SEAMIC HEALTH STATISTICS
1997

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International Medical Foundation of Japan

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Toyo-kaiji Bldg. No. 6, 7-2 Shimbashi 4-chome,
Minato-ku, Tokyo 105-0004, Japan

Foreword

It is my great pleasure to send you the 1997 edition of SEAMIC Health Statistics. I would like to express my appreciation to the devoted work of our Editorial Board Members.

I hope this publication will serve your reference.

Takaji Ishimaru, M.D.
Director General
SEAMIC/IMFJ

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.

Vietnam has recently joined the SEAMIC activities, and, consequently, has provided statistical information which appears in the present issue.

The structure of the statistical presentation remains almost the same as for the last issue for 1996, but two changes have been incorporated, as agreed upon at a recent SEAMIC technical meeting on health statistics attended by the representatives of the countries. First, the ranking of the causes of death shown in table 3–1, which used to be produced by the countries, has been prepared by the SEAMIC/IMFJ on the basis of the data provided by the countries for table 3–3. The results have been used also in the ranking in table 3–2 for the latest year available. This has reduced the reporting burden of the countries and, at the same time, improved uniformity in the identification of the leading causes of death. Second, the classifications of medical establishments and health personnel used in sections 8 and 9 have been simplified.

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, 1998

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

Contents

Part I

Health Statistics

Explanation of Symbols

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

1. Population

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

	Latest Census						Annual Rate of Increase 1981–1990 (%)	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	4.0 a)	5,765	51 a)
INDONESIA (2)	1990	179,322,000	89,436,285	89,885,715	99.5	4.5	2.0	1,919,443	93
JAPAN (3) b)	1 October 1995	125,570,246	61,574,398	63,995,848	96.2	2.8	1.6 c)	377,829	337
MALAYSIA (4)	14 August 1991	18,379,655	9,327,519	9,052,136	103.0	4.8	2.6 d)	329,758	54
PHILIPPINES (5)	September 1995	68,616,536	34,584,170	34,032,366	101.6	5.1	2.3 d)	300,000	229
SINGAPORE (6) e)	30 June 1990	2,705,115	1,370,059	1,335,056	102.6	4.2	1.9 f)	648 g)	4,702 g)
THAILAND (7)	1 April 1990	54,548,530	27,061,733	27,486,797	98.5	4.4	2.0	513,115	106
VIETNAM (8)	1 April 1994	72,509,500	35,386,400	37,123,100	106.8	4.8	2.1 h)	331,114	227

Source : (1) Statistics Section, Economic Planning Unit, Ministry of Finance
(2) ***Population Census of Indonesia, 1990,*** Central Bureau of Statistics
(3) ***1995 Population Census of Japan,*** Statistics Bureau, Management and Coordination Agency
(4) ***Population and Housing Census of Malaysia, 1991***
(5) National Statistics Office
(6) ***Census of Population 1990 Singapore,*** and ***Yearbook of Statistics, Singapore 1995,*** Department of Statistics
(7) ***1990 Population and Housing Census,*** National Statistics Office, Office of the Prime Minister.
(8) Ministry of Health

Note : a) For 1995
b) All residents
c) Annual rate of increase 1990–1995
d) Annual rate of increase 1980–1991
e) Singapore residents only
f) Annual rate of increase 1987–1996
g) Year 1996
h) Annual rate of increase 1986–1996

1 – 2 Estimates of Mid-year Population

(in thousands)

	1970	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996
BRUNEI (1)	130	156	185	222	249	257	261	268	276	285	296	
INDONESIA (2)	119,470 (3)	130,500 (3)	146,360 (3)	162,899	174,730	178,170	181,384	186,043	187,589	190,815	195,264	196,263
JAPAN (4) a)	103,119	111,252	116,320	120,266	122,460	122,721	123,102	123,476	123,788	124,069	124,299	124,709
MALAYSIA (5)	10,768	12,175	13,764	15,681	17,354	17,764	18,327	18,762	19,208	19,658	20,108	21,169
PHILIPPINES (6)	36,849	42,517	48,317	54,668	60,097	62,049	63,692	65,339	66,982	68,624	68,616	
SINGAPORE (7) b)	2,075	2,263	2,282	2,483	2,648	2,705	2,763	2,818	2,874	2,930	2,987	3,044
THAILAND (8)	36,370	41,388	46,718	51,683	55,448	56,340	57,196	57,760	58,584	59,695		59,788
VIETNAM (9)	41,063	47,638	53,722	59,872 c)	64,376	66,233	67,774	69,405	70,982	72,509	73,959	75,355

Source : (1) Statistics Section, Economic Planning Unit, Ministry of Finance
(2) *National Income of Indonesia 1983–1995,* Central Bureau of Statistics
(3) *Indonesian Population Projection 1980–2000,* Central Bureau of Statistics
(4) *Japan Statistical Yearbook,* Statistics Bureau, Management and Coordination Agency
(5) *Vital Statistics Malaysia 1996,* Department of Statistics
(6) National Statistics Office
(7) *Report on Registration of Births and Deaths, 1996,* National Registration Department
(8) *Report of Working Group on Population Projections,* Office of the National Economic and Social Development Board
(9) Ministry of Health

Note : a) Japanese nationals only
b) Population figures from 1980 onwards refer to Singapore residents only
c) 1986

1 – 3 Population Estimates and Projections

(in thousands)

	2000	2005	2010	2015	2020	2025	2030	2035	2040
BRUNEI (1)	a) 345	b) 389	c) 437						
INDONESIA (2)	209,821	224,074	238,927	251,317	262,578				
JAPAN (3) d)	126,892	127,684	127,623	126,444	124,133	120,913	117,149	113,114	
MALAYSIA (4)	23,264	25,843	28,411	31,081	33,855	31,274			
PHILIPPINES (5)	78,415	86,326	93,874	100,950	107,447	113,462	119,095	124,051	128,136
SINGAPORE (6) e)	3,268	3,539	3,798	3,967	4,118	4,248	4,348		
THAILAND (7)	64,389	67,910	70,865	73,208					
VIETNAM (8)	81,200	88,300	93,400						

Source : (1) Based on ***Demographic Situation & Population Projections 1991–2011,*** Statistics Division, Economic Planning Unit, Ministry of Finance
(2) Based on ***Population Formula Census 1990,*** Central Bureau of Statistics. Calculated by Centre for Health Data
(3) ***Population Projections for Japan: 1996–2050,*** 1997, Institute of Population Problems, Ministry of Health and Welfare
(4) Department of Statistics
(5) Based on ***Population Projections (Series 2: Moderate Fertility Decline and Moderate Mortality Decline),*** National Statistics Office
(6) Population Planning Section, Ministry of Health
(7) ***Report of Working Group on Population Projections,*** Office of the National Economic and Social Development Board
(8) Ministry of Health

Note : a) Year 2001
b) Year 2006
c) Year 2011
d) Population on 1 October
e) Singapore residents only

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
(1) BRUNEI	1995	T	296.0	35.9	33.6	28.8	25.4	28.0	30.0	29.3	26.2
		M	156.6	18.5	17.4	14.7	13.2	14.5	16.1	15.9	14.4
		F	139.4	17.4	16.2	14.1	12.2	13.5	13.9	13.4	11.8
(2) a) INDONESIA	1996	T	198,205	19,810	20,460	23,248	21,538	18,248	16,535	15,639	14,412
		M	98,640	10,075	10,465	11,868	10,831	8,782	7,815	7,545	7,182
		F	99,566	9,735	9,994	11,380	10,706	9,466	8,720	8,094	7,231
(3) b) JAPAN	1996	T	124,709	5,925	6,330	7,285	8,181	9,691	9.135	7,845	7,650
		M	61,115	3,036	3,242	3,730	4,195	4,952	4,637	3,973	3,862
		F	63,594	2,889	3,088	3,555	3,986	4,739	4,498	3,872	3,788
(4) MALAYSIA	1996	T	21,169	2,540	2,500	2,359	2,116	1,998	1,803	1,677	1,482
		M	10,824	1,310	1,288	1,211	1,090	1,037	927	855	756
		F	10,346	1,230	1,212	1,148	1,026	961	877	822	725
(5) PHILIPPINES	1995	T	68,616	9,362	8,893	8,041	7,465	6,271	5,753	4,861	4,318
		M	34,584	4,827	4,566	4,082	3,727	3,120	2,880	2,454	2,196
		F	34,032	4,535	4,327	3,959	3,738	3,151	2,873	2,407	2,122
(6) c) SINGAPORE	1996	T	3,044	244	242	209	203	232	259	302	308
		M	1,531	126	125	109	105	116	128	151	157
		F	1,513	118	117	100	99	116	131	151	151
(7) THAILAND	1996	T	59,780	5,400	5,427	5,656	5,795	5,706	5,418	5,014	4,569
		M	29,817	2,726	2,740	2,868	2,943	2,906	2,756	2,520	2,286
		F	29,955	2,674	2,687	2,787	2,851	2,800	2,661	2,494	2,282
(8) VIETNAM	1996	T	75,355	9,042	9,494	9,193	7,761	6,480	5,953	5,802	4,822
		M	36,773	4,672	4,898	4,747	3,843	3,089	2,938	2,788	2,260
		F	38,582	4,370	4,596	4,446	3,918	3,391	2,997	3,014	2,562

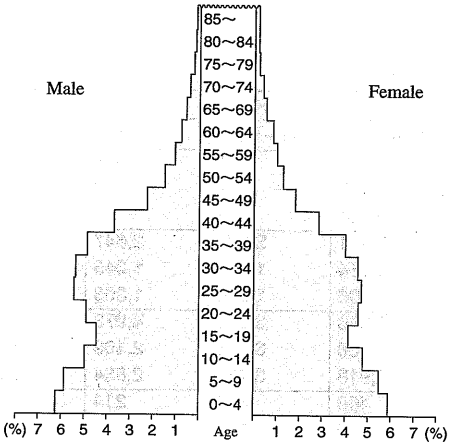
Source : (1) Statistics Section, Economic Planning Unit, Ministry of Finance
(2) *Population Projection, Indonesia by Province 1990–1995,* Central Bureau of Statistics
(3) *Vital Statistics Japan,* Ministry of Health and Welfare
(4) Department of Statistics
(5) National Statistics Office
(6) Department of Statistics
(7) *The Central Office for Civil Registration,* Ministry of Interior
(8) Ministry of Health

Note : a) Excluding non-permanent resident (homeless people, sailor, boat people and remote area communities)
b) Japanese nationals only
c) Singapore residents only

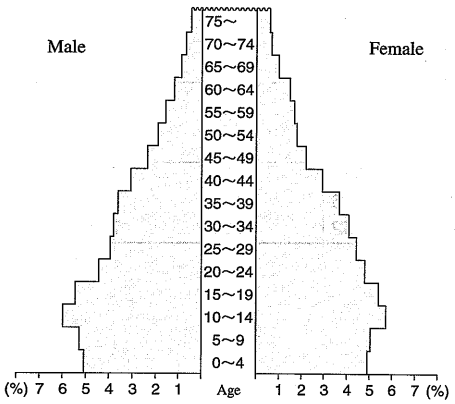
(in thousands)

Age									
40 – 44	45 – 49	50 – 54	55 – 59	60 – 64	65 – 69	70 – 74	75 – 79	80 – 84	85+
19.3	12.0	8.1	6.0	4.7	3.2	2.3	1.3	1.0	0.9
10.9	6.7	4.4	3.1	2.3	1.7	1.2	0.7	0.5	0.4
8.4	5.3	3.7	2.9	2.4	1.5	1.1	0.6	0.5	0.5
11,900	9,009	7,322	6,419	5,241	3,699	2,647		2,078	
6,109	4,671	3,790	3,130	2,354	1,753	1,345		924	
5,791	4,338	3,532	3,290	2,886	1,946	1,303		1,154	
8,506	11,115	8,434	8,074	7,586	6,532	4,973	3,370	2,373	1,701
4,277	5,575	4,182	3,968	3,668	3,075	2,109	1,276	848	509
4,229	5,541	4,252	4,107	3,918	3,458	2,864	2,095	1,526	1,191
1,220	957	709	581	450	324	214	144	96	
625	493	365	293	220	153	97	63	40	
595	465	344	288	230	171	116	80	56	
3,403	2,734	2,063	1,715	1,322	956	654	410	252	142
1,730	1,385	1,033	844	642	449	300	184	107	59
1,673	1,349	1,030	871	680	507	354	226	145	83
269	222	127	122	96	78	54	37	23	18
137	113	64	61	47	37	25	16	9	7
132	110	63	62	49	41	28	21	14	12
3,971	3,103	2,539	2,251	1,829	1,296	844		962	
1,966	1,525	1,230	1,080	866	609	391		405	
2,005	1,577	1,308	1,170	962	687	453		557	
3,466	2,336	2,260	2,185	2,260	1,733	602	678	452	836
1,657	1,130	904	904	1,054	753	527	226	150	75
1,809	1,206	1,356	1,281	1,206	980	75	452	302	761

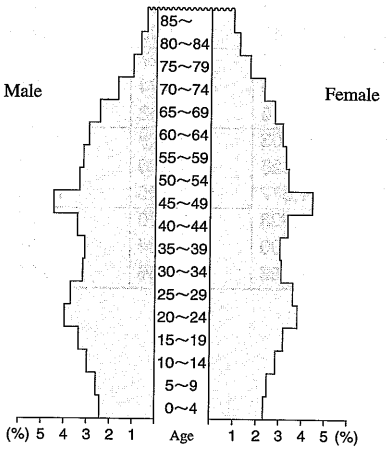
Fig. 1 Population Pyramid



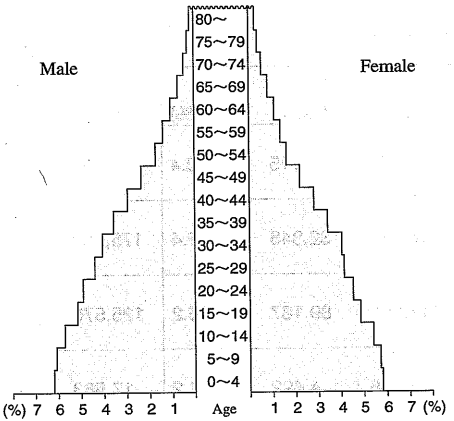
BRUNEI DARUSSALAM 1995



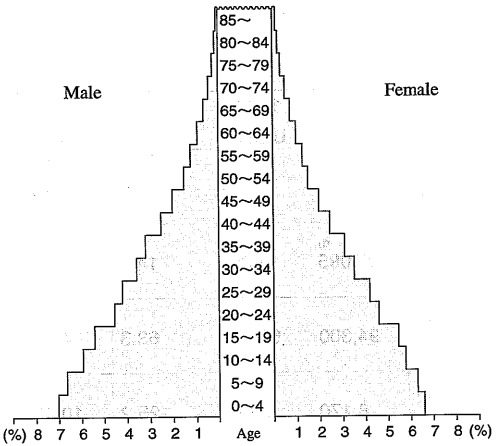
INDONESIA 1996



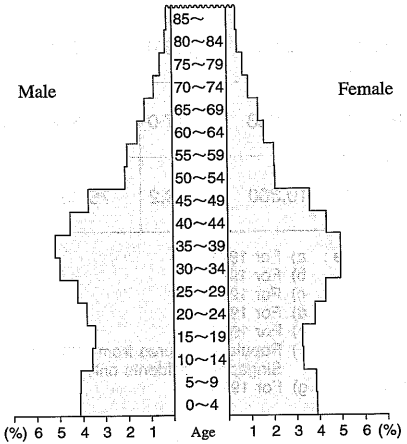
JAPAN 1996



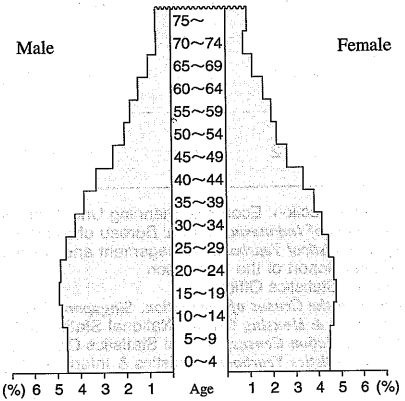
MALAYSIA 1996



PHILIPPINES 1995



SINGAPORE 1996



THAILAND 1996

1 – 5 Urban and Total Population

(in thousands)

	1960			1970			1980			1990		
	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	175,588	50,456	28.7
JAPAN (3)	94,300	59,698	63.3	104,666	75,429	72.1	117,600	89,187	76.2	e) 125,570	98,009	78.1
MALAYSIA (4)	8,170	2,060	25.2	10,439	2,799	26.8	13,136	4,492	34.2	17,563	8,899	50.6
PHILIPPINES (5)	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 (6)	d) 1,446	1,132	78.0	2,075	1,562	75.0	f) 2,282	2,282	100.0	f) g) 3,044	3,044	100.0
THAILAND (7)	(8) 26,258	3,274	12.5	34,397	4,553	13.2	44,824	7,633	17.0	54,548	10,215	18.7
VIETNAM (9)	30,172	4,727	15.7	41,063	8,787	21.4	53,722	10,300	19.2	g) 75,355	15,232	20.2

Source : (1) Statistics Section, Economic Planning Unit, Ministry of Finance
(2) ***Population of Indonesia,*** Central Bureau of Statistics
(3) ***Japan Statistical Yearbook,*** Management and Coordination Agency
(4) General Report of the Population
(5) National Statistics Office
(6) ***Report on the Census of Population, Singapore, Vol. I,*** Department of Statistics
(7) ***Population & Housing Census,*** National Statistical Office, Office of the Prime Minister
(8) ***1960 Population Census,*** Central Statistics Office, National Economic Development Board
(9) ***Health Statistics Yearbook,*** Statistics & Informatic Div., Ministry of Health

Note : a) For 1971
b) For 1981
c) For 1991
d) For 1957
e) For 1995
f) Population figures from 1980 onwards refer to Singapore residents only
g) For 1996

2. General Vital Statistics and Life Tables

2 – A Explanatory Notes on Vital Statistics

Crude Live-birth Rate = (B / P) × 1,000
Crude Death Rate = (D / P) × 1,000
Infant Mortality Rate = (Infant Deaths / B) × 1,000

where B = Number of live-births during a year
D = Number of deaths during a year
P = Population at middle of year

Crude Marriage Rate = (M / P) × 1,000
Crude Divorce Rate = (D / P) × 1,000
Crude Birth Rate = (B / P) × 1,000
General Fertility Rate = (B / F_{15-49}) × 1,000

where M = Number of marriages during a year
D = Number of divorces during a year
B = Number of births during a year
P = Population at middle of year
F_{15-49} = Population of women at ages 15–49 at middle of year

Absolute numbers and crude rates per 1,000 live-births

Late fetal deaths:	Fetal deaths after at least 28 weeks' gestation Fetal deaths of unknown gestational age are included
Infant deaths:	Deaths under one year
Neonatal deaths:	Deaths under four weeks
Post-neonatal deaths:	Deaths from four weeks to under one year
Perinatal deaths:	Late fetal deaths and deaths under one week

Maternal Mortality Rate is computed as the ratio of maternal deaths in a year to 100,000 live-births of the same year
Maternal Mortality Rate = (D_p / B) × 100,000

where D_p = Direct obstetric deaths (Chapter XI in ICD-9 and Chapter XV in ICD-10) during a year
B = Number of live-births during a year

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

BRUNEI

Population:

During 1981–91 the annual average growth rate was just over 3 percent which was somewhat lower than during the period 1971–1981. The rate of 3% is still relatively high by world standards. If the current rate of population growth continues at the same level into the future, the population size of Brunei Darussalam will double in about 23 years.

The population is still relatively young with those below the age of 15 years accounting for 35% of the population. Though the elderly accounts for only 4%, problems associated with ageing are now being addressed to.

Year	Population	Annual Growth (%)
1971 a)	136,256	1971 – 81 = 3.47
1981 a)	192,832	
1991 a)	260,482	1981 – 91 = 3.01
1995	296,000	

a) Census years

Birth and Death Rates:

Brunei Darussalam has a moderately high level of fertility with a crude birth rate of 24.8 per 1000 population in 1995. However, the rate has declined as seen in the table. The crude death rate fluctuates around 3.3 per 1000 population. This is an extremely low level by world standards.

Heart Disease is the leading cause of death, followed by cancer and accident, violence and poisoning. Death due to road traffic accidents is the main contributor to this third cause of death.

	Crude birth rate b)		Crude death rate b)	
Year	Rate	Index	Rate	Index
1971	36.0	100	5.9	100
1981	30.5	85	3.6	61
1991	27.3	76	3.3	56
1995	24.8	69	2.9	49

b) per 1,000 population

Life Expectancy:

The life expectancy in 1991 was 72.1 years for male and 76.2 years for female.

INDONESIA

Population:

Indonesia has an estimated 1995 population of more than 195 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 is continuously declining. During 1990–1995, the estimated annual population growth was 1.71%, compared to 2.32% in 1971–1980 and 1.98% in 1981–1990. 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 is showing a downward trend since the early 1970s. The rate in 1995 is estimated at 7.5 per 1,000 population, compared to 18.7 and 12.5 in 1971 and 1980, respectively (average annual decline of 2.8%). 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 61.5 years for males and 65.3 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 125.86 million on 1 October 1996. The proportion of people over 65 years old was 15.1% in 1996 and is growing rapidly.

Crude Birth Rate:

The number of births in 1996 was 1,206,551 and the crude birth rate was 9.7 (per 1,000 population). The rate had increased slightly.

Crude Death Rate:

The number of deaths in 1996 was 896,182 and the crude death rate was 7.2 (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.

Trends of Causes of Death:

In 1996, there was a significant change in the ranking of causes of death: heart diseases, which used to be the second frequent cause of death, shifted to the third cause, and cerebrovascular diseases, which used to be the third cause, moved to the second rank.

This change seems to be due to the use of ICD-10 instead of ICD-9 and to a reform of death certification, consisting of the introduction of the new international certificate and the discouragement of using non-specific disease terms.

Life Expectancy:

In 1996, Japanese life expectancy at birth for male was 77.01 years, which represented an increase by 0.63 year as compared with the preceding year. Life expectancy for females was 83.59 years, also showing an increase by 0.04 year.

Health Care Status:

Most Japanese are enjoying good health. About 90% of people consider themselves healthy or very healthy. The Ministry of Health 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 1996, Malaysia had a population of 21,169,000 people, an increase of 479,700 persons or 2.3% over the population in 1995. The growth rate in 1996 was a healthy 2.8% per annum.

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 1991, the perinatal mortality rate was 12.3 per 1,000 livebirths and stillbirths but in 1996 it dropped to 9.8. Likewise, the neonatal mortality rate dipped from 8.2 per 1,000 livebirths to 6.5.

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 livebirths, and by 1996 it was down to 9.8.

The relatively good survival rate of Malaysian infants has accounted in no small measure for the low toddler mortality at present. In 1996, the toddler mortality rate was less than 1 death per 1,000 toddlers aged 1 to 4 years.

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. Hence, the maternal mortality rate in 1996 was extremely low at 0.2 per 1,000 livebirths.

Life expectancy among Malaysians today is comparable to many developed countries. Under the favourable socio-economic conditions prevailing in the country, the life expectancy is 69.3 years for men and 74.1 years for women.

PHILIPPINES

Population:

The total population of the Philippines on September 1, 1995 by actual count was 68,616,536 persons, an increase of 7,913,330 persons or 13 percent over the 1990 census count of 60,703,206. This figure corrects the projection for the 1995 Philippine population published in last year's SEAMIC Health Statistics.

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.

The Philippines continues to have a young population with 58 percent of its citizens aged under 25 years. Only 3.5 percent of the Filipinos are 65 years or older.

Crude Birth Rate:

The crude birth rate stood at 28.9 in 1996.

Crude Death Rate:

The crude death rate continued to decline to 6.2 in 1996, lower by 0.5 from 1995 when it stood at 6.7 per thousand.

Life Expectancy:

Life expectancy continues to improve and is longer for females at 70.83 as against Filipino males who can expect an average lifetime of 65.58 years.

SINGAPORE

Population:

The mid-year resident population of Singapore grew marginally by about 1.9% from 2.99 million in 1995 to 3.04 million in 1996. The Chinese constituted the majority of the population at 77.3%, followed by the Malays at 14.2% and the Indians at 7.3%. The population continued to age, with the proportion of the elderly aged 65 years and over increasing from 6.8% in 1995 to 6.9% in 1996. The median age of the population now

stands at 32.2 years, up from 31.8 years in 1995.

The rate of natural increase decreased from 10.9 per 1,000 resident population in 1995 to 10.7 per 1,000 in 1996. There were 48,738 births in 1996, which represented a marginal increase of 0.2% from the 48,635 births in 1995. The total fertility rate remained unchanged at 1.7 births per woman in 1996. The number of deaths on the other hand rose slightly from 15,569 to 15,586. The crude death rate remained low at 4.7 deaths per 1,000 resident population.

Life Expectancy:

The life expectancy at birth of the average Singaporeans was 76.6 years in 1996. Expectancy of life at birth for the average male was 74.4 years and that for the average female was 78.9 years.

Health Care Status:

The state of health of Singaporeans continued to improve. The Ministry of Health's efforts towards health promotion and disease prevention and to encourage Singaporeans to stay healty coutinued in 1996. The Ministry also continued with its policy to ensure that good and cost-effective medical care remained available and accessible to all Singaporeans.

THAILAND

Population:

Thailand has a population of around 58.99 million (January 1995). In 1994, the population growth rate was approximately 1.15 percent and the population is expected to reach 70 million by the year 2000. 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.

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 63 years during 1990–1995 (66.6 years in 1995) and in female from 66 years to 68 years between the same period of time (71.7 years in 1995).

VIETNAM

Over the period of 10 years from 1986 to 1996, the total population of Vietnam increased from 61.1 million to 75.4 million, with the average annual increase of 2.12%.

The crude birth rate in 1995 was 25.3 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 3.1 in 1994.

During the period 1993–1995 the crude death rate remained unchanged at 6.7 per 1,000 population.

2 – 1 Crude Live-birth Rates

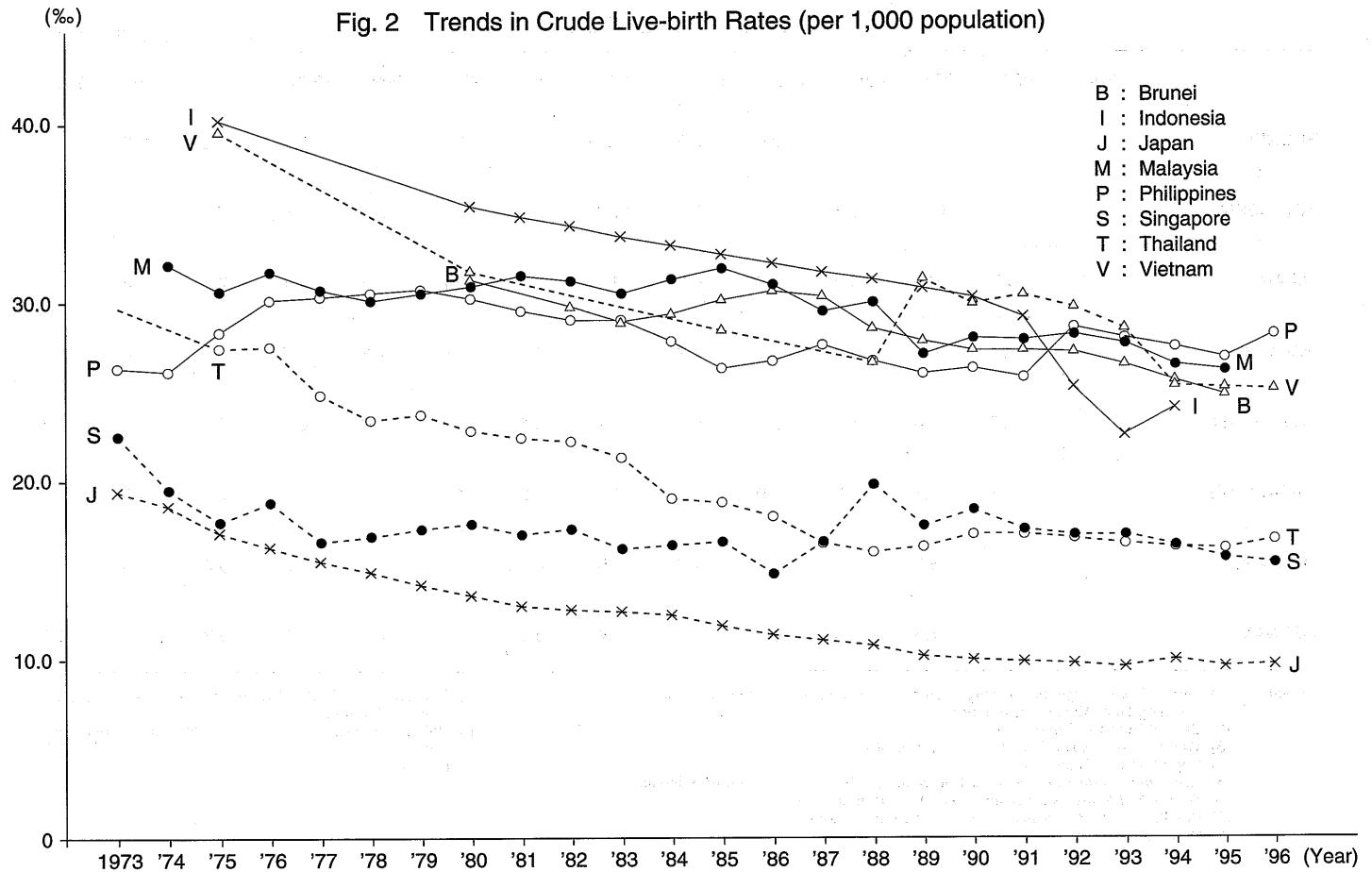
(per 1,000 population)

Year	1970	1975	1980	1985	1988	1989	1990	1991	1992	1993	1994	1995	1996
BRUNEI (1)			31.2	30.1	28.5	27.8	27.3	27.3	27.2	26.5	25.6	24.8	
INDONESIA (2)	43.8	40.2	35.4	32.7	31.3	30.8	30.3	a) 29.2	a) 25.3	a) 22.6	a) 24.1		
JAPAN (3)	18.8	17.1	13.6	11.9	10.8	10.2	10.0	9.9	9.8	9.6	10.0	9.6	9.7
MALAYSIA (4)	32.4	30.6	30.9	31.9	30.0	27.1	28.0	27.9	28.2	27.7	26.5	26.2	
PHILIPPINES (5)	27.4	28.8	30.2	26.3	26.7	26.0	26.3	25.8	28.6	28.0	27.5	26.9	28.9
SINGAPORE (6) b)	22.1	17.7	17.6	16.6	19.8	17.5	18.4	17.3	17.0	17.0	16.4	15.7	15.4
THAILAND (7)	31.5	27.4	22.8	18.8	16.0	16.3	17.0	17.0	16.8	16.5	16.3	16.3	16.7
VIETNAM (8)		c) 39.5	31.7	28.4	26.6	31.3	29.9	30.4	29.7	28.5	25.3	25.2	25.1

Source : (1) Birth & Death Registry, Ministry of Health and Statistics Section, Economic Planning Unit, Ministry of Finance
(2) Central Bureau of Statistics
(3) *Vital Statistics Japan,* Ministry of Health & Welfare
(4) Department of Statistics
(5) ***Philippine Health Statistics,*** Health Intelligence Service, Department of Health
(6) ***Yearbook of Statistics, Singapore 1994,*** Department of Statistics
(7) Health Information Division, Ministry of Public Health
(8) Ministry of Health

Note : a) Calculated by Central Bureau of Statistics based on National Census 1990
b) Rates from 1980 onward refer to Singapore residents only
c) For 1976

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



2 – 2 Crude Death Rates

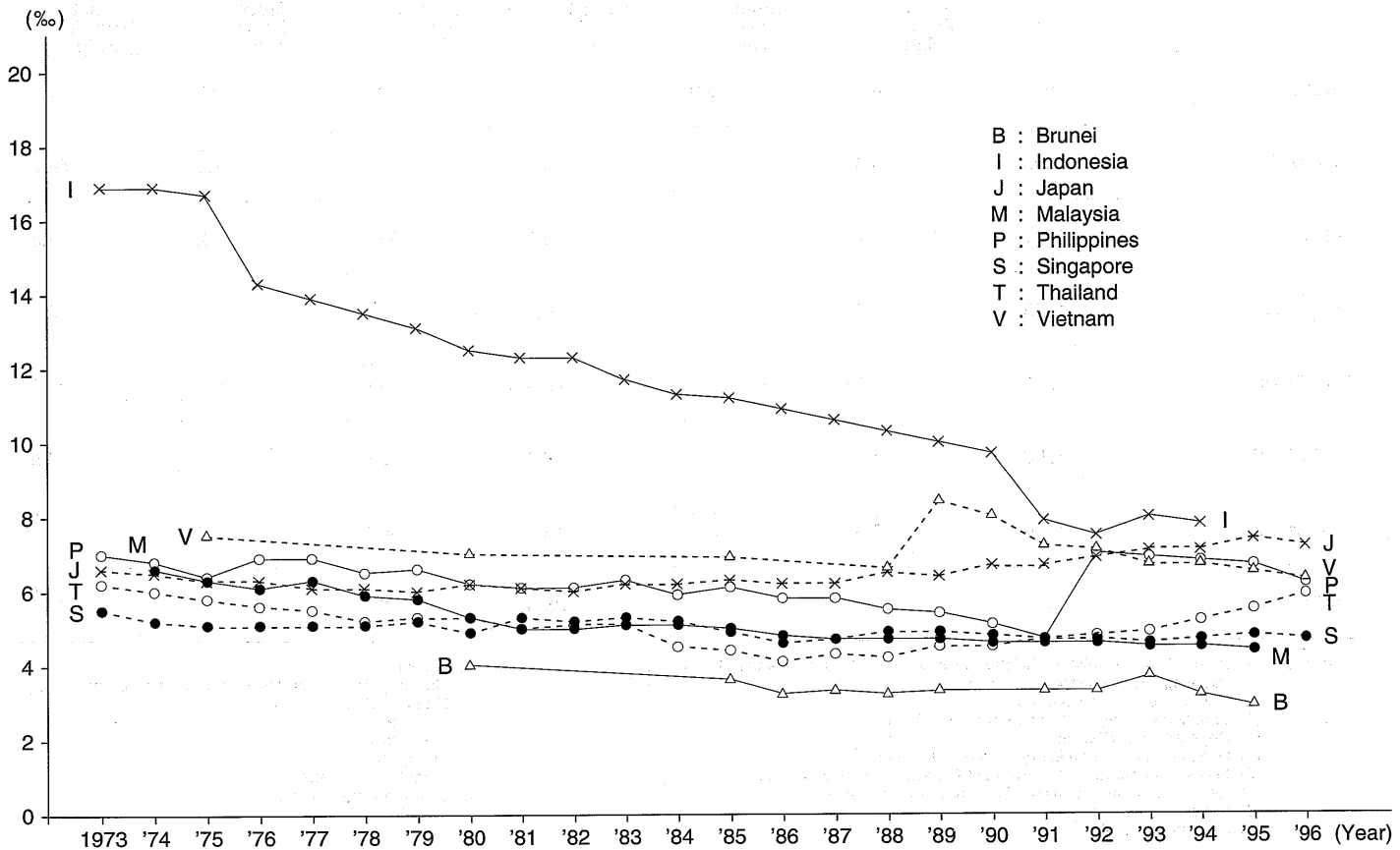
(per 1,000 population)

Year	1970	1975	1980	1985	1988	1989	1990	1991	1992	1993	1994	1995	1996
BRUNEI (1)			4.0	3.6	3.2	3.3		3.3	3.3	3.7	3.2	2.9	
INDONESIA (2)	18.7	16.7	12.5	11.2	10.3	10.0	9.7	7.9 a)	7.5 a)	8.0 a)	7.8 a)		
JAPAN (3)	6.9	6.3	6.2	6.3	6.5	6.4	6.7	6.7	6.9	7.1	7.1	7.4	7.2
MALAYSIA (4)	7.0	6.3	5.3	5.0	4.7	4.7	4.6	4.6	4.6	4.5	4.5	4.4	
PHILIPPINES (5)	6.7	6.4	6.2	6.1	5.5	5.4	5.1	4.7	7.0	6.9	6.8	6.7	6.2
SINGAPORE (6) b)	5.2	5.1	4.9	4.9	4.9	4.9	4.8	4.7	4.7	4.6	4.7	4.8	4.7
THAILAND (7)	6.2	5.8	5.3	4.4	4.2	4.5	4.5	4.7	4.8	4.9	5.2	5.5	5.9
VIETNAM (8)		7.5 c)	7.0	6.9	6.6	8.4	8.0	7.2	7.1	6.7	6.7	6.5	6.3

Source : (1) Birth & Death Registry, Ministry of Health and Statistics Section, Economic Planning Unit, Ministry of Finance
(2) Central Bureau of Statistics
(3) *Vital Statistics Japan,* Ministry of Health & Welfare
(4) Department of Statistics
(5) *Philippine Health Statistics,* Health Intelligence Service, Department of Health
(6) *Yearbook of Statistics Singapore, 1993,* Department of Statistics
(7) Health Information Division, Ministry of Public Health
(8) Ministry of Health

Note : a) Calculated by Central Bureau of Statistics based on National Census 1990
b) Rates from 1980 onward refer to Singapore residents only
c) 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 Mortality Rate
BRUNEI (1)	1995	a) 5.4	a) 0.9	24.8	93.5	2.9	7.9
INDONESIA (2) b)	1995	a) 8.4	a) 0.8	c) 24.1		c) 7.8	d) 54.0
JAPAN (3)	1996	6.4	1.7	9.7	38.8	7.2	3.8
MALAYSIA (4)	1995	e) 7.8	e) 0.7	26.2	103.1	4.4	10.4
PHILIPPINES (5)	1995	13.7	••	26.9	f) 3.8	6.7	24.1
SINGAPORE (6) g)	1996	7.9	1.5	15.4	52.5	4.7	3.8
THAILAND (7)	1996	(8) e) 8.3	(8) e) 0.8	16.7	58.6	5.9	(8) 7.2
VIETNAM (9)	1994			25.3	100.8	6.7	h) 45.3

Source : (1) Birth & Death Registry, Ministry of Health and Statistics Section, Economic Planning Unit, Ministry of Finance
(2) Central Bureau of Statistics
(3) *Vital Statistics Japan,* Ministry of Health & Welfare
(4) Department of Statistics
(5) National Statistics Office (estimated vital rates)
(6) *Yearbook of Statistics Singapore 1995,* Department of Statistics
(7) Health Information Division, Ministry of Public Health
(8) Ministry of Interior
(9) Ministry of Health

Note : a) Muslims
b) Calculated by Central Bureau of Statistics based on National Census 1990
c) For 1994
d) For 1996
e) For 1993
f) Total Fertility Rate
g) Singapore residents only
h) For 1993

2 – 4 Natality, Mortality and Natural Increase

	Year	Natality (live-born)				Mortality				Natural Increase
		Number			(‰)	Number			(‰)	(‰)
		Total	Male	Female		Total	Male	Female		
BRUNEI (1)	1995	7,341	3,789	3,552	24.8	872	499	373	2.9	21.9
INDONESIA (2)	1994				24.1				7.8	16.3
JAPAN (3)	1996	1,206,555	619,793	586,762	9.7	896,182	488,605	407,577	7.2	2.5
MALAYSIA (4)	1995	535,053	276,659	258,394	26.2	94,648	54,580	40,068	4.4	21.8
PHILIPPINES (5)	1993	1,680,896	875,540	805,356	25.1	318,546	189,322	129,224	4.8	
SINGAPORE (6) a)	1996	48,577 b)	25,306	23,269	15.3	15,590 b)	8,829	6,759	4.7	10.6
THAILAND (7)	1996	1,000,484	513,516	486,968	16.7	353,595	215,543	138,052	5.9	11.0
VIETNAM (8)	1994 1995	1,834,490	1,022,768	811,722	25.3	485,813				18.6 18.7

Source : (1) Birth & Death Registry, Ministry of Health and Statistics Section, Economic Planning Unit, Ministry of Finance
(2) Calculated by Central Bureau of Statistics
(3) ***Vital Statistics Japan,*** Ministry of Health & Welfare
(4) Department of Statistics
(5) ***Philippine Health Statistics,*** Health Intelligence Service, Department of Health
(6) ***Report on Registration of Births and Deaths, 1996,*** National Registration Department
(7) Health Statistics Division, Ministry of Public Health
(8) Ministry of Health

Note : Figures for males and females may not add up to the total on account of unknown sex
a) Singapore residents only
b) Includes unknown sex

2 – 5 Deaths and Death Rates by Age

	Year	Sex	All ages		0 – 4		5 – 14		15 – 24		25 – 34	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI (1)	1995	T	872	294.6	72	200.6	25	40.1	41	76.8	66	111.3
		M	499	318.6	40	216.2	16	49.8	31	111.9	50	156.3
		F	373	267.6	32	183.9	9	29.7	10	38.9	10	58.6
INDONESIA (2) a)	1992	T	5,352		292		315		443		1,008	
JAPAN (3)	1996	T	922,139	741.9	7,040	118.3	2,419	17.4	8,449	46.3	9,725	58.6
		M	501,276	822.9	3,929	129.0	1,468	20.6	6,053	64.8	6,500	77.3
		F	420,863	664.0	3,111	107.2	951	14.0	2,396	26.8	3,225	39.4
MALAYSIA (4)	1996	T	94,648	470.7	7,131	284.1	1,841	39.7	4,336	114.7	4,547	138.6
		M	54,580	525.1	3,972	306.5	1,109	46.5	3,308	172.7	3,219	195.3
		F	40,068	481.7	3,159	260.2	732	32.5	1,028	55.2	1,328	81.4
PHILIPPINES (5)	1994	T	321,024	467.8	44,990	469.6	11,115	68.5	15,377	112.8	21,551	201.9
		M	191,573	555.7	25,916	520.0	6,388	76.9	10,403	149.0	14,838	281.1
		F	129,451	379.1	19,074	406.9	4,727	59.6	4,974	74.7	6,713	124.4
SINGAPORE (6) b)	1996	T	15,590 c)	473.9	254 c)	91.4	99	19.1	298	44.3	546	62.2
		M	8,829	523.0	135	96.1	59	21.8	216	60.7	392	78.6
		F	6,759	424.0	117	84.7	40	16.1	82	27.5	154	46.1
THAILAND (7)	1996	T	353,595	591.4	4,981	92.2	6,071	54.8	25,890	225.1	42,211	404.6
		M	215,543	722.7	2,805	102.9	3,801	67.8	20,122	344.0	33,885	642.2
		F	138,052	460.7	2,176	81.4	2,270	41.5	5,768	102.1	8,326	161.5
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) Birth and Death Registry, Ministry of Health and Statistics Section, Economic Planning Unit, Ministry of Finance
(2) Directorate General of Medical Care, Ministry of Health
(3) ***Vital Statistics Japan,*** Ministry of Health and Welfare
(4) Department of Statistics
(5) ***Philippine Health Statistics,*** Health Intelligence Service, Department of Health
(6) ***Report on Registration of Births and Deaths, 1996,*** National Registration Department
(7) Health Statistics Division, Ministry of Public Health
(8) General Statistical Office

Note : a) Based on a 10-day sample of discharges from hospital for each quarter
b) Singapore residents only
c) Includes unkown sex

(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
83	182.4	60	298.5	126	1,177.6	165	3,000.0	234	7,312.5		
49	193.7	40	360.4	68	1,259.3	89	3,069.0	116	7,250.0		
34	168.3	20	222.2	58	1,094.3	76	2,923.1	118	7,375.0		
1,008		1,464				1,012					
19,653	111.5	57,082	294.0	113,042	736.0	191,532	1,733.6	512,560	7,171.7	637	
12,649	151.1	37,521	387.5	77,679	1,037.9	120,755	2,455.4	234,178	9,169.1	544	
7,004	84.8	19,561	201.1	35,363	449.1	70,777	1,154.8	278,382	6,062.3	93	
5,892	230.4	8,757	556.6	14,417	1,433.1	20,090	3,867.0	26,876	10,918.3	761	
3,925	302.2	5,565	565.3	8,810	1,746.3	11,146	4,536.7	13,015	10,975.7	511	
1,967	764.1	3,192	416.8	5,607	1,106.5	8,944	3,266.2	13,861	10,082.4	250	
25,622	328.4	31,629	643.7	42,540	1,353.5	49,542	2,816.5	78,093	8,864.1	565	
17,518	460.8	21,454	870.7	27,813	1,814.3	29,321	3,571.4	37,557	9,436.4	365	
8,104	202.6	10,175	415.3	14,727	914.7	20,221	2,155.8	40,536	8,392.5	200	
869	124.9	1,268	330.7	2,394	1,035.4	3,781	2,754.2	6,030	7,441.9	51	
560	158.8	832	419.4	1,540	1,347.0	2,229	3,410.5	2,790	8,431.3	46	
279	89.7	436	240.0	854	733.3	1,552	2,157.0	3,240	6,758.1	5	
34,951	409.3	34,657	614.3	48,845	1,197.2	55,924	2,613.3	77,761	8,083.3	22,304	
25,774	606.2	22,654	822.3	29,311	1,506.2	31,257	3,125.7	35,047	8,653.6	10,887	
9,177	214.1	12,003	416.0	19,534	916.2	24,667	2,163.8	42,714	7,668.6	11,417	
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		

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)	1991	M	72.1	71.9				68.1	63.3	58.5	54.0
		F	76.5	76.5				72.6	67.7	62.8	57.9
INDONESIA (2)	1996	M	62.7	65.4				62.5	57.9	53.2	48.7
		F	66.5	68.6				65.6	61.0	56.2	51.6
JAPAN (3)	1996	M	77.0	76.3	75.4	74.4	73.4	72.5	67.5	62.6	57.7
		F	83.6	82.9	81.9	81.0	79.8	79.0	74.0	69.1	64.1
MALAYSIA (4)	1995	M	69.4	69.2				65.5	60.6	55.7	51.1
		F	74.1	73.8				70.1	65.2	60.2	55.4
PHILIPPINES (5)	1992	M	63.2	66.3				63.9	59.3	54.6	49.9
		F	68.5	71.1				68.8	64.2	59.4	54.7
SINGAPORE (6)	1995	M	74.2	73.5				69.6	64.7	59.8	54.9
		F	78.7	77.9				74.0	69.1	64.1	59.2
THAILAND (7)	1991	M	67.7	69.8				66.2	61.6	56.9	52.3
		F	72.5	74.8				71.1	66.4	61.6	56.9
VIETNAM (8)	1989	M	63.0	65.0	64.4	63.8	63.1	62.3	58.0	53.5	49.0
		F	67.5	69.5	69.2	68.7	68.0	67.3	63.2	58.7	54.1

Source : (1) Economic Planning Unit, Ministry of Finance
(2) Calculated by Centre for Health Data, using Model Life Table for West Model and level of mortality = 18.66
(3) ***Abridged Life Table for Japan,*** Ministry of Health & Welfare
(4) ***Abridged Life Table,*** Department of Statistics
(5) University of the Philippines Population Institute, projected using 1990 baseline estimates based on registered deaths aged 5 years and over, corrected for underregistration and implied infant and child mortality from the adjusted deaths at ages 5–9 (Latin American Pattern, Model Life Tables for Developing Countries), assumption = moderate mortality decline.
(6) ***Abridged Life Table,*** Ministry of Health
(7) National Statistical 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
49.5 52.9	44.8 48.0	40.2 43.3	35.5 38.4	30.9 33.7	26.4 29.0	22.2 25.0	18.6 21.1	15.2 17.9	12.8 14.4	10.2 12.0	8.8 10.1			
44.3 47.1	39.1 42.6	35.5 38.1	31.1 33.7	26.8 29.4	22.8 25.2	18.7 21.1	15.5 17.3	12.2 13.7	9.5 10.6	7.1 7.8	5.1 5.6			
52.9 59.2	48.1 54.3	43.3 49.4	38.5 44.6	33.8 39.8	29.3 35.1	24.9 30.4	20.8 25.9	16.9 21.5	13.4 17.3	10.3 13.4	7.5 9.9	5.4 7.1	3.8 5.0	2.8 3.5
46.6 50.6	41.9 45.7	37.3 40.9	32.7 36.2	28.3 31.5	24.0 26.9	19.9 22.6	16.2 18.5	12.8 14.7	9.9 11.2	7.5 8.4	5.5 6.2			
45.5 50.0	41.1 45.3	36.8 40.7	32.6 36.2	28.5 31.8	24.5 27.5	20.8 23.3	17.3 19.4	14.1 15.7	11.2 12.3	8.6 9.3	6.4 6.8			
50.1 54.3	45.3 49.4	40.5 44.5	35.7 39.7	31.0 34.9	26.5 30.2	22.2 25.7	18.3 21.4	14.8 17.4	11.8 13.7	9.1 10.5	6.7 7.6	4.4 4.6		
47.7 52.3	43.2 47.7	38.8 43.1	34.4 38.6	30.2 34.1	26.1 29.7	22.3 25.9	18.8 22.0	15.7 18.3	12.8 14.8	10.5 11.4	9.3 9.0			
44.6 49.6	40.0 45.0	35.5 40.4	31.2 35.8	27.0 31.4	23.1 27.0	19.3 22.9	15.6 19.0	12.5 15.3	9.6 11.9	7.3 9.0	5.8 6.4	4.2 4.4	3.1 3.0	

2 – 7 Survivors at Specified Ages for Each Sex

	Year	Sex	Age							
			0	1	5	10	15	20	25	30
BRUNEI (1)	1991	M	100,000	98,850	98,490	98,200	97,945	96,995	96,092	95,532
		F	100,000	98,784	98,694	98,556	98,359	98,226	98,113	98,000
INDONESIA (2)	1996	M	100,000	94,607	92,746	91,795	91,597	90,760	89,537	88,390
		F	100,000	95,582	94,130	93,589	93,170	92,515	91,625	90,582
JAPAN (3)	1996	M	100,000	99,589	99,416	99,334	99,258	99,012	98,681	98,350
		F	100,000	99,655	99,528	99,468	99,416	99,317	99,185	99,034
MALAYSIA (4)	1995	M	100,000	98,849	98,512	98,305	98,062	97,370	96,500	95,681
		F	100,000	99,032	98,736	98,593	98,427	98,196	97,916	97,574
PHILIPPINES (5)	1992	M	100,000	94,032	91,850	91,212	90,790	90,065	88,957	87,593
		F	100,000	95,055	92,932	92,397	92,064	91,650	91,098	90,433
SINGAPORE (6)	1995	M	100,000	99,602	99,459	99,371	99,238	98,989	98,635	98,299
		F	100,000	99,647	99,544	99,486	99,392	99,259	99,108	98,921
THAILAND (7)	1991	M	100,000	95,624	95,106	94,544	94,030	93,385	92,582	91,561
		F	100,000	95,670	95,248	94,798	94,513	94,024	93,316	92,702
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) Economic Planning Unit, Ministry of Finance
(2) Calculated by Centre for Health Data, using level of mortality = 18.66
(3) ***Abridged Life Table,*** Ministry of Health & Welfare
(4) ***Abridged Life Table,*** Department of Statistics
(5) University of the Philippines Population Institute, projected using 1990 baseline estimates based on registered deaths aged 5 years and over, corrected for underregistration and implied infant and child mortality from the adjusted deaths at ages 5–9 (Latin American Pattern, Model Life Tables for Developing Countries), assumption = moderate mortality decline.
(6) ***Abridged Life Table,*** Ministry of Health
(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
94,685 97,365	94,020 97,112	92,838 96,339	91,055 95,433	88,072 92,012	82,470 87,510	74,720 79,949	62,180 72,651	50,509 59,577	34,403 45,155	20,647 31,581		
87,050 89,355	85,406 87,924	83,209 86,112	80,111 83,695	75,688 80,330	69,421 75,657	60,824 68,896	49,670 59,245	36,178 46,048	21,917 30,267			
97,952 98,815	97,402 98,515	96,554 98,037	95,127 97,263	92,853 96,114	89,471 94,525	83,745 92,072	76,031 88,351	65,092 82,266	50,048 71,900	31,892 55,655	14,810 33,950	4,391 14,350
94,752 97,132	93,617 96,538	92,009 95,618	89,649 94,121	85,814 91,695	79,854 87,851	71,469 81,722	59,697 72,415	43,806 57,740	27,625 39,464			
86,004 89,620	84,147 88,529	81,775 87,116	78,569 85,189	74,282 82,376	68,623 78,589	61,054 73,023	51,820 65,157	40,521 54,017	27,668 39,264			
97,888 98,697	97,256 98,319	96,306 97,758	94,725 96,815	91,887 95,084	87,206 92,178	79,660 87,727	68,669 80,661	54,981 69,329	39,169 55,135	24,100 39,411		
90,304 91,900	88,711 90,780	86,695 89,406	83,959 87,701	79,901 84,092	74,226 80,437	66,522 75,230	57,251 68,750	45,430 60,596	30,775 47,065			
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. 4 Survivors at Specified Ages for Each Sex (1) Brunei, 1991

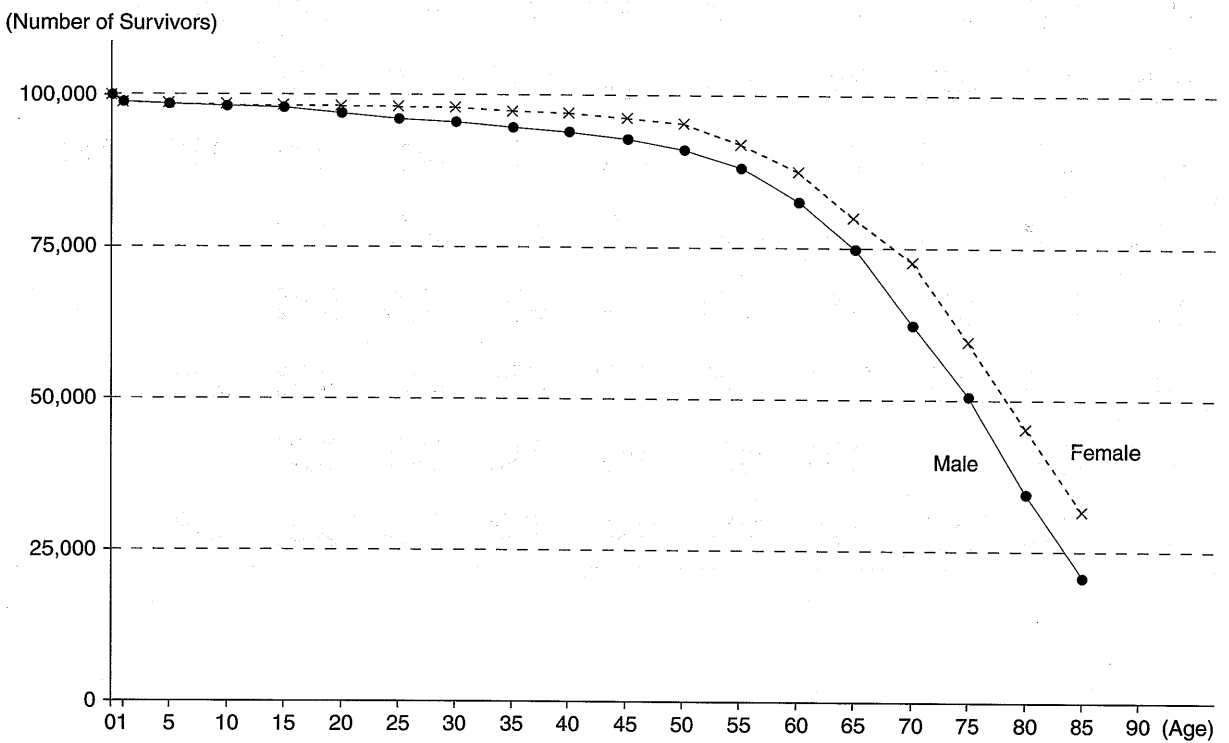


Fig. 4 Survivors at Specified Ages for Each Sex (2) Indonesia, 1996

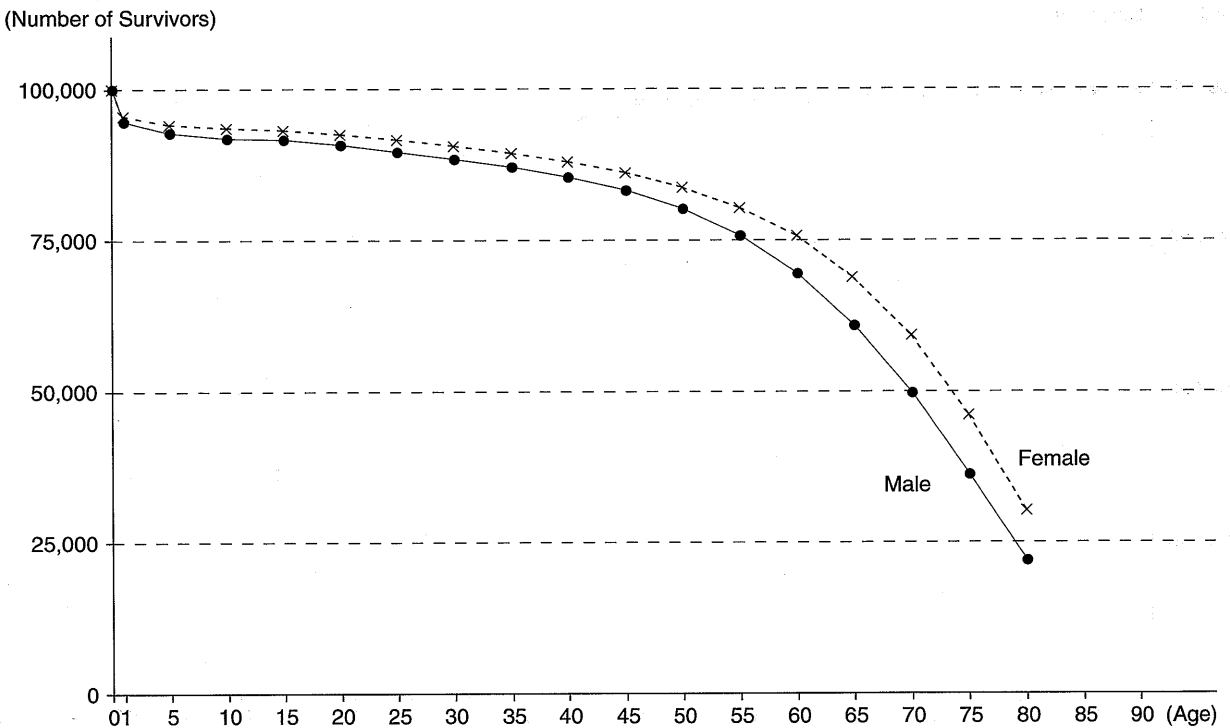


Fig. 4 Survivors at Specified Ages for Each Sex (3) Japan, 1996

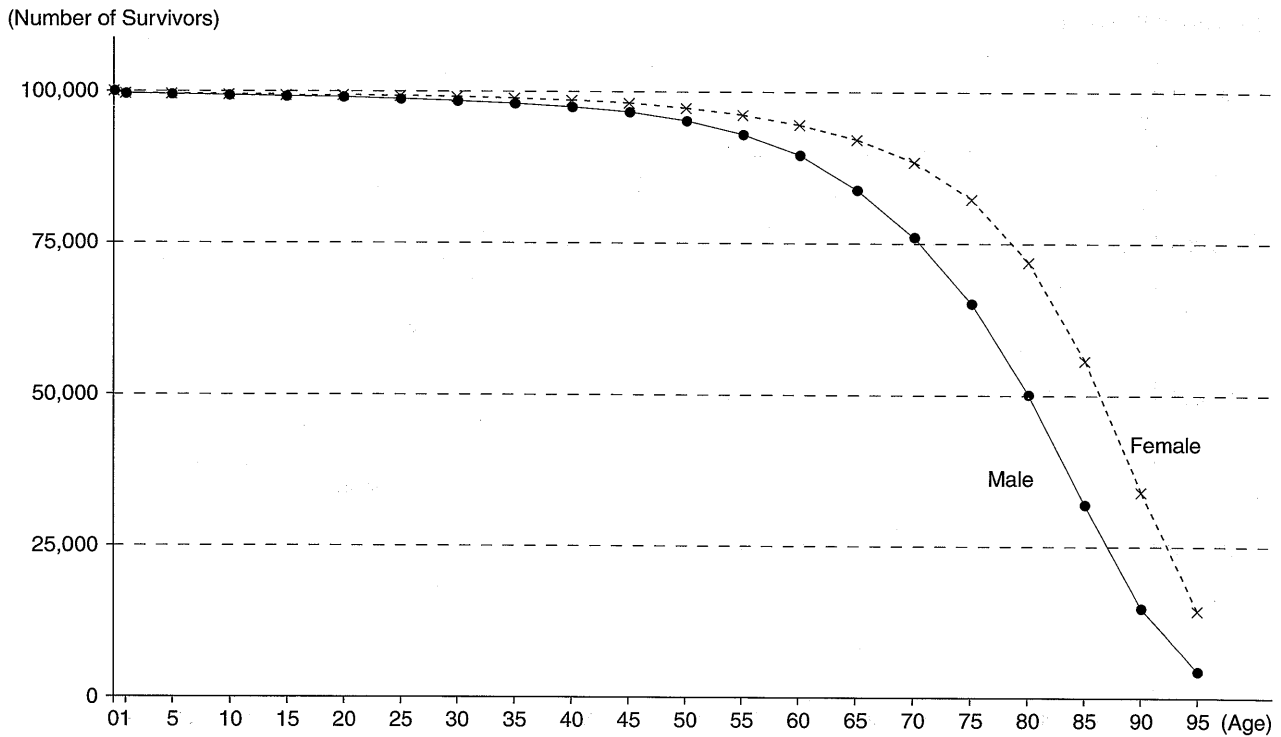


Fig. 4 Survivors at Specified Ages for Each Sex (4) Malaysia, 1995

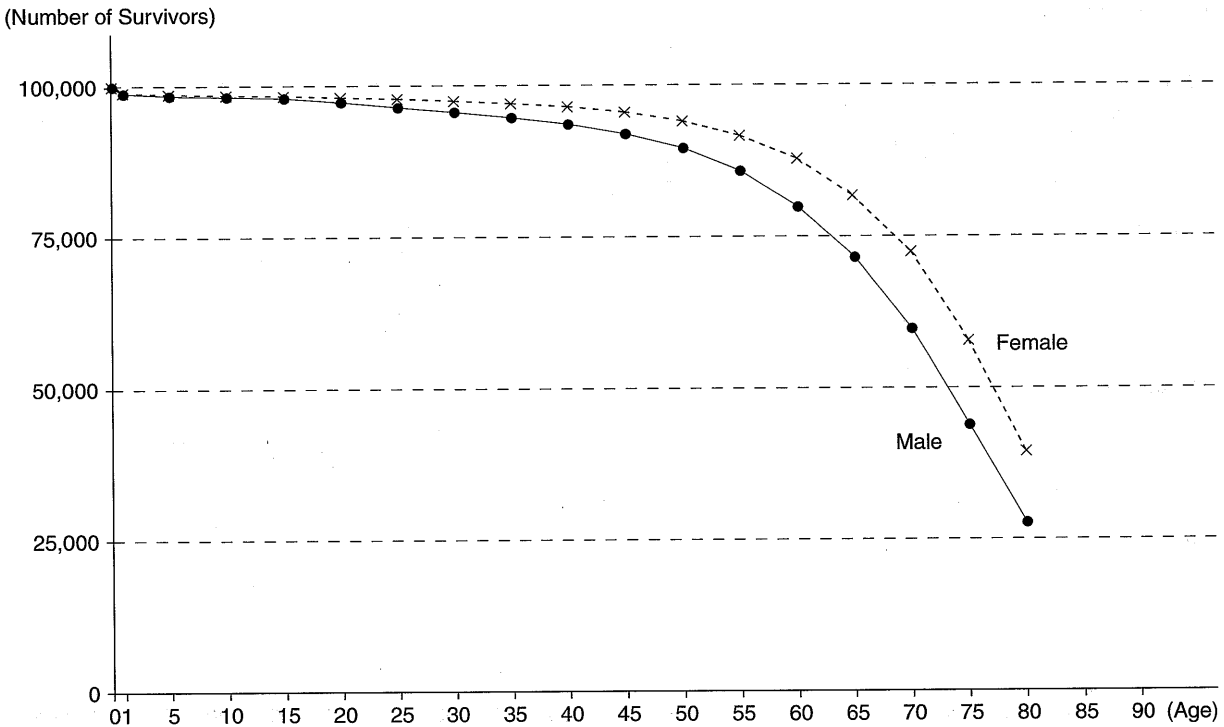


Fig. 4 Survivors at Specified Ages for Each Sex (5) Philippines, 1992

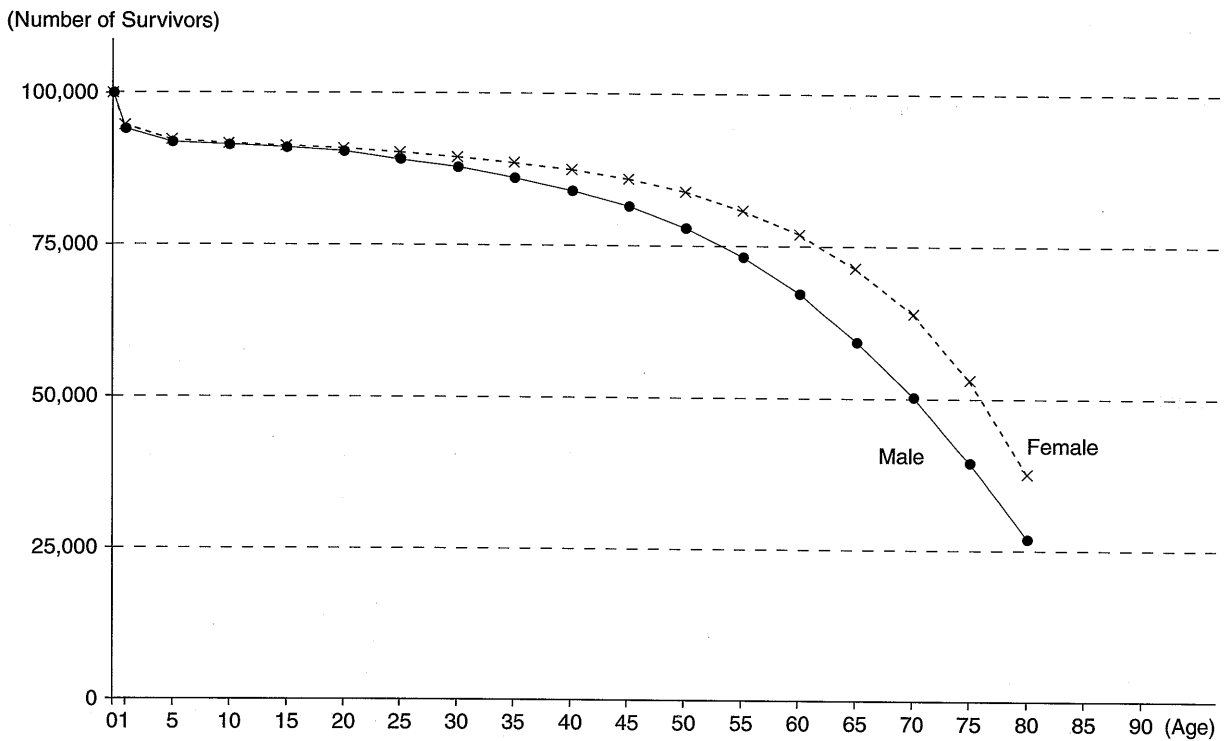


Fig. 4 Survivors at Specified Ages for Each Sex (6) Singapore, 1995

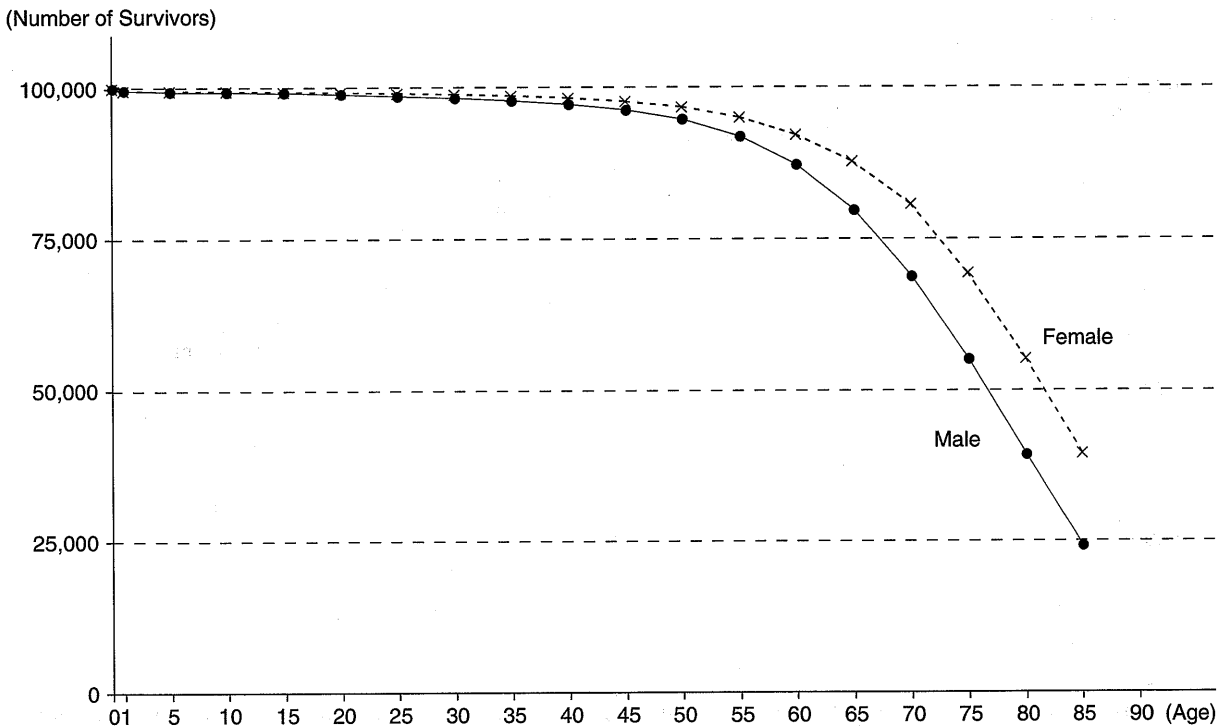


Fig. 4 Survivors at Specified Ages for Each Sex (7) Thailand, 1991

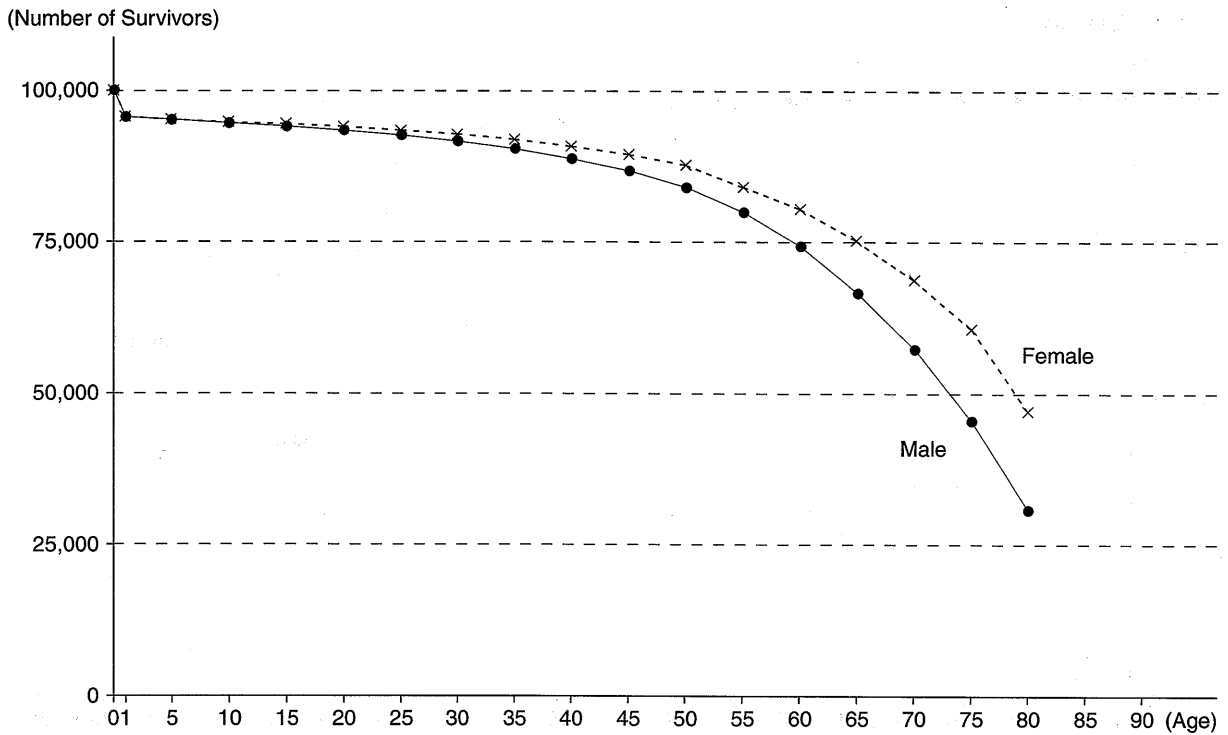
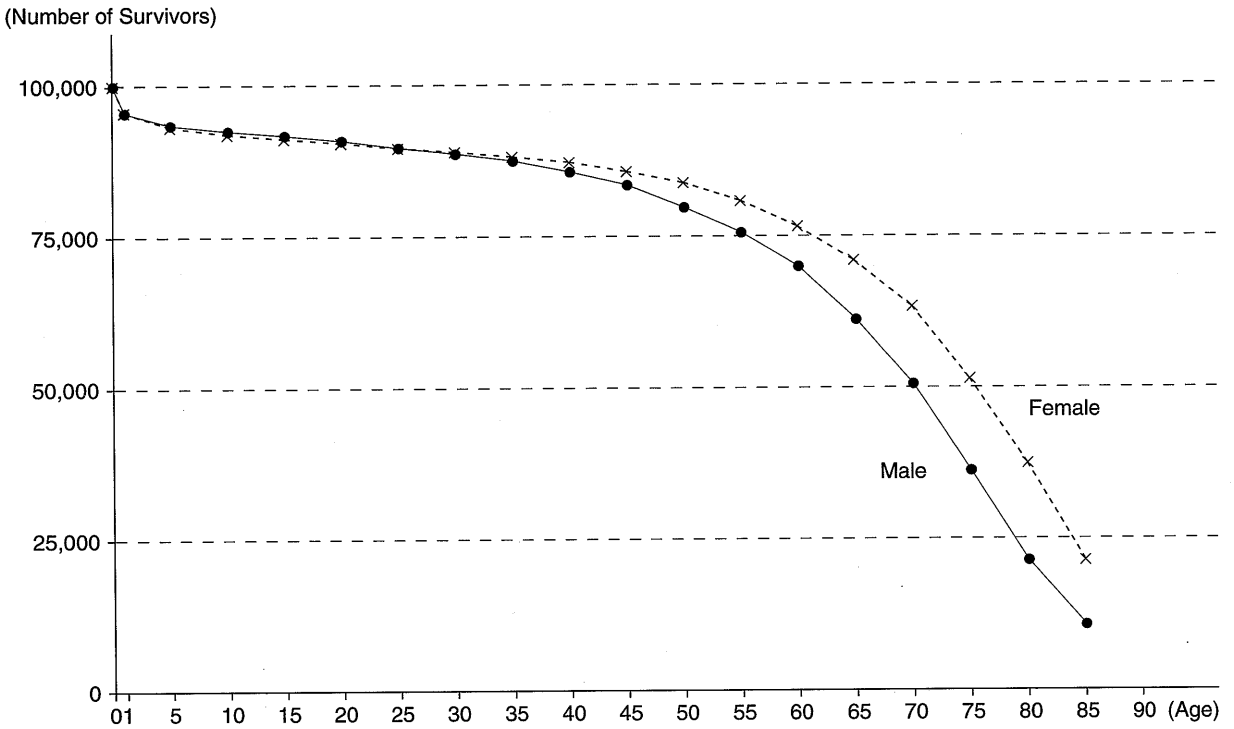


Fig. 4 Survivors at Specified Ages for Each Sex (8) Vietnam, 1989



3. Causes of Death

3 – 1 Ten Leading Causes of Death [a)]

	Year	1	2	3	4
BRUNEI (1)	1995	Heart Diseases	Malignant Neoplasms	Celebrovascular Diseases	Transport Accidents
INDONESIA (2)	1996	Certain Conditions Originating in the Perinatal Period	Heart Diseases	Celebrovascular Diseases	Pneumonia
JAPAN (3)	1995	Malignant Neoplasms	Cerebrovascular Diseases	Heart Diseases	Pneumonia
MALAYSIA (4) b)	1995	Heart Diseases	Malignant Neoplasms	Celebrovascular Diseases	Certain Condition Originating in the Perinatal Period
PHILIPPINES (5)	1994	Heart Diseases	Malignant Neoplasms	Pneumonia	Tuberculosis
SINGAPORE (6)	1996	Malignant Neoplasms	Heart Diseases	Cerebrovascular Diseases	Pneumonia
THAILAND (7)	1996	Heart Diseases	Malignant Neoplasms	Transport Accidents	Pneumonia
VIETNAM (8) b)	1996	Accidents, Injuries	Pneumonia	Respiratory Tuberculosis	Fetus and Newborn Affected by Maternal Factors and by Complications of Pregnancy Labour and Delivery

Source : (1) Birth and Death Registry, Ministry of Health
(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,*** Health Intelligence Service, Department of Health
(6) National Registration Department, Singapore
(7) Health Information Division, Bureau of Health Policy and Plan, Ministry of Public Health
(8) ***Health Statistics Yearbook,*** Statistics & Informatic Div., Ministry of Health

Note : a) Based on Table 3–3 except Vietnam
b) Government hospitals only

5	6	7	8	9	10
Diabetes Mellitus	Hypertensive Diseases	Pneumonia	Certain Conditions Originating in the Perinatal Period	Bronchitis, Emphysema & Asthma	Congenital Anomalies
Transport Accidents Tuberculosis		Nephritis, Nephrotic Syndrome & Nephrosis	Chronic Liver Diseases & Cirrhosis of Liver	Diabetes Mellitus	Intestinal Infectious Diseases
Bronchitis, Emphysema and Asthma	Suicide and Self-inflicted Injury	Nephritis, Nephrotic Syndrome & Nephrosis	Transport Accidents	Diabetes Mellitus	Chronic Liver Diseases & Cirrhosis of Liver
Septicemia	Transport Accidents	Pneumonia	Nephritis, Nephrotic Syndrome & Nephrosis	Congenital Anomalies	Diabetes Mellitus
Hypertensive Diseases	Celebrovascular Deseases	Certain Conditions Originating in the Perinatal Period	Homicide and Injuries Inflicted by Other Person	Bronchitis Emphysema and Asthma	Intestinal Infectious Diseases
Hypertensive Diseases	Diabetes Mellitus	Suicide and Self-inflicted Injury	Transport Accidents	Nephritis, Nephrotic Syndrome & Nephrosis	Bronchitis Emphysema and Asthma
Septicemia	Celebrovascular Diseases	Diabetes Mellitus	Chronic Liver Diseases & Cirrhosis	Suicide and Self-inflicted Injury	Tuberculosis
Intracerebral Haemorrhage	Traffic Accidents	Essential (primary) Hypertension	Acute Myocardial Infarction	Viral Encephalitis	Suicide

[Brunei Darussalam]

3 – 2 Trends in the Leading Causes of Death

Order	Year	1983	1985	1988	1989	1990	1991	1992	1993	1994	1995 [a]
No. 1	Cause of Death	Accidents, Poisoning & Violence		Malignant Neoplasms	Heart Diseases			Malignant Neoplasms	Heart Diseases	Malignant Neoplasms	Heart Diseases
	Death Rate per 100,000 Population	31.7	37.0	43.1	46.6	54.6	49.8	37.3	48.9	42.5	38.3
No. 2	Cause of Death	Malignant Neoplasms	Heart Diseases	Heart Diseases	Malignant Neoplasms			Heart Diseases	Accidents, Poisoning & Violence		Malignant Neoplasms
	Death Rate per 100,000 Population	25.5	32.4	35.6	45.0	36.6	41.0	36.6	46.3	42.2	37.9
No. 3	Cause of Death	Heart Diseases	Malignant Neoplasms	Accidents, Poisoning & Violence					Malignant Neoplasms	Heart Diseases	Cerebro-vascular Diseases
	Death Rate per 100,000 Population	24.5	28.8	29.8	24.9	26.1	38.0	30.6	44.9	38.7	25.0
No. 4	Cause of Death	Pneumonia	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Pneumonia	Cerebro-vascular Diseases	Hypertensive Diseases	Cerebrovascular Diseases			Transport Accidents
	Death Rate per 100,000 Population	15.4	18.0	17.8	22.1	14.4	15.3	19.0	22.1	23.6	19.3
No. 5	Cause of Death	Cerebro-vascular Diseases	Pneumonia	Diabetes Mellitus	Hypertensive Diseases		Cerebro-vascular Diseases	Pneumonia	Conditions Originating in the Perinatal Period		Diabetes Mellitus
	Death Rate per 100,000 Population	13.0	13.1	12.4	16.5	11.7	13.0	12.3	13.8	9.1	13.9

Source : Ministry of Health

Note : a) Based on Table 3–3

[Indonesia]

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

Order	Year	1972	1980	1986	1992	1996 a)
No. 1	Cause of Death Death Rate per 100,000 Population	Diarrhea	Lower Respiratory Tract Infection	Diarrhea	Circulatory System Diseases	Certain Conditions Originating in the Perinatal Period
No. 2	Cause of Death Death Rate per 100,000 Population	Lower Respiratory Tract Infection	Diarrhea	Tuberculosis		Heart Diseases
No. 3	Cause of Death Death Rate per 100,000 Population	Tuberculosis	Cardio-vascular Diseases	Diphtheria, Measles & Cough	Lower Respiratory Tract Infection	Cerebro-vascular Diseases
No. 4	Cause of Death Death Rate per 100,000 Population	Cardiovascular Disorder & Nervous System	Tuberculosis	Tetanus	Diarrhea	Pneumonia
No. 5	Cause of Death Death Rate per 100,000 Population	Tetanus		Malaria	Perinatal Diseases	Tuberculosis Transport Accidents

Source : Household Health Survey in Indonesia

Note : a) Based on Table 3-3

[Japan]

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

Order		Year 1899	1920	1930	1940	1950	1960	1970	1980	1985	1990	1993	1994	1995[a]
No. 1	Cause of Death	Pneumonia and Bronchitis		Gastro-enteritis	Tuberculosis		Cerebrovascular Diseases			Malignant Neoplasms				
	Death Rate per 100,000 Population	206.1	408.6	221.4	212.9	146.4	160.7	175.8	139.5	156.1	177.2	190.4	196.4	209.5
No. 2	Cause of Death	Cerebro-vascular Diseases	Gastro-enteritis	Pneumonia and Bronchitis		Cerebro-vascular Diseases	Malignant Neoplasms			Heart Diseases				Cerebro-vascular Diseases
	Death Rate per 100,000 Population	170.5	254.2	200.1	185.8	127.1	100.4	116.3	139.1	117.3	134.8	145.6	128.6	116.7
No. 3	Cause of Death	Tuberculosis			Cerebro-vascular Diseases	Pneumonia and Bronchitis	Heart Diseases			Cerebrovascular Diseases				Heart Diseases
	Death Rate per 100,000 Population	155.7	223.7	185.6	177.7	93.2	73.2	86.7	106.2	112.2	99.4	96.0	96.9	110.5
No. 4	Cause of Death	Gastro-enteritis	Influenza	Cerebro-vascular Diseases	Gastroenteritis		Pneumonia and Bronchitis	Accidents, Poisoning & Violence	Pneumonia and Bronchitis					Pneumonia
	Death Rate per 100,000 Population	149.7	193.7	162.8	159.2	82.4	58.0	42.5	33.7	42.7	60.7	70.6	72.4	63.4
No. 5	Cause of Death	Senility	Cerebro-vascular Diseases	Senility		Malignant Neoplasms	Accidents, Poisoning & Violence	Pneumonia and Bronchitis	Accidents, Poisoning & Violence					Bronchitis, Emphysema & Asthma
	Death Rate per 100,000 Population	127.2	157.6	118.8	124.5	77.4	49.3	34.1	25.1	24.6	26.9	28.0	29.1	18.1

Source : Ministry of Health and Welfare

Note : a) Based on Table 3–3

[Peninsular Malaysia] 3 – 2 Trends in the Leading Causes of Death (Contd.)

Order		Year 1980	1985	1988	1989	1990	1991	1992	1993	1994	1995 a)
No. 1	Cause of Death	Heart Diseases	Heart Diseases and Diseases of Pulmonary Circulation								Heart Diseases
	Death Rate per 100,000 Population	25.0	27.5	24.4	23.8	23.8	19.2	22.1	20.3	16.9	38.6
No. 2	Cause of Death	Diseases of Early Infancy	Certain Condition Originating in the Perinatal Period							Accidents	Malignant Neoplasms
	Death Rate per 100,000 Population	22.7	18.9	14.2	13.4	14.1	11.6	13.3	12.6	10.5	21.2
No. 3	Cause of Death	Accidents		Cerebrovascular Diseases			Accidents		Cerebrovascular Diseases	Certain Condition Originating in the Perinatal Period	Cerebrovascular Diseases
	Death Rate per 100,000 Population	20.0	17.8	11.9	12.5	12.7	11.4	13.2	12.2	10.4	16.7
No. 4	Cause of Death	Cerebrovascular Diseases		Accidents			Cerebrovascular Diseases		Accidents	Cerebrovascular Diseases	Certain Conditions Originating in the Perinatal Period
	Death Rate per 100,000 Population	12.1	12.2	11.9	12.5	12.7	11.4	13.1	11.8	10.4	39.7
No. 5	Cause of Death	Malignant Neoplasms					Septicemia		Malignant Neoplasms		Septicemia
	Death Rate per 100,000 Population	11.9	11.3	11.8	12.4	12.0	9.7	11.2	11.3	9.5	33.2

Source : ***Annual Report-1980, 1985–1994 of Ministry of Health Malaysia***

Note : a) Based on Table 3–3. Whole Malaysia.

[Philippines]

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

Order		Year 1960	1965	1970	1975	1980	1985	1987	1988	1989	1990	1991	1992	1994 a)
No. 1	Cause of Death	Pneumonia									Heart Diseases			
	Death Rate per 100,000 Population	100.4	83.4	118.2	102.0	93.6	96.7	91.9	80.8	77.0	74.4	72.9	75.2	65.3
No. 2	Cause of Death	Tuberculosis (All Forms)	Respiratory Tuberculosis	Tuberculosis (All Forms)		Heart Diseases					Pneumonia			Malignant Neoplasms
	Death Rate per 100,000 Population	92.1	83.4	80.1	69.2	60.8	66.3	67.7	69.1	74.6	66.3	57.7	64.5	46.7
No. 3	Cause of Death	Gastroenteritis & Colitis		Diseases of Vascular System	Heart Diseases	Tuberculosis (All Forms)		Diseases of Vascular System						Pneumonia
	Death Rate per 100,000 Population	60.5	46.0	35.8	56.6	59.6	57.9	52.1	53.1	56.1	54.2	51.8	54.3	41.0
No. 4	Cause of Death	Bronchitis		Gastro-enteritis & Colitis	Diseases of Vascular System			Tuberculosis (All Forms)					Malignant Neoplasms	Tuberculosis
	Death Rate per 100,000 Population	57.2	43.1	35.0	31.8	43.8	49.7	50.0	46.0	43.8	39.1	35.9	36.7	39.7
No. 5	Cause of Death	Beri-beri		Heart Diseases	Malignant Neoplasms	Diarrhea	Malignant Neoplasms						Tuberculosis (All Forms)	Hypertensive Diseases
	Death Rate per 100,000 Population	54.4	32.8	34.0	29.4	33.2	33.2	35.5	36.1	36.5	35.7	35.2	35.8	33.2

Source : ***Philippine Health Statistics, 1960–1992,*** Health Intelligence Service

Note : a) Based on Table 3–3

[Singapore]

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

Order	Year	1950	1955	1960	1970	1980	1985	1989 a)	1990 a)	1991 a)	1992 a)	1993 a)	1994 a)	1995	1996 a)
No. 1	Cause of Death	Tuberculosis	Pneumonia	Malignant Neoplasms		Heart Diseases				Malignant Neoplasms					
	Death Rate per 100,000 Population	145	79	62	77	111	118	121	117	116	117	117	122	125	123.9
No. 2	Cause of Death	Infantile Convulsions	Tuberculosis	Pneumonia	Heart Diseases	Malignant Neoplasms				Heart Diseases					
	Death Rate per 100,000 Population	133	76	56	76	106	113	117	115	107	115	112	114	114	118.9
No. 3	Cause of Death	Pneumonia	Heart Diseases			Cerebrovascular Diseases								Pneumonia	Cerebro-vascular Diseases
	Death Rate per 100,000 Population	131	56	49	50	60	55	56	58	59	57	55	55	64	56.9
No. 4	Cause of Death	Gastroenteritis		Tuberculosis	Accidents	Pneumonia								Cerebro-vascular Diseases	Pneumonia
	Death Rate per 100,000 Population	108	54	39	41	47	50	40	41	44	46	52	54	54	52.7
No. 5	Cause of Death	Diseases of Early Infancy	Malignant Neoplasms	Gastro-enteritis	Pneumonia	Accidents									Hypertensive Diseases
	Death Rate per 100,000 Population	79	50	33	41	37	42	32	31	31	31	27	28	28	11.5

Source : National Registration Department

Note : a) Rates refer to Singapore residents only
b) Based on Table 3–3

[Thailand]

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

Order	Year	1930	1940	1950	1960	1970	1980	1985	1990	1991	1992	1993	1994	1995	1996 [a]
No. 1	Cause of Death	Malaria			Gastro-enteritis	Accidents		Heart Diseases	Diseases of Pulmonary Circulation and Other Forms of Heart Diseases		Heart Diseases				
	Death Rate per 100,000 Population	342.4	277.8	195.0	38.7	27.2	35.9	36.4	49.6	52.5	56.0	58.5	72.7	78.9	79.6
No. 2	Cause of Death	Gastroenteritis		T.B. of Respiratory System			Heart Diseases	Accidents and Poisoning	Other Accidents Including Late Effect		Accidents and Poisoning				Malignant Neoplasms
	Death Rate per 100,000 Population	159.8	168.8	65.5	34.7	20.8	31.4	28.9	25.3	25.8	48.5	52.7	61.5	61.5	50.8
No. 3	Cause of Death	T.B. of Respiratory System	Dysentery	Gastro-enteritis	Pneumonia	Diarrhea	Malignant Neoplasms of Other and Unspecified Sites				Malignant Neoplasm, All Forms				Transport Accidents
	Death Rate per 100,000 Population	79.2	110.0	66.1	32.5	17.6	23.6	27.0	22.0	21.9	43.5	45.0	48.9	50.9	29.3
No. 4	Cause of Death	Dysentery	T.B. of Respiratory System	Pneumonia	Malaria	Heart Diseases	T.B. of Respiratory System		Diseases of Digestive System Other than Oral Cavity, Salivary Glands and Jaws		Hypertension and Cerebro-vascular Diseases				Pneumonia
	Death Rate per 100,000 Population	74.3	80.9	39.4	30.2	15.3	14.3	10.3	18.4	18.5	16.9	16.4	15.7	16.1	11.8
No. 5	Cause of Death	Pneumonia		Dysentery	Heart Diseases	Pneumonia			Transport Accidents		Suicide, Homicide and Other Injury		Diseases of Liver and Pancreas	Suicide, Homicide and Other Injury	Septicemia
	Death Rate per 100,000 Population	22.0	48.7	32.8	19.0	14.8	10.0	7.4	15.2	18.3	13.3	14.7	13.0	13.3	11.5

Source : Ministry of Public Health

Note : a) Based on Table 3–3

3 – 3 Deaths and Death Rates by Causes (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)	1995	T	872	294.6	26	8.8	—		—		—	
		M	499	318.6	14	8.9	—		—		—	
		F	373	267.6	12	8.6	—		—		—	
INDONESIA (2)	1996	T	1,688						23			
		M	923						11			
		F	765						12			
JAPAN (3)	1995	T	922,139	741.9	18,925	15.2	1	0.0	—		4	0.0
		M	501,276	822.9	10,671	17.5	1	0.0	—		4	0.0
		F	420,863	664.0	8,254	13.0	—		—		—	
MALAYSIA (4) b)	1995	T	41,395	205.9	3,493	17.4	28	0.1	15	0.1	4	0.0
		M	26,106	255.9	2,064	20.2	21	0.2	11	0.1	4	0.0
		F	15,289	154.4	1,429	14.4	7	0.1	4	0.0	—	
PHILIPPINES (5)	1994	T	325,099	473.7	45,854	66.8	289	0.4	1,196	1.7	442	0.6
		M	194,541	564.3	28,947	84.0	174	0.5	697	2.0	256	0.7
		F	130,558	382.3	16,907	49.5	115	0.3	499	1.5	186	0.5
SINGAPORE (6) c)	1996	T	15,590 d)	473.9	358	10.7	—		1	0.0	—	
		M	8,829	523.0	214	12.2	—		—		—	
		F	6,759	424.0	144	9.2	—		1	0.1	—	
THAILAND (7)	1996	T	353,595	591.4	18,602	31.1	—		132	0.2	11	0.0
		M	215,543	722.7	12,088	40.5	—		93	0.3	9	0.0
		F	138,052	460.7	6,514	21.7	—		39	0.1	2	0.0
VIETNAM (8) e)	1995	T	20,425		3,449		18		47		61	
	1996	T	21,320		3,794		1		38		45	

Source : (1) Birth and Death Registry, Ministry of Health and Economic Planning Unit, Ministry of Finance
(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 and Welfare
(4) Department of Statistics
(5) *Philippine Health Statistics,* Department of Health
(6) *Report on Registration of Birth and Deaths,* National Registration Department
(7) Ministry of Public Health (official data)
(8) Ministry of Health

Note : a) ICD – 10: Japan, Thailand and Vietnam
b) Medically certified deaths only, which correspond to 43.7% of all deaths.
c) Singapore residents only
d) Includes unknown sex
e) Hospital based figures

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

	Year	Sex	013, 015, 016, 019 Rest of A00 – A09 Other Intestinal Infectious Diseases		020 – 021 A15, A16 Tuberculosis of Respiratory System		022 – 025, 029 A17 – A19 Tuberculosis of Other Forms		033 A36 Diphtheria		034 A37 Whooping Cough	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1995	T	—		9	3.0	—		—		—	
		M	—		4	2.6	—		—		—	
		F	—		5	3.6	—		—		—	
INDONESIA	1996	T	32		77		3				—	
		M	21		50		1				—	
		F	11		27		2				—	
JAPAN	1995	T	1,092	0.9	2,986	2.1	192	0.2	—		5	0.0
		M	471	0.8	2,163	3.6	104	0.2	—		3	0.0
		F	621	1.0	823	1.3	88	0.1	—		2	0.0
MALAYSIA	1995	T	108	0.5	456	2.3	79	0.4	1	0.0	1	0.0
		M	60	0.6	329	3.3	47	0.5	1	0.0	—	
		F	48	0.5	127	1.3	32	0.3	—		1	0.0
PHILIPPINES	1994	T	6,439	9.4	26,208	38.2	1,049	1.5	51	0.1	9	0.0
		M	3,681	10.7	17,354	50.3	626	1.8	31	0.1	5	0.0
		F	2,758	8.1	8,854	26.1	423	1.2	20	0.1	4	0.0
SINGAPORE	1996	T	27	0.9	118	3.6	14	0.4	1	0.0	—	
		M	13	0.8	93	5.6	9	0.5	1	0.0	—	
		F	14	0.9	25	1.6	5	0.3	—		—	
THAILAND	1996	T	1,670	2.8	3,555	5.9	1,218	2.0	35	0.1	3	0.0
		M	1,027	3.4	2,673	9.0	908	3.0	23	0.1	1	0.0
		F	643	2.1	882	2.9	310	1.0	12	0.0	2	0.0
VIETNAM	1995	T	356		827		75		33		11	
	1996	T	601		1,146		83		23		3	

(rate per 100,000 population)

036 A39		037 A33 – A35		038 A40, A41		030 – 032, 035, 039 Rest of A20 – A49		040 A80		042 B05		046 B15 – B19		047 A82	
Meningococcal Infection		Tetanus		Septicemia		Other Bacterial Diseases		Acute Poliomyelitis		Measles		Viral Hepatitis		Rabies	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
—		—		13	4.4	—		—		—		—			
—		—		7	4.5	—		—		—		—			
—		—		6	4.3	—		—		—		—			
—		23		24		4		—		—		—		—	
—		18		14		3		—		—		—		—	
—		5		10		1		—		—		—		—	
1	0.0	14	0.0	4,905	3.9	860	0.7	—		7	0.0	6	0.0	—	
1	0.0	5	0.0	2,269	3.7	404	0.7	—		3	0.0	4	0.0	—	
—		9	0.0	2,636	4.2	456	0.7	—		4	0.0	2	0.0	—	
4	0.0	17	0.1	2,399	11.9	125	0.6	—		12	0.1	8	0.0	—	
3	0.0	11	0.1	1,344	13.2	72	0.7	—		5	0.0	8	0.1	—	
1	0.1	6	0.1	1,055	10.7	53	0.5	—		7	0.1	—		—	
188	0.3	810	1.2	3,615	5.3	115	0.2	38	0.1	1,023	4.5	1,065	1.6	538	0.8
98	0.3	617	1.8	1,991	5.8	54	0.2	22	0.1	557	4.6	750	2.2	363	1.1
90	0.3	193	0.6	1,624	4.8	61	0.2	16	0.0	466	4.4	315	0.9	175	0.5
3	0.0	—		141	4.4	7	0.2	—		—		8	0.2	—	
3	0.1	—		56	3.3	6	0.3	—		—		7	0.3	—	
—	—	—		85	5.5	1	0.1	—		—		1	0.1	—	
2	0.0	153	0.3	6,884	11.5	195	0.3	40	0.1	7	0.0	127	0.2	58	0.1
—		103	0.3	3,853	12.9	127	0.2	24	0.1	5	0.0	80	0.3	32	0.1
2	0.0	50	0.2	3,031	10.1	68	0.1	16	0.1	2	0.0	47	0.2	26	0.1
		305 a) 280 a)						8 a) 52 a)		36 a) 9 a)		45 61		124 92	

Note : a) Age under 5-year

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

	Year	Sex	279.5 [a] B20 – B24 AIDS (HIV)		065.4 [a] A91 Dengue Hemorrhagic Fever		061 [a] A90 Dengue		044, 045 •• Other Arthropod-borne Viral Diseases		041, 043, 048, 049 Rest of A80 – B34 Other Viral Diseases		052 B50 – B54 Malaria	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1995	T							1	0.3			—	
		M							1	0.6			—	
		F							—				—	
INDONESIA	1996	T							—		26		14	
		M							—		12		8	
		F							—		14		6	
JAPAN	1995	T	56 [b]	0.0	—		—		••		6,220	5.0	—	
		M	52	0.1	—		—				3,531	5.8	—	
		F	4	0.0	—		—				2,689	4.2	—	
MALAYSIA	1995	T	—		—		28	0.1	—		57	0.3	63	0.3
		M	—		—		9	0.1	—		38	0.4	35	0.3
		F	—		—		19	0.2	—		19	0.2	28	0.3
PHILIPPINES	1994	T	115	0.2	464	0.7	—		53	0.1	338	0.5	786	1.1
		M	65	0.2	201	0.6	—		33	0.1	184	0.5	525	1.5
		F	50	0.1	263	0.8	—		20	0.1	154	0.5	261	0.8
SINGAPORE	1996	T	63	1.8	4	0.1	—		—		25	0.7	3	0.0
		M	58	3.4	2	0.1	—		—		17	1.0	2	0.0
		F	5	0.3	2	0.1	—		—		8	0.5	1	0.1
THAILAND	1996	T	782	1.3	—		—				725	1.2	826	1.4
		M	577	1.9	—		—		••		460	0.8	639	2.1
		F	205	0.7	—		—				265	0.4	187	0.6
VIETNAM	1995	T	47		274				••		2		348	
	1996	T	225 [c]		268						66		158	

Note : a) Four-digit subcategories
b) Excluding hemophiliacs
c) Up to November, 1996

(rate per 100,000 population)

06 A50 – A64		Rest of 01 – 07 Rest of A00 – B99		08 – 14 C00 – C97		091 C16		093 C18		094 C19 – C20		095 C22		101 C33, C34	
Venereal Diseases		Other Infectious and Parasitic Diseases		Malignant Neoplasms		Malignant Neoplasm of Stomach		Malignant Neoplasm of Colon		Malignant Neoplasm of Rectum, Rectosigmoid Junction and Anus		Malignant Neoplasm of Liver Specified as Primary		Malignant Neoplasm of Trachea, Bronchus and Lung	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
2	0.7	1	0.3	112	37.8	5	1.7	9	3.0	7	2.4	9	3.0	27	9.1
1	0.6	1	0.6	67	42.8	3	1.9	5	3.2	3	1.9	8	5.1	23	14.7
1	0.7	—		45	32.3	2	1.4	4	2.9	4	2.9	1	0.7	4	2.9
		3		20		1		3		3		16		8	
		1		11		1		2		2		9		6	
		2		9		—		1		1		7		2	
28	0.0	2,548	2.0	263,022	211.6	50,076	40.3	20,286	16.3	10,988	8.8	31,707	25.5	45,745	36.8
18	0.0	1,638	2.7	159,623	262.0	32,015	52.6	10,420	17.1	6,892	11.3	22,773	37.4	33,389	54.8
10	0.0	910	1.4	103,399	163.1	18,061	28.5	9,866	15.6	4,096	6.5	8,934	14.1	12,356	19.5
5	0.0	83	0.4	4,259	21.2	297	1.5	231	1.1	120	0.6	356	1.8	884	4.4
4	0.0	62	0.6	2,406	23.6	192	1.9	117	1.1	70	0.7	254	2.5	630	6.2
1	0.0	21	0.2	1,853	18.7	105	1.1	114	1.2	50	0.6	102	1.0	254	2.6
4	0.0	1,019	1.5	32,016	46.7	1,370	2.0	953	1.4	425	0.6	4,112	6.0	4,572	6.7
4	0.0	659	1.9	18,168	52.7	795	2.3	528	1.5	237	0.7	3,020	8.8	3,494	10.1
—		360	1.1	13,848	40.6	575	1.7	425	1.2	188	0.6	1,092	3.2	1,078	3.2
1	0.0	5	0.1	3,985	123.9	373	11.8	368	11.8	168	5.4	175	5.1	897	28.0
1	0.1	4	0.2	2,337	144.3	230	14.6	182	11.6	86	5.5	145	8.2	630	39.1
—		1	0.0	1,648	103.3	143	9.0	186	12.0	82	5.3	30	1.9	267	16.8
13	0.0	2,166	3.6	30,343	50.8	401	0.7	1,211	2.0	—		5,455	9.1	2,961	5.0
9	0.0	1,445	4.8	18,407	61.7	239	0.8	751	2.5	—		3,882	13.0	2,153	7.2
4	0.0	721	2.4	11,936	39.8	162	0.5	460	1.5	—		1,573	5.2	808	2.7
		519		524		42		16				65		52	
		325		524		63		22				69		89	

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

	Year	Sex	113 C50 [a] Malignant Neoplasm of Female Breast		120 C53 Malignant Neoplasm of Cervix Uteri		122 C54, C55 Malignant Neoplasm of Uterus, Other and Unspecified		Rest of 8 – 13 Rest of C00 – C80 Malignant Neoplasm of Other Sites		141 C91 – C95 Leukemia		140, 149 Rest of C81 – C97 Other Malignant Neoplasm of Lymphatic and Hemopoietic Tissue	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1995	T	6	2.0	7	2.4	—		37	12.5	2	0.7	3	1.0
		M	••		••		••		22	14.0	2	1.3	1	0.6
		F	6	4.3	7	5.0	—		15	10.8	—		2	1.4
INDONESIA	1996	T	8											
		M	••											
		F	8											
JAPAN	1995	T	7,819	6.2	2,268	1.8	2,597	2.1	76,057	61.2	6,129	4.9	9,350	7.5
		M	56	0.1	••		••		45,133	74.1	3,645	6.0	5,300	8.7
		F	7,763	12.2	2,268	3.6	2,597	4.1	30,924	48.8	2,484	3.9	4,050	6.4
MALAYSIA	1995	T	320	1.6	142	0.7	23	0.1	1,371	6.8	329	1.6	186	0.9
		M	••		••		••		833	8.2	187	1.8	123	1.2
		F	320	3.2	142	1.4	23	0.2	538	5.4	142	1.4	63	0.6
PHILIPPINES	1994	T	2,333	3.4	599	0.9	1,130	1.6	14,054	20.5	1,777	2.6	691	1.0
		M	••		••		••		8,745	25.4	937	2.7	412	1.2
		F	2,333	6.8	599	1.8	1,130	3.3	5,309	15.5	840	2.5	279	0.8
SINGAPORE	1996	T	221	6.8	94	2.8	31	0.8	1,390	43.4	127	3.7	141	4.3
		M	••		••		••		899	55.8	77	4.4	88	5.1
		F	221	13.7	94	5.6	31	1.7	491	30.8	50	3.1	53	3.4
THAILAND	1996	T	550	0.9	392	0.7	353	0.6	17,823	29.8	928	1.6	269	0.5
		M	9	0.0	••		••		10,705	35.9	491	1.6	177	0.5
		F	541	1.8	392	1.3	353	1.2	7,118	23.8	437	1.5	92	0.3
VIETNAM	1995	T	1		14				99		31		—	
	1996	T	13		29				174		52		3	

Note : a) Malignant Neoplasm of Breast

(rate per 100,000 population)

15 – 17 D00 – D48		181 E10 – E14		180, 182, 183, 189 Rest of E00 – E90		19 E40 – E64		200 D50 – D64		209 D65 – D89 [b]		21 F00 – F99		220 G00 – G09	
Benign Neoplasm, Carcinoma in Situ, Other and Unspecified Neoplasmas		Diabetes Mellitus		Other Endocrine and Metabolic Diseases		Nutritional Deficiencies		Anemias		Other Diseases of Blood and Blood-forming Organs		Mental Disorders		Meningitis	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
—		41	13.9	3	1.0	—		—		—		2	0.7	1	0.3
—		17	10.9	1	0.6	—		—		—		2	1.3	1	0.6
—		24	17.2	2	1.4	—		—		—		—		—	
24		57		6		3		16		1		2		28	
14		17		3		3		3		—		1		15	
10		40		3		—		13		1		1		13	
7,271	5.8	14,225	11.4	3,847	3.1	1,288	1.0	1,652	1.3	2,454	2.0	3,762	3.0	924	0.7
4,026	6.6	7,107	11.7	1,673	2.7	707	1.2	666	1.1	1,166	1.9	1,670	2.7	537	0.9
3,245	5.1	7,118	11.2	2,174	3.4	581	0.9	986	1.6	1,288	2.0	2,092	3.3	387	0.6
196	1.0	734	3.7	316	1.6	10	0.0	105	0.5	109	0.5	104	0.5	206	1.0
102	1.0	372	3.6	239	2.3	7	0.1	56	0.5	55	0.5	94	0.9	125	1.2
94	0.9	362	3.7	77	0.8	3	0.0	49	0.5	54	0.5	10	0.1	81	0.8
167	0.2	6,081	8.9	1,466	2.1	2,904	4.2	1,960	2.9	628	0.9	1,038	1.5	2,033	3.0
89	0.3	2,866	8.3	714	2.1	1,458	4.2	1,017	2.9	314	0.9	769	2.2	1,203	3.5
78	0.2	3,215	9.4	752	2.2	1,446	4.2	943	2.8	314	0.9	269	0.8	830	2.4
49	1.5	320	10.2	20	0.6	—		19	0.6	18	0.6	11	0.4	7	0.2
21	1.2	133	8.4	5	0.3	—		9	0.5	10	0.7	4	0.3	5	0.2
28	1.8	187	12.0	15	0.8	—		10	0.7	8	0.5	7	0.5	2	0.1
555	0.9	5,428	7.4	306	0.5	241	0.4	315	0.5	7,412	12.4	1,106	1.8	1,913	3.2
327	1.1	2,104	6.0	131	0.4	140	0.5	155	0.5	5,884	19.7	965	3.2	1,486	5.0
228	0.8	3,324	8.8	175	0.6	101	0.3	160	0.5	1,528	5.1	141	0.5	427	1.4
22		55		14		115		129		33		29		a)	
13		120		246		105		387		80		30			

Note : a) See page 66

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

	Year	Sex	221 – 225, 229, 23,24 G10 – H95 Other Diseases of Nervous System and Sense Organs		25 – 30 I 00 – I 99 Diseases of Circulatory System		25 I 00 – I 09 Rheumatic Fever and Rheumatic Heart Diseases		26 I 10 – I 15 Hypertensive Disease		270 I 21 – I 23 Acute Myocardial Infarction		279 I 20, I 24, I 25 Other Ischemic Heart Diseases	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1995	T	4	1.1	218	73.6	4	1.4	27	9.1	44	14.9	21	7.1
		M	3	1.9	137	87.5	4	2.6	12	7.7	34	21.7	17	10.9
		F	1	0.7	81	58.1	—		15	10.8	10	7.2	4	2.9
INDONESIA	1996	T	74		336		4		29		32		24	
		M	37		181		3		18		22		14	
		F	37		155		1		11		10		10	
JAPAN	1995	T	7,722	6.2	304,824	245.2	2,811	2.3	8,222	6.6	52,533	42.3	23,040	18.5
		M	3,999	6.6	148,515	243.8	875	1.4	3,027	5.0	28,401	46.6	11,659	19.1
		F	3,723	5.9	156,309	246.6	1,936	3.1	5,195	8.2	24,132	38.1	11,381	18.0
MALAYSIA	1995	T	479	2.4	11,765	58.5	148	0.7	285	1.4	3,383	16.8	931	4.6
		M	274	2.7	7,244	71.0	51	0.5	177	1.7	2,384	23.4	598	5.9
		F	205	2.1	4,521	45.6	97	1.0	108	1.1	999	10.1	333	3.4
PHILIPPINES	1994	T	2,998	4.4	89,346	130.2	2,548	3.7	22,776	33.2	16,555	24.1	8,829	12.9
		M	1,731	5.0	51,399	149.1	1,185	3.4	13,312	38.6	11,010	31.9	4,433	12.9
		F	1,267	3.7	37,947	111.1	1,363	4.0	9,464	27.7	5,545	16.2	4,396	12.9
SINGAPORE	1996	T	82	2.5	5,896	181.0	36	1.1	363	11.5	1,601	48.6	1,513	47.1
		M	44	2.5	3,160	189.0	13	0.8	182	11.2	967	57.4	792	48.5
		F	38	2.4	2,736	172.8	23	1.5	181	11.7	634	39.7	721	45.7
THAILAND	1995	T	11,251	18.8	64,821	108.4	571	1.0	3,154	5.3	759	1.3	2,106	3.5
		M	7,126	23.9	40,218	134.8	268	0.9	1,786	6.0	463	1.6	1,287	4.3
		F	4,125	13.8	24,603	82.1	303	1.0	1,368	4.6	296	1.0	819	2.7
VIETNAM	1995	T	214 a)		2,989		111		578		124		112	
	1996	T	424 a)		3,994		223		683		442		143	

Note : a) Including meningitis

(rate per 100,000 population)

28 I 30 – I 52		29 I 60 – I 69		300 I 70		301 – 305, 309 Rest of I 00 – I 99		310 – 312 J00 – J06		320 J20 – J21		321 J12 – J18		322 J10, J11	
Other Heart Diseases		Cerebrovascular Disease		Atherosclerosis		Other Disease of Circulatory System		Acute Upper Respiratory Infection		Acute Bronchitis and Bronchiolitis		Pneumonia		Influenza	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
44	14.9	74	25.0	—		4	1.4	—		1	0.3	26	8.8	—	
32	20.4	34	21.7	—		4	2.6	—		—		12	7.7	—	
12	8.6	40	28.7	—		—		—		1	0.7	14	10.0	—	
103		147				1		3		4		89			
51		75				—		1		2		51			
52		72				1		2		2		38			
60,322	48.5	146,552	117.9	1,372	1.1	9,972	8.0	891	0.7	2,135	1.7	79,629	64.1	1,244	1.0
28,543	46.9	69,587	114.2	662	1.1	5,761	9.5	395	0.6	960	1.6	42,419	69.6	602	1.0
31,779	50.1	76,965	121.4	710	1.1	4,211	6.6	496	0.8	1,175	1.9	37,210	58.7	642	1.0
3,320	16.5	3,349	16.7	5	0.0	344	1.7	4	0.0	12	0.1	1,492	7.4	4	0.0
1,871	18.3	1,911	18.7	5	0.0	247	2.4	3	0.0	6	0.1	922	9.0	3	0.0
1,449	14.6	1,438	14.5	—		97	1.0	1	0.0	6	0.1	570	5.8	1	0.0
16,876	24.6	18,808	27.4	2,175	3.2	779	1.1	70	0.1	226	0.3	28,120	41.0	404	0.6
9,161	26.6	10,816	31.4	989	2.9	493	1.4	38	0.1	121	0.4	14,829	43.0	213	0.6
7,715	22.6	7,992	23.4	1,186	3.5	286	0.8	32	0.1	105	0.3	13,291	38.9	191	0.6
472	12.9	1,805	56.9	5	0.1	101	2.8	2	0.1	—		1,693	52.7	1	0.0
278	13.6	858	53.9	4	0.2	66	3.4	1	0.1	—		844	51.2	1	0.1
194	12.2	947	59.8	1	0.1	35	2.2	1	0.1	—		849	54.1	—	
44,118	73.8	6,508	10.9	13	0.0	7,592	12.7	176	0.3	5	0.0	7,050	11.8	160	0.3
27,379	91.8	4,109	13.8	8	0.0	4,918	16.5	120	0.4	1	0.0	4,732	15.9	98	0.3
16,739	55.9	2,399	8.0	5	0.0	2,674	8.9	56	0.2	4	0.0	2,318	7.7	62	0.2
539		609				916		1,961		229		1,011		—	
812		252		—		605		56		296		1,227		—	

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

	Year	Sex	323 J40 – J46 Bronchitis, Chronic and Unspecified, Emphysema and Asthma		313 – 315, 319, 324 – 327, 329 Rest of J00 – J99 Other Diseases of Respiratory System		341 K25 – K27 Ulcer of Stomach and Duodenum		347 K73, K74 Chronic Liver Disease and Cirrhosis		33, 340, 342 – 346, 348, 349 Rest of K00 – K93 Other Diseases of Digestive System		350 N00 – N19 Nephritis, Nephrotic Syndrome and Nephrosis	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1995	T	20	6.8	37	12.5	3	1.0	1	0.3	18	6.1	18	6.1
		M	15	9.6	17	10.9	2	1.3	1	0.6	8	5.1	11	7.0
		F	5	3.6	20	14.3	1	0.7	—		10	7.2	7	5.0
INDONESIA	1996	T	33		57		6		72		81		78	
		M	18		37		5		54		45		48	
		F	15		20		1		18		36		30	
JAPAN	1995	T	22,690	18.3	20,072	16.1	4,314	3.5	11,952	9.6	22,460	18.1	19,375	15.6
		M	14,649	24.0	12,170	20.0	2,274	3.7	7,847	12.9	11,887	19.5	9,054	14.9
		F	8,041	12.7	7,902	12.5	2,040	3.2	4,105	6.5	10,573	16.7	10,321	16.3
MALAYSIA	1995	T	15	0.1	2,717	13.5	142	0.7	365	1.8	1,187	5.9	995	4.9
		M	8	0.1	1,830	17.9	98	1.0	268	2.6	794	7.8	554	5.4
		F	7	0.1	887	9.0	44	0.4	97	1.0	393	4.0	441	4.5
PHILIPPINES	1994	T	11,379	16.6	6,355	9.3	5,674	8.3	3,630	5.3	6,060	8.8	5,825	8.5
		M	7,462	21.6	3,210	9.3	3,976	11.5	2,935	8.5	4,373	12.7	3,506	10.2
		F	3,917	11.5	3,145	9.3	1,698	5.0	695	2.0	1,687	4.9	2,319	6.8
SINGAPORE	1996	T	166	5.2	672	21.4	93	2.9	155	4.9	168	5.0	173	5.4
		M	87	5.4	516	32.7	63	3.8	105	6.5	95	5.5	81	5.0
		F	79	5.0	156	10.0	30	1.9	50	3.2	73	4.5	92	5.8
THAILAND	1995	T	3,069	5.1	9,888	16.5	466	0.8	5,365	9.0	4,833	8.1	4,616	7.7
		M	2,215	7.4	6,831	22.9	306	1.0	3,950	13.2	3,256	10.9	2,454	8.2
		F	854	2.9	3,057	10.2	160	0.5	1,415	4.7	1,577	5.3	2,162	7.2
VIETNAM	1995	T	115		606		202		191		780		160	
	1996	T	184		680		153		452		734		225	

(rate per 100,000 population)

351 – 353, 359, 36, 37 N20 – N99		38 O00 – O08		39 O10 – O75, O81 – O97		40, 41 O80, O98 – O99		42 L00 – L99		43 M00 – M99		44 Q00 – Q99		45 P00 – P96	
Other Diseases of Genito-urinary System		Abortion		Other Direct Obstetric Causes		Indirect Obstetric Causes		Diseases of Skin and Subcutaneous Tissue		Diseases of Musculo-skeletal System and Connective Tissue		Congenital Anomalies		Certain Conditions Originating in the Perinatal Period	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
—		—		—		—		1	0.3	—		19	6.4	23	7.8
—		••		••		••		—		—		12	7.7	13	8.3
—		—		—		—		1	0.7	—		7	5.0	10	7.2
17		2		12		21		9		3		12		218	
8		••		••		••		3		2		9		127	
9		2		12		21		6		1		3		91	
2,006	1.6	2	0.0	88	0.1	18	0.0	866	0.7	4,070	3.3	3,285	2.6	1,547	1.2
900	1.5	••		••		••		285	0.5	1,278	2.1	1,687	2.8	902	1.5
1,106	1.7	2	0.0	88	0.1	18	0.0	581	0.9	2,792	4.4	1,598	2.5	645	1.0
58	0.3	10	0.0	71	0.4	2	0.0	95	0.5	63	0.3	982	4.9	2,598	12.9
31	0.3	••		••		••		53	0.5	12	0.1	529	5.2	1,511	14.8
27	0.2	10	0.1	71	0.7	2	0.0	42	0.4	51	0.5	453	4.6	1,087	11.0
2,237	3.3	208	0.3	1,586	2.3	—		1,064	1.6	764	1.1	4,054	5.9	14,606	21.3
1,283	3.7	••		••		••		513	1.5	458	1.3	2,281	6.6	8,763	25.4
954	2.8	208	0.6	1,586	4.6	—		551	1.6	306	0.9	1,773	5.2	5,843	17.1
271	8.6	1	0.0	1	0.0	—		25	0.7	56	1.8	130 [a]	3.7	64	1.9
93	5.8	••		••		••		11	0.6	19	1.2	67	3.7	37	2.3
178	11.4	1	0.1	1	0.1	—		14	0.9	37	2.4	61	3.2	27	1.7
546	0.9	33	0.1	126	0.2	5	0.0	634	1.1	361	0.6	535	0.9	559	0.9
306	1.0	••		••		••		440	1.5	232	0.8	299	1.0	339	1.1
240	0.8	33	0.1	126	0.4	5	0.0	194	0.6	129	0.4	236	0.8	220	0.7
45		8		190		5		20		8		147		5,165	
87		5		120		16		43		33		257		2,371	

Note : a) Includes unknown sex

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

	Year	Sex	465 R54 Senility without Mention of Psychosis		460 – 464, 466, 467, 469 Rest of R00 – R99 Signs, Symptoms and Other Ill-defined Conditions		E47 – E56 V01 – Y98 Accidents and Adverse Effects		E47 V01 – V99 Transport Accidents		E48 X – X29, X40 – X49 Accidental Poisoning		E50 W00 – W19 Accidental Falls	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1995	T	112	37.8	54	18.2	132	44.6	57	19.3	3	1.0	7	2.4
		M	48	30.7	26	16.6	92	58.7	40	25.5	2	1.3	6	3.8
		F	64	45.9	28	20.1	40	28.7	17	12.2	1	0.7	1	0.7
INDONESIA	1996	T			82		188		80		3		17	
		M			47		127		59		1		11	
		F			35		61		23		2		6	
JAPAN	1995	T	21,493	17.3	4,227	3.4	69,877	56.2	15,147	12.2	613	0.5	5,911	4.8
		M	6,684	11.0	2,536	4.2	44,387	72.9	10,772	17.7	427	0.7	3,663	6.0
		F	14,809	23.4	1,691	2.7	25,490	40.2	4,375	6.9	186	0.3	2,248	3.5
MALAYSIA	1995	T	1,169	5.8	1,211	6.0	6,427	62.0	2,367	11.8	174	0.9	427	2.1
		M	459	4.5	776	7.6	5,211	51.1	2,042	20.0	128	1.3	376	3.7
		F	710	7.2	435	4.4	1,216	12.3	325	3.3	46	0.5	51	0.5
PHILIPPINES	1994	T	10,810	15.8	6,744	9.8	28,792	42.0	4,339	6.3	281	0.4	970	1.4
		M	4,547	13.2	4,077	11.8	23,281	67.5	3,086	9.0	207	0.6	724	0.7
		F	6,263	18.3	2,667	7.8	5,511	16.1	1,253	3.7	74	0.4	246	0.7
SINGAPORE	1996	T	6	0.2	45	0.9	1,040	24.8	256	5.9	8	0.2	102	2.3
		M	3	0.2	18	0.5	788	35.5	212	9.3	6	0.3	77	3.2
		F	3	0.2	27	1.3	252	14.1	44	2.4	2	0.1	25	1.4
THAILAND	1996	T	83,927	140.4	41,818	69.9	47,130	78.8	17,529	29.3	399	0.7	496	0.8
		M	36,845	123.5	26,244	88.0	37,844	126.9	14,426	48.4	240	0.8	403	1.4
		F	47,082	157.1	15,574	52.0	9,286	31.0	3,103	10.4	159	0.5	93	0.3
VIETNAM	1995	T			547		3,604		495		1,431			
	1996	T			558		4,408		714		461			

(rate per 100,000 population)

E51 X00 – X09		E521 W65 – W79		E49, E520, E522, E529 Rest of W00 – X59		E53 Y40 – Y84		E54 X60 – X84		E55 X85 – Y09		E56 Y10 – Y36, Y85 – Y98	
Accidents Caused by Fire and Flames		Accidental Drowning and Submersion		All Other Accidents Including Late Effects		Drugs, Medicaments Causing Adverse Effects in Therapeutic Use		Suicide and Self-inflicted Injury		Homicide & Injury Inflicted by Other Persons		Other Violence	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
9	3.0	21	7.1	15	5.1	—		—		6	2.0	14	4.7
4	2.6	15	9.6	9	5.7	—		—		4	2.6	12	7.7
5	3.6	6	4.3	6	4.3	—		—		2	1.4	2	1.4
3				36						1			
2				28						1			
1				8						—			
1,383	1.1	10,915	8.8	11,354	9.1	149	0.1	21,420	17.2	727	0.6	2,258	1.8
849	1.4	6,391	10.5	6,127	10.1	81	0.1	14,231	23.4	413	0.7	1,433	2.4
534	0.8	4,524	7.1	5,227	8.2	68	0.1	7,189	11.3	314	0.5	825	1.3
207	1.0	175	0.9	430	2.1	17	0.1	52	0.3	44	0.2	2,534	12.6
111	1.1	128	1.3	352	3.4	12	0.1	43	0.4	34	0.3	1,985	19.5
96	1.0	47	0.5	78	0.8	5	0.1	9	0.1	10	0.1	549	5.5
548	0.8	2,565	3.7	4,729	6.9	1,163	1.7	1,254	1.8	11,993	17.5	950	1.4
295	0.9	1,833	5.3	3,471	10.1	963	2.8	808	2.3	11,149	32.3	745	2.2
253	0.7	732	2.1	1,258	3.7	200	0.6	446	1.3	844	2.5	205	0.6
3	0.1	29	0.6	72	1.3	1	0.0	271	7.9	36	0.5	262	6.0
2	0.1	25	1.0	62	2.0	—		167	9.9	24	0.4	213	9.2
1	0.1	4	0.1	10	0.7	1	0.1	104	5.7	12	0.7	49	2.8
257	0.4	3,842	6.4	13,141	22.0	17	0.0	4,781	8.0	3,928	6.6	2,740	4.6
165	0.6	2,804	9.4	10,779	36.2	11	0.0	3,512	11.8	3,347	11.2	2,157	7.2
65	0.3	1,038	3.5	2,362	7.9	6	0.0	1,269	4.2	581	1.9	583	1.9
205				431									
—								321					

4. Child and Maternal Health

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

BRUNEI

The infant mortality rate has generally been declining despite some annual ups and downs, and it stands at 7.9 per 1,000 live births. The level of infant mortality in Brunei is nowadays comparable to the levels of the advanced countries. There was no maternal death for the whole of 1995. Maternal mortality is a rare occurence in Brunei Darussalam.

	Infant mortality [a]	
Year	Rate	Index
1971	38.4	100
1981	15.8	41
1991	11.1	29
1995	7.9	21

a) per 1,000 live-births

INDONESIA

Infant Mortality Rate:

Since the late 1960s, the estimated infant mortality rate in Indonesia declined from 145 to 55 deaths per 1,000 live-births in 1995. The 1992 Household Health Survey found that infant mortality was mainly caused by acute upper respiratory tract infection (36%), diarrheal disease (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 Rate:

For children under five years, the mortality rate declined from 111 deaths per 1,000 live-births in 1986 to 81 in 1995. The 1992 Household Health Survey found that child mortality was mainly caused by diarrhea (23%) and acute upper respiratory tract infection (13%).

Maternal Mortality Rate:

The 1994 Demographic and Health Survey estimated the maternal mortality rate to be 390 deaths per 100,000 live-births for the period 1989–94. However, 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 1992 Household Health Survey findings suggest a decline from 420 to the current estimate of 390 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). Next to that, the high percentage of pregnant women with anemia (about 55%) may aggravate the problem of maternal deaths.

JAPAN

Infant Mortality Rate:

The infant mortality rate has been among the lowest in the world. In 1995, the number of infant deaths was 5,054 and the infant mortality rate was 4.3 (per 1,000 live-births).

Maternal Mortality Rate:

The maternal mortality rate has been gradually decreasing. In 1994, the number of maternal deaths was 76 and the maternal mortality rate was 5.9 (per 100,000 live-births).

MALAYSIA

The health status of Malaysians continues to improve steadily, with the infant mortality rate of 9.8 per 1,000 and the maternal mortality rate of 0.2 per 1,000 in 1996.

PHILIPPINES

Infant Mortality:

There were 31,003 infant deaths in 1994 out of 1,285,863 live-births, with an infant mortality rate of 24.1 per thousand, as reported by the field health units nationwide. The official projections were 50.48/1000 and 48.93/1000 for 1994 and 1995, respectively.

Maternal Mortality:

The field health services reported a maternal mortality rate of 59.9 in 1996 per 100,000 live-births, the first time that the rate has dropped below 100 since 1985.

SINGAPORE

Infant Mortality:

Singapore's infant mortality rate declined further from its previous level of 4.0 per 1,000 live-births in 1995 to reach a new low of 3.8 per 1,000 live births in 1996. This is a landmark achievement even by international standards.

Maternal Mortality:

In 1996, only two maternal deaths were registered.

THAILAND

The infant mortality rate has continuously declined since 1987 due to the increased health care coverage and utilization, the improved socioeconomic status and the Extended Programme for Immunization. The rate was 7.2 per 1,000 live-births in 1995.

VIETNAM

The infant mortality rate stood at 45.1 per 1,000 live-births in 1994.

The maternal mortality rate was 1.1 per 1,000 live-births in 1996.

After a long, devastating war and under the permanent pressure of high population growth, the health and nutritional status of childeren 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.

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

	Year	Late Fetal Mortality		Infant Mortality		Neonatal Mortality		Post-neonatal Mortality		Perinatal Mortality	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI (1)	1995	60	8.2	58	7.9	39	5.3	19	2.6	91	12.4
INDONESIA (2)	1996				a) 54.0						
JAPAN (3)	1996	6,369	5.3	4,546	3.8	2,438	2.0	2,108	1.7	8,116	6.7
MALAYSIA (4)	1995	2,419	4.5	5,564	10.4	3,634	6.8	1,930	3.6	5,258	9.8
PHILIPPINES (5)	1994	(6) 3,520	2.7	31,003	24.1	16,300	12.7	14,703	11.4	(6) 8,820	6.9
SINGAPORE (7)	1996	150	3.1	183	3.8	113	2.3	70	1.4	220	4.5
THAILAND (8) b)	1995	327	0.3	6,920	7.2	3,185	3.3	3,735	3.9	2,437	2.5
VIETNAM (9)	1993	c) 5,916	3.3	77,940	43.3	43,560	24.2	27,000	15.0		

Source : (1) Birth & Death Registry and Economic Planning Unit
(2) Central Bureau of Statistics (Projection)
(3) ***Vital Statistics Japan,*** Ministry of Health & Welfare
(4) ***Vital Statistics Malaysia,*** Department of Statistics
(5) ***Philippine Health Statistics,*** Health Intelligence Service, Department of Health
(6) Field Health Service Information System (FHSIS) 1994 Data
(7) ***Report on Registration of Births and Deaths,*** National Registration Department
(8) Health Statistics Division, Ministry of Public Health
(9) Ministry of Health

Note : a) Calculated by Central Bureau of Statistics based on National Census 1990
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 1996

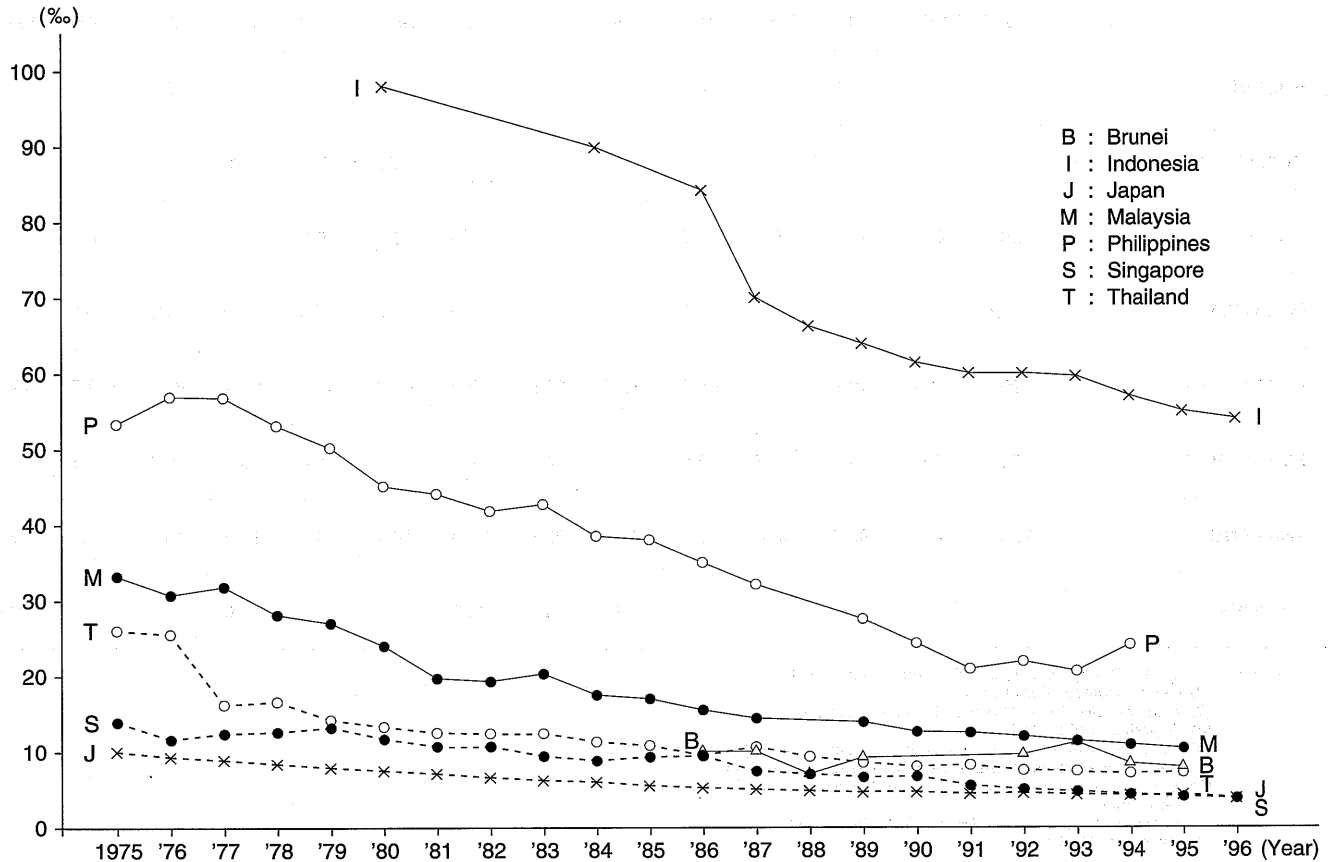
4 – 2 Infant Mortality by Age and Sex

	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)	1995	T	58	21	10	8	19	—	7.9	2.9	1.4	1.1	2.6	—
		M	32	9	6	6	11	—	8.4	2.4	1.6	1.6	2.9	—
		F	26	12	4	2	8	—	7.3	3.4	1.1	0.6	2.3	—
INDONESIA (2)	1996	T							a) 55					
									61					
									49					
JAPAN (3)	1996	T	4,546	1,283	464	691	2,108	—	3.8	1.1	0.4	0.6	1.7	—
		M	2,533	705	254	399	1,174	—	4.2	1.2	0.4	0.7	1.9	—
		F	2,013	578	210	292	934	—	3.3	1.0	0.3	0.5	1.5	—
MALAYSIA (4)	1995	T	5,564	2,839		795	1,930	—	10.4	5.3		1.5	3.6	—
		M	3,106	1,636		446	1,024	—	11.2	5.9		1.6	3.7	—
		F	2,458	1,203		349	906	—	9.5	4.7		1.4	3.5	—
PHILIPPINES (5)	1994	T	31,003	12,783		3,517	14,703	—	24.1					
SINGAPORE (6)	1996	T	b) 183	b) 45	25	43	70	—	3.8	0.9	0.5	0.9	1.4	—
		M	96	24	13	23	36	—	3.8	0.9	0.5	0.9	1.4	—
		F	85	19	12	20	34	—	3.7	0.8	0.5	0.9	1.5	—
THAILAND (7)	1995	T	6,920	1,002	1,108	1,075	3,305	430	7.2	1.0	1.1	1.1	3.4	0.4
		M	3,838	550	680	605	1,783	220	7.8	1.1	1.4	1.2	3.6	0.4
		F	3,082	452	428	470	1,522	210	6.6	1.0	0.9	1.0	3.2	0.4
VIETNAM (8)	1993	T	77,940						43.3					
		M	44,563						51.0					
		F	33,377						34.9					

Source : (1) Birth & Death Registry and Economic Planning Unit
(2) Central Bureau of Statistics
(3) *Vital Statistics Japan,* Ministry of Health & Welfare
(4) *Vital Statistics Peninsular Malaysia, Sabah and Sarawak,* Department of Statistics
(5) Health Intelligence Service, Department of Health
(6) *Report on Registration of Births and Deaths,* National Registration Department
(7) Health Statistics Division, Ministry of Public Health
(8) Ministry of Health

Note : a) Calculated by Central Bureau of Statistics based on National Census 1990
b) Includes unknown sex

Fig. 5 Trends in Infant Mortality Rates (per 1,000 live-births)



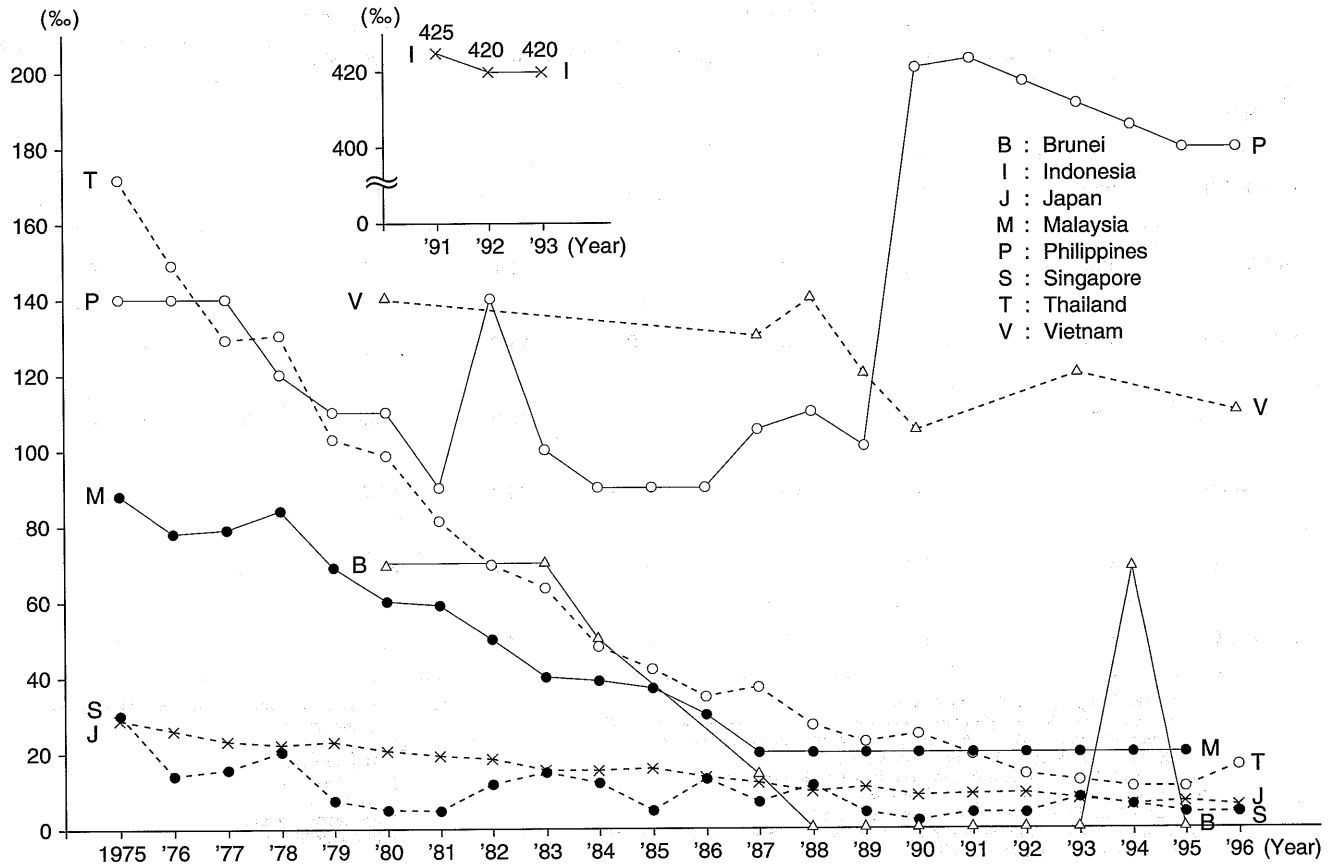
4 – 3 Maternal Mortality Rates

(per 100,000 live-births)

	1970	1975	1980	1985	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
BRUNEI (1)			69.2	—	14.1	—	—	—	—	—	—	68.8	—	
INDONESIA (2)									425	420	420			
JAPAN (3)	50.0	28.7	20.5	15.8	12.0	9.6	10.8	8.6	9.0	9.2	7.7	6.1	6.9	5.8
MALAYSIA (4)	160	88	60	37	20	20	20	20	20	20	20	20	20	
PHILIPPINES (5)	190.0	140.0	110.0	90.0	105.3	110.0	100.9	200.9	203.2	197.3	191.4	185.6	179.7	179.7
SINGAPORE (6)	32.7	30.0	4.9	4.7	6.9	11.3	4.2	2.0	4.1	4.0	8.0	6.1	4.1	4.1
THAILAND (7)	226.1	171.7	98.5	42.0	37.2	27.2	22.8	24.8	19.4	14.2	12.5	10.8	10.7	16.4
VIETNAM (8)			140		130	140	120	105			120			110

Source : (1) Birth & Death Registry and Economic Planning Unit
(2) Central Bureau of Statistics
(3) ***Vital Statistics Japan,*** Ministry of Health & Welfare
(4) Department of Statistics
(5) ***Philippine Health Statistics,*** Intelligence Health Service, Department of Health (1970–1989), National Statistical Coordination Board (1990–)
(6) ***Report on the Registration of Births and Deaths,*** National Registration Department
(7) Health Statistics Division, Ministry of Public Health
(8) Ministry of Health

Fig. 6 Trends in Maternal Mortality Rates (per 100,000 live-births)



4 – 4 Family Planning Methods Used

(%)

	Year	Reversible				Irreversible	Natural [a]	Others [b]
		Oral Contraceptive	IUD	Injection	Condom	Sterilization		
BRUNEI								
INDONESIA [1]	1996	28.4	22.0	33.9	1.3	1.1	—	9.5
JAPAN [2] c)	1996	1.3	3.8	—	77.2	6.5	17.0	10.6
MALAYSIA [3]	1995	73.7	5.0	2.2	11.0	5.6	—	2.5
PHILIPPINES [4]	1995	55.8	14.7		15.3	d) 5.6 e) 0.6	f) 2.3	g) 2.6
SINGAPORE [5]	1992	10.7	10.1	1.0	33.4	23.6	14.5	6.7
THAILAND [6]	1995	37.8	4.6	19.0	0.7	d) 31.8 e) 2.5	—	3.6
VIETNAM [7]	1996	5.3	55.8	0.4	7.1	8.7	21.3	1.4

Source : (1) Family Planning Coordination Board
(2) ***Toward a New Century of Equality and Symbiosis, Summary of Twenty-third National Survey on Family Planning,*** The Population Problems Research Council, The Mainichi Shimbun, Tokyo, Japan
(3) National Population and Family Development Board Malaysia
(4) Family Planning, Department of Health only
(5) Population Planning Section, Ministry of Health
(6) ***Report on Population Characteristics, the 1995–1996,*** Survey of Population Change, National Statistical Office
(7) ***Helth Statistics Yearbook,*** Health Statistics & Informatic Div., Ministry of Health

Note : a) Basic body temperature, cervical mucous, rhythm method
b) Diaphragm, etc.
c) Plural choice
d) Tubal ligation
e) Vasectomy
f) Excluding Rhythm
g) Including Rhythm

4 – 5 Women Receiving Prenatal Care

	Year	Percentage of Pregnant Women who Received Prenatal Care at least 4 Times from Trained Health Personnel during Entire Pregnancy
BRUNEI	1995	a) 8.1
INDONESIA	1995 1996	64.8 70.1
JAPAN	1995	b) 401,000
MALAYSIA	1995	c) 71.6
PHILIPPINES	1996	d) 52.8
SINGAPORE	1996	100
THAILAND	1995	70.1
VIETNAM	1995	54.9

Source : Ministry of Health of each country

Note : a) Average number of visits to trained health personnel during entire pregnancy
b) Number of pregnant women reported in National Patient Survey
c) 1 time
d) 3 or more visits

5. Morbidity from Infectious Diseases

5 – A List of Notifiable Infectious Diseases

ICD-9 Categories	Brunei 1995	Indonesia 1996	Japan 1996	Malaysia 1996	Philippines 1993	Singapore 1996	Thailand 1996	Vietnam 1995
001/A00 Cholera	√	√	√	√	√	√		√
002/A01 Typhoid and Paratyphoid Fevers	√	√	√	√	√	√	√	√
003/A02 Other Salmonella Infections	√			√	√		√	
004, 006/A03, A06 Shigellosis	√		√					
008/A04 – A09 Intestinal Infections due to Other Organisms			√ a)					
010 – 018/A5 – A19 Tuberculosis	√	√	√	√	√	√		√
020/A20 Plague	√	√	√	√		√		√
022/A22 Anthrax		√	√				√	
030/A30 Leprosy	√	√		√	√	√	√	√
032/A36 Diphtheria	√	√	√	√	√	√	√	√
033/A37 Whooping Cough	√	√	√	√	√		√	√
034/A38, J02.0 Streptococcal Sore Throat and Scarlet Fever			√ b)					
036/A39 Meningococcal Infection			√				√	
037/A33 – A35 Tetanus	√	√	√	√	√		√	√ c)
045/A80 Acute Poliomyelitis	√	√	√	√	√	√		√
050/B03 Smallpox			√					
052/B01 Chickenpox	√				√	√	√	
055/B05 Measles	√	√	√	√	√	√	√	√
060/A95 Yellow Fever	√		√	√		√		
061/A90 Dengue	√	√		√	√	√	√	√
062/A83 Mosquito-borne Viral Encephalitis	√		√	√		√	√	√
070/B15 – B19 Viral Hepatitis	√	√		√	√	√	√	√
071/A82 Rabies		√	√	√			√	√

Note : a) Infectious diarrhoea only
b) Scarlet fever only
c) New born only

5 – A List of Notifiable Infectious Diseases (Contd.)

ICD-9 Categories	Brunei 1995	Indonesia 1996	Japan 1996	Malaysia 1996	Philippines 1993	Singapore 1996	Thailand 1996	Vietnam 1995
072/B26 Mumps	√					√	√	
081/A75.1 – A75.9 Other Typhus	√			√			√	
084/B50 – B54 Malaria	√	√	√	√	√	√	√	√
087/A68 Relapsing Fever			√	√				
090/A50 Congenital Syphilis	√	√	√	√	√	√	√	
098/A54 Gonococcal Infections	√	√	√	√	√	√	√	√
099/A55 – A64 Other Venereal Diseases			√ a)	√ b)		√ c)	√	√
100/A27 Leptospirosis	√						√	
102/A66 Yaws							√	
120/B65 Schistosomiasis [Bilharziasis]		√			√			
124/B75 Trichinosis							√	
125/B72, B74 Filarial Infection and Dracontiasis	√		√ d)					
279.5/B20 – B24 AIDS		√	√	√	√	√	√	√
487/J10, J11 Influenza		√	√		√		√	

Note : a) Chancroid + lymphogranuloma inguinale
b) Chancroid
c) All sexually transmitted diseases
d) Filariasis only

5 – B Infectious Diseases Specified by Immunization Programme

	Brunei 1995	Indonesia 1996	Japan 1996	Malaysia 1996	Philippines 1993	Singapore 1996	Thailand 1996	Vietnam 1995
Cholera	√	√			√			
Diphtheria	√	√	√	√	√	√	√	√
Measles	√	√	√	√	√	√	√	√
Mosquito-borne Viral Encephalitis			√					
Mumps	√					√	√	
Poliomyelitis	√	√	√	√	√	√		√
Rubella	√		√	√ a)		√	√	
Tetanus	√	√	√	√	√	√	√	√
Tuberculosis (BCG)	√	√	√	√	√	√	√	√
Typhoid and Paratyphoid Fever	√	√			√		√	
Whooping Cough	√	√	√	√	√	√	√	√
Yellow Fever	√			√ b)				

Note : a) Women only
b) Required under Institute for Medical Research

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)	1995	2	6	8	69	185	1
INDONESIA (2)	1996	806	252,646	489,958	2,308	410,326	33,750
JAPAN (3) (4) (5)	1996	40	113	1,218	38,408	[b] 168,581	
MALAYSIA (6)	1996	1,486	953	121	12,691	11,778	273
PHILIPPINES (7)	1993	1,988	19,609	8,329	—	159,049	2,430
SINGAPORE (8)	1996	19	316	33	621	2,483	23
THAILAND (9)	1996	—	13,001	54,407	82,156	24,953	521
VIETNAM	1994 1995 1996	5,621 6,356 1,828	22,385 30,406 29,294			72,177 62,900 70,349	26,125 19,619 3,291

Source : (1) Disease Control Unit, Health Department
(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 & Welfare
(6) Information & Documentation System Unit, Ministry of Health
(7) ***Philippine Health Statistics,*** Health Intelligence Service, Department of Health
(8) Ministry of Health

Note: a) ICD-10: Japan, Thailand and Vietnam
b) Prevalence of registered patients, for 1995

032 A36	052 B01	070 B15 – B19	071 A82	084 B50 – B54	487 J10, J11	033 A37	036 A39	037 A33 – A35	055 B05
Diphtheria	Chickenpox	Viral Hepatitis	Rabies	Malaria	Influenza (Grippe)	Whooping Cough	Meningococcal Infection	Tetanus	Measles
—	2,281	59		46		6		1	45
544	—	32,980	1,010	1,086,088	—	—		4,203	92,797
1	a) b) 186,214	(10) c) 207,000	—	51	8,774	183	4	44	1,640
—	—	1,581	5	51,921	—	7	—	32	460
867	71,317	22,634		49,506	609,471	5,628		2,778	85,345
1	49,763	320	—	364		4			308
53	40,158	8,111	75	57,741	45,312	79	49	369	5,722
257	4,988	15,143	126,907	915,065	561,896	5,643		d) 980	12,248
167	4,526	15,760	287,095	666,153	718,293	2,444		d) 330	6,575
143	5,663	14,490	138,161	532,860	1,060,073	1,037		d) 257	6,410

Source : (8) Ministry of the Environment and Ministry of Health
(9) Health Information Division, Ministry of Public Health
(10) ***Patient Survey***, Ministry of Health and Welfare

Note : a) Cases treated in large hospitals only
b) For 1995
c) For 1993
d) New-born only

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

		056 B06	072 B26	279.5 B20 – B24	045 A80	047 – 049, 062 – 064 A83 – A89	060, 061, 065 A90, A91	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)	1995	8	18		—	—	3	2		17	182	9
INDONESIA (2)	1996	—	—	32	34	—	45,549	2,005	—	4,229	22,038	
JAPAN (3) (4) (5)	1996	a) b) 16,269	b) 70,921	a) b) 571 (2,120)	—	6		1		565	2,201	6
MALAYSIA (6)	1995	—	—	249	—	18	c) 532	—	—	1,562	1,772	6
PHILIPPINES (7)	1993			42	600		21,146	1,546	12,393	136	2,158	
SINGAPORE (8)	1996	487	765	92	—	1	3,128			1,172	1,419	2,979
THAILAND (9)	1996	1,420	39,806	21,074	—	1,622	38,109	—	—	2,764	5,320	13,294
VIETNAM	1994 1995 1996		8,946 19,068 24,624	d) 59(2,177) d) 157(3,295) d) 618(4,765)	152 119 136	e) 3,447 e) 3,193 e) 3,122	f) 44,944 f) 80,447 f) 89,963			5,820 3,121 1,916	9,706 4,131	33,686 13,475

Note : a) Cases treated in large hospitals only
b) For 1995
c) Refer to dengue hemorrhagic fever
d) Cumulative AIDS (HIV) patients
e) Acute encephalitis syndrome
f) Dengue fever and dengue hemorrhagic fever

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

	Year	Diphtheria	Pertussis	Tetanus	Poliomyelitis	Measles	Tuberculosis
BRUNEI (1)	1994		97		97		99
INDONESIA (2)	1996		100.0		89.5	91.7	99.6
JAPAN (3)	1995		99.9		a) 97.3	b) 93.0	
MALAYSIA (4)	1995		93.7		94.1	85.5	100
PHILIPPINES (5)	1995		81.9		84.4	83.7	88.9
SINGAPORE (6)	1996		92.5		91.5	c) 90.3	97.2
THAILAND (7)	1996		90		90	90	90
VIETNAM (8)	1993		90.8		90.9	93.2	93.9
	1994		92.5		93.8	95.9	95.3
	1995		93.4		93.6	98.5	95.7

Source : (1) Ministry of Health
(2) Ministry of Health
(3) Ministry of Health and Welfare
(4) Ministry of Health
(5) Health Intelligence Service-FHSIS, Department of Health
(6) ***Family Health Service Annual Report 1995***
(7) Department of Health, Ministry of Public Health
(8) Ministry of Health

Note : a) 3 months to 1.5 years old children
b) 1 to 2 years old children
c) 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)	1996	2,020	1,682	338	54.5	42.2	12.3	30.5 a)		
JAPAN (2)	1995	2,042			81.5	37.1	44.4	59.9	30.1	29.8
MALAYSIA										
PHILIPPINES (3)	1993	1,684	1,475	209	49.9	29.8	20.1	28	16	12
SINGAPORE (4)	1993	1,981			76.4			67.0		
THAILAND (5)	1986	1,766	1,412	354	50.8	27.9	22.9	42.6	13.4	29.2
VIETNAM (6)	1996	1,900	1,662	238	50	35.4	14.6	25.7	11.8	

Source : (1) ***Welfare Indonesia,*** Central Bureau of Statistics
(2) ***National Nutrition Survey,*** Health Promotion and Nutrition Division, Ministry of Health and Welfare
(3) Actual Food Consumption Survey (Food Weighing Technique), Food and Nutrition Research Institute, Department of Science & Technology 1987
(4) ***Food Consumption Study of Adults (24 hour recall) 1993,*** Food and Nutrition Department, Ministry of Health
(5) Nutrition Division, Ministry of Public Health
(6) Ministry of Health

Note : a) For 1992

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	1986	215	10.0	a) 1,096	1.18		142	b) 353.8
JAPAN	1995	585	11.8	a) 2,840	1.22	1.47	135	280
MALAYSIA								
PHILIPPINES	1993	390	10.1	c) 392	0.67	0.56	47	302
SINGAPORE	1993	491	14.0	578				265.9
THAILAND	1986	301	11.8	a) 4,679	0.89	0.73	96	
VIETNAM								

Note : a) Unit = IU
b) For 1990
c) Unit = Retinol Equivalent, mcg.

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

	Population or Place	Year	Sex	Age					
				Birth	4 wks	3 mos	6 mos	9 mos	12 mos
BRUNEI									
INDONESIA (1)	National	1994	M F	49.4 48.9					
JAPAN (2)	National	1990	M F	49.6 48.9	56.7 55.6	63.2 61.5	68.5 66.8	72.0 70.6	75.4 74.2
MALAYSIA									
PHILIPPINES (3)	National	1993	M F	51.3 51.1	57.5 56.7	64.1 62.0	67.7 68.0	72.0 70.8	a) 77.6 76.6
SINGAPORE									
THAILAND (4)	National	1986	M F	50.7 50.2	53.5 56.0	57.7 60.1	66.6 66.9	69.1 71.3	73.0 74.4
VIETNAM									

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

Note : a) For 1–1.99 years old

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

(kg)

	Population or Place	Year	Sex	Age					
				Birth	4 wks	3 mos	6 mos	9 mos	12 mos
BRUNEI									
INDONESIA (1)	National	1994	M F	3.1 3.0					
JAPAN (2)	National	1990	M F	3.2 3.1	5.1 4.7	6.9 6.3	8.1 7.5	9.0 8.4	9.6 9.0
MALAYSIA (3)	Peninsular Malaysia	1995	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 (5)	National	1996	M F	3.2 3.2					
THAILAND (6)	National	1986	M F	3.1 3.0	4.1 4.7	5.4 6.1	7.3 7.8	7.9 8.8	8.8 9.5
VIETNAM									

Source : (1) Ministry of Health
(2) Ministry of Health and Welfare
(3) Department of Statistics
(4) Food and Nutrition Research Institute
(5) Ministry of Health
(6) ***National Food and Nutrition Survey,*** Department of Health, Ministry of Public Health

Note : a) For 1–1.99 years old

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

	Population or Place	Year	Sex	Age					
				Birth	4 wks	3 mos	6 mos	9 mos	12 mos
BRUNEI									
INDONESIA (1)	National	1994	M F	32.5 32.4					
JAPAN (2)	National	1990	M F	32.2 32.0	38.6 37.6	42.2 41.0	44.2 43.1	45.6 44.5	46.5 45.4
MALAYSIA									
PHILIPPINES (3)	National	1987	M F	34.5 34.3	37.8 36.8	41.7 40.0	43.5 42.1	44.1 43.2	46.1 45.0
SINGAPORE									
THAILAND (4)	National	1986	M F		37.9 35.0	40.2 38.5	42.7 41.5	44.4 43.2	45.7 44.4
VIETNAM									

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

6 – 5 Mean Height by Age (1–18 years)

	Population or Place	Year	Sex	Age						
				1	2	3	4	5	6	7
BRUNEI										
INDONESIA (1)	National	1994	M					107.1	109.7	112.2
			F					106.1	108.7	111.3
JAPAN (2)	National	1995	M	80.5	89.3	97.0	103.8	110.8	116.6	121.8
			F	78.4	88.8	95.8	103.1	109.8	115.8	121.1
MALAYSIA										
PHILIPPINES (3)	National	1993	M	77.6	85.0	92.6	98.2	103.9	108.8	114.5
			F	76.7	84.2	91.3	97.7	103.8	108.8	114.2
SINGAPORE (4)	National	1996	M						120.4	
			F						119.4	
THAILAND (5)	National	1986	M	73.0	82.3	92.4	98.9	105.3	111.6	116.1
			F	74.4	85.1	92.4	101.0	106.1	111.2	115.9
VIETNAM										

Source : (1) ***Report on Height of School Entrance in Indonesia 1994/1995,*** Directorate of Community Nutrition, Ministry of Health
(2) ***National Nutrition Survey,*** Health Service Bureau, Ministry of Health and Welfare
(3) Food and Nutrition Research Institute
(4) School Health Service, Ministry of Health
(5) ***National Food and Nutrition Survey,*** Department of Health, Ministry of Public Health

(cm)

Age										
8	9	10	11	12	13	14	15	16	17	18
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
127.7 127.8	133.3 134.7	139.2 138.7	144.4 147.1	152.4 152.2	158.7 155.4	164.9 155.9	168.2 157.6	169.4 158.1	171.8 158.5	171.8 158.8
119.0 119.1	124.5 124.3	128.5 130.6	131.7 135.1	137.4 141.3	143.6 145.8	150.9 148.7	156.2 150.6	159.6 150.2	160.9 151.1	162.3 151.7
			148.9 150.1				170.5 159.3			
120.9 120.5	126.2 126.0	130.9 130.9	134.8 137.7	141.4 143.8	148.7 149.4	153.8 152.3	158.9 153.8	163.5 154.3	164.5 153.9	165.9 155.1

Note : a) For 1993
b) West Sumatra, Central Java and West Nusa Tenggara
c) For 1989

6 – 6 Mean Weight by Age (1–18 years)

	Population or Place	Year	Sex	Age						
				1	2	3	4	5	6	7
BRUNEI										
INDONESIA (1)	National	1977	M		10.4	12.1	13.8	15.5	15.7	18.2
			F		10.1	11.6	13.2	14.5	15.7	17.0
JAPAN (2)	National	1995	M	10.8	12.9	15.0	17.1	19.5	21.3	24.7
			F	10.2	13.5	14.5	16.5	18.7	20.8	23.3
MALAYSIA										
PHILIPPINES (3)	National	1993	M	9.4	11.5	12.9	14.5	15.9	17.2	19.2
			F	9.0	11.0	12.5	14.0	15.7	17.2	19.0
SINGAPORE (4)	National	1996	M						23.1	
			F						22.1	
THAILAND (5)	National	1986	M	8.8	11.4	13.4	14.9	16.6	18.6	20.2
			F	9.5	11.9	14.6	15.2	16.5	18.0	20.2
VIETNAM										

Source : (1) Ohsawa's Laboratory, Otsuma Women's University
(2) *National Nutrition Survey,* Health Service Bureau, Ministry of Health and Welfare
(3) Food and Nutrition Research Institute
(4) School Health Service, Ministry of Health
(5) *National Nutrition Survey,* Department of Health, Ministry of Public Health

(kg)

Age										
8	9	10	11	12	13	14	15	16	17	18
19.9 19.2	21.3 21.0	23.3 23.4	25.7 26.3	27.3 30.3	31.8 33.4	37.1 37.6	40.9 40.4	44.7 43.2	46.9 44.6	48.7 45.9
27.3 27.5	30.6 31.2	34.7 32.4	39.4 39.6	43.9 43.4	48.7 48.4	53.8 48.2	57.1 50.2	60.2 51.4	63.7 51.8	63.4 52.6
20.7 20.9	23.5 23.3	25.7 26.6	27.6 29.1	31.0 33.4	34.7 37.9	39.8 40.8	44.4 44.6	49.0 46.8	52.0 46.5	54.0 46.0
			41.8 41.8				60.0 50.8			
22.0 21.7	24.3 24.2	27.1 26.8	29.3 30.7	33.3 35.4	38.9 40.4	41.7 43.6	45.9 45.9	50.8 46.4	52.2 47.4	52.7 48.8

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	79.0	a) 97.5			2.0	0.5
INDONESIA (2)	1996	Total	17.6	33.3	72.2	6.0	20.9		1.0
		Urban	38.3	61.4	95.0	1.8	3.1	—	0.1
		Rural	6.1	17.7	59.4	8.4	30.8		1.4
JAPAN (3)	1996	Total	95.8	b) 98.4	99.9				
MALAYSIA (4) (5)	1995	Total	92.0	95.6	c) 91	c) 2	c) 7	c) —	c) 1
PHILIPPINES (6)	1996	Total	83.0	77.0	d) 55.1	d) 1.7	d) 0.1	d) 49.6	d) 0.5
		Urban	91.0	88.0	79.2	1.2	0.1	19.3	0.2
		Rural	81.0	64.0	31.9	2.1	0.2	65.1	0.7
SINGAPORE (7)	1996	Total	100.0	100.0	100.0				
THAILAND (8)	1995	Total	89.3	95.7	97.7				
VIETNAM (9)	1996	Total	50.0	42.7					

Source : (1) Ministry of Health
(2) *Welfare Statistics, 1994,* Central Bureau of Statistics
(3) Water Supply and Environmental Sanitation Department, Ministry of Health and Welfare
(4) Ministry of Health
(5) Department of Statistics
(6) *Census of Population and Housing,* National Statistics Office
(7) Public Utilities Board, Ministry of the Environment and Singapore Power
(8) *Provincial Health Survey I (1995),* Health Information Division, Ministry of Public Health
(9) Ministry of Health

Note : a) Percentage of households
b) For 1993
c) For 1991
d) For 1990

7 – 2 Socio-economic Indicators

	Year	Literacy Rate (%)	Year	Per Capita GNP [a] (in US $)	Year	Labour Force Participation Rate (%)
BRUNEI	1991	89.0 [b]	1995	17,003 [c]	1991	65.6 [d]
INDONESIA	1995	86.3 [e]	1995	1,014	1994	58.0
JAPAN	1996	99.99 [f]	1996	37,286	1996	63.5 (1)
MALAYSIA	1991	85.0 (2)	1995 1996	4,016 (3) 4,419	1995 1996	66.9 (3) 66.9
PHILIPPINES	1994	93.9 (4)	1993	826 (4)	1993	65.6 (5)
SINGAPORE (6)	1996	92.2 [g]	1996	26,266	1996	64.6 [h]
THAILAND (7)	1996	97.7 [i]	1995	3,090	1996	58.8
VIETNAM	1996	M 92.0 [d] F 84.0 [d]	1995	279 (8) [c]		

Source : (1) ***Annual Report on the Labour Force Survey,*** Statistics Bureau, Management and Coordination Agency
(2) ***General Report of the Population Census, Vol. 1***
(3) ***Economic Report 1995/1996***
(4) National Statistics Office
(5) ***Philippine Statistical Yearbook,*** National Statistical Coordinating Board
(6) ***Year Book of Statistics, Singapore 1994,*** Department of Statistics
(7) ***8th National Economic and Social Development Plan,*** Office of the National Economic and Social Development Board
(8) ***Health Statistics Yearbook,*** Health Statistics & Informatic Div., Ministry of Health

Note : a) Figures for each country except Indonesia, Philippines and Thailand 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.
b) Age 9 years and over c) GDP
d) Age 15 years and over e) Age 10 years and over
f) Children enrolled
g) Per 100 resident population aged 15 years and over
h) Per 100 population aged 15 years and over
i) Age 7 years

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	1995	131,720,051	4.9	439	105,192,606	57,570,199	39,508,960	8,113,447
INDONESIA	1991	480,167,150	1.9	1.7				
JAPAN [a]	1996	132,173,193,601	19.1	1,059.9				
MALAYSIA	1996	1,361,253,627	6.2	66.4	1,368,118,505	1,190,434,829		177,683,675
PHILIPPINES [b]	1996	357,765,846 [c]	2.4	4.8	357,765,846	130,342,730	158,935,884	68,487,230
SINGAPORE	1996	847,504		278.4	825,588	161,687	422,463	241,438
THAILAND	1996	2,162,930,769 [d]	6.7	36.1				
VIETNAM	1995	201,743,419 [e]	3.5	2.7				

Source : Ministry of Health in each country

Note : Figures for each country except Indonesia, Philippines and Thailand 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.

a) Including budget for social welfare
b) Including attached agencies
c) 1 US$ = 26 peso
d) 1 US$ = 26 Thai Bahts
e) Including foreign aids

7 – 4 Adult[a] Smoking Prevalence

(%)

	Year	Total	Male	Female
BRUNEI (1) a)	1993	17.0	27.3	3.1
INDONESIA				
JAPAN (2) b)	1995	28.2	52.7	10.6
MALAYSIA				
PHILIPPINES				
SINGAPORE (1) c)	1995	17.0	32.0	3.0
THAILAND (3)	1990	25	46	3
VIETNAM				

Source : (1) Ministry of Health
(2) Ministry of Health and Welfare
(3) National Statistical Office

Note: Adult smoking prevalence $= \frac{\text{Number of adult smokers}}{\text{Number of adults investigated}} \times 100$ (%)

All regular smokers are included in the numerator, regardless of the amount smoked daily.

a) Cardiovascular diseases screening among civil servants aged 30 years and over
b) 20 years old and over
c) Age 18 – 64 years

8. Medical Establishments

8 – A Definitions Used in Hospital Statistics (WHO)

	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. Discharges (including deaths)	The number of persons, living or dead, whose stay has terminated and whose departure has been officially recorded.
9. 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 (1995)	Indonesia (1996)	Japan (1996)	Malaysia (1995)	Philippines (1996)	Singapore (1996)	Thailand (1995)	Vietnam (1996)
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)]	√	√
9 PHC [c)] Facilities with Beds, Staffed with Physician(s)			√			√	√	
10 PHC [c)] Facilities without Beds, Permanently Staffed with Physician(s)	√	√	√	√	√	√	√	√
11 PHC [c)] Facilities without Beds and without Permanently Staffed Physician		√		√			√	√

Note : a) Hospitals. The previous categorization into general hospital and local or rural hospitals does no longer apply.
b) Provides only ambulatory care
c) Primary health care

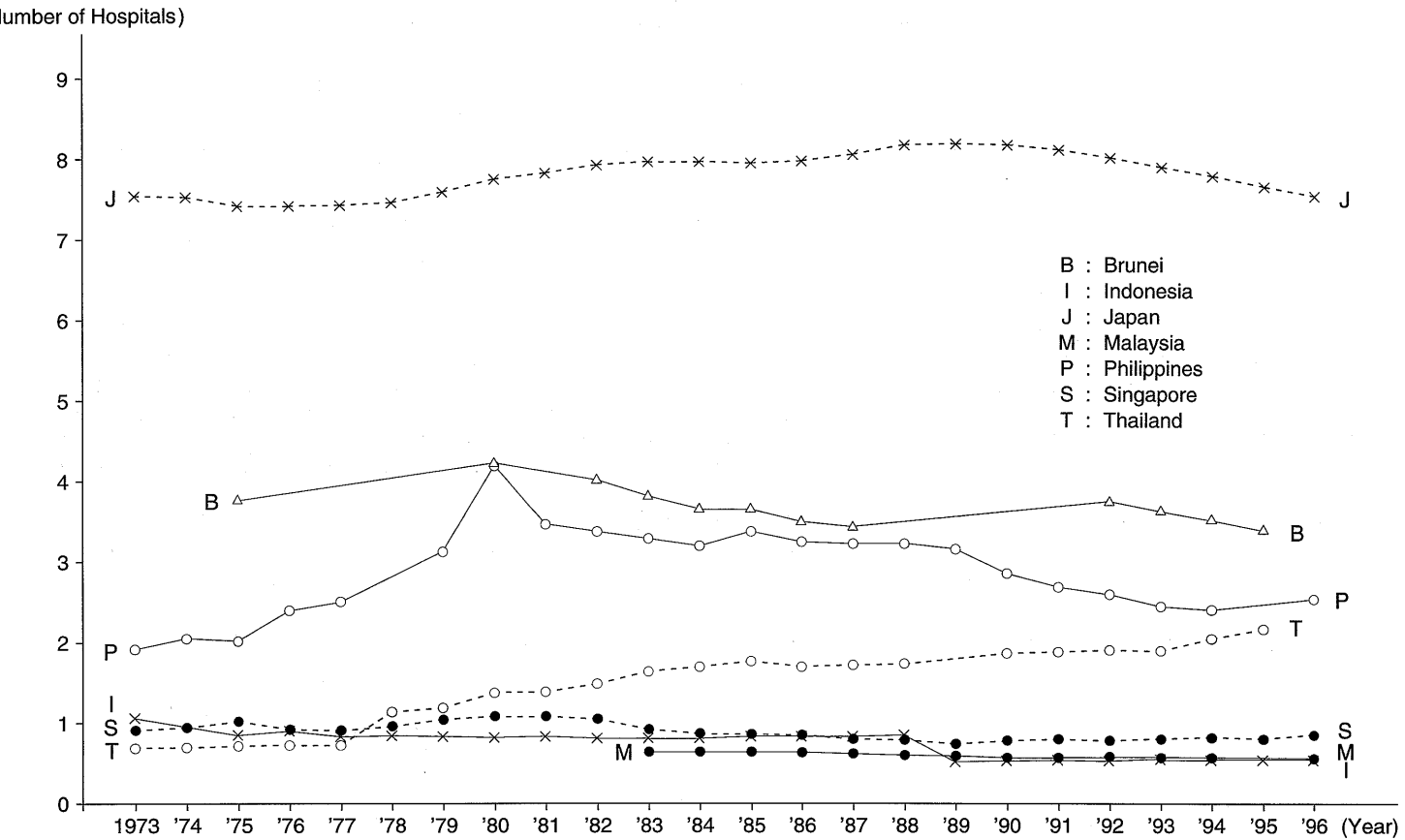
8 – 1 Number of Hospitals

		1970	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996
BRUNEI	Total		6	8	8				10	10	10	10	
INDONESIA	Total	1,164	1,115	1,208	1,367	a) 924	a) 950	a) 982	a) 994	a) 1,026	a) 1,039	a) 1,062	1,074
JAPAN	Total	7,974	8,294	9,055	9,608	10,081	10,096	10,066	9,963	9,844	9,731	9,606	9,478
MALAYSIA	Total	86	90	96	101	102	102	104	107	108	112	118	118
PHILIPPINES	Total	650	927	2,020	1,846	1,805	1,726	1,663	1,691	1,723	1,648	1,702	1,738
	Public	220	316	413	612	619	b) 594	b) 562	582	c) 628	c) 553	607	600
	Private	430	611	1,607	1,229	1,186	1,132	1,101	1,109	1,095	1,095	1,095	1,138
SINGAPORE	Total	17	23	26	22	20	21	22	22	24	25	24	26
	Public	11	13	13	11	10	11	11	12	13	13	12	12
	Private	6	10	13	11	10	10	11	10	11	12	12	14
THAILAND	Total	98	281	636	910		1,043	1,064	1,097	1,105	1,215	1,280	
VIETNAM	Total		d) 550	685	738	777	782	785	792	793	792	796	794

Source : Ministry of Health in each country

Note : a) Excluding maternity hospitals
b) Licensed only
c) Retained and devolved hospitals
d) For 1976

Fig. 7 Trends in Number of Hospitals (per 100,000 population)



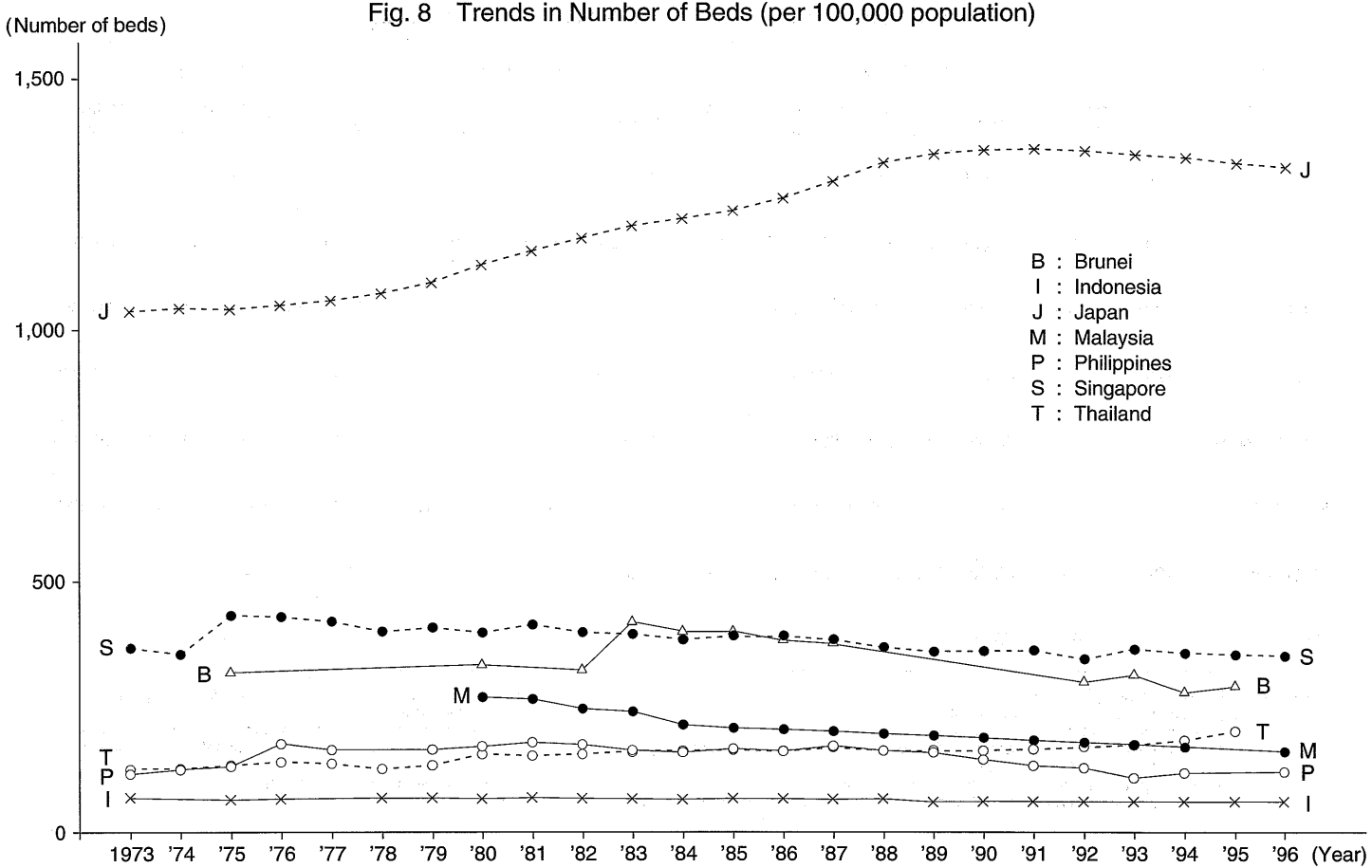
8 – 2 Number of Beds

		1970	1975	1980	1985	1988	1989	1990	1991	1992	1993	1994	1995	1996
BRUNEI	Total		506	630	876					797	863	789	856	
INDONESIA	Total	86,022	83,696	98,543	110,361	116,847	107,112	119,387	111,127	112,779	114,474	116,847	118,306	120,083
JAPAN [a]	Total	1,062,553	1,164,098	1,319,406	1,495,328	1,634,309	1,661,952	1,676,803	1,685,589	1,686,696	1,680,952	1,677,041	1,669,951	1,663,853
MALAYSIA	Total	30,900	32,164	35,291	32,495	33,067	33,341	33,400	33,432	33,261	33,201	33,246	33,588	33,818
PHILIPPINES	Total	40,289	55,323	81,976	90,279	90,414	90,414	86,948	81,647	83,113	77,734	80,580	84,482	81,789
	Public	19,725	27,075	39,625	47,861	50,703	50,703	48,602	46,338	45,971	[b] 41,498	[b] 44,344	46,911	43,582
	Private	20,564	28,248	42,351	42,418	39,711	39,711	38,346	35,309	37,142	36,236	36,236	37,571	38,207
SINGAPORE	Total	7,760	9,311	9,585	10,000	9,730	9,644	9,759	9,801	9,726	10,469	10,407	10,498	10,668
	Public	6,891	8,211	8,078	8,329	7,893	7,852	7,922	7,892	7,833	8,640	8,346	8,326	8,511
	Private	869	1,100	1,507	1,671	1,837	1,792	1,837	1,909	1,893	1,829	2,061	2,172	2,157
THAILAND [c]	Total	25,619	52,652	71,718	84,045	88,009	89,982	90,740	93,852	97,856	101,166	108,747	118,417	
VIETNAM [d]	Total		98,362 [e]	131,265	143,771	154,486	154,776	140,076	123,602	120,710	134,635	119,519	130,760	121,808

Source : Ministry of Health in each country

Note : a) Hospitals (with 20 or more beds) only
b) Retained and devolved hospitals
c) From 1985 onwards, including private maternity centres
d) Including beds of policlinics and specialized clinics and maternity houses
e) For 1976

Fig. 8 Trends in Number of Beds (per 100,000 population)



8 – 3 Hospitals and Other Medical Establishments with Beds

	Year	1 General Hospitals				2 Local or Rural Hospitals				3 Mental Hospitals			
		Establish-ments	Beds	Admissions or Discharges	Patient-days	Establish-ments	Beds	Admissions or Discharges	Patient-days	Establish-ments	Beds	Admissions or Discharges	Patient-days
BRUNEI	1995	10	a) 856	a) 35,011	a) 171,703	..				..			
INDONESIA (1)	1996	299	60,034	2,332,493	12,741,340	559	42,008	1,593,802	7,772,568	48	8,165	34,518	2,435,905
JAPAN	1996	8,421	1,399,868	11,679,927	418,940,539	..				1,057	263,985	154,322	55,980,305
MALAYSIA (2)	1995	b) 111	b) 26,936	b) 1,450,013	b) 5,824,640	..				4	5,720	9,935	1,567,282
PHILIPPINES (3) c)	1996	52	22,080	596,308	5,856,113	272	10,110			1	5,834	9,414	1,192,975
SINGAPORE	1996	11	6,176	321,282	1,676,219	8	810	4,441	147,016	3	3,168	7,645	946,583
THAILAND (4)	1995	1,192	102,986	5,787,549	25,057,419	698	22,055			12	7,684		
VIETNAM (5)	1996	671	73,658			..				..			

Source : Ministry of Health in each country
(1) Directorate of Medical Care, Ministry of Health
(2) Information and Documentation System Unit
(3) Hospital Operation & Management Services, and Bureau of Licensing & Regulation, Department of Health
(4) Health Statistics Division, Ministry of Public Health
(5) ***Health Statistics Yearbook,*** Health Statistics & Informatic Div., 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-retained hospitals only.

4 Maternity Hospitals				5 Infectious Diseases Hospitals				6 Leprosy Hospitalsls			
Establish-ments	Beds	Admissions or Discharges	Patient-days	Establish-ments	Beds	Admissions or Discharges	Patient-days	Establish-ments	Beds	Admissions or Discharges	Patient-days
..				..				..			
52	2,269	96,103	382,997	1	103	3,516	17,696	24	2,708	2,475	597,438
..				..				..			
..				..				2	856	3,243	92,868
1	700	52,022	202,869	3	975	59,144	224,642	8	4,420	5,499	1,282,766
1	514	39,943	136,292	..				..			
8	939			3	1,200			15	1,516		
a) 66	a) 1,207			..				19	b) 2,637		

Note : a) Maternity homes
b) Leprosariums

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

	Year	7 Tuberculosis Hospitals				8 Other Specialized Hospitals				9 PHC[a] Facilities with Beds, Staffed with Physician(s)			
		Establish-ments	Beds	Admissions or Discharges	Patient-days	Establish-ments	Beds	Admissions or Discharges	Patient-days	Establish-ments	Beds	Admissions or Discharges	Patient-days
BRUNEI	1995	..				..							
INDONESIA	1996	10	747	10,389	129,671	69	3,190	118,238	4,715,511				
JAPAN	1996	..				..				20,452	246,779		
MALAYSIA	1995	1	116	2,306	16,191								
PHILIPPINES	1996					7	2,135	68,765	518,179				
SINGAPORE	1996	..				4[b]	975	34,587	273,224				
THAILAND	1995	1	600			50	2,954						
VIETNAM	1996	80[c]				74	16,308						

Note : a) Primary health care
b) Provides only ambulatory care
c) Sanatoriums

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 or Discharges	Patient-days
		10	856	35,011	171,703
67,457	••	97,387	1,910,632	11,777,090	511,610,645
874	1,987	2,979	33,628	1,465,497	7,500,981
		341	45,094	756,974	9,032,589
[b] 21		47	10,668	373,311	2,906,110
		1,280	118,417	5,967,424	28,998,559
		12,556	172,642		

Note : a) Primary health care
b) Government only

8 – 4 Hospital Utilization by Category of Hospital

	Year	All Hospitals					General Hospitals					
		Type	Population per Bed	Beds per 10,000 Population	Admissions per 10,000 Population	Bed Occupancy Rate (%)	Type	Beds per 10,000 Population	Admissions		Bed Occupancy Rate (%)	Average Length of Stay (Days)
									per 10,000 Population	per Bed		
BRUNEI	1995	T	346	28.9	1,183	55	T	28.9	1,183	41	55	5.0
INDONESIA (1)	1996	G	1,652	6.1	211.9	56.3	G	3.0	117.6	38.9	58.1	5
JAPAN	1996	T	75.6	132.2	940.2	84.3	T	111.2	928.0	8.3	83.0	33.5
MALAYSIA (2)	1995	G	603	16.6	721.9	61.4	G	a) 13.2	a) 714.2	a) 53.8	a) 59.7	a) 4.0
PHILIPPINES (3) b)	1996	T	1,491	0.8	52.4	82.4	T					
SINGAPORE	1996	T	339	29.5	1,033.5	80.3	T	17.1	889.5	52.0	79.7	5.2
THAILAND (4)	1995	T	500	19.9	1,006.6	67.1	T	17.4	976.3	56.1		
VIETNAM (5)	1996	G			681.1	89.5						

Source : Ministry of Health in each country
(1) Directorate of Medical Care, Ministry of Health
(2) Information and Documentation System Unit
(3) Hospital Operation & Management Services
(4) Health Statistics Division
(5) ***Health Statistics Yearbook,*** Health Statistics & Informatic Div., Ministry of Health

Note : Type of hospitals
T = Total
G = Government hospital establishments
a) Hospitals. The previous categorization into general hospitals and district hospitals does no longer apply.
b) Refer to data from 36 retained tertiary hospitals by Department of Health

District Hospitals						Tuberculosis Hospitals					
Type	Beds per 10,000 Population	Admissions		Bed Occupancy Rate (%)	Average Length of Stay (Days)	Type	Beds per 10,000 Population	Admissions		Bed Occupancy Rate (%)	Average Length of Stay (Days)
		per 10,000 Population	per Bed					per 10,000 Population	per Bed		
		..						..			
G	2.1	80.4	37.9	50.7	5.0	G	0.0	0.5	13.9	47.6	12
		..				T		..			
G		..				G	0.1	1.1	19.9	38.2	7.0
		..						..			
G	3.7					T	0.1				

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

	Year	Mental Hospitals						Maternity Hospitals					
		Type	Beds per 10,000 Population	Admissions		Bed Occupancy Rate (%)	Average Length of Stay (Days)	Type	Beds per 10,000 Population	Admissions		Bed Occupancy Rate (%)	Average Length of Stay (Days)
				per 10,000 Population	per Bed					per 10,000 Population	per Bed		
BRUNEI	1995	••						••					
INDONESIA (1)	1996	G	2.4	1.7	4.2	81.7	69	G	0.1	4.8	42.4	46.2	4
JAPAN	1996	T	21.0	12.3	0.6	94.3	441.4	••					
MALAYSIA (2)	1995	G	2.8	4.9	1.7	75.3	142.2	••					
PHILIPPINES (3)	1995	Special	0.4	0.9	2.2	76.4	157.6	Tertiary	0.1	5.1	73.0	106.1	4.3
SINGAPORE	1996	T	8.8	21.2	2.4	85.0	115.2	T	1.4	110.6	77.7	72.4	3.4
THAILAND (4)	1995	T	1.2					T	0.1				
VIETNAM													

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

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 Auxiliarees	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	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. Dispensers	Personnel making up and distributing medicaments according to a prescription. These personnel do not have pharmaceutical education of university level.
10. Veterinarians / Veterinary Surgeons	All graduates of a faculty or school of veterinary medicine actually working in any field of veterinary activity, including teaching and pubilic health.
11. Veterinary Assistants	Personnel providing limited diagnostic, preventive, and curative veterinary services. These personnel have no veterinary education of university level.
12. 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.)
13. 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.
14. 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.
15. 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.

	Definition
16. 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 apprenticeship.
17. 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.
18. 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.
19. Physiotherapists / Physical Therapists	Professional personnel treating patients by exercise, physical means, and massage, usually as prescribed by a physician.
20. 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.
21. Dietitians / Nutritionists	Professional personnel who are experts in nutrients and nutrition and their application to the choice and use of food.
22. Medical Social Workers	Professional personnel providing help to persons with family or social problems arising from disease, injury or impairment.

	Definition
23. 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.
24. 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.
25. 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.
26. Assistant Radiographers	Auxiliary medical radiological personnel working under the direct supervision of a medical radiological technician or under a specialist or physician.
27. 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.
28. 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.

	Definition
29. 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.
30. Entomologists	In health work, professional personnel with education of university level in entomology of disease vectors and in vector control.

	Definition
31. 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 Personnel

	Brunei (1995)	Indonesia (1996)	Japan (1996)	Malaysia (1996)	Philippines (1994)	Singapore (1996)	Thailand (1995)	Vietnam (1996)
1 Physicians	V	√	√	√	√	√	√	√
2 Medical Assistants				√			√	√
3 Dentists / Dental Surgeons	√	√	√	√	√	√	√	
4 Dental Nurses	√	√		√		√		
5 Dentat Assistants / Dental Auxiliaries	√	√	√	√		√	√	
6 Dental Technicians	√	√		√		√		
7 Pharmacists	√	√	√	√	√	√	√	√
8 Pharmaceutical Assistants	√	√		√		√	√	√
9 Dispensers		√				√	√	
10 Veterinarians / Veterinary Surgeons	√		√	√	√	√	√	
11 Veterinary Assistants				√		√	√	
12 Professional Midwives	√	√	√	√	√	√	√	√
13 Assistant Midwives / Auxiliary Midwives	√						√	√
14 Trained Traditional Birth Attendants					√			
15 Untrained Traditional Birth Attendants					√			
16 Voluntary Health Workers				√	√		√	
17 Professional Nurses	√	√	√	√	√	√	√	√
18 Assistant Nurses / Auxiliary Nurses	√		√	√		√	√	√
19 Physiotherapists / Physical Therapists	√	√	√	√	√	√	√	
20 Occupational Therapists	√	√	√	√	√	√	√	
21 Dietitians / Nutritionists	√	√	√	√	√	√	√	
22 Medical Social Workers	√		√	√	√	√	√	
23 Medical Laboratory Technicians	√	√	√	√	√	√	√	√
24 Assistan Medical Laboratory Technicians	√	√		√	√	√	√	
25 Radiographers	√	√	√	√	√	√	√	

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

	Brunei (1995)	Indonesia (1996)	Japan (1996)	Malaysia (1996)	Philippines (1994)	Singapore (1996)	Thailand (1995)	Vietnam (1996)
26 Assistant Radiographers	√					√		
27 Sanitary Engineers		√		√	√	√	√	
28 Sanitarian / Assistant Sanitarian	√	√			√	√	√	
29 Malaria Field Officers	√			√	√		√	
30 Entomologists	√			√	√		√	
31 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	1995	251	••	38	69	38	19	13
INDONESIA	1995 1996	24,440 36,688	••	5,462 5,962	7,184	a) 6,391	95	6,971 6,993
JAPAN	1996	240,908	••	85,518	••	56,466	••	194,300
MALAYSIA (1)	1996	10,196	4,600	1,800	1,288	1,005	380	1,715
PHILIPPINES (2)	1995	84,671	••	35,483	••	••	••	36,352
SINGAPORE	1996	4,661	••	913	b) 309	b) 240	b) 23	858
THAILAND (3)	1995	14,181	709	2,920	••	2,649	••	5,867
VIETNAM (4)	1996	33,470	c) 48,238					5,286

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 & Informatic Div., Ministry of Health

Note : a) 1994
b) Government only
c) Assistant doctors

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

	Year	8. Pharmaceutical Assistants	9. Dispensers	10. Veterinarians / Veterinary surgeons	11. Veterinary Assistants	12. Professional Midwives	13. Assistant Midwives / Auxiliary Midwives	14. Trained Traditional Birth Attendants
BRUNEI	1995	24	••	4	••	269	183	••
INDONESIA	1995 1996	17,548	a) 18,633	••	••	a) 51,067	••	••
JAPAN	1996	••	••	(1) b) 29,301	••	23,615	••	••
MALAYSIA	1996	1,919	••			5,746	••	••
PHILIPPINES	1995	••	••	309	••	111,700	••	(2) 33,001
SINGAPORE	1996	196	c) 134	c) 24	c) 123	487	••	••
THAILAND	1995	2,896	—	798	1,716	9,713	—	
VIETNAM	1996	15,835				8,101	4,461	

Source : (1) Livestock Industry Bureau, Ministry of Agriculture, Forestry and Fisheries
(2) Community Health Service

Note : a) For 1994
b) As of December 31, 1996
c) Government only

15. Untrained Traditional Birth Attendants	16. Voluntary Health Workes	17. Professional Nurses	18. Assistant Nurses / Auxiliary Nurses	19. Physiotherapists / Physical Therapists	20. Occupational Therapists	21. Dietitians / Nutritionists	22. Medical Social Workers	23. Medical Loboratory Technicians	24. Assistant Medical Laboratory Technicians
		876	487	13	8	10	2	40	39
..		110,504	..	1,179	a) 667	9,504 / 4,948	..	b) 284	7,832
..	..	544,929	383,967	c) 17,316	c) 8,741	d) 22,110	d) e) 5,834	c) 128,455	..
—	..	14,614	9,459	227	227	17	30	1,698	1,146
(1) 5,824	(1) 17,500	286,901	..	1,443	71	793	171	3,513	143
—		10,141	3,052	f) 9	f) 17	f) 11	f) 26	f) 131	f) 11
	528,979	54,262	31,280	681	212	1,193	751	1,721	3,753
		22,536	20,886					1,597	

Source : (1) Community Health Service

Note: a) For 1991
b) For 1990
c) Licensees at the end of 1996
d) For 1995
e) Hospitals only
f) Government only

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

	Year	25. Radiographers	26. Assistant Radiographers	27. Sanitary Engineers	28. Sanitarians / Assistant Sanitarians	29. Malaria Field Officers	30. Entomologists	31. Health Educators
BRUNEI	1995	4	13	..	39	11	1	7
INDONESIA (1)	1995 1996	1,016		a) 4,568	4,131	..	..	b) 78
JAPAN	1996	c) 42,630	..	..	..	..	..	..
MALAYSIA	1996	461	..	98	..		13	64
PHILIPPINES	1995	d) 143	..				d) 20	d) 80
SINGAPORE	1996	e) 17		e) 225	e) 591			e) 21
THAILAND	1995			54	745	16,289	28	565
VIETNAM								

Source :

Note : a) For 1994
b) For 1990
c) Licensees at the end of 1996
d) Department of Health only
e) Government only

9 – 2 Population / Health Personnel Ratios

	Year	Physicians per 10,000 Population	Population per Physician	Dentists per 10,000 Population	Population per Dentist	Pharmacists per 10,000 Population	Population per Pharmacist	Medical Assistants per 10,000 Population	Population per Medical Assistant	Nursing Personnel per 10,000 Population	Population per Nursing Personnel	Nursing & Midwifery Personnel per 10,000 Population	Population per Nursing & Midwifery Personnel
BRUNEI	1995	8.5	1,179	1.3	7,789	0.4	22,769	••	••	29.6	338	44.9	223
INDONESIA	1995 1996	a) 1.6	a) 6,121	0.4	24,921	0.4 0.4	28,014 28,343	••	••	a) 5.0	a) 1,993	a) 7.7	a) 1,291
JAPAN	1996	19.1	522	6.8	1,472	15.4	648	••	••	73.8	135	75.7	132
MALAYSIA	1996	5.0	2,076	0.9	11,716	0.8	12,343	2.2	4,543	6.9	1,449	9.3	1,026
PHILIPPINES (1)	1994	12.0	831	5.0	1,996	6.2	1,627	••	••	37.8	264	53	189
SINGAPORE	1996	12.9	775	2.5	3,956	2.4	4,210	••	••	36.5	274	37.9	264
THAILAND	1995	2.3	4,180	0.5	20,300	1.0	10,103	0.1	83,607	9.1	1,092		
VIETNAM	1996	4.4	2,253			0.7	14,256	b) 6.4	b) 1,562	5.8	1,735	7.4	1,346

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

Note : a) For 1994
b) Assistant doctor

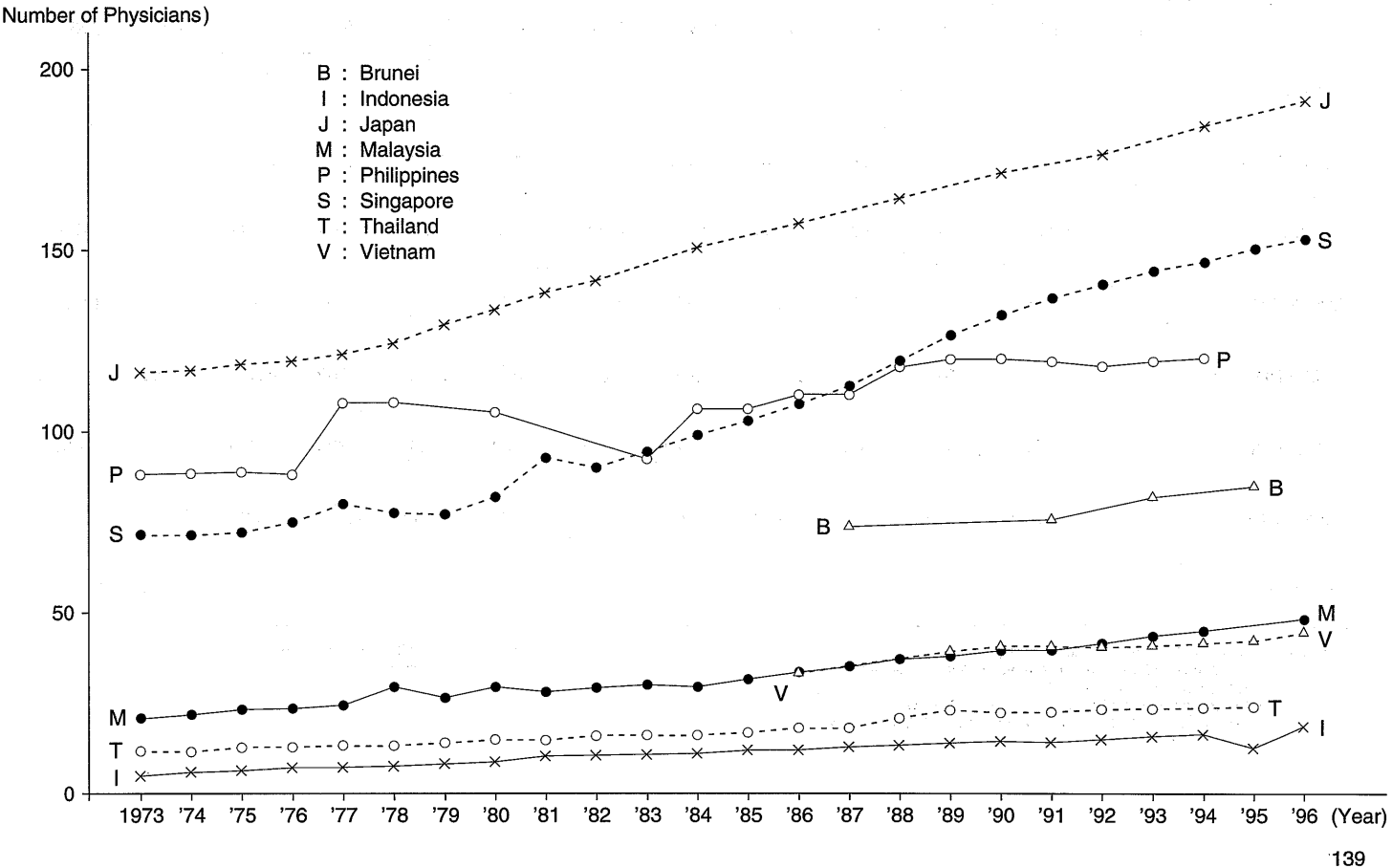
9 – 3 Number of Physicians

Year	1970	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996
BRUNEI							197		226		251	
INDONESIA (1)	3,578	8,279	12,931	(2) 19,875	24,823	25,752	25,754	27,652	29,450	31,400	34,440	36,688
JAPAN	118,990	132,479	156,235	a) NA	b) 201,658	211,797	a) NA	219,704	a) NA	230,519	a) NA	240,908
MALAYSIA (3)	2,543	2,757	3,858	4,939	6,577	7,012	7,198	7,719	8,279	8,831	9,608	10,196
PHILIPPINES (4)	31,515	37,276	50,848	58,015	68,682	72,593	74,008	77,127	79,936	82,494	84,671	
SINGAPORE (5)	1,363	1,622	1,976	2,631	3,397	3,573	3,779	3,962	4,146	4,301	4,495	4,661
THAILAND (6)	5,407	5,005	6,867	8,650	12,713	12,520	12,803	13,398	13,634	14,098	14,181	
VIETNAM (7)		c) 9,108		d) 19,804	25,177	26,821	27,413	27,953	28,884	30,017	31,122	33,470

Source : Ministry of Health in each country
(1) ***The Health Situation of Indonesia,*** Ministry of Health
(2) Personnel Bureau 1987
(3) Information and Documentation System Unit, Ministry of Health
(4) Professional Regulation Commission, Registered
(5) ***Yearbook of Statistics, Singapore 1996***
(6) Health Statistics Division, Ministry of Public Health
(7) ***Health Statistics Yearbok,*** Health Statistics & Informatic Div., Ministry of Health

Note: a) Data collection every other year
b) For 1988
c) 1976
d) 1986

Fig. 9 Trends in Number of Physicians (per 100,000 population)



9 – 4 Number of Dentists

Year	1970	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996
BRUNEI							27		31		38	
INDONESIA (1)	452		1,681	(2) 4,237	5,290	5,545	6,176	6,753	7,231	7,836	7,836	
JAPAN	37,859	43,586	53,602	a) NA	b) 70,572	74,028	a) NA	77,416	a) NA	81,055	a) NA	85,518
MALAYSIA (3)	301	504	691	1,041	1,401	1,471	1,501	1,562	1,606	1,712	1,750	1,800
PHILIPPINES (4)	12,174	13,096	15,158	21,148	26,937	28,204	30,354	32,093	33,302	34,379	35,483	
SINGAPORE (5)	398	419	485	604	740	776	784	806	839	859	875	913
THAILAND	683	652	1,169	1,451	2,107	2,285	2,408	2,669	2,786	2,984	2,290	
VIETNAM												

Source : Ministry of Health in each country
(1) ***The Health Situation of Indonesia,*** Ministry of Health
(2) Personnel Bureau, 1987
(3) Information and Documentation System Unit
(4) Professional Regulation Commission, Registered (cumulative)
(5) Ministry of Health

Note : a) Data collection every other year
b) For 1988

9 – 5 Number of Pharmacists

Year	1970	1975	1980	1985	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
BRUNEI					9				10		13		13	
INDONESIA (1)	1,486	1,847	3,013	(2) 4,268	(2) 4,814	(2) 5,085	5,207	5,399	5,345	5,592	5,762	6,559	6,971	6,993
JAPAN	79,393	94,362	116,056	a) NA	b) 135,990	143,429	a) NA	150,627	a) NA	162,021	a) NA	176,871	a) NA	194,300
MALAYSIA (3)		258	488	843	1,050	1,084	1,170	1,239	1,214	1,351	1,324	1,510	1,537	1,715
PHILIPPINES (4)	19,076	20,838	23,225	26,440	27,493	27,732	28,764	29,612	30,971	32,126	33,233	34,854	36,352	
SINGAPORE (5)	245	288	368	436	487	526	557	587	629	677	720	773	815	858
THAILAND (6)	1,407	1,913	2,650	3,376	3,622	3,681	3,825	4,163	4,333	4,609	4,721	5,575	5,867	
VIETNAM		c) 3,089		d) 5,700								5,757	4,941	5,286

Source : Ministry of Health in each country
(1) ***The Health Situation of Indonesia,*** Ministry of Health
(2) Directorate General, Food & Drugs Control, Ministry of Health
(3) Information and Documentation System Unit
(4) Professional Regulation Commission, Registered (cumulative)
(5) ***Yearbook of Statistics, Singapore 1995***
(6) Health Information Division, Ministry of Public Health

Note: a) Data collection every other year
b) For 1986
c) 1976
d) 1986

9 – 6 Number of Midwives

Year	1970	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996
BRUNEI							407		464		452	
INDONESIA (1)	3,752	10,720	16,472		18,439	(2) 22,405	(3) 29,869	36,187	42,518	51,067		
JAPAN	28,087	26,742	25,867	a) NA	b) 23,320	22,918	a) NA	22,690	a) NA	23,048	a) NA	23,615
MALAYSIA (4)		c) 1,995	c) 4,355	5,047	5,501	5,492	5,543	5,476	5,508	5,500	5,495	5,746
PHILIPPINES (5)	16,082	18,528	42,114	55,841	66,621	71,092	77,773	85,172	94,849	102,875	111,700	
SINGAPORE (6)	1,058	930	779	623	550	543	529	530	522	507	499	487
THAILAND (7)	4,203	6,335	8,669	7,716	11,354	10,796	10,582	10,492	10,525	10,342	9,713	
VIETNAM		d) 647		e) 4,480	5,025	5,025		5,835	5,986	6,625	7,145	8,101

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) Biro Kepegawaian, Data Jumlah yang bekerja di Depkes
(4) Nursing Board, Ministry of Health
(5) Professional Regulation Commission, Registered (cumulative)
(6) ***Yearbook of Statistics, Singapore 1995***
(7) Health Information Division, Ministry of Public Health

Note : a) Data collection every other year
b) For 1988
c) Peninsular Malaysia only
d) 1976
e) 1986

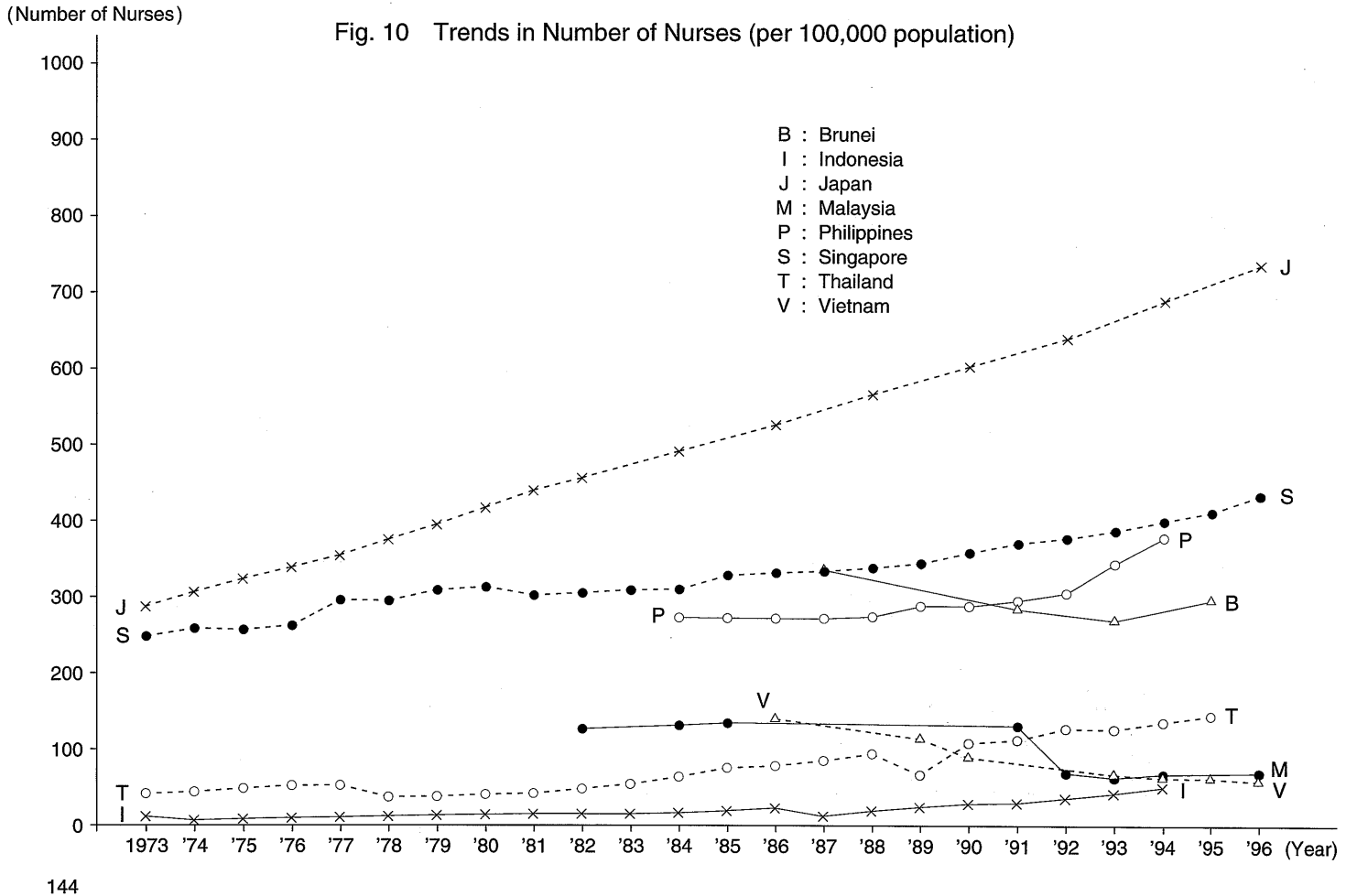
9 – 7 Number of Nurses

Year	1970	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996
BRUNEI							739		743		876	
INDONESIA (1)		9,856	20,201		42,024	50,350	53,308	65,805	78,290	96,427		
JAPAN	273,572	361,604	487,169	NA	694,999 a)	745,301	NA	795,810	NA	862,013	NA	928,896
MALAYSIA (2)	5,617	4,207	7,649 b)	10,311	12,721	11,569	11,604	12,789	11,961	13,224	13,647	14,614
PHILIPPINES (3)	38,918	64,165	114,657	148,514	165,012	174,112	183,277	199,263	230,187	259,629	286,901	
SINGAPORE (4)	4,304	5,767	7,545	8,393	9,237	9,695	10,233	10,633	11,127	11,723	12,298	13,193
THAILAND (5)	15,387	18,993	18,483	38,683	36,652	60,672	63,974	73,319	73,684	80,938	85,542	
VIETNAM (6)		63,458 c)		83,222 d)	72,993	58,674			47,125	45,279	45,561	43,422

Source : Ministry of Health each country
(1) Personal Bureau, Ministry of Health
(2) Nursing Board, Ministry of Health
(3) Professional Regulation Commissioner, Registered (cumulative)
(4) ***Yearbook of Statistics, Singapore***
(5) Health Information Division, Ministry of Public Health
(6) ***Health Statistics Yearbook,*** Health Statistics & Informatic Div., Ministry of Health

Note: a) For 1988
b) Peninsular Malaysia only
c) 1976
d) 1986

Fig. 10 Trends in Number of Nurses (per 100,000 population)



9 – 8 Situation of Medical Schools

	Academic Year	Number of Medical Schools	Duration of Studies	Total Enrolment	Admissions	Graduates
BRUNEI	—	—	—	—	—	—
INDONESIA (1)	1994 1995 1996	30 32 32	6 Years			1,975 1,587 1,660
JAPAN (2) a)	1996	80	6 Years	48,152	7,603	7,717
MALAYSIA (3)	1995 / 1996	3	5 – 6 Years	2,381		
PHILIPPINES (4) b)	1997	30	Pre-Med-4 Years Proper-4 Years Intern-1 Years	12,000	3,800	2,500
SINGAPORE (5)	1996 / 1997	1	5 Years	c) 720 d) 41	c) 142 d) 9	c) 140 d) 7
THAILAND (6)	1996	11	7 Years			819
VIETNAM (7)	1996	e) 9	6 Years	13,382	2,950	1,797

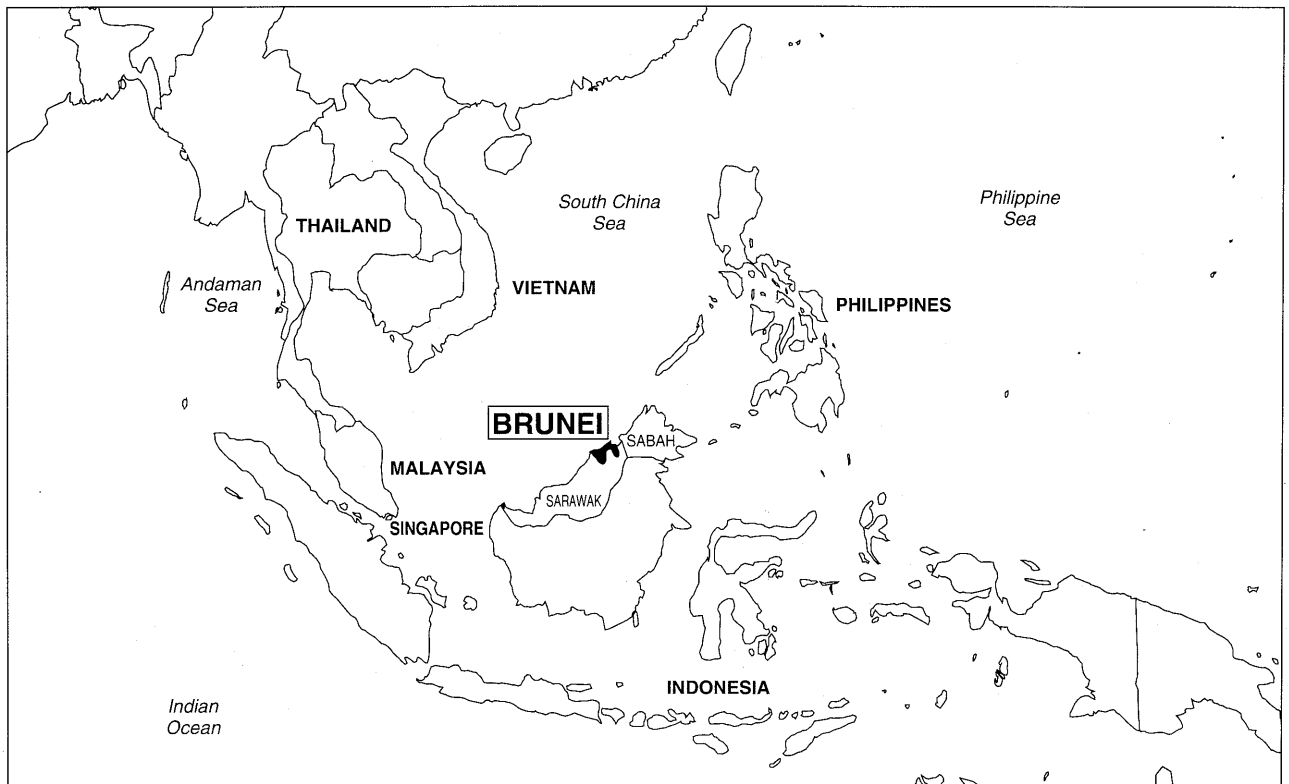
Source : (1) Consortium Medical Science
(2) Ministry of Education
(3) Ministry of Education
(4) Association of Philippine Medical Colleges, Manila
(5) National University of Singapore
(6) Ministry of Public Health
(7) Ministry of Health and Ministry of Education

Note : a) Data on 1 May
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. Population and Vital Statistics

(1) Background Information

The main sources of information on population and vital statistics of Brunei are censuses and compulsory vital registration of births and deaths. The first census took place in 1911 and the last decennial census was conducted in 1991. Midyear population estimates are made for the intercensal years based on the 1991 census figures.

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) 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.

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

Births

(a) Number, sex, race, urban/rural, month and rate;

(b) Number and district/registration area;
(c) Crude birth rate.

Deaths

(a) All deaths: Number, age, sex, race, nationality, month, rate and causes;
(b) Number and district/registration area;
(c) Infant deaths: Number, age, sex, district/registration area, rate and cause;
(d) Neonatal deaths: Number, sex, district/registration area, rate and cause;
(e) Early neonatal deaths: Number, sex, district, rate and cause;
(f) Stillbirths: Number, sex, rate and district/registration area;
(g) Perinatal deaths: Number, sex, rate and district/registration area;
(h) Maternal deaths: Number, rate and district/registration area;
(i) Crude death rate;
(j) Causes of death by age and sex (coding based on ICD-9).

(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.

The vital registration system is operating in 25 registration areas under the supervision of six Deputy Registrars. The responsible agency is the Birth and Death Registry, under the Medical and Health Directorate. The vital events information is now processed by the Birth and Death Registry and the Computer Unit, Ministry of Health.

(6) Tabulation and Publication

The Economic Planning Unit is responsible for the tabulation and release of census results. The data are also published in the Brunei Statistical Yearbook. The vital events information is presented in the Public Health Services Annual Report.

2. Morbidity Statistics

(1) Background Information

Notifiable and infectious disease statistics are collected from hospitals, health centres and general practitioners. To augment these data, hospital outpatient as well as inpatient information is being collected.

(2) Purpose

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

(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 through 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.

(6) Tabulation and Publication

The Medical Records Officers at the Government hospitals are responsible for compilation of the source information. The Medical and Health Statistics Section, Planning, Research and Development Unit (PRDU) in the Ministry of Health is responsible for collection, compilation, processing, analysis and interpretation of the information.

3. Public Health Statistics

Statistics are collected on maternal and child health services, primary health care training, school health services, expanded programme of immunization, environmental health (food safety, pollution control and vector control), port health, disease control, nutrition, psychology, building and development, and health education programmes. Monitoring and evaluation indicators have accordingly been developed and

are used for the assessment of these programmes.

4. Hospital Performance Statistics

The Medical and Health Statistics Unit, PRDU, 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, and results of care and information on beds.

5. Monitoring System

At the early part of 1991 Ministry of Health began an improvement programme called PIP (Performance Improvement Programming). The PIP concept is nothing but 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. Regular meetings have been held ever since, at which the performance of the programme activities is monitored.

6. 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.

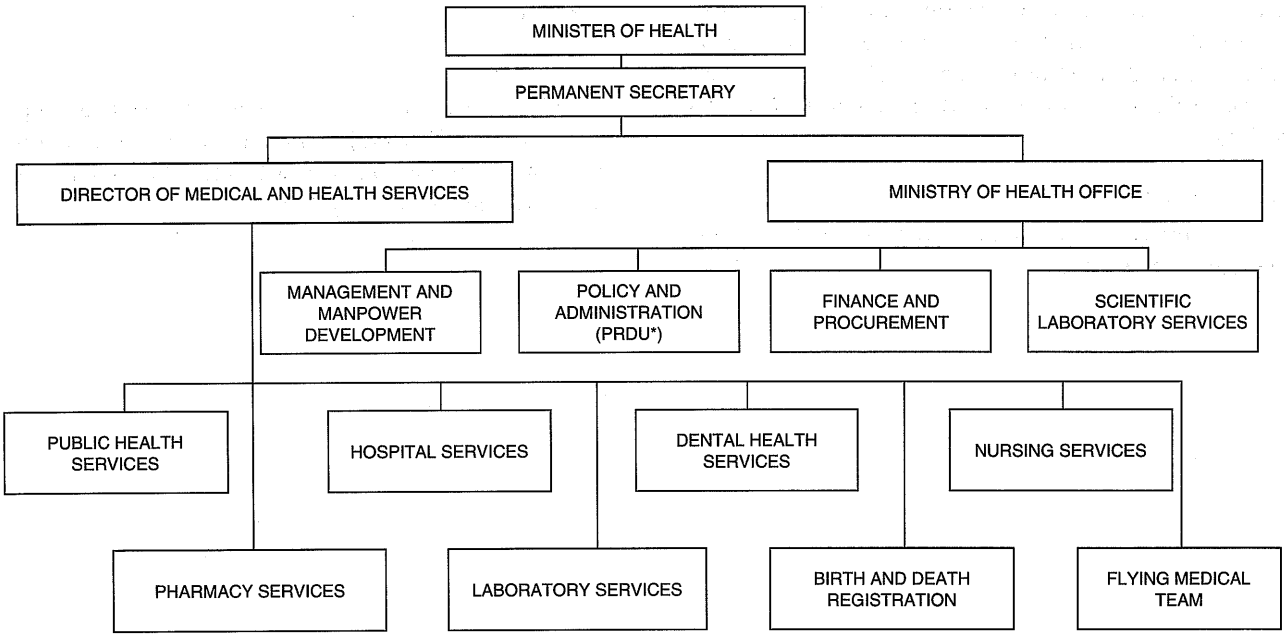
(3) Coverage

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

(4) The Plan

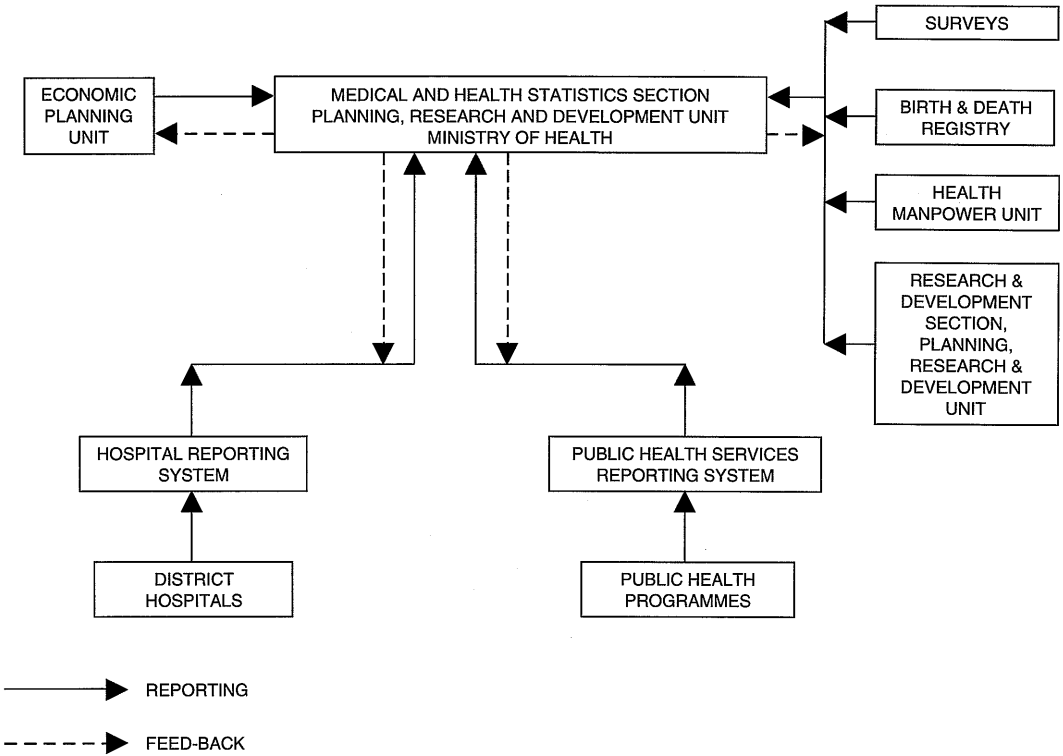
The Manpower Development and Management Unit and the Research and Development Section, PRDU are planning to develop a comprehensive health manpower information system.

Ministry of Health
Negara Brunei Darussalam

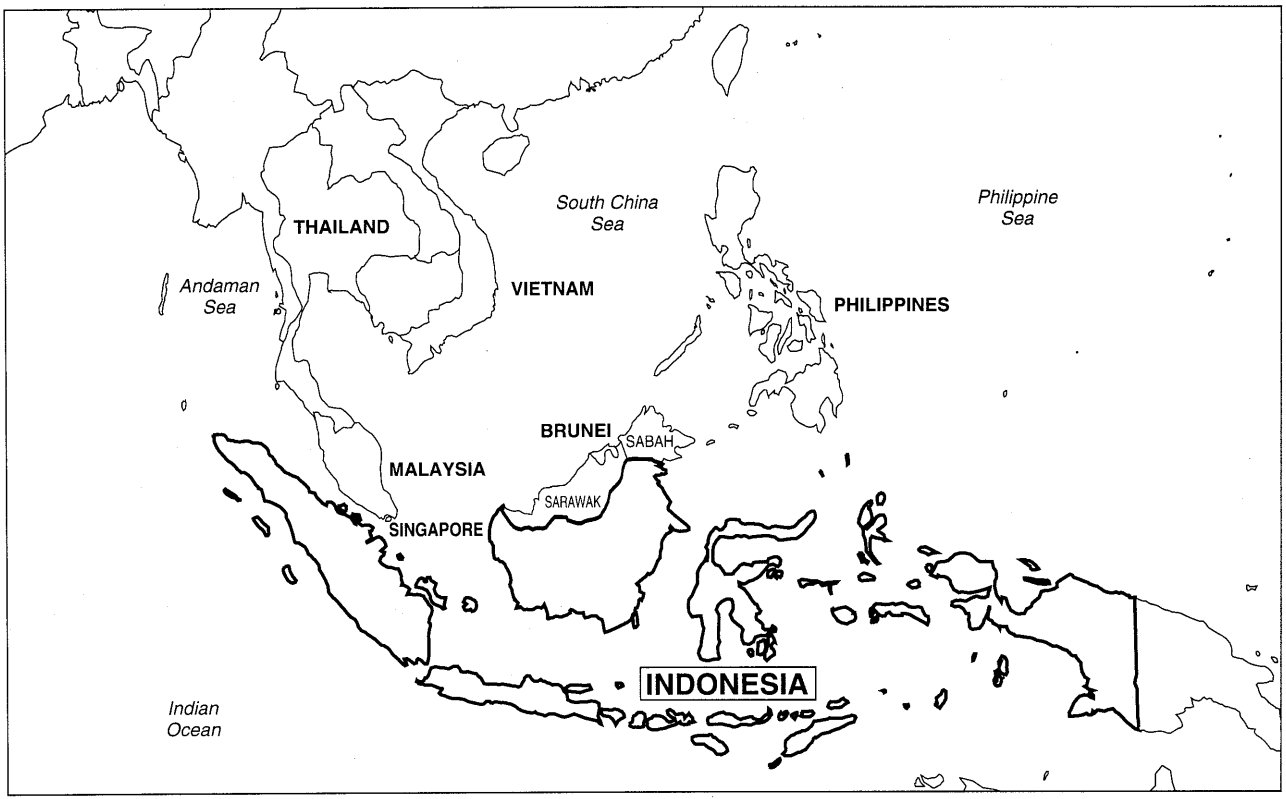


*PRDU = Medical & Health Statistics Section, Planning, Research & Development Unit

Flow of Health Information



Indonesia


THAILAND
South China Sea
Philippine Sea
Andaman Sea
VIETNAM
PHILIPPINES
BRUNEI
SABAH
MALAYSIA
SARAWAK
SINGAPORE
INDONESIA
Indian Ocean

Indonesia

1. Population Census

(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 Central Bureau of Statistics organizes the activities.

2. 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 Central Bureau of Statistics organizes the survey.

3. 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, hepa-

titis, 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, Ministry of Health, Provincial Health Service, District Health Service and Health Centres organize the activity at the central, provincial, district and subdistrict levels, respectively.

4. 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. KAP and community participation in health

service;
f. nutritional status of infants, children, and pregnant women.

(2) Methodology

Due to the limitations in ability and coverage of the survey, the number of population being taken 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.

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.

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 Central Bureau of Statistics assisted by the FAO experts in collaboration with the Food and Nutrition Unit of the Ministry of Agriculture undertakes the composition.

6. 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.

7. 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, whereas the Centre for Health Data organizes the activity in the pilot project areas.

8. 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 organizes the activity.

9. 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 and Culture organizes the activity. All reports should be addressed to the CHS.

10. Recent Developments in the Health Information System

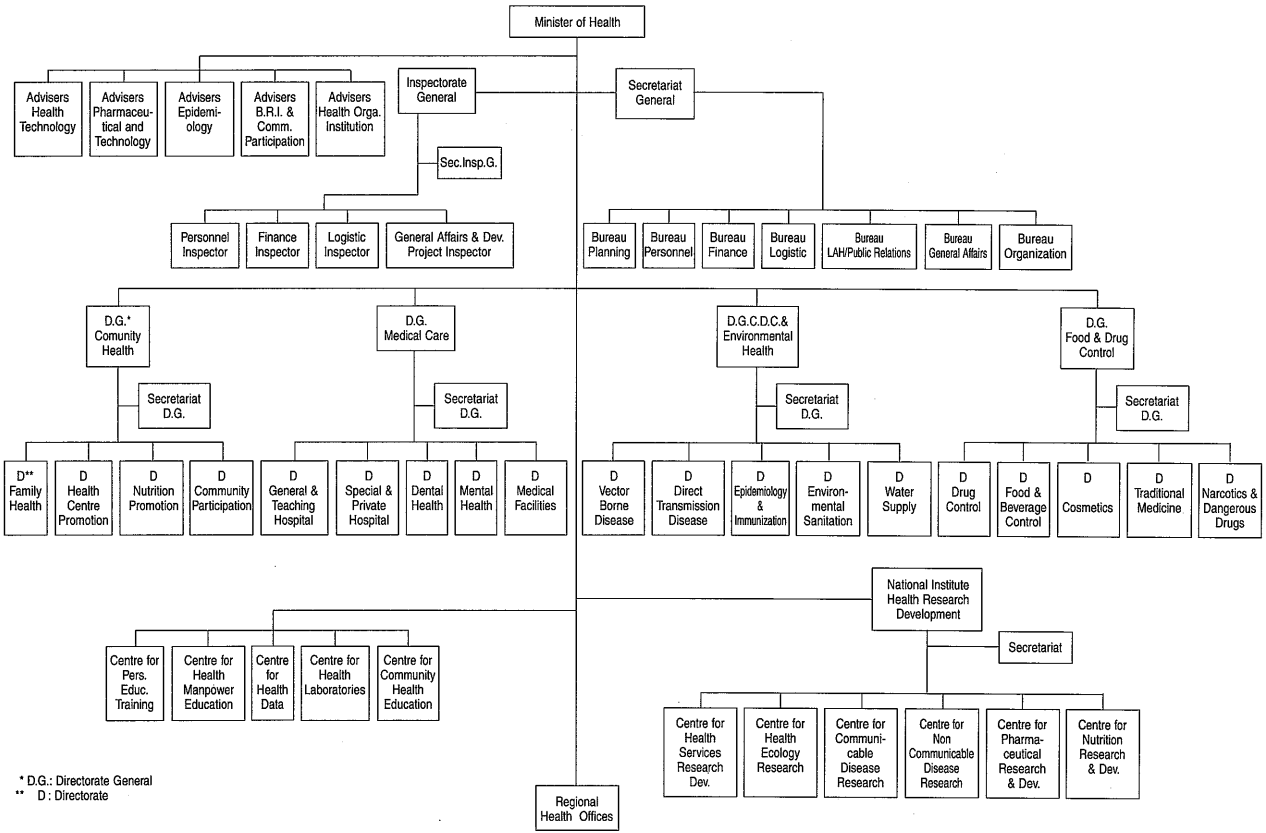
Since 1988, the Centre for Health Data, Ministry of Health initiated the preparation of the National Profile and Provincial and District Annual Health Profiles to be used among others as supportive information for policy formulation and decision-making at each government level. Furthermore in 1994, the Ministry of

Health developed monthly and trimonthly executive reporting from each Provincial Health Office to the Health Minister.

Recent technological advances in computing and informatics offer almost unlimited opportunities for the improvement of the information system. To support the executive functions at national level, the local area network (intranet) and the wide area network (internet) have been developed.

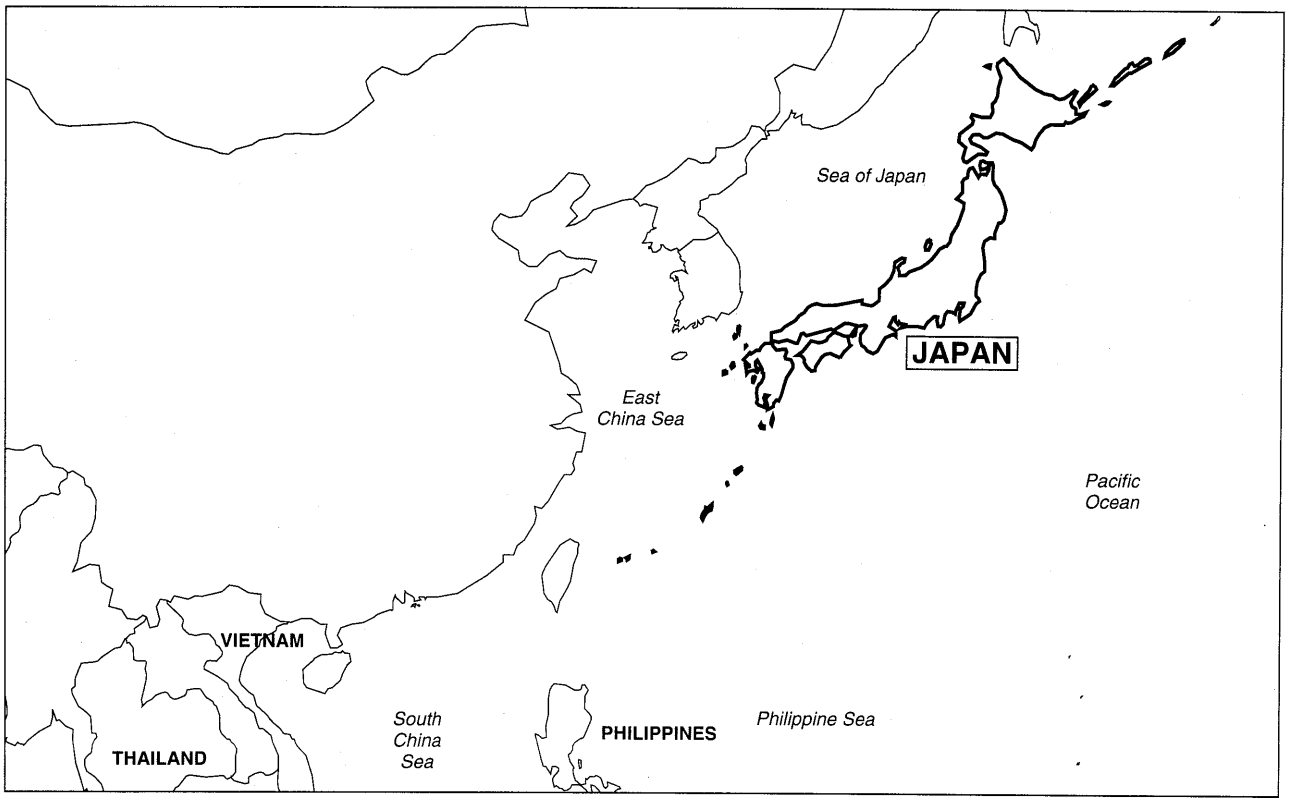
(Centre for Health Data, Ministry of Health)

Organization Structure
Ministry of Health, Indonesia



* D.G.: Directorate General
** D : Directorate

Japan


Sea of Japan
JAPAN
East
China Sea
Pacific
Ocean
VIETNAM
South
China
Sea
PHILIPPINES
Philippine Sea
THAILAND

Japan

1. Population Census

(1) History

Population censuses in Japan have been conducted every five years since 1920. The last 1995 Population Census was the sixteenth one.

The censuses include large-scale censuses and simplified censuses. The censuses taken every ten years starting 1920 are the large-scale censuses, while the censuses taken quinquennially between the large-scale decennial censuses are the simplified ones. The main difference between the two was the number of questions asked in the census. In a simplified one, questions were limited to basic characteristics of population, i.e., name, sex, age, marital status, etc., while a large-scale census covered questions on socio-economic characteristics such as occupation and industry in addition to the basic characteristics of population. The 1995 Population Census was taken as a simplified census.

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.

(2) Purpose

To provide data on the present 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 1990 Population Census (large-scale census)

(i) For household member

a. Name
b. Sex
c. Date of birth
d. Relationship to the head of the household
e. Marital status
f. Nationality
g. Previous address five years ago
h. Educational record
i. Type of employment (permanent/part-time employment)
j. Industry
k. Occupation
l. Employment status (rank in enterprise)
m. Place of work or location of school
n. Transportation to the place of work or location of school
o. Commutation time

(ii) For household

a. Type of household (extended/nuclear family, etc.)
b. Number of household members
c. Source of income
d. Type of tenure (purchased/rental)
e. Number of dwelling rooms
f. Total floor space
g. Type of building (wooden/reinforced concrete) and number of stories

(6) Data Collection Procedure

The field enumeration of the 1990 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 under the Management and Coordination Agency, the Prime Minister's Office.

(7) Tabulation and Publication

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

2. Vital Statistics

(1) History

The Family Registration System was established and came to function as a permanent source of vital statistics in 1872. 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 and Welfare on a periodical basis in the following three publications:

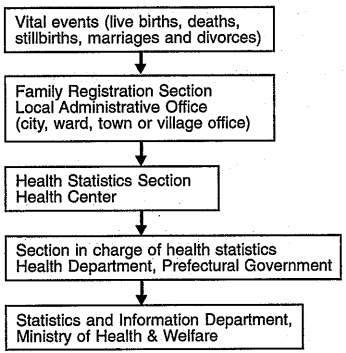
a. Monthly Brief Report on Vital Statistics
   The Monthly Brief Report covers total figures of live births, deaths, stillbirths, marriages and

divorces by prefecture. It should be noted that 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 and Welfare. This 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.

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



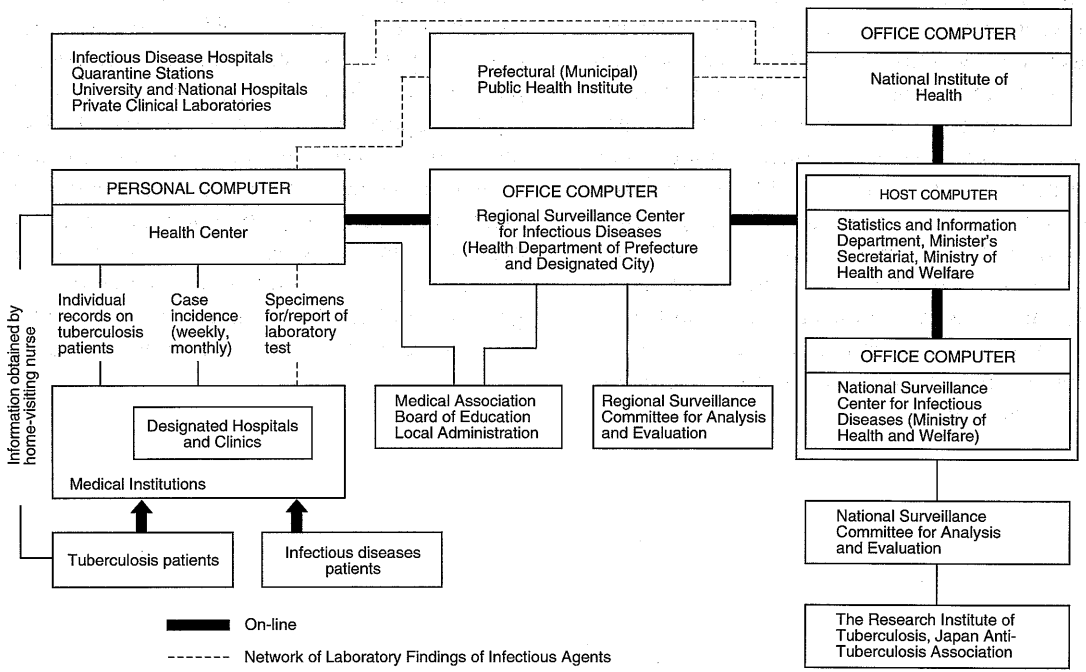
1. Reporting.
2. Report accepted after scrutiny.
3. Vital statistics schedules prepared.
4. The schedules forwarded to the Health Centers immediately.
5. All schedules examined.
6. The schedules submitted to the Prefectural Government before the 25th of every month.
7. The schedules examined.
8. The 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.

3. 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 municipalities, 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 and dermatology.

The following 26 diseases are included in this surveillance system: measles, rubella, chickenpox, mumps, pertussis, streptococcal infection, atypical pneumonia, infectious gastroenteritis, infantile vomiting and diarrhea, hand, foot and mouth disease, erythema infectiosum, exanthema subitum, herpangina, influenza, acute febrile mucocutaneous lymphnode syndrome, pharyngo-conjunctival fever, epidemic keratoconjunctivitis, acute hemorrhagic conjunctivitis, meningitis, encephalomyelitis, hepatitis, gonorrhea, genital chlamydial infection, genital herpes, condyloma acuminatum, and trichomoniasis.

Infectious Disease Surveillance System



4. 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 1993 survey, about 7,000 hospitals, 6,000 general clinics and 1,000 dental clinics were randomly selected after stratification by prefecture. The sampling rates were: 70% for hospitals, 7.5% for general clinics and 2.0% for dental clinics.

(4) Date

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

(5) Contents of Reporting Forms

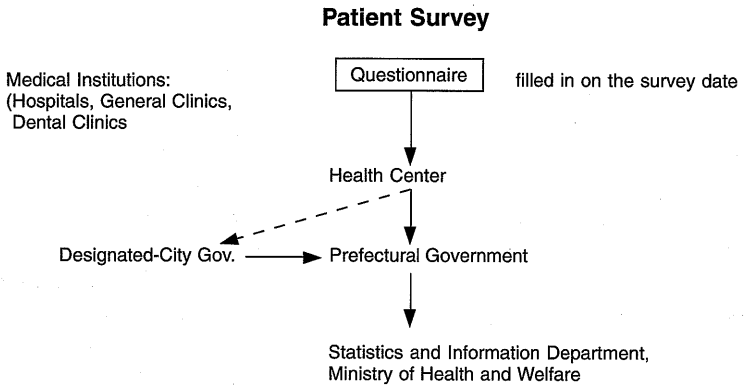
a. Sex
b. Date of birth
c. Address
d. Type of treatment
e. Diagnosis
f. Specialty of medical facility
g. Type of health insurance
h. Date of the last visit
i. Route of reference

(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 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.



5. National Nutrition Survey

(1) History

The National Nutrition Survey in Japan has been conducted annually for more than 50 years. It was started in 1946, 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

In the 1995 survey, about 15,000 persons from about 5,000 households in randomly selected 300 census enumeration districts were investigated.

(4) Date

As of one designated day of November 1995.

(5) Contents of Reporting Form

a) Physical check for individual persons
   1) Anthropometry: height and body weight [aged one or over]
   2) Blood pressure measurement (sitting position) [aged 15 or over]
   3) Blood tests: RBC, hemoglobin, total cholesterol, HDL-cholesterol, triglyceride, total protein, blood sugar [aged 20-59]
   4) Physical activity: number of steps in a day measured by pedometer [aged 15 or over]
   5) Interview on anti-hypertensive drug, smoking habit and physical exercise [aged 20 or over]

b) Dietary study for households
   1) Members who compose the household: age, sex, birth date, profession, pregnancy or lactation
   2) Meals in three days: meals cooked in the family, foods taken outside, meals not taken
   3) Food intake (weighed food record in one day with additional information regarding the proportion of each food shared by family members, to compute the nutrient intake of individual members)

c) Dietary habits

The contents of this section change in each survey. In the 1995 survey, self-evaluations on the following questions were requested: (i) food intake, (ii) energy, fat,

calcium, iron and salt, (iii) the amount of a meal, (iv) feeling of satisfaction at meals, (v) the respondent's body shape (obese, thin, etc.), and whether the respondent follows healthy eating habits.

(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 releases the results through publications and other media.

6. 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.

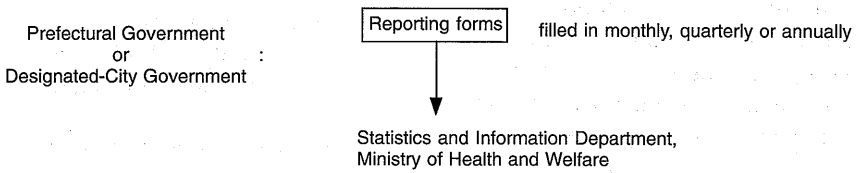
(6) Data Collection Procedure

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 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



7. 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 been conducted since 1986.

(2) Purpose

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

(3) Coverage

In a detailed survey which is conducted every 3 years, 5,240 census enumeration districts are randomly sampled after stratification, and all households and household members in those districts are surveyed. The sample comprises approximately 260,000 households and 800,000 household members. A brief survey is conducted in each intermediate year 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 1994 survey which was a detailed one)

(i) Questionnaire on Household

a. Number of household members
b. Sex
c. Date of birth
d. Condition of disabled person(s)
e. Occupational status
f. Social insurance, pension system

(ii) Questionnaire on Health

a. Activities of daily living (ADL)
b. Symptoms
c. Daily activities for health
d. Medical consultation

(iii) Questionnaire on Income

a. Status of income
b. Tax and social security contributions

(iv) Questionnaire on Saving

a. Status of saving

(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 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.

8. 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 in the census method and data collection procedure were made, 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 is only for 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

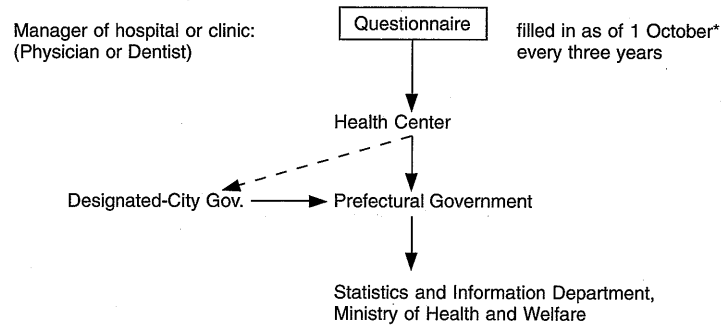
The questionnaire filled in by the responsible person in each institution is submitted to the health center that administers the area where the medical care institution is located. Those collected questionnaires are sent to the Statistics and Information Department of the Ministry of Health and Welfare through 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.

Census of Medical Care Institutions

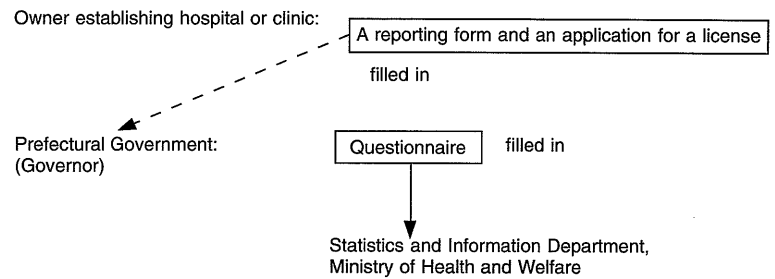
A. Main Detailed Survey



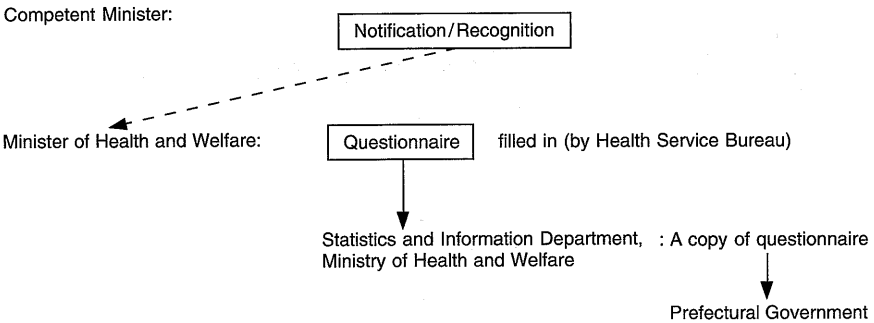
* Questionnaire had been filled in as of the last day of the year up to 1981.

B. Brief Monthly Survey

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



B-2. Medical Institutions established by the central government



9. 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.

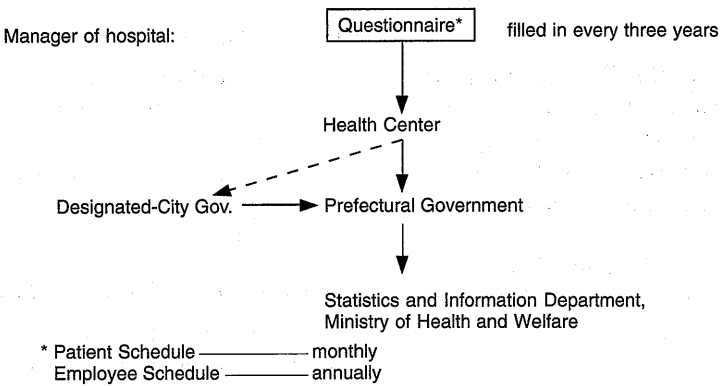
(5) Data Collection Procedure

The report forms filled in by the responsible person of the hospitals are sent to the Ministry of Health 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.

Hospital Report



10. 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

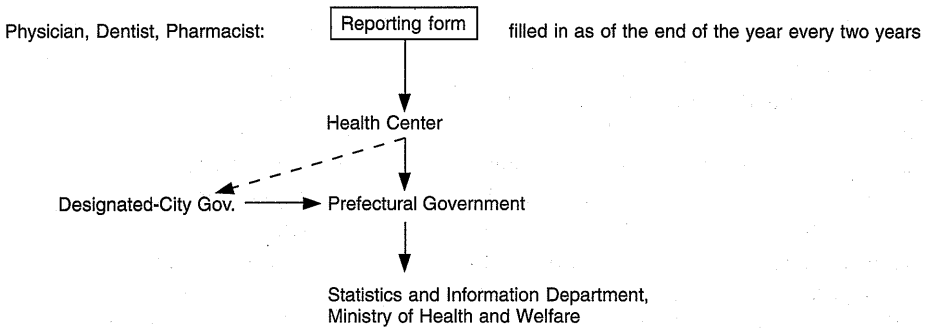
The report form filled in by each professional is submitted to the health center. At the health center, editing work is done and the report is sent to the Statistics and Information Department via the prefectural government.

(7) Tabulation and Publication

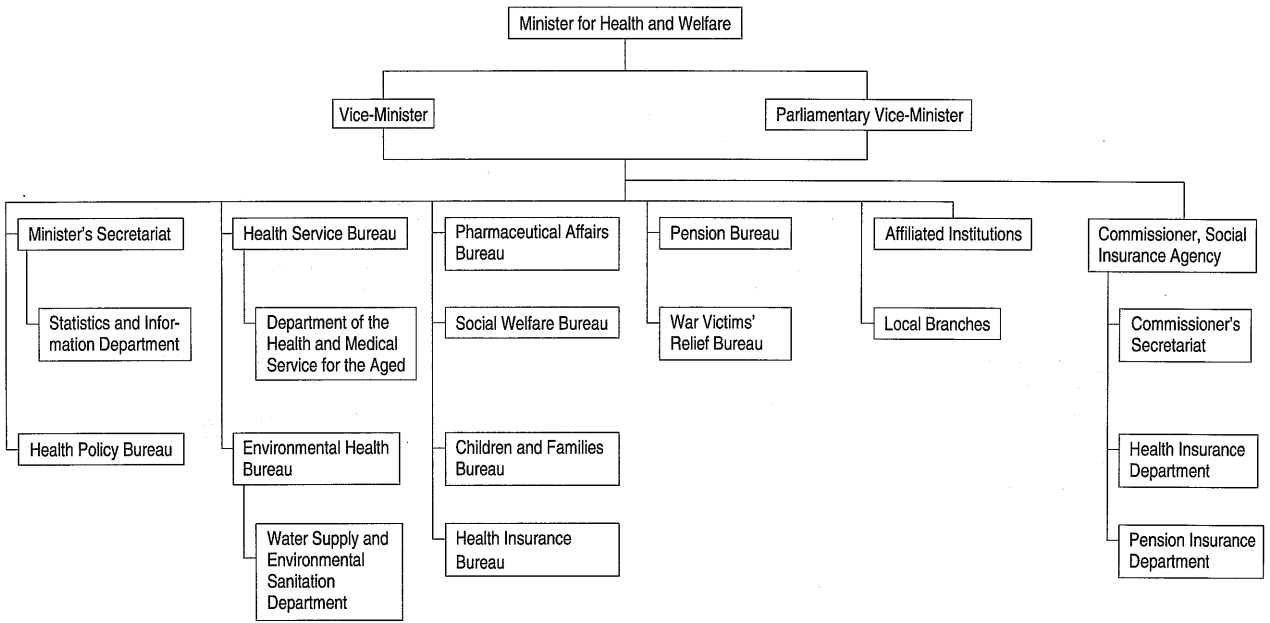
The Statistics and Information Department takes charge of the tabulation and releases the results through publications.

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

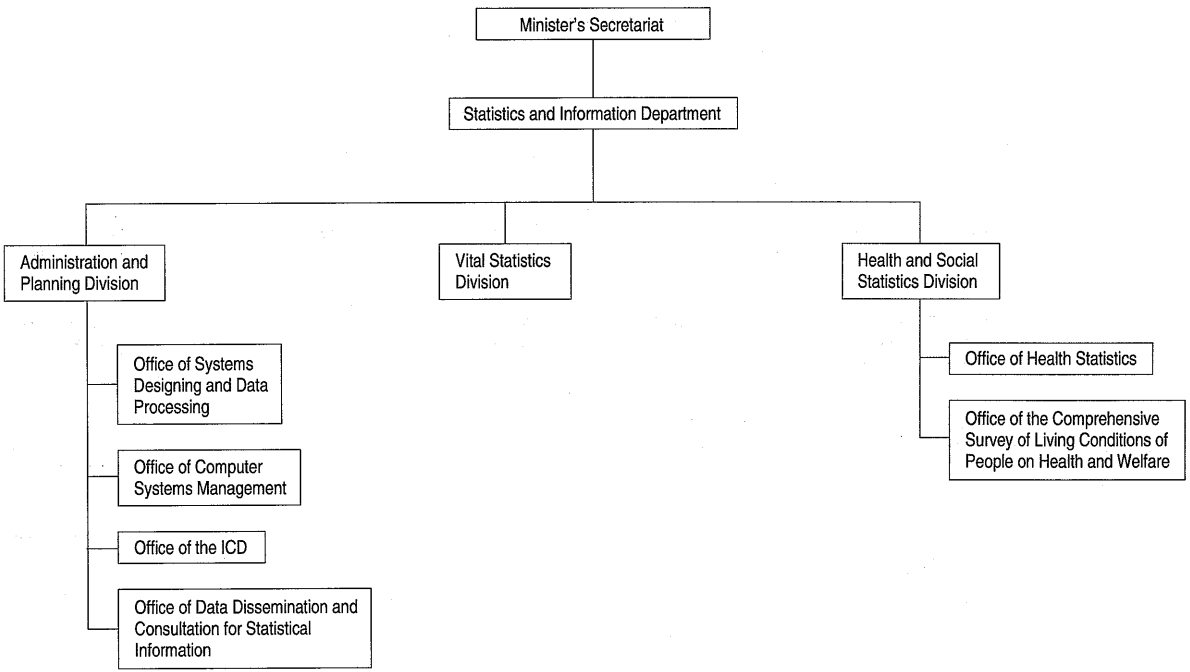
Survey on Physicians, Dentists, and Pharmacists



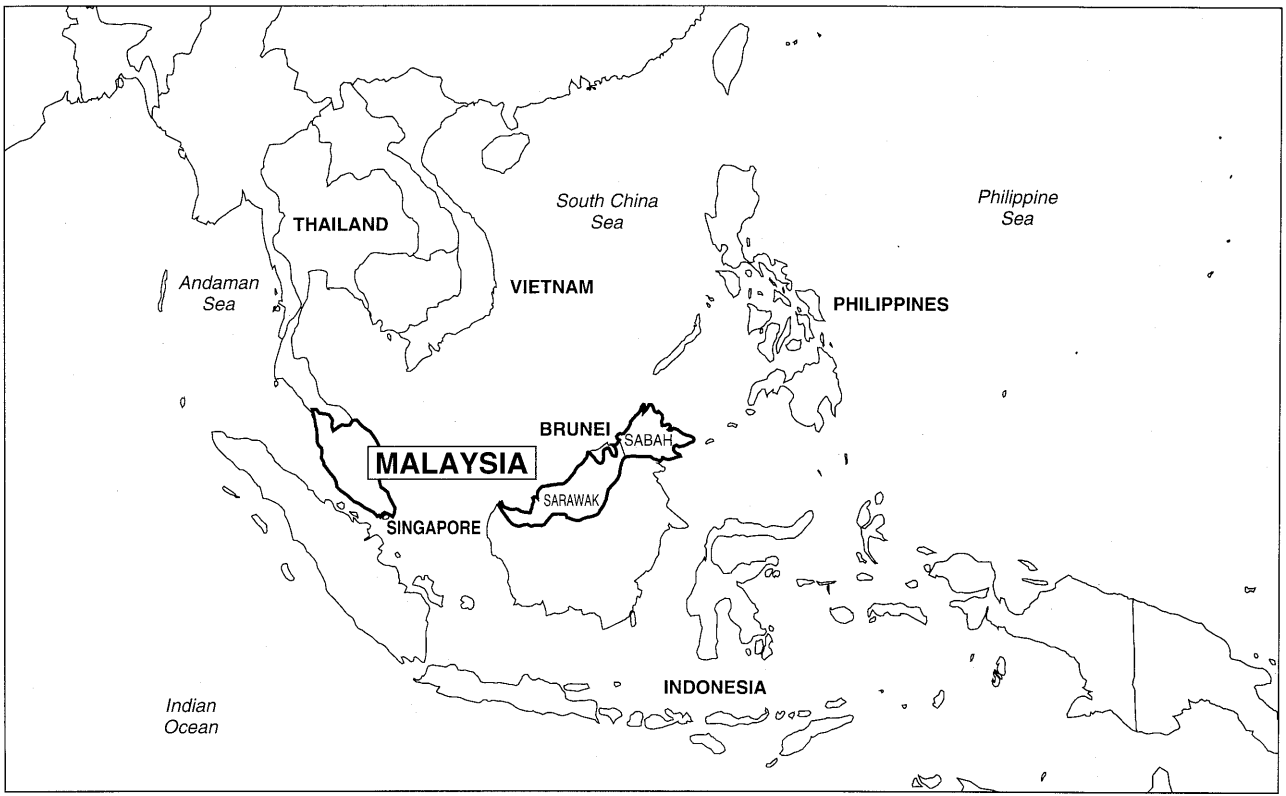
Annex I. Organization Chart of the Ministry of Health and Welfare, Japan



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



Malaysia


THAILAND
South China Sea
Philippine Sea
Andaman Sea
VIETNAM
PHILIPPINES
BRUNEI
SABAH
MALAYSIA
SARAWAK
SINGAPORE
INDONESIA
Indian Ocean

Malaysia

1. Population and Vital Statistics

(1) Background Information

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

In 1991 Malaysia conducted its third census of population since its formation in 1963, the first and second having been held in 1970 and 1980. 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.

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, while the Department of Statistics is 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.

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 1991 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.

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

(5) Data Collection Procedure

In the 1991 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 is done wholly by the Department of Statistics.

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

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

Census information is published in the Census Report, while information pertaining to current demographic changes is published in the annual Vital Statistics publication and the Year Book of Statistics.

2. 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 under the 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 by the Year 2000 (HFA/2000), 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.

Employment status of specific categories of personnel in the Ministry of Health (including non-medical professionals, sub-professionals, and also contract foreign medical personnel) is 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 Computer 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 Sixth Malaysia Plan (1991-95), 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 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 the HFA/2000.

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

3. 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.

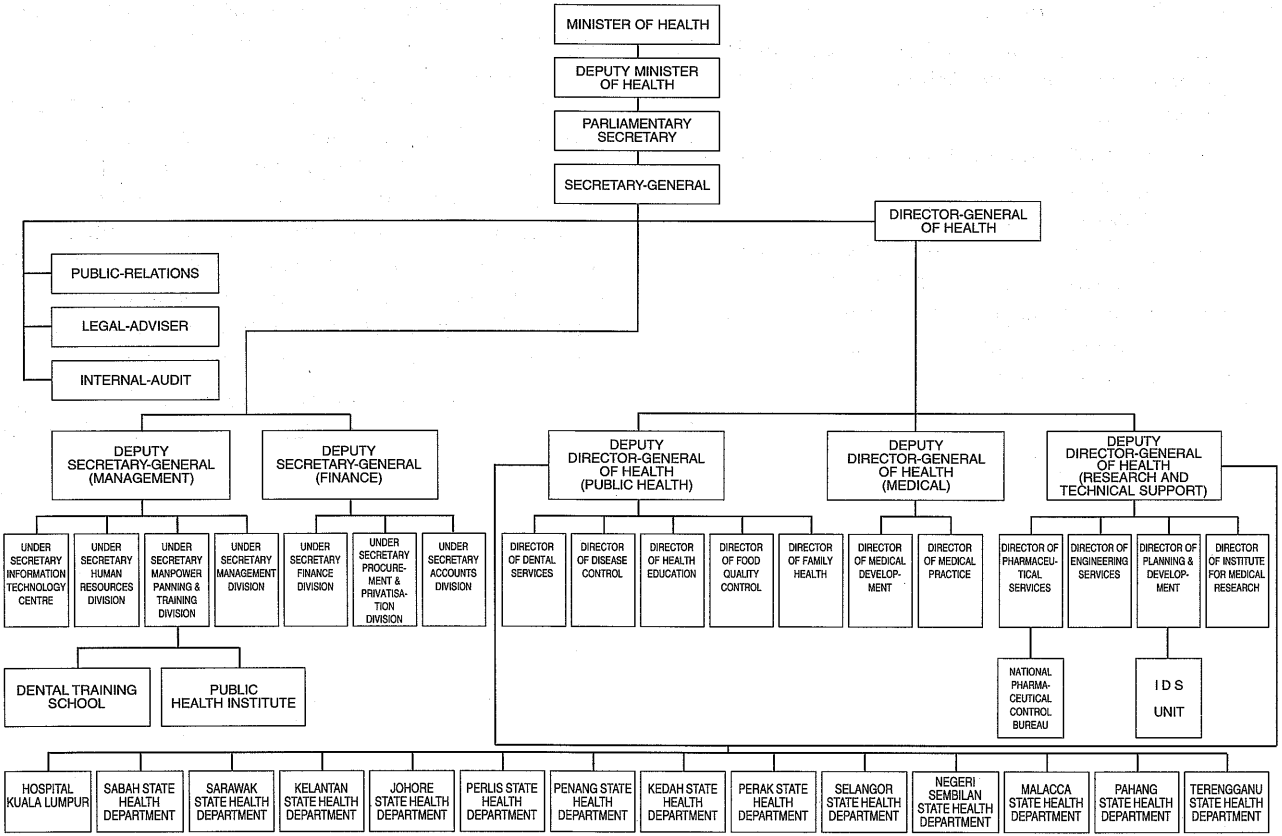
All the above projects either have been implemented fully (and continually upgraded) or are in various stages of implementation.

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

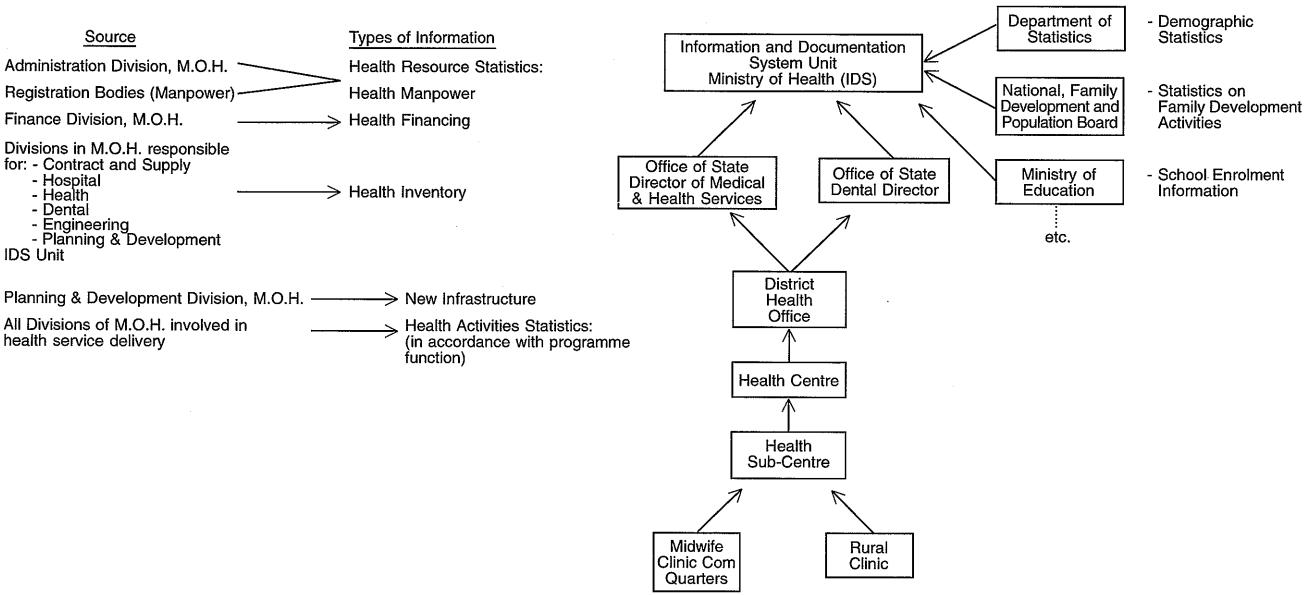
In response to the growing number of users of computerized information within the Ministry itself coupled with the availability of more sophisticated micros at lower costs, the Ministry is encouraging the use of a microcomputer system at local levels. Information sharing is one of the ultimate aims in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

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

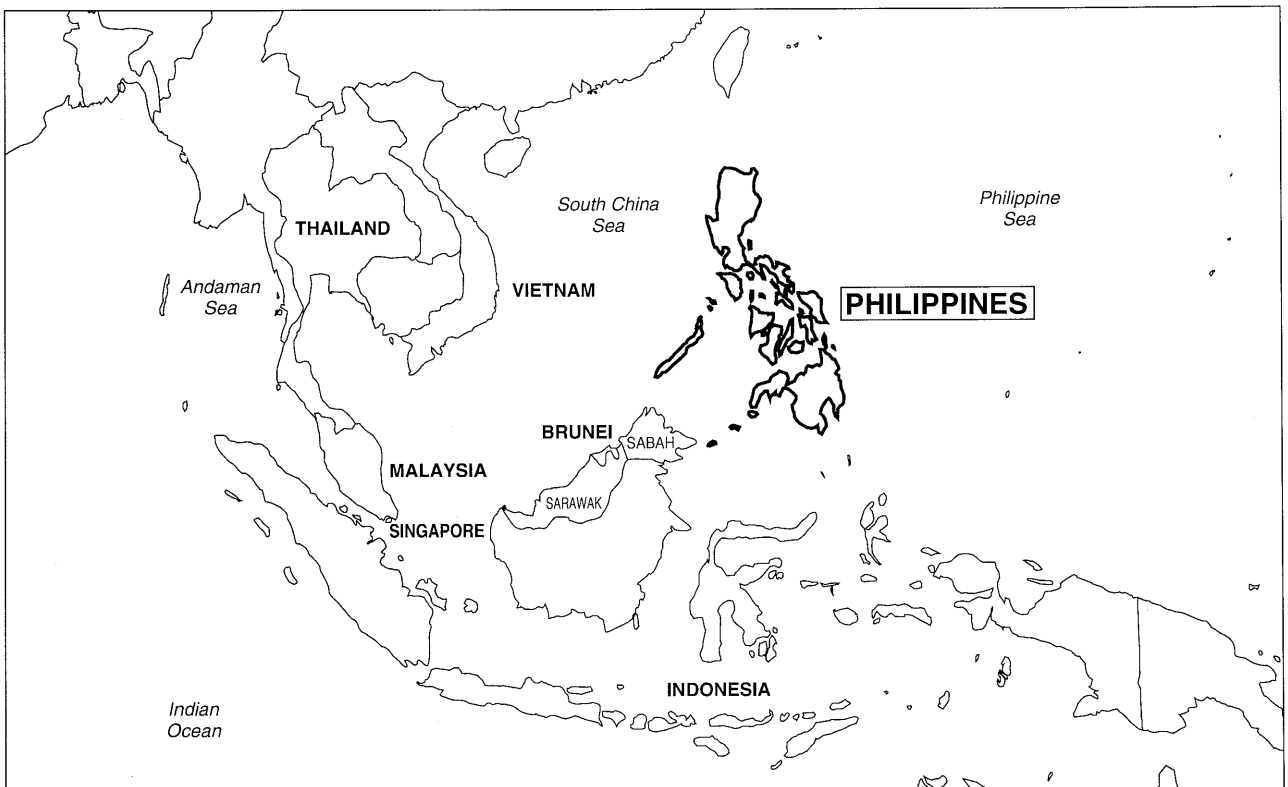
Organization Chart of the Ministry of Health, Malaysia



Flow of Health and Health-Related Information, Malaysia



The Philippines



The Philippines

1. 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 1993) 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 groupings and sex, the numbers married and single by sex, the educa-

tional 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.

2. 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 Preports

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 Department of Health's regional offices, who in turn submit consolidated natality statistics to the Health Intelligence Service in Manila. These reports are released through the *Philippine Health Statistics*, published annually by the Department of Health - Health Intelligence Service.

3. 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 Department of Health's Health Intelligence Service.

(2) Field Health Mortality Reports

Mortality statistics are collected by field health units from the civil registrars and reported to the Department of Health 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 Department of Health's regional offices for eventual submission to the DOH's Health Intelligence Service 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 Department of Health based on the law on Reporting of Communicable Diseases since 1929. The list of notifiable diseases is updated regularly by the Department of Health through its Health Intelligence Service.

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 Department of Health. The report lists the notifiable diseases occurring in their area by age and gender.

The reports consolidated by the Department of Health are used in compiling the ten leading causes of morbidity and annual morbidity rates. The results are released through the regular publications of the Health Intelligence Service which include:

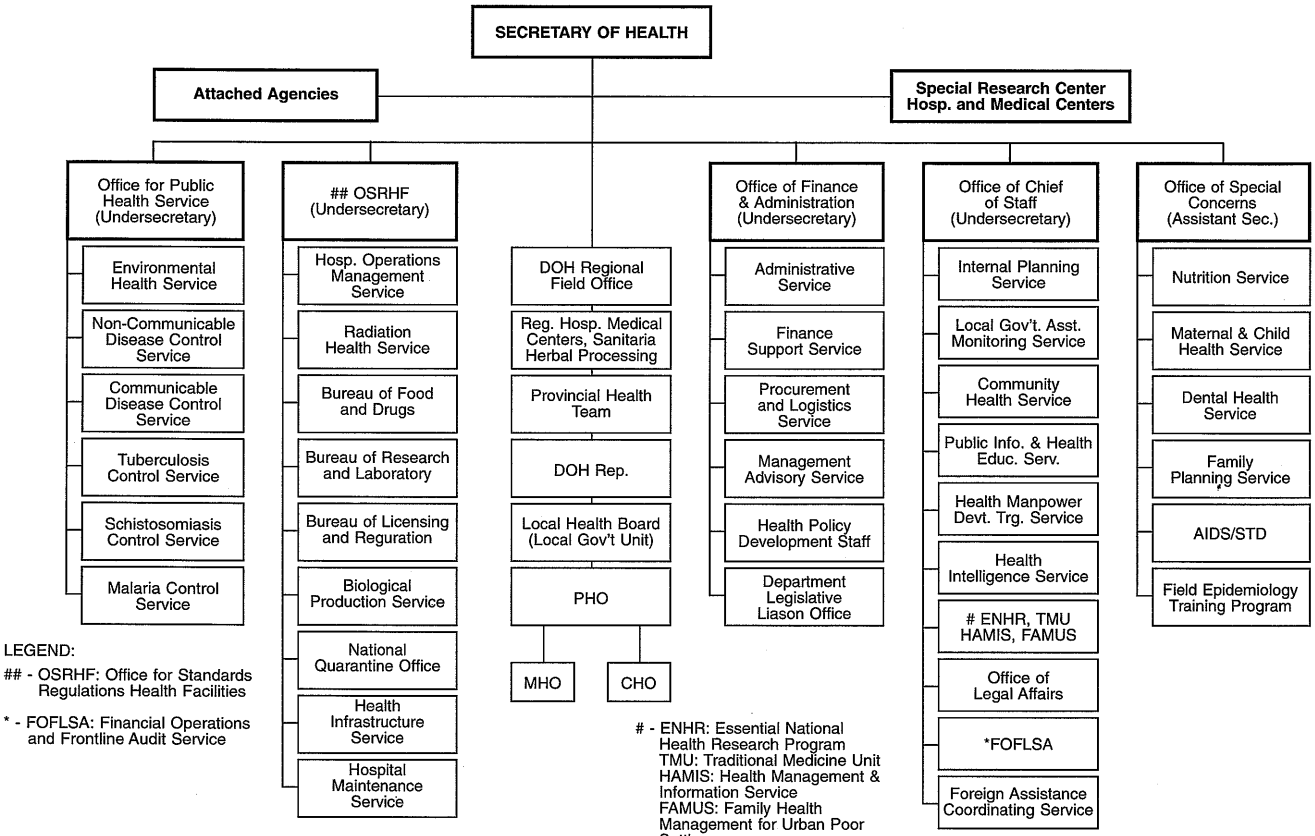
a) HIS Updates (every two months)

b) MFHSIS Annual Reports

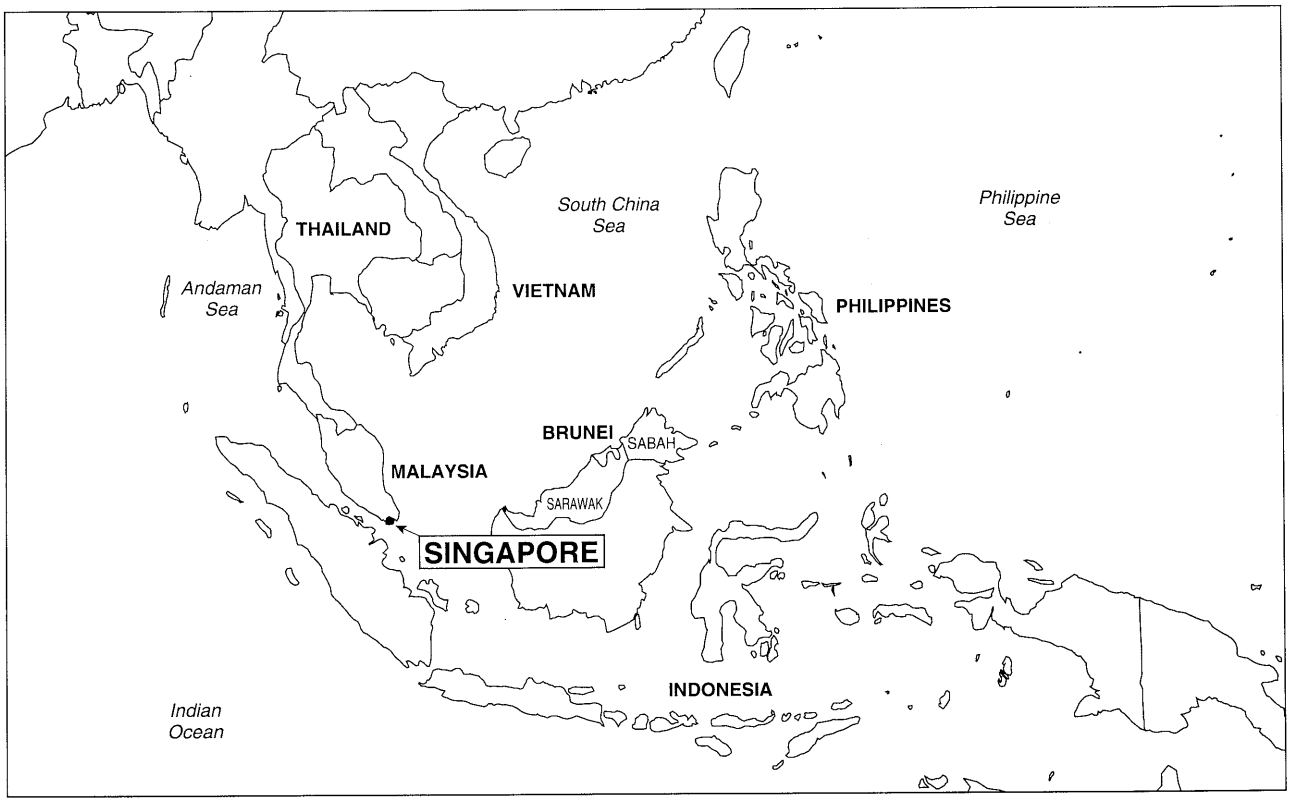
c) *Philippine Health Statistics*

(Health Intelligence Service, Department, of Health)

ORGANIZATIONAL CHART OF THE DEPARTMENT OF HEALTH



Singapore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South China Sea
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Andaman Sea
VIETNAM
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BRUNEI
SABAH
MALAYSIA
SARAWAK
SINGAPORE
INDONESIA
Indian Ocean

Singapore

1. Population and Vital Statistics

(1) Background Information

The main sources of information on population and vital statistics of Singapore are censuses and compulsory vital registration of births and deaths.

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 and 1990. Mid-year population estimates are made for the intercensal years.

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

The main purpose of conducting censuses is to obtain updated information on the population situation in the country. 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. 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 1990 Census of Population, the detailed information collected on the population could be clas-

sified under the following broad categories:

a. Demographic characteristics;
b. Literacy and educational qualifications;
c. Economic characteristics and employment;
d. Geographic distribution;
e. Houses and households;
f. Income and mode of transport;
g. Language and dialects spoken at home;
h. Religion and fertility.

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 deaths by age and sex (coding based on ICD-9);
i. Standardized mortality ratio.

(5) Data Collection Procedure

In the 1990 Population Census, a new approach was adopted. Particulars of individuals and houses which were readily available in the databases and administrative records of public authorities were preprinted on census schedules. This procedure saved the effort of obtaining the information from the individuals; the field interviewers had only to verify/confirm as

the case might be. Any changes, e.g. births or deaths or occupancy of the houses, were taken into account for the extraction of the particulars from the administrative records. Additional information which was not available in the database was obtained from the households and updated in the census schedules.

Data processing was undertaken from June 1990 to March 1991, by the Department of Computer Information Services of the Ministry of Finance, using the latest technology. This involved automatic coding for occupation and household structure, and computer-assisted coding of economic activity. The computer was also designed to carry out comprehensive checks for record errors and inconsistencies.

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

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.

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

2. 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 compulsory 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".

3. 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 Medisave Scheme is a compulsory savings scheme introduced in April 1984 to help Singaporeans to set aside sufficient savings for their hospitalization expenses, especially during old age. 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 dependent(s).

** The MediShield was introduced in July 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.

(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 Information Services Department 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.

4. Statistics on Occupational Diseases

(1) Background Information

The Department of Industrial Health in the Ministry of Labour 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, including 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 Labour's Annual Report, the Singapore Yearbook, the Yearbook of Labour Statistics, as well as Singapore Facts and Pictures. On an ad hoc basis, the data may be published in the Labour Ministry's newsletters, in scientific journals and in reports to international bodies, such as the ILO and WHO.

5. 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 Information Services Department) 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 are 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, dura-

tion 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 Information Services Department, 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.

6. 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. Information is also available in the Family Health Service Annual Report and the School Health Service Annual Report.

7. 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 Minister 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

Monthly returns on sterilization and abortion returns from all hospitals and clinics/institutions are submitted to the Information Services Department, Ministry of Health for data processing.

(6) Tabulation and Publication

The Information Services Department of the Ministry of Health is responsible for statistical tabulation and compilation of the data. The information is published annually.

8. 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

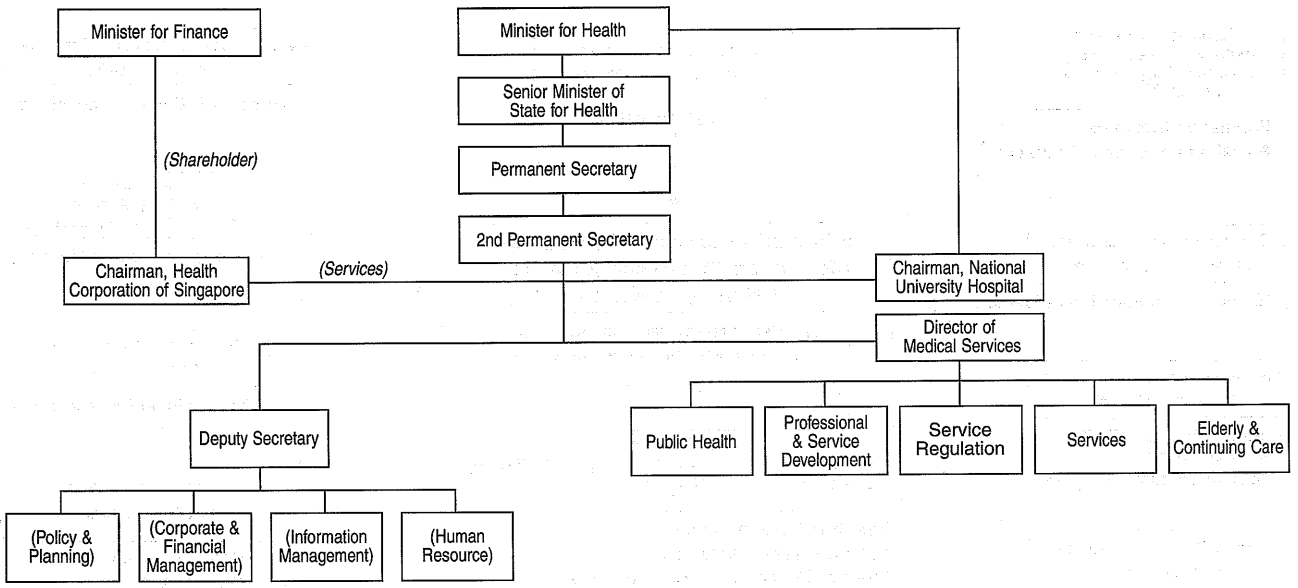
The information is obtained from the registration forms completed by the doctors, dentists, pharmacists, nurses and midwives. The manpower registers are updated annually.

(6) Tabulation and Publication

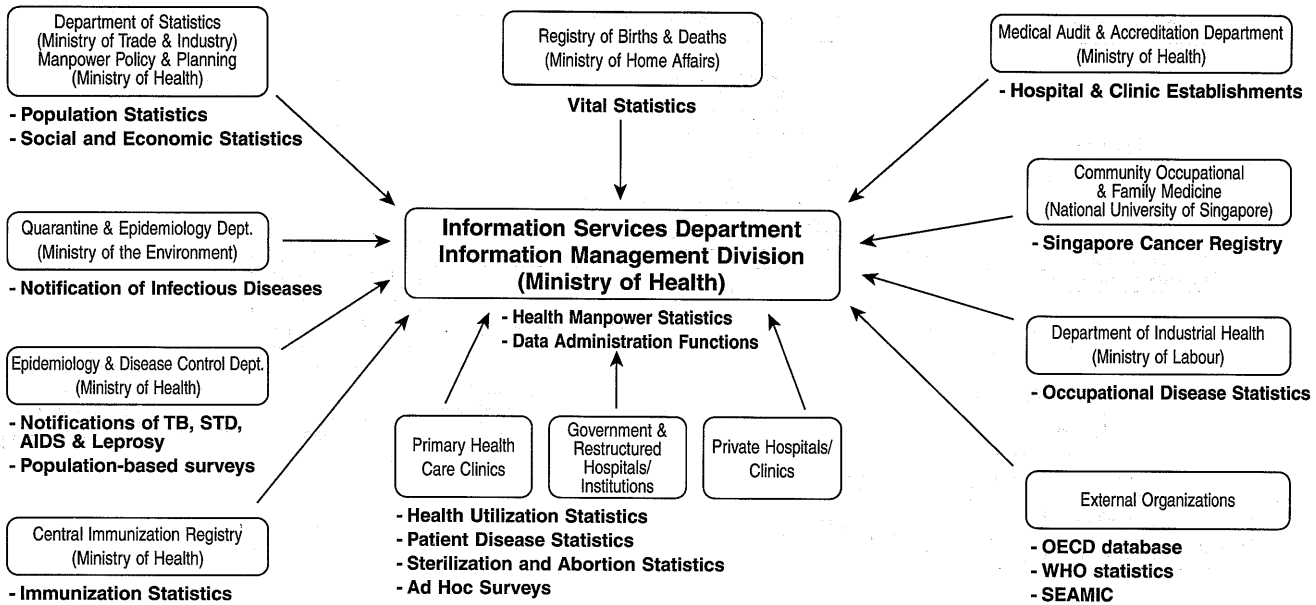
The Information Services Department, Ministry of Health, is responsible for the tabulation and analysis of the statistical data. Reports on these key health personnel are published annually.

(Information Services Department, Information Management Division, Ministry of Health)

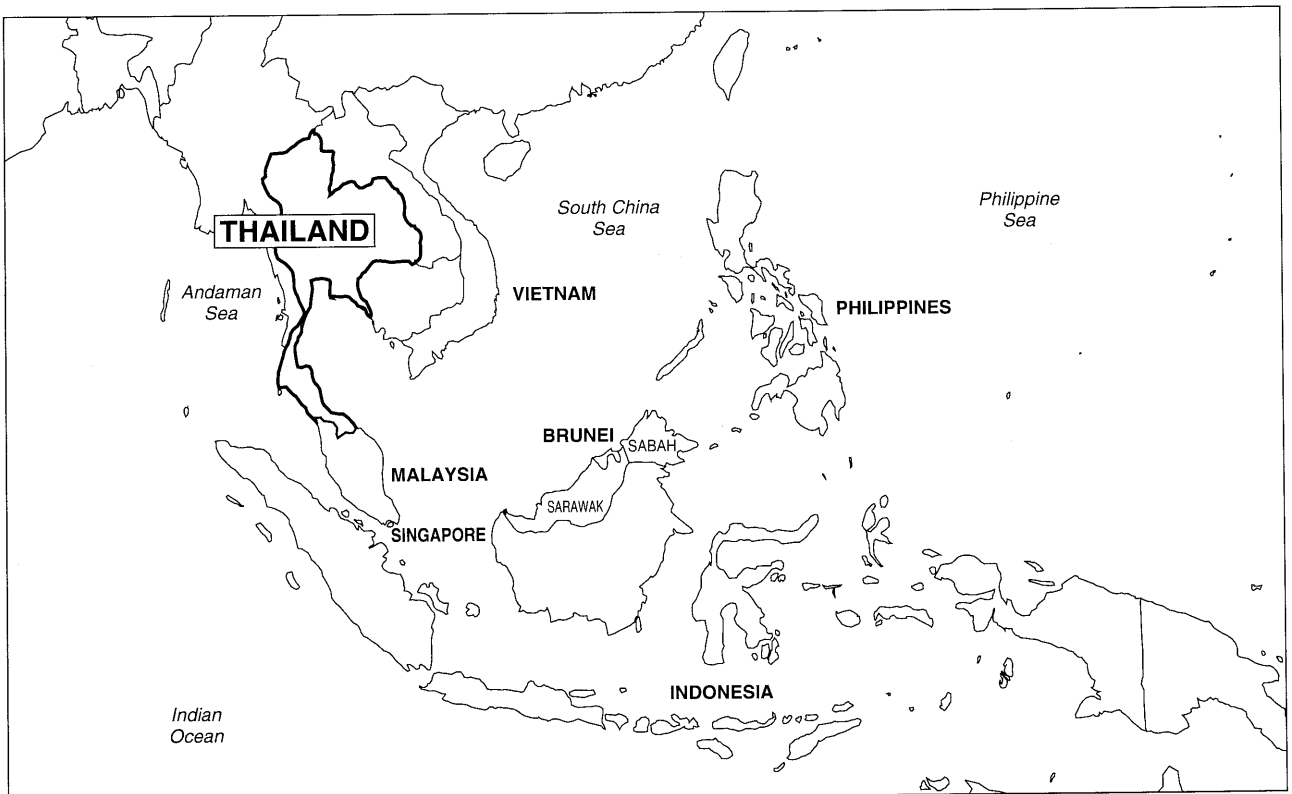
Ministry of Health Organisation Chart, Singapore (effective 15 October 1997)



Ministry of Health, Singapore
Flowchart of Health & Health-Related Information
(as at October 1997)



Thailand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VIETNAM
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MALAYSIA
SARAWAK
SINGAPORE
INDONESIA
Indian Ocean

Thailand

1. Outline

It is well accepted that in the development of any country, the quality of life of the population is one of the most important factors which has to be arrived at. Among those acquired conditions, health status is considered the main element to come prior. The Ministry of Public Health has fully been involved in taking care of such responsibility by rendering health care to the population as a whole.

In Thailand the administrative area has been classified into various levels: central, provincial, district, subdistrict (tambon), and village. The health care delivery systems are provided along with such an organizational structure.

In order to know the relevant status on 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, 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 in the essence of high technology. The validity and accuracy of the statistics 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.

2. Population Statistics

Thailand has conducted a population census for the whole country for 9 times since 1911. 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 since then. The ninth census "Population and Housing Census 1990," was undertaken on 1 April 1990.

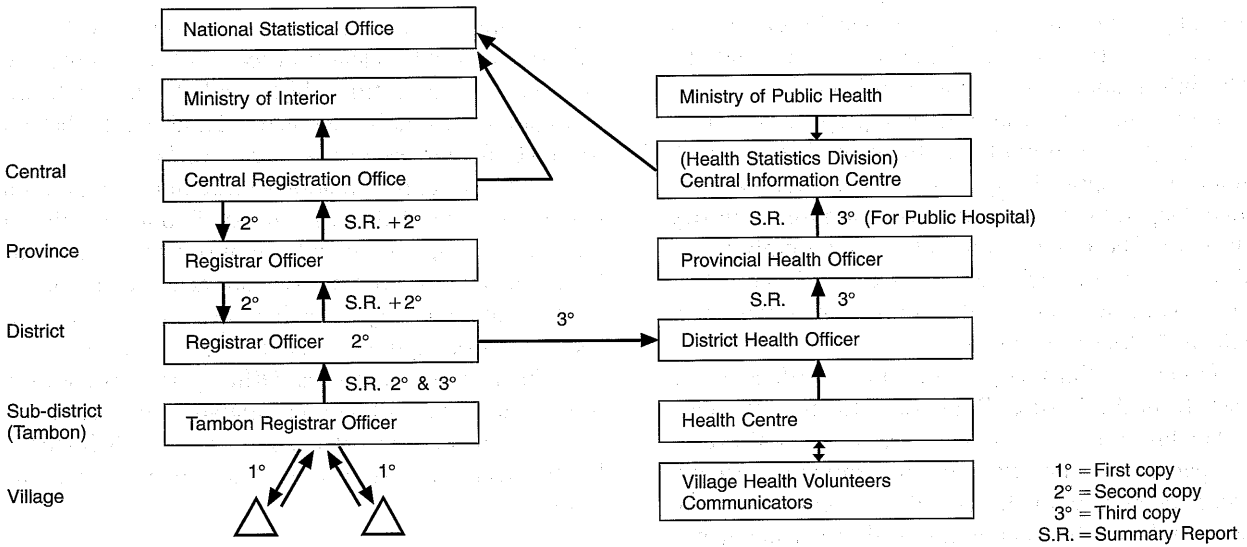
The main population statistics presented are put into 3 groups:

1. Census population and its components
2. Population estimates and expectation of life
3. Distribution of population

3. 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 the above level until the data reach the central level. This system can be illustrated as follows.



(2) Channel of Data Collection

If there happens a vital event, birth or death, the owner of the household in the village must report to the Registrar Officer at the sub-district level for registration. The Registrar Officer produces three copies of the birth or death certificate. The first copy will be handed to the informant, and the second and the third copies are transferred to the District Registrar Officer with a summary report on a monthly basis.

The District Registrar Officer collects reports and certificates from all sub-districts within the district and prepare a summary report to be presented to the provincial level. The second copy of the certificate is sent to the Central Registration Office for photocopying into microfilm and returned back to be kept as the legal document at the local registration office, while the

third copy is passed to the District Health Officer. At this junction, the vital registration system and the health information system are coordinated.

Provincial Registrar Officers prepare the summary report to be submitted to the central level which is under the responsibility of the Central Registration Office, Department of Local Administration, Ministry of Interior. The reports are made on a monthly basis, and at the end of each year the Central Registration Office publishes the total number of population, deaths and other movements.

When the third copies of vital certificates are passed from the District Registrar Officer to the District Health Officer, a summary report on vital events is prepared and submitted to the Provincial Health Officer together with the actual third copies. At the provincial level, the total numbers of births and deaths are computed and submitted to the central level of the Ministry of Public Health in terms of a summary report. At the same time, birth and death certificates from public hospitals are collected and sent to the central level for processing in more details.

The Central Information Centre or the Health Statistics Division of the Ministry of Public Health collects and compiles the total number of vital events from the summary reports and prepares the annual report for the Ministry after having analysed and performed various types of statistical presentation.

The National Statistical Office performs the function of publishing all national statistical figures for the whole country. The vital statistics from the Ministry of Public Health are also sent to this Office on an annual basis.

4. 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 A-list and the 9th edition of the International Classification of Diseases (ICD) provided by WHO.

(ii) Epidemiological data are obtained from the prompt reports from the surveillance scheme which provide information without delay on the occurrence of disease or unfavourable conditions of the population concerning ill-health.

(iii) Natality, mortality and causes of death statistics are obtained from the vital registration system.

(iv) Data Collection Procedure

Morbidity statistics for inpatients and outpatients are submitted on the monthly basis from public hospitals and health service centres and compiled for the whole province and separately for municipal areas in each province. Epidemiological data are submitted in prescribed forms on the daily basis for other communicable diseases from public and private health service centres.

(v) 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 Central 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 Central 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

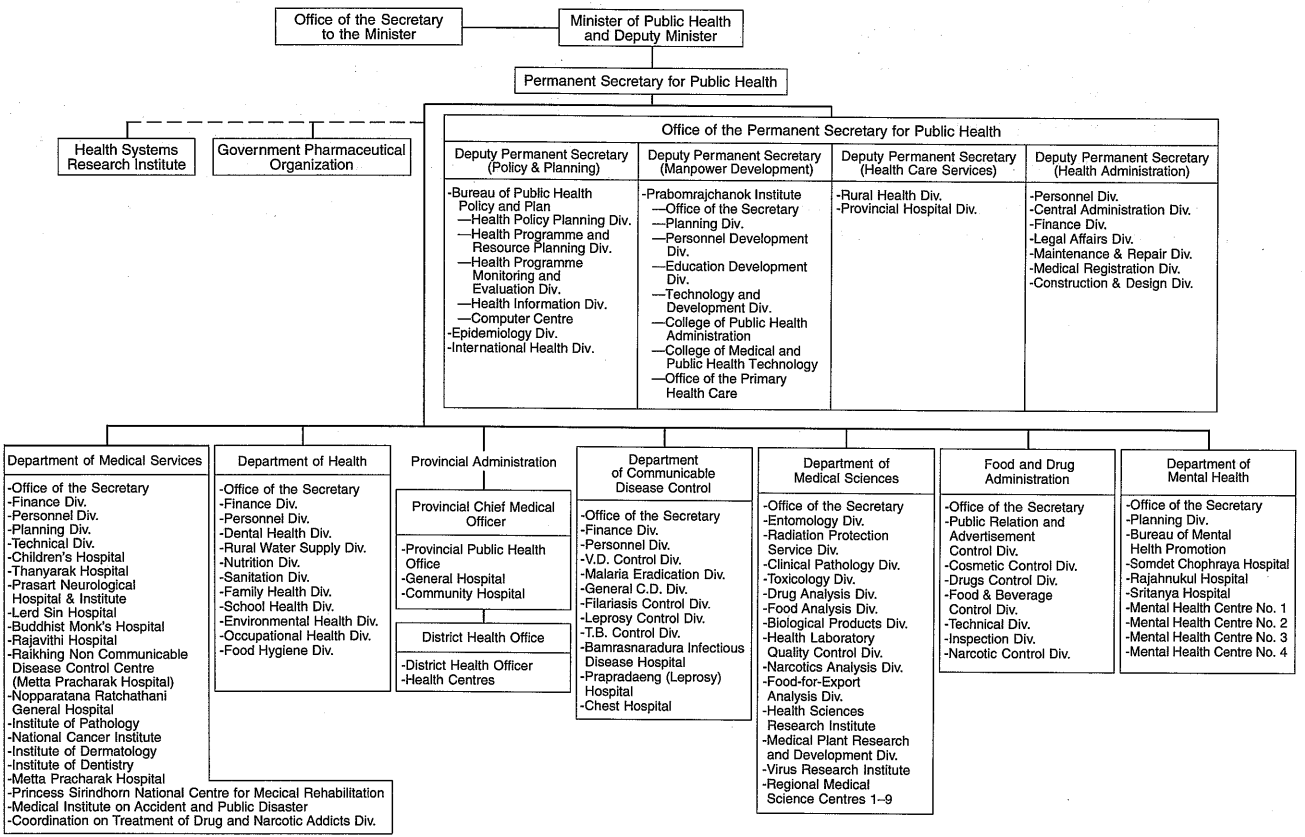
The data are collected in the prescribed health resources report form on a yearly basis by the various health service centres to the Central Health Information Centre.

(v) Tabulation and Publication

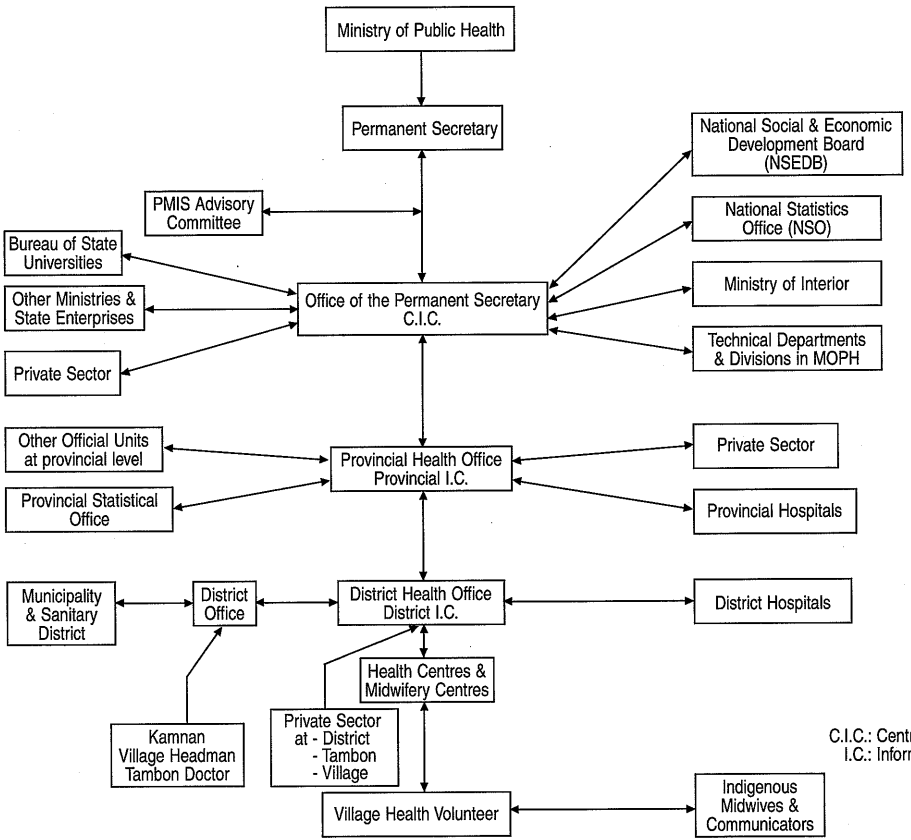
The data are collected and published annually in summary in the Public Health Statistics and in more details in the Report on Health Resources.

(Health Information Division, Ministry of Public Health)

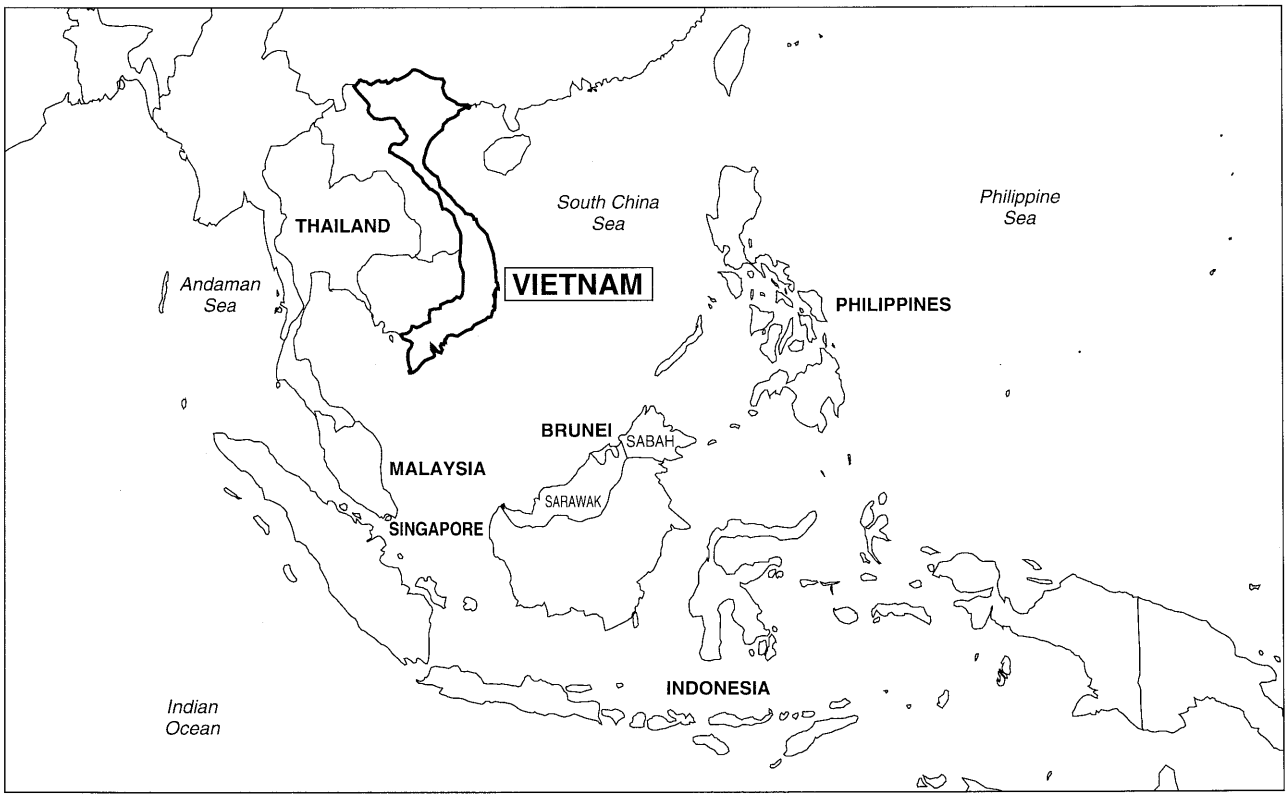
Organization Chart, Thailand



Thailand National Health Information System Network



Vietnam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SINGAPORE
INDONESIA
Indian Ocean

Vietnam

1. Population Census

(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.

2. 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 deaths, 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.

3. Health Statistics

3.1. 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.).

3.2. 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.

3.3. 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 programnmes for their management.

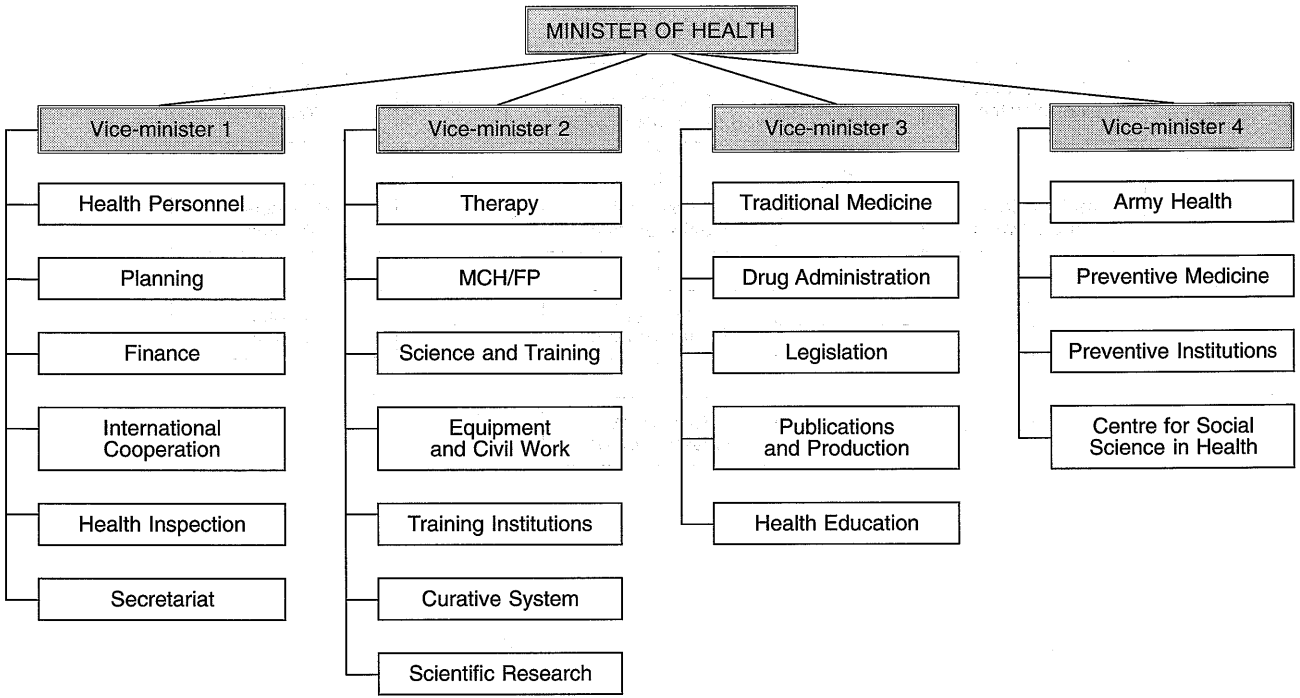
(3) Coverage

Within the coverage areas of the vertical health programmes.

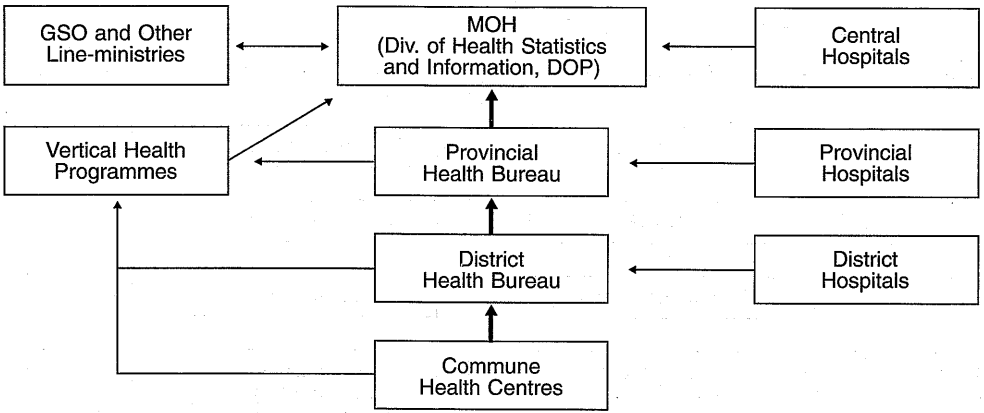
(4) Contents

The contents depend on each programme. In general, following data are collected: coverage, programme performances (service delivery) and programme outcomes.

Ministry of Health Organization Chart, Vietnam



Health Management Information System Chart, Vietnam



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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 Ministry of Health (Departmen Kesehatan)	Jalan H.R. Rasuna Said Kav. X 4-9, Jakarta
Directorate-General of Communicable Diseases Control Ministry of Health	Jalan Percetakan Negara 29 P.O. Box 223, Jakarta
Central Bureau of Statistics	Jalan Dr. Sutomo No. 8 P.O. Box 3, Jakarta

JAPAN

Statistics and Information Department Ministry of Health and Welfare	2-3, Kasumigaseki 1-chome, Chiyoda-ku, Tokyo 100-0013
Communicable Diseases Surveillance Division Health Service Bureau, Ministry of Health and Welfare	2-2, Kasumigaseki 1-chome, Chiyoda-ku, Tokyo 100-8045
Statistics Bureau, the Management and Coordination Agency	19-1, Wakamatsu-cho, Shinjuku-ku, Tokyo 162-8668

MALAYSIA

Information & Documentation System Unit Ministry of Health (Kementarian Kesihatan)	TKT. 10, Bangunan Perkim, Jalan Ipoh, 51200 Kuala Lumpur
Department of Statistics	Kuala Lumpur Kota Kinabalu, Sabah Kuching, Sarawak

PHILIPPINES

Health Intelligence Service, Department of Health	San Lazaro Compound, Rizal Avenue, Manila P.O. Box 1116, Manila
National Statistical Coordination Board	21F Midland Buendia Bldg. 403 Sen. Gil Puyaf Ave., Makati

SINGAPORE

Information Services Department, Information Management 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

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	Bangkok Metropolis

VIETNAM

Department of Planning, Ministry of Health	138A Giang Vo Street, Hanoi, VIETNAM

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