pregnancy.

4 – 7: This table shows the proportion of pregnant women with anaemia. Anaemia in pregnant women is defined as a blood concentration of haemoglobin inferior to 110 *g/ℓ* (or 6.83 *mmol/ℓ*) or by an haematocrit below 33%. (WHO. *Evaluating the implementation of the strategy for health for all by the year 2000. Common framework: Third evaluation.* WHO/HST/96.4). This is a new table inserted in this issue.

5. Morbidity from Infectious Diseases

This section concerns the incidence of infectious diseases and the coverage of immunization.

5 – A: The infectious diseases are listed for each country of which the reporting of incidence is required by law from the physician or the medical institution treating the patient.

5 – B: The target diseases of the national immunization programme are listed for each country. The age group to be immunized may differ from disease to disease and from country to country.

5 – 1: This table presents statistics on the number of cases of diseases which occur frequently and are notifiable in the majority of the countries.

5 – 2: This table presents statistics on the percentage of infants immunized against 6 diseases which are included in the programmes of all the countries.

6. Nutrition

Statistics included in this section were obtained from sample surveys on nutrition, food consumption or anthropometry. Most countries carry out such surveys periodically but not necessarily every year.

6 – 1: This table shows the intake of various kinds of nutrients per capita, obtained from food consumption surveys.

6 – 2, 6 – 3 and 6 – 4: These tables show the average length, weight, and chest circumference of infants, measured at birth and at 4 weeks, 3 months, 6 months, 9 months and 12 months after birth.

6 – 5 and 6 – 6: These tables concern the height and weight measured at each age from 1 to 18 years. Both the average and the standard deviation are included.

6 – 7: This new table shows the proportion of infants with a birth weight less than 2,500 g.

6 – 8: This new table shows the proportion of underweight children under 5 years old. Underweight children are defined as those whose weight-for-age is below 80% of the reference value of the country, or below – 2 standard deviation from the reference value. A national (or international) reference population should be used for the calculation. A WHO Working Group has recommended that the best available data in this regard are those established by the United States National Center for Health Statistics. (WHO. *Evaluating the implementation of the strategy for health for all by the year 2000. Common framework: Third evaluation.* WHO/HST/96.4).

7. Environmental Health and Socio-Economic Situation

7 – 1: This table shows statistics on the availability of safe water and sanitary toilet, and on the types of lighting used.

Safe water means that it does not contain biological or chemical agent at concentration levels directly detrimental to health. Safe water includes treated surface water and untreated but uncontaminated water such as that from protected boreholes, springs and sanitary wells.

A sanitary toilet is a facility for the disposal of human excreta which isolates faeces from contact with people, animals, crops and water sources. Suitable facilities range from simple but protected pit latrines to flush toilets with sewage.

7 – 2: This table presents 5 socio-economic indicators which have a bearing on health.

Adult literacy relates to the ability of people aged 15 years and over who can both read and write a short simple statement on their everyday life. The rate is expressed as the percentage of adults with literacy.

The net primary enrolment ratio is computed by

$$\frac{\text{Number of children of primary-school age who are actually enrolled}}{\text{Number of children of primary-school age}} \times 100$$

The net secondary enrolment ratio is computed by

$$\frac{\text{Number of children of secondary-school age who are actually enrolled}}{\text{Number of children of secondary-school age}} \times 100$$

The gross domestic product (GDP) measures the total domestic value claimed by both residents and non-residents of a country. The value is calculated in the national currency, but, for international comparisons, it has been converted to US dollars according to the average exchange rate for the year and further divided by the population of the country.

Labour force participation relates to people in work or available for work, i.e. the total number of people in employment plus the number unemployed. The rate is computed as the percentage of people in labour force among those aged 15 years and over.

7 – 3: This table concerns the expenditure of the Ministry of Health (or its equivalent). It does not cover health expenditures borne by other Ministries or by local governments not financed by the central Ministry of Health. On the other hand, the expenditures shown in this table may include those beyond health proper such as some social security expenditures for which the Ministry of Health may be responsible. The values in the national currency have been converted to US dollars by applying the average exchange rate for the year.

7 – 4: This table shows the percentage of adults who smoke, namely,

Adult smoking rate = [(Number of adult smokers) / (Number of adults investigated)] × 100 (%)

All regular smokers are included in the numerator, regardless of the amount smoked daily. The age group investigated varies from country to country.

8. Medical Establishments

8 – A: This list provides the definitions of medical establishments and related statistical terms used in this section.

8 – B: This table shows which of the 11 categories of medical establishments included in the statistics of this section are formally recognized in each country.

8 – 1 and Fig. 8: The trends are shown in the number of hospitals operating in each country (per 100,000 population in Fig. 8).

8 – 2 and Fig. 9: The trends in the number of hospital beds available in each country are shown in the table and the trends in the beds / population ratio in the graph.

8 – 3: This table provides detailed statistics on 11 categories of medical establishments in each country.

8 – 4: This table shows the utilization of hospitals. The bed occupancy rate and the average length of stay during a year are computed by the following formulae:

Bed occupancy rate = [(Occupied bed-days) / (Available bed-days during the year)] × 100 (%)

Average length of stay = (Number of inpatient days of care provided to discharged patients) / (Number of discharges),

where discharges include all separations through return to the patient's home, transfer to another hospital or institution, and death. Newborn babies are excluded from the computation. The day of admission is counted as 1 day but the day of discharge is not counted. Admission and discharge on the same day is counted as 1 day.

9. Human Resources for Health

9 – A: This list provides the definitions of the 28 health professions dealt with in this section.

9 – B: This table shows which of the 28 professions included in this section are recognized formally in each country.

9 – 1: This table gives the number of persons in each of the 28 professions considered. In the Philippines noticeable declines have occurred since the previous years due to the reorganization of the Department of Health as per Executive Order No.102.

9 – 2: This table gives the ratios of health personnel per population and population per health personnel, for 6 professions.

9 – 3 and Fig. 10: The table gives the trends in the number of physicians, while the graph shows the trends in the physician / population ratio. A sudden rise is seen for Malaysia in 1997 in the number of physicians, due to the changed definition. Up to 1996, only those physicians who were issued an annual practising certificate by the Malaysian Medical Council were included in the statistics. Starting from 1997, the numbers have included also those in any other medical fields such as teaching, administration, research and laboratory, as defined in Table 9 – A.

9 – 4, 9 – 5 and 9 – 6: These tables show the trends in the numbers of dentists, pharmacists and midwives, respectively.

9 – 7 and Fig. 11: The table shows the trends in the number of nurses, and the graph the trends in the nurses / population ratio.

9 – 8: This table shows the number and percentage of physicians, dentists and pharmacists by sex.

9 – 9: This table gives data on the number of medical schools and the enrolment situation.

Explanation of Symbols

..	Category not applicable	0.0	Not nil, but less than 0.05
(blank) or NA	Data not available	*	Provisional or estimated
–	Nil		

1. Population

1 – 1 Population by Sex, Rate of Population Increase, Surface Area and Density

	Latest Census						Annual Rate of Increase (%)	Surface Area (km²)	Density (Persons / km²)
	Date	Total	Male	Female	Sex Ratio	Persons per Household			
BRUNEI (1)	26 August 1991	260,482	137,616	122,866	112.0	6.0	2.3 a)	5,765	51
INDONESIA (2)	15 September – 31 October 1990	179,322,000	89,436,285	89,885,715	99.5	4.5	1.2 b)	1,937,179	107 c)
JAPAN (3) d)	1 October 2000	126,925,843	62,110,764	64,815,079	97.8	2.7	0.2 e)	377,829	338
MALAYSIA (4)	5 July 2000	22,202,614	11,212,525	10,990,089	102.0	4.5	2.1 f)	329,847	67
PHILIPPINES (5)	1 September 1995	68,616,536	34,584,170	34,032,366	101.6	5.1	2.6 g)	300,000	229
SINGAPORE (6) h)	30 June 2000	3,263,209	1,630,293	1,632,916	99.8	3.7	1.9 i)	683 c)	5,885 j)
THAILAND (7)	1 April 2000	60,606,947	29,844,870	30,762,077	97.0	3.9	1.1 k)	513,120	118
VIETNAM (8)	1 April 1999	76,327,919	37,518,547	38,809,372	96.7	4.6	1.0 ℓ)	331,114	231 m)

Source : (1) Department of Economic Planning and Development, Prime Minister Office
(2) *National Socio-Economic Survey 1999,* BPS-Statistics Indonesia
(3) *2000 Population Census of Japan,* Statistics Bureau & Statistics Center, Ministry of Public Management, Home Affairs, Posts and Telecommunications
(4) *Population and Housing Census of Malaysia, 2000,* Department of Statistics
(5) National Statistics Office
(6) *Census of Population 2000 Singapore,* and *Yearbook of Statistics, Singapore,* Department of Statistics
(7) *2000 Population and Housing Census (Advance Report),* National Statistics Office, Office of the Prime Minister
(8) General Statistics Office

Note : a) 1999–2000
b) 1995–1999
c) Year 1999
d) All residents
e) 1995–2000
f) 1991–2000
g) 1990–1995
h) Singapore residents only
i) 1990–2000
j) Total population 2000
k) 1990–2000
ℓ) 1994–1999
m) Revised data

1 – 2 Estimates of Mid-year Population (in thousands)

	1970	1975	1980	1985	1990	1993	1994	1995	1996	1997	1998	1999	2000
BRUNEI (1)	130	156	185	218	253	276	285	296	305	314	323	331	338
INDONESIA (2)	119,470	130,500	146,360	163,370	178,440	187,589	a) 190,815	a) 195,264	a) 196,263	a) 199,662	a) 202,914	(3) a) 204,784	
JAPAN (4) b)	102,805	110,311	116,107	120,037	122,726	123,692	123,999	124,245	124,615	124,881	125,189	125,402	125,561
MALAYSIA (5)	10,768	12,175	13,764	15,681	17,764	19,208	19,658	20,108	21,169	21,665	22,180	22,710	23,264
PHILIPPINES (6)	36,849	42,517	48,317	54,668	62,049	66,982	68,624	68,617	69,946	71,550	73,148	74,746	c) 76,320
SINGAPORE (7) d)	2,075	2,263	2,282	2,483	a) 2,736	a) 2,907	a) 2,961	a) 3,015	a) 3,068	a) 3,121	a) 3,175	a) 3,222	3,263
THAILAND (8)	36,370	41,388	46,718	51,683	56,340	58,584	59,695	59,401	59,788	60,602	61,201	61,563	(9) 61,770
VIETNAM (10)	41,063	47,638	53,722	e) 59,872	a) 65,611	a) 69,510	a) 70,772	a) 71,986	a) 73,167	a) 74,346	a) 75,526	a) 76,597	77,686

Source : (1) Department of Economic Planning and Development, Prime Minister Office
(2) National Income of Indonesia 1988–1995, Central Bureau of Statistics
(3) Indonesia Health Profile 2000
(4) Statistics Bureau & Statistics Center, Management and Coordination Agency (for 1970–1999), Statistics & Statistics Center, Ministry of Public Management, Home Affairs, Posts and Telecommunications (for 2000)
(5) ***Yearbook of Statistics,*** Department of Statistics
(6) National Statistics Office, 1995—Census Based National-Regional Projections
(7) ***Yearbook of Statistics,*** Singapore Department of Statistics
(8) ***Report of Working Group on Population Projections,*** Office of the National Economic and Social Development Board
(9) 1999–2000 The Central Office for Civil Registration, Ministry of Interior
(10) General Statistics Office

Note : a) Revised figure
b) Japanese nationals only
c) Census Based National-Regional Projections, medium assumptions
d) Population figures from 1980 onwards refer to Singapore residents only
e) 1986

1 – 3 Population Projections

(in thousands)

	2000	2005	2010	2015	2020	2025	2030	2035	2040
BRUNEI (1)	a) 345	b) 389	c) 437		516	560	604	648	
INDONESIA (2)	210,486	225,748	242,115	259,668	278,493	298,685	320,339		343,564
JAPAN (3) d)	126,926	127,708	127,473	126,266	124,107	121,136	117,580	113,602	109,338
MALAYSIA (4)	23,264	25,843	28,411	31,081	33,855				
PHILIPPINES (5)	76,320	84,215	91,851	99,008	105,503	111,473	117,060	122,016	126,173
SINGAPORE (6) e)	3,263	3,499	3,719	3,892	4,042	4,151	4,220	4,256	4,268
THAILAND (7) f)	62,405	65,034	67,230	69,076	70,503				
VIETNAM (8)	81,200	f) 81,860	f) 86,353	91,278	95,762				

Source : (1) Based on ***Demographic Situation and Population Projections 1991–2011,*** Statistics Division, Department of Economic Planning & Development, Prime Minister Office
(2) Population Projection 1995–2005 in December figure, Central Bureau of Statistics
(3) ***Population Projections for Japan 2001–2050***, National Institute of Population and Social Security Research, Ministry of Health and Welfare
(4) Department of Statistics
(5) National Statistics Office-1995 Census based National-Regional Projection
(6) Singapore Department of Statistics
(7) ***Thailand Population Projection for Thailand 1990–2020,*** Human Resources Planning Division, National Economic and Social Development Board
(8) General Statistics Office

Note : a) Year 2001
b) Year 2006
c) Year 2011
d) Population on 1 October, including foreign nationals
e) Singapore residents only
f) Revised figures

1 – 4 Population by Age and Sex

	Year	Sex	Ages								
			All Ages	0 – 4	5 – 9	10 – 14	15 – 19	20 – 24	25 – 29	30 – 34	35 – 39
BRUNEI (1)	2000	T	338.4	39.0	37.1	33.0	29.4	30.0	31.7	32.0	29.6
		M	179.1	20.2	19.3	17.1	15.3	15.4	16.8	17.3	16.3
		F	159.3	18.8	17.8	15.9	14.1	14.6	14.9	14.7	13.3
INDONESIA (2)	1999 a)	T	207,437	21,440	19,376	21,318	23,127	20,113	17,182	15,963	15,024
		M	103,234	10,912	9,863	10,916	11,754	9,980	8,161	7,576	7,336
		F	104,203	10,527	9,513	10,402	11,373	10,133	9,021	8,387	7,688
JAPAN (3) b)	2000	T	125,387	5,849	5,974	6,496	7,420	8,284	9,608	8,592	7,963
		M	61,342	2,995	3,059	3,327	3,800	4,244	4,882	4,355	4,025
		F	64,045	2,855	2,915	3,168	3,620	4,040	4,726	4,238	3,938
MALAYSIA (4)	1999	T	22,712	2,614	2,528	2,476	2,315	2,131	1,967	1,766	1,614
		M	11,633	1,348	1,303	1,273	1,194	1,111	1,024	906	824
		F	11,079	1,267	1,225	1,203	1,121	1,020	943	859	790
PHILIPPINES (5)	1999	T	74,745	9,570	9,206	8,532	7,779	6,997	6,209	5,445	4,682
		M	37,650	4,901	4,744	4,355	3,931	3,513	3,103	2,723	2,350
		F	37,095	4,669	4,462	4,177	3,848	3,484	3,106	2,722	2,332
SINGAPORE (6) c)	2000	T	3,263.2	213.3	252.1	235.4	211.3	212.6	267.6	290.9	323.1
		M	1,630.3	110.3	129.9	121.7	109.1	106.5	129.5	142.2	162.3
		F	1,632.9	102.9	122.1	113.7	102.3	106.1	138.1	148.7	160.7
THAILAND (7)	2000	T	61,770	5,173	5,340	5,411	5,631	5,709	5,545	5,201	4,791
		M	30,687	2,609	2,686	2,728	2,847	2,893	2,820	2,624	2,377
		F	31,083	2,564	2,654	2,683	2,784	2,816	2,725	2,577	2,414
VIETNAM (8)	1999	T	76,328	7,269	9,161	9,132	8,219	6,765	6,474	6,001	5,552
		M	37,519	3,785	4,745	4,724	4,124	3,283	3,226	2,985	2,700
		F	38,809	3,484	4,416	4,408	4,095	3,482	3,248	3,016	2,852

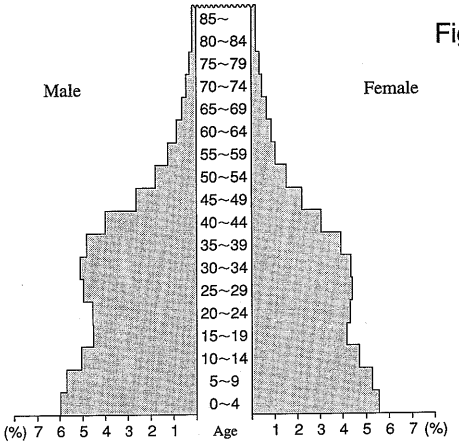
Source : (1) Department of Economic Planning and Development, Prime Minister Office
(2) Province Population Projection 1995–2005, BPS-Statistics Indonesia
(3) Statistics Bureau & Statistics Center, Ministry of Public Management, Home Affairs, Posts and Telecommunications
(4) Department of Statistics
(5) National Statistics Office
(6) Department of Statistics
(7) *The Central Office for Civil Registration,* Ministry of Interior
(8) General Statistics Office

(in thousands)

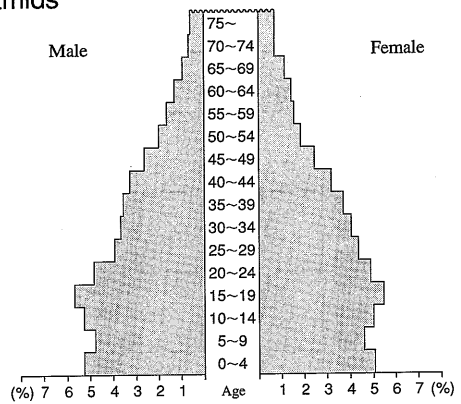
Age									
40 – 44	45 – 49	50 – 54	55 – 59	60 – 64	65 – 69	70 – 74	75 – 79	80 – 84	85+
23.8	16.3	11.2	7.7	5.8	4.3	3.0	2.1	1.2	1.2
13.5	8.9	6.1	4.2	2.9	2.1	1.5	1.0	0.6	0.6
10.3	7.4	5.1	3.5	2.9	2.2	1.5	1.1	0.6	0.6
13,359	10,536	7,944	6,614	5,662	4,325	2,785		2,669	
6,734	5,437	4,104	3,353	2,650	1,920	1,342		1,197	
6,625	5,099	3,841	3,261	3,012	2,405	1,444		1,472	
7,692	8,830	10,372	8,683	7,698	7,079	5,880	4,133	2,606	2,278
3,874	4,426	5,174	4,264	3,731	3,345	2,661	1,618	911	651
3,819	4,404	5,198	4,418	3,967	3,734	3,220	2,516	1,694	1,576
1,378	1,103	833	626	502	363	239		258	
704	565	427	318	247	171	108		109	
674	538	406	309	255	191	131		149	
3,956	3,243	2,622	2,034	1,568	1,162	828	519	393	
1,988	1,631	1,312	1,006	764	553	380	229	167	
1,968	1,612	1,310	1,028	804	609	448	290	226	
313.0	262.6	207.1	125.5	111.1	89.2	68.0	40.1	22.9	17.5
158.0	132.7	104.1	62.2	54.4	42.7	31.9	17.9	8.9	6.0
155.1	129.9	103.0	63.3	56.7	46.4	36.1	22.2	14.1	11.5
4,350	3,716	2,847	2,353	2,045	1,588	1,017		1,053	
2,156	1,822	1,836	1,124	965	738	464		448	
2,194	1,894	1,461	1,229	1,080	850	553		605	
4,509	3,105	2,137	1,804	1,767	1,682	1,209	834	419	290
2,144	1,468	965	794	776	751	504	314	143	87
2,365	1,637	1,172	1,011	991	931	705	520	275	202

Note : a) As of December 1999
b) Japanese nationals only, as of 1 October
c) Singapore residents only

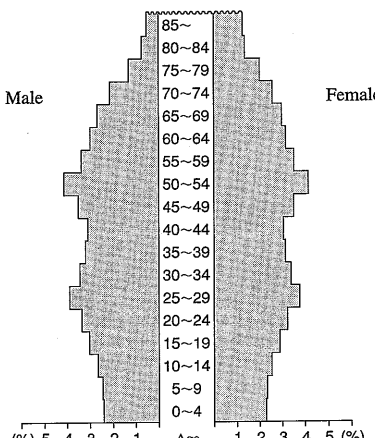
Fig. 1 Population Pyramids



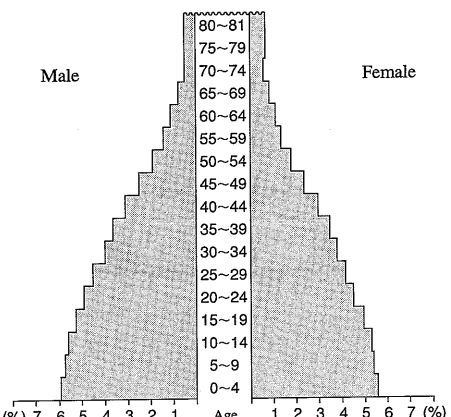
BRUNEI DARUSSALAM 2000



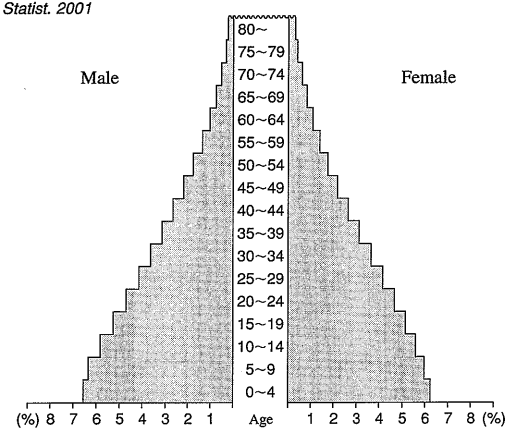
INDONESIA 1999



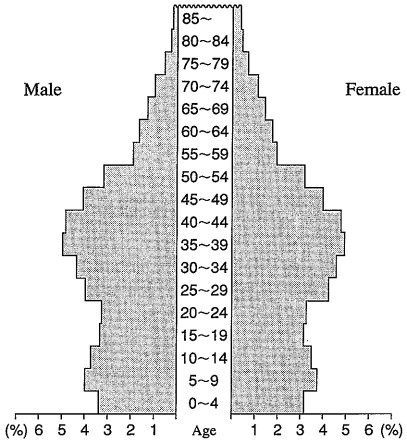
JAPAN 2000



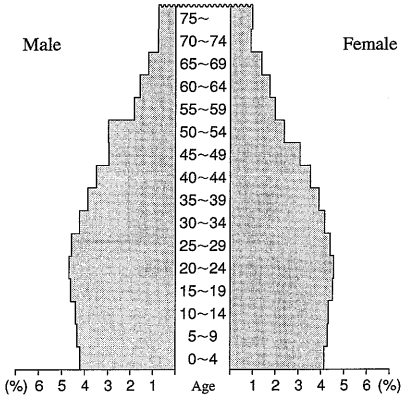
MALAYSIA 1999



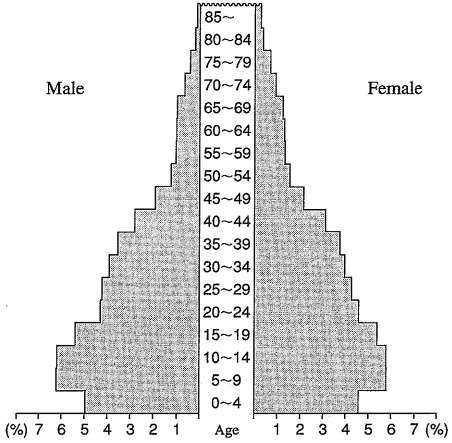
PHILIPPINES 1999



SINGAPORE 2000



THAILAND 2000



VIETNAM 1999

1 – 5 Proportions of 3 Age Groups in the Population

(%)

	Ages	1970	1975	1980	1985	1990	1995	1996	1997	1998	1999	2000
BRUNEI (1)	All ages		100.0	100.0	100.0	a) 100.0	100.0	a) 100.0	100.0	100.0	100.0	100.0
	0 – 14		41.1	38.9	36.9	34.8	33.2	32.9	32.8	32.9	32.5	32.2
	15 – 64		56.0	58.1	60.3	62.4	63.9	64.0	63.9	63.8	64.1	64.3
	65+		2.9	3.0	2.8	2.7	2.9	3.0	3.3	3.3	3.4	3.5
INDONESIA	All ages	b) 100.0	c) 100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	0 – 14	44.0	42.1	43.5	39.2	36.5	33.5	32.0	31.3	30.5	30.0	29.9
	15 – 64	53.5	55.0	53.2	57.5	59.6	62.3	63.7	64.4	64.9	65.3	65.4
	65+	2.5	2.9	3.3	3.3	3.9	4.2	4.3	4.3	4.6	4.7	4.7
JAPAN (2)	All ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	0 – 14	23.9	24.3	23.5	21.5	18.2	15.9	15.6	15.4	15.1	14.8	14.6
	15 – 64	69.0	67.8	67.4	68.2	69.7	69.6	69.3	68.9	68.7	68.4	67.9
	65+	7.1	7.9	9.1	10.3	12.1	14.5	15.1	15.7	16.2	16.8	17.5
MALAYSIA	All ages			100.0	100.0	100.0	d) 100.0	100.0	100.0	100.0	100.0	
	0 – 14			39.6	38.0	36.8	35.8	35.0	34.5	34.0	33.5	
	15 – 64			56.8	58.2	59.3	60.4	61.3	61.8	62.3	62.7	
	65+			3.6	3.8	3.9	3.8	3.7	3.7	3.7	3.8	
PHILIPPINES	All ages		e) 100.0	100.0	f) 100.0	100.0	100.0	100.0	100.0	100.0	100.0	
	0 – 14		43.5	42.0	40.0	39.6	38.3	37.8	37.4	36.9	36.5	
	15 – 64		53.6	54.6	56.6	57.0	58.2	58.6	58.9	59.3	59.6	
	65+		2.9	3.4	3.4	3.4	3.5	3.6	3.7	3.8	3.9	
SINGAPORE (3)	All ages		100.0	100.0	100.0	a) 100.0	a) 100.0	a) 100.0	a) 100.0	a) 100.0	a) 100.0	a) 100.0
	0 – 14		33.0	27.1	24.4	23.0	22.8	22.6	22.4	22.1	21.8	21.5
	15 – 64		63.0	68.2	70.4	71.0	70.7	70.8	70.9	71.0	71.1	71.2
	65+		4.0	4.7	5.2	6.0	6.5	6.6	6.7	6.9	7.1	7.3
THAILAND	All ages		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	0 – 14		46.1	38.3	36.5	33.4	28.0	27.6	27.1	26.7	26.2	25.8
	15 – 64		50.7	58.1	59.9	62.8	66.9	67.2	67.6	67.8	68.1	68.3
	65+		3.2	3.6	3.6	3.8	5.1	5.2	5.3	5.5	5.7	5.9
VIETNAM	All ages							100.0	100.0		100.0	
	0 – 14							36.8	36.8		33.5	
	15 – 64							57.5	57.4		60.7	
	65+							5.7	5.8		5.8	

Source : Table 1 – 4 of this issue and the corresponding tables in the previous issues of *SEAMIC Health Statistics*, except Brunei, Japan and Singapore
(1) Department of Economic Planning and Development, Prime Minister Office
(2) Statistics Bureau and Statistics Center, Management and Coordination Agency (for 1970–1999), Statistics Bureau and Statistics Center, Ministry of Public Management, Home Affairs, Posts and Telecommunications (for 2000)
(3) Singapore Department of Statistics

Note : a) Revised figures
b) For 1971
c) For 1976
d) For 1994
e) For 1974
f) For 1986

1 – 6 Urban and Total Population

(in thousands)

	1960			1970			1980			1990			2000 or latest		
	Total	Urban	(%)	Total	Urban	(%)	Total	Urban	(%)	Total	Urban	(%)	Total	Urban	(%)
BRUNEI (1)	84	37	43.6	a) 136	87	63.6	b) 193	115	59.4	c) 261	173	66.6			
INDONESIA (2)	d) 97,085	14,358	14.8	119,143	20,733	17.4	146,776	32,846	22.4	e) f) 204,393	89,186	37.1	(3) 195,103	82,546	42.3
JAPAN (4)	94,300	59,698	63.3	104,666	75,429	72.1	117,600	89,187	76.2	g) 125,570	98,009	78.1	125,387	98,495	78.6
MALAYSIA (5)	8,170	2,060	25.2	10,439	2,799	26.8	13,136	4,492	34.2	c) 17,563	8,899	50.6	22,203	13,726	61.8
PHILIPPINES (6)	28,098	8,513	30.3	37,540	12,366	32.9	48,098	17,944	37.3	60,487	29,419	48.6			
SINGAPORE (7)	d) 1,446	1,132	78.0	2,075	1,562	75.0	h) 2,282	2,282	100.0	h) 2,736	2,736	100.0	h) 3,263	3,263	100.0
THAILAND (8)	(9) 26,258	3,274	12.5	34,397	4,553	13.2	44,824	7,633	17.0	54,548	10,215	18.7	60,606	18,833	31.1
VIETNAM (10)	30,172	4,727	15.7	41,063	8,787	21.4	53,722	10,300	19.2	e) 76,328	17,918	23.5	76,597	18,002	23.5

Source :
(1) Department of Economic Planning and Development, Prime Minister Office
(2) ***Population of Indonesia,*** Central Bureau of Statistics
(3) BPS, National Socio Economics Survey, 2000
(4) ***Japan Statistical Yearbook,*** Management and Coordination Agency (for 1960, 1970, 1980, 1990), Statistics Bureau and Statistics Center, Ministry of Public Management, Home Affairs, Posts and Telecommunications (for 2000)
(5) General Report of the Population, Department of Statistics
(6) National Statistics Office
(7) ***Report on the Census of Population, Singapore, Vol. 1,*** Department of Statistics
(8) ***Population and Housing Census,*** National Statistical Office, Office of the Prime Minister
(9) ***1960 Population Census,*** Central Statistics Office, National Economic Development Board
(10) ***Health Statistics Yearbook,*** Statistics and Informatic Division, Ministry of Health

Note :
a) For 1971
b) For 1981
c) For 1991
d) For 1957
e) For 1999
f) Calculated by Centre for Health Data, Ministry of Health based on Population Projection 1990–2000 and 2000–2005
g) For 1995
h) Singapore residents only

2. General Vital Statistics and Life Tables

2 – A A Brief Description of Population and Vital Statistics Trends

BRUNEI DARUSSALAM

Population:

The population is rising with an annual growth rate of around 2.3% during 1999–2000. The population was estimated at 338,400 in 2000. The proportion of elderly people aged 60 years and over increased from 4.1% in 1991 to 5.2% in 2000.

Crude Birth and Death Rates:

There were 7,478 live-births with the crude rate of 22.1 per 1,000 population in 2000, as compared with 7,408 live-births with the corresponding rate of 22.4 in 1999. The number of deaths in 2000 was 965 and the crude death rate was 2.9.

Trends of Causes of Deaths:

During 2000, malignant neoplasms were the top leading cause of death followed by heart diseases, cerebrovascular diseases, diabetes mellitus and bronchitis (chronic and unspecified), emphysema and asthma, transport accidents and congenital malformations, deformations and chromosomal abnormalities and hypertensive diseases. The ICD-10 coding scheme was implemented in January 1996.

Life Expectancy:

The expectation of life at birth was 74.9 years for males and 78.2 years for females in 1998. During the period 1971 to 1998, the gain in life expectancy at birth was 13.5 years for males and 16.1 years for females.

Health Care Status:

The Ministry of Health is always on vigilance of the World Health Organization indicators for monitoring the progress of the Global Strategy for Health for All. Almost all indicators that have been appraised for Brunei Darussalam for the year 2000 were found to meet the WHO targets, which indicated a marked progress towards a better health status. Brunei Darussalam is free of major communicable diseases.

INDONESIA

Population:

Indonesia has an estimated 1999 population of more than 204 million. This would make Indonesia the fourth most populous country in the world after the People's Republic of China, India, and the United States of America.

The nation's population growth rate has been continuously declining. During 1990–1999, the estimated annual population growth was 1.54%, compared to 2.05% in 1970–1980 and 2.00% in 1980–1990. The census and survey data show that Indonesia's fertility has declined significantly since the 1970s. The crude birth rate, which was estimated at 33.7 births per 1,000 population in the period 1980–1985, declined to an estimated 25.3 per 1,000 in the period 1990–1995.

Crude Death Rate:

The crude death rate has been showing a downward trend since the early 1970s. The rate in 1999 is estimated at 7.5 per 1,000 population, compared to 18.7, 12.5, and 9.7 in 1970, 1980, and 1990, respectively. The 1992 Household Health Survey found that cardiovascular diseases were the prime cause of death. In earlier surveys, infectious diseases were the prime cause, while cardiovascular diseases were not even among the top five causes.

Life Expectancy:

In the early 1970s, the life expectancy at birth was still very low: 45 years for males and 48 years for females. The current life expectancy at birth is estimated at 64.6 years for males and 68.3 years for females. This longer life expectancy is very much influenced by the decreased mortality, particularly among infants, due to the successful health programme.

JAPAN

Population:

The population has been growing every year, reaching 126.9 million on 1 October 2000. The proportion of people over 65 years old was 17.5% in 2000 and is growing rapidly.

Crude Birth Rate:

The number of births in 2000 was 1,190,547 and the crude birth rate was 9.5 (per 1,000 population). The rate had increased slightly.

Crude Death Rate:

The number of deaths in 2000 was 961,653 and the crude death rate was 7.7 (per 1,000 population). The rate used to decrease after World War II, but has turned increasing gradually in recent years, caused by the rising number of aged people's deaths.

Life Expectancy:

In 2000, Japanese life expectancy at birth for male was 77.72 years, which represented an increase by 0.62 year as compared with the preceding year. Life expectancy for females was 84.60 years, also showing an increase by 0.61 year.

Health Care Status:

Most Japanese are enjoying good health. About 80% of people consider themselves healthy or very healthy. The Ministry of Health, Labour and Welfare continues to make efforts to provide a high-quality, efficient, cost-effective, accessible health care system, to prevent diseases and to promote health.

MALAYSIA

In 2000, Malaysia had a population of 22,202,614 people, with the average annual growth rate of 2.6% during 1991–2000. The crude birth rate has been falling gradually since 1985.

Life expectancy among Malaysians today is comparable to many developed countries, under the favourable socio-economic conditions prevailing in the country. The life expectancy was 69.8 years for men and 74.7 years for women in 1998.

PHILIPPINES

Population:

The total population of the Philippines on September 1, 1995 by actual count was 68,616,536 persons, showing an increase of 7,913,330 persons or 13 percent over the 1990 census count of 60,703,206.

The 1995 census showed that the males numbered 34,584,170, which is 551,804 persons more than the female population of 34,032,366. The census indicated a sex ratio of 101.6.

In 1999, the Philippines continued to have a young population with 56 percent of its citizens aged under 25 years. Only 3.9 percent of the Filipinos were 65 years or older.

Crude Birth Rate:
The crude birth rate stood at 26.8 in 2000.

Crude Death Rate:
The crude death rate in 2000 was 5.9.

Life Expectancy:
Expectancy of life at birth for the average male was 62.7 years and that for the average female was 67.9 years in 1995.

SINGAPORE

Population:
The mid-year resident population of Singapore grew marginally by about 1.3% from 3.22 million in 1999 to 3.26 million in 2000. The majority of the population was the Chinese (76.8%), followed by the Malays (13.9%) and the Indians (7.9%). The proportion of population age 65 years and above increased from 7.1% in 1999 to 7.3% in 2000. The median age of the population stood at 34.2 years, up from 33.7 years in 1999.

The rate of natural increase increased from 8.3 per 1,000 resident population in 1999, to 9.2 per 1,000 residents in 2000. There were 46,997 live births in 2000, which was an increase of 8.4% from the 43,336 births in 1999. The total fertility rate correspondingly increased to 1.59 births per woman in 2000 as compared with 1.47 births per woman in 1999. The crude death rate remained 4.5 deaths per 1,000 resident population in 2000.

Life Expectancy:
The average life expectancy at birth of Singapore residents was 77.6 years in 1999. Expectancy of life at birth for the average male was 75.6 years and that for the average female was 79.7 years.

Health Care Status:
The health of Singaporeans continues to improve with life expectancy increasing and infant mortality remaining low. A high level of medical services and the active promotion of preventive medicine, have all helped to significantly boost the health of Singapore.

THAILAND

Population:
Thailand had a population of around 60.6 million in 2000. The current annual population growth rate is 0.6 percent. The trend of population growth indicates that the country is becoming more urbanized, with an increase in proportion of working ages and old ages, and a decrease in the dependency ratio.

Crude Birth Rate:

The birth rate decreased from 31.5 in 1970 to 12.5 in 2000, reflecting the successful campaign on the Family Planning Project undertaken by the Ministry of Public Health.

Crude Death Rate:

Data on deaths used to be collected from the peripheral level by the Ministry of Interior (MOI) through the annual reporting system based on death certificates. The crude death rate obtained showed a decrease from 6.2 per 1,000 in 1970 to 5.9 in 2000. There was, however, some under-registration. With the change introduced in 1996 by which individual data from the death certificates are to be transmitted directly to the MOI's database, the data coverage and completeness improved.

Life Expectancy:

As a result of the success in health development, life expectancy of the Thai people has increased by the average of 0.46 year annually, in male from 60 years during 1980–1985 to 70 years during 1995–1996 and in female from 66 years to 75 years between the same period of time.

VIETNAM

Over the period from 1986 to 1999, the total population of Vietnam increased from 61.1 million to 76.3 million, with the average annual increase of 1.72%.

The crude birth rate in 1999 was 19.9 per 1,000 live-births, showing a decline from the rate of 28.5 in 1993. The total fertility rate declined from 3.8 in 1989 to 2.3 in 1999.

During the period 1993–1999 the crude death rate dropped from 6.7 to 5.6 per 1,000 population.

2 – 1 Crude Live-birth Rates

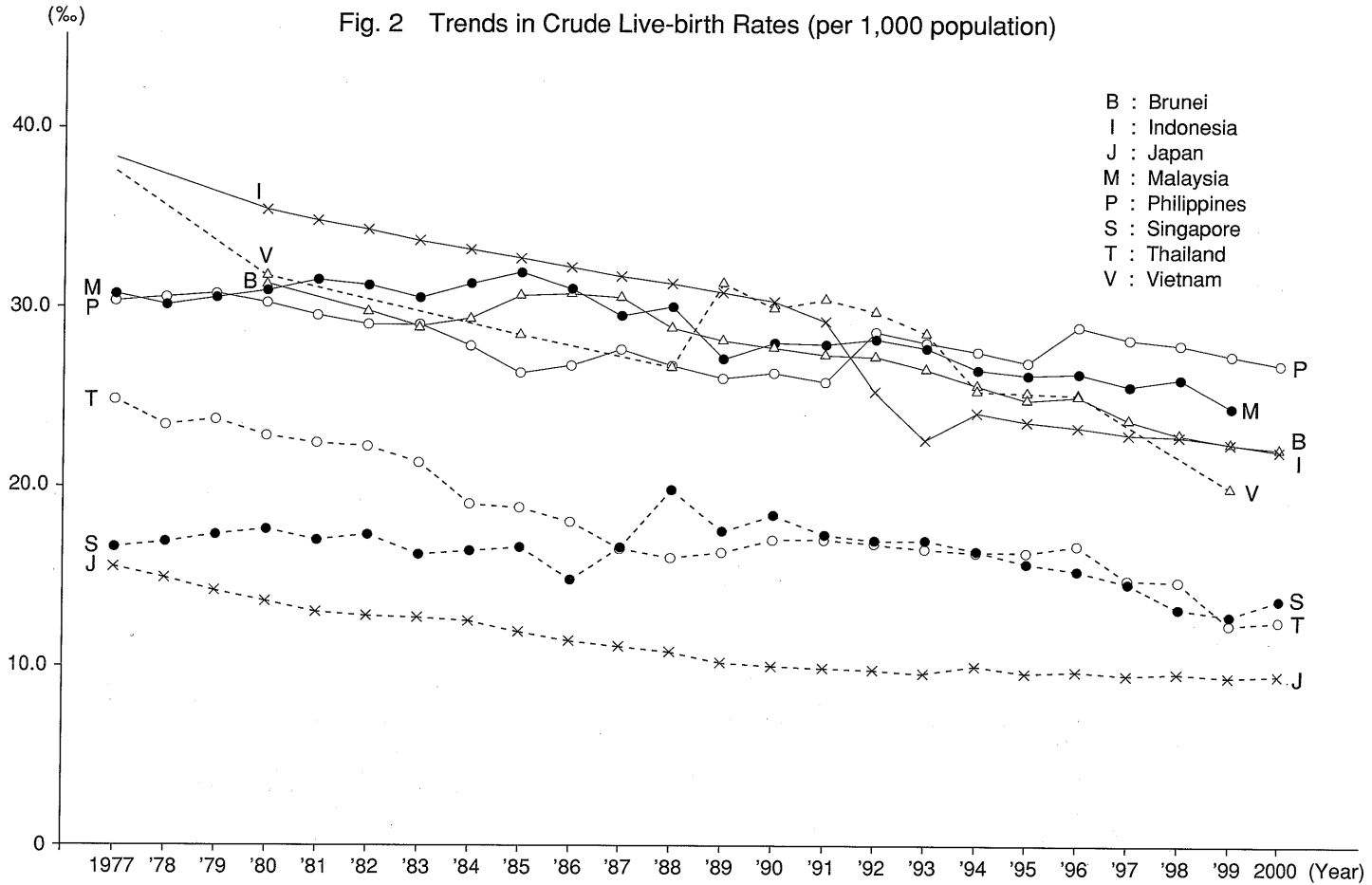
(per 1,000 population)

Year	1970	1975	1980	1985	1990	1992	1993	1994	1995	1996	1997	1998	1999	2000
BRUNEI (1)			31.2	30.6	27.7	27.2	26.5	25.6	24.8	25.0	23.7	22.9	22.4	22.1
INDONESIA (2)	43.8	40.2	35.4	32.7	30.3	25.3	a) 22.6	a) 24.1	a) 23.6	a) 23.3	b) 22.9	b) c) 22.8	b) 22.4	22.0
JAPAN (3)	18.8	17.1	13.6	11.9	10.0	9.8	9.6	10.0	9.6	9.7	9.5	9.6	9.4	9.5
MALAYSIA (4)	32.4	30.6	30.9	31.9	28.0	28.2	27.7	26.5	26.2	26.3	25.6	26.0	24.4	
PHILIPPINES (5)	27.4	28.8	30.2	26.3	26.3	28.6	28.0	27.5	26.9	28.9	(6) c) 28.2	(6) 27.9	(6) c) 27.3	(6) c) 26.8
SINGAPORE (7) d)	22.1	17.7	17.6	16.6	18.4	17.0	17.0	16.4	15.7	15.3	14.6	13.2	12.8	13.7
THAILAND (8)	31.5	27.4	22.8	18.8	17.0	16.8	16.5	16.3	16.3	16.7	14.8	14.7	e) 12.3	12.5
VIETNAM (9)		f) 39.5	31.7	28.4	29.9	29.7	28.5	25.3	25.2	25.1			19.9	

Source : (1) Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs and Department of Economic Planning and Development, Prime Minister Office
(2) Central Bureau of Statistics
(3) ***Vital Statistics Japan,*** Ministry of Health, Labour and Welfare
(4) Department of Statistics
(5) ***Philippine Health Statistics,*** Health Intelligence Service, Department of Health
(6) National Statistics Office
(7) ***Report on Registration of Births and Deaths,*** Registry of Births and Deaths, Singapore
(8) Health Information Center, Ministry of Public Health
(9) General Statistics Office

Note : a) Based on National Census 1990
b) Estimated (Projection 1995–2000 and 2000–2005)
c) Based on 1995 Census Based National-Regional Projections
d) Rates from 1980 onwards refer to Singapore residents only
e) Revised figure
f) For 1976

Fig. 2 Trends in Crude Live-birth Rates (per 1,000 population)



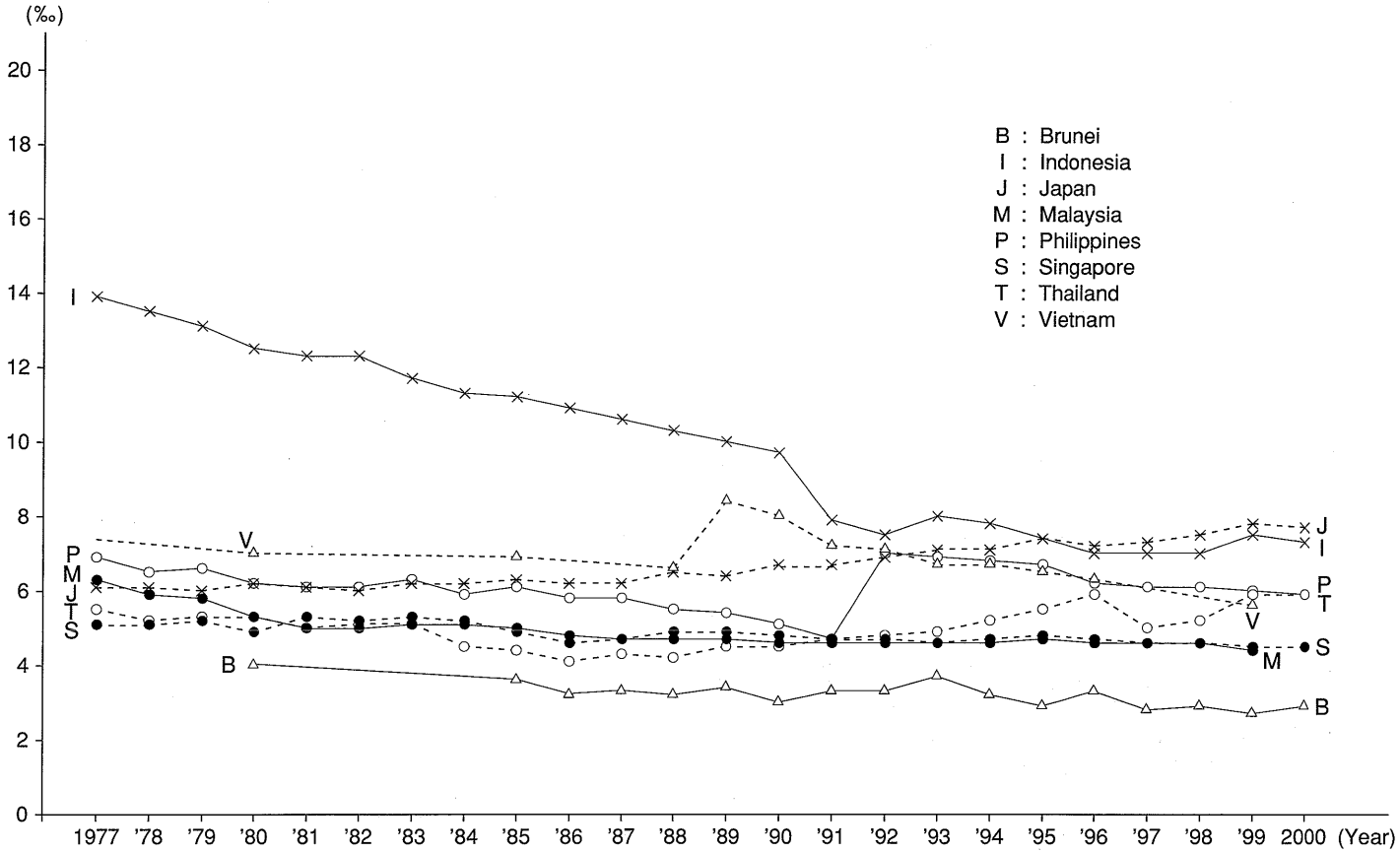
2 – 2 Crude Death Rates (per 1,000 population)

Year	1970	1975	1980	1985	1990	1992	1993	1994	1995	1996	1997	1998	1999	2000
BRUNEI (1)			4.0	3.6	3.0	3.3	3.7	3.2	2.9	3.3	2.8	2.9	2.7	2.9
INDONESIA (2)	18.7	16.7	12.5	11.2	9.7	a) 7.5	a) 8.0	a) 7.8	c) 7.7	c) 7.6	c) 7.5	c) 7.7	c) 7.5	7.3
JAPAN (3)	6.9	6.3	6.2	6.3	6.7	6.9	7.1	7.1	7.4	7.2	7.3	7.5	7.8	7.7
MALAYSIA (4)	7.0	6.3	5.3	5.0	4.6	4.6	4.6	4.6	4.7	4.6	4.6	4.6	4.4	
PHILIPPINES (5)	6.7	6.4	6.2	6.1	5.1	7.0	6.9	6.8	6.7	6.2	(6) d) 6.1	(6) d) 6.1	(6) d) 6.0	(6) d) 5.9
SINGAPORE (7) e)	5.2	5.1	4.9	4.9	4.8	4.7	4.6	4.7	4.8	4.7	4.6	4.6	4.5	4.5
THAILAND (8)	6.2	5.8	5.3	4.4	4.5	4.8	4.9	5.2	5.5	5.9	5.0	a) 5.2	5.9	5.9
VIETNAM (9)		f) 7.5	7.0	6.9	8.0	7.1	6.7	6.7	6.5	6.3			5.6	

Source : (1) Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs and Department of Economic Planning and Development, Prime Minister Office
(2) Central Bureau of Statistics
(3) ***Vital Statistics Japan,*** Ministry of Health and Welfare (from 2000, Ministry of Health, Labour and Welfare)
(4) Department of Statistics
(5) ***Philippine Health Statistics,*** Health Intelligence Service, Department of Health
(6) National Statistics Office
(7) ***Report on Registration of Births and Deaths,*** Registry of Births and Deaths, Singapore
(8) Health Information Center, Ministry of Public Health
(9) General Statistics Office

Note : a) Revised figure
b) Based on National Census 1990
c) Estimated (Projection 1995–2000 and 2000–2005)
d) Based on 1995 Census Based National-Regional Projections
e) Rates from 1980 onwards refer to Singapore residents only
f) For 1976

Fig. 3 Trends in Crude Death Rates (per 1,000 population)



2 – 3 Vital Statistics Rates

(per 1,000 population)

	Year	Crude Marriage Rate	Crude Divorce Rate	Crude Birth Rate	General Fertility Rate	Crude Death Rate	Infant [a] Mortality Rate
BRUNEI (1)	2000	[b] 5.3	[b] 1.0	22.1	83.8	2.9	7.4
INDONESIA (2)	2000	[b] 8.4	[b] 0.8	22.0	[c] [d] [e] 2.6	7.5	46
JAPAN (3)	2000	6.4	2.1	9.5	40.7	7.7	3.2
MALAYSIA (4)	1999	7.2	0.9	24.4	100.9	4.4	7.9
PHILIPPINES (5)	2000	[f] 14.1	••	26.8	[c] 3.4	5.9	(6) [g] 17.0
SINGAPORE (7) [h]	2000	6.7	1.6	13.7	47.6	4.5	2.5
THAILAND (8) (9)	2000	5.5	1.1	12.5	43.3	5.9	6.2
VIETNAM (10)	1999		0.6	19.9	[b] 2.3	5.6	[i] 36.7

Source : (1) Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs and Department of Economic Planning and Development, Prime Minister Office
(2) Central Bureau of Statistics and Ministry of Home Affairs
(3) ***Vital Statistics Japan,*** Ministry of Health, Labour and Welfare
(4) Department of Statistics
(5) National Statistics Office
(6) ***Philippine Health Statistics,*** National Epidemiology Center, Department of Health
(7) ***Report on Registration of Births and Deaths,*** Registry of Births and Deaths and Singapore Department of Statistics
(8) Health Information Center, Ministry of Public Health
(9) Registration System, Ministry of Interior
(10) General Statistics Office

Note : a) Per 1,000 live–births
b) Muslims
c) Total fertility rate
d) Estimated
e) For 1999
f) For 1998
g) For 1997
h) Singapore residents only
i) Revised data

2 – 4 Natality, Mortality and Natural Increase

	Year	Natality (live-born)				Mortality				Natural Increase
		Number			(‰)	Number			(‰)	(‰)
		Total	Male	Female		Total	Male	Female		
BRUNEI (1)	2000	7,478	3,852	3,626	22.1	965	553	412	2.9	19.2
INDONESIA (2) a)	2000				22.0				7.3	14.7
JAPAN (3)	2000	1,190,547	612,148	578,399	9.5	961,653	525,903	435,750	7.7	1.8
MALAYSIA (4)	1998	554,600	287,200	267,400	26.0	97,906	56,472	41,434	4.6	21.4
PHILIPPINES (5)	1997	1,653,236	859,814	793,422	23.1	339,400	201,700	137,700	4.7	18.4
SINGAPORE (6)	1999	43,336 b)	22,572	20,763	12.8	15,516 c)	8,608	6,906	4.5	8.3
THAILAND (7)	2000	773,009	397,523	375,486	12.5	365,741	213,907	151,834	5.9	6.6
VIETNAM (8)	1999	1,518,927	785,146	733,781	19.9				5.6	14.3 d)

Source : (1) Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs and Department of Economic Planning and Development, Prime Minister Office
(2) Calculated by Centre for Health Data and Information, Ministry of Health, based on Population Projection 1995–2000 and 2000–2005, BPS-Statistics Indonesia
(3) ***Vital Statistics Japan,*** Ministry of Health, Labour and Welfare
(4) Department of Statistics
(5) ***Philippine Health Statistics,*** National Epidemiology Center, Department of Health
(6) ***Report on Registration of Births and Deaths,*** Registry of Births and Deaths, Singapore
(7) Health Information Division, Ministry of Public Health
(8) Ministry of Health

Note : a) Estimated
b) Includes unknown sex
c) Singapore residents only
d) Revised data

2 – 5 Deaths and Death Rates by Age and Sex

	Year	Sex	All ages		0 – 4		5 – 14		15 – 24		25 – 34	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI (1)	2000	T	965	286.1	77	197.4	20	28.5	46	77.4	52	81.6
		M	553	308.8	41	203.0	11	30.2	31	101.1	31	90.9
		F	412	260.4	36	191.5	9	26.7	15	52.3	21	70.9
INDONESIA (2) a)	1999	T	1,488,858	717.7	287,088	1,339.1	41,565	102.1	76,527	177.0	81,328	245.4
		M	814,729	789.2	163,192	1,495.5	23,540	113.3	44,249	203.6	41,842	265.9
		F	674,129	646.9	123,895	1,176.9	18,025	90.5	32,278	150.1	39,486	226.8
JAPAN (3)	2000	T	961,653	765.6	5,269	89.9	1,482	11.9	6,432	40.9	10,413	57.1
		M	525,903	855.3	2,933	97.7	931	14.5	4,596	57.0	7,020	75.8
		F	435,750	679.5	2,336	81.7	551	9.0	1,836	23.9	3,393	37.8
MALAYSIA (4)	1998	T	97,906	441.4	5,902	229.1	1,913	38.5	4,324	99.9	4,999	137.3
		M	56,472	497.5	3,301	248.6	1,133	44.3	3,348	149.2	3,726	198.6
		F	41,434	382.7	2,601	208.4	780	32.3	976	89.7	1,273	72.1
PHILIPPINES (5)	1997	T	339,400	474.4	40,409	424.5	10,857	63.1	14,920	105.2	21,607	195.0
		M	201,700	559.5	23,260	474.8	6,285	71.5	10,117	141.8	15,198	273.8
		F	137,700	387.9	17,149	371.1	4,572	54.4	4,803	68.1	6,409	115.8
SINGAPORE (6) b)	1999	T	15,516 d)	450.4	200 c)	73.1	80	14.7	245	39.1	467	51.2
		M	8,608	490.8	106	72.7	44	16.0	163	52.0	326	65.9
		F	6,906	409.3	93	72.7	36	13.3	82	25.8	141	37.0
THAILAND (7)	2000	T	365,741	592.1	9,224	178.3	5,468	50.9	17,552	154.8	45,654	424.8
		M	213,907	697.0	5,309	203.5	3,305	61.0	12,554	218.7	32,973	605.6
		F	151,834	488.5	3,915	125.7	2,163	40.5	4,998	89.3	12,681	239.2
VIETNAM (8)	1989	T	252,486	398.5	65,128	722.8	16,430	102.0	11,669	95.0	10,167	101.1
		M	141,070	463.3	36,091	776.8	8,791	106.2	6,880	118.9	6,263	133.9
		F	111,416	338.5	29,037	665.4	7,639	97.6	4,789	73.7	3,904	72.6

Source : (1) Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs and Department of Economic Planning and Development, Prime Minister Office
(2) Calculated by Center for Health Data and Information, Ministry of Health, using Model Life Table for Developing Countries 1982, the United Nations
(3) ***Vital Statistics Japan,*** Ministry of Health, Labour and Welfare
(4) Department of Statistics
(5) ***Philippine Health Statistics,*** Health Intelligence Service, Department of Health
(6) ***Report on Registration of Births and Deaths,*** Registry of Births and Deaths, Singapore
(7) Health Information Division, Ministry of Public Health
(8) General Statistical Office

(rate per 100,000 population)

35 – 44		45 – 54		55 – 64		65 – 74		75 & over		Unknown	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
72	134.8	80	290.9	124	918.5	211	2,890.4	283	8,323.5		
46	154.4	41	273.3	76	1,070.4	120	3,333.3	156	7,090.9		
26	110.2	39	312.0	48	750.0	91	2,459.5	127	10,583.3		
108,167	381.1	141,944	768.1	216,567	1,764.2	299,553	4,212.8	236,120	8,847.4		
58,970	419.1	84,124	881.7	124,364	2,071.6	158,369	4,855.3	116,079	9,700.0		
49,197	343.7	57,820	646.8	92,203	1,470.0	141,184	3,668.3	120,041	8,154.4		
17,525	111.7	55,579	288.9	106,672	650.0	205,586	1,583.7	6,146.8	6,146.8	723	
11,461	144.7	37,244	387.1	74,062	924.1	137,375	2,282.2	7,833.3	7,833.3	624	
6,064	78.1	18,335	190.7	32,610	388.4	68,211	979.7	5,218.9	5,218.9	99	
6,800	234.7	9,321	506.5	15,335	1,402.5	21,295	3,688.7	27,665	10,973.8	352	
4,726	319.3	6,015	637.0	9,302	1,704.3	11,629	4,335.9	13,026	12,151.1	266	
2,074	146.3	3,306	369.0	6,033	1,101.7	9,666	3,127.1	14,639	10,102.8	86	
27,276	336.4	35,079	644.8	46,835	1,402.2	141,801			5,307.0	616	
18,531	454.2	23,825	872.7	30,891	1,883.6	73,236			5,983.3	357	
8,745	217.1	11,254	415.3	15,944	937.9	68,565			4,735.2	259	
797	108.9	1,330	287.9	2,239	911.8	3,721	2,460.2	6,399	6,905.0	38 [c]	
514	135.1	830	348.6	1,441	1,187.6	2,231	3,115.2	2,918	7,544.2	35	
283	81.9	500	225.2	798	643.5	1,490	1,876.6	3,481	6,448.3	2	
40,862	447.0	39,214	597.6	48,803	1,109.8	66,113	2,538.4	91,312	8,664.4	1,539	
29,151	643.0	25,133	783.7	28,810	1,379.3	35,995	2,995.3	40,033	8,924.1	644	
11,711	254.2	14,081	419.7	19,993	865.9	30,118	2,147.0	51,279	8,471.9	895	
9,788	180.0	14,910	384.4	28,936	819.3	38,700	1,894.3	56,758	5,559.1		
6,219	249.9	9,288	539.7	18,046	1,109.2	22,769	2,638.4	26,723	7,964.5		
3,569	121.1	5,622	260.6	10,890	571.7	15,931	1,347.8	30,035	4,530.2		

Note : a) Based on a 10-day sample of discharges from hospital for each quarter
b) The number of deaths includes non-residents. Death rates are computed based on the number of resident deaths over resident population.
c) Includes unkown sex

2 – 6 Expectation of Life at Specified Ages for Each Sex

	Year	Sex	Age								
			0	1	2	3	4	5	10	15	20
BRUNEI (1)	1997–1999	M	74.9	74.6				70.7	65.8	60.9	56.2
		F	78.2	77.6				73.7	68.7	63.8	58.9
INDONESIA (2)	1999	M	64.6	66.8				64.2	59.8	55.2	50.8
		F	68.3	69.9				67.2	62.7	58.1	53.5
JAPAN (3)	2000	M	77.7	77.0	76.0	75.1	74.1	73.1	68.2	63.2	58.3
		F	84.6	83.9	82.9	81.9	80.9	80.0	75.0	70.0	65.1
MALAYSIA (4)	1999	M	69.9	69.6				65.8	60.9	56.1	51.4
		F	74.9	74.5				70.7	65.8	60.9	56.0
PHILIPPINES (5)	1995	M	62.7	65.2	64.9	64.0	63.2	62.5	57.6	53.1	48.5
		F	67.9	70.3	70.0	69.3	68.6	67.9	63.3	58.6	53.9
SINGAPORE (6)	1999	M	75.6	74.9				71.0	66.0	61.1	56.2
		F	79.7	78.9				75.0	70.1	65.1	60.2
THAILAND (7)	1995–1996	M	70.0	71.1				67.5	62.9	58.2	53.7
		F	75.0	76.1				72.4	67.7	62.9	58.4
VIETNAM (8)	1999	M	65.0								
		F	70.0								

Source : (1) Medical and Health Statistics Unit, Research and Development Division, Ministry of Health
(2) Calculated by Centre for Health Data, using ***Model Life Table for Developing Countries 1982,*** the United Nations
(3) ***The Nineteenth Life Tables for Japan,*** Ministry of Health, Labour and Welfare
(4) ***Abridged Life Table,*** Department of Statistics
(5) Population Institute, University of the Philippines
(6) ***Abridged Life Table,*** Singapore Department of Statistics
(7) National Statistics Office
(8) ***Detailed Analysis of Sample Survey,*** General Statistics Office

Age														
25	30	35	40	45	50	55	60	65	70	75	80	85	90	95
51.5 54.1	46.9 49.2	42.2 44.4	37.5 39.5	32.9 34.8	28.4 30.1	24.1 25.7	19.8 21.4	16.0 17.5	12.8 14.1	10.0 11.0	7.5 8.1	4.5 4.6		
46.5 49.0	42.3 44.5	38.0 40.1	33.7 35.6	29.4 31.3	25.3 27.0	21.4 22.5	17.6 18.8	14.1 15.1	11.0 11.7	8.3 8.8	6.1 6.4	4.3 4.5	2.9 3.1	2.0 2.0
53.5 60.2	48.7 55.3	43.9 50.4	39.1 45.5	34.5 40.7	29.9 36.0	25.6 31.4	21.4 26.9	17.5 22.4	14.0 18.2	10.8 14.2	8.0 10.6	5.8 7.6	4.1 5.3	3.0 3.7
46.8 51.1	42.2 46.3	37.7 41.5	33.2 36.7	28.7 32.0	24.4 27.4	20.3 23.0	16.5 18.9	13.1 15.1	10.1 11.7	7.5 8.8	5.5 6.4			
44.1 49.2	39.8 44.6	35.7 40.1	31.5 35.7	27.5 31.3	23.7 27.1	20.1 23.0	16.8 19.0	13.7 15.4	10.9 12.0	8.4 9.0	6.3 6.7	4.7 4.9	3.4 3.6	2.5 2.6
51.4 55.3	46.5 50.4	41.7 45.5	36.9 40.6	32.2 35.8	27.6 31.1	23.2 26.5	19.1 22.0	15.4 17.9	12.1 14.1	9.1 10.6	6.6 7.5	4.4 4.6		
49.3 53.9	45.0 49.5	40.7 45.0	36.4 40.5	32.1 36.1	27.9 31.7	23.9 27.6	20.3 23.9	17.1 20.2	14.2 16.9	11.9 14.6	10.9 13.6			

Fig. 4 Trends in Expectation of Life at Birth (Male)

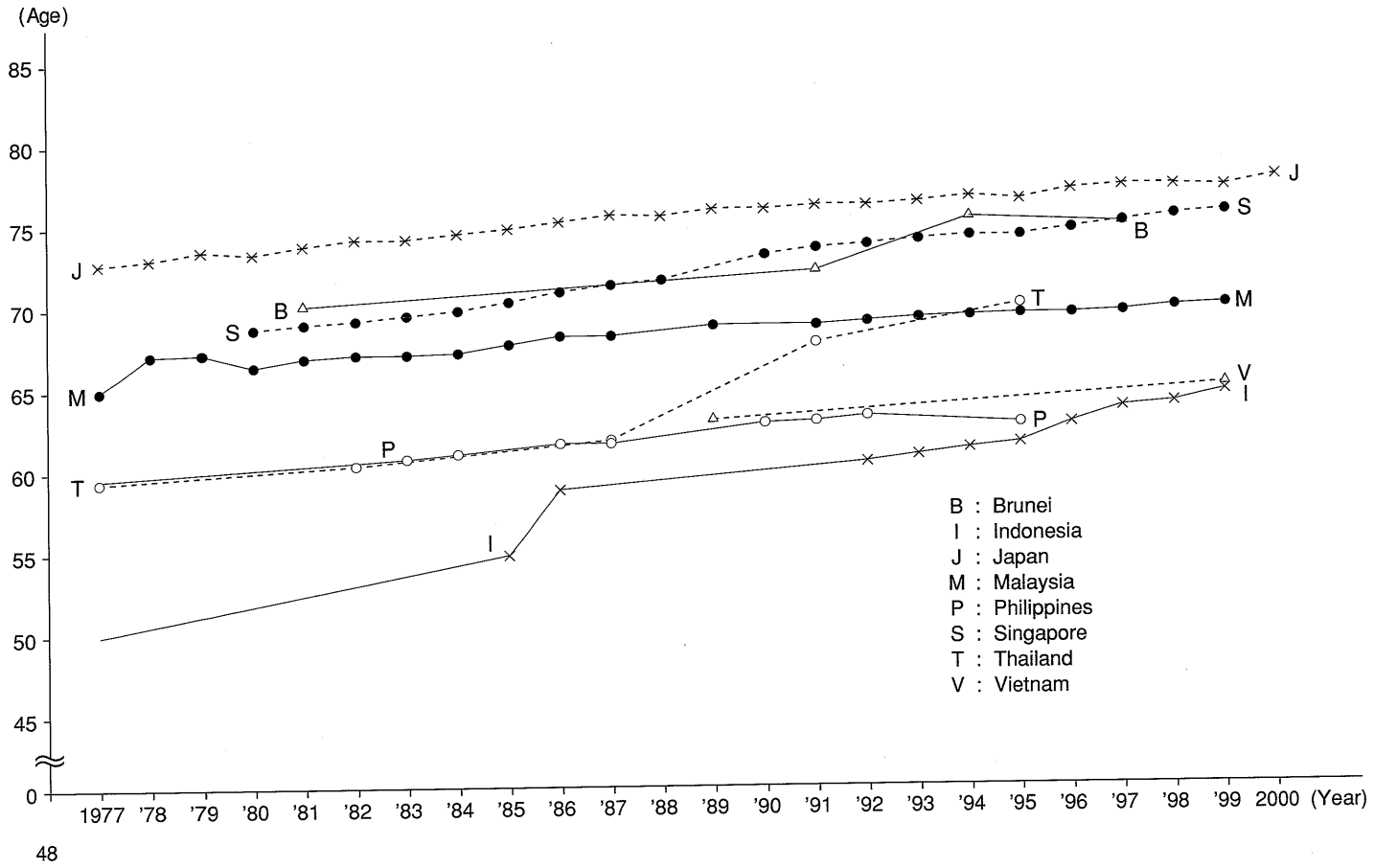
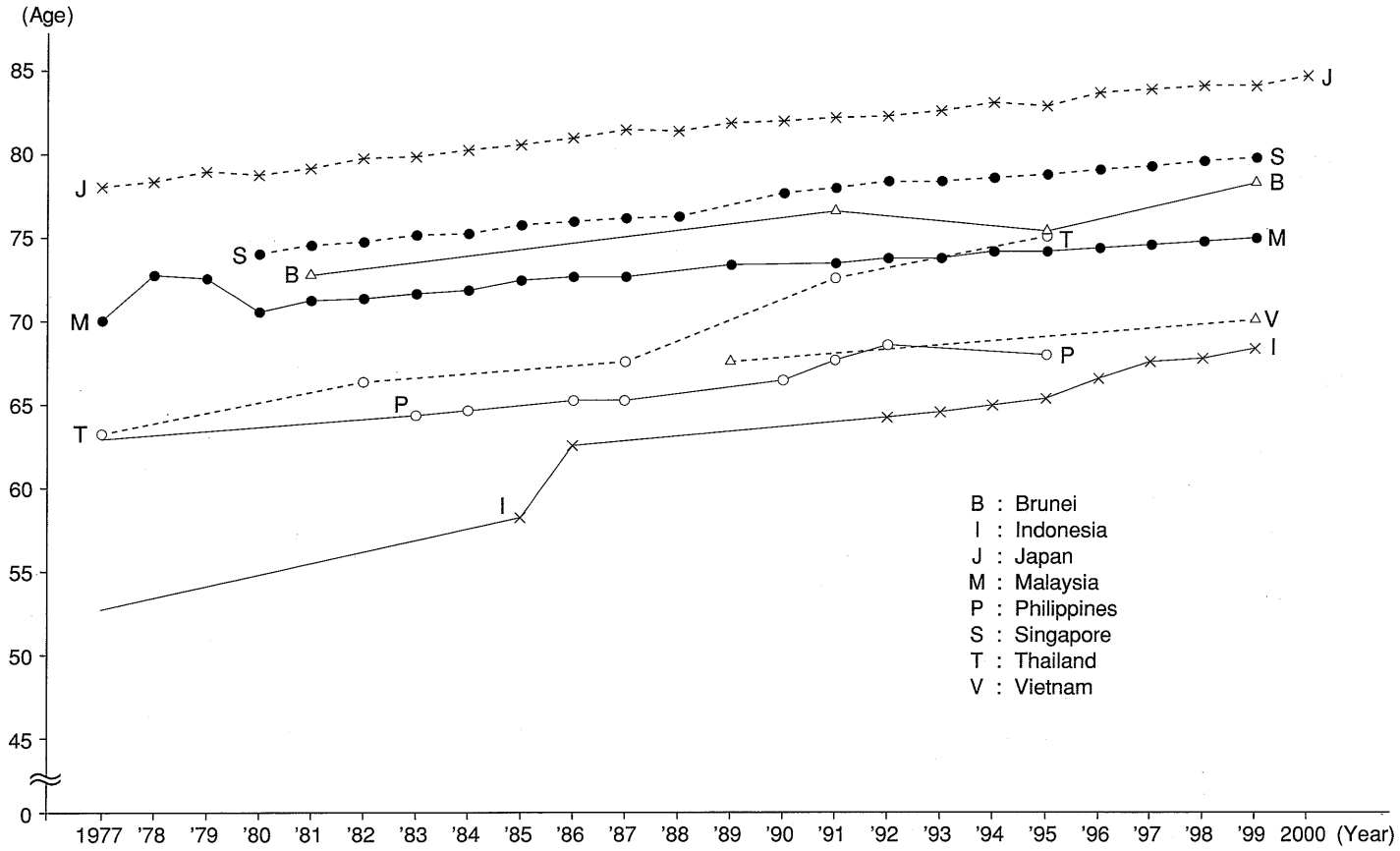


Fig. 4 Trends in Expectation of Life at Birth (Female)



2 – 7 Survivors at Specified Ages for Each Sex

	Year	Sex	Age							
			0	1	5	10	15	20	25	30
BRUNEI (1)	1997–1999	M	100,000	99,195	98,945	98,839	98,658	98,252	97,586	96,899
		F	100,000	99,497	99,362	99,304	99,208	99,024	98,738	98,497
INDONESIA (2)	1999	M	100,000	95,315	93,332	92,365	91,758	90,762	89,330	87,881
		F	100,000	96,190	94,422	93,660	93,144	92,455	91,544	90,507
JAPAN (3)	2000	M	100,000	99,655	99,517	99,446	99,375	99,153	98,823	98,490
		F	100,000	99,702	99,594	99,544	99,504	99,413	99,273	99,110
MALAYSIA (4)	1999	M	100,000	99,062	98,772	98,568	98,327	97,677	96,865	96,007
		F	100,000	99,237	98,973	98,822	98,648	98,439	98,187	97,896
PHILIPPINES (5)	1995	M	100,000	94,677	92,781	92,217	91,766	91,044	89,854	88,295
		F	100,000	95,158	93,042	92,509	92,112	91,625	90,995	90,166
SINGAPORE (6)	1999	M	100,000	99,642	99,531	99,478	99,368	99,198	98,862	98,569
		F	100,000	99,654	99,542	99,480	99,399	99,268	99,148	98,996
THAILAND (7)	1995–1996	M	100,000	97,060	96,455	95,932	95,455	94,585	93,462	92,143
		F	100,000	97,316	96,881	96,476	96,158	95,413	94,503	93,520
VIETNAM (8)	1989	M	100,000	95,537	93,523	92,491	91,736	90,882	89,712	88,687
		F	100,000	95,612	93,160	91,929	91,164	90,519	89,654	88,998

Source : (1) Medical and Health Statistics Unit, Research and Development Division, Ministry of Health
(2) Calculated by Centre for Health Data, using ***Model Life Table for Developing Countries 1982,*** United Nations
(3) ***The Nineteenth Life Tables,*** Ministry of Health, Labour and Welfare
(4) ***Abridged Life Table,*** Department of Statistics
(5) Population Institute, University of the Philippines
(6) ***Abridged Life Table,*** Singapore Department of Statistics
(7) National Statistical Office
(8) ***Detailed Analysis of Sample Survey,*** General Statistics Office

Age												
35	40	45	50	55	60	65	70	75	80	85	90	95
96,205 98,150	95,461 97,805	94,285 97,052	92,898 96,165	90,617 94,260	87,448 91,447	81,872 86,183	72,088 77,844	59,727 67,233	44,904 53,485	31,801 42,309		
86,345 89,357	84,656 88,039	82,622 86,327	80,092 84,284	76,447 81,401	71,826 77,660	65,188 72,083	55,992 63,715	43,697 51,802	29,649 36,644	15,669 20,597	5,564 7,904	1,036 1,608
98,063 98,892	97,497 98,585	96,642 98,119	95,252 97,404	92,979 96,278	89,600 94,771	84,675 92,586	77,227 89,140	66,725 83,711	52,494 74,529	34,572 59,459	16,306 38,773	5,653 17,696
94,940 97,471	93,623 96,889	91,977 96,044	89,759 94,717	86,232 92,536	80,738 88,817	72,379 82,681	60,891 73,157	45,934 59,849	28,811 42,300			
86,429 89,134	84,214 87,807	81,392 86,167	77,620 84,012	72,854 81,010	66,542 76,933	58,682 71,135	48,983 63,189	37,600 51,728	25,278 36,767	13,364 20,652	5,213 8,652	1,236 2,241
98,190 98,781	97,637 98,473	96,795 97,990	95,505 97,138	93,312 95,752	89,534 93,554	82,915 89,632	73,007 83,020	60,438 73,894	43,927 59,449	26,152 41,917		
90,643 92,431	89,067 91,293	87,194 89,907	84,805 88,340	81,704 85,699	76,630 81,567	69,399 76,853	60,945 70,157	49,507 59,025	34,625 44,350			
87,519 88,187	85,637 87,240	83,452 85,704	79,779 83,813	75,554 80,825	69,953 76,573	61,123 70,910	50,508 63,335	36,169 51,350	21,287 37,386	10,624 21,343		

Fig. 5 Survivors at Specified Ages for Each Sex (1) Brunei, 1997~1999

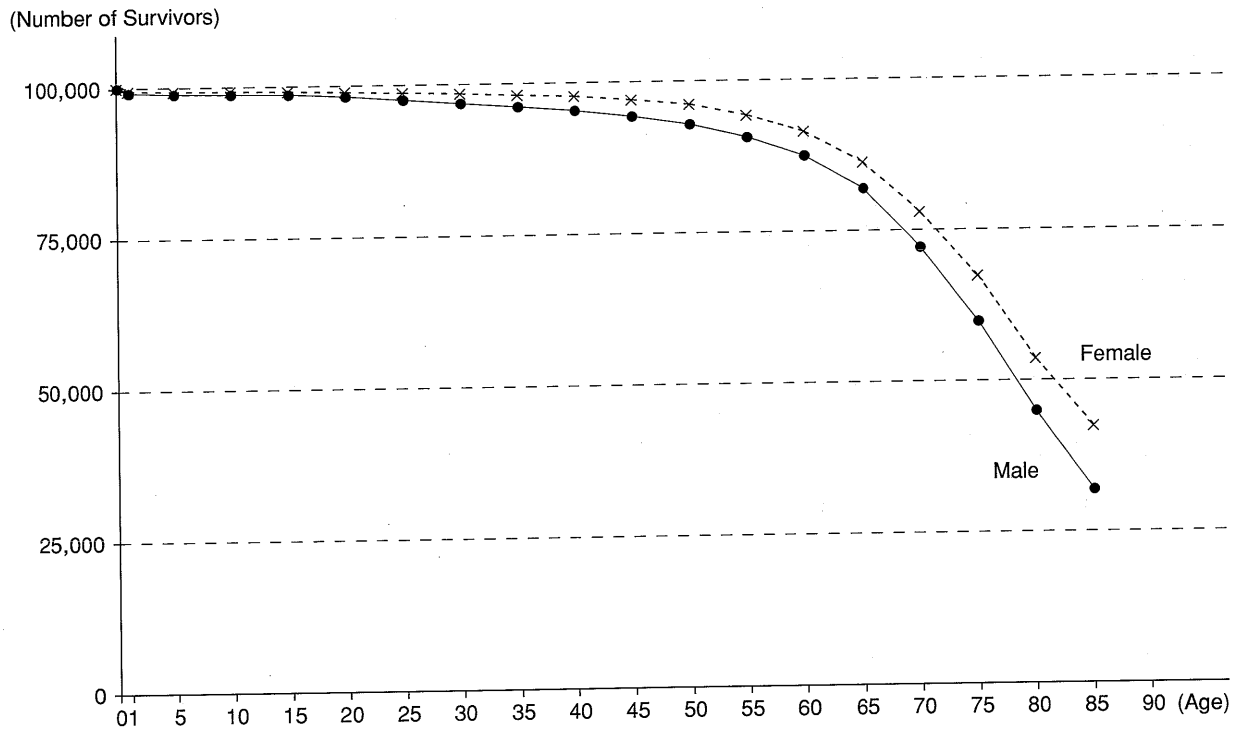


Fig. 5 Survivors at Specified Ages for Each Sex (2) Indonesia, 1999

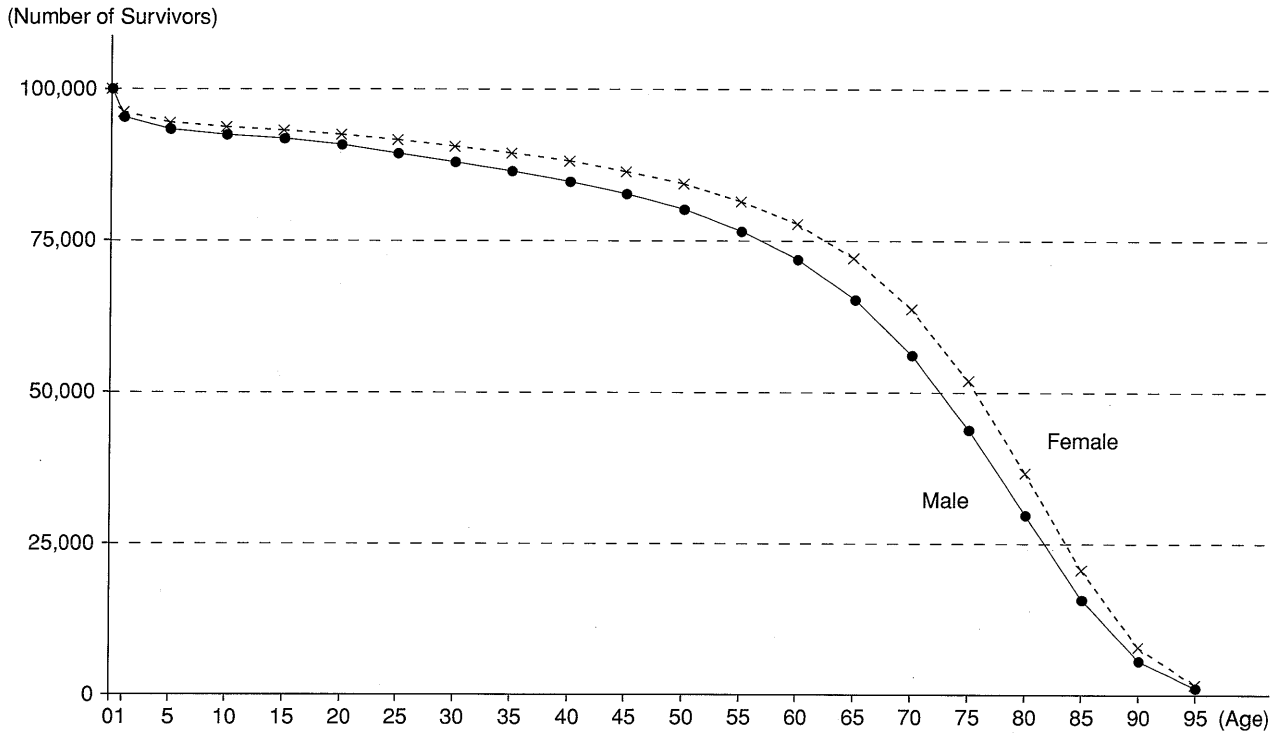


Fig. 5 Survivors at Specified Ages for Each Sex (3) Japan, 2000

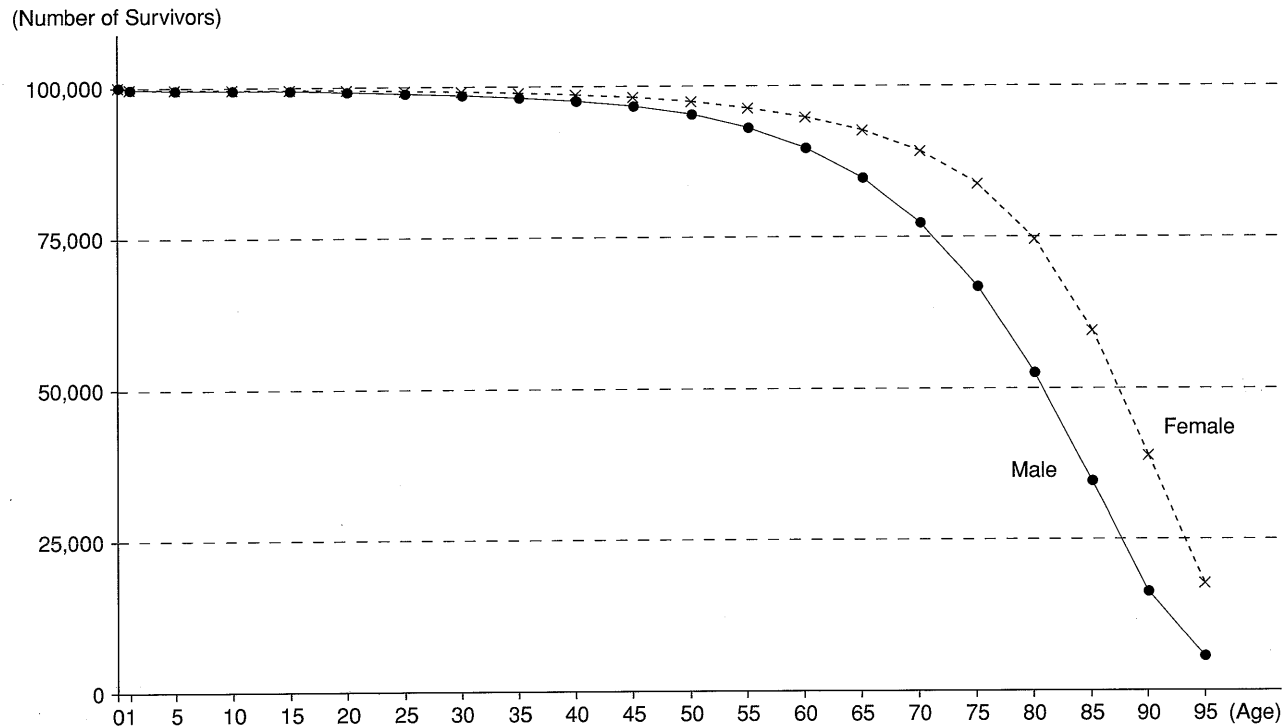


Fig. 5 Survivors at Specified Ages for Each Sex (4) Malaysia, 1999

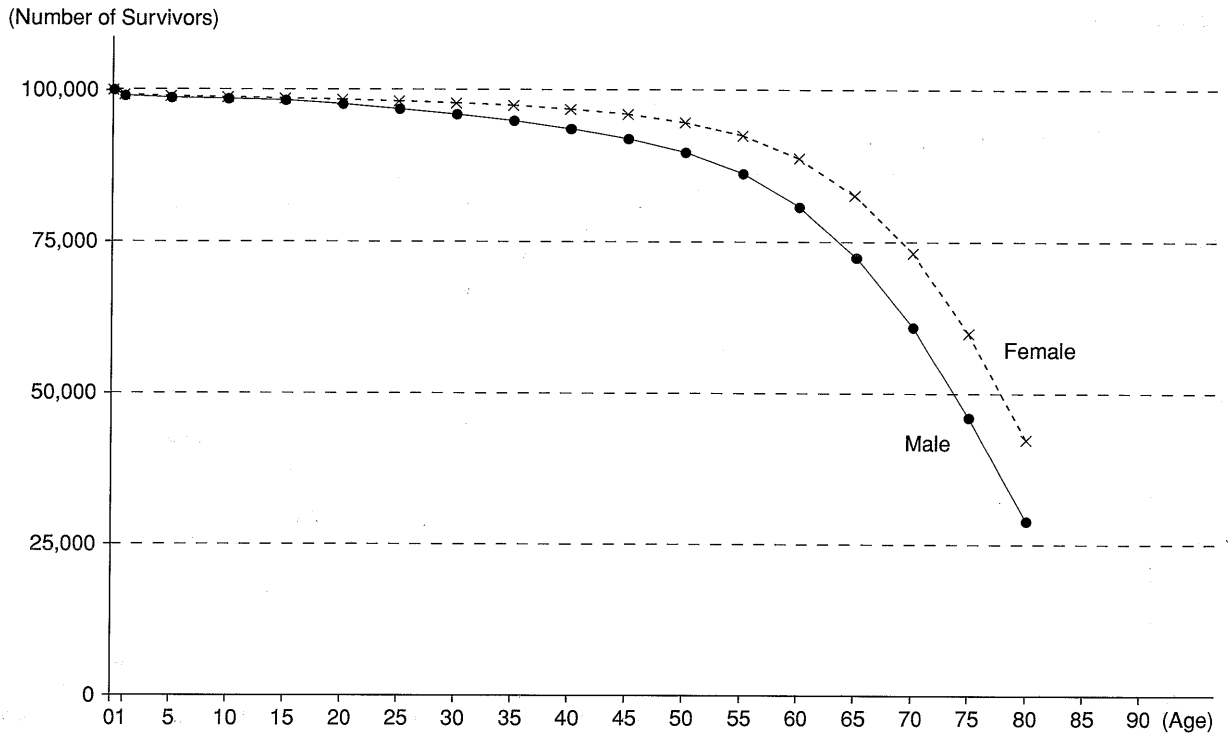


Fig. 5 Survivors at Specified Ages for Each Sex (5) Philippines, 1995

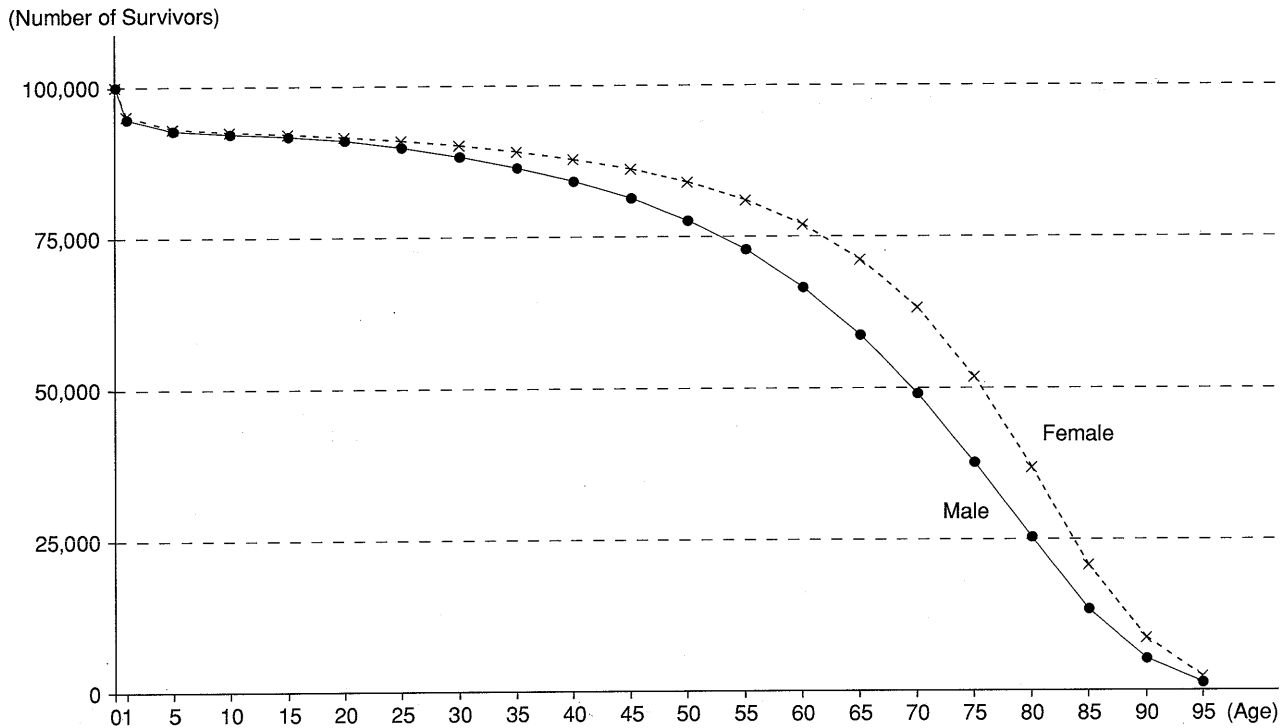


Fig. 5 Survivors at Specified Ages for Each Sex (6) Singapore, 1999

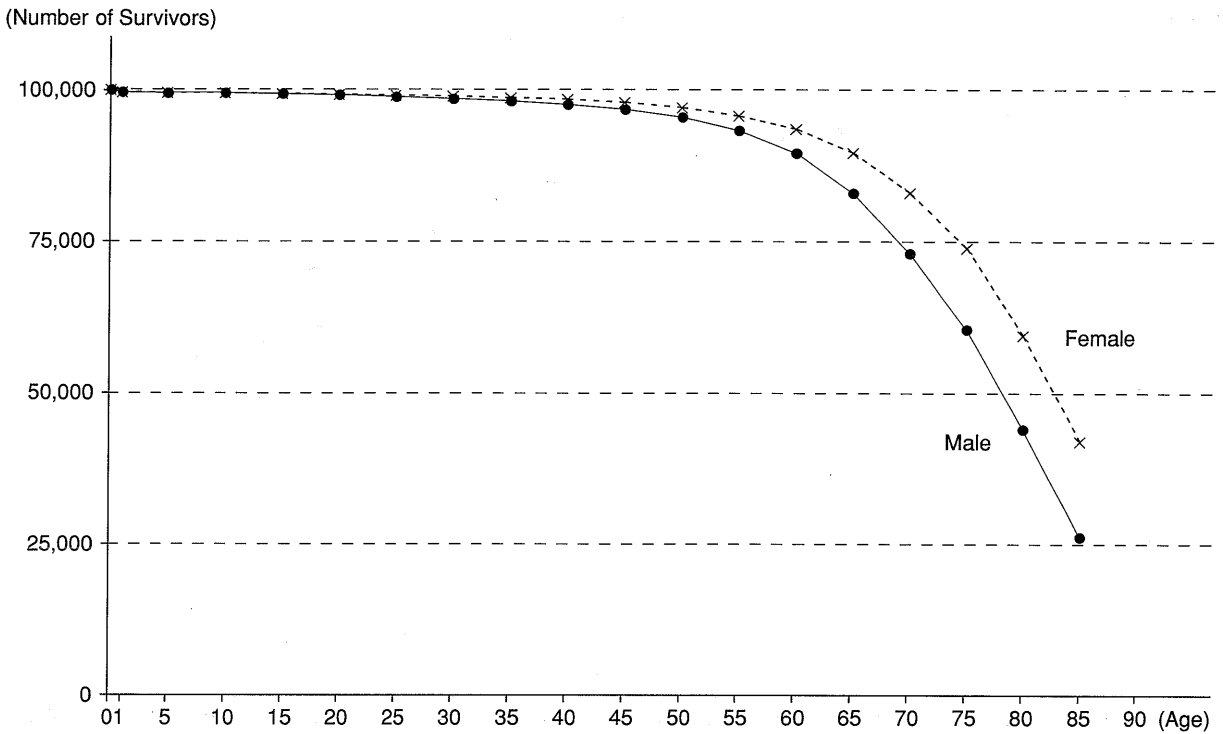


Fig. 5 Survivors at Specified Ages for Each Sex (7) Thailand, 1995~1996

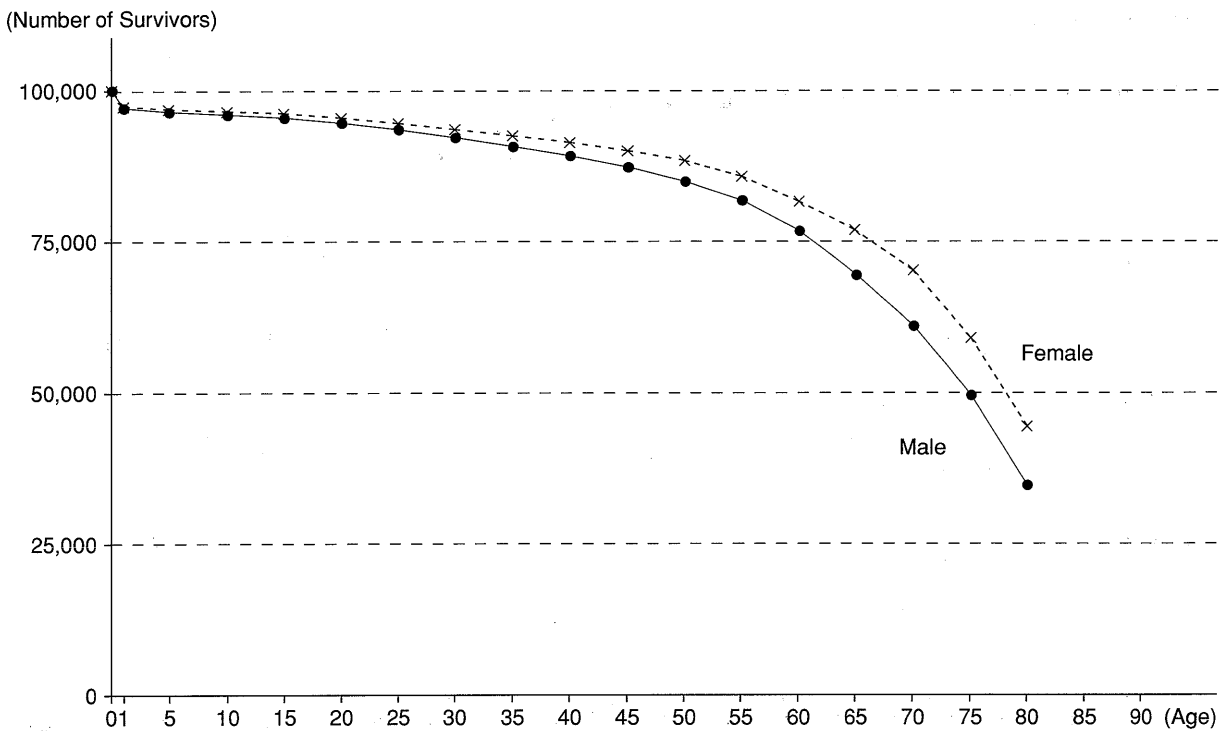
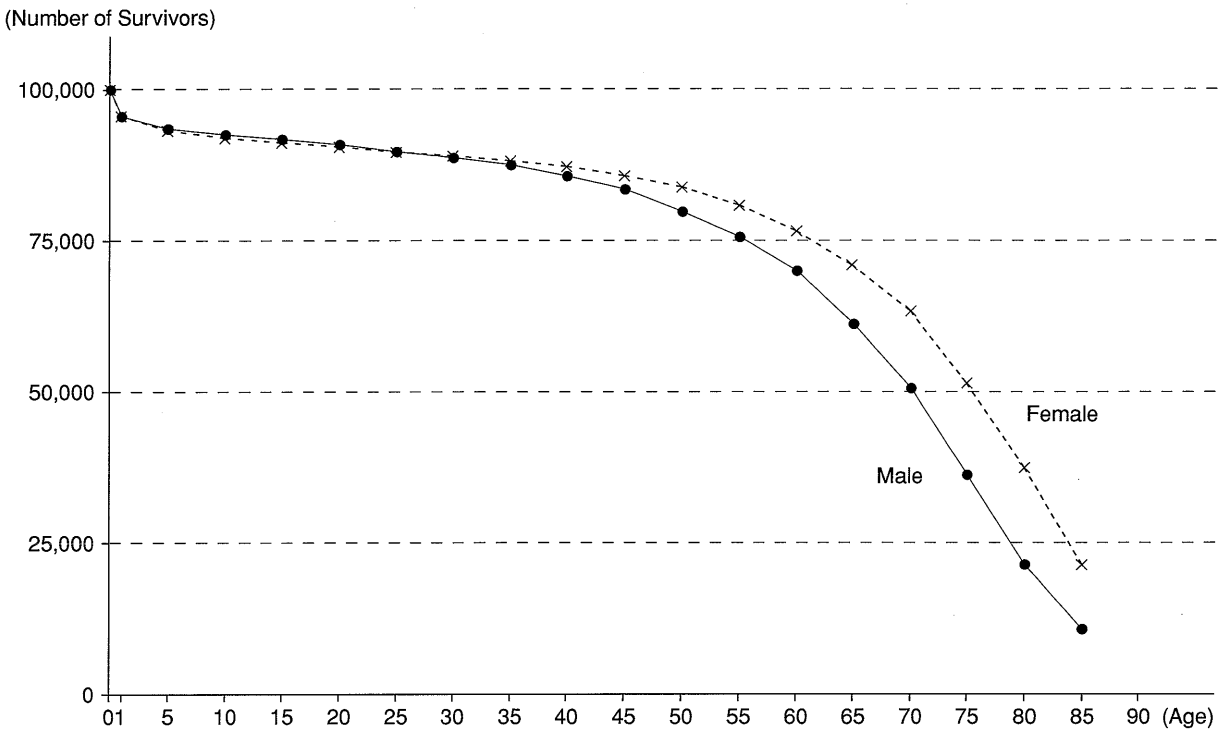


Fig. 5 Survivors at Specified Ages for Each Sex (8) Vietnam, 1989



3. Causes of Death

3 – A Classification List Used for Ranking Causes of Death in Tables 3 – 1 and 3 – 2

ICD – 9*	ICD – 10†	Disease groups
01	A00 – A09	Intestinal infectious diseases
02	A15 – A19	Tuberculosis
033	A36	Diphtheria
034	A37	Whooping cough
036	A39	Meningococcal infection
037, 771.3**	A33 – A35	Tetanus
038	A40, A41	Septicemia
040	A80	Acute poliomyelitis
042	B05	Measles
046	B15 – B19	Viral hepatitis
047	A82	Rabies
279.5**	B20 – B24	AIDS (HIV)
061***	A90	Dengue
065.4**	A91	Dengue hemorrhagic fever
052	B50 – B54	Malaria
06	A50 – A64	Venereal diseases
08 – 14	C00 – C97	Malignant neoplasms
15 – 17	D00 – D48	Benign neoplasms, carcinoma in situ, other and unspecified neoplasms
181	E10 – E14	Diabetes mellitus
19	E40 – E64	Nutritional deficiencies
200	D50 – D64	Anemias
21	F00 – F99	Mental disorders
220	G00 – G09	Meningitis
26	I10 – I15	Hypertensive diseases
25, 27, 28	I00 – I09, I20 – I25, I30 – I52	Heart diseases
29	I60 – I69	Cerebrovascular diseases
300	I70	Atherosclerosis
310 – 312	J00 – J06	Acute upper respiratory infection
320	J20, J21	Acute bronchitis and bronchiolitis
321, 322	J10 – J18	Influenza and pneumonia
323	J40 – J46	Bronchitis, chronic and unspecified, emphysema and asthma
341	K25 – K27	Ulcer of stomach and duodenum
347	K73, K74	Chronic liver diseases and cirrhosis
350	N00 – N19	Nephritis, nephrotic syndrome and nephrosis
38	O00 – O08	Abortion
40, 41	O80, O98 – O99	Indirect obstetric causes
42	L00 – L99	Diseases of skin and subcutaneous tissue
43	M00 – M99	Diseases of musculoskeletal system and connective tissue
44	Q00 – Q99	Congenital anomalies
45	P00 – P96	Certain conditions originating in the perinatal period
E47	V01 – V99	Transport accidents
E48	X40 – X49	Accidental poisoning
E50	W00 – W19	Accidental falls
E51	X00 – X09	Accidents caused by fire and flames
E521	W65 – W79	Accidental drowning and submersion
E53	Y40 – Y84	Drugs, medicaments causing adverse effects in therapeutic use
E54	X60 – X84	Suicide and self-inflicted injuries
E55	X85 – Y09	Homicide and injuries purposely inflicted by other persons

* Categories of the Basic Tabulation List
** 4-digit category
*** 3-digit category
† 3-character codes

3 – 1 Ten Leading Causes of Death (Percentage of All Deaths with Specific Diagnosis)

	Year	1	2	3	4	5
BRUNEI (1)	2000	Malignant Neoplasms (20.6%)	Heart Diseases (16.6%)	Cerebrovascular Diseases (9.1%)	Diabetes Mellitus (8.7%)	Bronchitis, Emphysema & Asthma (6.6%)
INDONESIA (2)	1999	Intestinal Infectious Diseases (22.0%)	Cerebrovascular Diseases (12.0%)	Certain Conditions Originating in the Perinatal Period (11.2%)	Heart Diseases (5.8%)	Bronchitis, Emphysema & Asthma (5.7%)
JAPAN (3)	2000	Malignant Neoplasms (31.6%)	Heart Diseases (15.6%)	Cerebrovascular Diseases (14.2%)	Influenza and Pneumonia (9.4%)	Suicide and Self-inflicted Injury (3.2%)
MALAYSIA (4) b)	1998	Heart Diseases (19.5%)	Malignant Neoplasms (10.9%)	Cerebrovascular Diseases (8.2%)	Septicemia (7.1%)	Transport Accidents (6.4%)
PHILIPPINES (5)	1997	Heart Diseases (17.0%)	Malignant Neoplasms (13.4%)	Influenza and Pneumonia (11.8%)	Tuberculosis (8.8%)	Hypertensive Diseases (8.2%)
SINGAPORE (6)	1999	Malignant Neoplasms (26.8%)	Heart Diseases (24.0%)	Influenza and Pneumonia (10.6%)	Cerebrovascular Diseases (10.6%)	Hypertensive Diseases (2.3%)
THAILAND (7)	2000	Malignant Neoplasms (18.2%)	Heart Diseases (9.1%)	Transport Accidents (6.1%)	Septicemia (4.9%)	HIV Infection (4.0%)
VIETNAM (8) b)	2000	Celebrovascular Diseases (15.3%)	Heart Diseases (12.0%)	Influenza and Pneumonia (8.8%)	Bronchitis, Emphysema & Asthma (7.4%)	HIV Infection (6.5%)

Source : (1) Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs
(2) Directorate General of Medical Care, Ministry of Health
(3) ***Vital Statistics Japan,*** Ministry of Health and Welfare
(4) Information and Documentation System Unit, Ministry of Health
(5) ***Philippine Health Statistics,*** National Epidemiology Center, Department of Health
(6) Registry of Births and Deaths
(7) Health Information Center, Bureau of Health Policy and Plan, Ministry of Public Health
(8) ***Health Statistics Yearbook,*** Statistics and Informatic Division, Ministry of Health

6	7	8	9	10	Conditions excluded from the denominator [a] (% of all deaths)
Transport Accidents (4.9%)	Congenital Anomalies (3.7%)	Hypertensive Diseases (3.0%)	Influenza and Pneumonia (2.8%)	Certain Conditions Originating in the Perinatal Period (2.7%)	7.0
Influenza and Pneumonia (3.9%)	Tuberculosis (3.5%)	Chronic Liver Diseases & Cirrhosis of Liver (3.0%)	Hypertensive Diseases (2.5%)	Malignant Neoplasms (2.5%)	1.7
Nephritis, Nephrotic Syndrome & Nephrosis (2.1%)	Bronchitis, Emphysema & Asthma (1.9%)	Transport Accidents (1.4%)	Diabetes Mellitus (1.3%)	Chronic Liver Diseases & Cirrhosis of Liver (1.1%)	2.8
Certain Conditions Originating in the Perinatal Period (4.9%)	Influenza and Pneumonia (4.5%)	Congenital Anomalies (2.5%)	Nephritis, Nephrotic Syndrome & Nephrosis (2.5%)	Diabetes Mellitus (1.8%)	5.2
Celebrovascular Deseases (7.1%)	Homicide and Injuries Inflicted by Other Person (4.6%)	Diabetes Mellitus (2.6%)	Transport Accidents (2.0%)	Nephritis, Nephrotic Syndrome & Nephrosis (2.6%)	22.5
Diabetes Mellitus (2.3%)	Suicide and Self-inflicted Injuries (2.0%)	Transport Accidents (1.4%)	Nephritis, Nephrotic Syndrome & Nephrosis (1.2%)	Chronic Liver Diseases & Cirrhosis of Liver (1.0%)	0.4
Influenza and Pneumonia (3.9%)	Nephritis, Nephrotic Syndrome & Nephrosis (3.8%)	Cerebrovascular Diseases (3.9%)	Diabetes Mellitus (3.5%)	Tuberculosis (2.9%)	40.9
Certain Conditions Originating in the Perinatal Period (5.2%)	Transport Accidents (4.6%)	Tuberculosis (3.8%)	Suicide and Self-inflicted Injuries (3.0%)	Congenital Anomalies (2.7%)	27.7

Note : a) 465 (ICD-9) / R54 (ICD-10): Senility without Mention of Psychosis and 460–464, 466, 467, 469 (ICD-9) / Rest of R00–R99 (ICD-10): Signs, Symptoms and Other Ill-defined Conditions
b) Government hospital-based figures

[Brunei Darussalam]

3 – 2 Trends in the Leading Causes of Death

Order	Year	1988	1989	1992	1993	1995	1996	1997	1998	1999	2000
No. 1	Cause of Death	Malignant Neoplasms	Heart Diseases					Malignant Neoplasms	Heart Diseases	Malignant Neoplasms	
	Percentage of All Deaths	19.5	19.0	22.5	17.4	16.0	18.0	17.4	19.6	19.2	20.6
No. 2	Cause of Death	Heart Diseases	Malignant Neoplasms					Heart Diseases	Malignant Neoplasms	Heart Diseases	
	Percentage of All Deaths	16.2	12.8	15.4	15.6	15.9	14.7	16.6	16.7	18.1	16.6
No. 3	Cause of Death		Cerebrovascular Diseases							Diabetes Melitus	Cerebro-vascular Diseases
	Percentage of All Deaths	8.1	5.0	7.9	7.7	10.5	10.4	9.0	9.6	8.9	9.1
No. 4	Cause of Death	Transport Accidents							Bronchitis, Emphysema & Asthma	Cerebro-vascular Diseases	Diabetes Melitus
	Percentage of All Deaths	6.6	4.8	5.7	7.7	8.1	9.0	7.8	9.2	8.8	8.7
No. 5	Cause of Death	Diabetes Mellitus		Influenza and Pneumonia	Certain Conditions Originating in the Perinatal Period	Diabetes Mellitus	Bronchitis, Emphysema & Asthma		Diabetes Melitus	Bronchitis, Emphysema & Asthma	
	Percentage of All Deaths	5.6	3.7	5.1	4.8	5.8	7.7	7.2	7.1	7.7	6.6

Source : Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs

[Indonesia]

3 – 2 Trends in the Leading Causes of Death (Contd.)

Order	Year	1988	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
No. 1	Cause of Death	Certain Conditions Originating in the Perinatal Period	Intestinal Infectious Diseases	Cerebrovascular Diseases					Certain Conditions Originating in the Perinatal Period			Intestinal Infectious Diseases
	Percentage of All Deaths	12.2	16.1	14.2	12.3	16.5	13.2	12.2	13.6	24.4	22.1	22.0
No. 2	Cause of Death	Heart Diseases	Cerebro-vascular Diseases	Influenza and Pneumonia	HIV Infection	Influenza and Pneumonia	Certain Conditions Originating in the Perinatal Period		Heart Diseases			Cerebro-vascular Diseases
	Percentage of All Deaths	8.2	10.8	7.5	11.6	9.4	8.8	9.5	10.1	10.4	9.2	12.0
No. 3	Cause of Death	Influenza and Pneumonia	Influenza and Pneunmonia	Malignant Neoplasms	Influenza and Pneunmonia	Tuberculosis	Heart Diseases		Cerebro-vascular Diseases	Tuberculosis	Influenza and Pneumonia	Certain Conditions Originating in the Perinatal Period
	Percentage of All Deaths	6.90	6.4	6.4	6.6	8.4	6.6	9.1	9.2	6.5	7.8	11.2
No. 4	Cause of Death	Cerebro-vascular Diseases	Tuberculosis			Malignant Neoplasms	Influenza and Pneumonia				Tuberculosis	Heart Diseases
	Percentage of All Deaths	6.87	6.4	6.3	5.5	7.2	6.3	6.6	5.5	5.6	6.5	5.8
No. 5	Cause of Death	Intestinal Infectious Diseases	Malignant Neoplasms	Intestinal Infectious Diseases	Malignant Neoplasms	Intestinal Infectious Diseases	Malignant Neoplasms	Intestinal Infectious Diseases	Transport Accidents	Septicemia	Meningitis	Bronchitis, Emphysema & Asthma
	Percentage of All Deaths	6.3	6.1	6.2	4.8	6.3	5.3	5.0	5.0	4.2	5.0	6.6

Source : Ministry of Health

3 – 2 (J)

[Japan]

3 – 2 Trends in the Leading Causes of Death (Contd.)

Order		Year	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
No. 1	Cause of Death		Malignant Neoplasms												
	Percentage of All Deaths		27.0	28.0	27.5	28.8	28.1	27.8	28.9	29.3	31.1	31.0	31.2	30.4	31.2
No. 2	Cause of Death		Heart Diseases							Cerebrovascular Diseases		Heart Diseases			
	Percentage of All Deaths		20.7	20.7	20.9	21.0	21.3	21.3	18.9	16.3	16.1	15.7	15.7	15.8	15.6
No. 3	Cause of Death		Cerebrovascular Diseases							Heart Diseases		Cerebrovascular Diseases			
	Percentage of All Deaths		16.9	15.9	15.4	14.8	14.3	14.0	14.2	15.5	15.8	15.6	15.1	14.6	14.2
No. 4	Cause of Death		Influenza and Pneumonia												
	Percentage of All Deaths		7.5	7.8	8.7	8.8	9.0	9.6	9.9	9.0	8.2	9.0	8.8	10.0	9.4
No. 5	Cause of Death		Suicide and Self-inflicted Injuries												
	Percentage of All Deaths		3.0	2.8	2.5	2.5	2.5	2.4	2.5	2.4	2.5	2.6	3.5	3.3	3.2

Source : Ministry of Health, Labour and Welfare

[Malaysia]

3 – 2 Trends in the Leading Causes of Death (Contd.)

Order	Year	1988	1989	1990	1991 a)	1992	1993	1994	1995	1996	1997	1998
No. 1	Cause of Death	Heart Diseases										
	Percentage of All Deaths	12.7	23.1	20.1	22.0	20.3	20.2	20.0	19.9	19.4	19.5	19.5
No. 2	Cause of Death	Certain Conditions Originating in the Perinatal Period	Malignant Neoplasms									
	Percentage of All Deaths	9.0	12.3	10.1	12.5	11.8	11.4	10.9	11.6	10.7	10.6	10.9
No. 3	Cause of Death	Intestinal Infectious Diseases	Certain Conditions Originating in the Perinatal Period	Cerebrovascular Diseases								
	Percentage of All Deaths	7.5	11.8	9.3	9.1	9.1	9.1	8.7	8.6	8.4	8.1	8.2
No. 4	Cause of Death	Cerebrovascular Diseases		Certain Conditions Originating in the Perinatal Period						Transport Accidents		Septicemia
	Percentage of All Deaths	7.1	9.7	8.4	6.8	7.9	7.9	7.2	6.7	7.1	7.4	7.1
No. 5	Cause of Death	Malignant Neoplasms	Septicemia	Transport Accidents			Septicemia	Transport Accidents	Septicemia			Transport Accidents
	Percentage of All Deaths	6.3	4.9	4.3	5.9	5.7	5.5	5.8	6.1	6.7	6.6	6.4

Source : Ministry of Health

Note : a) Peninsular Malaysia only

3 – 2 (P)

[Philippines]

3 – 2 Trends in the Leading Causes of Death (Contd.)

Order		Year 1988	1990	1991	1992	1993	1994	1995	1996	1997
No. 1	Cause of Death	Influenza and Pneumonia	Heart Diseases							
	Percentage of All Deaths	16.4	15.4	15.6	15.1	15.1	14.6	14.8	14.7	17.0
No. 2	Cause of Death	Heart Diseases	Influenza and Pneumonia				Malignant Neoplasms	Influenza and Pneumonia		Malignant Neoplasms
	Percentage of All Deaths	13.0	14.9	13.4	14.2	14.2	10.4	11.1	10.3	13.4
No. 3	Cause of Death	Tuberculosis			Malignant Neoplasms	Tuberculosis	Influenza and Pneumonia	Malignant Neoplasms		Influenza and Pneumonia
	Percentage of All Deaths	12.5	8.6	8.2	8.0	8.5	9.3	9.2	9.2	11.8
No. 4	Cause of Death	Malignant Neoplasms			Tuberculosis	Malignant Neoplasms	Tuberculosis			
	Percentage of All Deaths	7.2	7.8	8.1	7.8	7.0	8.9	8.8	8.4	8.8
No. 5	Cause of Death	Certain Conditions Originating in the Perinatal Period	Cerebrovascular Diseases			Hypertensive Diseases				
	Percentage of All Deaths	5.7	6.2	6.1	6.1	6.6	7.4	6.9	7.2	8.2

Source : Department of Health

[Singapore]

3 – 2 Trends in the Leading Causes of Death (Contd.)

Order	Year	1988	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
No. 1	Cause of Death	Malignant Neoplasms										
	Percentage of All Deaths	23.7	23.9	24.4	24.2	24.5	25.2	25.1	25.6	27.0	26.0	26.8
No. 2	Cause of Death	Heart Diseases										
	Percentage of All Deaths	22.1	23.2	21.6	22.3	22.6	22.2	21.8	23.3	23.9	23.6	24.0
No. 3	Cause of Death	Cerebrovascular Diseases						Influenza and Pneumonia	Cerebrovascular Diseases		Influenza and Pneumonia	
	Percentage of All Deaths	7.8	8.7	9.3	10.0	11.1	11.2	13.1	11.6	10.8	11.4	10.6
No. 4	Cause of Death	Influenza and Pneumonia						Cerebro-vascular Diseases	Influenza and Pneumonia		Cerebrovascular Diseases	
	Percentage of All Deaths	7.8	8.7	9.3	10.0	11.1	11.2	11.0	10.9	10.2	10.5	10.6
No. 5	Cause of Death	Diabetes Mellitus	Suicide and Self-inflicted Injuries	Diabetes Mellitus	Suicide and Self-inflicted Injuries	Transport Accidents	Suicide and Self-inflicted Injuries		Hypertensive Diseases		Suicide and Self-inflicted Injuries	Hypertensive Diseases
	Percentage of All Deaths	3.7	2.6	2.3	2.1	2.2	2.3	2.6	2.3	2.29	2.4	2.3

Source : Ministry of Health

3 – 2 (T)

[Thailand]

3 – 2 Trends in the Leading Causes of Death (Contd.)

Order	Year	1988	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000
No. 1	Cause of Death	Heart Diseases										Malignant Neoplasms	
	Percentage of All Deaths	19.0	20.2	20.6	20.3	20.2	17.5	19.5	20.9	21.8	22.3	16.9	18.2
No. 2	Cause of Death	Malignant Neoplasms										Heart Diseases	
	Percentage of All Deaths	14.3	15.5	15.5	15.8	15.6	13.3	14.2	13.3	13.2	16.7	14.5	9.1
No. 3	Cause of Death	Transport Accidents											
	Percentage of All Deaths	4.4	6.0	6.9	7.3	7.5	6.8	8.0	7.7	6.6	4.6	5.5	6.1
No. 4	Cause of Death	Homicides & Injuries Inflicted by Other Persons	Cerebrovascular Diseases				Chronic Liver Diseases & Cirrhosis	Septicemia	Influenza and Pneumonia	Septicemia	Septicemia	Influenza and Pneumonia	Septicemia
	Percentage of All Deaths	4.3	4.1	4.2	4.3	3.9	3.4	3.13	3.2	3.1	3.3	4.1	4.9
No. 5	Cause of Death	Cerebro-vascular Diseases	Chronic Liver Diseases & Cirrhosis		Nephritis, Nephrotic Syndrome & Nephrosis		Influenza and Pneumonia		Septicemia	Cerebro-vascular Diseases	Influenza and Pneumonia	Septicemia	HIV Infection
	Percentage of All Deaths	4.1	3.6	3.6	3.5	3.4	3.0	3.12	3.0	2.9	3.3	3.6	4.0

Source : Ministry of Public Health

[Vietnam]

3 – 2 Trends in the Leading Causes of Death (Contd.)

Order	Year	1995	1996	2000
No. 1	Cause of Death	Certain Conditions Originating in the Perinatal Period		Cerebro-vascular Diseases
	Percentage of All Deaths	23.5	11.3	15.3
No. 2	Cause of Death	Influenza and Pneumonia	Heart Diseases	
	Percentage of All Deaths	4.6	7.7	12.0
No. 3	Cause of Death	Tuberculosis		Influenza and Pneumonia
	Percentage of All Deaths	4.1	5.8	8.8
No. 4	Cause of Death	Heart Diseases	Influenza and Pneumonia	Bronchitis, Emphysema & Asthma
	Percentage of All Deaths	4.0	5.8	7.4
No. 5	Cause of Death	Cerebro-vascular Diseases	Transport Accidents	HIV Infection
	Percentage of All Deaths	2.8	3.4	6.5

Source : Ministry of Health

3 – 3 Deaths and Death Rates by Sex Cause (ICD-9/ICD-10)

	Basic Tabulation List ICD – 9 a) 3–Char. Categories ICD – 10		01 – 07 A00 – B99		010 A00		011 A01		012, 014 A03,A06	
	Year	Sex	All Causes		Infectious and Parasitic Diseases		Cholera		Typhoid and Paratyphoid Fevers		Dysentery (Amebiasis and Bacillary)	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI (1)	2000	T	965	285.2	40	11.8	—		—		—	
		M	553	308.8	25	14.0	—		—		—	
		F	412	258.6	15	9.4	—		—		—	
INDONESIA (2)	1999	T	67,538		21,351		366		827		148	
JAPAN (3)	2000	T	961,653	765.6	19,858	15.8	—		—		6	0.0
		M	525,903	418.7	10,907	17.7	—		—		5	0.0
		F	435,750	346.9	8,951	13.4	—		—		1	0.0
MALAYSIA (4) c)	1998	T	43,514	196.2	4,272	19.3	20	0.1	20	0.1	—	
		M	27,724	244.2	2,682	23.6	18	0.2	16	0.1	—	
		F	15,790	145.8	1,590	14.7	2	0.0	4	0.0	—	
PHILIPPINES (5)	1997	T	339,400	474.4	35,416	49.5	62	0.1	860	1.2	256	0.4
		M	201,700	559.5	22,556	62.6	37	0.1	511	1.4	152	0.4
		F	137,700	387.9	12,860	36.2	25	0.1	349	1.0	104	0.3
SINGAPORE (6) d)	1999	T	15,516 e)	450.4	311	8.8	—		—		1	0.0
		M	8,608	490.8	185	10.1	—		—		1	0.1
		F	6,906	409.3	126	7.5	—		—		—	—
THAILAND (7)	2000	T	365,741	592.1	31,957	51.7	—		91	0.1	13	0.0
		M	213,907	697.0	20,463	66.7	—		59	0.2	9	0.0
		F	151,834	488.5	11,494	37.0	—		32	0.1	4	0.0
VIETNAM (8) f)	2000	T	25,844		3,233		2		10			

Source : (1) Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs
(2) Directorate General of Medical Care, Ministry of Health
Based on 10-day sample of discharges from hospital for each quarter
(3) ***Vital Statistics Japan,*** Ministry of Health, Labour and Welfare
(4) Department of Statistics
(5) ***Philippine Health Statistics,*** National Epidemiolgy Center, Department of Health
(6) ***Report on Registration of Birth and Deaths,*** Registry of Births and Deaths
(7) Ministry of Public Health (official data)
(8) Ministry of Health

(rate per 100,000 population)

013, 015, 016, 019 Rest of A00 – A09		020 – 021 A15, A16		022 – 025, 029 A17 – A19		033 A36		034 A37		036 A39		037, 771.3 [g] A33 – A35		038 A40, A41	
Other Intestinal Infectious Diseases		Tuberculosis of Respiratory System		Tuberculosis of Other Forms		Diphtheria		Whooping Cough		Meningococcal Infection		Tetanus		Septicemia	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1	0.3	13	3.8	2	0.6	—		—		1	0.3	—		12	3.5
1	0.6	10	5.6	1	0.6	—		—		1	0.6	—		4	2.2
—		3	1.9	1	0.6	—		—		—		—		8	5.0
12,637		1,945		298		13		25		29		762		1,370	
1,206	1.0	2,461	2.0	195	0.2	1	0.0	1	0.0	3	0.0	10	0.0	6,216	4.9
519	0.8	1,781	2.9	95	0.2	1	0.0	1	0.0	1	0.0	6	0.0	2,897	4.7
687	1.1	680	1.1	100	0.2	—		—		2	0.0	4	0.0	3,319	5.2
116	0.5	470	2.1	103	0.5	1	0.0	—		3	0.0	10	0.0	2,923	13.2
59	0.5	355	3.1	70	0.6	—		—		1	0.0	3	0.0	1,750	15.4
57	0.5	115	1.1	33	0.3	1	0.0	—		2	0.0	7	0.1	1,173	10.8
30	0.0	22,179	31.0	877	1.2	30	0.0	6	0.0	167	0.2	635	0.9	4,417	6.2
16	0.0	14,888	41.3	489	1.4	16	0.0	4	0.0	94	0.3	516	1.4	2,312	6.4
14	0.0	7,291	20.5	388	1.1	14	0.0	2	0.0	73	0.2	119	0.3	2,105	5.9
25	0.7	98	2.9	9	0.2	—		—		1	0.0	—		125	3.7
14	0.8	67	3.8	5	0.2	—		—		—	—	—		60	3.5
11	0.7	31	1.9	4	0.2	—		—		1	0.1	—		65	3.9
1,256	2.0	5,941	9.6	305	0.5	7	0.0	5	0.0	—		105	0.2	10,691	17.3
763	2.5	4,314	14.1	206	0.7	6	0.0	4	0.0	—		72	0.2	5,791	18.9
493	1.6	1,627	5.2	99	0.3	1	0.0	1	0.0	—		33	0.1	4,900	15.8
31		901		85		5		2		39		111 [h]		482	

Note : a) ICD – 10: Brunei, Indonesia, Japan, Thailand and Vietnam
b) Including 1 intersex
c) Medically certified deaths only
d) The number of deaths includes non-residents. Death rates are computed based on the number of resident deaths over resident population.
e) Includes unknown sex
f) Provincial Hospital-based figures
g) Four-digit subcategory
h) Age under 5 years

3 – 3 Deaths and Death Rates by Sex Cause (ICD-9/ICD-10) (Contd.)

	Year	Sex	030 – 032, 035, 039 Rest of A20 – A49 Other Bacterial Diseases		040 A80 Acute Poliomyelitis		042 B05 Measles		046 B15 – B19 Viral Hepatitis		047 A82 Rabies	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	2000	T	—		—		—		6	1.8	—	
		M	—		—		—		4	2.2	—	
		F	—		—		—		2	1.3	—	
INDONESIA	1999	T	125		3		776		578		17	
JAPAN	2000	T	884	0.7	—		18	0.0	5,121	4.1	—	
		M	437	0.7	—		6	0.0	2,839	4.6	—	
		F	447	0.7	—		12	0.0	2,282	3.6	—	
MALAYSIA	1998	T	163	0.7	—		3	0.0	26	0.1	1	0.0
		M	87	0.8	—		1	0.0	19	0.2	—	
		F	76	0.7	—		2	0.0	7	0.1	1	0.0
PHILIPPINES	1997	T	163	0.2	40	0.1	1,447	2.2	998	1.4	648	0.9
		M	113	0.3	20	0.1	802	1.8	675	1.9	431	1.2
		F	50	0.1	20	0.1	645	2.0	323	0.9	217	0.6
SINGAPORE	1999	T	9	0.2	—		—		12	0.3	1	0.0
		M	4	0.2	—		—		12	0.6	1	0.0
		F	5	0.3	—		—		—		—	
THAILAND	2000	T	418	0.7	42	0.1	9	0.0	375	0.6	33	0.1
		M	320	1.0	25	0.1	6	0.0	253	0.8	21	0.1
		F	98	0.3	17	0.1	3	0.0	122	0.4	12	0.1
VIETNAM	2000	T	85		0		10 [a)]		7		23	

Note : a) Age under 5 years

(rate per 100,000 population)

279.5 [a] B20 – B24		061 [a] A90		065.4 [a] A91		044, 045 ••		041, 043, 048, 049 Rest of A80 – B34		052 B50 – B54		06 A50 – A64		Rest of 01 – 07 Rest of A00 – B99	
AIDS (HIV)		Dengue		Dengue Hemorrhagic Fever		Other Arthropod-borne Viral Diseases		Other Viral Diseases		Malaria		Venereal Diseases		Other Infectious and Parasitic Diseases	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
2	0.6	—		—				—		—		—		3	0.9
2	1.1	—		—		••		—		—		—		2	1.1
—	0.6	—		—				—		—		—		1	0.6
7		59		652		29		132		342		16		195	
50 [b]	0.0	—		—				421	0.3	1	0.0	12	0.0	3,252	2.7
47	0.1	—		—		••		193	0.3	1	0.0	8	0.0	2,070	3.4
3	0.0	—		—				228	0.4	—		4	0.0	1,182	1.8
—		46	0.2	—		2	0.0	180	0.8	20	0.1	9	0.0	156	0.7
—		23	0.2	—		2	0.0	138	1.2	12	0.1	5	0.0	123	1.1
—		23	0.2	—		—		42	0.4	8	0.1	4	0.0	33	0.3
—		953			1.3	13	0.0	861	1.2	487	0.7	21	0.0	266	0.4
—		471			1.3	7	0.0	467	1.3	316	0.9	16	0.0	203	0.6
—		482			1.4	6	0.0	394	1.1	171	0.5	5	0.0	63	0.2
72	2.1	—		5	0.1	—		16	0.4	1	0.0	2	0.1	6	0.1
62	3.7	—		5	0.2	—		9	0.5	1	0.0	1	0.1	5	0.2
10	0.4	—		—		—		7	0.3	—		1	0.1	1	0.1
8,695	14.1	—		103	0.2			621	1.0	625	1.0	9	0.0	2,613	4.2
6,001	19.6	—		48	0.2	••		400	1.3	446	1.5	7	0.0	1,712	5.6
2,694	8.7	—		55	0.2			221	0.7	179	0.6	2	0.0	901	2.9
1,216		45				••				148				31	

Note : a) Four-digit subcategory
b) Excluding hemophiliacs

3 – 3 Deaths and Death Rates by Sex Cause (ICD-9/ICD-10) (Contd.)

	Year	Sex	08 – 14 C00 – C97 Malignant Neoplasms		091 C16 Malignant Neoplasm of Stomach		093 C18 Malignant Neoplasm of Colon		094 C19 – C20 Malignant Neoplasm of Rectum, Rectosigmoid Junction and Anus		095 C22 Malignant Neoplasm of Liver Specified as Primary		101 C33, C34 Malignant Neoplasm of Trachea, Bronchus and Lung	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	2000	T	185	54.7	24	7.1	8	2.4	5	1.5	8	2.4	36	10.6
		M	101	56.4	16	8.9	5	2.8	2	1.1	6	3.4	19	10.6
		F	84	52.7	8	5.0	3	1.9	3	1.9	2	1.3	17	10.7
INDONESIA	1999	T	1,566		26		49		74		279		27	
JAPAN	2000	T	295,484	235.2	50,650	40.3	23,637	18.8	12,311	9.8	33,981	27.1	53,724	42.8
		M	179,140	292.0	32,798	53.5	12,139	19.8	7,729	12.6	23,602	38.5	39,053	63.7
		F	116,344	181.7	17,852	27.9	11,498	18.0	4,582	7.2	10,379	16.2	14,671	22.9
MALAYSIA	1998	T	4,498	20.3	266	1.2	239	1.1	120	0.5	431	1.9	941	4.2
		M	2,520	22.2	163	1.4	135	1.2	75	0.7	325	2.9	669	5.9
		F	1,978	18.3	103	1.0	104	1.0	45	0.4	106	1.0	272	2.5
PHILIPPINES	1997	T	35,290	49.3	1,198	1.7	970	1.4	421	0.6	—		4,206	5.9
		M	19,464	54.0	685	1.9	525	1.5	237	0.7	—		3,146	8.7
		F	15,826	44.6	513	1.4	445	1.3	184	0.5	—		1,060	3.0
SINGAPORE	1999	T	4,134	123.2	363	11.0	407	12.4	152	4.5	207	6.1	969	29.2
		M	2,377	141.6	228	13.9	199	12.0	96	5.7	173	10.1	699	42.1
		F	1,757	104.7	135	8.1	208	12.8	56	3.4	34	2.1	270	16.1
THAILAND	2000	T	39,238	63.5	648	1.0	1,871	3.0	10	0.0	9,086	14.7	5,486	8.9
		M	22,929	74.7	373	1.2	1,075	3.5	7	0.0	6,518	21.2	3,776	12.3
		F	16,309	52.5	275	0.9	796	2.6	3	0.0	2,568	8.3	1,710	5.5
VIETNAM	2000	T	473		62		31				116		93	

(rate per 100,000 population)

113 C50 [a]		120 C53		122 C54, C55		141 C91 – C95		140, 149 Rest of C81 – C96		Rest of 8 – 13 Rest of C00 – C80, C97		15 – 17 D00 – D48		181 E10 – E14	
Malignant Neoplasm of Female Breast		Malignant Neoplasm of Cervix Uteri		Malignant Neoplasm of Uterus, Other and Unspecified		Leukemia		Other Malignant Neoplasm of Lymphatic and Hemopoietic Tissue		Malignant Neoplasm of Other Sites		Benign Neoplasm, Carcinoma in Situ, Other and Unspecified Neoplasmas		Diabetes Mellitus	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
14	4.1	6	1.8	2	0.6	6	1.8	15	4.4	61	18.0	4	1.2	78	23.0
—		..		..		2	1.1	9	5.0	42	23.5	3	1.7	39	21.8
14	8.8	6	3.8	2	1.3	4	2.5	6	3.8	19	11.9	1	0.6	39	24.5
154		99		80		110		87		581		453		972	
9,248	7.4	2,393	1.9	2,809	2.2	6,766	5.4	11,343	9.0	88,622	70.1	9,005	7.2	12,303	9.8
77	0.1	..		..		3,970	6.5	6,352	10.3	53,420	87.1	4,761	7.7	6,489	10.6
9,171	14.3	2,393	3.7	2,809	4.4	2,796	4.4	4,991	7.8	35,202	55.0	4,244	6.6	5,814	9.1
339	1.53	177	0.80	26	0.1	311	1.4	248	1.1	1,400	6.3	215	1.0	729	3.3
..		..		..		172	1.5	151	1.3	830	7.3	115	1.0	336	3.0
339	3.1	177	1.6	26	0.2	139	1.3	97	0.9	570	5.3	100	0.9	393	3.6
2,319	3.2	595	0.8	514 [b]	0.7	1,761	2.5	650	0.9	22,656	31.6	663	0.9	6,749	9.4
..		..		..		928	2.6	403	1.1	13,540	37.6	303	0.8	3,265	9.1
2,319	6.5	595	1.7	514	1.4	833	2.3	247	0.7	9,116	25.7	360	1.0	3,484	9.8
292	8.6	99	3.0	34	1.1	112	2.9	146	4.1	1,353	40.4	34	1.0	350	10.5
..		..		..		63	3.2	85	4.8	834	49.7	19	1.2	158	9.4
292	17.3	99	5.9	34	2.1	49	2.5	61	3.4	519	31.0	15	0.9	192	11.5
1,126	1.8	871	1.4	691	1.1	1,532	2.5	122	0.2	17,795	28.8	242	0.4	7,558	12.2
11	0.0	..		..		788	2.6	72	0.2	10,309	33.6	135	0.4	2,948	9.6
1,115	3.6	871	2.8	691	2.2	744	2.4	50	0.2	7,486	24.1	107	0.4	4,610	14.8
23		16		8		85		8		31				93	

Note : a) The code C50 comprises malignant neoplasm of breast, regardless sex
b) Uterus only

3 – 3 Deaths and Death Rates by Sex Cause (ICD-9/ICD-10) (Contd.)

	Year	Sex	180, 182, 183, 189 Rest of E00 – E90 Other Endocrine and Metabolic Diseases		19 E40 – E64 Nutritional Deficiencies		200 D50 – D64 Anemias		209 D65 – D89 [a] Other Diseases of Blood and Blood-forming Organs		21 F00 – F99 Mental Disorders		220 G00 – G09 Meningitis	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	2000	T	1			0.3	4	1.2	—		2	0.6	—	
		M	1			0.6	1	0.6	—		2	1.1	—	
		F	—				3	1.9	—		—		—	
INDONESIA	1999	T	703		174									
JAPAN	2000	T	3,413	2.7	1,394	1.1	1,707	1.4	2,350	1.9	3,920	3.1	882	0.7
		M	1,473	2.4	779	1.3	669	1.1	1,120	1.8	1,555	2.5	505	0.8
		F	1,940	3.0	615	1.0	1,038	1.6	1,230	1.9	2,365	3.7	377	0.6
MALAYSIA	1998	T	680	3.1	21	0.1	122	0.6	105	0.5	187	0.8	206	0.9
		M	538	4.7	13	0.1	60	0.5	58	0.5	170	1.5	130	1.1
		F	142	1.3	8	0.1	62	0.6	47	0.4	17	0.2	76	0.7
PHILIPPINES	1997	T	2,077	2.9	1,704	2.4	1,902	2.7	637	0.9	29	0.0	1,450	2.0
		M	995	2.8	833	2.3	944	2.6	331	0.9	21	0.1	800	2.2
		F	1,082	3.0	871	2.5	958	2.7	306	0.9	8	0.0	650	1.8
SINGAPORE	1999	T	22	0.7	—		24	0.7	26	0.8	15	0.5	10	0.3
		M	9	0.5	—		7	0.4	12	0.7	6	0.4	8	0.4
		F	13	0.8	—		17	1.0	14	0.9	9	0.6	2	0.1
THAILAND	2000	T	412	0.7	99	0.2	287	0.5	8,893	14.4	569	0.9	2,026	3.3
		M	171	0.6	70	0.2	141	0.5	5,712	18.6	490	1.6	1,363	4.4
		F	241	0.8	29	0.1	146	0.5	3,181	10.2	79	0.3	663	2.1
VIETNAM	2000	T	39		54				78		16		[b]	

Note : a) Includes D80 – D89: Certain Disorders Involving the Immune Mechanism

b) See Note a) on page 75

(rate per 100,000 population)

221 – 225, 229, 23,24 G10 – H95		25 – 30 I 00 – I 99		25 I 00 – I 09		26 I 10 – I 15		270 I 21 – I 23		279 I 20, I 24, I 25		28 I 30 – I 52		29 I 60 – I 69	
Other Diseases of Nervous System and Sense Organs		Diseases of Circulatory System		Rheumatic Fever and Rheumatic Heart Diseases		Hypertensive Diseases		Acute Myocardial Infarction		Other Ischemic Heart Diseases		Other Heart Diseases		Cerebrovascular Diseases	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
9	2.7	260	76.8	3	0.9	27	8.0	37	10.9	28	8.3	81	23.9	82	24.2
2	1.1	154	86.0	—		12	6.7	27	15.1	20	11.2	51	28.5	43	24.0
7	4.4	106	66.5	3	1.9	15	9.4	10	6.3	8	5.0	30	18.8	39	24.5
615		14,555		538		1,608		724		124		2,286		7,597	
8,716	7.0	298,338	237.5	2,530	2.0	6,063	4.8	45,885	36.5	24,298	19.3	73,582	58.6	132,529	105.5
4,526	7.4	144,629	235.2	774	1.3	2,163	3.5	24,960	40.6	12,915	21.0	33,308	54.2	63,127	102.7
4,190	6.5	153,709	239.7	1,756	2.7	3,900	6.1	20,925	32.7	11,383	17.8	40,274	62.8	69,402	108.2
580	2.6	12,215	55.1	105	0.5	450	2.0	3,328	15.0	1,062	4.8	3,534	15.9	3,367	15.2
365	3.2	7,464	65.8	48	0.4	255	2.3	2,310	20.4	696	6.1	1,988	17.5	1,907	16.8
215	2.0	4,751	43.9	57	0.5	195	1.8	1,018	9.4	366	3.4	1,546	14.3	1,460	13.5
1,865	2.6	87,773	122.7	2,233	3.1	21,647	30.3	17,380	24.3	8,758	12.2	16,349	22.8	18,722	26.2
1,097	3.0	49,467	137.2	1,002	2.8	12,314	34.2	11,223	31.1	4,450	12.3	8,612	23.9	10,636	29.5
768	2.2	38,306	107.9	1,231	3.5	9,333	26.3	6,157	17.3	4,308	12.1	7,737	21.8	8,086	22.8
95	2.8	5,810	170.6	38	1.1	354	10.6	1,809	53.1	1,482	43.9	378	10.3	1,633	48.4
49	2.9	3,050	176.0	13	0.7	174	10.3	1,037	59.4	788	46.3	210	10.9	755	44.3
46	2.7	2,760	165.1	25	1.4	180	10.8	772	46.8	694	41.5	168	9.7	878	52.4
8,703	14.1	32,331	52.3	51	0.1	3,403	5.5	1,584	2.6	4,667	7.6	13,298	21.5	8,260	13.4
5,431	17.7	18,882	61.5	20	0.1	1,861	6.1	928	3.0	2,763	9.0	7,865	25.6	4,827	15.7
3,272	10.5	13,449	43.3	31	0.1	1,542	5.0	656	2.1	1,904	6.1	5,433	17.5	3,433	11.0
62 a)		5,608		85		450		722		70		1,359		2,867	

Note : a) Includes meningitis

3 – 3 Deaths and Death Rates by Sex Cause (ICD-9/ICD-10) (Contd.)

	Year	Sex	300 I 70 Atherosclerosis		301 – 305, 309 Rest of I 00 – I 99 Other Diseases of Circulatory System		310 – 312 J00 – J06 Acute Upper Respiratory Infection		320 J20, J21 Acute Bronchitis and Bronchiolitis		321 J12 – J18 Pneumonia		322 J10, J11 Influenza	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	2000	T	—		2	0.6	—		—		25	7.4	—	
		M	—		1	0.6	—		—		21	11.7	—	
		F	—		1	0.6	—		—		4	2.5	—	
INDONESIA	1999	T	3		1,675		14		168		2,451		10	
JAPAN	2000	T	1,043	0.8	12,408	9.9	510	0.4	1,590	1.3	86,938	69.2	575	0.5
		M	508	0.4	6,874	11.2	227	0.4	685	1.1	46,722	76.0	280	0.5
		F	535	0.8	5,534	8.6	283	0.4	905	1.4	40,216	62.7	295	0.5
MALAYSIA	1998	T	1	0.0	368	1.7	5	0.0	4	0.0	1,865	8.4	1	0.0
		M	1	0.0	259	2.3	3	0.0	3	0.0	1,172	10.3	—	
		F	—		109	1.0	2	0.0	1	0.0	693	6.4	1	0.0
PHILIPPINES	1997	T	2,429	3.4	255	0.4	187	0.3	156	0.2	30,811	43.1	238	0.3
		M	1,066	3.0	164	0.5	108	0.3	75	0.2	15,792	43.8	120	0.3
		F	1,363	3.8	91	0.3	79	0.2	81	0.2	15,019	42.3	118	0.3
SINGAPORE	1999	T	3	0.1	113	3.2	6	0.2	—		1,641	48.2	—	
		M	1	0.1	72	4.0	4	0.2	—		812	46.7	—	
		F	2	0.1	41	2.3	2	0.1	—		829	49.7	—	
THAILAND	2000	T	2	0.0	1,066	1.7	62	0.1	12	0.0	8,334	13.5	128	0.2
		M	2	0.0	616	2.0	38	0.1	9	0.0	5,225	17.0	81	0.3
		F	—		450	1.4	24	0.1	3	0.0	3,109	10.0	47	0.2
VIETNAM	2000	T	8		47		47		171		1,649		—	

(rate per 100,000 population)

323 J40 – J46		313 – 315, 319, 324 – 327, 329 Rest of J00 – J99		341 K25 – K27		347 K73, K74		33, 340, 342 – 346, 348, 349 Rest of K00 – K93		350 N00 – N19		351 – 353, 359, 36, 37 N20 – N99		38 O00 – O08	
Bronchitis, Chronic and Unspecified, Emphysema and Asthma		Other Diseases of Respiratory System		Ulcer of Stomach and Duodenum		Chronic Liver Diseases and Cirrhosis		Other Diseases of Digestive System		Nephritis, Nephrotic Syndrome and Nephrosis		Other Diseases of Genito-urinary System		Abortion	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
51	15.1	14	4.1	2	0.6	6	1.8	9	2.7	59			17.4	—	
35	19.5	9	5.0	2	1.1	6	3.4	7	3.9	25			14.0	••	
16	10.0	5	3.1	—		—		2	1.3	34			21.3	—	
3,635		1,117		124		1,910		3,405		993		892		168	
18,234	14.5	26,654	21.2	3,869	3.1	10,234	8.1	24,165	19.2	19,864	15.8	2,113	1.7	5	0.0
12,314	20.0	15,316	24.9	2,161	3.5	6,565	10.7	13,026	21.2	9,115	14.8	832	1.4	••	
5,920	9.2	11,338	17.7	1,708	2.7	3,669	5.7	11,139	17.4	10,749	16.8	1,281	2.0	5	0.0
8	0.0	2,690	12.1	117	0.5	363	1.6	1,333	6.0	1,011	4.6	116	0.5	22	0.1
5	0.0	1,773	15.6	86	0.8	272	2.4	900	7.9	596	5.3	45	0.4	—	
3	0.0	917	8.5	31	0.3	91	0.8	433	4.0	415	3.8	71	0.7	22	0.2
—		6,961	9.7	4,845	6.8	3,604	5.0	5,327	7.4	6,704	9.4	1,180	1.6	—	
—		3,423	9.5	3,305	9.2	2,957	8.2	3,909	10.8	3,942	10.9	578	1.6	••	
—		3,538	10.0	1,540	4.3	647	1.8	1,418	4.0	2,762	7.8	602	1.7	—	
135	3.9	575	17.4	100	3.0	150	4.3	162	4.8	181	5.4	289	8.7	—	
74	4.3	412	24.7	66	3.9	100	5.7	74	4.3	98	5.8	94	5.6	••	
61	3.5	163	10.0	34	2.0	50	2.9	88	5.2	83	4.9	195	11.9	—	
4,292	6.9	8,273	13.4	280	0.5	3,684	6.0	5,091	8.2	8,283	13.4	1,149	1.9	17	0.0
2,981	9.7	5,562	18.1	189	0.6	2,709	8.8	3,430	11.2	4,239	13.8	595	1.9	••	
1,311	4.2	2,711	8.7	91	0.3	975	3.1	1,661	5.3	4,044	13.0	554	1.8	17	0.0
1,391		583		303		388		412		303		47		16	

3 – 3 Deaths and Death Rates by Sex Cause (ICD-9/ICD-10) (Contd.)

	Year	Sex	39 O10 – O75, O81 – O97 Other Direct Obstetric Causes		40, 41 O80, O98 – O99 Indirect Obstetric Causes		42 L00 – L99 Diseases of Skin and Subcutaneous Tissue		43 M00 – M99 Diseases of Musculo-skeletal System and Connective Tissue		44 Q00 – Q99 Congenital Anomalies		45 P00 – P96 Certain Conditions Originating in the Perinatal Period	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	2000	T	2	0.6	—		—		4	1.2	33	9.8	24	7.1
		M	—		—		—		2	1.1	15	8.4	13	7.3
		F	2	1.3	—		—		2	1.3	18	11.3	11	6.9
INDONESIA	1999	T	848		491		295		346		217		7,131	
JAPAN	2000	T	64	0.1	15	0.0	854	0.7	4,419	3.5	2,702	2.2	1,125	0.9
		M	••		••		290	0.5	1,438	2.4	1,357	2.2	616	1.0
		F	64	0.1	15	0.0	564	0.9	2,981	4.6	1,345	2.1	509	0.8
MALAYSIA	1998	T	94	0.4	2	0.0	106	0.5	81	0.4	1,027	4.6	2,002	9.0
		M	—		—		60	0.5	26	0.2	566	5.0	1,141	10.1
		F	94	0.9	2	0.0	46	0.4	55	0.5	461	4.3	861	8.0
PHILIPPINES	1997	T	—		—		957	1.3	132	0.2	4,912	6.9	—	
		M	••		••		425	1.2	70	0.2	2,952	8.2	—	
		F	—		—		532	1.5	62	0.2	1,960	5.5	—	
SINGAPORE	1999	T	4	0.1	—		36	1.1	53	1.6	95	2.8	52 [a]	1.5
		M	••		••		19	1.1	19	1.2	54	3.0	22	1.1
		F	4	0.1	—		17	1.1	34	1.9	41	2.5	29	1.5
THAILAND	2000	T	80	0.1	5	0.0	773	1.3	471	0.8	907	1.5	989	1.6
		M	••		••		414	1.3	231	0.8	496	1.6	587	1.9
		F	80	0.3	5	0.0	359	1.2	240	0.8	411	1.3	402	1.3
VIETNAM	2000	T	171		23		23		54		513		963	

Note : a) Includes unknown sex

(rate per 100,000 population)

465 R54		460 – 464, 466, 467, 469 Rest of R00 – R99		E47 – E56 V01 – Y98		E47 V01 – V99		E48 X40 – X49		E50 W00 – W19		E51 X00 – X09		E521 W65 – W74	
Senility without Mention of Psychosis		Signs, Symptoms and Other Ill-defined Conditions		Accidents and Adverse Effects		Transport Accidents		Accidental Poisoning		Accidental Falls		Accidents Caused by Fire and Flames		Accidental Drowning and Submersion	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
48	14.2	20	5.9	85	25.1	44	13.0	2	0.6	3	0.9	3	0.9	15	4.4
15	8.4	7	3.9	68	38.0	35	19.5	1	0.6	3	1.7	2	1.1	14	7.8
33	20.7	13	8.2	17	10.7	9	5.6	1	0.6	—		1	0.6	1	0.6
12		1,117		1,801		1,376		67		39		26		17	
21,213	16.9	5,335	4.2	73,805	58.8	12,857	10.2	605	0.5	6,245	5.0	1,416	1.1	5,978	4.8
6,017	9.8	3,081	5.0	49,308	80.4	9,072	14.8	415	0.7	3,798	6.2	883	1.4	3,332	5.4
15,196	23.7	2,254	3.5	24,497	38.2	3,785	5.9	190	0.3	2,447	3.8	533	0.8	2,646	4.1
911	4.1	1,362	6.1	6,564	29.6	2,642	11.9	91	0.4	355	1.6	153	0.7	320	1.4
369	3.3	893	7.9	5,363	47.2	2,235	19.7	70	0.6	288	2.5	98	0.9	253	2.2
542	5.0	469	4.3	1,201	11.1	407	3.8	21	0.2	67	0.6	55	0.5	67	0.6
6,866	9.6	69,638	95.9	21,327	29.8	5,193	7.3	127	0.2	1,003	1.4	64	0.1	2,135	3.0
2,847	7.9	43,259	120.0	17,862	49.5	3,861	10.7	83	0.2	768	2.1	32	0.1	1,503	4.2
4,019	11.3	26,379	74.3	3,465	9.8	1,332	3.8	44	0.1	235	0.7	32	0.1	632	1.8
17	0.4	51	1.1	1,066 [a]	24.5	223	4.9	6	0.2	138	3.1	3	0.1	16	0.4
3	0.2	28	1.1	787	34.8	176	7.3	5	0.2	100	4.5	1	0.1	11	0.6
14	0.7	23	1.1	278	14.2	47	2.5	1	0.1	38	1.7	2	0.1	5	0.2
85,632	138.6	63,932	103.5	41,032	66.4	13,194	21.4	98	0.2	714	1.2	212	0.3	3,863	6.3
36,809	120.0	39,224	127.8	32,353	105.4	10,531	34.3	68	0.2	559	1.8	142	0.5	2,835	9.2
48,823	157.1	24,708	79.5	8,679	27.9	2,663	8.6	30	0.1	155	0.2	70	0.2	1,028	3.3
31		7,118		1,982		862		148 [b]				31		62	

Note : a) Includes unknown sex
b) Includes X20 – X29 (ICD –10): Contact With Venomous Animals and Plants

3 – 3 Deaths and Death Rates by Sex Cause (ICD-9/ICD-10) (Contd.)

	Year	Sex	E49, E520, E522, E529 Rest of W00 – X59 All Other Accidents Including Late Effects		E53 Y40 – Y84 Drugs, Medicaments Causing Adverse Effects in Therapeutic Use		E54 X60 – X84 Suicide and Self-inflicted Injuries		E55 X85 – Y09 Homicide & Injuries Inflicted by Other Persons		E56 Y10 – Y36, Y85 – Y98 Other Violence	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	2000	T	[a]		—		5	1.5	4	1.2	9 [a]	2.7
		M			—		3	1.7	2	1.1	8	4.5
		F			—		2	1.3	2	1.3	1	0.6
INDONESIA	1999	T	153		16		55		20		32	
JAPAN	2000	T	12,383	9.9	317	0.3	30,251	24.1	768	0.6	2,985	2.4
		M	7,662	12.5	183	0.3	21,656	35.2	426	0.7	1,881	3.1
		F	4,721	7.4	134	0.2	8,595	13.4	342	0.5	1,104	1.7
MALAYSIA	1998	T	527	2.4	20	0.1	200	0.9	141	0.6	2,115	9.5
		M	415	3.7	11	0.1	155	1.4	108	1.0	1,730	15.2
		F	112	1.0	9	0.1	45	0.4	33	0.3	385	3.6
PHILIPPINES	1997	T	—		1,340	1.9	797	1.1	10,668	14.9	—	
		M	—		1,127	3.1	584	1.6	9,904	27.5	—	
		F	—		213	0.6	213	0.6	764	2.2	—	
SINGAPORE	1999	T	67	0.8	2	0.1	309	8.6	52	1.0	250 [b]	5.4
		M	58	1.1	1	0.1	205	11.6	40	1.6	190	7.8
		F	9	0.5	1	0.1	104	5.6	12	0.3	59	3.1
THAILAND	2000	T	5,584	9.0	38	0.1	5,189	8.4	3,442	5.6	8.698	14.1
		M	4,471	14.6	23	0.1	4,038	13.2	2,848	9.3	6,838	22.3
		F	1,113	3.6	15	0.0	1,151	3.7	594	1.9	1,860	6.0
VIETNAM	2000	T	109		16		552		78		124	

Note : a) Including all other accidents inculding late effects
b) Includes unknown sex

3 – 4 Number and Percentage of Deaths Medically Certified and not Medically Certified

	Year	Deaths Medically Certified		Deaths not Medically Certified		Total
		Number	Percentage (%)	Number	Percentage (%)	Number
BRUNEI	1999 2000	567 602	62.7 62.4	338 363	37.3 37.6	905 965
INDONESIA						
JAPAN (1)	2000	961,653	100.0	—	—	961,653
MALAYSIA (2)	1998	43,514	44.4	54,392	55.6	97,906
PHILIPPINES	1997	166,687 a)	49.1	172,713 b)	50.9	339,400
SINGAPORE	1999	15,012	96.8	504	3.2	15,516
THAILAND (5) c)	2000	87,888	24.0	277,853	76.0	365,741
VIETNAM						

Source : (1) Ministry of Health and Welfare
(2) *Vital Statistics Malaysia,* Department of Statistics
(3) National Statistics Office
(4) *Report on Registration of Births and Deaths,* Registry of Births and Deaths
(5) Ministry of Public Health

Note : a) Deaths medically attended
b) Deaths not medically attended
c) Includes deaths certified by other health personnel such as nurses and health officers

4. Child and Maternal Health

4 – A A Brief Description of Trends in Infant Mortality and Maternal Mortality

BRUNEI DARUSSALAM

Infant Mortality:

The infant mortality rate which stood at 38.4 per 1,000 live-births in 1971 has been significantly dropped to 7.4 in 2000. The drop was as high as 81%.

Maternal Mortality:

The maternal mortality ratio stood at 80 per 100,000 live-births in 1971. It dropped to 0.3% in 2000.

INDONESIA

Infant Mortality:

Since the late 1960s, the estimated infant mortality rate in Indonesia declined from 145 to 44 deaths per 1,000 live-births in 1999. The 1992 Household Health Survey found that infant mortality was mainly caused by acute upper respiratory tract infection (36%), diarrheal diseases (11%), and neonatal tetanus (9.8%). Income and nutritional gains, along with the fertility decline probably also account for much of the decline of the rate. The 1994 Demographic and Health Survey found that infant mortality was the lowest for children of mothers who received both antenatal care and assistance at delivery from medical professionals, and the highest for children whose mothers had neither antenatal care nor medical assistance at delivery (39 and 107 deaths per 1,000 live-births, respectively).

Child (under five years) Mortality:

For children under five years, the mortality rate declined from 111 deaths per 1,000 live-births in 1986 to about 60 in 1999. The 1992 Household Health Survey found that child mortality was mainly caused by diarrhea (23%) and acute upper respiratory tract infection (13%).

Maternal Mortality:

There are no accurate measures of the national level of maternal mortality, bacause 75% of all deliveries take place at home and the related deaths are not registered. The Household Health Survey findings suggest a decline from 420 in 1992 to the currently estimated range of 312–385 deaths per 100,000 live-births. The relatively high rate is believed to be attributed to the low frequency of deliveries attended by health professionals (35% in the rural and 65% in the urban areas). Furthemore, the high percentage of pregnant women with anemia (about 55%) may aggravate the problem of maternal deaths.

JAPAN

Infant Mortality:

The infant mortality rate has been among the lowest in the world. In 2000, the number of infant deaths was 3,830 and the infant mortality rate was 3.2 (per 1,000 live-births).

Maternal Mortality:

The maternal mortality rate has been gradually decreasing. In 2000, the rate was 7.1 (per 100,000 live-births).

MALAYSIA

Infant and Child Mortality:

The perinatal and neonatal mortality rates which reflect the level of health of expectant mothers as well as the level of antenatal care of the mother have improved over the years. In 1998, the perinatal mortality rate was 7.5 per 1,000 live-births and stillbirths but in 1998 it dropped to 7.5. Likewise, the neonatal mortality rate dipped from 8.2 per 1,000 live-births to 5.0.

The infant mortality rate has improved, which reflects, not only the magnitude of the health problems directly responsible for the death of infants such as diarrhoeal diseases, respiratory infections and malnutrition, but also the level of living in general. Malaysia's infant mortality rate is now among the lowest in the Asian region: in 1991 it was 12.5 per 1,000 live-births, and by 1998 it was down to 8.1.

The relatively good survival rate of Malaysian children has accounted in no small measure for the low toddler mortality at present. In 1998, the under-5 mortality rate was 12.7 per 1,000 live-births for male and 10.5 for female.

Maternal Mortality:

The maternal mortality rate reflects the risks to mothers during pregnancy and at childbirth. The percentage of safe deliveries, that is, deliveries attended by trained personnel was 95.2% in 1996. The maternal mortality rate in 1998 was extremely low at 0.2 per 1,000 livebirths.

PHILIPPINES

Infant Mortality:

In 1996, there were 30,550 infant deaths, with an Infant Mortality Rate (IMR) of 19.0 per 1,000 live-births. The IMR was slightly higher than that of the previous year. However, for 1997, there 28,061 infant deaths reported with an IMR of 17.0 per 1,000 live-births.

Maternal Mortality:

In 1997, the Maternal Mortality Rate (MMR) was 0.9 per 1,000 live-births compared with 1.0 per 1,000 live-births in 1996.

SINGAPORE

Infant Mortality:

Singapore's infant mortality remained very low at 2.5 per 1,000 resident live-births in 2000. This was lower than the rate of 3.3 per 1,000 resident live-births reported in 1998.

Maternal Mortality:

In 2000, eight maternal deaths were registered.

THAILAND

Infant Mortality:

The infant mortality rate has continuously declined due to the increased health care coverage and utilization, the improved socioeconomic

status and the Extended Programme on Immunization. The rate estimated for 1995–1996 from the survey of population change was 26.1 per 1,000 live-births. The rate obtained from the civil registration in 2000 was 6.2, due to underregistration.

Maternal Mortality:

The maternal mortality rate has also decreased rapidly. The rate was 13.2 per 100,000 live-births in 2000.

VIETNAM

After a long, devastating war and under the permanent pressure of high population growth, the health and nutritional status of children and mothers is poor. However, the Extended Programme on Immunization has been a remarkable success, producing a high coverage and leading to a net reduction of morbidity and mortality from the targeted diseases.

Infant Mortality:

The infant mortality rate stood at 45.1 per 1,000 live-births in 1994, and according to the survey conducted by UNFPA decreased to 37.0 per 1,000 live-births in 1998.

Maternal Mortality:

The maternal mortality rate was 1.1 per 1,000 live-births in 1996, and decreased to 0.95 per 1,000 live-births in 1999.

4 – 1 Fetal, Infant, Neonatal, Post-neonatal and Perinatal Mortality (per 1,000 live-births)

	Year	Fetal Mortality		Infant Mortality		Neonatal Mortality		Post-neonatal Mortality		Perinatal Mortality	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI (1)	2000	a) 49	6.5	55	7.4	36	4.8	19	2.5	78	10.4
INDONESIA (2)	1999				44						
JAPAN (3)	2000	5,362	4.5	3,830	3.2	2,106	1.8	1,724	1.4	6,881	5.8
MALAYSIA (4)	1998	2,041	3.7	4,481	8.1	2,752	5.0	1,729	3.4	4,151	7.5
PHILIPPINES (5) (6)	1997	9,706	5.8	28,061	17.0	15,760	9.5	12,301	7.4	22,274	13.5
SINGAPORE (7)	2000	143	3.0	137	2.5	82	1.7	55	1.2	204	4.3
THAILAND (8) b)	2000			4,822	6.2	2,669	3.5	2,153	2.8	1,116	1.4
VIETNAM (2)	1999	14,023	9.2	55,931	(9) 36.7	c) 43,560	c) 24.2	c) 27,000	c) 15.0	33,833	22.2

Source : (1) Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs
(2) Ministry of Health
(3) ***Vital Statistics Japan,*** Ministry of Health, Labour and Welfare
(4) ***Vital Statistics Malaysia,*** Department of Statistics
(5) ***Philippine Health Statistics,*** National Epidemiology Center, Department of Health
(6) National Statistics Office
(7) ***Report on Registration of Births and Deaths,*** Registry of Births and Deaths, Singapore
(8) Ministry of Interior
(9) Based on the survey conducted by UNFPA

Note : a) Late fetal mortality (28 weeks of gestation and over)
b) While the vital registration system of the whole country was revised for improvement in 1984, the registration of stillbirth has no longer been emphasized since then. The stillbirth data are therefore incomplete and not valid enough to be presented in the vital statistics.
c) For 1993

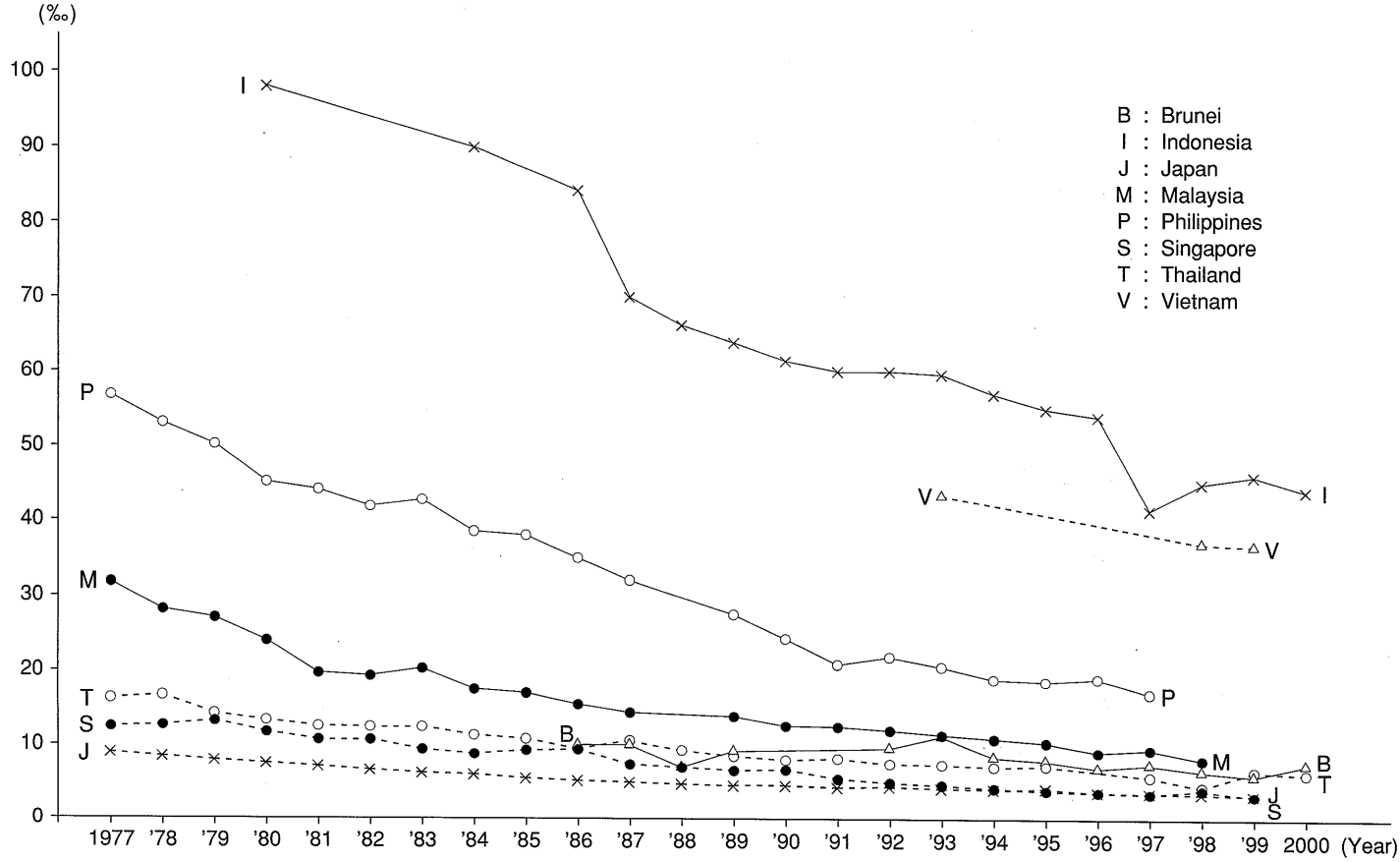
4 – 2 Infant Mortality by Age and Sex

	Year	Sex	Number						Rate (per 1,000 live-births)					
			Total	– 1 day	2 – 6	7 – 27	28 – 365	Unknown	Total	– 1 day	2 – 6	7 – 27	28 – 365	Unknown
BRUNEI (1)	2000	T	55	17	12	7	19	—	7.4	2.3	1.6	0.9	2.5	—
		M	26	7	7	4	8	—	6.7	1.8	1.8	1.0	2.1	—
		F	29	10	5	3	11	—	8.0	2.8	1.4	0.8	3.0	—
INDONESIA (2)	1999	T							[a] 44					
		M							50					
		F							38					
JAPAN (3)	2000	T	3,830	1,135	384	587	1,724	—	3.2	1.0	0.3	0.5	1.5	—
		M	2,107	624	215	310	958	—	3.4	1.0	0.4	0.5	1.6	—
		F	1,723	511	169	277	766	—	3.0	0.9	0.3	0.5	1.3	—
MALAYSIA (4)	1998	T	4,481	2,166		636	1,729	—	8.1	3.9		1.1	3.1	—
		M	2,533	1,234		359	940	—	8.8	4.3		1.3	3.3	—
		F	1,948	882		277	789	—	7.3	3.3		1.0	3.0	—
PHILIPPINES (5) (6)	1997	T	28,061	12,568		3,192	12,301	—	17.0	7.6		2.0	7.4	
SINGAPORE (7)	1999	T	[b] 150	[b] 39	19	28	64	—	3.3	0.9	0.4	0.6	1.4	—
		M	78	18	7	16	37	—	3.2	0.7	0.3	0.6	1.5	—
		F	71	20	12	12	27	—	3.4	1.0	0.6	0.6	1.3	—
THAILAND (8)	2000	T	4,822	573	543	835	2,871	—	6.2	0.7	0.7	1.1	3.7	—
		M	2,773	316	333	481	1,643	—	7.0	0.8	0.9	1.2	4.1	—
		F	2,049	257	210	354	1,228	—	5.5	0.7	0.6	0.9	3.3	—
VIETNAM (9)	1999	T	55,931						36.7					

Source : (1) Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs
(2) Ministry of Health
(3) *Vital Statistics Japan,* Ministry of Health, Labour and Welfare
(4) *Vital Statistics Peninsular Malaysia, Sabah and Sarawak,* Department of Statistics
(5) *Philippine Health Statistics,* National Epidemiology Center, Department of Health
(6) National Statistics Office
(7) *Report on Registration of Births and Deaths,* Registry of Births and Deaths, Singapore
(8) Health Information Center, Ministry of Public Health
(9) Ministry of Health

Note : a) Estimated
b) Includes unknown sex

Fig. 6 Trends in Infant Mortality Rates (per 1,000 live-births)



4 – 3 Under-5 Mortality Rate by Sex (per 1000 live-births)

	Year	Male	Female
BRUNEI (1)	1999 2000	8.5 10.6	7.1 9.9
INDONESIA	1999	66.7	55.8
JAPAN	2000	4.8	4.1
MALAYSIA	1998	12.7	10.5
PHILIPPINES	1995	72.2	69.6
SINGAPORE (2)	1999	4.7	4.6
THAILAND	1995–1996	35.5	31.2
VIETNAM	1989	64.8	68.4

Source : Table 2–7. See also Notes on Tables and Graphs for explanation.
(1) Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs
(2) Singapore Department of Statistics

4 – 4 Maternal Mortality Rates

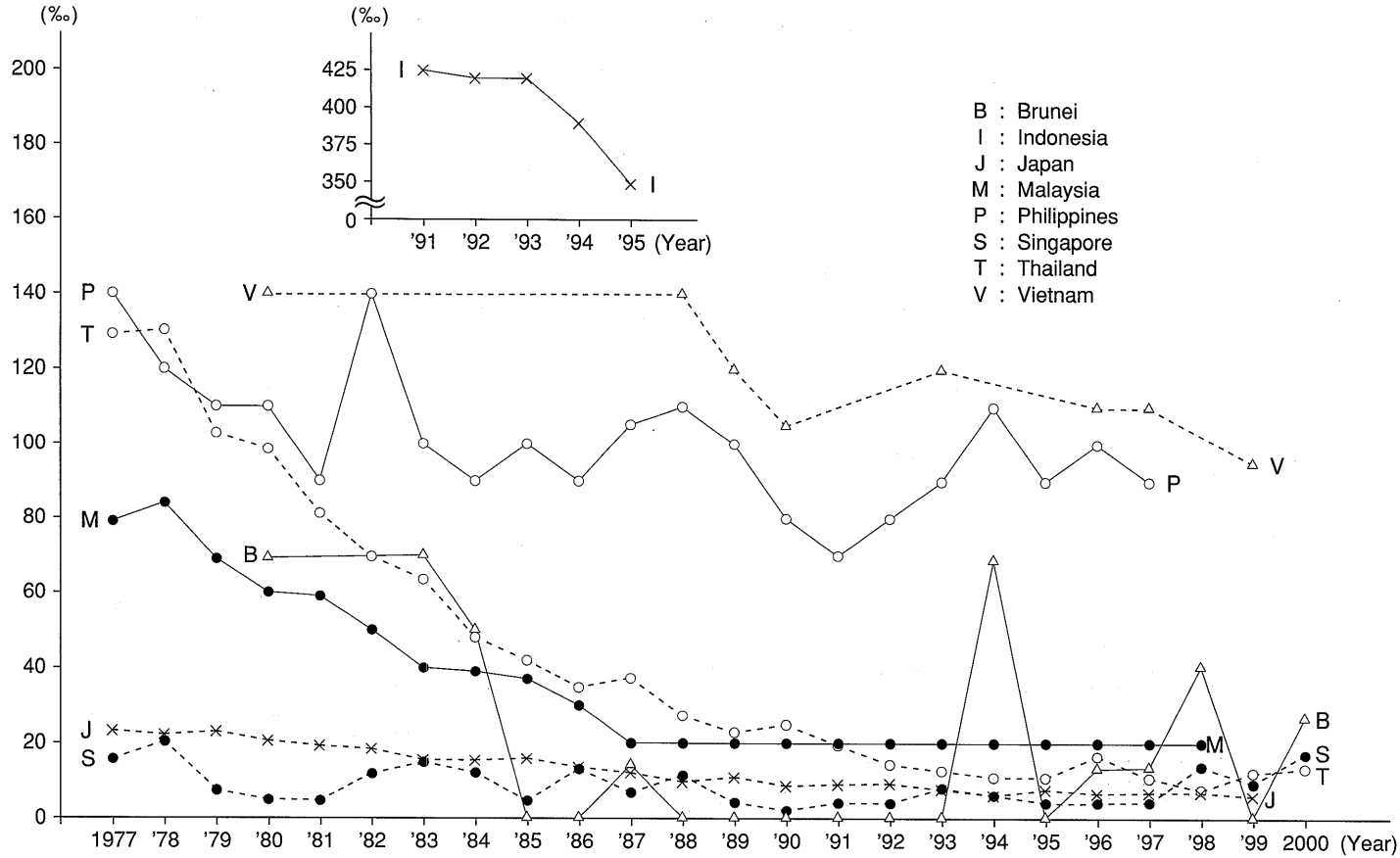
(per 100,000 live-births)

	1970	1975	1980	1985	1989	1990	1992	1993	1994	1995	1996	1997	1998	1999	2000
BRUNEI (1)			69.2	—	—	—	—	—	68.8	—	13.1	13.4	40.5	—	26.7
INDONESIA (2)							420	420	390	a) 312–385					
JAPAN (3)	50.0	28.7	20.5	15.8	10.8	8.6	9.2	7.7	6.1	7.6	6.6	6.8	7.4	6.7	7.1
MALAYSIA (4)	160	88	60	37	20	20	20	20	20	20	20	20	20		
PHILIPPINES (5) (6)	190	140	110	100	100	80	80	90	110	90	100	90			
SINGAPORE (7)	32.7	30.0	4.9	4.7	4.2	2.0	4.0	8.0	6.1	4.1	4.1	4.2	13.7	9.2	17.0
THAILAND (8)	226.1	171.7	98.5	42.0	22.8	24.8	14.2	12.5	10.8	10.7	16.4	10.6	7.6	12.0	13.2
VIETNAM (9)			140		120	105		120			110	100		95	

Source : (1) Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs
(2) Central Bureau of Statistics
(3) ***Vital Statistics Japan,*** Ministry of Health, Labour and Welfare
(4) Department of Statistics
(5) ***Philippine Health Statistics,*** National Epidemiology Center, Department of Health
(6) National Statistics Office
(7) ***Report on the Registration of Births and Deaths,*** Registry of Births and Deaths
(8) Health Information Center, Ministry of Public Health
(9) Ministry of Health

Note : a) The figure of 312 is based on reports from midwives and that of 385 has been estimated from the Household Survey.

Fig. 7 Trends in Maternal Mortality Rates (per 100,000 live-births)



4 – 5 Family Planning Methods Used

(%)

	Year	Reversible				Irreversible	Natural [a]	Others [b]
		Oral Contraceptive	IUD	Injection	Condom	Sterilization		
BRUNEI								
INDONESIA (1)	2000	32.6	6.0	56.4	0.8	3.8		0.4
JAPAN (2) c)	1998	1.1	3.1	—	77.8	5.8	16.6	9.3
MALAYSIA (3)	1999	74.3	4.6	3.1	9.3	6.7	—	2.0
PHILIPPINES (4)	1999	43.6	11.4	13.9	13.0	3.5 [d] 0.2 [e]	3.1	11.2 [f]
SINGAPORE (5) c)	1997	15.7	8.7	1.1	35.7	25.5	26.5	2.2
THAILAND (6) g)	2000	29.9	3.8	20.7	3.6	20.6 [d] 4.3 [e]	—	17.0
VIETNAM (7)	2000	7.2	50.4	0.7	8.3	8.9	23.4	1.1

Source : (1) Family Planning Coordination Board
(2) ***The Future of the Family: Beyond Gender, Summary of Twenty-fourth National Survey on Family Planning,*** The Population Problems Research Council, The Mainichi Shimbun, Tokyo, Japan
(3) National Population and Family Development Board Malaysia
(4) Field Health Service Information System, National Epidemiology Center, Department of Health
(5) ***National Family Planning & Population Survey, 1997,*** Ministry of Health
(6) ***Report on Health Activity,*** Bureau of Health Policy and Planning, Ministry of Public Health
(7) ***Helth Statistics Yearbook,*** Health Statistics and Informatic Division, Ministry of Health

Note : a) Basic body temperature, cervical mucous, rhythm method
b) Diaphragm, etc.
c) Plural choice
d) Tubal ligation
e) Vasectomy
f) Lactational Ammenorheic Method (LAM)
g) National data except two provinces

4 – 6 Women Receiving Prenatal Care

	Year	Percentage of Pregnant Women Receiving Prenatal Care at least 4 Times from Trained Health Personnel during Entire Pregnancy
BRUNEI [a]	2000	100
INDONESIA	1999	75.7
JAPAN		
MALAYSIA	1999	75.6 [b]
PHILIPPINES [1]	1999	65.6
SINGAPORE	2000	100
THAILAND [2]	2000	88.0
VIETNAM	1999	57.5

Source : Ministry of Health of each country
(1) Field Health Service Information System, National Epidemiology Center, Dapartment of Health
(2) Report on Health Activity, Bureau of Health Policy and Planning, Ministry of Public Health

Note : a) Coverage of average number of mothers (1st visit) by Public Health Facilities
b) 1 time

4 – 7 Proportion of Pregnant Women with Anemia (%)

	Year	Number of Subjects Examined	% with Anaemia
BRUNEI			
INDONESIA			
JAPAN			
MALAYSIA (1)	1999	683,106 a)	3.6 b) 37.7 c)
PHILIPPINES (2)	1998	3,103	50.3
SINGAPORE			
THAILAND	2000	401,495	13.2
VIETNAM	1998	National d)	60.0

Source : (1) Information and Documentation System Unit, Ministry of Health
(2) ***Fifth National Nutrition Survey 1998,*** Food and Nutrition Research Institute
(3) Ministry of Public Health
(4) Ministry of Health

Note : a) Estimated number of Pregnant mothers
b) Below HB 9 gm/ℓ
c) Hb 9 – <11gm/ℓ
d) Estimated

5. Morbidity from Infectious Diseases

5 – A List of Notifiable Infectious Diseases

ICD-9/ICD-10 Categories	Brunei 2000	Indonesia 1997	Japan 1999	Malaysia 2000	Philippines 1997/1998	Singapore 2000	Thailand 1999	Vietnam 1998
001/A00 Cholera	√	√	√	√	√	√	√	√
002/A01 Typhoid and Paratyphoid Fever	√	√	√	√	√	√	√	√
003, 005/A02, A04, A05 Food Poisoning (Bacterial)			√ a)					
004, 006/A03, A06 Amebiasis and Bacillary Dysentery (Shigellosis)	√		√	√				
010 – 018/A15 – A19 Tuberculosis of All Forms	√	√	√	√	√	√	√	√
030/A30 Leprosy	√	√		√	√	√	√	√
037, 771.3 b)/A33 – A35 Tetanus	√	√	√ a)	√	√		√	√ c)
032/A36 Diphtheria	√	√	√	√	√	√	√	√
033/A37 Whooping Cough	√	√	√ a)	√	√		√	√
036/A39 Meningococcal Infection			√ a)				√	
090 – 097/A50 – A53 Syphilis	√	√	√ a)	√	√	√	√	
098/A54 Gonococcal Infections	√	√	√ a)	√	√	√	√	√
099/A55 – A64 Other Venereal Diseases	√		√ a) d)	√ e)		√ f)		
045/A80 Acute Poliomyelitis	√	√	√	√	√	√		√
071/A82 Rabies		√	√ a)	√	√		√	√
047 – 049, 062 – 064/A83 – A89 Viral Meningitis and Encephalitis	√			√				
060, 061, 065/A90, A91, A95 Viral Hemorrhagic Fever	√							
052/B01 Chickenpox	√		√ a)		√	√	√	
055/B05 Measles	√	√	√ a)	√	√	√	√	√
056/B06 Rubella								
070/B15 – B19 Viral Hepatitis	√	√	√ a)	√	√	√	√	√
279.5/B20 – B24 AIDS (HIV)	√	√	√ a)	√	√	√	√	√
072/B26 Mumps	√		√ a)			√	√	
084/B50 – B54 Malaria	√	√	√ a)	√	√	√	√	√
120/B65 Schistosomiasis		√			√			
125/B74 Filariasis	√		√ a)					
487/J10, J11 Influenza (Grippe)		√	√ a)		√		√	

Note : a) Sentinel surveillance only
b) Four-digit subcategory
c) New born only
b) Chancroid + lymphogranuloma inguinale
e) Chancroid
f) All sexually transmitted diseases

5 – B Infectious Diseases Specified by Immunization Programme

	Brunei 2000	Indonesia 1997	Japan 1999	Malaysia 2000	Philippines 1997	Singapore 2000	Thailand 1999	Vietnam 1998
Cholera	√	√			√		√	√
Diphtheria	√	√	√	√	√	√	√	√
Measles	√	√	√	√	√	√	√	√
Mosquito-borne Viral Encephalitis			√				√	
Mumps	√					√	√	
Poliomyelitis	√	√	√	√	√	√	√	√
Rubella	√		√	√ a)		√	√	
Tetanus	√	√	√	√	√	√	√	√
Tuberculosis (BCG)	√	√	√	√	√	√	√	√
Typhoid and Paratyphoid Fever	√	√			√		√	√
Whooping Cough	√	√	√	√	√	√	√	√

Note : a) Women only

5 – 1 Morbidity Statistics (ICD-9/ICD-10)

	ICD – 9 ICD – 10 [a]	001 A00	002 A01	004, 006 A03, A06	003, 005 A02, A04, A05	010 – 018 A15 – A19	030 A30
	Year	Cholera	Typhoid and Paratyphoid Fever	Amebiasis and Bacillary Dysentery	Food Poisoning (Bacterial)	Tuberculosis of All Forms	Leprosy
BRUNEI (1)	2000	—	5	4	106	307	—
INDONESIA (2)	1998	985	75,884	11,548	11,872	304,787	16,220
JAPAN (3) (4) (5)	[d] 1999	40	113	893	30,618	44,016	
MALAYSIA (6)	1999	1,074	850	222	3,429	14,907	434
PHILIPPINES (7)	1999	659	17,675		1,132	152,734	1,423
SINGAPORE (8)	2000	10	101	7	1,542	2,204	18
THAILAND (9)	2000	—	5,758	3,824	130,777	32,012	642
VIETNAM (10)	2000	176	10,705		12,195	[f] 90,754	[g] 21,918

Source : (1) Disease Control Unit, Department of Health Services, Minitry of Health
(2) Directorate General of CDC, Ministry of Health
(3) ***Statistics on Communicable Diseases,*** Ministry of Health and Welfare
(4) ***Statistics of Food Poisoning,*** Ministry of Health and Welfare
(5) ***Annual Report of Surveillance of Tuberculosis and Infectious Diseases,*** Ministry of Health and Welfare
(6) Information and Documentation System Unit, Ministry of Health
(7) Field Health Service Information System, National Epidemiology Center, Department of Health
(8) Ministry of the Environment and Ministry of Health
(9) Epidemiology Division, Ministry of Public Health
(10) Ministry of Health

032 A36	052 B01	070 B15 – B19	071 A82	084 B50 – B54	487 J10, J11	033 A37	036 A39	037, 771.3 [b] A33 – A35	055 B05
Diphtheria	Chickenpox	Viral Hepatitis	Rabies	Malaria	Influenza (Grippe)	Whooping Cough	Meningococcal Infection	Tetanus	Measles
—	1,558	2		31		2		—	42
835		20,953	204	[c] 111,472	122,544		1,400	1,770	4,703
1	[e] 164,568	1,488	—	111	[e] 67,718	[e] 2,685	10	68	[e] 6,059
6	—	6,139	0	5,875		6		24	1,228
48	35,699	5,525	2,582	68,155	514,198	1,327	29	465	12,713
—	24,074	211	—	266		1	22		141
15	42,585	4,403	50	51,848	39,594	96	72	234	4,120
107	3,177	9,325	3,727	[f] 293,016	[g] [h] 1,359,758	1,601	898	716	16,512

Note : a) ICD-10: Brunei, Japan, Thailand and Vietnam
b) Four-digit category
c) Revised data
d) From April to December 1999
e) Cases treated in large hospitals only
f) For 1996
g) Data on the end of 2000
h) Influenza Syndrome

5 – 1 Morbidity Statistics (ICD-9/ICD-10) (Cond.)

		056 B06	072 B26	279.5 [a] B20 – B24	045 A80	047 – 049, 062 – 064 A83 – A89	060, 061, 065 A90, A91, A95	125 B74	120 B65	090 – 097 A50 – A53	098 A54	099 A55 – A64
		Rubella	Mumps	AIDS (HIV)	Acute Polio-myelitis	Viral Meningitis and Encephalitis	Viral Hemor-rhagic Fever	Filariasis	Schisto-somiasis	Syphilis	Gonococcal Infections	Other Venereal Diseases
BRUNEI (1)	2000	1	33	—	—	—	—	1		2	77	9
INDONESIA (2)	1998	246	2,399	[b] 227	690	447	39,405	303	275	3,778	4,843	1,990
JAPAN (3) (4) (5)	1999	3,015	70,010	598	—	5	9	—		749	[c] 11,754	[c] 34,555
MALAYSIA (6)	1999			1,200	—	275	[d] 605	—	—	2,675	2,392	383
PHILIPPINES (7)	1999			8		344	9,121	398	11,572	121	2,800	
SINGAPORE (8)	2000	312	5,981	[e] 226	—	4	673			955	1,497	3,799
THAILAND (9)	2000	1,145	6,655	23,128	—	4,061	18,617	[f] 345	—	1,672	3,137	10,756
VIETNAM	2000	373	16,401	[e] 5,120	62	3,147	[g] 25,266			2,572	6,094	101,356

Note : a) Four-digit category
b) Revised data
c) Cases treated in large hospitals only
d) Refer to dengue hemorrhagic fever
e) AIDS / HIV
f) Cumulative
g) Dengue fever only

5 – 2 Percentage of Infants under 1 Year Who Are Fully Immunized Against Target Diseases

	Year	Diphtheria	Pertussis	Tetanus	Poliomyelitis	Measles	Tuberculosis
BRUNEI (1)	1998	100.0			98.8	99.0	100.0
INDONESIA (2)	1999	97.0	90.9	88.4	98.9	88.3	
JAPAN (3)	1996	a) 94.4			b) 96.4	c) 91.7	
MALAYSIA (4)	1999	93.1			93.2	86.6	100
PHILIPPINES (5)	1999	87.1			87.1	87.1	87.1
SINGAPORE (6)	2000	91			90	d) 89	97
THAILAND (7)	2000	94.4			94.5	83.8	98.8
VIETNAM (8)	2000	96.0			96.0	96.6	97.6

Source : (1) Department of Health Services, Ministry of Health
(2) Directorate General of Communicable Disease Control and Environmental Health, Ministry of Health
(3) Ministry of Health and Welfare
(4) Ministry of Health
(5) Field Health Service Information System, National Epidemiology Center, Department of Health
(6) Family Health Service, Ministry of Health
(7) ***Report on Health Activity,*** Bureau of Health Policy and Planning, Ministry of Public Health
(8) Ministry of Health

Note : a) Including children aged over 1 year. The denominator is population under 1 year.
b) 3 months to 1.5 years old children
c) 1 to 2 years old children
d) 2 years old children

6. Nutrition

6 – 1 Per Capita Food Intake

	Year	Energy (kcal / day)			Protein (g / day)			Fat (g / day)		
		Total	Vegetable Products	Animal Products	Total	Vegetable Products	Animal Products	Total	Vegetable Products	Animal Products
BRUNEI										
INDONESIA (1)	1998 a)	1,990			49.1			29.6		
JAPAN (2)	1999 2000	1,967 1,948			78.9 77.7	36.6 36.0	42.3 41.7	57.9 57.4	28.9 28.6	29.0 28.8
MALAYSIA										
PHILIPPINES (3)	1993	1,684	1,366 a)	318 a)	49.9	29.8	20.1	28.0	16.0	12.0
SINGAPORE (4) b)	1998	1,929			72.6			66.6		
THAILAND (5)	1995	1,751			51.1	21.4	29.7	45.6		
VIETNAM (6)	1996	1,900	1,662	238	50	35.4	14.6	25.7	11.8	

Source : (1) Food Consumption Survey 1998, Ministry of Health
(2) ***National Nutrition Survey,*** Health Promotion and Nutrition Division, Ministry of Health, Labour and Welfare
(3) ***Fourth National Nutrition Survey 1993,*** Food and Nutrition Research Institute, Department of Science and Technology
(4) ***National Nutrition Survey 1998,*** Department of Nutrition, Ministry of Health
(5) ***The 4th National Nutrition Survey 1995,*** Nutrition Division, Ministry of Public Health
(6) Ministry of Health

Note : a) Revised figure
b) Figures represent mean intake for Singapore adults aged 18–69 years old.

6 – 1 Per Capita Food Intake (Contd.)

	Year	Calcium (mg / day)	Iron (mg / day)	Vitamin A (μg / day)	Vitamin B_1 (mg / day)	Vitamin B_2 (mg / day)	Vitamin C (mg / day)	Carbohydrate (g / day)
BRUNEI								
INDONESIA	1998 [a]	254	8.9	[b] 4,311	0.6		52.8	255
JAPAN	1999 2000	575 547	11.5 11.3	[b] 2,803 [b] 2,654	1.18 1.17	1.43 1.40	129 128	269 266
MALAYSIA								
PHILIPPINES	1993	39.0	10.1	[c] 392	0.67	0.56	47	302
SINGAPORE [d]	1998	482	16.9	702			88	259.7
THAILAND	1995	344	18.1	[c] 677	0.9	1.1	95	276.9
VIETNAM								

Note : a) Revised figures
b) Unit = IU
c) Unit = Retinol Equivalent, mcg.
d) Figures represent mean intake for Singapore adults aged 18–69 years old.

6 – 2 Mean Length of Infants from Birth to One Year

(cm)

	Population or Place	Year	Sex	Age					
				Birth	4 weeks	3 months	6 months	9 months	12 months
BRUNEI			M						
			F						
INDONESIA (1)	National	1994	M	49.4					
			F	48.9					
JAPAN (2)	National	2000	M	49.0	56.2	62.9	68.3	72.0	75.5
			F	48.4	54.9	61.6	66.9	70.5	73.8
MALAYSIA			M						
			F						
PHILIPPINES (3)	National	1993	M	51.3	57.5	64.1	67.7	72.0	77.6 a)
			F	51.1	56.7	62.0	68.0	70.8	76.6
SINGAPORE			M						
			F						
THAILAND (4)	National	1995 b)	M	50.0	53.0	58.6	65.5	70.7	74.8
			F	49.8	52.5	57.7	64.4	69.5	73.4
VIETNAM	National	1984	M			59.0	63.5	68.1	70.9
			F			57.3	63.6	66.1	68.8

Source : (1) Ministry of Health
(2) Ministry of Health, Labour and Welfare
(3) ***Fourth National Nutrition Survey 1993,*** Food and Nutrition Research Institute, Department of Science and Technology
(4) ***National Food and Nutrition Survey,*** Department of Health, Ministry of Public Health

Note : a) For 1–1.99 years old
b) Revised figures

6 – 3 Mean Weight of Infants from Birth to One Year

(kg)

	Population or Place	Year	Sex	Age					
				Birth	4 weeks	3 months	6 months	9 months	12 months
BRUNEI			M F						
INDONESIA (1)	National	1994	M F	3.1 3.0					
JAPAN (2)	National	2000	M F	3.0 3.0	4.9 4.6	6.7 6.2	8.2 7.5	8.9 8.3	9.5 8.9
MALAYSIA (3)	Peninsular Malaysia	1998	T	3.2					
PHILIPPINES (4)	National	1993	M F	3.5 3.4	5.3 4.8	6.6 6.1	7.4 7.2	8.1 7.8	a) 9.4 9.0
SINGAPORE (1)	National	1999	M F	3.1 3.1					
THAILAND (5)	National	1995 b)	M F	3.3 3.1	4.0 3.8	5.5 5.1	7.3 6.7	8.6 7.9	9.5 8.8
VIETNAM			M F						

Source : (1) Ministry of Health
(2) Ministry of Health, Labour and Welfare
(3) Department of Statistics
(4) ***Fourth National Nutrition Survey 1993,*** Food and Nutrition Research Institute, Department of Science and Technology
(5) ***The 4th National Nutrition Survey 1995,*** Department of Health, Ministry of Public Health

Note : a) For 1–1.99 years old
b) Revised figures

6 – 4 Mean Chest Circumference of Infants from Birth to One Year

(cm)

	Population or Place	Year	Sex	Age					
				Birth	4 weeks	3 months	6 months	9 months	12 months
BRUNEI			M						
			F						
INDONESIA (1)	National	1994	M	32.5					
			F	32.4					
JAPAN (2)	National	2000	M	31.8	37.8	41.9	44.2	45.4	46.2
			F	31.6	37.0	40.9	43.1	44.3	45.1
MALAYSIA			M						
			F						
PHILIPPINES (3)	National	1998	M	34.5	37.8	41.7	43.5	44.1	46.1
			F	34.3	36.8	40.0	42.1	43.2	45.0
SINGAPORE			M						
			F						
THAILAND (4)	National	1995 a)	M	32.5	34.5	38.1	42.2	44.2	45.7
			F	32.0	33.8	37.2	41.1	43.4	44.7
VIETNAM			M						
			F						

Source : (1) Ministry of Health
(2) Ministry of Health, Labour and Welfare
(3) Food and Nutrition Research Institute, Department of Science and Technology
(4) ***The 4th National Nutrition Survey 1995,*** Department of Health, Ministry of Public Health

Note : a) Revised figures

6 – 5 Mean and Standard Deviation[a] of Height by Age (1–18 years)

	Population or Place	Year	Sex	Age						
				1	2	3	4	5	6	7
BRUNEI (1)	National	1997	M	81.9 (5.3)	91.4 (4.6)	99.3 (4.8)	106.6 (3.3)	112.7 (5.4)	119.0 (5.9)	122.5 (5.3)
			F	77.2 (13.0)	91.4 (5.4)	99.1 (7.0)	106.3 (4.9)	111.3 (6.5)	116.2 (5.5)	123.0 (4.7)
INDONESIA (2)	National	1994	M					107.1	109.7	112.2
			F					106.1	108.7	111.3
JAPAN (3)	National	1999	M	81.3 (4.6) (4)	89.3 (4.4) (4)	95.7 (4.2) (4)	102.8 (4.7) (4)	110.8 (4.7)	116.6 (5.0)	122.4 (5.2)
			F	78.5 (3.7)	86.8 (4.7)	94.8 (3.7)	101.7 (5.0)	109.9 (4.7)	115.8 (4.8)	121.6 (5.2)
MALAYSIA			M							
			F							
PHILIPPINES (5)	National	1998	M	77.3 (4.3)	85.1 (4.7)	92.0 (4.9)	98.0 (5.0)	103.8 (5.1)	109.3 (5.4)	115.5 (5.4)
			F	75.9 (4.5)	84.3 (4.7)	91.1 (5.1)	97.2 (5.0)	103.1 (5.1)	109.2 (4.8)	115.0 (5.5)
SINGAPORE (6)	National	2000	M						120.5	
			F						119.6	
THAILAND (7)	National	1995 b)	M		87.0	95.0	102.0	112.8	114.4	120.0
			F		84.7	94.1	101.1	107.6	113.9	119.8
VIETNAM	National	1984	M		77.7 (4.2)	86.6 (6.1)	92.2 (8.5)	97.6 (7.2) c)		
			F		76.7 (5.4)	84.8 (6.0)	91.8 (7.7)	97.3 (5.7)		

Source : (1) National Nutrition Survey, Ministry of Health
(2) ***Report on Height of School Entrance in Indonesia 1994/1995,*** Directorate of Community Nutrition, Ministry of Health
(3) ***School Health Examination Survey,*** Ministry of Education, Culture, Sports, Science and Technology
(4) ***National Nutrition Survey,*** Health Service Bureau, Ministry of Health, Labour and Welfare
(5) ***Fifth National Nutrition Survey 1998,*** Food and Nutrition Research Institute, Department of Science and Technology
(6) School Health Service, Ministry of Health
(7) ***The 4th National Nutrition Survey 1995,*** Department of Health, Ministry of Public Health

Note : a) Standard deviation: in brackets
b) Revised figures
c) 59 months old

(cm)

Age										
8	9	10	11	12	13	14	15	16	17	18
127.6 (5.3) 128.1 (5.5)	131.9 (7.2) 130.5 (6.3)	132.3 (6.1) 138.5 (5.8)	140.3 (7.4) 142.2 (8.4)	146.0 (10.4) 147.5 (7.4)	154.6 (7.6) 149.9 (5.5)	158.4 (10.3) 153.7 (5.7)	164.5 (8.7) 153.4 (5.9)	163.1 (5.4) 151.9 (6.5)		
115.0 114.0	117.9 117.0	121.3 120.1	123.7 122.9	a) b) 128.9 130.0		151.3 148.9	b) c) 155.2 149.7	b) c) 159.7 150.9	b) c) 161.3 151.6	b) c) 162.9 151.7
128.0 (5.4) 127.4 (5.5)	133.5 (5.7) 133.5 (6.2)	139.1 (6.2) 140.3 (6.8)	145.3 (7.1) 147.1 (6.7)	152.7 (8.0) 152.2 (5.9)	160.0 (7.6) 155.1 (5.4)	165.5 (6.6) 156.7 (5.2)	168.5 (5.9) 157.3 (5.2)	170.2 (5.7) 157.8 (5.2)	170.9 (5.8) 158.1 (5.2)	(4) 171.0 (5.9) 159.0 (5.8)
119.5 (5.6) 118.7 (5.9)	123.8 (5.6) 123.5 (5.8)	127.0 (4.9) 129.0 (6.4)	133.0 (6.8) 136.5 (7.5)	137.5 (8.3) 140.2 (7.8)	145.7 (8.8) 145.1 (6.6)	150.6 (8.9) 149.0 (6.1)	157.5 (7.5) 150.2 (5.6)	158.9 (7.0) 150.7 (5.6)	162.6 (6.7) 150.2 (5.2)	163.0 (5.9) 151.3 (5.5)
			149.1 150.2				170.2 159.0			
125.2 124.8	130.3 130.1	135.0 136.2	139.5 143.0	145.6 148.8	153.2 152.7	160.5 154.7	164.7 156.0	167.5 156.6	169.2 156.9	169.4 156.9
d) 119.3 (5.2) 119.6 (4.7)	d) 124.2 (4.6) 124.7 (4.4)	d) 128.3 (5.2) 129.6 (5.0)	d) 132.4 (5.5) 134.7 (12.6)	d) 138.2 (7.2) 141.1 (6.2)	d) 141.0 (6.7) 147.0 (6.0)	d) 149.0 (7.7) 150.8 (6.9)			e) 163.4 (5.0) 154.9 (4.3)	e) 163.6 (5.1) 153.2 (4.6)

Note : a) For 1993
b) West Sumatra, Central Java and West Nusa Tenggara
c) For 1989
d) For 1994. Thái Binh Province
e) For 1995. Students at four universities in North Vietnam

6 – 6 Mean and Standard Deviation[a] of Weight by Age (1–18 years)

	Population or Place	Year	Sex	Age						
				1	2	3	4	5	6	7
BRUNEI			M F							
INDONESIA (1)	National	1989	M F	6.6 6.3	9.2 9.0	10.9 10.7	12.5 13.8	13.8 13.6		
JAPAN (2)	National	1999	M F	10.8 (1.5) (3) 10.0 (1.3)	13.2 (2.3) (3) 11.9 (1.5)	14.5 (1.7) (3) 14.4 (2.0)	16.4 (2.1) (3) 16.1 (2.1)	19.2 (2.8) 18.8 (2.7)	21.7 (3.6) 21.3 (3.5)	24.4 (4.4) 23.8 (4.1)
MALAYSIA			M F							
PHILIPPINES (4)	National	1998	M F	9.4 8.8	11.3 10.9	13.0 12.5	14.5 13.9	15.9 15.4		
SINGAPORE (5)	National	2000	M F						22.7 21.7	
THAILAND (6)	National	1995 c)	M F	9.5 8.8	12.4 11.6	14.6 13.9	16.2 15.7	17.8 17.4	19.8 19.4	21.9 21.4
VIETNAM	Thái Binh Province	1994	M F							

Source : (1) Ministry of Health
(2) ***School Health Examination Survey,*** Ministry of Education, Culture, Sports, Science and Technology
(3) ***National Nutrition Survey,*** Health Service Bureau, Ministry of Health, Labour and Welfare
(4) ***Fifth National Nutrition Survey 1998,*** Food and Nutrition Research Institute, Department of Science and Technology
(5) School Health Service, Ministry of Health
(6) ***The 4th National Nutrition Survey 1995,*** Department of Health, Ministry of Public Health

Note: a) Standard deviation: in brackets
b) For 1995. Students at four universities in North Vietnam
c) Revised figures

(kg)

Age										
8	9	10	11	12	13	14	15	16	17	18
27.7 (5.6) 27.0 (5.1)	31.2 (6.7) 30.7 (6.4)	35.1 (8.0) 34.9 (7.5)	39.3 (9.0) 40.0 (8.3)	45.1 (10.2) 45.1 (8.6)	50.2 (10.4) 48.2 (8.2)	55.3 (10.5) 50.7 (7.9)	59.3 (10.8) 52.2 (8.4)	61.1 (10.1) 53.1 (8.1)	62.4 (10.1) 53.1 (8.0)	61.5 (10.2) [3] 51.8 (6.6)
20.8 20.5			28.9 31.2		44.5 43.0					
			42.4 42.0				60.0 51.0			
24.1 23.6	26.7 26.5	29.7 29.9	32.7 34.2	36.6 38.6	41.6 42.3	46.7 44.9	50.7 46.8	53.8 47.9	56.1 48.4	57.6 48.7
20.9 (2.0) 20.3 (2.2)	22.1 (2.1) 22.0 (2.2)	23.9 (3.1) 23.7 (2.1)	26.0 (2.9) 25.1 (3.2)	28.6 (4.0) 28.8 (3.8)	30.6 (4.9) 33.1 (4.8)	36.0 (5.0) 37.7 (5.0)			49.5 (5.3) [b] 44.9 (3.9)	49.1 (5.3) [b] 44.0 (4.6)

6 – 7 Proportion of Low Birth-Weight Infants

	Year	Number of Subjects Examined Weight	Sex	% Under 2500 g
BRUNEI (1)	1999	3,857 3,510	M F	10.8 12.6
INDONESIA			M F	
JAPAN	2000	National	M F	7.8 9.5
MALAYSIA (2)	1998	287,200 267,400	M F	8.5 9.9
PHILIPPINES (3)	1998	National	M F	8.0
SINGAPORE			M F	
THAILAND			M F	
VIETNAM (4)	2000		M F	7.3

Source : (1) Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs
(2) ***Vital Statistics,*** Department of Statistics
(3) ***Fifth National Nutrition Survey 1998,*** Food and Nutrition Research Institute, Department of Science and Technology
(4) Ministry of Health

6 – 8 Proportion of Underweight Children under 5 Years Old

	Year	Number of Subjects Weighed	Sex	% of Underweight Children
BRUNEI (1)	1999	201 189	M F	9.0 9.5
INDONESIA			M F	
JAPAN			M F	
MALAYSIA			M F	
PHILIPPINES (2)	1998	National	M F	8.4 10.0
SINGAPORE			M F	
THAILAND			M F	
VIETNAM	2000		M F	33.8

Source : (1) Registration of Birth and Death and Adoptions, Department of Immigration and Registration of Nationals, Ministry of Home Affairs
(2) ***Fifth National Nutrition Survey 1998,*** Food and Nutrition Research Institute, Department of Science and Technology

7. Environmental Health and Socio-economic Situation

7 – 1 Housing Conditions

(%)

	Year		Percentage of Population Served with Safe Water	Percentage of Population with Sanitary Toilet	Lighting				
					Electricity	Pressure / Gas Lamp	Oil Lamp	Kerosene	Other
BRUNEI (1)	1991	Total	a) 96.0	a) 79.0	97.5			2.0	0.5
INDONESIA (2)	2000	Total	43.8	58.3	86.1	2.7	10.4		0.8
		Urban	58.3	76.0	97.9	0.6	1.4		0.1
		Rural	33.8	39.7	77.5	4.2	17.0		1.3
JAPAN (3)	2000	Total	b) 96.4	e) 98.0	100.0				
MALAYSIA (4)	1999	Total	93.0	99.0	f) 91	f) 2	f) 7	f) —	f) 1
PHILIPPINES (5)	1999	Total	a) 75.2	a) 69.9	a) g) 55.1	a) g) 1.7	a) g) 0.1	a) g) 49.6	a) g) 0.5
		Urban			79.2	1.2	0.1	19.3	0.2
		Rural			31.9	2.1	0.2	65.1	0.7
SINGAPORE (6)	2000	Total	100.0	100.0	100.0				
THAILAND (7)	2000	Total	89.7	98.3	e) 97.7				
VIETNAM (8)	2000	Total	50.5	65.5	80.1	19.9			

Source : (1) Department of Economic Planning and Development, Prime Minister Office
(2) National Socio Economic Survey 2000, BPS
(3) Water Supply and Environmental Sanitation Department, Ministry of Health and Welfare
(4) Ministry of Health and Department of Statistics
(5) Field Health Service Information System, National Epidemiology Center, Department of Health and National Statistics Office
(6) Public Utilities Board, Ministry of the Environment and Singapore Power
(7) Ministry of Public Health
(8) Ministry of Health

Note : a) Percentage of households
b) As of March 31, 2000
c) For 1997
d) For 1991
e) For 1990

7 – 2 Socio-economic Indicators

	Year	Adult Literacy Rate (%)	Year	Net Primary Enrolment Ratio (%)	Year	Net Secondary Enrolment Ratio (%)	Year	[a] Per Capita GDP (in US $)	Year	Labour Force Participation Rate (%)
BRUNEI	1999	(1) b) 90.7					1998	(2) 14,998	1995	b) 66.5
INDONESIA (3)	2000	88.6	2000	94.9	2000	60.8	2000	762	2000	67.8
JAPAN	1999	(1) b) c) 99.0	2000	(4) 100.0	2000	(4) 100.0	2000	(5) 37,504	2000	(6) b) 62.4
MALAYSIA	1999	(1) b) 87.0	2000	(7) 97.6	2000	(7) 58.9	1999	(7) 4,133	1999	(7) 64.2
PHILIPPINES	1999	(1) b) 95.1	2000	(8) 70.4	2000	(8) 65.2	1999	(9) 314	1999	(10) 65.8
SINGAPORE (11)	2000	d) 92.5	2000	e) 96	2000	e) 92	2000	22,961	2000	b) 68.6
THAILAND	1999	(1) b) 95.3	2000	89.9	2000	82.5	2000	(12) 1,970	2000	(12) 48.8
VIETNAM (13)	1999	M 94.3 F 88.2	1999–2000	95.2	1999–2000	75.4	2000	404	1999	92.6

Source : (1) ***Human Development Report 2001,*** the United Nations Development Programme
(2) Department of Economic Planning and Development, Prime Minister Office
(3) Welfare Indicators, Central Bureau of Statistics, Department of Economic Planning and Development, Prime Minister Office
(4) Ministry of Education, Science, Sports and Culture
(5) Department of National Accounts, Economic and Social Research Institute, Cabinet Office
(6) ***The Annual Report on the Labour Force Survey,*** Statistics Bureau & Statistics Center, Ministry of Public Management, Home Affairs, Posts and Telecommunications
(7) ***Social Statistics Bulletin,*** Department of Statistics
(8) Department of Education, Culture and Sports
(9) National Statistical Coordinating Board
(10) National Statistics Office
(11) Singapore, Department of Statistics and Ministry of Education
(12) National Economic and Social Development Board
(13) Health Statistics and Informatic Division, Ministry of Health

Note : a) Figures for each country except Indonesia and Vietnam converted into US $ by SEAMIC / IMFJ, using yearly average exchange rates (except Vietnam) shown in ***IMF International Financial Statistics.*** For Vietnam, the rate at the end of period was applied.
b) Age 15 years and over
c) Estimated
d) Refer to resident population aged 15 years and over
e) Resident students aged 6 – 11 for primary education and 12 – 15 for secondary education

7 – 3 Expenditure of the Ministry of Health

	Fiscal Year	Total Health Budget (in US $)	Health Budget as % of National Budget	Per Capita Health Budget (in US $)	Health Expenditure (in US $)			
					Total	Personal Services	Maintenance and Other	Capital Outlay (Development Expenditure)
BRUNEI	1999	117,852,507	7.2	372.3	113,994,100	67,646,018	41,144,543	5,203,540
INDONESIA	1999	746,939,000	2.5	3.6				
JAPAN								
MALAYSIA	1999	1,187,436,371	6.9	52.4	1,170,067,918	950,218,962		219,848,956
PHILIPPINES (1)	2000	272,393,963	1.8	3.6	272,393,963	114,414,283	148,994,071	8,985,608
SINGAPORE	2000	710,196	1.7	176.7	702,907	84,516	536,903	81,489
THAILAND	2000	1,456,570,318	6.8	29.9	1,456,570,318	705,774,928	174,036,670	576,758,721
VIETNAM	2000	360,077,683 a)	5.1	4.6				

Source : Ministry of Health in each country
(1) 2000 General Appropriations Act (GAA)

Note : Figures for each country except Indonesia and Vietnam converted into US $ by SEAMIC / IMFJ, using yearly average exchange rates (except Vietnam) shown in ***IMF International Financial Statistics***. For Vietnam, the rate at the end of the period.
a) Including foreign aids

7 – 4 Adult Smoking Prevalence

(%)

	Year	Total	Male	Female
BRUNEI (1)	1997		12.0 a) 36.1 b)	0.9 a) 6.4 b)
INDONESIA (2)	1995		45.0	1.5
JAPAN (3) b)	1998 1999	27.2 26.5	49.2 49.2	10.3 10.4
MALAYSIA				
PHILIPPINES (4)	1995	33	c) 29	c) 8
SINGAPORE (5) d)	1998	15.0	26.9	3.1
THAILAND (6)	1999	24.0	45.4	3.0
VIETNAM				

Source : (1) National Nutrition Survey (1997), Ministry of Health
(2) Household Survey 1995, Department of Health
(3) Ministry of Health, Labour and Welfare
(4) ***1995 National Smoking Prevalence Survey,*** Department of Health
(5) Ministry of Health
(6) National Statistics Office

Note: a) 11 – 19 years
b) 20 years old and over
c) Children and adults
d) Age 18 – 64 years

8. Medical Establishments

8 – A Definitions Used in Statistics on Medical Establishments

	Definition
1. Hospital	Any establishment permanently staffed by at least one physician that can offer inpatient accommodation and provide active medical and nursing care. Establishments providing principally custodial care should not be included.
2. General Hospital	A hospital other than local or rural hospitals providing medical and nursing care for more than one category of medical discipline (e.g., general medicine, specialized medicine, general surgery, obstetrics, etc.)
3. Local or Rural Hospital	A hospital, usually in rural areas, permanently staffed by one or more physicians, which in respect of their functions is also a general hospital, but provides medical and nursing care of a more limited range than that provided by principal general hospitals.
4. Specialized Hospital	A hospital providing medical and nursing care primarily for only one discipline, such as for mental disorders, maternity, infectious diseases, leprosy and tuberculosis. This category does not include the specialized department administratively attached to a principal general hospital and sometimes located in an annex or separate building; their beds (and the related data) are included with the principal general hospital.
5. Primary Health Care Faclility	An establishment serving as the first-level contact point in the country's health system and providing outpatient medical and nursing care under a physician's supervision, though the physician may or may not be its permanent staff. This category includes general practitioners' offices, peripheral health stations, etc.

	Definition
6. Bed	A hospital bed is one regularly maintained and staffed for the accommodation and full-time care of a succession of inpatients and is situated in wards or a part of the hospital where continuous medical care for inpatients is provided. The total of such beds constitutes the normally available bed complement of the hospital. Cribs and bassinets maintained for use by healthy newborn infants who do not require special care should not be included.
7. Admission	An inpatient admission is the formal admission by a hospital of an inpatient and always involves the allocation of a hospital bed. Healthy babies born in the hospital should not be counted if they do not require special care.
8. Patient days	Total of daily censuses of inpatients in the hospitals during the year. Not included in the daily censuses are healthy babies born in the hospitals if they do not require special care. The day of admission and the day of discharge should be counted together as one day.

8 – B Comparative Table on Medical Establishments

	Brunei (2000)	Indonesia (2000)	Japan (2000)	Malaysia (1999)	Philippines (2000)	Singapore (2000)	Thailand (1999)	Vietnam (2000)
1 General Hospital	√	√	√	√ a)	√	√	√	√
2 Local or Rural Hospital		√					√	√
3 Mental Hospital		√	√	√	√	√	√	√
4 Maternity Hospitals		√			√	√	√	√
5 Infectious Diseases Hospitals		√			√		√	
6 Leprosy Hospitals		√		√	√		√	√
7 Tuberculosis Hospitals		√	√	√			√	√
8 Other Specialized Hospitals		√			√	√ b)	√	√ c)
9 PHC d) Facilities with Beds, Staffed with Physician(s)			√	√				√
10 PHC d) Facilities without Beds, Permanently Staffed with Physician(s)	√ e)	√	√	√	√	√	√	√
11 PHC d) Facilities without Beds and without Permanently Staffed Physician	√ f)	√		√	√		√	√

Note : a) Hospitals. The previous categorization into general hospital and local or rural hospitals does no longer apply.
b) Ophthalmological, dermatological, community & extended care hospitals
c) Pediatric hospitals, ophthalmological hospitals, cancer hospitals, surgical hospitals, Cardiological Institute, dermatological hospitals, oto-rhino-laryngological hospitals, dental-naso-facial hospitals, Traditional Medical Institute, Acupuncture Institute
d) Primary health care
e) Health centres, health clinics, MCH clinics, Flying Medical Team
f) Travelling Health Clinic

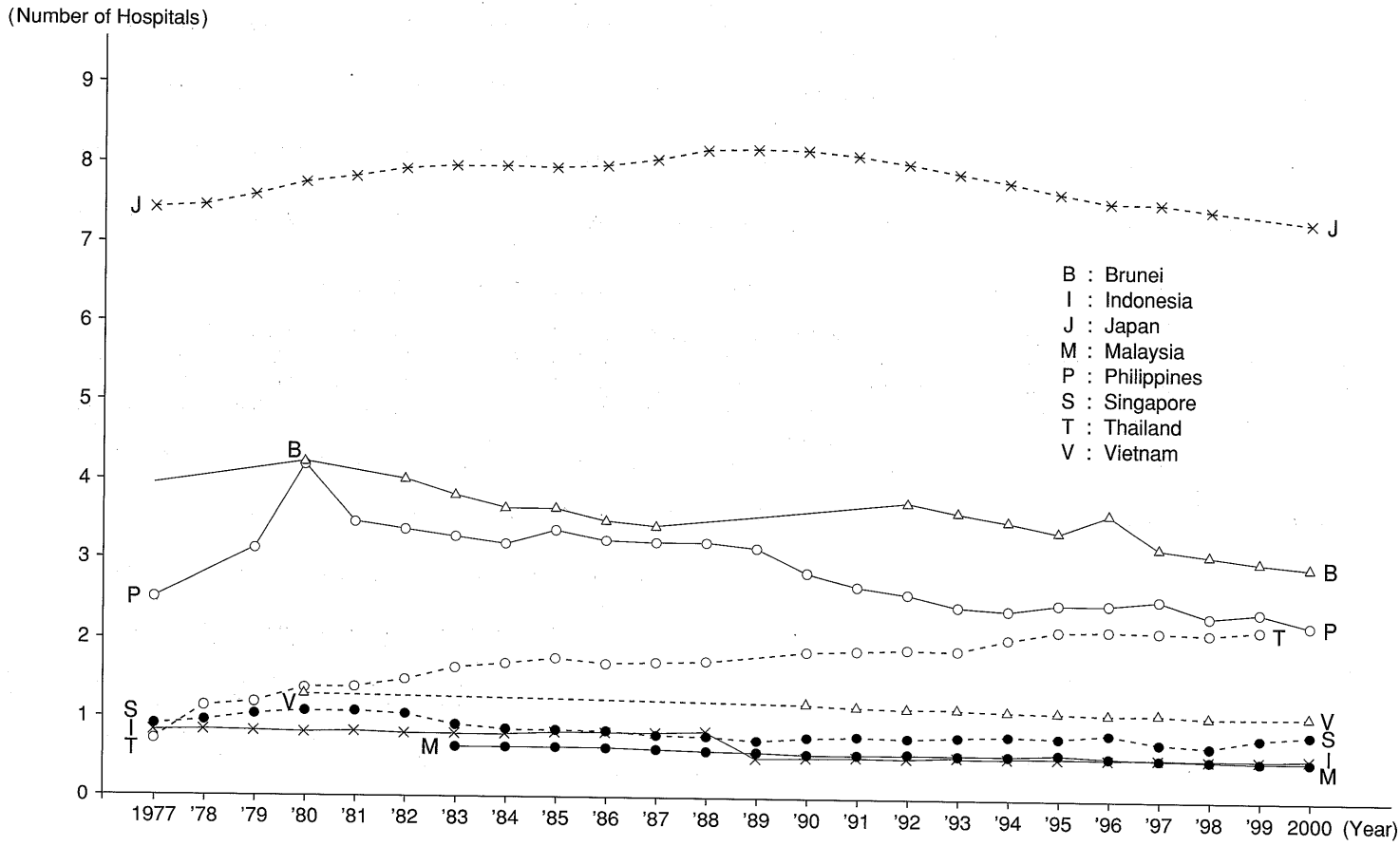
8 – 1 Number of Hospitals

		1970	1975	1980	1985	1990	1993	1994	1995	1996	1997	1998	1999	2000
BRUNEI	Total		6	8	8		10	10	10	11	10	10	10	10
INDONESIA	Total	1,164	1,115	1,208	1,367	a) 950	1,026	1,039	1,062	1,074	1,090	1,112	1,111	1,145
JAPAN b)	Total	7,974	8,294	9,055	9,608	10,096	9,844	9,731	9,606	9,490	9,413	9,333	9,286	9,266
MALAYSIA	Total	86	90	96	101	102	108	112	118	118	118	118	118	120
PHILIPPINES	Total	650	927	2,020	1,846	1,726	1,723	1,648	1,702	1,738	1,817	1,713	1,794	1,712
	Public	220	316	413	612	c) 594	c) 628	c) 553	c) 607	c) 600	c) 645	c) 616	c) 648	623
	Private	430	611	1,607	1,229	1,132	1,095	1,095	1,095	1,138	1,172	1,097	1,146	1,089
SINGAPORE	Total	17	23	26	22	21	24	25	24	26	d) 24	d) 23	d) 28	28
	Public	11	13	13	11	11	13	13	12	12	11	11	14	14
	Private	6	10	13	11	10	11	12	12	14	13	12	14	14
THAILAND	Total	98	281	636	910	1,043	1,105	1,215	1,280	1,293	1,301	e) 1,302	1,345	
VIETNAM	Total		f) 550	685	738	782	793	792	796	794	817	g) 810		842

Source : Ministry of Health in each country

Note : a) Excluding maternity hospitals
b) Hospitals (with 20 or more beds) only
c) Licensed retained and licensed devolved hospitals only
d) Revised figure
e) Hospitals except rural hospitals
f) For 1976
g) Hospitals and institutes

Fig. 8 Trends in Hospitals per 100,000 Population



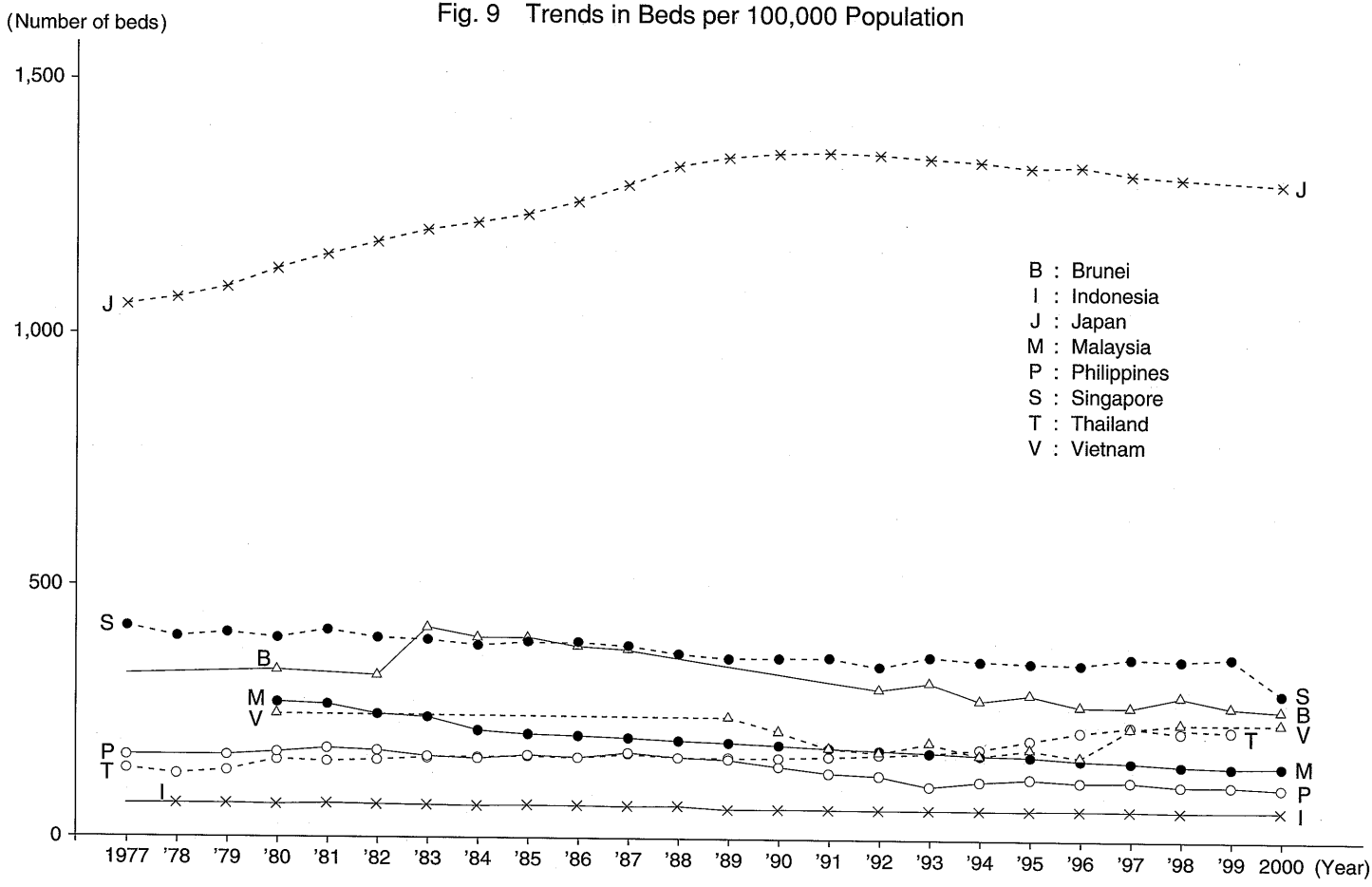
8 – 2 Number of Beds

		1970	1975	1980	1985	1990	1993	1994	1995	1996	1997	1998	1999	2000
BRUNEI	Total		506	630	876		772	789	856	a) 813	a) 835	a) 899	a) 880	a) 880
INDONESIA	Total	86,022	83,696	98,543	110,361	109,387	114,474	116,847	118,306	120,083	121,990	123,186	123,598	125,507
JAPAN b)	Total	1,062,553	1,164,098	1,319,406	1,495,328	1,676,803	1,680,952	1,677,041	1,669,951	1,664,629	1,660,784	1,656,415	1,648,217	1,647,253
MALAYSIA	Total	30,900	32,164	35,291	32,495	33,400	33,201	33,246	33,588	33,818	33,918	33,338	c) 34,437	34,579
PHILIPPINES d)	Total	40,289	55,323	81,976	90,279	86,948	77,734	80,580	84,482	81,789	84,648	81,200	83,521	81,016
	Public	19,725	27,075	39,625	47,861	48,602	41,498	44,344	46,911	43,582	44,818	42,877	43,507	42,384
	Private	20,564	28,248	42,351	42,418	38,346	36,236	36,236	37,571	38,207	39,830	38,323	40,014	38,632
SINGAPORE	Total	7,760	9,311	9,585	10,000	9,759	10,469	10,407	10,498	10,668	11,276	11,389	11,747	11,798
	Public	6,891	8,211	8,078	8,329	7,922	8,640	8,346	8,326	8,511	9,091	9,277	9,560	9,556
	Private	869	1,100	1,507	1,671	1,837	1,829	2,061	2,172	2,157	2,185	2,112	2,187	2,242
THAILAND e)	Total	25,619	52,652	71,718	84,045	90,740	101,166	108,747	118,417	129,387	137,715	132,405	135,303	
VIETNAM f)	Total		g) 98,362	131,265	143,771	140,076	134,635	119,519	130,760	121,808	166,628	175,570		181,359

Source : Ministry of Health in each country

Note : a) Based on 4 government hospitals and 1 private hospital
b) Hospitals (with 20 or more beds) only
c) Revised data
d) From 1993, licensed retained and devolved hospitals
e) From 1985 onwards, including private maternity centres
f) Including beds of policlinics and specialized clinics and maternity houses
g) For 1976

Fig. 9 Trends in Beds per 100,000 Population



8 – 3 Hospitals and Other Medical Establishments

	Year	1 General Hospitals				2 Local or Rural Hospitals				3 Mental Hospitals			
		Establish-ments	Beds	Admissions	Patient-days	Establish-ments	Beds	Admissions	Patient-days	Establish-ments	Beds	Admissions	Patient-days
BRUNEI	2000	10	a) 880	a) 36,643	a) 176,722	..				..			
INDONESIA (1)	2000	348	63,723	2,772,626	13,004,225	562	43,814	1,983,635	8,809,013	50	7,834	44,563	1,830,614
JAPAN	1999	8,222	1,387,315	12,588,657	419,765,184	..				1,060	260,594	197,424	89,592,116
MALAYSIA (2)	1999	b) 111	b) 27,145	b) 1,571,078	b) 6,028,195	..				4	5,320	9,407	1,444,182
PHILIPPINES (3) c)	2000	49	9,735	578,871	3,133,275					1	4,200	9,056	1,304,050
SINGAPORE	2000	13	6,495	289,447	1,488,252	..				2	3,163	6,989	933,963
THAILAND (4)	1999	1,282	121,299	7,773,757	30,764,741	d) 712	26,702	2,814,069	8,492,041	19	8,104	100,262	1,968,413
VIETNAM (5)	2000	698	83,336			e)				f) 20	2,072		

Source : Ministry of Health in each country
(1) ***Indonesia Health Profile 2000,*** Ministry of Health
(2) Information and Documentation System Unit
(3) National Center for Health Facilities and Development, Department of Health
(4) Health Information Center, Ministry of Public Health
(5) ***Health Statistics Yearbook,*** Health Statistics and Informatic Division, Ministry of Health

Note : a) Based on 4 government hospitals and 1 private hospital
b) Hospitals. The previous categorization into general hospital and local or rural hospitals does no longer apply.
c) DOH (Department of Health)-retained hospitals only.
d) Government hospital only
e) Included in General Hospitals
f) 2 central-level hospitals and 18 provincial level hospitals

4 Maternity Hospitals				5 Infectious Diseases Hospitals				6 Leprosy Hospitals			
Establish-ments	Beds	Admissions	Patient-days	Establish-ments	Beds	Admissions	Patient-days	Establish-ments	Beds	Admissions	Patient-days
..				..				..			
54	2,432	113,868	385,931	1	144	4,336	18,889	24	2,459	7,689	383,172
..				..				..			
..				..				2	856	6,025	86,248
1	700	58,754	182,052	3	575	1,644	159,901	8	4,630	4,494	130,122
a) 1	898	68,229	231,988	..				..			
8	1,008	63,540	289,267	2	890	15,959	100,071	2	1,320		
b) 41	b) 3,680			..				c) 18	1,481		

Note : a) Women's and Children's Hospital
b) Includes maternity homes
c) Leprosaria

8 – 3 Hospitals and Other Medical Establishments (Contd.)

	Year	7 Tuberculosis Hospitals				8 Other Specialized Hospitals				9 PHC[a] Facilities with Beds, Staffed with Physician(s)			
		Establish-ments	Beds	Admissions	Patient-days	Establish-ments	Beds	Admissions	Patient-days	Establish-ments	Beds	Admissions	Patient-days
BRUNEI	1999	..				..							
INDONESIA	2000	9	711	13,582	107,708	97	4,390	179,040	674,036				
JAPAN	1999	4	308	387	79,915	..				18,487	224,134		
MALAYSIA	1998	1	116	2,442	17,624								
PHILIPPINES	2000					10	2,902	123,238	787,246				
SINGAPORE	2000	..				[b] 12	1,242	25,381	354,329				
THAILAND	1999	1	600	7,353	77,159	20	2,082	46,944	814,729	[c] 3	[c] 25	[c] 1,188	[c] 2,159
VIETNAM	2000	75	24,665			[d] 222	2,167			[c] 905 [e] 10,257	[d] 9,646 [e] 45,303		

Note : a) Primary health care
b) Ophthalmological, dermatological, community and extended care hospitals
c) Policlinics: PHC staffed with physicians
d) Pediatric hospitals, ophthalmological hospitals, cancer hospitals, surgical hospitals, Cardiological Institute, dermatological hospitals, oto-rhino-laryngological hospitals, dental-naso-facial hospitals, Traditional Medical Institute, Acupuncture Institute, rehabilitation hospitals
e) Communal Health Stations (CHS), 51% of CHSs are staffed with physicians

10 PHC[a] Faclities without Beds, Permanently Staffed with Physician(s)	11 PHC[a] Facilities without Beds and without Permanently Staffed Physician	12 Total			
Establishments	Establishments	Establish-ments	Beds	Admissions	Patient-days
[b] 47	[c] 7	64	[d] 880	[d] 36,643	[d] 176,722
		1,145	125,507	5,119,339	25,213,588
73,013	..	100,786	1,872,351	[e] 12,786,468	[e] 509,437,215
773	1,990	2,881	33,437	1,587,772	7,574,535
		72	22,742	776,057	5,696,646
[f] 16	..	44	11,798	390,046	3,008,532
2	[g] 9,559	[h] 10,820	[h] 135,303	8,007,815	34,014,380
[e]	[j] 815	181,359		44,793,796	

Note : a) Primary health care
b) Health Centres, Health Clinics, MCH Clinics, Flying Medical Team
c) Travelling Health Clinic
d) Based on 4 government hospitals and 1 private hospital
e) Excluding PHC facilities
f) Public sector only, excludes general practitioner's offices
g) Health Centres
h) Excluding rural hospitals
i) Belong to Ministry of Health
j) Health stations at other ministries

8 – 4 Hospital Utilization by Category of Hospital

	Year	All Hospitals					General Hospitals					
		Type	Population per Bed	Beds per 100,000 Population	Admissions per 100,000 Population	Bed Occupancy Rate (%)	Type	Beds per 100,000 Population	Admissions per 100,000 Population	Admissions per Bed	Bed Occupancy Rate (%)	Average Length of Stay (Days)
BRUNEI [a]	2000	T	385	260	10,828	55	T	260	10,828	42	55	4.9
INDONESIA [1]	2000	G	1,670	59.9	2,443.1	55.0	G	30.4	1,323.2	43.5	56.7	3.0
JAPAN	1999	T	76	1,312.6	10,182.7	84.6	T	1,104.7	10,025.2	9.1	83.2 [b]	33.3
MALAYSIA [2]	1999	G	679	147	6,991	62.1	G	119.5 [c]	6,917.0 [c]	57.9 [c]	60.1 [c]	3.9 [c]
PHILIPPINES [3] [d]	2000	T	3,067	32.6	923.5	80.2	T	12.8	738.8	57.9	89.5	7.7
SINGAPORE [e]	2000	T	341	293.7	9,708.2	76.5	T	161.7	7,204.3	44.6	71.9	5.1
THAILAND [4]	1999	T	455	219.7	13,004	68.8	T	196.9	12,624.2	64.5	69.5	4.0
VIETNAM	1997	G	460	[b] 224.1		81.1	G					
	1998		438	[b] 232.5		91.5						
	2000		428	233.5		90.2		112.9				

Source : Ministry of Health in each country
(1) Directorate of Medical Care
(2) Information and Documentation System Unit
(3) Center for Hospital and Services, Department of Health
(4) Health Information Division

Note : Type of hospitals
T = Total
G = Government hospital establishments
a) 4 government hospitals and 1 private hospital
b) Revised figure
c) Hospitals. The previous categorization into general hospitals and district hospitals does no longer apply.
d) Department of Health-retained hospital only
e) Based on total population

Local or Rural Hospitals						Mental Hospitals					
Type	Beds per 100,000 Population	Admissions		Bed Occupancy Rate (%)	Average Length of Stay (Days)	Type	Beds per 100,000 Population	Admissions		Bed Occupancy Rate (%)	Average Length of Stay (Days)
		per 100,000 Population	per Bed					per 100,000 Population	per Bed		
		..						..			
G	20.9	946.6	45.0	55.8	4.0	G	3.7	21.3	5.6	64.0	52
		..				T	207.5	157.2	0.8	94.2	453.1
		..				G	23.4	41.4	1.8	75.0	150.7
						Special	5.5	11.9	2.2	85.1	145.4
		..				T	78.7	174.0	2.2	82.9	116.5
G	43.4	4,569.9	105	87	3.0	T	13.2	162.8	12.3	66.3	19.6
G		..					27				

8 – 4 Hospital Utilization by Category of Hospital (Contd.)

	Year	Tuberculosis Hospitals						Maternity Hospitals					
		Type	Beds per 100,000 Population	Admissions		Bed Occupancy Rate (%)	Average Length of Stay (Days)	Type	Beds per 100,000 Population	Admissions		Bed Occupancy Rate (%)	Average Length of Stay (Days)
				per 100,000 Population	per Bed					per 100,000 Population	per Bed		
BRUNEI	2000	..						..					
INDONESIA (1)	2000	G	1.0	6.5	19.1	41.5	8.0	G	1.2	54.3	46.8	43.5	3
JAPAN	1999	T	0.2	0.3	1.3	71.1	188.7	..					
MALAYSIA (2)	1999	G	0.5	10.8	21.1	41.6	7.2	..					
PHILIPPINES (3)	2000							Special	0.9	77.0	0.0	71.3	3.1
SINGAPORE a)	2000	..						T b)	22.4	1,698.2	76.0	79.0	3.4
THAILAND (4)	1999	T	1.0	11.9	12.2	35.2	10.5	T	1.6	103.1	63.0	78.6	4.6
VIETNAM	2000		3.6						1.3			85.5	4.5

Source : Ministry of Health in each country
(1) Directorate of Medical Care, Ministry of Health
(2) Information and Documentation System Unit
(3) Hospital Operation and Management Services
(4) Health Information Center

Note : a) Based on total population
b) Women's and Children's Hospital

9. Human Resources for Health

9 – A Definitions of Medical and Allied Health Personnel

	Definition
1. Physicians	All graduates of a medical school or faculty actually working in any medical field (practice, teaching, administration, research, laboratory, etc).
2. Medical Assistants	Personnel performing duties ranging from simple curative procedures for common diseases to wider medical care that may include a variety of diagnostic, curative and preventive practices. These personnel have no medical education of university level or equivalent.
3. Dentists / Dental Surgeons (a) High (university) level (b) Middle (non-university) level	(a) All graduates of a dental school (or faculty of odontology or stomatology) actually working in any dental field. (b) Personnel qualified from a dental school of non-university level and licensed to practice dentistry.
4. Dental Nurses	Personnel performing a limited range of diagnostic, preventive, and curative services in dentistry. These personnel usually do not have complete dental education of university level or equivalent.
5. Dental Assistants / Dental Auxiliaries	Dental non-operating auxiliaries who assist dentists and dental nurses in their clinical work but do not carry out any independent intra-oral procedures. These dental personnel usually have technical training either in formal courses or by apprenticeship.
6. Dental Technicians	Personnel who make dentures, bridges, etc. as specified by dentists for their patients. These personnel usually have technical trainingg in formal courses, e.g. at a specialized educational institution.
7. Pharmacists	All graduates of a faculty or school of pharmacy actually working in pharmacies, hospitals, laboratories, industry, etc.
8. Pharmaceutical Assistants / Dispensers	Personnel assisting in pharmacies, hospitals, or dispensaries to make and dispense medicaments, under the supervision of a pharmacist. These personnel do not have pharmaceutical education of university level or equivalent.
9. Professional Midwives	All graduates of a midwifery school actually working in any field of midwifery (practice in institutions and community health services, teaching, administration, private practice, etc.)
10. Assistant Midwives / Auxiliary Midwives	Personnel carrying out midwifery duties in normal obstetrics, in institutions and other health services, in principle under the supervision of a professional midwife. These personnel do not have the full education and training of a professional midwife.
11. Trained Traditional Birth Attendants	Personnel who practice traditional care of pregnant women and assist in the delivery, as accepted by the culture of a specific community, and who have later received some training in midwifery work.
12. Untrained Traditional Birth Attendants	Personnel without formal training in midwifery work who practice traditional care of pregnant women and assist in the delivery, as accepted by the culture of a specific community.
13. Voluntary Health Workers	Personnel performing voluntarily various types of health-related work, usually at the community level. They may have received some training in the work involved, either in formal courses or by apprentice-ship.

	Definition
14. Professional Nurses	All graduates of a nursing school working in any nursing field (general nursing, specialized clinical nursing services in mental health, pediatrics, cardiovascular diseases, etc., or public health, occupational health, teaching, administration, research, etc.). These personnel are qualified and authorized to provide the most responsible and competent professional nursing service.
15. Assistant Nurses / Auxiliary Nurses	Personnel performing general patient care of a less complex nature in hospitals and other health services, in principle under the supervision of a professional nurse. These personnel do not have the full education and training of a professional nurse.
16. Physiotherapists / Physical Therapists	Professional personnel treating patients by exercise, physical means, and massage, usually as prescribed by a physician.
17. Occupational Therapists	Professional personnel helping patients' recovery from illness or injury by supervising mental or physical tasks prescribed by a physician, such as daily activities of life, or vocational or recreational activities.
18. Dietitians / Nutritionists	Professional personnel who are experts in nutrients and nutrition and their application to the choice and use of food.
19. Medical Social Workers	Professional personnel providing help to persons with family or social problems arising from disease, injury or impairment.
20. Medical Laboratory Technicians	Professionals who have graduated from a school for laboratory technicians and work under the responsibility of a scientific or medical specialist. They also participate in the supervision, teaching and training of subordinate technical personnel.

	Definition
21. Assistant Medical Laboratory Technicians	Auxiliary technical laboratory personnel working under the supervision of a professional laboratory technologist or technician. These auxiliary personnel do not have the full training and theoretical knowledge of the professional.
22. Radiographers	Professionals who have graduated from a school for radiological technicians and work under the general responsibility of a specialist or physician in the field of radiology.
23. Assistant Radiographers	Auxiliary medical radiological personnel working under the direct supervision of a medical radiological technician or under a specialist or physician.
24. Sanitary Engineers	Professionally qualified engineers specialized in the prevention, control, and management of environmental factors that influence man's health adversely, e.g., in the design and operation of facilities for control and the planning and administration of environmental health programmes.
25. Sanitarians (a) High level	(a) Professional personnel other than physicians inspecting the environment, promoting measures to restore or improve sanitary conditions (food inspection, inspection of public premises, etc.) and supervising the implementation of these measures.
(b) Middle level	(b) Personnel who perform to a limited extent the functions of a professional sanitarian but do not have the full training and theoretical knowledge of the professional.

9 – A Definitions of Medical and Allied Health Personnel (Contd.)

	Definition
26. Malaria Field Officers	Personnel performing field work in malaria control under the supervision of the medical officer in charge, such as vector control, distribution of medicaments and field investigations. These personnel usually do not have education of university level, but are trained in formal courses in the work to be performed.
27. Entomologists	In health work, professional personnel with education of university level in entomology of disease vectors and in vector control.
28. Health Educators	Personnel providing community population groups with knowledge regarding health, such as disease treatment, disease prevention and health promotion. These personnel usually do not have education of university level, but are trained in formal courses in various subjects relating to health work.

9 – B Comparative Table on Medical and Allied Health Personnel

	Brunei (2000)	Indonesia (1999)	Japan (2000)	Malaysia (2000)	Philippines (2000)	Singapore (2000)	Thailand (1999)	Vietnam (2000)
1 Physicians	√	√	√	√	√	√	√	√
2 Medical Assistants		√		√			√	√
3 Dentists / Dental Surgeons	√	√	√	√	√	√	√	√
4 Dental Nurses	√	√		√		√		
5 Dental Assistants / Dental Auxiliaries	√	√	√	√		√	√	
6 Dental Technicians	√	√	√	√		√		
7 Pharmacists	√	√	√	√	√	√	√	√
8 Pharmaceutical Assistants / Dispensers	√	√		√			√	√
9 Professional Midwives	√	√	√	√	√	√	√	√
10 Assistant Midwives / Auxiliary Midwives	√							√
11 Trained Traditional Birth Attendants					√		√	
12 Untrained Traditional Birth Attendants					√			
13 Voluntary Health Workers					√		√	
14 Professional Nurses	√	√	√	√	√	√	√	√
15 Assistant Nurses / Auxiliary Nurses	√		√	√		√	√	√
16 Physiotherapists / Physical Therapists	√	√	√	√	√	√	√	
17 Occupational Therapists	√	√	√	√	√	√	√	
18 Dietitians / Nutritionists	√	√	√	√	√	√	√	
19 Medical Social Workers	√		√	√	√	√	√	
20 Medical Laboratory Technicians	√	√	√	√	√	√	√	√
21 Assistant Medical Laboratory Technicians	√	√		√	√		√	
22 Radiographers	√	√	√	√	√	√	√	
23 Assistant Radiographers	√	√						
24 Sanitary Engineers		√		√	√	√	√	
25 Sanitarian / Assistant Sanitarian	√	√				√	√	

9 – B Comparative Table on Medical and Allied Health Personnel (Contd.)

	Brunei (2000)	Indonesia (1999)	Japan (2000)	Malaysia (2000)	Philippines (2000)	Singapore (2000)	Thailand (1999)	Vietnam (2000)
26 Malaria Field Officers	√	√		√		√	√	√
27 Entomologists	√			√	√		√	
28 Health Educators	√	√		√	√		√	

9 – 1 Medical and Allied Health Personnel

	Year	1. Physicians	2. Medical Assistants	3. Dentists / Dental Surgeons	4. Dental Nurses	5. Dental Assistants / Dental Auxiliaries	6. Dental Technicians	7. Pharmacists
BRUNEI	2000	336	••	48	82	35	20	25
INDONESIA	1999	25,552	30,752	6,051	a) 7,184	b) 11,508	a) 95	c) 6,991
JAPAN	2000	255,792	••	90,857	••	67,376	d) 90,825	217,477
MALAYSIA (1)	2000	15,619	6,530	2,144	e) 1,552	e) 1,336	e) 582	2,333
PHILIPPINES (2)	1998 1999 2000	90,566 92,842 95,016	••	39,669 40,432 41,484	••	••	••	40,797 42,694 44,316
SINGAPORE	2000	5,577	••	1,118	f) 236	f) 22	f) 1	1,098
THAILAND (3)	1999	18,140		4,026				6,062
VIETNAM	2000	g) 41,663	h) 50,378					5,977

Source : Ministry of Health in each country
(1) Information and Documentation System Unit
(2) Professional Regulation Comission (Cumulative)
(3) ***Health Resources Report,*** Health Information Division
(4) ***Health Statistics Yearbook***, Health Statistics and Informatic Division, Ministry of Health

Note : a) For 1995
b) For 1994
c) For 1998
d) Licensees at the end of 2000
e) Government only
f) School Dental Service only
g) Including dentists
h) Assistant doctors

9 – 1 Medical and Allied Health Personnel (Contd.)

	Year	8. Pharmaceutical Assistants / Dispensers	9. Professional Midwives	10. Assistant Midwives / Auxiliary Midwives	11. Trained Traditional Birth Attendants	12. Untrained Traditional Birth Attendants	13. Voluntary Health Workers	14. Professional Nurses
BRUNEI	2000	65	a) 20	b) 181	••	••	••	c) 892
INDONESIA	1999	d) 15,407	54,258	••	••	••	••	80,592
JAPAN	2000	••	24,511	••	••	••	••	653,617
MALAYSIA	2000	2,225	7,711	••		••	••	d) 23,255
PHILIPPINES	1998 1999 2000	••	125,516 127,794 129,532	••	(1) 39,350 (1) 37,516 NA	(2) 5,834	(1) 160,557 (1) 186,068	323,736 332,155 337,939
SINGAPORE	2000	NA	437	••	••	••		12,353
THAILAND	1999						708,509	68,008
VIETNAM	2000	e) 18,108	f) 11,188	g) 3,474				h) 28,153

Source : (1) Annual Field Health Service Information System, National Epidemiology Center, Department of Health
(2) Community Health Service

Note : a) Senior midwives and midwives special grades
b) Midwives
c) Including 158 nurses with midwifery qualification
d) Government only
e) Assistant pharmacists, 2nd degree pharmaceutical technicians and elementary pharmacists
f) 2nd degree midwives
g) Elementary midwives
h) High degree nurses and 2nd degree nurses

15. Assistant Nurses / Auxiliary Nurses	16. Physiotherapists / Physical Therapists	17. Occupational Therapists	18. Dietitians / Nutritionists	19. Medical Social Workers	20. Medical Loboratory Technicians	21. Assistant Medical Laboratory Technicians	22. Radiographers	23. Assistant Radiographers	24. Sanitary Engineers
a) 363	11	17	12	5	65	39	16	45	..
..	b) 1,179	c) 667	b) 9,504 / 4,948	..	c) 284	b) 7,832	b) 1,739	1,367	d) 4,568
d) 388,851	e) f) 26,944	e) f) 14,880	f) g) 740,735	a) h) 8,499	e) 142,018	..	e) 50,286	..	..
i) 8,213	i) 271	i) 252	i) 83	i) 61	i) 2,974	i) 845	i) 525	..	i) 93
..	6,988 9,129 11,442	636 941 1,191	10,165 10,499 10,841	1,619 2,320 2,936	35,751 35,836 35,931		3,489 3,937 4,564	..	2,056 2,098 2,153
3,821	j) 170	j) 90	j) 40	j) 84	j) 618		j) 232	..	j) 270
31,543									
j) 17,315					6,037	2,862			

Note:
a) Including 45 nurses with midwifery qualification
b) For 1995
c) For 1991
d) For 1994
e) Licensees at the end of 2000
f) Cumulative
g) Licensees as of March 31, 1999
h) Hospitals only
i) Government only
j) Public Sector only
k) Elementary nurses

9 – 1 Medical and Allied Health Personnel (Contd.)

	Year	25. Sanitarians / Assistant Sanitarians	26. Malaria Field Officers	27. Entomologists	28. Health Educators
BRUNEI	2000	48	13	1	3
INDONESIA (1)	1999	a) 4,131	b) 3,685	••	c) 78
JAPAN	2000	••	••	••	••
MALAYSIA	2000	••		d) 30	d) 96
PHILIPPINES	1998 1999 2000	e) ••	e) ••	(1) f) 1	(1) f) 15
SINGAPORE	2000	c) g) 634			
THAILAND	1999				
VIETNAM	1998				

Source : (1) Personnel Services Division, Department of Health

Note : a) For 1995
b) For 1997
c) For 1991
d) Government only
e) Sanitarians / Assistant Sanitarians and Malaria Field Officers items were dissolved due to Executive Order 102
f) New personnel as per Executive Order 102 Plantilla
g) Known as Environmental Health Officers

9 – 2 Population / Health Personnel Ratios

	Year	Physicians per 100,000 Population	Population per Physician	Dentists per 100,000 Population	Population per Dentist	Pharmacists per 100,000 Population	Population per Pharmacist	Medical Assistants per 100,000 Population	Population per Medical Assistant	Nursing Personnel per 100,000 Population	Population per Nursing Personnel	Nursing & Midwifery Personnel per 100,000 Population	Population per Nursing & Midwifery Personnel
BRUNEI	2000	99.3	1,007	14.2	7,050	7.4	13,536	••	••	395.1	253	514.5	194.4
INDONESIA	1999	12.5	8,118	3.0	33,843	3.4	29,364	25.6	15.0	39.4	2,541	64.9	1,540
JAPAN	2000	201.5	496	71.6	1,397	171.3	583.6	••	••	821.3	122	840.6	119
MALAYSIA	2000	67.1	1,489	9.2	10,851	10.0	9,971	28.1	3,563	99.9	1,000	133.1	751
PHILIPPINES (1)	1998	123.8	807	54.2	1,844	55.8	1,793			442.7	226		
	1999	124.1	806	54.5	1,835	56.8	1,762	••	••	441.0	227	612.5	163
	2000	124.5	803	54.4	1,840	58.1	1,722			442.8	226		
SINGAPORE a)	2000	138.8	720	27.8	3,594	27.3	3,659	••	••	402.6	248	413.4	242
THAILAND	1999	29.4	3,395	6.5	15,295	9.8	10,158			161.7	618.4	161.6 b)	618.5 b)
VIETNAM	1998	49.6 c)	2,016 c)			7.4 c)	13,460 c)	64.6 c) d)	1,555 d)	57.9 c)	1,717	73.6	1,359
	2000	53.6	1,865			7.7	12,997	64.8	1,542	58.5	1,708	77.4	1,292

Source : Ministry of Health in each country
(1) Professional Regulation Commission

Note : a) Based on total population
b) Nurses and professional midwives
c) Revised figure
d) Assistant doctor

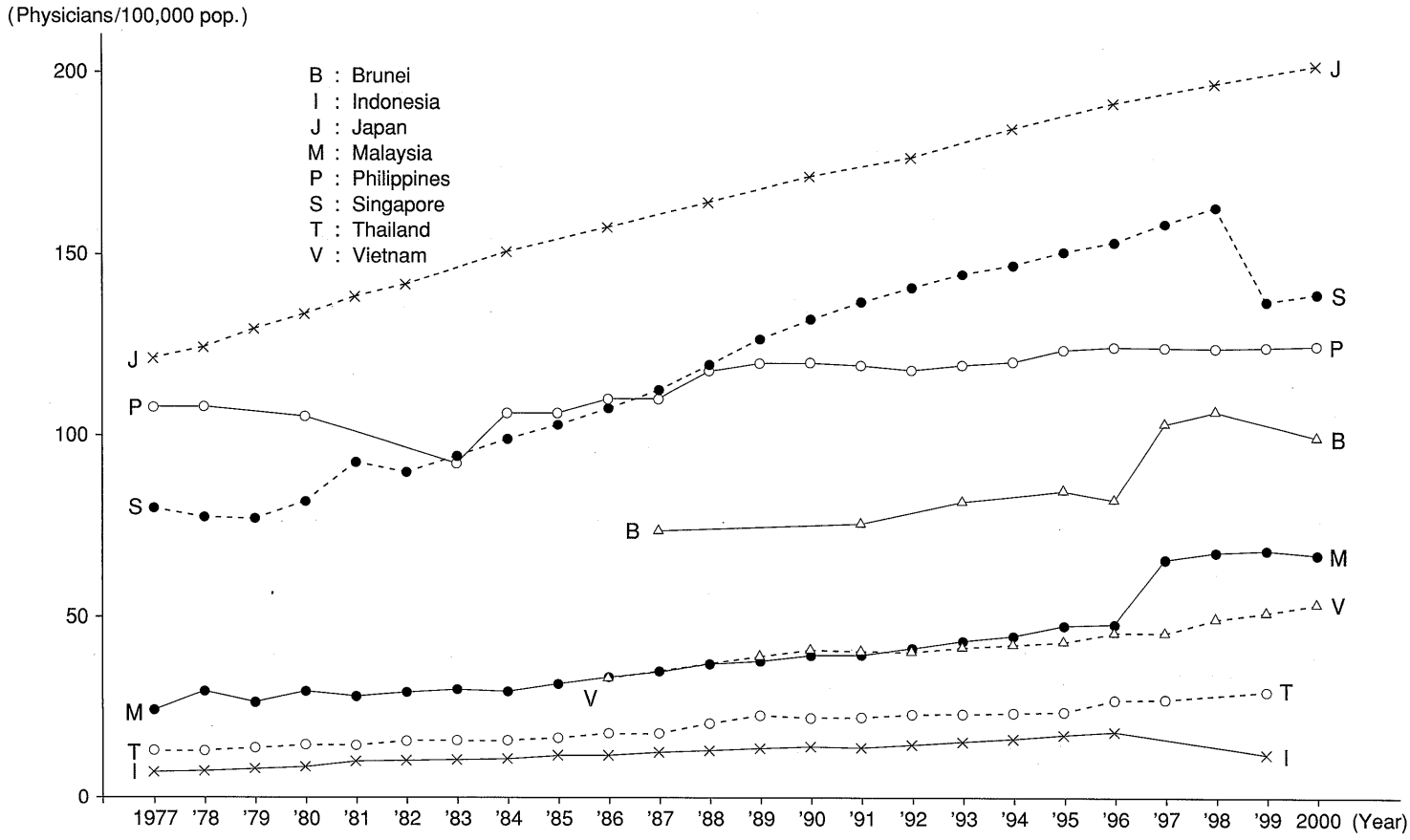
9 – 3 Number of Physicians

Year	1970	1975	1980	1985	1990	1992	1993	1994	1995	1996	1997	1998	1999	2000
BRUNEI							226		251	251	324	344	309	336
INDONESIA (1)	3,578	8,279	12,931	(2) 19,875	25,752	27,652	29,450	31,400	(3) 24,440	(4) 36,688	28,038		25,552	
JAPAN a)	118,990	132,479	156,235	NA	211,797	219,704	NA	230,519	NA	240,908	NA	248,611	NA	255,792
MALAYSIA (5)	2,543	2,757	3,858	4,939	7,012	7,719	8,279	8,831	9,608	10,196	14,248	15,016	15,503	15,619
PHILIPPINES (6)	31,515	37,276	50,848	58,015	72,593	77,127	79,936	82,494	84,671	86,878	88,754	90,566	92,740	95,016
SINGAPORE	1,363	1,622	1,976	2,631	3,573	3,962	4,146	4,301	4,495	4,661	4,912	5,148	5,325	5,577
THAILAND (7)	5,407	5,005	6,867	8,650	12,520	13,398	13,634	14,098	14,181	16,209	16,569	17,955	18,140	
VIETNAM (8) b)		c) 9,108		d) 19,804	26,821	27,953	28,884	30,017	31,122	33,470	34,001	37,458	39,294	41,663

Source : Ministry of Health in each country
(1) ***The Health Situation of Indonesia,*** Ministry of Health
(2) Personnel Bureau 1987
(3) Indonesia Health Profile 1996
(4) Indonesian Five Year's Planning
(5) Information and Documentation System Unit, Ministry of Health
(6) Professional Regulation Commission
(7) Health Information Center, Ministry of Public Health
(8) ***Health Statistics Yearbook,*** Health Statistics and Informatic Division, Ministry of Health

Note: a) Since 1982, data collection every other year
b) Including dentists
c) 1976
d) 1986

Fig. 10 Trends in Physicians per 100,000 Population



9 – 4 Number of Dentists

Year	1970	1975	1980	1985	1990	1992	1993	1994	1995	1996	1997	1998	1999	2000
BRUNEI							31		38	24	46	50	50	48
INDONESIA (1)	452		1,681	4,237 (2)	5,545 (3)	6,756 (3)	7,231	7,836	5,462	5,962	6,827	5,794	6,051	
JAPAN a)	37,859	43,586	53,602	NA	74,028	77,416	NA	81,055	NA	85,518	NA	88,061	NA	90,857
MALAYSIA (4)	301	504	691	1,041	1,471	1,562	1,606	1,712	1,750	1,800	1,865	2,104	1,909	2,144
PHILIPPINES (5)	12,174	13,096	15,158	21,148	28,204	32,093	33,302	34,379	35,483	36,707	38,278	39,669	40,721	41,484
SINGAPORE	398	419	485	604	776	806	839	859	875	913	952	981	1,028	1,118
THAILAND	683	652	1,169	1,451	2,285	2,669	2,786	2,984	2,290	3,415	3,414	3,917	4,026	
VIETNAM b)														

Source : Ministry of Health in each country
(1) ***The Health Situation of Indonesia,*** Ministry of Health
(2) Consurtium Health Science, Ministry of Education and Culture Medical Science
(3) Personnel Bureau
(4) Information and Documentation System Unit
(5) Professional Regulation Commission

Note : a) Since 1982, data collection every other year
b) Included in number of physicians. See Table 9 – 3.

9 – 5 Number of Pharmacists

Year	1970	1975	1980	1985	1990	1992	1993	1994	1995	1996	1997	1998	1999	2000
BRUNEI							13		13	20	24	23	25	25
INDONESIA (1)	1,486	1,847	3,013	(2) 4,268	5,060	5,592	5,762	6,559	6,971	6,993	6,572	7,768	a) 6,991	
JAPAN b)	79,393	94,362	116,056	NA	150,627	162,021	NA	176,871	NA	194,300	NA	205,953	NA	217,477
MALAYSIA (3)		258	488	843	1,239	1,351	1,324	1,510	1,537	1,715	1,746	2,129	2,318	2,333
PHILIPPINES (4)	19,076	20,838	23,225	26,440	29,612	32,126	33,233	34,854	36,352	37,650	39,095	40,797	42,419	44,316
SINGAPORE	245	288	368	436	587	677	720	773	815	858	944	998	1,043	1,098
THAILAND (5)	1,407	1,913	2,650	3,376	4,163	4,609	4,721	5,575	5,867	5,640	5,941	5,911	6,062	
VIETNAM		c) 3,089		d) 5,700				5,757	4,941	5,286	5,406	5,611	5,849	5,977

Source : Ministry of Health in each country
(1) ***The Health Situation of Indonesia,*** Ministry of Health
(2) Consurtium Health Science, Ministry of Education and Culture Medical Scinece
(3) Information and Documentation System Unit
(4) Professional Regulation Commission
(5) Health Information Center, Ministry of Public Health

Note: a) Revised figure
b) Since 1982, data collection every other year
c) 1976
d) 1986

9 – 6 Number of Midwives

Year	1970	1975	1980	1985	1990	1992	1993	1994	1995	1996	1997	1998	1999	2000
BRUNEI							464		452	341	234	231	219	404
INDONESIA (1)	3,752	10,720	16,472	16,500	(2) 22,405	36,187	42,518	51,067	49,643	58,656	49,643	49,758	54,258	
JAPAN a)	28,087	26,742	25,867	NA	22,918	22,690	NA	23,048	NA	23,615	NA	24,202	NA	24,511
MALAYSIA (3) b)		c) 1,995	c) 4,355	5,047	5,492	5,476	5,508	5,500	5,495	5,746	5,827	6,620	6,911	7,711
PHILIPPINES (4)	16,082	18,528	42,114	55,841	71,092	85,172	94,849	102,875	111,700	117,995	122,013	125,516	127,254	129,532
SINGAPORE	1,058	930	779	623	543	530	522	507	499	487	473	456	449	437
THAILAND (5)	4,203	6,335	8,669	7,716	10,796	10,492	10,525	10,342	9,713	d) 2,731	d) 2,677			
VIETNAM		e) 647		f) 4,480	5,025	5,835	5,986	6,625	7,145	8,101	8,563	9,553	10,418	11,188

Source : Ministry of Health in each country
(1) ***The Health Situation of Indonesia,*** Ministry of Health
(2) Centre for Health Manpower Education, Ministry of Health
(3) Nursing Board, Ministry of Health
(4) Professional Regulation Commission
(5) Health Information Division, Ministry of Public Health

Note : a) Since 1982, data collection every other year
b) Government sector only
c) Peninsular Malaysia only
d) Professional midwives only
e) 1976
f) 1986

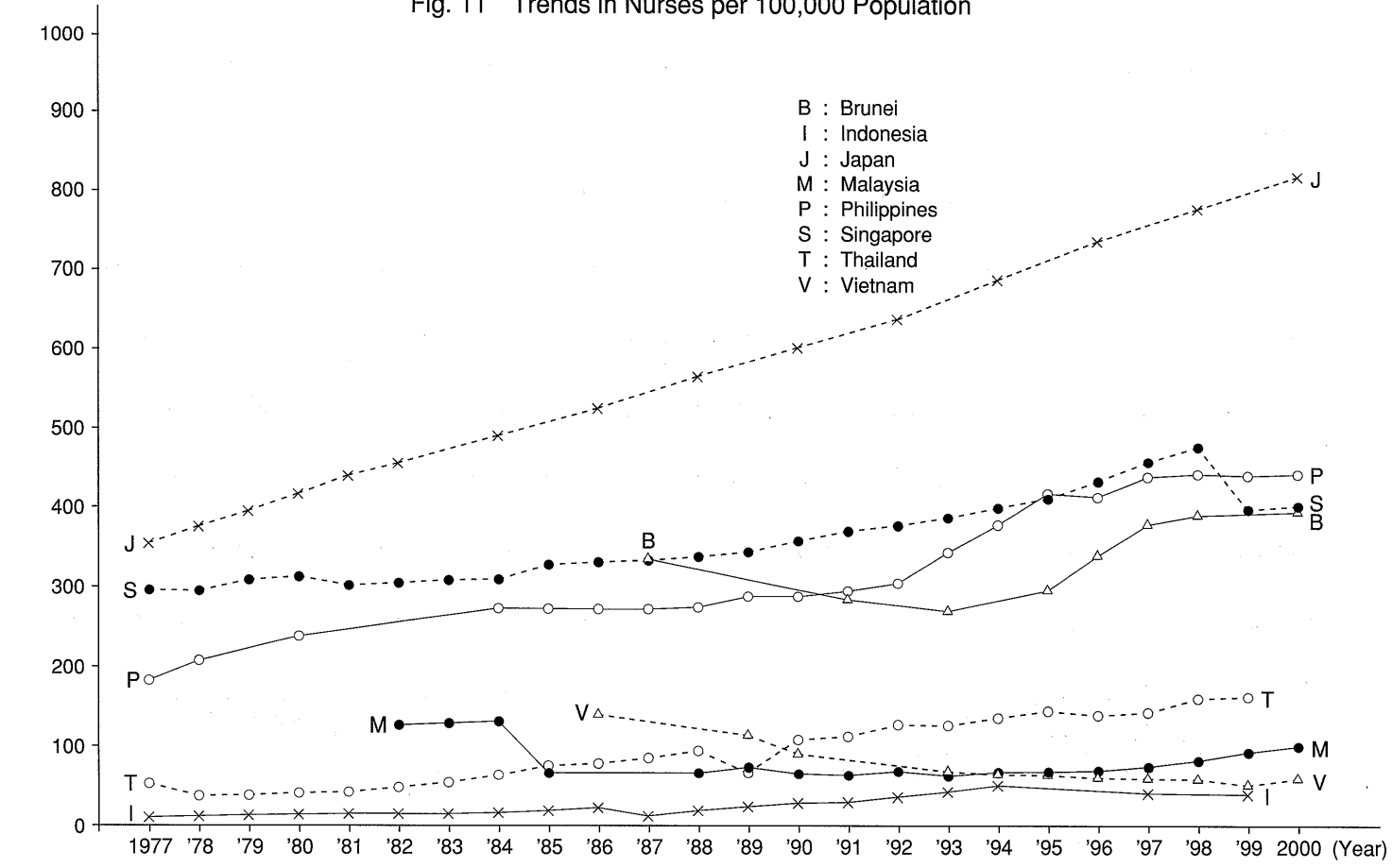
9 – 7 Number of Nurses

Year	1970	1975	1980	1985	1990	1992	1993	1994	1995	1996	1997	1998	1999	2000
BRUNEI							743		876	1,035	1,190	1,262	1,383	a) 1,337
INDONESIA (1)		9,856	20,201	14,553	50,350	65,805	78,290	96,427	72,592	80,158	80,587	81,111	80,592	
JAPAN b) c)	273,572	361,604	487,169	NA	745,301	795,810	NA	862,013	NA	928,896	NA	985,821	NA	1,042,468
MALAYSIA (2) d)	5,617	4,207	e) 7,649	10,311	11,569	12,789	11,961	13,224	13,647	14,614	16,068	18,134	20,914	23,255
PHILIPPINES (3)	38,918	64,165	114,657	148,514	174,112	199,263	230,187	259,629	286,901	289,473	314,295	323,736	329,520	337,939
SINGAPORE b)	4,304	5,767	7,545	8,393	9,695	10,633	11,127	11,723	12,298	13,193	14,232	15,112	15,498	16,174
THAILAND (4)	15,387	18,993	18,483	38,683	60,672	73,319	73,684	80,938	85,542	82,815	86,231	b) 97,572	b) 99,551	
VIETNAM (5)		f) 63,458		g) 83,222	58,674		47,125	45,279	45,561	43,422	43,440	43,722	44,948	45,468

Source : Ministry of Health in each country
(1) Personal Bureau, Ministry of Health
(2) Nursing Board, Ministry of Health
(3) Professional Regulation Commissioner
(4) Health Information Division, Ministry of Public Health
(5) ***Health Statistics Yearbook,*** Health Statistics and Informatic Division, Ministry of Health

Note: a) Including 82 dental nurses
b) Professional nurses and assistant nurses
c) Since 1982, date collection every other year
d) Government sector only
e) Peninsular Malaysia only
f) 1976
g) 1986

Fig. 11 Trends in Nurses per 100,000 Population



9 – 8 Number of Physicians, Dentists and Pharmacists, by Sex

	Year	Physicians				Dentists				Pharmacists			
		Male		Female		Male		Female		Male		Female	
		number	%	number	%	number	%	number	%	number	%	number	%
BRUNEI													
INDONESIA													
JAPAN	2000	218,940	85.6	36,852	14.4	75,671	83.3	15,186	16.7	86,357	39.7	131,120	60.3
MALAYSIA													
PHILIPPINES													
SINGAPORE	2000	3,853	69.1	1,724	30.9	679	60.7	439	39.3	338	30.8	760	69.2
THAILAND													
VIETNAM	2000	22,915	55.0	18,748	45.0					2,869	47.8	3,128	52.2

Source : Ministry of Health in each country

9 – 9 Situation of Medical Schools

	Academic Year	Number of Medical Schools	Duration of Studies	Total Enrolment	Admissions	Graduates
BRUNEI	..					
INDONESIA (1)	1997 1998	32	6 years			2,545 2,196
JAPAN (2) a)	2000	80	6 Years	47,658	7,436	7,555
MALAYSIA (3)	2000 / 2001	6	5 – 6 Years	3,911	1,028	
PHILIPPINES (4) b)	1997	30	Pre-Med-4 Years Proper-4 Years Intern-1 Years	12,000	3,800	2,500
SINGAPORE (5)	2000 / 2001	1	5 Years	c) 874 d) 73	c) 198 d) 17	c) 133 d) 6
THAILAND (6)	1999	11	7 Years		805	(7) 1,148
VIETNAM (8)	2000	e) 9	6 Years	5,500	2,500	1,200

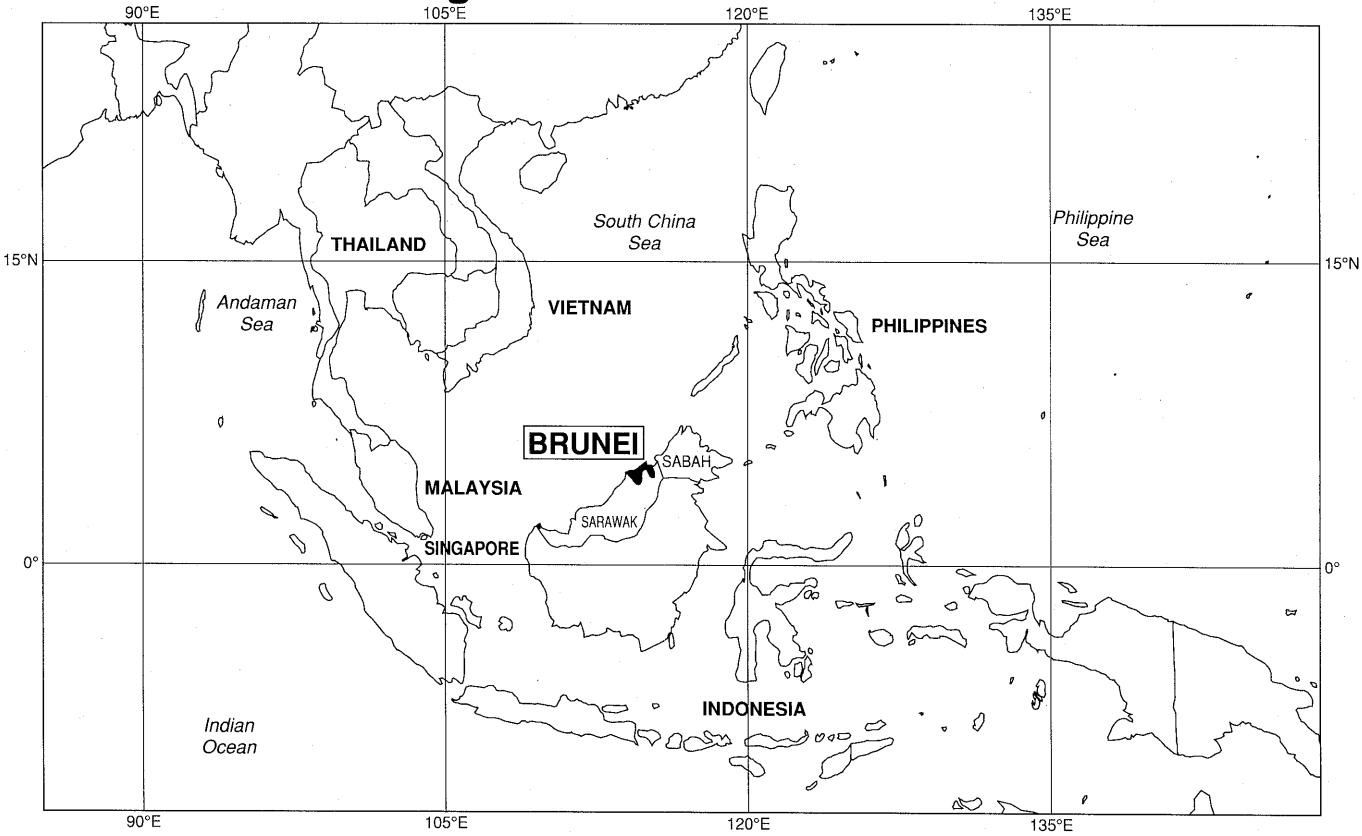
Source : (1) Consortium Medical Science
(2) ***School Basic Survey,*** Ministry of Education, Science, Sports and Culture, and National Defense Medical College
(3) Ministry of Education
(4) Association of Philippine Medical Colleges, Manila
(5) National University of Singapore
(6) Ministry of University Affairs
(7) Thai Medical Council
(8) Ministry of Health and Ministry of Education

Note : a) Data on 1 May, 1999
b) Estimated
c) Singaporeans
d) Non-Singaporeans
e) 5 medical colleges belong to Ministry of Health and 4 medical departments of universities belong to Ministry of Education

Part II

An Outline of Health Statistics in SEAMIC Countries

Negara Brunei Darussalam



Negara Brunei Darussalam

1. Health Policy Developments

The 8th National Development Plan for the period 2001-2005 comprises 2 long-term objectives which are directly related to the health sector:

- To improve the quality of life of the citizens and the people of Brunei Darussalam
- To create a healthy and clean environment.

Overall progress has been made in raising the living standard of people especially in health. The country has achieved almost all the Global Health Indicators set by WHO. New challenges, however, will bring necessary reforms in the healthcare system, due to (a) the escalating costs of healthcare, (b) the changing disease pattern from infectious diseases to lifestyle-related diseases, (c) increased public expectation for better-quality healthcare, and (d) the continued over-dependence of the people on Government welfare including health. In response to those challenges, the National Health Care Plan for the period 2000-2010 was launched in June 2000. The Plan outlines the long-term strategies for a more focused direction in health care and competent management of sustainable health resources.

Brunei Darussalam's healthcare is a mixed public-private system, with the public sector providing a wide spectrum of comprehensive health services financed primarily by general revenue sources, and the private sector providing mainly curative services financed through out-of-pocket payment.

The most crucial to the improvement of health care is to give higher priority to primary health care services, so that comprehensive health care should be provided to the disease prevention, health promotion and curative services at the first contact with the society. As the first step to the enhancement of primary health care services, a programme was implemented recently on decentralizing outpatient services from a large hospital to several health centres. A National Committee on Health Promotion was set up in 1999, to promote healthy lifestyles among the people.

Early in 2000, the Ministry of Health started a postgraduate course in primary care Medical Educa-

tion Programme for medical students. The recent financial crisis, which has also affected Brunei's economy, has forced to delay the construction of new health centres under the 7th National Development Plan. It has also limited the process of training relevant personnel in the primary health care setting. Two actions are required to strengthen primary health care: first to build modern health centres and expedite further privatization of the service, and second to allocate more funds for the training of doctors and nurses on primary health care.

2. Population Statistics

(1) Background Information

The main sources of information on population are censuses. The first census took place in 1911 and the last decennial census was conducted in 1991. The population projections are made based on an analysis of trends in the components of population change, i.e., fertility, mortality and migration for the period 1981 to 1991.

(2) Purpose

The main purpose is to satisfy the internal need for statistical information on population, housing and agricultural activities, thereby providing the background for general planning purposes and for the Brunei Darussalam National Development Committee which requires timely and reliable data as essential information.

(3) Coverage

Nationwide

(4) Contents

In the 1991 (latest) census, the information collected could be classified under the following categories:

(a) Geographical, census house and census household characteristics;
(b) Demographic and personal characteristics;
(c) Educational characteristics;
(d) Fertility characteristics;
(e) Economic characteristics.

(5) Data Collection Procedures

In the 1991 population census, trained enumerators visited every house or building suspected of being

used for habitation to collect information pertaining to name, identity card number, relationship to head of household, sex, age, place of birth, citizenship, marital status, religion, level of education, age at first marriage, number of children born alive, employment and income of each person staying in the house or building during the census night, i.e., the night of 26 August 1991.

(6) Tabulation and Publication

The Department of Economic Planning and Development is responsible for the tabulation and release of census results. The data are also published in the *Brunei Darussalam Statistical Yearbook.*

3. Vital Statistics

(1) Background Information

The main source of information on vital statistics is the compulsory vital registration of births and deaths. The occurrence of birth and death events is registered by law. The registration system has been operative since 1 January 1923 under the "Births and Deaths Registration Act". Although stillbirths have been recorded, they are not registered by law.

(2) Coverage

Nationwide

(3) Contents

Statistics and health indicators derived from the vital registration system include:

Births

(a) Number and rate by sex, race, urban/rural, month;
(b) Number by district/registration area;
(c) Crude birth rate.

Deaths

(a) All deaths: Number and rate by age, sex, race, nationality, month and causes;
(b) Number by district/registration area;
(c) Infant deaths: Number and rate by age, sex, district/registration area and cause;
(d) Neonatal deaths: Number and rate by sex, district/registration area and

cause;
(e) Early neonatal deaths: Number and rate by sex, district and cause;
(f) Stillbirths: Number and rate by sex and district/registration area;
(g) Perinatal deaths: Number and rate by sex and district/registration area;
(h) Maternal deaths: Number and rate by district/registration area;
(i) Crude death rate;
(j) Causes of death by age and sex (coding based on ICD-10).

(4) Data Collection Procedures

The vital registration system is operating in 25 registration areas under the supervision of six Deputy Registrars. The responsible agency is the Registration of Birth and Death and Adoptions, under the Department of Immigration and Registration of Nationals, Ministry of Home Affairs. The vital events information is now processed by the Registration of Birth and Death and Adoptions.

(5) Tabulation and Publication

The vital events information is presented in the *Public Health Services Annual Report*, and *Annual Vital Statistics*, publications issued by Statistics Division, Department of Economic Planning and Development, Prime Minister Office, Brunei Darussalam.

4. Morbidity Statistics

(1) Background Information

Hospital and health centre outpatient as well as inpatient information are being collected. Notifiable and infectious disease statistics are also collected from hospitals, health centres, laboratories and general practitioners. The Disease Control Unit, which is under the Public Health Directorate is responsible for the epidemiological surveillance capactiy of the country.

(2) Purpose

To study the general pattern and trend of morbidity situation in Brunei. To take prompt action on the occurrence of notifiable diseases.

(3) Coverage

All inpatients and outpatients.

(4) Contents

Diseases by age, sex, average length of stay, district and Bruneian/non-Bruneian.

(5) Data Collection Procedures

The notifiable disease statistics are collected based on date on onset through telephone, fax and specially designed yellow forms. The inpatient morbidity data are collected, based on individual case summaries of discharged patients, while outpatient morbidity data are collected, based on outpatient folder request forms. The disease coding is done by physicians and trained medical coders. A one-day morbidity survey of private clinic outpatients in Brunei Muara District was carried out on 1st July 1999.

(6) Tabulation and Publication

The Medical Records Officers at the Government and private hospitals are responsible for compilation of the source information. The Medical and Health Statistics Unit Research and Development Section in the Ministry of Health is responsible for collection, compilation, processing, analysis and interpretation of the information. The epidemiological surveillance data are analyzed and reported on a monthly and annual basis by the Disease Control Unit.

5. Public Health Statistics

Statistics are collected on maternal and child health services, out-patient services, primary health care training, school health services, Expanded Programme of Immunization, Environmental health (food safety, pollution control and vector control, port health and building and development), disease control, nutrition, psychology, and health education programmes. Monitoring and evaluation indicators have accordingly been developed and are used for the assessment of these programmes.

6. Hospital Performance Statistics

The Medical and Health Statistics Unit, Research and Development Section, Ministry of Health is collecting hospital administrative statistics to obtain information on the workload, bed-usage and activities in order to plan, monitor and evaluate the hospital services. In so doing, the nursing census is properly maintained in all hospitals. These statistics are collected by using a specially designed hospital activities format. Its contents relate to inpatient/outpatient/surgical/dental/miscellaneous activities, laboratory and radiological investigations, X-ray and blood transfusions, obstetric services, results of care, and information on beds.

7. Monitoring System

At the early part of 1991 Ministry of Health introduced a planning instrument called PIP (Performance Improvement Programming). The PIP concept is a planning process applied in Health Programming for Improved Performance. This approach is similar to the Country Health Programming Instrument used in some WHO member countries. Based on this PIP, the monitoring system for Medical Care and Public Health Programmes was developed and put into operation by the Ministry of Health in April 1991. Based on this, the performance of the programme activities is monitored.

8. Health Manpower Statistics

(1) Background Information

Special health manpower registers for doctors, dentists, pharmacists, nurses and midwives are systematically kept. Another source of health manpower data is from administrative records. This source covers all categories of personnel working under the Ministry of Health.

(2) Purpose

To provide up-to-date information for health manpower planning.

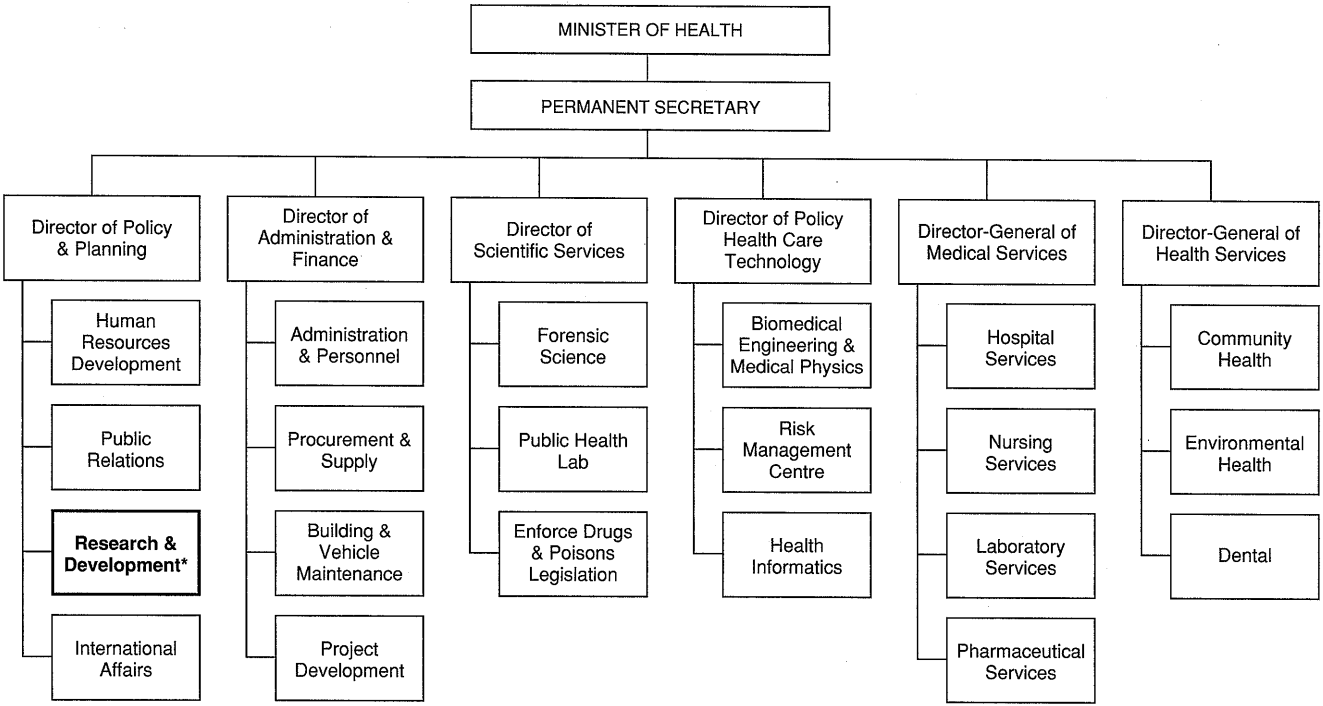
(3) Coverage

All doctors, dentists, pharmacists, nurses, midwives, etc.

(4) The Plan

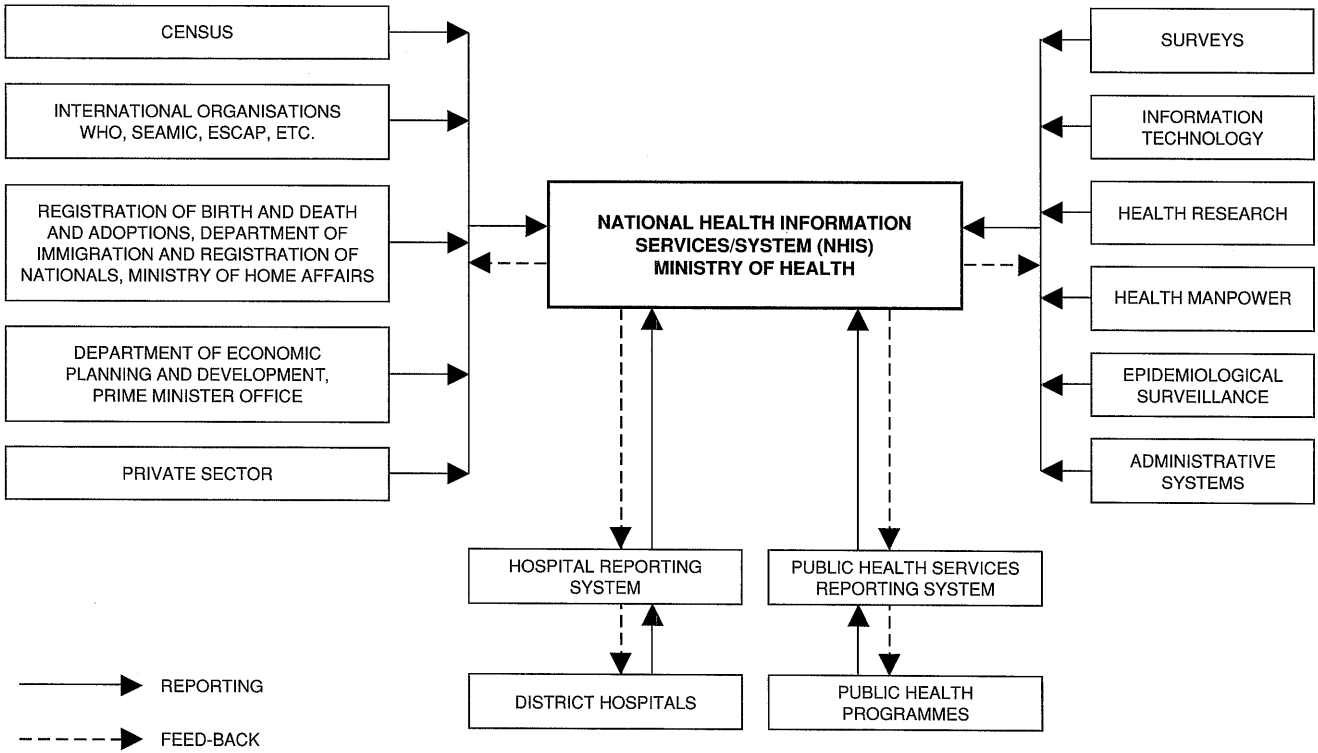
The Human Resource Development and Administration and Personnel Division of Ministry of Health are planning to develop a comprehensive health manpower information system.

Organization Chart of the Ministry of Health, Brunei Darussalam

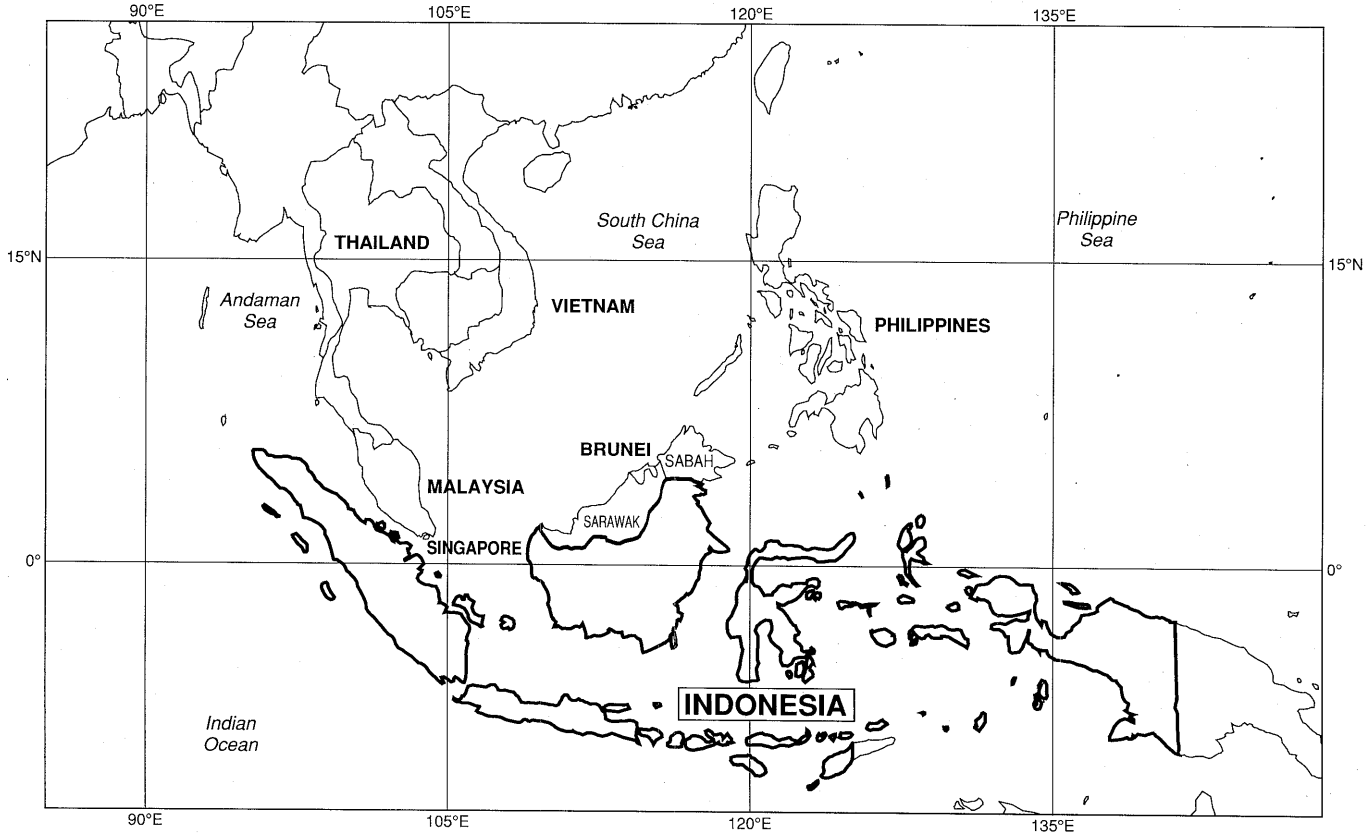


* Health Statistics Unit, Research and Development Division

Flow of Health and Health-Related Information



Indonesia


90°E
105°E
120°E
135°E
15°N
0°
THAILAND
South China Sea
Philippine Sea
Andaman Sea
VIETNAM
PHILIPPINES
BRUNEI
SABAH
MALAYSIA
SARAWAK
SINGAPORE
INDONESIA
Indian Ocean

Indonesia

1. Health Policy Developments

During the past quarter century, significant improvements were made in health in Indonesia. Compared to the neighbouring countries, however, the health status of the Indonesian people still lags behind the norm, e.g. as measured by the infant mortality and maternal mortality rates. A large proportion of the population in both rural and urban areas is not able to have access to minimum essential health care.

In order to improve the situation, the Ministry of Health has formulated the new Vision and Mission, with the motto "Healthy Indonesia 2010". Two new fundamental Acts were enacted, namely, Act No.22/1999 on Local Governance and Act No.25/1999 on Financial Balance Between the Central Government and Local Governments, for the implementation of the decentralization policy which give provinces and districts a large autonomy to manage their own home affairs, by 2001.

There are currently 32 autonomous provinces and 342 autonomous districts/cities in the country. All the activities of public services, including health services, should be carried out mainly at the district/city level. Provinces have the authority to coordinate and supervise the activities of districts/cities, while the Central Government should set up policies, standards and regulations on what should be done at the district/city and provincial levels.

Financial resources are now transferred directly to the district/city level as the local budget. Every public service unit, including the health service unit, should propose its annual budget to the local government and local house of representatives.

To achieve the goal and objectives of the national health development, 6 health development programmes have been elaborated: (1) Healthy Environment, Healthy Behaviour and Community Empowerment Programme; (2) Health Services Improvement Programme; (3) Community Nutrition Improvement Programme; (4) Health Resources Development Programme; (5) Drug and Food Control Programme; and (6) Health Development Policy and Management Programme. These programmes are being imple-

mented, in consideration of the background, social problems and culture of Indonesia.

Since 2001 was the first year of the implementation of the decentralization policy, many arrangements have not been fully settled, causing some problems such as much lower budget allocation for the health sector than the year before in almost all district/cities. This has affected adversely many health programmes ranging from community nutrition and infectious diseases control to the management of the health information system. A strategic policy and approach should now be adopted by the Ministry of Health to overcome these difficulties.

2. Population Censuses

(1) Purpose

To obtain the latest data and information on the population for monitoring and evaluating the development programmes such as health, housing, education, etc.

(2) Methodology

The scope of the census is the whole population who live or stay in Indonesia, either Indonesian citizens or foreigners (excluding diplomatic corps), ship crews on Indonesian flagships in Indonesian waters, nomadic groups and homeless persons.

The ceusus collects data on migration, education, mortality, natality and other vital statistics, etc.

The data are collected once every ten years so that annual data can only be obtained through estimation and projection.

The data are collected in two phases. In the first phase, a complete census of the whole population is done to collect basic information on the number of population by sex and citizenship. In the second phase, five percent of the total population is taken as a sample to collect more detailed information.

The Indonesia Statistics (BPS) organizes the activities.

3. Intercensal Population Survey

(1) Purpose

The objectives of the survey are:

a. to estimate the number of population in the time period between two censuses;
b. to estimate birth rates, death rates, and population mobility;
c. to collect socio-economic data on the population;
d. to collect information on building and housing.

(2) Methodology

The survey covers all geographical areas and populations that have permanent residence in the Indonesian territory. The data are collected once every ten years, namely, in the middle year between two successive censuses.

In the first phase of the survey, all households in the latest census are listed. Based on the list, some households are selected as samples in such a way that the number of the sample households becomes ten times the number of selected census blocks in the district. The data are collected through interview with respondents during the second phase of the survey. The data collected in the second phase consist of information about the family and the house; individual information relates to socio-economic characteristics, marriage, birth, family planning, health, death, migration, and labour force or activity.

The Indonesia Statistics (BPS) organizes the survey.

4. Epidemic and Communicable Disease Report

(1) Purpose

To monitor closely some communicable diseases which are epidemic or potentially epidemic that might give rise to an outbreak or unusual events.

(2) Methodology

The scope of the report is the whole population who are reached by health facilities or personnel. The types of communicable diseases being reported are:

a. Quarantinable or serious epidemic diseases such as cholera, typhus, poliomyelitis and diphtheria;
b. Potentially epidemic diseases which spread quickly or cause high mortality and require quick action, namely, dengue hemorrhagic fever (DHF), measles, pertussis and rabies;
c. Other potential epidemic diseases, such as malaria, framboesia, influenza, anthrax, hepatitis, typhus abdominalis, meningitis, encephalitis, tetanus and tetanus neonatorum;
d. Other communicable diseases which are not potentially epidemic such as worms, leprosy, tuberculosis, syphilis, gonorrhoea, filariasis, etc.

Amongst those diseases, only diseases in item a. and b. need to be reported weekly, provided there is no epidemic. The others must be reported through the Health Centre's recording and reporting system, but if there is an epidemic, it must be reported immediately within 24 hours.

In the recording and reporting system, there are two types of form to be used.

(i) W-1 Form.

This form is used to report an outbreak or unusual events within 24 hours by all health facilities to the administrative level one step up.

Since it is a rough report on an epidemic, the report should be followed up with a temporary epidemiological investigation, and a plan of actions.

(ii) W-2 Form.

This form is used to report weekly some potentially epidemic diseases such as cholera, diarrhoea, typhus, DHF, rabies, diphtheria, poliomyelitis, pertussis, measles and other communicable diseases which are endemic at the time of outbreak.

The reports are done by all health facilities to the administrative level one step up.

The Directorate General of Communicable Diseases Control and Environmental Health of the Ministry of Health, Provincial Health Office, District Health Office and Health Centres organize the activity at the central, provincial, district and subdistrict levels, respectively.

5. Food Balance Sheets

(1) Purpose

The objectives of composing Food Balance Sheets are:

a. to present the food consumption pattern in general, namely, composition of food commodities, total consumption of calories and protein and fats, for monitoring and evaluating nutrition programmes;
b. to describe the distribution of the food supply for export, import, industrial use and also for domestic consumption;
c. to indicate the quality of the basic data available on exports, imports, conversion factors used, and the per capita consumption.

(2) Methodology

The Food Balance Sheets cover all information dealing with the food consumption pattern and its nutrients, distribution of food supply for export, industrial use and domestic consumption and its quality.

The available annual data are compiled using FAO methods, in which some necessary adjustments have to be made based on the existing data in Indonesia.

The Indonesia Statistics (BPS) assisted by the FAO experts in collaboration with the Food and Nutrition Unit of the Ministry of Agriculture undertakes the composition.

6. National Household Health Survey

(1) Purpose

To obtain the latest data and information on the health situation of the population, especially on:

a. morbidity and mortality pattern;
b. fertility, pregnancy and child delivery pattern;
c. pattern of health facilities utilization, both governmental and private;
d. condition of environmental health;
e. knowledge, awareness and practice (KAP) and community participation in health service;
f. nutritional status of infants, children, and pregnant women.

(2) Methodology

Due to the limitations in resources and coverage of the survey, the number of persons selected as a sample is limited. The survey might not be able to cover every aspect of change in the health situation in the year of the survey. The survey is done once every five years.

Data are collected through interviews, environmental observation, and physical and laboratory examination. The head of the household acts as the respondent in the interview.

Six types of questionnaire are used to ask data on characteristics of household and living environment, individual characteristics, morbidity, mortality, and pregnancy and delivery.

A stratified multistage random sampling is done based on the clusters of the infant mortality rate.

From each cluster one province is chosen whose characteristics are considered to approximately correspond to the median of the values. In each province chosen, random sampling of districts and subdistricts is done to select three districts, and two or three subdistricts in each district. Approximately 889 households are selected in each subdistrict or about 4,445 population.

The Institute of Health Research and Development, Ministry of Health organizes the survey.

7. National Socio-Economic Survey

(1) Purpose

To collect data on the population which are related to socio-economic activities.

(2) Methodology

The survey covers all geographical areas and populations of Indonesia, and collects information on population, health, fertility, household expenditure, crime, housing and environment.

The samples are drawn from both urban and rural areas. In the rural areas, the samples are collected in four stages. The first two stages are meant for the selection of subdistricts and villages, respectively, which is conducted using the probability sampling proportional to the total population. In the third stage, census blocks are selected using a random sampling procedure, and in the last stage, nine households are selected from each census block systematically. In the urban areas, the samples are drawn systematically in two stages: selection of clusters and households. A

cluster is part of a village which consists of 50 households or 250 population living close to each other and which has a clear boundary. From each cluster nine households are selected.

The survey covers approximately 25,000 to 100,000 households and in each quarter one fourth of the households are to be visited for survey.

The Central Bureau of Statistics organizes the activities.

8. Hospital Recording System

(1) Purpose

To obtain the latest data and information from hospitals concerning hospital activity or service.

(2) Methodology

The recording covers all hospitals in Indonesia, either governmental or private. There are some limitations to the data being collected:

a. the morbidity and mortality rates resulted from the hospital records do not cover all population in the district area;
b. data on hospital service comprise hospital outpatient visits and inpatient care.

The data on morbidity and mortality are based on a ten-day sampling in three months. The data on visits and delivery are based on the daily census.

All of the data are recorded in the registers or individual records. Individual records are used for inpatient care including delivery. Based on the registers, quarterly reports are made.

The Directorate General of Medical Care organizes the activity.

9. Health Manpower Recording and Reporting System

(1) Purpose

To obtain data on health manpower and personnel, health schools and their students, and also data on training activities.

(2) Methodology

The activity covers all health personnel who work in health offices, government health centres, and hospitals, either governmental or private. It covers also all health schools and their students. Training of health personnel is also included in the activity.

a. Health personnel records:
   Every health personnel fills in the computerized form to record individual biodata and other attributes such as educational level, place of work, salary, etc. Every change of those attributes should be reported for updating.
b. Health schools:
   Every health school should record and report basic data on the school such as the number of teachers, number of classrooms, number of students and amount of budget, etc. Besides, every students should report his or her biodata, status and its changes.
c. Data on health personnel training are reported, pertaining to the type of training, duration, budget, and number of personnel trained.

The Centre for Health Data and Information organizes the activity.

10. Consortium of Health Sciences (CHS)

(1) Purpose

To obtain data on the number of schools and graduates from all faculties of medicine in Indonesia to be used for planning and development of medical doctor education.

(2) Methodology

The activity covers all governmental medical schools in Indonesia; private schools are not included.

Every medical school should report the number of students in every class and also the number of graduates every year.

The Ministry of Education organizes the activity. All reports should be addressed to the CHS.

11. Recent Developments in the Health Information System

Healthy Indonesia 2010 has been accepted as the target and achievement goal of the country for the successful health development, along with its new vision, mission, and basic strategies, as mentioned under section 1 above.

To implement this strategy the development of healthy indicators is essential as a tool of measurement on how far the target has been achieved, and also for the identification of the need for any adjustment to be made to accelerate the achievement of health development. These indicators will cover health status, healthy environment, healthy attitude and practice, and health services accessibility, equity and equality provided to the community. Since the achievement of healthy conditions is not meant to be claimed as health sector achievement solely, indicators originated from the related sectors will also be formulated and included in the integrated set of healthy indicators.

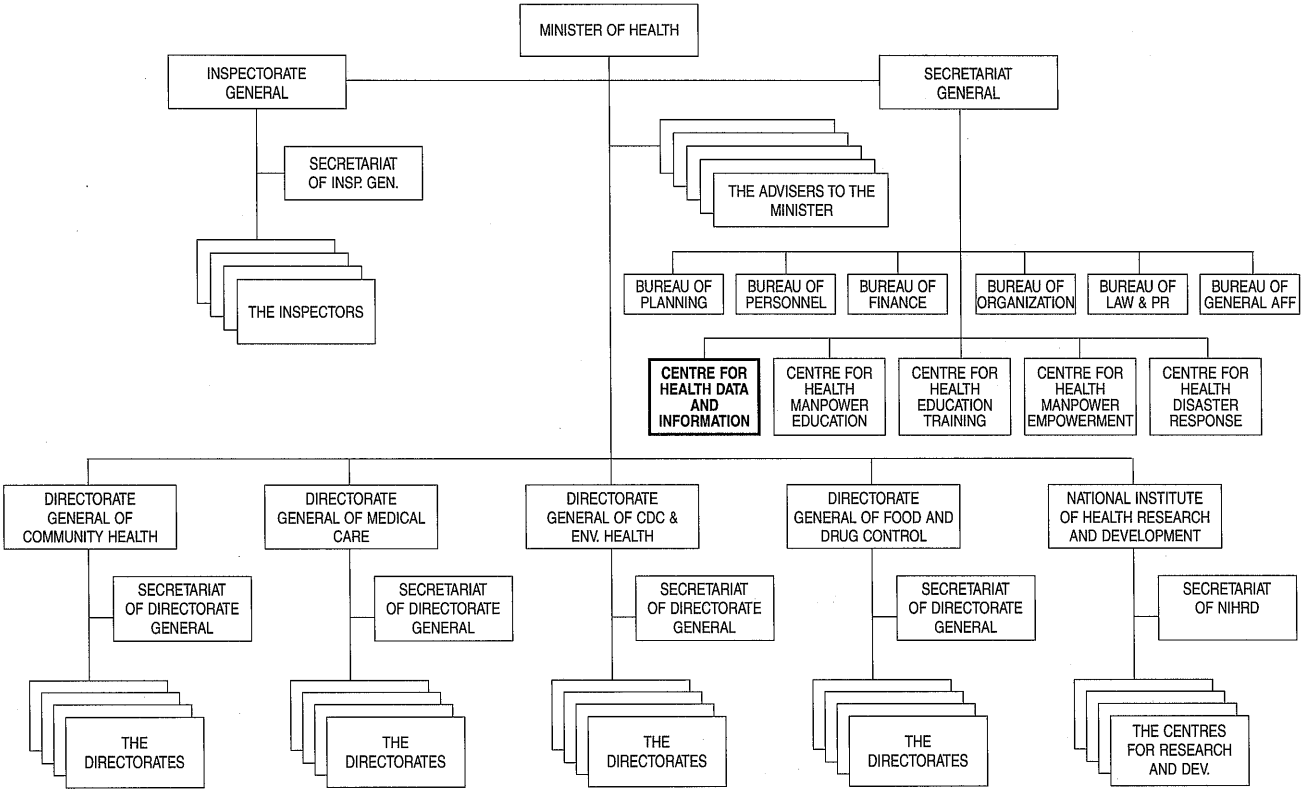
Apart from its function as information to support the policy and strategic decision-making at the national health management level, the National Healthy Indicators will also serve as a tool of measurement in a much more comprehensive assessment of the health development achievement. These will be taking into account all provincial level achievements and will also serve for the comparison of health achievement among similar countries. The development of the Healthy Indicators to achieve Healthy Indonesia 2010 has been initiated by the Centre for Health Data and Information, MOH as generic indicators applicable to all level of health management.

12. National Health Survey

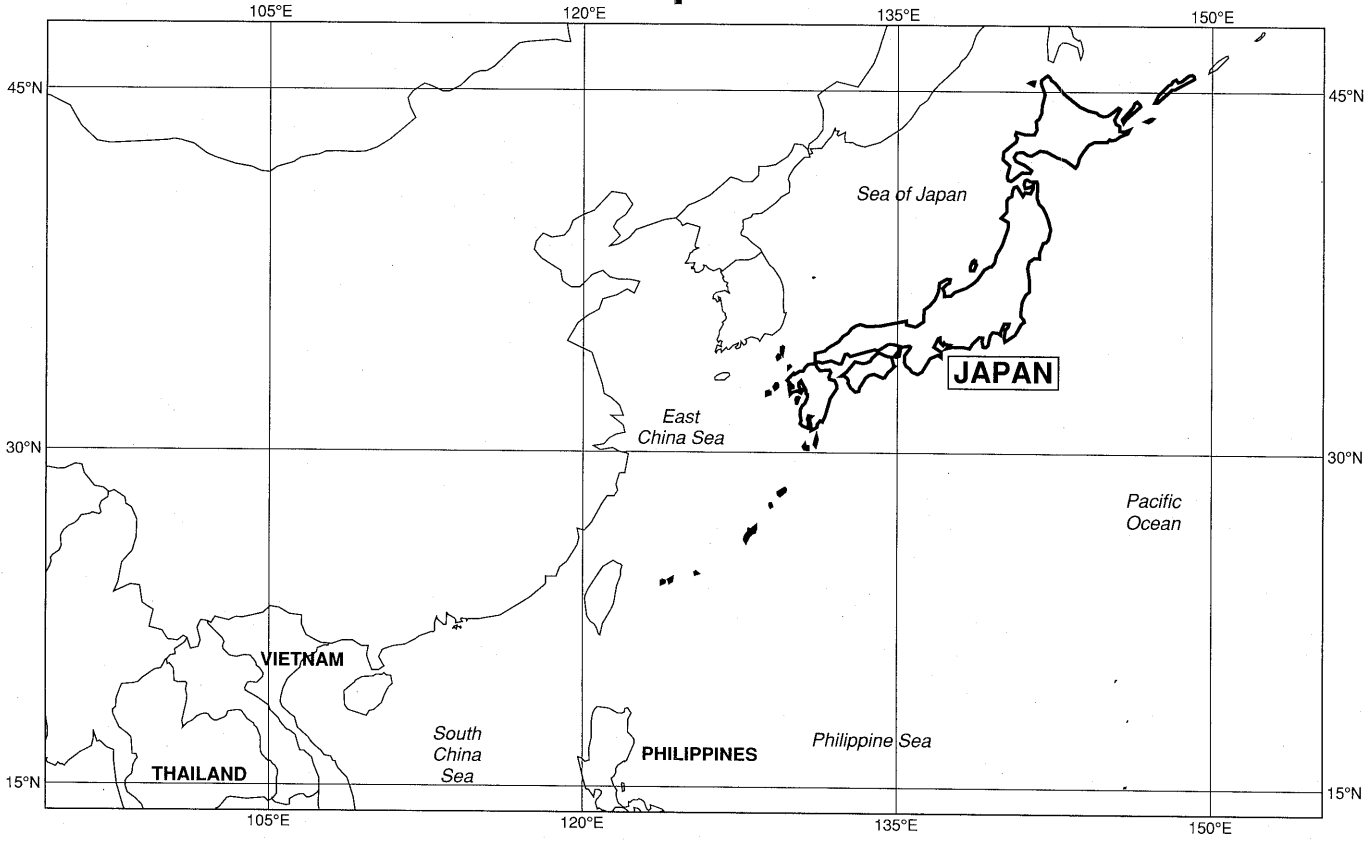
The Indonesian Household Survey was renamed in 2000 as the National Health Survey. This was to emphasise the integration of all health-related surveys which are of national coverage, for the optimalization of the health information provision. However, the original purpose of the National Health Survey and the methodology applied remain the same.

(Centre for Health Data and Information, Ministry of Health)

Organization Chart of the Ministry of Health (As of May 2001)



Japan


105°E
120°E
135°E
150°E
45°N
30°N
15°N
Sea of Japan
JAPAN
East
China Sea
Pacific
Ocean
VIETNAM
THAILAND
South
China
Sea
PHILIPPINES
Philippine Sea

Japan

1. Health Policy Developments

A large-scale reform of the central government was implemented in January 2001. As a part of this administrative reform, the former Ministry of Health and Welfare was merged with the former Ministry of Labour to create the Ministry of Health, Labour and Welfare. No major changes have been made, however, in the health policy itself because of this merger.

Japan has been experiencing rapid economic and social changes over the past 50 years. Economic growth was particularly dramatic in the 1960s, 1970s and 1980s. Introduction of new medical technologies, with an increased level of health knowledge, attitude and practice among the population, has reduced morbidity and mortality from infectious diseases and improved the general health status. Japan now enjoys the longest life expectancy in the world.

At the same time, the extended life expectancy coupled with the declining birth rate has caused rapid ageing of the population. There has been a shift towards nuclear families and an increase in the number of households of elderly people alone. The disease pattern has become more lifestyle-related, with more cancer, heart disease, cerebrovascular disease and diabetes mellitus, leading to greater needs for the provision of long-term care and causing heavy economic and social burden. The social security system which covers the whole population, with the medical insurance and pension schemes as its major components, is being reviewed and is expected to be revised considerably in the near future.

A new movement of health promotion was launched in 2001, with the title "Healthy Japan 21". The purpose of the movement is to reduce premature mortality, extend healthy life expectancy and enhance the quality of life, so as to build a vital society in which every citizen will be able to enjoy a healthy and fulfilled life. The movement focuses on health promotion and primary prevention, and on building up of a

supporting social environment by involving the national and local administrations, agencies and other bodies such as mass media, private enterprises and voluntary groups. About 90 numerical targets for health promotion have been set up for 2010, to reduce major health problems related to the lifestyles.

2. Population Censuses

(1) History

Population censuses in Japan have been conducted every five years since 1920. The last 2000 Population Census was the seventeenth one.

After World War II, the scope of census-taking has generally been amplified so as to satisfy the increased demands from the variety of users of the census results.

The censuses include large-scale censuses and simplified censuses. The censuses taken every ten years starting 1920 have been the large-scale censuses, while the censuses taken quinquennially between the large-scale decennial censuses have been the simplified ones. The main difference between the two is the number of questions asked in the census. In a simplified one, questions are limited to basic characteristics of population, i.e., name, sex, age, marital status, etc., while a large-scale census covers questions on socio-economic characteristics such as occupation and industry in addition to the basic characteristics of population. The 2000 Population Census was taken as a large-scale census.

(2) Purpose

To provide data on the current situation of population in Japan.

(3) Coverage

The whole population in Japan.

A person is enumerated at the place where he or she usually lives and is counted in the population of that area.

(4) Date

As of 0:00 a.m. of 1 October of the census year.

(5) Contents of Questionnaire for the 2000 Population Census (large-scale census)

(i) For each household member (16 items)

a. Name
b. Sex
c. Date of birth
d. Relationship to the head of the household
e. Marital status
f. Nationality
g. Duration of residence at the present dwelling unit
h. Previous address five years ago
i. Educational record
j. Employment status
k. Hours of gainful work during the preceding week
l. Industry
m. Occupation
n. Work status (employed/self-sustaining)
o. Location of workplace/school
p. Transportation to the workplace/school

(ii) For the household (6 items)

a. Type of household (extended/nuclear family, etc.)
b. Number of household members
c. Source of income
d. Type of tenure (purchased/rental)
e. Total floor space
f. Type of building (detached/row house/ apartment house)

(6) Data Collection Procedure

The field enumeration of the 2000 Population Census was conducted, within their respective jurisdictions, by the mayors or the heads of city, ward, town and village, under the supervision of the governments of prefectures. The whole procedure was planned and administered by the Statistics Bureau and Statistics Centre under the Ministry of Public Management, Home Affairs, Post and Telecommunications.

(7) Tabulation and Publication

The Statistics Bureau and Statistics Center takes charge of the whole tabulation and releases the results through publications and other media.

3. Vital Statistics

(1) History

The Family Registration System was established and came to function as a permanent source of vital statistics in 1872. A modern system for compiling vital statistics was introduced in 1899 through central processing of individual reporting forms on vital events. The jurisdiction of vital statistics system was transferred from the Statistics Bureau, Prime Minister's Office to the Ministry of Health and Welfare in 1947, with a view to making full use of the collected data mainly for public health activities.

(2) Method of Collecting Data

The basic characteristics of the present vital statistics system are based on the Family Registration System, which registers each individual's legal status under the jurisdiction of the Ministry of Justice.

According to the provisions of the Family Registration Law, vital events of birth, death, marriage and divorce have to be reported to the head of the local administrative office. The event of stillbirth (fetal death) also has to be reported under the provisions of the Stillbirth Report.

A birth report has to be accompanied with a birth certificate by the physician or the midwife who attended the delivery. The report should be submitted by either father, mother, a person who lives with them, or anyone who attended the delivery, within 14 days after the birth.

A death has to be reported with a doctor's death certificate or autopsy report. The death report has to be submitted by a relative or anyone who lived with the deceased, the landowner, or the custodian, within 7 days after the death or the time when the death was known.

The report on stillbirth has to be made with a doctor's or midwife's certificate of stillbirth, and is to be submitted by father, mother, any person who lives with them, or anyone who attended the delivery, within 7 days after the stillbirth.

The channel of collecting vital statistics data can be illustrated in the chart shown below.

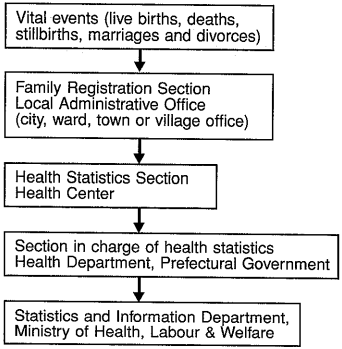
(3) Publications on Vital Statistics

The results of vital statistics are published by the Statistics and Information Department, Ministry of Health, Labour and Welfare on a periodical basis in the following three publications:

a. *Monthly Brief Report on Vital Statistics*
The Monthly Brief Report covers total figures of live births, deaths, stillbirths, marriages and divorces by prefecture. The figures stated in this report represent only the number of forms submitted for each type of vital events forwarded from Prefectural Governments and received by the Ministry of Health, Labour and Welfare. The Brief Report is published 2 months later.

b. *Monthly Report on Vital Statistics*
The Monthly Report containing the figures derived from the processed data is published 5 months after the month of occurrence of the vital events. This report covers a wider variety of detailed tables of results than the Brief Report referred to above.

c. *Annual Report on Vital Statistics*
The Annual Report is a fundamental one among the periodical publications on vital statistics. The Report includes a wide variety of detailed tables and presents final tabulations of vital statistics in Japan. The Report is published one year after the year of occurrence.



Channel of collecting vital statistics data

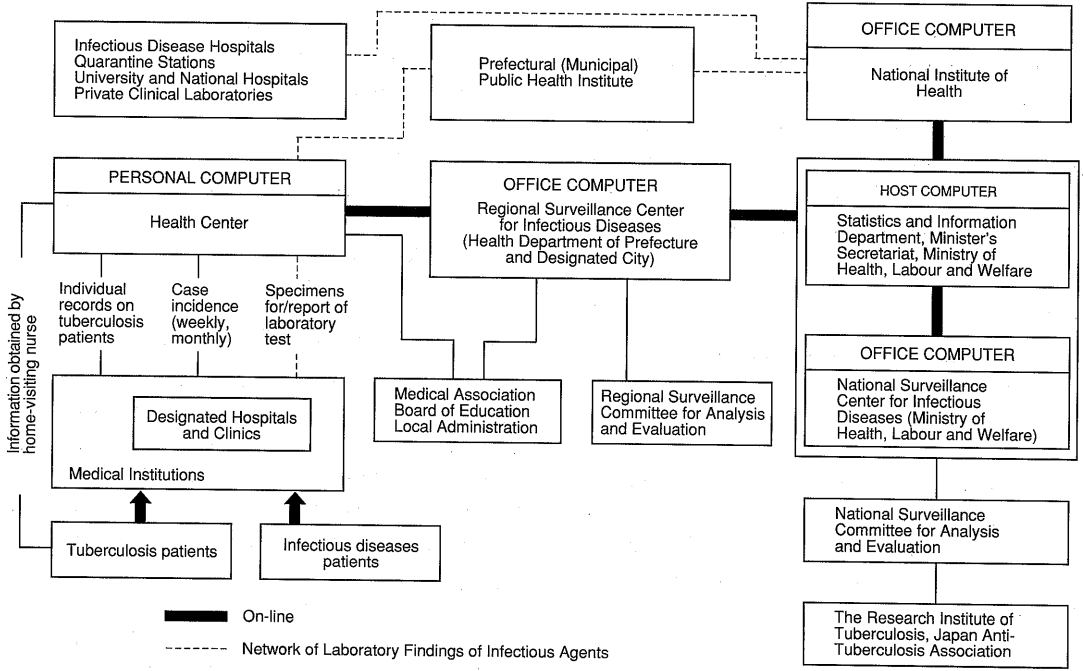
1. Reporting.
2. Report accepted after scrutiny.
3. Vital statistics schedules prepared.
4. The schedules forwarded to the Health Centers immediately.
5. All schedules examined.
6. The schedules submitted to the Prefectural Government before the 25th of every month.
7. The schedules examined.
8. The schedules submitted to the Ministry of Health and Welfare before the 5th of the following month.
9. Vital statistics are tabulated, analysed and published monthly and consolidated annually.
10. Supervision and guidance given to local authorities in the handling of vital statistics.

4. Infectious Disease Surveillance System

The Infectious Disease Surveillance System, designed to investigate epidemics of various communicable diseases on a weekly or monthly basis, was introduced in 1981 in all prefectures and large cities, in collaboration with over 3,000 designated clinics/hospitals. This system was then developed into a computerized on-line system in 1987 to facilitate communication and analysis of surveillance information. The outline of the surveillance system is illustrated in the following chart. The number of designated clinics/hospitals was allocated in proportion to the population served by each health center, including clinics/hospitals for pediatrics, internal medicine, urology, dermatology and ophthalmology.

A new Infectious Diseases Law was implemented in April 1999, focussing on the citizens' own initiative for disease prevention and for appropriate medical care rather than mass prevention of diseases. Diseases are classified into 4 groups according to the degree of infectivity and severity. All the 12 diseases in groups 1, 2 and 3, and 33 of the 60 diseases in group 4 have been designated as reportable by all medical care institutions: Ebola virus disease, Crimean-Congo hemorrhagic fever, plague, Marburg virus disease and Lassa fever in group 1; acute poliomyelitis, cholera, shigellosis, diphtheria, typhoid fever and paratyphoid fever in group 2; enterohaemorrhagic *E coli* diarrhea in group 3; and amebic dysentery, viral hepatitis, AIDS, tsutsugamushi fever, syphilis, etc. in group 4. Twenty-seven diseases of group 4 have been subjected to sentinel surveillance, such as influenza, group A hemolytic streptococcal pharyngitis, infectious gastroenteritis, varicella, herpangina, measles and mumps.

Infectious Disease Surveillance System



5. Patient Survey

(1) History

The annual Patient Survey was formally established in 1953, though some morbidity data had been collected annually since 1948.

A major modification in the structural management and procedure was made in 1984. The address of the patient was added to the questionnaire and the sampling rate was increased. Since then the survey has been conducted every three years.

(2) Purpose

To obtain fundamental information about patients treated in medical institutions.

(3) Coverage

In the 1999 survey, 6,463 hospitals, 5,902 general clinics and 983 dental clinics were randomly selected after stratification by prefecture. The sampling rates were: 70% for hospitals, 7.0% for general clinics and 1.6% for dental clinics.

(4) Date

As of one designated day of October (since 1984 once every 3 years).

(5) Contents of Reporting Forms

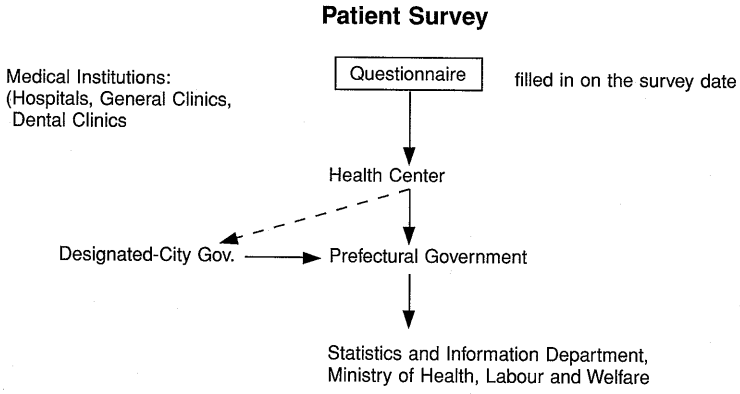
a. Sex
b. Date of birth
c. Address
d. Type of treatment
e. Diagnosis
f. Specialty of medical facility
g. Type of health insurance
h. Date of the last visit
i. Route of reference

(6) Data Collection Procedure

The questionnaires completed by the responsible institution are submitted to the health center of the area. Those collected are sent to the Statistics and Information Department of the Ministry of Health, Labour and Welfare through the prefectural and, where applicable, designated-city governments.

(7) Tabulation and Publication

The Statistics and Information Department is responsible for the tabulation and releases the results through publications and other media.



6. National Nutrition Survey

(1) History

The National Nutrition Survey in Japan has been conducted annually for more than 50 years. It was started in 1945, under the instructions of the Allied Forces occupying Japan (1945–1952), to assess the nutritional conditions and socio-economical aspects of the Japanese people, with a view to acquiring urgent food supplies from other countries. At the beginning, the survey covered only the Tokyo area, but it was rapidly expanded to become nation-wide in 1948.

In 1952, the Nutrition Improvement Law was enacted, in which the aim of the National Nutrition Survey and its enforcement were also stated. Under the law, the nutritional conditions of the Japanese have

been improved, and, with the high economic growth from around 1960, the dietary habits of the Japanese have been "modernized" and malnutrition has become rare. On the other hand, an excessive intake, which may be related to obesity, heart diseases, diabetes mellitus and other chronic diseases, has become a more important concern in the nutrition policy. The focus of this survey has therefore been shifted from the policy-making for food supplies to the monitoring of excessive food intake, prevention of diet-related chronic diseases, and health promotion.

(2) Purpose

The Nutrition Improvement Law states that this survey should aim to monitor the food consumption and the nutrient intake of the Japanese people, and to clarify the relationship between nutrition and health conditions, in order to obtain basic data for the nutrition and health promotion policy.

(3) Coverage

About 15,000 persons from about 5,000 households in randomly selected 300 census enumeration districts are investigated.

(4) Date

One day in November.

(5) Contents of Reporting Form

a) Physical check for individual persons

1) Anthropometry: height and body weight [aged one year or over]

2) Blood pressure measurement (sitting position) [aged 15 years or over]

3) Interview on antihypertensive medication, smoking and drinking habits and physical exercise [aged 20 years or over]

4) Blood tests: Total protein, total cholesterol, triglyceride, HDL-cholesterol, blood sugar, red blood cells, hemoglobin [aged 20 years or over]

5) Physical activity: number of steps in a day measured by pedometer [aged 15 years or over]

b) Dietary study for households

1) Members who compose the household: age, sex, birth date, profession, pregnancy or lactation, level of physical activity, meals at home/outside/skipped

2) Food intake (weighed food record), names of family members who shared each food

c) Dietary habits, etc. [aged 15 years or over]

The contents of this section change in each survey. In the 1999 survey, the focus was placed on the awareness and attitude regarding the amount and contents of food, etc.

(6) Data Collection Procedure

The Community Health, Health Promotion and Nutrition Division of the Health Service Bureau in the Ministry of Health and Welfare is responsible for the budget, planing and implementation of the survey.

The actual data collection is done by regional health centers under the supervision of the Health Promotion and Nutrition Division, and the prefecture or major city (the designated city) authorities. The survey team consists of physicians, public health nurses, dietitians, nurses, medical laboratory technicians, and assistant medical laboratory technicians.

(7) Tabulation and publication

The Statistics and Information Department is responsible for the tabulation and the Health Service Bureau for the publication of the results.

7. School Health Examination Survey

(1) History

The School Health Examination Survey has been carried out every year since 1948, though some changes have been incorporated over the years in its coverage and contents. The description below relates to the survey for 1999. The students' ages quoted in this description are those as of 1 April which is the beginning of a school year in Japan.

(2) Purpose

To investigate the status of physical development and health of pupils and students of schools, with a view to obtaining basic data for school health administration.

(3) Coverage

A sample of pupils and students attending kindergartens, elementary schools, lower secondary schools and higher secondary schools were selected by prob-

ability sampling. Kindergartens, where enrolment is not compulsory, cater for children aged 3, 4 and 5 years, with the enrolment rate of 61.6% in 1999. Only children aged 5 were included in this survey. Education at the elementary school (for 6-11 years of age) and at the lower secondary school (for 12-14 years of age) is compulsory, with the enrolment rate of 99.98% in 1999. Enrolment at the upper secondary school (for 15-17 years of age) is not compulsory, but the advancement rate to this level was as high as 96.9% in 1999. All ages were covered in this survey for those 3 types of school.

For each type of school, schools were first selected with probability proportional to size, and the selected schools were designated for the survey. For the physical development study, students in those schools were further selected by systematic sampling, separately for age and sex. For the health study, classes were selected separately for each grade, and all the students in the selected classes were included in the sample. The number of students in the sample for the 1998 survey is shown above.

Type of school	For physical development study	For health study
Kindergarten	72,380	75,972
Elementary school	270,720	510,339
Lower secondary school	225,600	390,804
Higher secondary school	126,900	207,976
Total	695,600	1,185,091

(4) Date

Between 1 April and 30 June 1998.

(5) Contents of the Reporting Form

For the physical development study: height, weight and sitting height. For the health study: nutritional state, vision, hearing, diseases of the eye, ear, nose, throat and skin, tuberculosis, intestinal parasites, diseases/abnormalities of the spine and chest, teeth and oral cavity, heart, etc.

(6) Data Collection Procedure

The Ministry of Education, Science, Sports and Culture requested, through the prefectural governors, the principals of the designated schools to collect the necessary data.

(7) Tabulation and Publication

The collected data were assembled by the Ministry for processing and analysis, and the results published in a report.

8. Statistical Report on Public Health Administration Services

(1) History

The Statistical Report on Home Affairs, the predecessor of the Statistical Report on Public Health Administration and Services, was initiated in 1886.

When the Ministry of Health and Welfare was established in 1938, the Report was newly started as the Statistical Report on Public Health Administration and Services.

The jurisdiction of the Report was transferred from the General Affairs Division of the Minister's Secretariat to the Statistics and Information Department in 1949, and thereafter there have been many changes in the reporting forms to meet the administrative demands.

(2) Purpose

To collect data on the present situation of the health administrative activities in the prefectural and designated-city governments.

(3) Coverage

All prefectural and designated-city governments.

(4) Date

As of 31 December, annually.

(5) Contents of Reporting Form

All administrative activities about mental health, nutrition, leprosy, communicable diseases, venereal diseases, clinical examinations, environmental sanitation, food sanitation, veterinary sanitation, medical care inspections, dental technicians, public health nurses and pharmaceutical affairs in all the prefectural and designated-city governments.

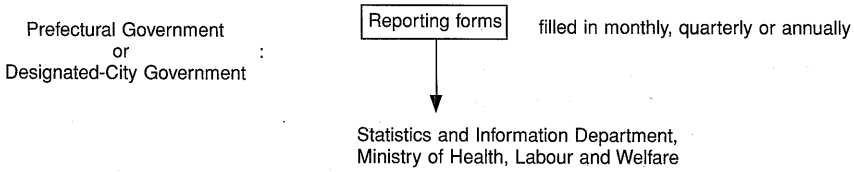
(6) Data Collection Procedure

The reporting forms filled by the responsible persons in the prefectural and designated-city governments are sent to the Statistics and Information Department of the Ministry of Health, Labour and Welfare.

(7) Tabulation and Publication

The Statistics and Information Department takes charge of the tabulation and releases the results through publications.

Statistical Report on Public Health Administration Services



9. Comprehensive Survey of Living Conditions of People on Health and Welfare

(1) History

Ad-hoc surveys of households had been conducted by the Ministry of Health and Welfare since 1945. The Comprehensive Survey of Living Conditions of People on Health and Welfare has integrated 4 such surveys and has been conducted since 1986.

(2) Purpose

To provide data on living conditions such as the health status, pensions, welfare, and incomes.

(3) Coverage

A detailed survey is conducted every 3 years, and a brief survey in each intervening year. In the detailed survey carried out in 1998, 5,240 census enumeration districts were randomly sampled after stratification, and all households and household members in those districts were surveyed. The sample comprised approximately 280,000 households and 780,000 household members.

On the other hand, a brief survey has been conducted with a sample of 1/5 the size of the sample for a detailed survey.

(4) Date

A designated day in June or July
Detailed survey: every 3 years
Brief survey: annually

(5) Contents of Questionnaire (used in the detailed survey in 1998)

(i) Questionnaire on Household (for all house-

holds selected)

a. Housing conditions, household expenditure, etc.
b. For each household member:
Sex, date of birth, participation in health insurance and pension schemes, occupational status, disability and long-term care received, etc.

(ii) Questionnaire on Health (for all members of the households selected)

a. Health status, symptoms and diseases
b. Visit to medical care institution and care received
c. Influence of health problems on daily living, mental stress, health check, etc.

(iii) Questionnaire on Income (for about 40,000 households subsampled)

a. Type and amount of income
b. Tax and social security contributions

(iv) Questionnaire on Saving (for about 40,000 households subsampled)

a. Amounts of savings and loans

(6) Data Collection Procedure

The interviewer-administered questionnaires on household and on income and the self-administered questionnaires on health and on savings are used in the Survey. The questionnaires on household and on health are submitted to the Health Center, while the questionnaire on income and savings collected by the investigator are submitted to the Welfare Office. All the collected questionnaires are then sent to the Statistics and Information Department of the Ministry of Health, Labour and Welfare through the prefectural and, where applicable, the designated-city governments.

(7) Tabulation and Publication

The Statistics and Information Department is responsible for the tabulation, and releases the results through publications and other media.

10. Census of Medical Care Institutions

(1) History

Before the formal establishment of the Census of Medical Care Institutions, the reporting on the number of facilities, their geographical location and type of

services provided had been included in the Statistical Report on Home Affairs.

After the first census of medical care institutions was conducted in 1948, some improvements were made in the census method and data collection procedure, and they resulted in the establishment of the Census of Medical Care Institutions in the present form, which has been conducted on a regular basis since 1953.

In 1973, a major modification was made in the structural arrangement and procedure, dividing the census into two portions, namely, the Main Detailed Survey and the Brief Monthly Survey.

(2) Purpose

To provide data on the geographical distribution, characteristics, manpower and equipments of medical care institutions.

(3) Coverage

All hospitals and clinics in Japan.

(4) Date

The Main Detailed Survey is conducted as of 1 October every three years, and the Brief Monthly Survey is done as of the end of every month.

(5) Contents of Questionnaire

(i) Main Detailed Survey

a. Name of medical care institution
b. Address
c. Type of ownership
d. Number of beds, by type of disease
e. Equipments installed
f. Specialty
g. Others

(ii) Brief Monthly Survey

This survey covers only the institutions newly registered or those reporting changes.

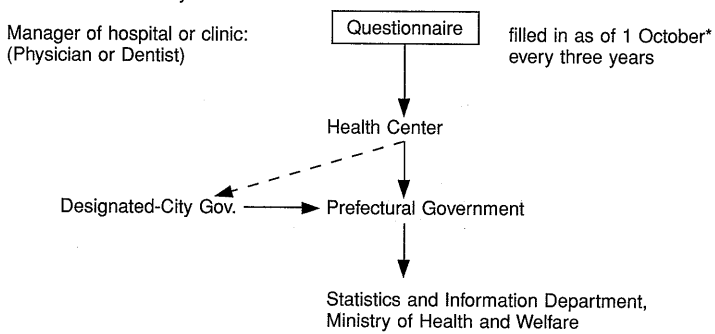
a. Name of medical care institution
b. Address
c. Type of ownership
d. Type of registration (establishment/abolition/suspension)
e. Number of beds, by type of disease
f. Specialty
g. Others

(6) Data Collection Procedure

The questionnaire completed by the responsible person in each institution is submitted to the health center that administers the area where the medical care institution is located. The collected questionnaires are

Census of Medical Care Institutions

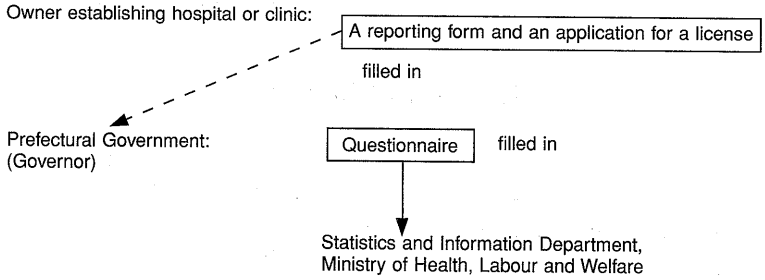
A. Main Detailed Survey

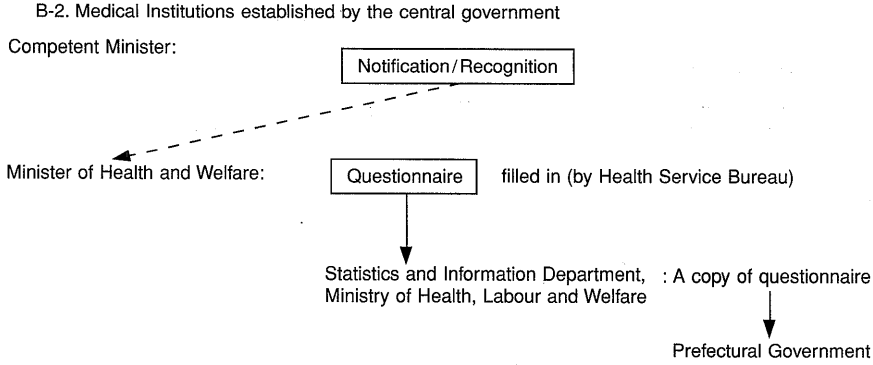


* Questionnaire had been filled in as of the last day of the year up to 1981.

B. Brief Monthly Survey

B-1. Medical Institutions except those established by the central government





sent to the Statistics and Information Department of the Ministry of Health and Welfare through the prefectural, and where applicable, designated-city governments.

(7) Tabulation and Publication

The Statistics and Information Department is responsible for the tabulation, and releases the results through publications and other media.

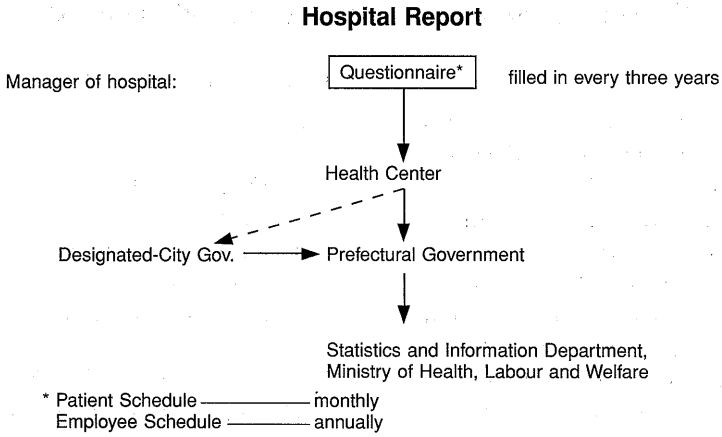
11. Hospital Report

(1) History

The Report originated as the Weekly Hospital Report in 1945. In 1948 it was modified as a monthly report, together with the extension of the coverage by including tuberculosis and leprosy hospitals, and renamed as the Hospital Report, with the enactment of the Medical Service Law.

The number of newborns and the number of employees have been added to the items of the report since 1968 and 1973, respectively.

(2) Purpose



The purpose of the Report is to provide data on the geographical distribution, present situation and utilization of hospitals.

(3) Coverage

All hospitals in Japan.

(4) Contents of Report Form

a. Patient form (monthly)
   Number of inpatients, outpatients, newborns, etc.
b. Employee form (annual)
   Number of physicians, pharmacists, nurses, etc.

(5) Data Collection Procedure

The report forms filled in by the responsible person of the hospitals are sent to the Ministry of Health, Labour and Welfare through the health centers and prefectural governments.

(6) Tabulation and Publication

The Statistics and Information Department takes charge of the tabulation and releases the results through publications and other media.

12. Survey on Physicians, Dentists and Pharmacists

(1) History

Originally, the Survey on Physicians, Dentists and Pharmacists was included in the Statistical Report on Public Health Services started in 1874.

With the enactment of the Medical Practitioners Law and the Dentists Law in 1948 and with the amendment of the Pharmaceutical Affairs Law in 1954, the reporting forms on physicians, dentists and pharmacists were separated from the Statistical Report and constituted the forms for a new survey, the Survey on Physicians, Dentists and Pharmacists in 1954.

(2) Purpose

To collect information on the number and geographical distribution of these health personnel.

(3) Coverage

All physicians, dentists, and pharmacists registered in Japan.

(4) Date

As of 31 December (since 1982 every two years).

(5) Contents of Reporting Forms

a. Name
b. Sex
c. Date of birth
d. Date of registration
e. Registration number
f. Main activity
g. Employment status

(6) Data Collection Procedure

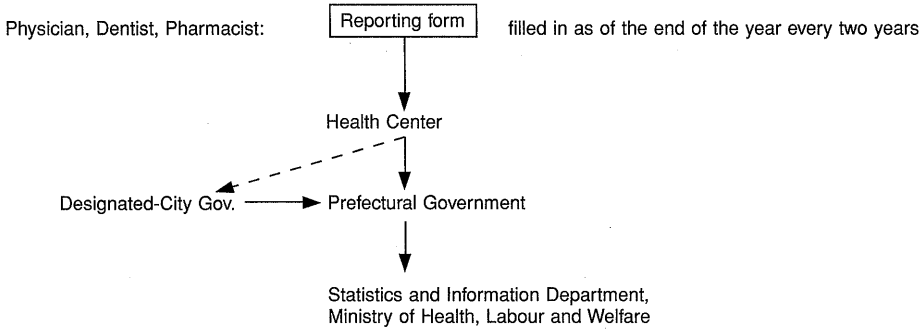
The report form filled in by each professional is submitted to the health center. At the health center, editing work is done and the report is sent to the Statistics and Information Department via the prefectural government.

(7) Tabulation and Publication

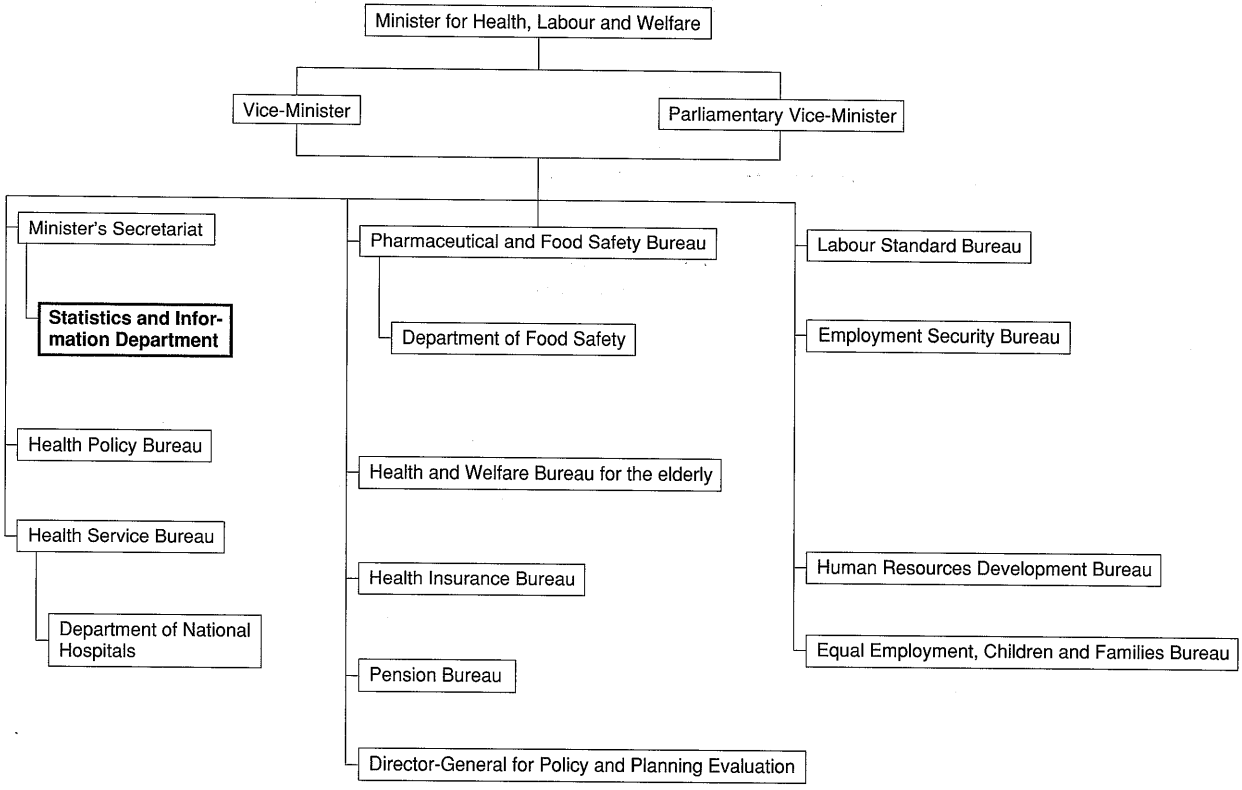
The Statistics and Information Department takes charge of the tabulation and releases the results through publications.

(Statistics and Information Department, Ministry of Health, Labour and Welfare)

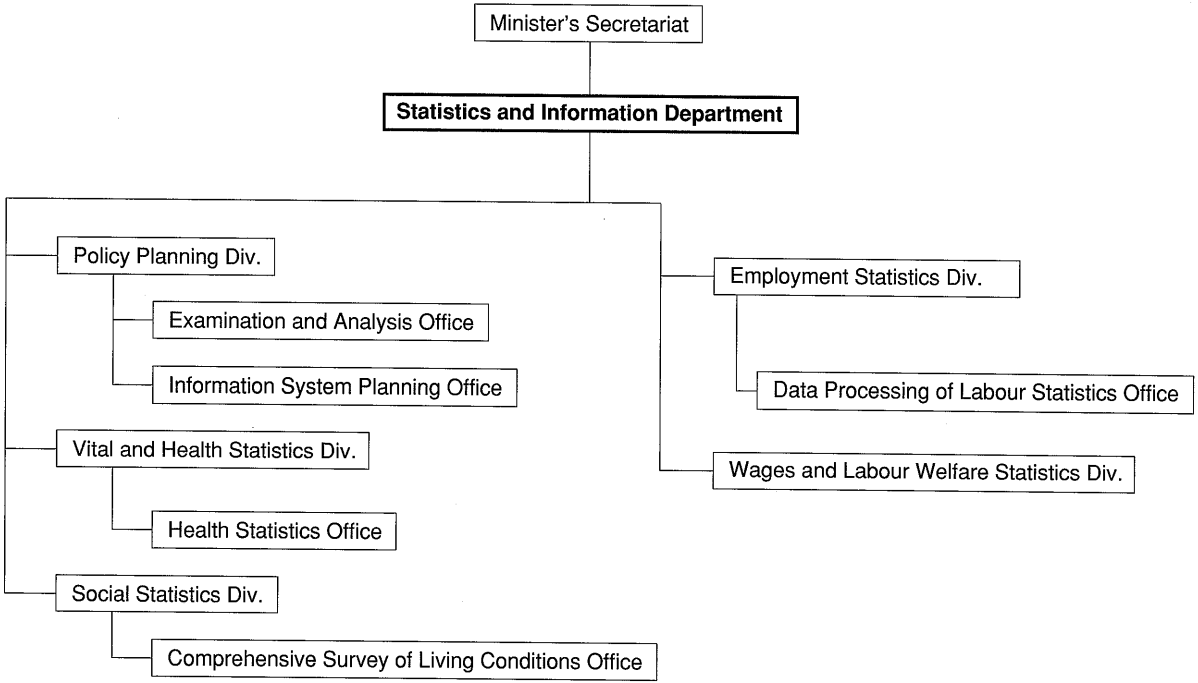
Survey on Physicians, Dentists, and Pharmacists



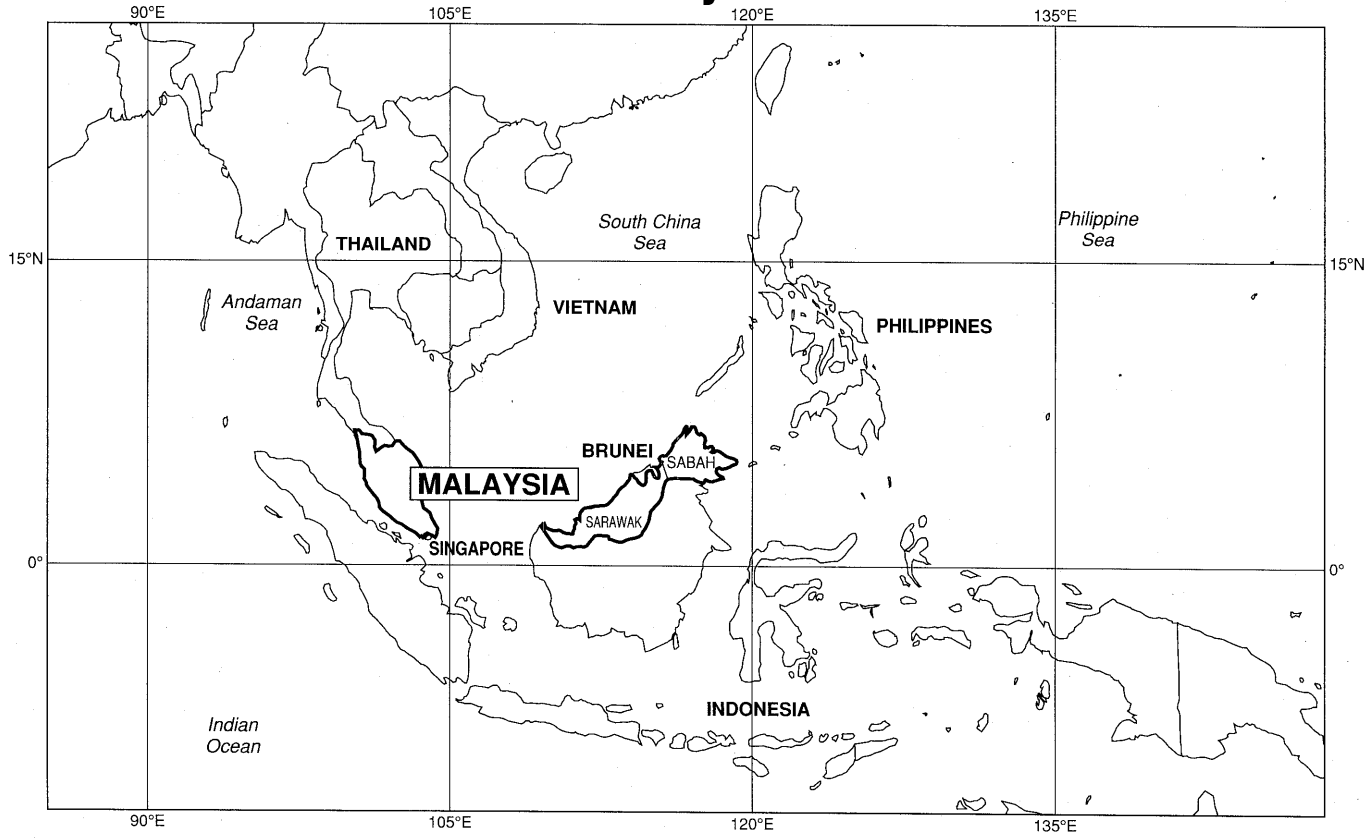
Annex I. Organization Chart of the Ministry of Health, Labour and Welfare, Japan



Annex II. Organization Chart of the Statistics and Information Department, Ministry of Health, Labour and Welfare



Malaysia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Philippine Sea
Andaman Sea
VIETNAM
PHILIPPINES
BRUNEI
SABAH
MALAYSIA
SARAWAK
SINGAPORE
INDONESIA
Indian Ocean

Malaysia

1. Health Policy Developments

The Malaysian national development policy encompasses health as an integral part of socio-economic development, giving health a relatively high priority in the nation's political agenda. The health status of the population has continued to improve over the years in-step with the national development.

Within the frame of the nation's new Vision 2020, the Vision for Health has been formulated, aiming at building of a nation of healthy individuals, families and communities through a health system that is equitable, affordable, efficient, technologically appropriate, environmentally acceptable, and consumer-friendly. Emphasis is placed on the quality of care, innovation, health promotion, respect for human dignity, promotion of individual responsibility, and community participation.

The major health issues which the country faces are: (1) shortage and maldistribution of human resources and facilities; (2) the epidemiological transition with a rise in chronic and degenerative diseases related to changes of lifestyles and behaviour; (3) emerging and re-emerging infectious diseases; and (4) environmental pollution caused by rapid economic development, population increase and urbanization.

In particular, diseases of affluence and lifestyle, such as cancer, hypertension and heart disease, are the main focus of public health whose scope goes beyond matters of sanitation to comprise various other aspects of preventive and community medicine. The Healthy Lifestyle campaign chose the exercising as the theme for the year 1998, promotion of safety and injury prevention for 1999, and mental health promotion for 2000.

2. Population Statistics

(1) Background Information

The main sources of information on population statistics of Malaysia are censuses.

In 2000 Malaysia conducted its fourth census of population since its formation in 1963, the first, second and third having been held in 1970, 1980 and 1991. Postwar population censuses were held in 1947 and 1957 in Peninsular Malaysia and in 1960 in Sabah (North Borneo as it was then known) and Sarawak.

Intercensal estimates based mainly on natural increases in population are undertaken by the Department of Statistics under the Prime Minister's Department.

(2) Purpose

The main purpose of conducting these censuses is to obtain updated information on the population in the country, with each subsequent census covering an increasing number of items of socio-economic information in addition to the basic enumeration. The census information is used in sectoral planning by the Government as well as by the private sector and by researchers.

(3) Coverage

Nationwide.

(4) Contents

The 2000 census report contains a detailed analysis of the key census topics such as population changes and its structure, marriage and fertility, migration, labour force, education, household and other socio-economic characteristics.

(5) Data Collection Procedure

In the 2000 population census, the particulars of all persons in Malaysia were recorded at their place of residence on the designated census day by field enumerators sent to the different census districts. Data collection and computerized processing are done wholly by the Department of Statistics.

(6) Tabulation and Publications

The Department of Statistics is responsible for the tabulation and release of census results and for the annual publication on current population estimates.

Census information is published in the *Census Report* and the *Year Book of Statistics*.

3. Vital Statistics

(1) Background Information

The main sources of information on vital statistics are vital registration of births and deaths.

Since 1963 the Department of Statistics, with the concurrence of the Registrar-General of Births and Deaths, has been coding and publishing statistical data on vital events based on information contained in Birth, Death and Stillbirth Certificates.

The Registry of Births and Deaths responsible for the vital statistics information is under the Ministry of Home Affairs.

(2) Purpose

The main purpose of the vital statistics, apart from its legal value, is to inform on changes in the current population in respect of births, deaths and causes of death, and fertility trends in general. It is thus useful for constructing the intercensal population estimates and population projections. It is particularly useful in health planning as the data collected are on a national basis.

(3) Coverage

Nationwide

(4) Contents

The vital registration statistics cover births, deaths and causes of death.

(5) Data Collection Procedure

Vital statistics on births and deaths are collected at designated registration centres throughout the country. However, processing by computers is still done by the Department of Statistics.

(6) Tabulation and Publications

Information pertaining to current demographic changes is published in the annual *Vital Statistics* and the *Year Book of Statistics*.

4. Health Statistics

(1) Background Information

A major portion of the health service information under the Ministry of Health is collected by the Information and Documentation System Unit (IDSU) through the Health Management Information System (HMIS). For the information whose collection is managed by the respective divisions in the Ministry (e.g. Finance, Manpower, Pharmacy, Research, etc.), the final output will need to be channelled through the IDSU when it is meant for consumption of the general public.

The types of health information can be classified under three general groupings, viz.

- Health status
- Health resources
- Health activities.

(2) Health Status

Information on health status is comprised of two types:

(i) Vital statistics as published by the Department of Statistics; and

(ii) Morbidity and mortality statistics from government medical and health facilities as collected by the Ministry itself.

a. Purpose

These statistics depict the current health status of the general population and also its trend over the years.

b. Coverage

The vital statistics cover the total population while the mortality information covers all reported deaths. Owing to the nature of the occurrence of deaths, about two-thirds are non-medically certified. Generally, the causes of death (and morbidity) reported at government hospitals are fairly reliable.

Statistics on births, deaths and causes of death are published in Vital Statistics by the Department of Statistics while statistics on morbidity and mortality in government hospitals are available up till the third terminal digit of the ICD (9th Revision).

c. Data Collection Procedure

Vital statistics are collected by the Registry of

Births and Deaths through its network of registration centres all over the country by gazetted personnel. The data are processed and published by the Department of Statistics.

Morbidity and mortality statistics in government health facilities are collected monthly by the IDSU of the Ministry.

d. Tabulation and Publication

Annual data are published in the *HMIS Report*, the *Indicators for Monitoring and Evaluation of the Strategy for Health for All*, and the *Annual Report of the Ministry of Health*.

(3) Health Resources

These cover health manpower, financing, inventory and infrastructure.

a. Purpose

The main purpose of this information is to ensure that the needed resources are adequate at all times for supporting the regular health services.

b. Coverage and Contents

- All registered medical professionals, paramedics and auxiliaries.
- Financing of all activities based on priority.
- All existing inventory in the Ministry of Health.
- Status of development of physical projects.

c. Data Collection Procedure

The information on health manpower is obtained through the various registration boards for the professionals and sub-professionals. These registers cover both the practitioners in the public and the private sectors and are updated annually.

Data on the employment status of specific categories of personnel in the Ministry of Health (including non-medical professionals, sub-professionals, and also contract foreign medical personnel) are also available from administrative records.

Health financing is monitored by the Finance Division of the Ministry of Health in the annual budgeting examinations. The Ministry has adopted the Modified Budgeting System introduced in 1990.

In the absence of a central inventory system and national guidelines, the existing lists of inventories or assets owned (plant, equipment and building, land, vehicles) are kept by the following divisions of the Ministry: Contract and Supply Division, Hospital Division, Health Division, Dental Division, Engineering Division, Planning and Development Division, the IDSU and the Com-

puter Unit. However, plans for a centralized inventory system are under way.

The progress of physical projects is monitored by the Planning and Development Division. However, for projects that have gone off the ground, the maintenance is monitored by various divisions concerned with specific aspects of the fixed asset, for example, Engineering Division, Hospital Division, Health Division, and Finance Division.

d. Tabulation and Publication

The information on health resources is documented in the respective annual reports of the various divisions of the Ministry, and also in the *Annual Report of the Ministry of Health* in a somewhat summarized form. The State's annual report and the Hospital's annual report also contain such information but in greater detail.

(4) Health Activities

In the formulation of the Malaysia Plan (2001–2005), the health information system continues to receive emphasis from health management as a decision support system. Among the various programmes, some of the information systems were reviewed and further strengthened to accommodate the changing information needs of the health programmes.

The emphasis in health care delivery is gradually changing from adequacy of care to quality of care, and this has prompted the need to upgrade the analytical skills of health personnel at all levels in using information as a management tool.

a. Purpose

The main objective of the information system is to monitor prevailing health programme performance towards specific goals or targets. On a long-term basis, the information is used for policy formulation, resources planning and projection of future demands for health and medical services.

b. Coverage

Information is collected for all activities carried out by the twenty-three programmes in different types of health and medical establishments run by the Ministry of Health.

c. Contents

The information collected measures, directly or indirectly, performance in terms of achievement of objectives in the specific programmes. These include:

- family health activities;
- morbidity and mortality data and utilization of

facilities in government medical establishments;
- incidence of notifiable communicable diseases and their prevention and control;
- environmental sanitation;
- food quality control;
- dental health;
- pharmaceuticals production and control;
- leprosy, tuberculosis and vector-borne disease control;
- health education activities;
- manpower planning;
- health systems research and biomedical research.

d. Data Collection Procedures

Information for a majority of the health care programmes is collected through the HMIS. However, many of the service support programmes like pharmacy, manpower development, general health planning, and health and medical research collect information through their own effort and initiative. There are plans to streamline these independent systems and integrate them into the general HMIS.

All information generated at service delivery points, namely at hospitals and public health facilities, is compiled into a monthly report and sent to the district level for further compilation. The process is repeated from the district to the state and the province, and subsequently stopped at the Information and Documentation System Unit at the national level for final processing.

e. Tabulation and Publication

Much of the routine data collection is on a monthly basis. However, published data for official use in general planning at national and at state levels are usually annual and in an aggregated or summarized form. Such information is to be found in the annual reports for specific programmes, the HMIS annual reports, the *Ministry of Health Annual Report* and the *Indicators for Monitoring and Evaluation of the Strategy for Health for All.*

The state and hospital reports are also available but these contain detailed information useful for planning at local level.

5. Computerization of Health Information

(1) Background Information

Computerization as a supportive service to health management was conceptualized as early as in 1976. However, due mainly to technical manpower constraints it was deferred until 1979 when it gained momentum starting off with the computerization of accounting activities within the Ministry.

In the absence of a central coordinating unit, computerization developed as separate functional entities within the Ministry of Health. In an effort to coordinate and streamline such sporadic proliferation, the Technological Information Centre was established within the Ministry in January 1991.

(2) Current Development

At present there are six key projects under the computerization plan in the Ministry covering the following activities:

(i) Store Management and Inventory Control System;
(ii) Biomedical Research;
(iii) Staff Management Information System;
(iv) Financial Information System;
(v) Health Management Information System;
(vi) National Pharmaceutical Laboratory Control System.

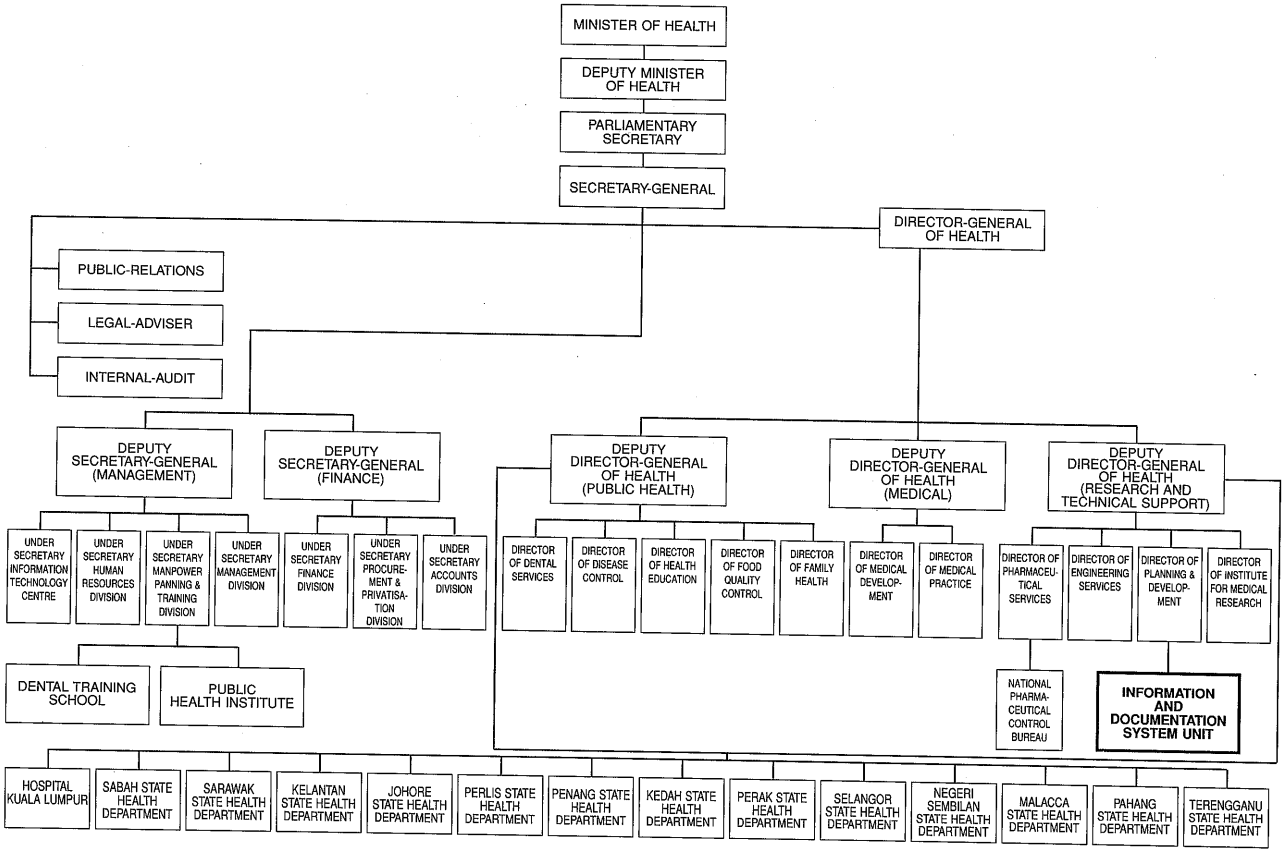
All the above projects either have been implemented fully (and continually upgraded) or are in various stages of implementation.

The hardware is in the form of mainframes, supermicros/minicomputers and microcomputers.

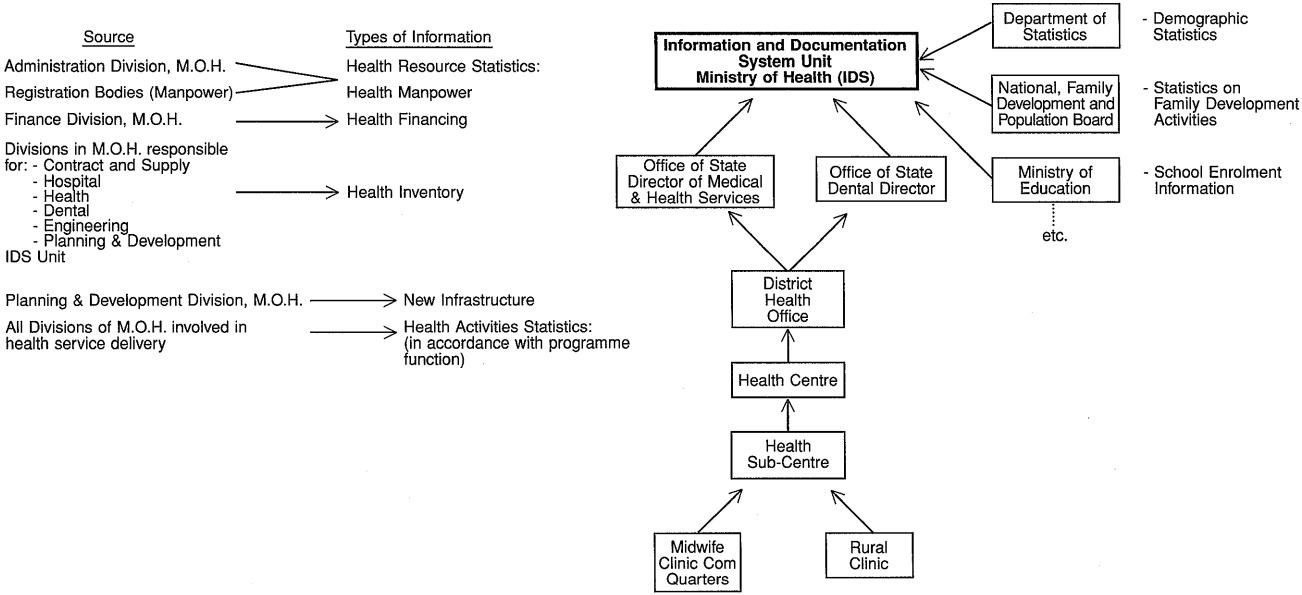
In response to the growing number of users of computerized information within the Ministry itself coupled with the availability of more sophisticated micros at lower costs, the Ministry is encouraging the use of a microcomputer system at local levels. Information sharing is one of the ultimate aims in computerization but duplication need to be avoided.

(Information and Documentation System Unit, Ministry of Health Malaysia)

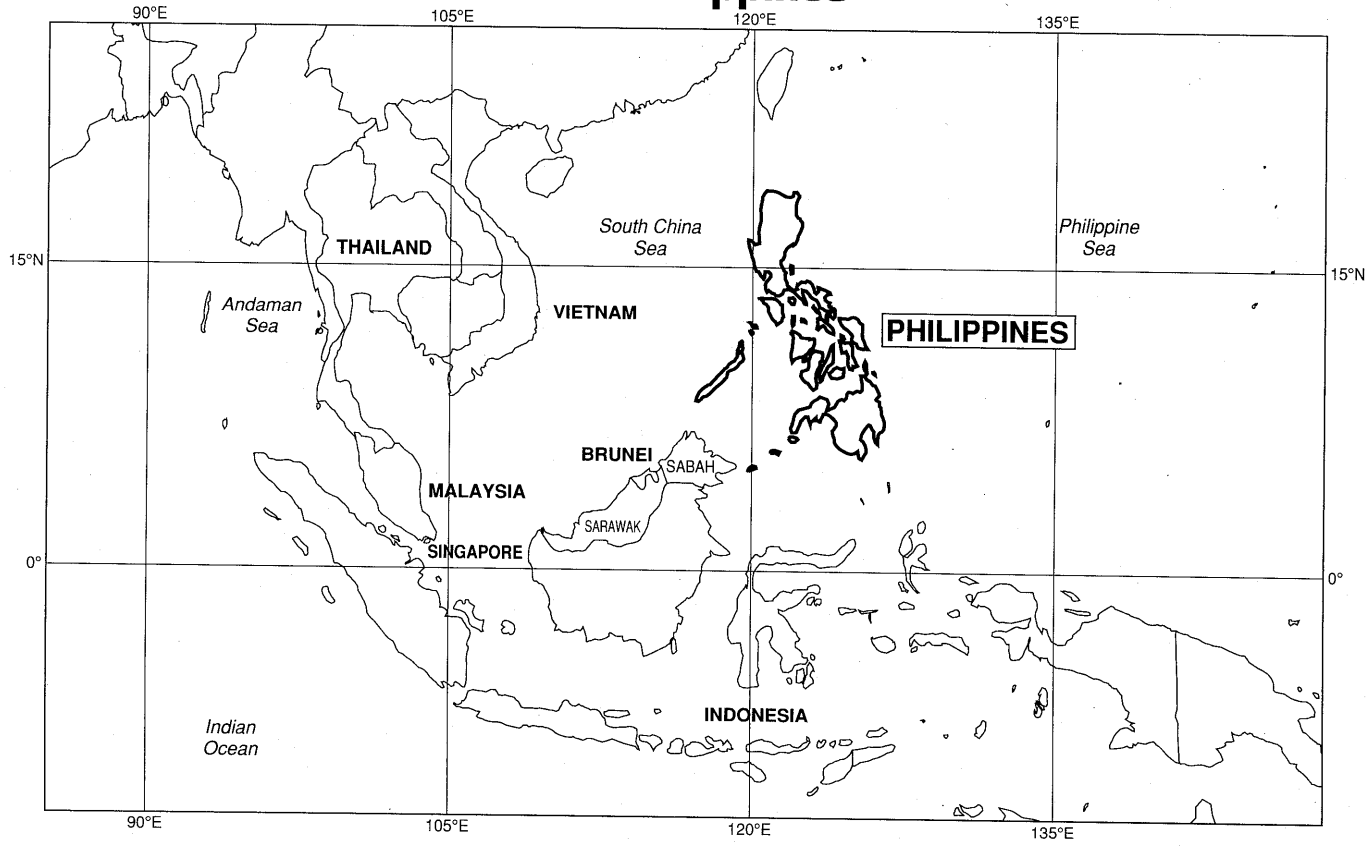
Organization Chart of the Ministry of Health, Malaysia



Flow of Health and Health-Related Information, Malaysia



The Philippines



The Philippines

1. Health Policy Developments

The Philippines Department of Health assumes the new role, shifting from that of "the sole provider of specific health services" to that of "a provider of specific health services and a technical assistance provider for the health sector", as a result of the devolution process.

The Department is now the national technical authority on health, the organization that provides technical and financial assistance, including the establishment of performance standards for human resources, health facilities and institutions, health products and health services. The local government units, non-government organizations, other private organizations and individual members of civil society act as direct implementers of health programs and as prime developers of health systems.

In line with this policy, the Health Sector Reform Agenda has been launched, which is already making waves as the Department envisages health for all Filipinos. The Agenda has since been further strengthened with new priority programs comprising:

(1) Pharma 50, or the 50% reduction of the cost of drugs and medicines commonly used by the poor population;

(2) Plan 500, or the health insurance coverage of 500,000 indigent families;

(3) Child health;

(4) Women's health;

(5) Tuberculosis; and

(6) Tobacco control.

In view of the large variation still existing in the health status of the Filipino people and in the accessibility to health services among the population groups, income classes and geographical locations, the first two programs have been included among the top priority programs of the President of the Philippines.

2. Population Statistics

(1) History

The first complete count of the population of the archipelago was made in 1903. The census of 1903 was followed by others carried out in 1918, 1939, 1948, 1960, 1970, 1975, 1980, 1990 and 1995. The 1995 census was the tenth national population census and this was carried out in September, 1995 by the National Statistics Office (NSO).

(2) Purpose

While the 1995 census was mainly intended to make an inventory of the total population and its characteristics, the census will also form the basis for the apportionment of Internal Revenue Allocations for local government units (as defined by the Philippines' 1991 Local Government Code, implemented in 1992) and for the creation of new legislative areas (regions, provinces, municipalities and barangays). Requests for conversions of local government units to another level (municipality to city) will also be based on this census.

In general the population census is the source of information on the size and distribution of the population as well as information about the demographic, social, economic and cultural characteristics of the Filipinos.

The NSO is mandated by law to conduct a national census every ten years, but a multi-agency board (NSCB-National Statistical Coordination Board) decreed the conduct of the mid-decade population census to serve the statistical requirements of the national government.

(3) Consolidation, Analysis and Presentation

The NSO published a report in March 1997 on the Population Census of 1995. The report highlights the population's size and trends since the first census in 1903, its distribution among the regions of the country, and disaggregates the population by age groups and sex, the numbers married and single by sex, the educational attainment of the population (highest level completed), the mother tongue spoken, types of disability, numbers and sizes of households and the characteristics of the household head, the number of overseas workers, trade skills of the population and class of worker.

(4) Projections in the years between censuses

The NSO and the NSCB have created technical committees on population, housing and population projections to cover annual projections on the population.

3. Vital Statistics

I. Natality Statistics

(1) History and Operation

As provided by the Civil Registry Law, all live-births are registered within thirty days from the date of birth at the Local Civil Registrar of the place of birth through a certificate of live-birth. The NSO collects and analyzes all information on these certificates and reports it regularly. The head of the NSO is the country's Civil Registrar-General.

(2) Field Health Natality Reports

Natality statistics are collected by health facilities nationwide from the civil registrars using MFHSIS (Modified Field Health Services Information System) Annual Form 1 - Vital Statistics Report. The annual forms collected in January are reported by local governments to the regional offices of the Department of Health (DOH), who in turn submit consolidated natality statistics to the National Epidemiology Center in Manila. These reports are released through the *Philippine Health Statistics*, published annually by the DOH - National Epidemiology Center.

II. Mortality Statistics

(1) History and Operation

Deaths are registered also under the Civil Registry Law through Local Civil Registrars in the form of death certificates within thirty days from the time of death through the registrar of the place of death. When the death occurred in transit or where the place of death cannot be ascertained, registration is made in the registrar of the place of burial. Reports from the registrars are submitted to the NSO, which releases data on causes of death by the ICD-9 classification to the DOH's National Epidemiology Center.

(2) Field Health Mortality Reports

Mortality statistics are collected by field health units from the civil registrars and reported to the DOH on January, using MFHSIS Annual Form 1- Vital Statistics Report and MFHSIS Annual Form 3 - Mortality Report. Form No. 1 provides a summary of mortalities by group: maternal deaths, infant deaths, infant deaths due to neonatal tetanus, and late fetal deaths. The Mortality Report on the other hand reflects the probable cause of death as noted from the death certificate; this is reported by age and gender.

Local governments nationwide collate the reports for submission to the the Centers for Health Development offices for eventual submission to the National Epidemiology Center, Department of Health in Manila which includes the information in the *Philippine Health Statistics*.

4. Morbidity Statistics

(1) History and Operation

Diseases of public health importance (notifiable diseases) have been reported to the DOH based on the law on Reporting of Communicable Diseases since 1929. The list of notifiable diseases is updated regularly by the DOH through its National Epidemiology Center.

Reports on those notifiable diseases seen by the rural health unit (RHU) staff, reports from private practitioners and reports from midwives based at Barangay Health Stations (where cases of pneumonia, measles, diarrhea, chicken pox and hypertension are usually first seen) are gathered by field health personnel at the municipal and city levels where the weekly trend of diseases is analyzed. These Municipal and City Health Offices submit monthly (4-week) consolidation reports to the provincial health office for further consolidation, analysis and possible action when there are outbreaks.

At the end of the year, the field health offices consolidate their monthly reports into the MFHSIS Annual Form No. 2 - Notifiable Diseases Report which is submitted every January to the DOH. The report lists the notifiable diseases occurring in their area by age and gender.

The reports consolidated by the DOH are used in compiling the ten leading causes of morbidity and annual morbidity rates. The results are released through the regular publications of the National Epidemiology Center which include:

a) *MFHSIS Annual Reports*

b) *Philippine Health Statistics*

5. Health Resources Statistics

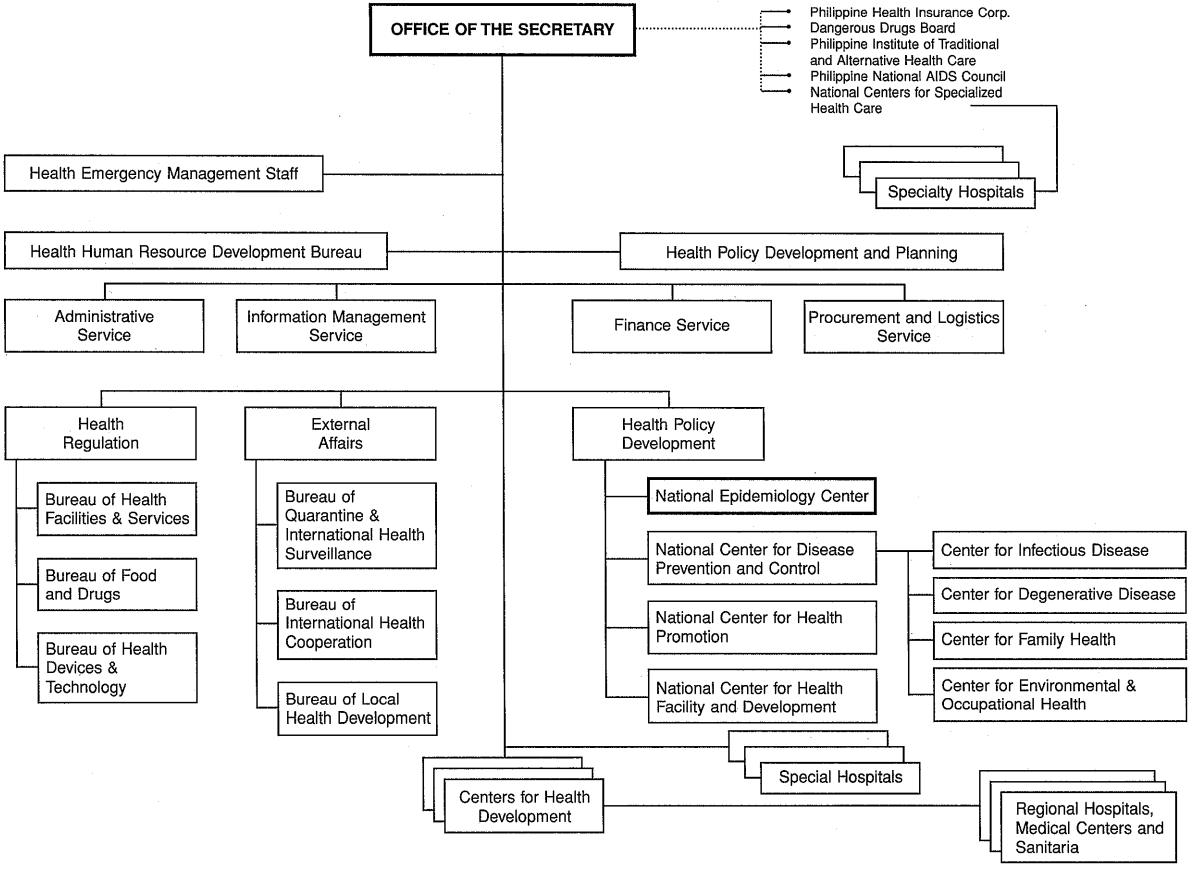
These include data on health manpower, health facilities such as hospitals and health centers, finance, budget, supplies and equipment.

The National Epidemiology Center has various sources for these data. The following are the sources for such information.

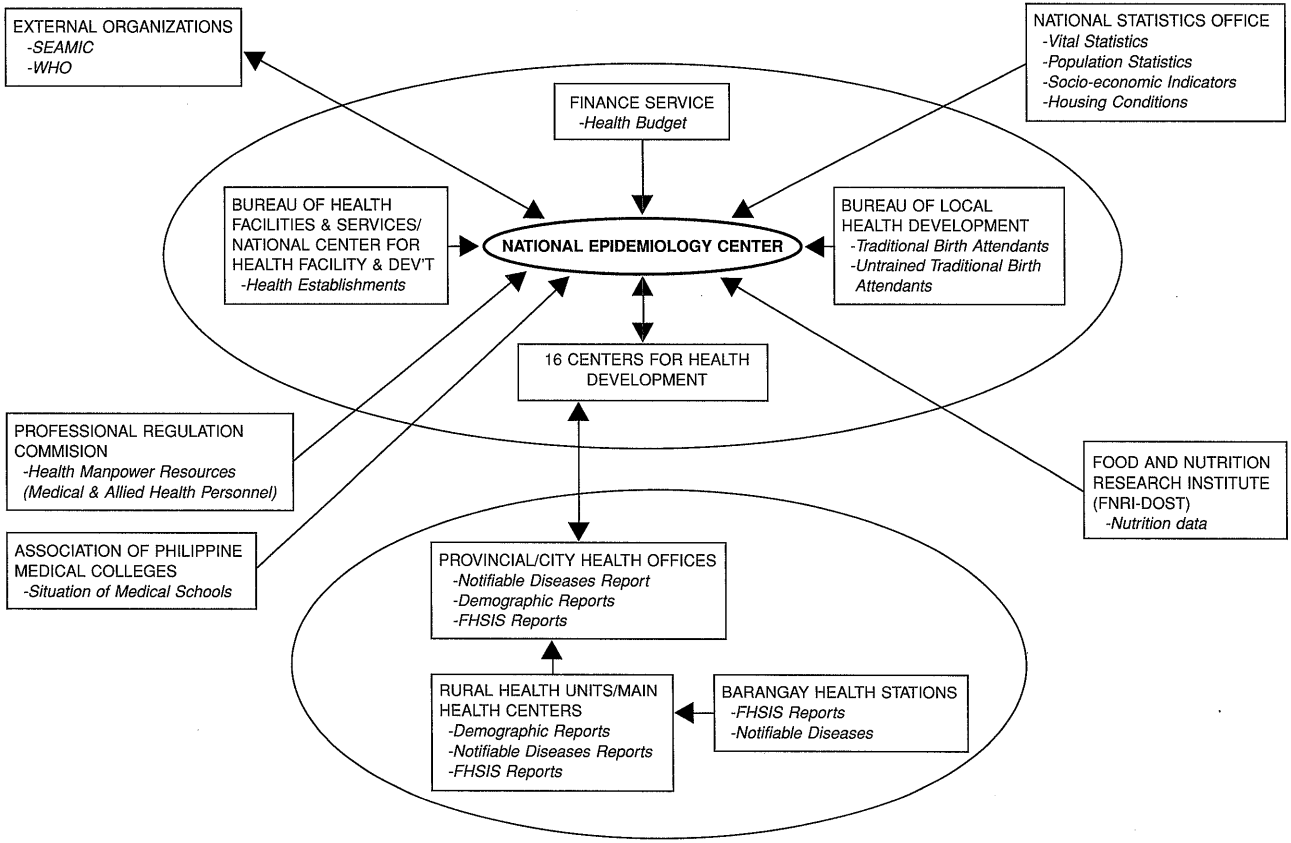
1. The Bureau of Health Facilities and Services as well as the National Center for Health Facility and Development provide data on the total number of licensed government and private hospitals as well as the total bed capacity of each hospital.
2. The MFHSIS Annual Demographic Report Information on the total number of Rural/Main Health Centers and Barangay Health Stations (PHCs) throughout the country are reported through the MFHSIS A-1.
3. The Professional Regulation Commission (PRC) - This agency is the source of all licensed/registered manpower in a given year who passed different Board/Bar examinations given by the government. The data are on an annual basis with the cumulative total for each category.
4. The Administrative Division of the DOH - The Central Office and the different Centers for Health Development provide the total number of health manpower who are retained by the Department of Health. For those devolved to the local government units (LGUs), the total number of the existing health manpower is submitted through the MFHSIS on an annual basis by all Centers for Health Development.
5. The Bureau of Local Health Development provides data on the total number of voluntary health workers nationwide.
6. The Association of Philippines Medical Schools releases data on total number of enrolment and graduates per year.
7. The Finance Service gives information on the DOH budget on different programs and activities, procurements, supplies and equipment.

(National Epidemiology Center, Department of Health)

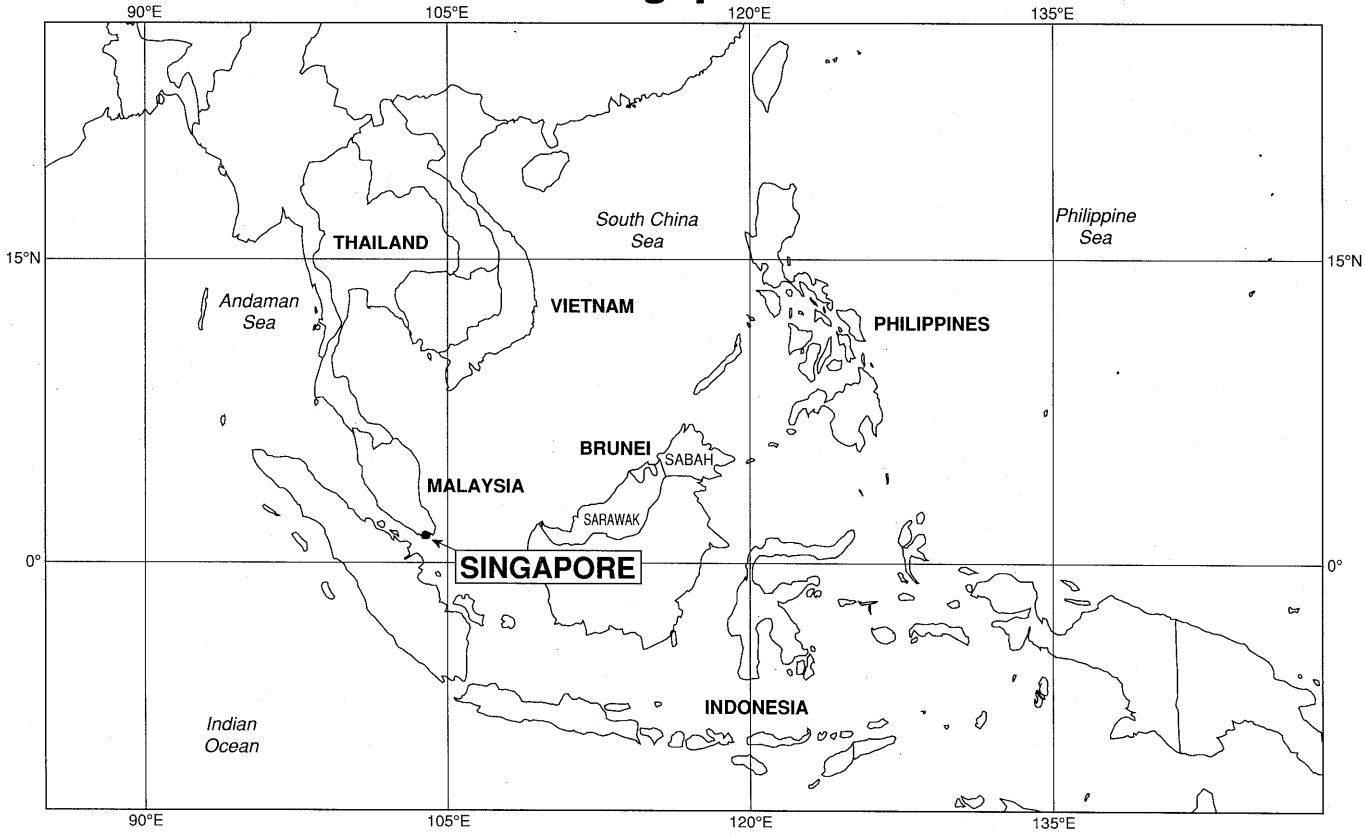
Organization Chart of the Department of Health, Philippines



FLOW OF HEALTH INFORMATION



Singapore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Andaman Sea
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PHILIPPINES
BRUNEI
SABAH
MALAYSIA
SARAWAK
SINGAPORE
INDONESIA
Indian Ocean

Singapore

1. Health Policy Developments

Over the course of the last 30 years, the health of Singaporeans has improved dramatically. Today, all Singaporeans enjoy a good state of health.

Singpore's healthcare philosophy is to build a healthy nation by promoting good health through preventive healthcare and health education and by providing good and affordable basic medical services to all Singaporeans. This framework emphasizes personal responsibility, for the adoption of a healthy lifestyle, saving for future healthcare, prudent use of medical services, and avoidance of over-reliance on state welfare or medical insurance.

The main areas of healthcare activity comprise: (1) prevention of communicable diseases through the National Childhood Immunization Programme, with a high coverage achieved exceeding 90% for almost all types of immunization; (2) health education and health promotion through the National Healthy Lifestyle Programme (initiated in 1992) aiming at the prevention of the major non-communicable diseases; (3) healthcare services by the public sector, private sector and voluntary welfare organizations; (4) health manpower development; (5) healthcare financing, emphasizing individual responsibility and based on the Midisave, MediShield and Medifund schemes (see section 5 below); and (6) comprehensive health care for the elderly, covering health promotion and disease prevention, screening programmes, acute medical care, institutional care services including community hospitals and nursing homes, and community-based support services such as day rehabilitation centres, day hospitals and home care services.

The Government also provides financial assistance to step-down care by voluntary welfare organizations (or non-governmental organiztions) including capital grant of up to 90% of cost, operating subsidy and rental subsidy. A scheme of 3-tier subsidy of 75%, 50% and 25% was implemented as from July 2000 for these nursing homes, corresponding to the level of household income, with the highest quantum of subsidy given to those with the least ability to pay.

To ensure adequate sustained funding for caring

elderly population, the Eldercare Fund was set up in 1999 to finance step-down care for the elderly. The capital sum of the Eldercare Fund amounted Singaporean $500 million in 2000. It is targeted for the sum to reach $2.5 billion by 2010.

2. Population Statistics

(1) Background Information

The main sources of information on population statistics of Singapore are censuses.

Singapore conducted its first population census in 1871 and subsequent censuses at ten-year intervals till the outbreak of World War II. In the pre-war censuses, Singapore was included as part of the Straits Settlements and later, of Malaya. Separate censuses for Singapore were carried out in 1947, 1959, 1970, 1980, 1990 and 2000. Mid-year population estimates are made for the intercensal years.

(2) Purpose

The main purpose of conducting censuses is to obtain updated information on the population situation in the country. Such data are essential for statistical analysis of changes in the population. Census information is particularly useful for planning and for evaluation of programmes such as housing, education, health, transport and other social amenities, as well as for research and analysis by the Government, private corporations and individuals.

(3) Coverage

The whole population of Singapore.

(4) Contents

In the 2000 Census of Population, the detailed information collected on the population could be classified under the following broad categories:

a. Demographic characteristics;
b. Religion;
c. Marriage & fertility;
d. Education, literacy & language;
e. Economic characteristics;
f. Income;
g. Mode of transport;
h. Households & housing characteristics.

(5) Data Collection Procedure

Population Census 2000 adopted a register-based approach. The total population was not required to file any census return, as the basic information was obtained from the database of public authorities.

Detailed data were collected for a 20% sample of households. This covered only persons present in Singapore.

The option of Internet Enumeration was made available to all households selected for the 20 per cent sample enumeration. This was a first in Singapore's census-taking history. Some 15 per cent of the selected households completed their census questionnaire online. Households which did not submit their returns by Internet were automatically scheduled and dialed up for Computer Assisted Telephone Interviewing (CATI). Fieldwork was carried out for households which could not be contacted by Internet or CATI.

Data collected via Internet and CATI were captured in the Census database without the need for data entry. Additional Processing had to be undertaken for data obtained from the fieldwork. Data items in the questionnaires were captured in the Census database using the high-end scanning technology and superb recognition software. The final processing of the census data involved the editing and verification of erroneous and inconsistent records.

(6) Tabulation and Publication

The Department of Statistics is responsible for the tabulation and release of census results and also for the periodic publication of population and vital statistics. The data are published in the *Monthly Demographic Bulletin*, *Monthly Digest of Statistics*, *Statistical Highlights Singapore* and the *Yearbook of Statistics, Singapore*.

3. Vital Statistics

(1) Background Information

The main source of vital statistics is compulsory registration of births and deaths.

Under the Registration of Births and Deaths Act, all occurrences of births and deaths within Singapore are required to be reported within stipulated periods. The registration system has been operative for many years and records of vital statistics are virtually complete.

(2) Purpose

In the case of vital registration, besides the legal requirements, the aim is to collect detailed information on births and deaths including the underlying causes of mortality.

Such data are essential for statistical analysis of changes in the population and studies of mortality trends.

(3) Coverage

The whole population of Singapore.

(4) Contents

Statistics and health indicators derived from the vital registration system include:

(i) Births

a. Number and rate;
b. Number and percentage distribution by birth attendant;
c. Number and rate by age of mother and ethnicity;
d. Number by occupation of father and birth order;
e. Number by birth weight and gestation period;
f. Crude birth rate;
g. Age-specific fertility rate;
h. Total fertility rate;
i. General fertility rate;
j. Gross reproduction rate.

(ii) Deaths

a. All deaths, number and rate by age, sex, ethnic group, medical attendance and cause;
b. Infant deaths, number and rate by sex, ethnic group and cause;
c. Neonatal deaths, number and rate by sex, ethnic group and cause;
d. Perinatal deaths, number and rate;
e. Stillbirths, number and rate;
f. Maternal deaths, number and rate;
g. Crude death rate;
h. Causes of death by age and sex (coding based on ICD-9);
i. Standardized mortality ratio.

(5) Data Collection Procedure

Vital statistics on births and deaths are processed from the Special Preliminary Report Forms completed by the various vital registration centres. Processing of the statistical information is undertaken by the Registry of Births and Deaths which is under the purview of the Ministry of Home Affairs.

(6) Tabulation and Publication

Detailed information on births and deaths are published annually in the *Annual Report on the Registration of Births and Deaths.*

4. Statistics on Notifiable Diseases

(1) Background Information

Statistics from notification of specific infectious diseases, e.g. cholera, enteric fevers, dengue hemorrhagic fever, malaria, viral encephalitis, viral hepatitis, tuberculosis, venereal diseases and leprosy, are collected routinely.

In 1973, a Joint Co-ordination Committee on Epidemic Diseases was set up. The main objective of the Committee is to co-ordinate the work and responsibilities of the Ministry of Health and the Ministry of the Environment on diseases of public health importance, specifically, the notifiable diseases and other diseases which may be considered of sufficient importance to require co-ordinating action and liaison between the two Ministries.

Statistics on diseases of key interest are monitored and reviewed by this Committee.

(2) Purpose

To monitor and control the epidemiological situation of the country with the primary aim of early detection of outbreaks of infectious diseases so that control measures can be instituted promptly.

(3) Coverage

All persons reported to have contracted any of the notifiable diseases.

(4) Contents

All reported cases of notifiable infectious diseases by type, including information on the profile of infected persons.

(5) Data Collection Procedure

Except for tuberculosis, venereal diseases and leprosy for which notifications are made to special registries in the Ministry of Health, notifications of the other infectious diseases are received by the Quarantine and Epidemiology Department of the Ministry of the Environment. Under the existing regulations, notifications of the specific notifiable diseases are com-

pulsory by all providers of health and medical service in the country.

(6) Tabulation and Publication

Based on information from notifications of specific notifiable diseases, the Committee on Epidemic Diseases publishes the *Weekly Infectious Diseases Bulletin* and the *Monthly Epidemiological News Bulletin.*

5. Morbidity Statistics

(1) Background Information

Routine collection of morbidity statistics on patients admitted into government hospitals started in 1969 as part of an overall objective of augmenting the existing data on specific notifiable diseases and other data on specific diseases from special disease registers such as those of tuberculosis, leprosy, venereal diseases and cancer.

In 1974, the scope of morbidity data was extended to the outpatient level, and since then the records of cases seen at all government primary health care clinics have been compiled according to disease conditions.

In 1978, a new statistical series was introduced by the Ministry of Health requiring private hospitals to provide, on prescribed forms, information pertaining to each patient admitted into their hospitals.

In July 1990, the Central Claims Processing System (CCPS), an automated system, was introduced by the Ministry of Health to facilitate all public and private hospitals to submit their Universal Claims Forms (UCF) through the Singapore Network Systems. The UCF is a single electronic message that contains all information for the Medisave*, claims for MediShield** and Hospital Inpatient Discharge Summary (HIDS). Through this system, Medisave and MediShield claims are submitted to the Central Provident Fund Board while the information from the HIDS is made available to the Ministry of Health for the processing of patient profile and disease data.

The Government has also established the Medifund*** to help needy Singaporeans and to pay their medical bills.

* The Medisave Scheme is a compulsory savings scheme in-

troduced in 1984 to help Singaporeans to set aside sufficient savings for their hospitalization expenses. Under the Scheme, every employee contributes 6–8% (depending on the age group) of the monthly salary to his/her Medisave Account. The savings can be withdrawn to pay for the hospital bills for the participant or his/her dependant(s).

** The MediShield was introduced in 1990 to supplement the Medisave. It is a low-cost catastrophic illness insurance scheme designed to help members meet the medical expenses from major and prolonged illnesses which the Medisave balances would not be sufficient to cover. The participation in the MediShield Scheme is voluntary.

*** The Medifund, introduced in 1993, provides the safety net for those who, despite help from government subsidies, Medisave and Medishield, are still unable to afford their medical expenses.

(2) Purpose

The main purpose of collecting the data is to study the morbidity patterns of patients and to analyse the disease profile of patients. This helps in the planning and proper design of government and community health programmes.

(3) Coverage

All patients admitted into government and private hospitals and patients attending government primary health care clinics.

(4) Contents

Data on hospitalized patients include:

a. Socio-economic profile, e.g. age, sex, ethnicity, nationality, occupation;
b. Patient classification by specialty;
c. Source of referral;
d. Diagnoses (coding based on ICD-9);
e. Surgical operation;
f. Underlying cause of death (in the case of death of patient).

For outpatients, the principal morbid condition for which the patient is treated is recorded.

(5) Data Collection Procedure

With the introduction of the CCPS, all public and private hospitals submit electronically their Medisave and MediShield claims to the Central Provident Fund Board and their Hospital Inpatient Discharge Summaries (HIDS) to the Ministry of Health through their UCF. Morbidity data on outpatients are compiled from computerized records of patients attending government primary health care clinics.

(6) Tabulation and Publication

The Health Information Management Branch of the Ministry of Health is responsible for co-ordinating and ensuring that individual hospitals are up-to-date in their submissions of their returns before the statistical tabulations are generated.

The statistics are processed annually.

6. Statistics on Occupational Diseases

(1) Background Information

The Occupational Health Department in the Ministry of Manpower is responsible for controlling health hazards in workplaces and preventing occupational diseases. The department's inspectors, industrial hygiene staff, nurses and doctors check workplaces, investigate complaints and notifications of occupational diseases, and enforce the health provisions of the Factories Act. Advice is given to companies, unions and other organizations with problems relating to occupational health matters. Surveys are also conducted to delineate specific occupational health problems so that appropriate preventive programmes, including legislation, may be instituted.

(2) Purpose

Statistics on occupational diseases are collected for the following reasons:

a) To assess the size of various occupational health problems in Singapore;
b) To identify areas of concern;
c) To study occupational disease trends and patterns;
d) To formulate action plans so as to effectively control the hazards and prevent occupational diseases.

(3) Data Collection and Publication

Workers suspected to have occupational disease are referred to the Department through:

a) Notifications under the Factories Act and the Workmen's Compensation Act;
b) Complaints and consultation received from workers, unions and employers;
c) Returns on medical surveillance results of workers exposed to specific hazards, includ-

ing hazards prescribed under the Factories (Medical Examinations) Regulations 1985.

All these cases are investigated by the Department in order to establish the diagnosis and ensure that control measures are taken to prevent further cases.

Data collected following the above investigations of occupational diseases cases are analysed. This is the only source of data on occupational diseases in Singapore.

These data are published annually in the Ministry of Manpower's *Annual Report*, the *Singapore Yearbook*, the *Yearbook of Manpower Statistics*, as well as *Singapore Facts and Pictures*. On an ad hoc basis, the data may be published in the Manpower Ministry's newsletters, in scientific journals and in reports to international bodies, such as the ILO and WHO.

7. Health Service Utilization Statistics

(1) Background Information

Prior to 1976, the responsibility for data collection and the determination of the type of data to be collected rested with each government health institution depending on their specific administrative needs and requirements. However, with increasing awareness and recognition of the importance of developing an effective health management information system for both administrative and planning purposes, the overall system of data collection was revamped in 1976. This was undertaken by the then Research and Evaluation Section (now Health Information Management Branch) of the Ministry of Health. The statistical system has undergone a number of revisions since 1976 in tandem with the changing needs and requirements of health administrators and planners.

In 1978, the statistical system was extended to cover the activities of private hospitals. However, information on activities of private clinics is not monitored routinely. Some information on private clinics is available from ad hoc surveys conducted by the Department of Statistics.

(2) Purpose

One of the prime objectives of collecting the data is to monitor and make a short-term appraisal of the performance of the various service departments within the Ministry of Health and the utilization of private hospitals. The statistical information is also utilized in conjunction with other data for purposes of resource

allocation, projection of future demand for health facilities and manpower as well as overall planning for health services in the country.

(3) Coverage

Statistics collected cover activities of all government hospitals, ancillary services and primary health care clinics. Coverage of activities of private medical establishments is currently confined to private hospitals.

(4) Contents

The current range and type of data collected are fairly wide and include, amongst other things, information on:

a. Use of inpatient facilities, e.g. hospital admissions, bed-days, bed occupancy, duration of stay and discharges by specialty;
b. Surgical operations and anaesthetic procedures;
c. Outpatient attendances at hospital specialist clinics, ambulatory, emergency and walk-in clinic departments, primary health care and dental clinics;
d. Radiological and laboratory investigations and extent of use of services of various other paraclinical and ancillary departments, e.g. physiotherapy, occupational therapy, medical social services, etc;
e. Selected health manpower;
f. Average hospital inpatient bill sizes;

(5) Data Collection Procedure

The statistical returns are submitted on a monthly basis by various service centres to Health Information Management Branch, Ministry of Health for processing.

(6) Tabulation and Publication

The data are collected and published quarterly and annually in the form of statistical bulletins and other special reports.

8. Statistics on Preventive Health Care Service

(1) Background Information

Immunization of pre-school children is the responsibility of the Family Health Service.

The School Health Service is responsible for the

immunization of school children at regular intervals and the Ministry of Defence for national servicemen.

The Government Vaccination Centre provides immunization against cholera and yellow fever to any member of the public. Private medical practitioners also provide immunizations.

Since the early 1960's all childhood immunizations are notified to the Central Immunization Registry and statistics pertaining to immunizations administered have been collected and compiled.

(2) Purpose

To help determine immunization coverage in the country and to monitor immunization programme activities.

(3) Coverage

All pre-school and school children in Singapore.

(4) Contents

Data collected include:

a) Number of immunizations administered;
b) Number of children immunized by age;
c) Type of immunization;
d) Immunization coverage rate.

(5) Data Collection Procedure

Data are collected from the various Family Health Service Clinics and from vaccination records kept by the School Health Service and private practitioners as well as from the compulsory notifications of diphtheria immunization carried out in pre-school children received by the Central Immunization Registry.

(6) Tabulation and Publication

Statistics on the immunization programme are tabulated and published in the *Report of the Childhood Immunization Programme in Singapore* by the Quarantine and Epidemiology Department of the Ministry of the Environment.

9. Statistics on Legalized Abortion and Sterilization

(1) Background Information

The Singapore Family Planning and Population Board was established in 1966 by an act of Parliament as a Statutory Board under the portfolio of the Minis-

ter for Health. When the National Programme began in 1966, the main objective was to provide good and easily accessible clinical services where all couples wishing to practice family planning could obtain professional advice and contraceptive supplies.

In 1972, all existing programmes of the Board were intensified and many new measures were initiated.

Both the Abortion Act (1969) and the Voluntary Sterilization Act (1969) legalizing abortion and sterilization were repealed at the end of 1974 and replaced by the Abortion Act 1974 and the Sterilization Act 1974 which further liberalized abortion and sterilization in the Republic.

The collection of statistics on sterilizations and legalized abortions started in 1970.

(2) Purpose

The purpose of collecting the data is to monitor abortions and sterilizations carried by approved clinics and hospitals and the profile of persons undergoing such procedures . This is to provide the necessary information for policy formulation and programme planning.

(3) Coverage

All persons who have undergone sterilization or abortion.

(4) Contents

The statistical data collected include:

a) Number of sterilizations performed and profile of persons who have undergone sterilization;

b) Number of legalized abortions performed and profile of persons who have had their pregnancies terminated.

(5) Data Collection Procedure

Sterilization and abortion forms from all hospitals and clinics/institutions are submitted to the Health Regulation Division, Ministry of Health for data processing.

(6) Tabulation and Publication

The Health Regulation Division of the Ministry of Health is responsible for statistical tabulation and compilation of the data. The information is published annually.

10. Health Manpower Statistics

(1) Background Information

Although statistics on all grades of health personnel are available from administrative records, particular emphasis is focused on certain key personnel, viz. doctors, dentists, pharmacists, nurses and midwives, who are also incidentally required to be registered under the relevant acts, namely, the Medical Registration Act, the Dentists Act, the Pharmacists Act, the Nurses and the Midwives Act.

Manpower registers for these groups of personnel are computerized and updated periodically for them to be kept "live".

(2) Purpose

The purpose of these registers is to provide up-to-date data on the stock of the key health personnel in the country both for administrative use and for manpower planning.

(3) Coverage

All registered doctors, dentists, pharmacists, nurses and midwives in Singapore.

(4) Contents

Personnel particulars maintained in the registers contain not only vital information such as sex, age, race, religion and citizenship, but also details on qualifications, year of qualification and the university/institution which conferred the degree and specialist qualification, etc. Information on the type, duration and place of practice is also captured.

(5) Data Collection Procedure

The information is obtained from the registration forms completed by the doctors, dentists, pharmacists, nurses and midwives. The manpower registers are updated annually.

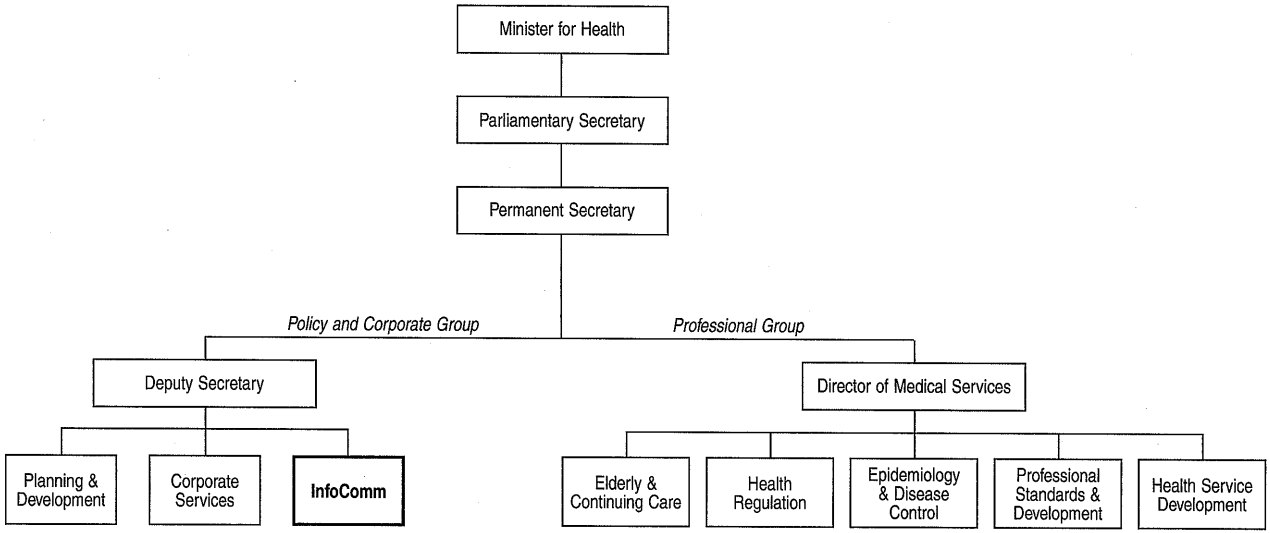
(6) Tabulation and Publication

Health Information Management Branch, Ministry of Health, is responsible for the tabulation and analysis of the statistical data. Reports on these key health personnel are published annually.

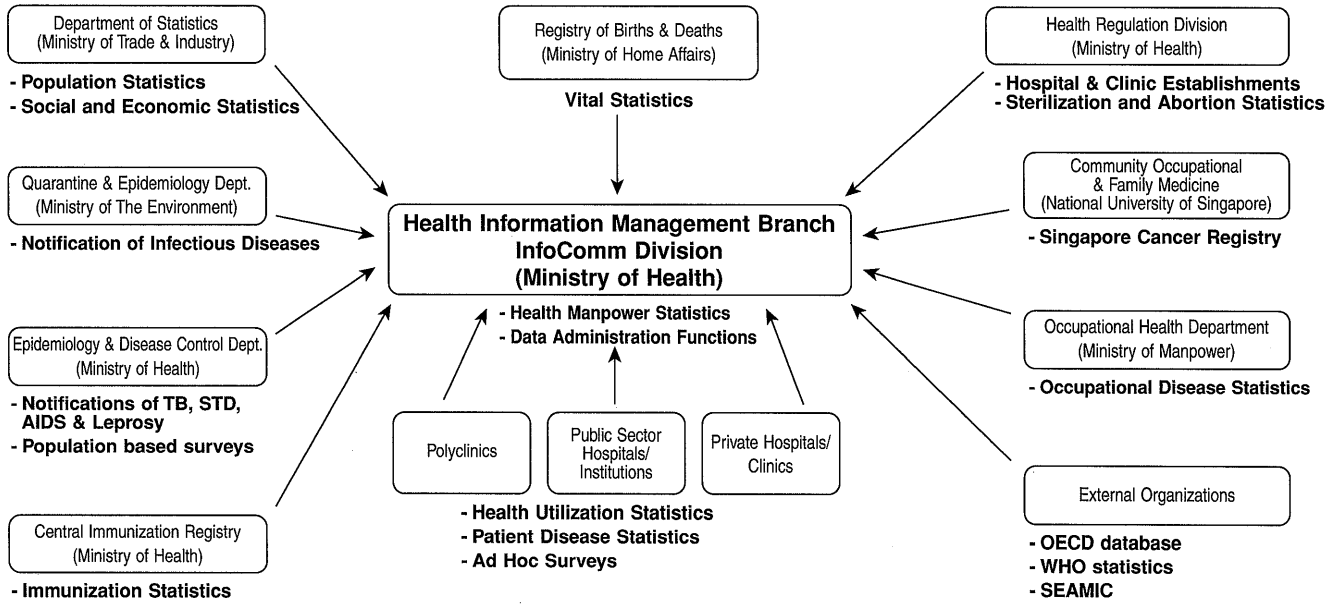
(Health Information Management Branch, InfoComm Division, Ministry of Health)

Organization Chart of the Ministry of Health, Singapore

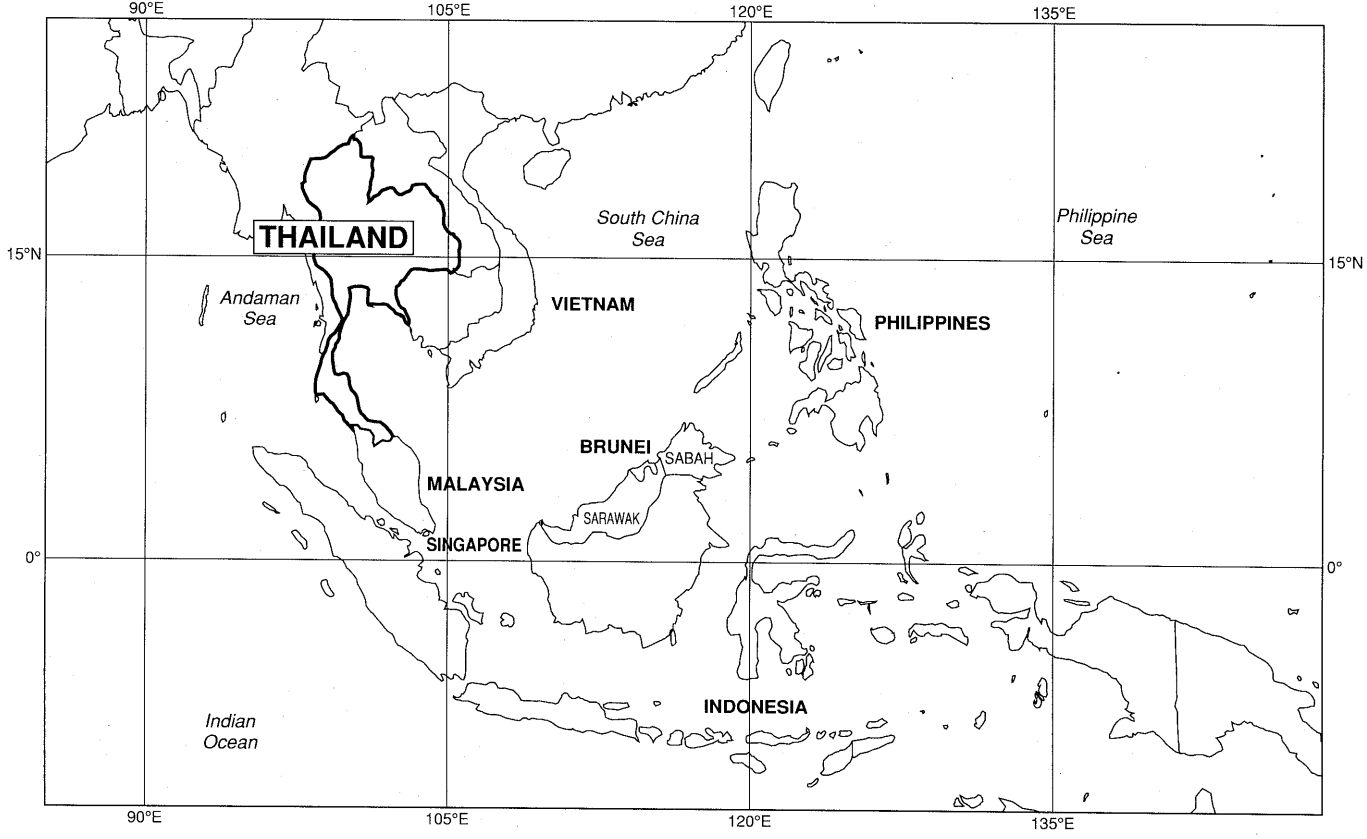
(as of December 2001)



Ministry of Health, Singapore
Flowchart of Health and Health-Related Information



Thailand


90°E
105°E
120°E
135°E
15°N
0°
THAILAND
South China Sea
Philippine Sea
Andaman Sea
VIETNAM
PHILIPPINES
BRUNEI
SABAH
MALAYSIA
SARAWAK
SINGAPORE
INDONESIA
Indian Ocean

Thailand

1. Health Policy Developments

During the past three decades, there has been a markedly decreasing trend in infant mortality, maternal mortality, child malnutrition, vaccine-preventable diseases, malaria, leprosy, encephalitis, helminthiasis and rabies. The key to these improvements has been the progressive development of a national system of public health that today penetrates into the most inaccessible corners of the Kingdom.

On the other hand, acute diarrhoea, dengue haemorrhagic fever, acute respiratory infection in children and HIV/AIDS still remain as important health problems. Chronic diseases such as heart disease, cancer and mental disorders have become the leading causes of morbidity and/or mortality.

Due to the economic crisis of 1997, health expenditure was reduced and the government budget was also cut. Besides, the demand shifted from private to public hospitals, and cheaper alternatives have been increasingly used, such as self-prescribed medicines, traditional healers, etc. Higher prices of imported drugs due to currency devaluation have made them less affordable by the poor, as household out-of-pocket payment is the major modality of purchasing services, because of the inadequate coverage of the public insurance mechanism.

The Royal Decree on the Establishment of the National Health System Reform Office (HSRO) has been proposed to the cabinet. The decree stipulated that the HSRO be a public organization to draft the National Health Act and to solicit social participation in the health system reform. The HSRO has been functioning since January 2000 with its term for 3 years.

In February 2001, the new government announced the major health policy of universal coverage with 30 Baht co-payment scheme. Under the scheme, all Thai people are entitled to the fundamental right for access to healthcare service as provided by the Constitution of the Kingdom of Thailand 1997. All people are encouraged to participate in the building up of the universal coverage health insurance scheme and are

given the right to be provided with good-quality healthcare service from any healthcare provider easily accessible. Both public and private healthcare facilities are requested to be quality-accredited for the provision of adequate and efficient healthcare services.

2. General Outline of the Health Information System

In Thailand the administrative area has been classified into several levels: central, provincial, district, subdistrict (tambon), and village. The health care delivery systems are provided in accordance with such an organizational structure.

In order to know the relevant status of health of the population, the system for collecting vital and health statistics has been established. Started with vital statistics, it was about 70 years ago that the registration of vital events became compulsory by laws in terms of births, deaths, and marriages. The responsible organization was the Ministry of Interior to which at that time the Health Department was attached. After that the Health Department was promoted and became the Ministry of Public Health, but the vital registration was still under the responsibility of the Ministry of Interior. When it came to the time for health development, the requirement for information concerning the health situation of population was not only confined to the vital statistics but also to other fields of health.

Within the context of health situation of the population, a variety of health information other than health and vital statistics is required so as to identify health problems. Health policies have been planned in accordance with the health problems of the people and subjected to the improvement of the unsatisfactory health situations. Health development plans are formulated to serve such policies and are included in the five-year National Economic and Social Development Plans. Particularly in the fourth five-year Plan (1977–1981), the Country Health Programming became the strategy for the health planning formulation in Thailand. With the concept of problem-oriented planning, the health problems are duly identified to prop up the health policy in planning to solve them. Then the requirements for the health information including vital and health statistics have become greater and greater, and the effective approaches to obtain more reliable and timely information have been implemented, utilizing high technology. The validity and accuracy of the sta-

tistics and information have gradually come up to a satisfactory level, but the timeliness is still the major problem. So it is expected that with the modern technology of computerized data processing system, it will bring in more satisfaction to the users.

3. Population Statistics

Thailand has conducted a population census for the whole country for 9 times since 1910. At the beginning, the population census was under the responsibility of the Ministry of Interior. When the National Statistical Office was organized under the Office of the Prime Minister, the responsibility for conducting the population census was transfered from the Ministry of Interior to the National Statistical Office. The ninth census, "Population and Housing Census 1990," was undertaken on 1 April 1990.

The main population statistics presented are put into 3 groups:

1. Census population and its components
2. Population estimates and expectation of life
3. Distribution of population

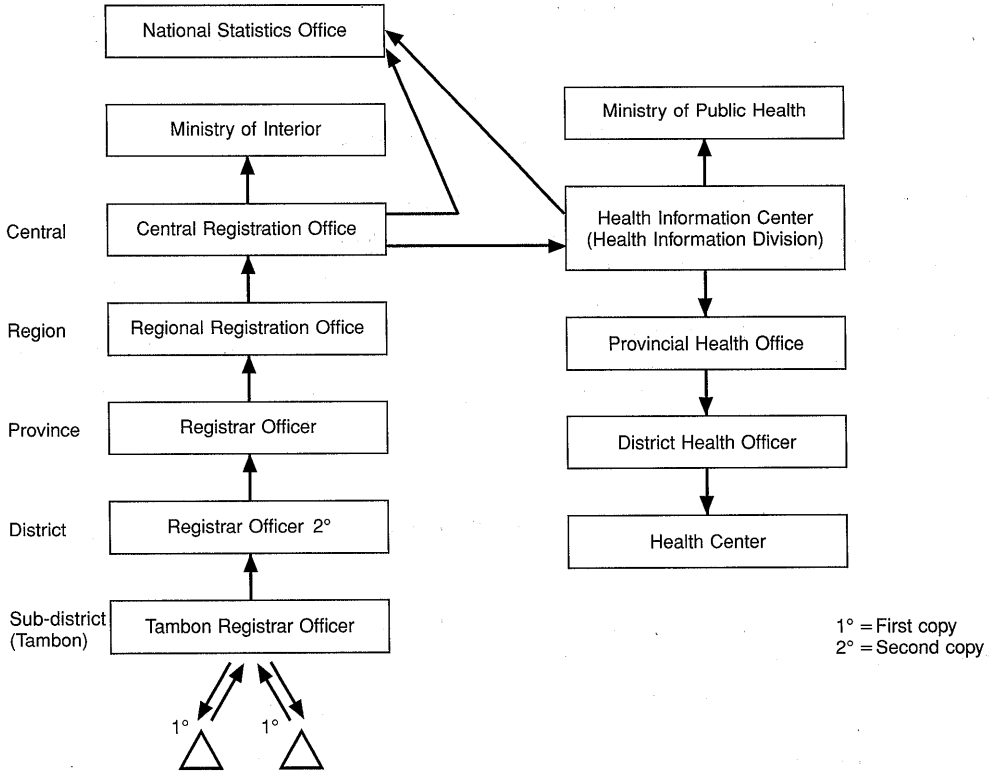
4. Vital Statistics

(1) Current System

The Vital Registration System of Thailand is at present under the jurisdiction of the Ministry of Interior. The function of this system is compulsory and nationwide which is very essential as a source of vital statistics. The raw data are collected through the channel of the local registrar office at the most peripheral level and are accumulated at higher levels until the data reach the central level. This system can be illustrated as follows.

(2) Channel of Data Collection

When there occurs a vital event, birth or death, the owner of the household in the village must report it to the head of the district called *kamnun*. At the dis-


National Statistics Office
Ministry of Interior
Central
Central Registration Office
Region
Regional Registration Office
Province
Registrar Officer
District
Registrar Officer 2°
Sub-district (Tambon)
Tambon Registrar Officer
1°
1°
Ministry of Public Health
Health Information Center (Health Information Division)
Provincial Health Office
District Health Officer
Health Center
1° = First copy
2° = Second copy

trict, the notifiable birth or death certificate is issued to the informant who then hands it to the District Registrar Office for registration. The Office produces 2 copies of the birth or death certificate; the first copy is handed to the relative of the newborn or the deceased, while the second copy is kept at the Office.

The District Registrar Office keys the data into its database which are transmitted to the province by an online system. The database at the Provincial Registrar Office is linked to the database at the Central Registrar Office, Department of Local Administration, Ministry of Interior. The data are then transmitted online to the Health Information Centre, Bureau of Health Policy and Planning, Ministry of Public Health, and processed and analysed for various types of statistical presentation for inclusion in the annual report of the Ministry.

The National Statistical Office performs the function of publishing all national statistical figures for the whole country. Vital statistics from the Ministry of Public Health are also sent to this Office for publication on an annual basis.

The birth and death rates presented in Tables 2–1, 2–2, 2–3 and 2–4 in Part I are those obtained from the civil registration system as outlined above. There is, however, a certain amount of under-registration of births and deaths. The Survey of Population Change (SPC) undertaken by the National Statistics Office in 1995–1996 estimated the crude birth rate to be 17.9 per 1,000 population, as against the figures of 16.3 and 16.7 obtained from the civil registration system for 1995 and 1996, respectively. For the crude death rate, the SPC estimate was 6.0 per 1,000 population, as against 5.5 for 1995 and 5.9 for 1996 from the civil registration.

In 1997–1998 the crude death rate from the civil registration dropped to 5.0 and 5.2, but in 1999 it rose again to 5.9, because in this year the Ministry of Interior cleaned the mortality registration system by removing the records relating to people aged 100 years and over from the Central Household Register, resulting in the rise of the computed death rate. There is still large under-registration of infant mortality, since many of the deaths occurring soon after birth are not registered. The SPC estimate for 1995-1996 was as high as 26.1 per 1,000 live-births, but the figures obtained from the civil registration are still given in Part I of the present edition for the sake of continuity.

5. Health Statistics

Other health statistics can be obtained under the jurisdiction of the Ministry of Public Health. The diagram below illustrates the flow of information from the grass-roots of the health delivery system. The information can be classified into health status, health activities, and health resources.

(1) Health Status

(i) Morbidity data are collected from the outpatients and inpatients in hospitals and other health institutions. The disease categorization is based on the 10th edition of the International Classification of Diseases (ICD) provided by WHO.

(ii) Epidemiological data are keyed in an electronic format for producing a weekly report which is sent by post to the Epidemiology Division, but some provinces transfer data by e-mail.

(iii) Tabulation and Publication

Natality, morbidity and mortality data are published in *Public Health Statistics*. Epidemiological data are published yearly in the *Epidemiological Surveillance Report* and in other special publications weekly, monthly and quarterly.

(2) Health Activities

(i) This kind of health information can be obtained from each level of the health delivery system in accordance with the progress of the activities performed by the health personnel. The health indicators have been established for each programme or project, and the recording and reporting systems are required to facilitate the monitoring and evaluation of the health projects.

A variety of record and report formats have been designed and put into practice according to the requirements of the responsible health units. The publication of information is undertaken on an annual basis.

The health service personnel have to perform the task of recording and reporting of their health activities which consumes so much of their time that complaints are made against insufficient time devoted to rendering the services. There have been many attempts to reduce this burden by revising or simplifying the record and report forms, but problems still exist.

(ii) Coverage

Activities on health projects or programmes undertaken by public health personnel at all levels.

(iii) Contents of report

a. Health care delivery
b. Mental health
c. Referral system
d. Immunization
e. Venereal disease control
f. Leprosy control
g. Tuberculosis control
h. Worm and parasite control
i. Malaria control
j. Veterinary public health
k. Diarrhoea control
l. Maternal and child health
m. School health
n. Nutrition
o. Dental health
p. Health education
q. Health supervision
r. Epidemiological surveillance
s. Primary health care
t. Food sanitation
u. Planning management information

(iv) Data Collection Procedure

The statistical data are filled in the prescribed health activities report forms on a monthly basis by the various public service centres and sent to the Provincial Health Information Centre. The data are then compiled for the whole province and separately for municipal areas and sent to the Health Information Centre on quarterly and 6-monthly bases.

(v) Tabulation and Publication

The data are classified according to provinces, regions and the whole country and are published annually in *Public Health Statistics* and other special reports.

(3) Health Resources

(i) This kind of information is also essential for the administration in the health field. Without knowing the health resources, health activities could not run smoothly and efficiently. Health resources comprise health manpower, health institutions, hospitals and health centres, finance, budget, supplies and equipment. These kinds of information are collected on an annual basis and the Health Information Centre of the Ministry of Public Health has been assigned to perform this job.

(ii) Coverage

The data on health manpower, the number of health service units and the number of beds are collected from all government and state enterprises and private sectors. The data on budget, supplies and

equipment, buildings and construction can be collected only from health service units under the Ministry of Public Health.

(iii) Contents

a. Number of health service units classified by number of beds, specialties and type of organization
b. Number of health personnel
c. Buildings and construction
d. Equipment
e. Budget and finance

(iv) Data Collection Procedures

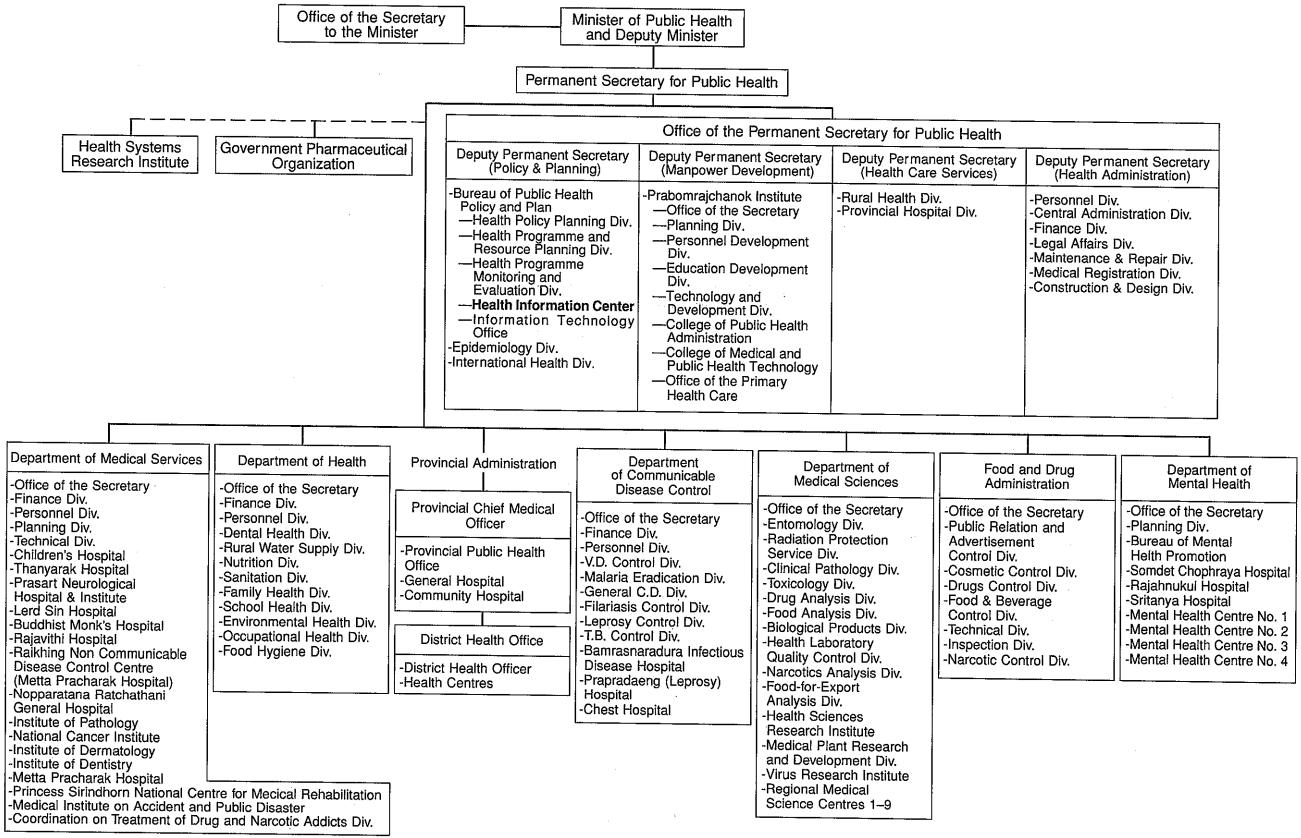
The data are collected in the prescribed health resources report form on a yearly basis by the various health service centres to the Central Health Information Centre.

(v) Tabulation and Publication

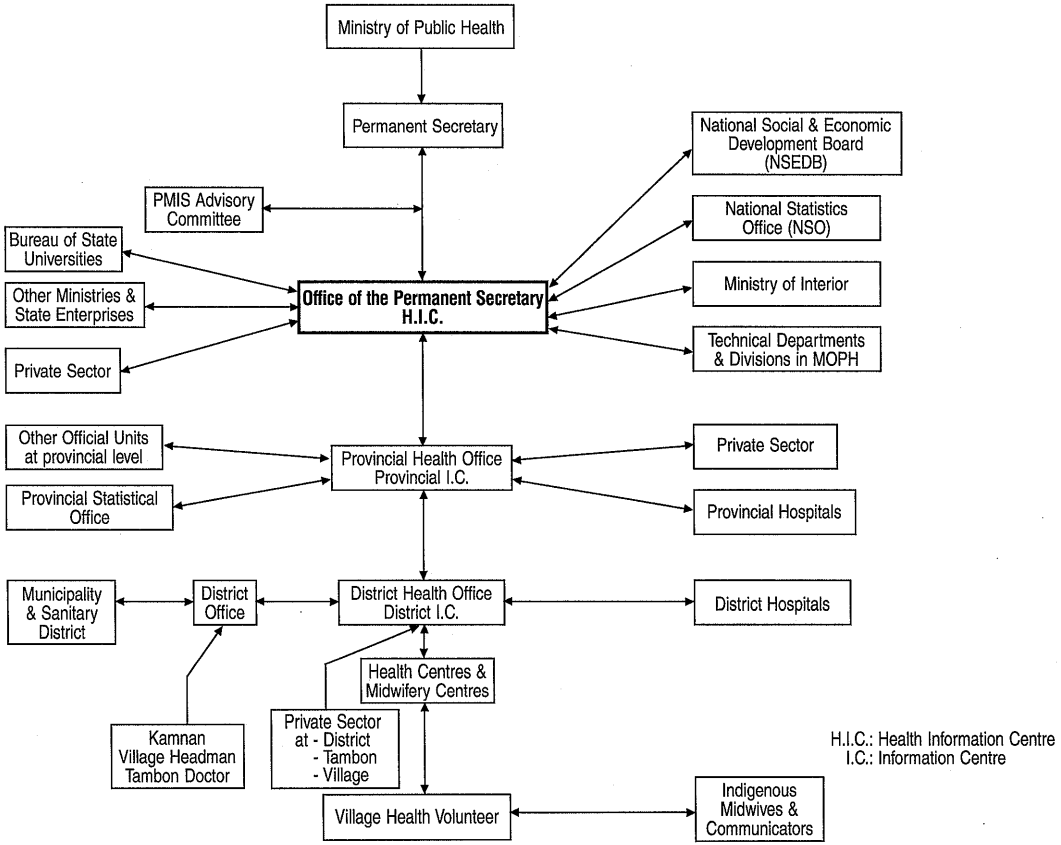
The data are collected and published annually in summary in the *Public Health Statistics* and in more details in the *Report on Health Resources.*

(Health Information Centre, Ministry of Public Health)

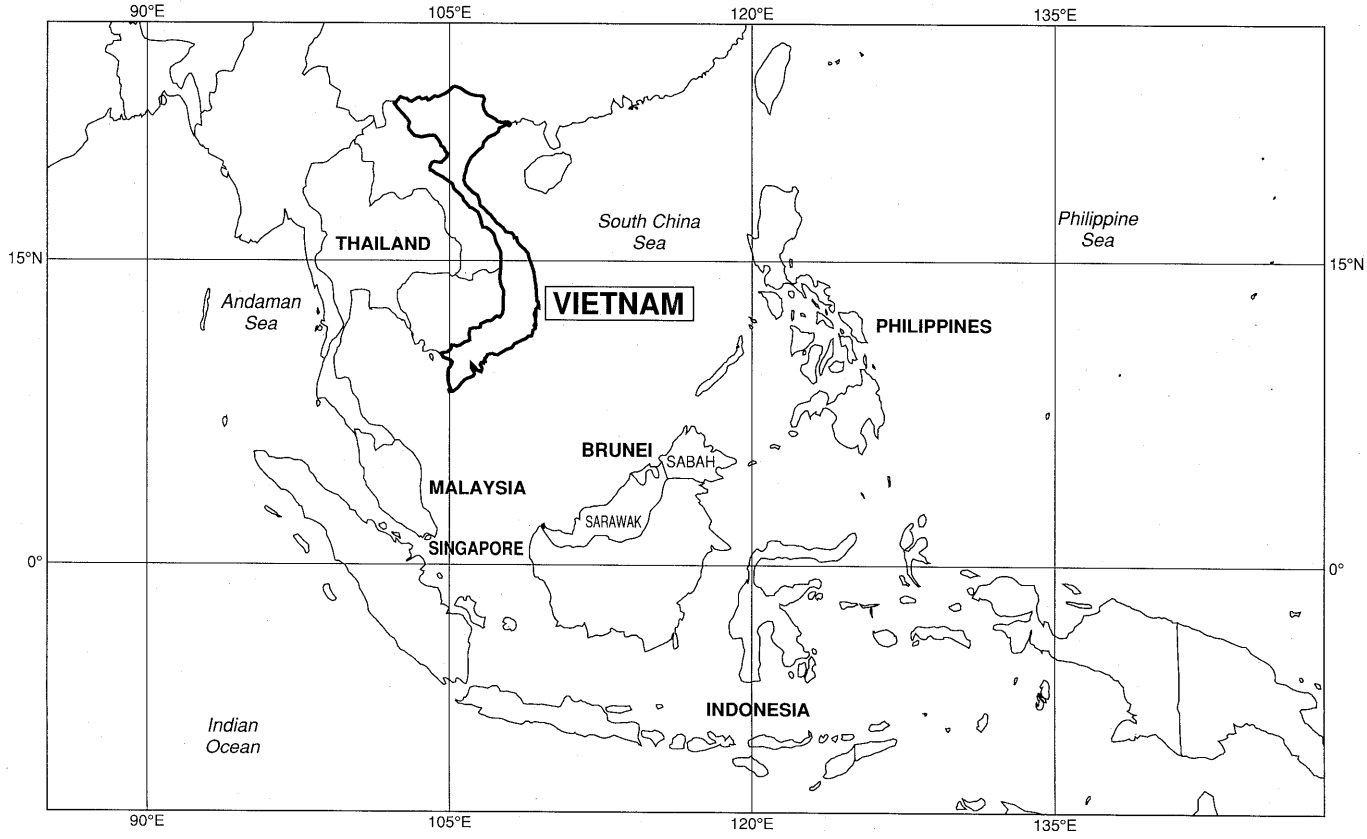
Organization Chart, Thailand



Thailand National Health Information System Network



Vietnam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THAILAND
South China Sea
Philippine Sea
Andaman Sea
VIETNAM
PHILIPPINES
BRUNEI
SABAH
MALAYSIA
SARAWAK
SINGAPORE
INDONESIA
Indian Ocean

Vietnam

1. Health Policy Developments

Rapid developments are taking place in the Vietnamese health care system. All communes have now health stations, 50% of which are staffed with medical doctors. 90% of the communes have midwives or obstetric/paediatric assistant doctors, and 73% of the villages have health workers. More than 90% of infants are fully immunized with 6 types of vaccine, reducing dramatically the morbidity and mortality from the target diseases. In 2000, child polio was eradicated in the country and infant tetanus eliminated. The health status of the people has been enhanced, as evidenced by the extension of life expectancy, reduction of maternal and child mortality and a significant improvement of the Human Development Index.

Challenges still remain for the health system: how to secure equity vis-à-vis the widening rich-poor polarization and enhance efficiency with the limited health budget; how to respond to the increasing and diversifying needs of the people for health care; how to improve the quality of health care by developing and applying advanced medical technologies; how to cope with the double burden of infectious and non-communicable diseases at the same time; etc.

With the overall objectives of ensuring universal access and utilization of primary health care, allowing good physical and spiritual development of everybody, and improving the health status of the next generations, a series of health targets have been set up for the year 2010. Major principles for people's health care emphasize health as a key to socio-economic development, equity and efficiency in health care, proactive prevention as an overall health policy, combination of traditional medicine with modern medicine, and social mobilization and diversification in health services. Key solutions have been proposed to the above-mentioned challenges, based on these principles.

2. Population Censuses

(1) Background information

The major sources of information on population in Vietnam are censuses. The first population census was conducted in Vietnam in 1959. It has been repeated every ten years since then. Between censuses, intercensal population surveys were conducted with an interval of five years. All censuses and population surveys have been organized by the General Statistics Office (GSO).

(2) Purpose

The main purpose of the censuses is to obtain updated information on the population of the country. The intercensal population surveys aim at collecting information on fertility, morbidity, mortality, family planning and mother/child health care. The information is used for making national plans as well as health plans.

(3) Coverage

Due to the war and separation of the country, the first two censuses were conducted only in the North of Vietnam. The two later censuses covered the whole country.

(4) Contents

The 1989 census, the latest one, collected data from the population on age, sex, marital status, nationality, educational level, occupation, employment status, labour force and other data on economic status of the households. The 1994 intercensal population survey collected data about fertility, mortality, family planning, and mother and child health.

3. Vital Statistics

(1) Background information

The major sources of information on vital statistics in Vietnam are registrations of births and deaths. The registers are fulfilled at the commune level, the lowest administrative level in Vietnam. At this level, the People Committees are responsible for vital registrations. The crude data are summarized in monthly reports which are referred to higher levels and end at the GSO as the central level.

(2) Purpose

The main purpose of the vital registrations is to obtain data on births, age at death and causes of death, so that changes in the population of the country can be projected. The data are very useful for health planning, family planning and population programmes.

(3) Coverage

Nationwide

(4) Contents

The birth registration statistics cover the address, age and occupation of the mother, date of birth and name of the baby. The death registration statistics cover information on name, age, address, date of death and cause of death.

4. Health Statistics

4.1. Health Management Information System (HMIS)

(1) Background information

A major proportion of health statistics are collected by the HMIS under the Department of Planning (Division of Health Statistics and Information), Ministry of Health (MOH). This is the official system according to the Decision No. 882/BYT-QD issued by the Ministry of Health on 15 August 1992. The crude data are collected by a set of seven primary registers at the commune health centre. Based on these registers, a monthly health statistics report is compiled by the head of the commune health centre and referred to the district health bureau, where data are further referred to the provincial health bureau and finally to MOH in quarterly health statistics reports. In addition, some other sources also provide data for the HMIS (see diagram below).

(2) Purpose

The main purpose of the HMIS is to provide timely health statistics to health managers and health policy makers. These statistics are used to monitor, supervise and evaluate health activities at different levels.

(3) Coverage

Nationwide

(4) Contents

The HMIS covers a wide range of health statistics, including data on (1) health resources (health facilities, manpower, and health budget); (2) health performance (preventive and curative services); and (3) health outcomes (mortality, morbidity, etc.).

4.2. Hospital-Based Statistics System (HBSS)

(1) Background information

The HMIS mainly collects data from commune health centres where primary health care is provided. Data from all Government hospitals of the country are collected by the HBSS. Quarterly reports are referred to the MOH (Department of Therapy) through the provincial health bureau.

(2) Purpose

The main purpose of this system is to provide information on the performance of curative care for its management.

(3) Coverage

Nationwide

(4) Contents

The HBSS collects data on hospital facilities and equipment, manpower, curative services (consultations, out-patients, in-patients), laboratory services, financial management, etc.

4.3. Statistics Systems of Vertical Health Programmes

(1) Background information

Currently, many vertical health programmes, e.g. ARI, CDD, malaria, tuberculosis, family planning, etc., are being implemented in Vietnam. The HMIS concentrates on collecting data for basic and essential indicators for planning purposes of the health sector. Nevertheless, it can not cover all the information required by the vertical programmes. Therefore, vertical programmes often create their own systems so that detailed information needed for programme management can be collected. Data are collected at the basic level (commonly at the commune health centre) and

aggregated in periodical reports. These reports are referred to higher levels through the management system of the programme under the programme manager concerned at the central level.

(2) Purpose

The main purpose of these systems is to provide information on the performance of the programmes for their management.

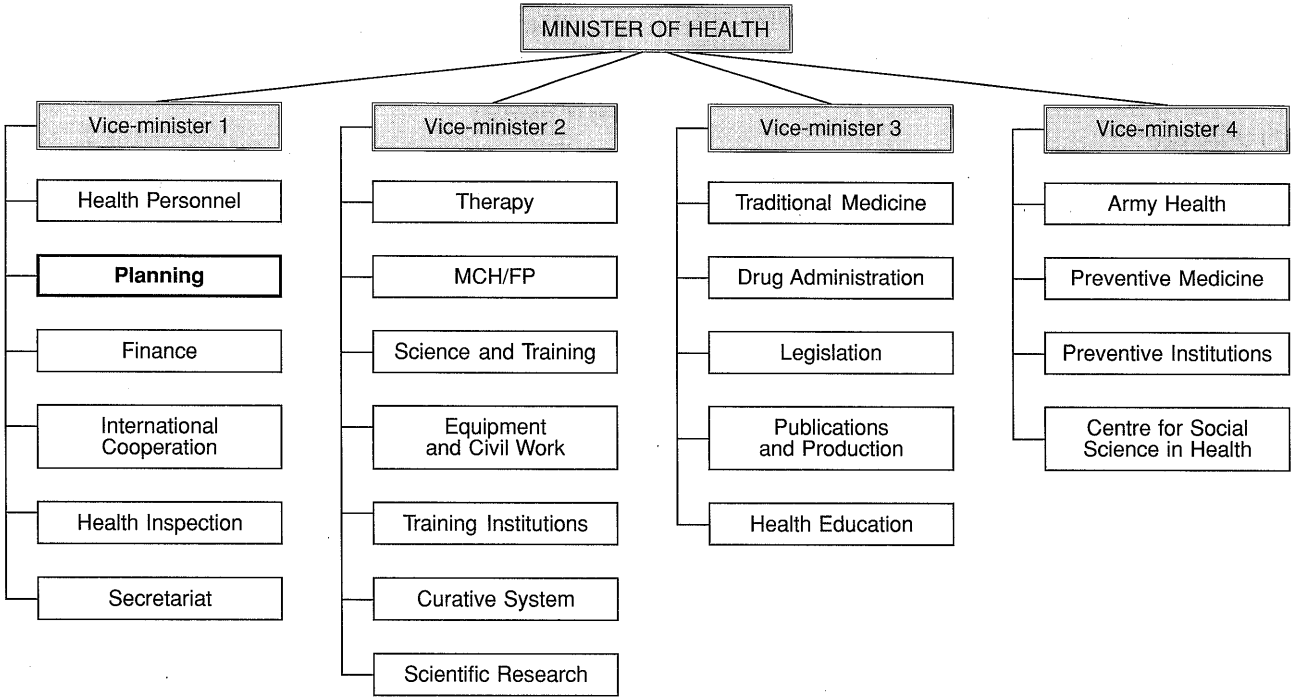
(3) Coverage

Within the coverage areas of the vertical health programmes.

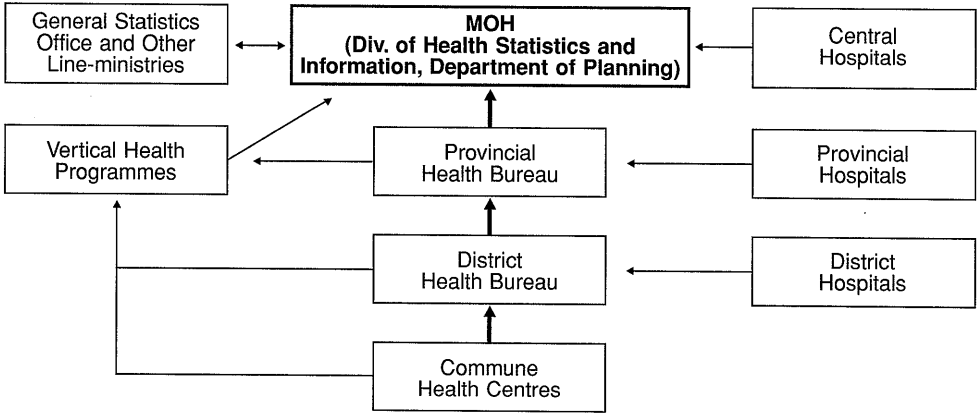
(4) Contents

The contents depend on each programme. In general, following data are collected: coverage, programme performances (service delivery) and programme outcomes.

Organization Chart of the Ministry of Health, Vietnam



Health Management Information System Chart, Vietnam



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Part I

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Part II

APPENDIX

List of Organizations Related to Health Statistics

BRUNEI

Ministry of Health	Bandar Seri Begawan 1210 Negara Brunei Darussalam

INDONESIA

Centre for Health Data and Information Ministry of Health and Social and Welfare	Jalan H.R. Rasuna Said Blok X 5, Kav. 4-9 Jakarta
Directorate-General of Communicable Diseases Control Ministry of Health and Social welfare	Jalan Percetakan Negara 29 P.O. Box 223, Jakarta
BPS-Statistics Indonesia	Jalan Dr. Sutomo No. 8 P.O. Box 3, Jakarta

JAPAN

Statistics and Information Department The Ministry of Health, Labour and Welfare	2-3, Kasumigaseki 1-chome, Chiyoda-ku Tokyo 100-0013
Health Service Bureau Ministry of Health, Labour, and Welfare	2-2, Kasumigaseki 1-chome, Chiyoda-ku Tokyo 100-8045
Statistics Bureau & Statistics Center Ministry of Public Management, Home Affairs, Posts and Telecommunication	19-1, Wakamatsu-cho, Shinjuku-ku Tokyo 162-8668
Ministry of Education, Culture, Sports, Science and Technology	3-2-2 Kasumigaseki, Chiyoda-ku Tokyo 100-8959
National Defense Medical College	3-2 Namiki, Tokorozawa-shi Saitama 359-8513

MALAYSIA

Information & Documentation System Unit Ministry of Health (Kementarian Kesihatan)	TKT. 10, Bangunan Perkim, Jalan Ipoh, 51200 Kuala Lumpur
Department of Statistics Malaysia	Parcel C, Block C6, Pusat Pentadbiran Kerajaan Persekutuan, Putra Jaya

PHILIPPINES

National Epidemiology Center Department of Health	San Lazaro Compound, Sta. Cruz, Manila
Bureau of Health Facilities and Services Department of Health	San Lazaro Compound, Sta. Cruz, Manila
National Center for Health Facility and Development Department of Health	San Lazaro Compound, Sta. Cruz, Manila
National Statistics Office	Magsaysay Blvd., Sta. Mesa, Manila
Food and Nutrition Research Institute	Food and Nutrition Research Institute DOST Compound, Gen. Santos Ave. Bicutan, Taguig, Metro Manila
National Statistical Coordination Board	1st, 2nd and 5th Floors, Midland Buendia Bldg., 403 Sen. Gil J. Puyat, Avenue, Makati

SINGAPORE

Health Information Management Branch, InfoComm Division, Ministry of Health	College of Medicine Bldg., 16 College Road, Singapore 169854
Joint Co-ordinating Committee on Epidemic Diseases	College of Medicine Bldg., 16 College Road, Singapore 169854
Department of Statistics,	100 High Street, #05-01, The Treasury Singapore 179434
Ministry of Trade & Industry	100 High Street, #09-01, The Treasury, Singapore 179434

THAILAND

Health Information Division, Ministry of Public Health	Tivanond Road, Nonthaburi 11000
Epidemiology Division, Ministry of Public Health	Tivanond Road, Nonthaburi 11000
National Statistical Office, Office for the Prime Minister	Lanlaung Road, Khate Pomprab, Bangkok 10100

VIETNAM

Department of Planning, Ministry of Health	138A Giang Vo Street, Hanoi

WHO

WHO Regional Office for the Western Pacific	United Nations Avenue, P.O. Box 2932, 12115, Manila, The Philippines
WHO Regional Office for South-East Asia	World Health House, New Delhi 110002, India

Corrigenda for *SEAMIC Health Statistics 2000*

Table 2–3,	p. 40	BRUNEI	Crude Divorce Rate: **1.2**[a)]
Table 3–1	p. 62–p. 63		PHILIPPINES (**1996**) 1. Heart Diseases (**14.7**%) 2. Influenza and Pneumonia (**10.3**%) 3. Malignant Neoplasms (**9.2**%) 4. Tuberculosis (**8.4**%) 5. Hypertensive Diseases (**7.2**%) 6. Celebrovascular Diseases (**6.3**%) 7. Certain Conditions Originating in the Perinatal Period (**4.5**%) **8. Bronchitis, Emphysema and Asthma (3.8%)** **9. Homicide and Injuries Inflicted by Other Person (3.6%) 10. Diabetes Mellitus (2.4%)** Conditions excluded from the denominator[a)] (**5.1**%)
Table 4–2	p. 92	BRUNEI	Number, 28-365 (days), F: **8**
Table 5–1	p. 104	BRUNEI	003,005/A02,A04,A05 Food Poisoning (Bacterial): **234** 010-018/A15-A19 Tuberculosis of All Forms: **266**
	p. 106	BRUNEI	098/A54 Gonococcal Infections: **148**
		INDONESIA	279.5[a)]/B20-B24 AIDS (HIV): **227**
Table 5–2	p. 107	Ref. Numbers	JAPAN, Diphtheria/Pertussis/Tetanus: 94.4[b)] Poliomyelitis: 96.4[c)], Measles: 91.7[d)] SINGAPORE, Measles: 86[e)]
Table 7–2	p. 124	Ref. Numbers	Country: SINGAPORE[(8)] Per Capita GDP[a)] (in US $) JAPAN 1999: 35,715[(3)], MALAYSIA 1999: 3,238[(5) c)] 〃 〃 〃 PHILIPPINES 1999: 1,051[(6) c)], THAILAND 1999: 1,193[(9)] 〃 〃 〃 VIETNAM 1995: 279[(10) c)] Labour Force Participation Rate (%) JAPAN 1999: 62.9[(4) b)], MALAYSIA 1999: 64.6[(5)] 〃 〃 〃 〃 PHILIPPINES 1997: 65.5[(7)], 1998: 66.0[(7)], 1999 65.8[(7)] 〃 〃 〃 〃 THAILAND 1999: 51.9[(9)]
		Source:	Delete **(3)**. (4)→**(3)**, (5)→**(4)**, (6)→**(5)**, (7)→**(6)**, (8)→**(7)**, (9)→**(8)**, (10)→**(9)** and (11)→**(10)**.
Table 7–3	p. 125	BRUNEI	Health Budget as % of National Budget: **6.9**
Table 8–3	p. 135	INDONESIA	4 Maternity Hospitals, Patient-days: **278,336**
Table 8–4	p. 139	Note	Delete **Note: a) District Hospitals.**