

SEAMIC HEALTH STATISTICS

1985

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by
Committee on Health Statistics

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SOUTHEAST ASIAN MEDICAL INFORMATION CENTER
INTERNATIONAL MEDICAL FOUNDATION OF JAPAN

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PREFACE

Because statistics are indispensable in the planning and evaluation of any societal program, it goes without saying that they are of great importance in developing programs in the health and medical field. Thus, since the inception of the International Medical Foundation of Japan, efforts have been made, through its SEAMIC activities, to collect facts and figures relevant to health and medical care in the SEAMIC countries and to compile secondary statistics and other reference materials.

This publication is the result of such collaborative efforts among our partners in the SEAMIC countries. It is our hope that the SEAMIC HEALTH STATISTICS (SHS), as small a publication as it is, may, with its more updated, improved, and enlarged contents, serve as a *vade mecum* for all people engaged in or concerned with health planning in the Southeast Asian region.

In preparing the 1985 edition, all of our overseas partners convened in Tokyo on 2-5 October 1985 for the first time to exchange views with the members of the SEAMIC Committee on Health Statistics concerning how to upgrade the quality of SHS more effectively. It is expected that the ideas given at the conference will be gradually materialized.

February, 1986

Shigeru Takabayashi

Coordinator
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EXPLANATION OF SYMBOLS

••	Category not applicable
(blank)	Data not available
—	Nil
$\frac{0}{0.0}$	Not nil, but less than half of units employed
*	Provisional or estimated

Part I
HEALTH STATISTICS

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

	Latest Census						Mid-year estimates 1984 (in thousands)	Annual rate of increase 1975-84(%)	Surface area (Km ²) 1984	Density Person/km ² 1984
	Date	Total	Male	Female	Sex ^{a)} ratio	Persons ^{b)} Per household				
INDONESIA	31, Oct. 1980	146,776,473 ⁽¹⁾	72,951,670 ⁽¹⁾	73,824,803 ⁽¹⁾	98.8	4.9 ⁽²⁾	159,831 ⁽²⁾	2.1	1,919,413 ⁽²⁾	86 ⁽²⁾
JAPAN ⁽³⁾	1, Oct. 1980	116,916,400	57,490,400	59,426,100	96.7	3.2	120,018	0.8	372,313	323
MALAYSIA ⁽⁴⁾	10, June 1980	13,745,241	6,918,370	6,826,871	101.3	5.4	14,886 ⁽⁵⁾	2.3	330,434	45
Peninsular Malaysia		11,426,613	5,731,116	5,695,497	100.6	5.3	12,344 ⁽⁵⁾	2.2	131,588	94
Sabah		1,011,046	528,255	482,791	109.4	5.5	1,134 ⁽⁵⁾	3.8	74,397	15
Sarawak		1,307,582	658,999	648,583	101.6	5.7	1,408 ⁽⁵⁾	2.4	124,449	11
PHILIPPINES ⁽⁶⁾	1, May 1980	48,098,460	24,128,755	23,969,705	100.7	5.6	53,170	2.9	300,000	177
SINGAPORE ⁽⁷⁾	24, June 1980	2,413,945	1,231,760	1,182,185	104.2	4.7	2,529	1.2	620.2	4,078
THAILAND ⁽⁸⁾	1, April 1980	44,824,540	22,328,607	22,495,933	99.2	5.2	50,396	2.0	513,000	98

Source: (1) Population of Indonesia, Indonesia, Central Bureau of Statistic

(2) Population Projection 1980-2000, Indonesia, Central Bureau of Statistic

(3) 1980 Population Census of Japan, Prompt Report of the Basic Findings, Part 1, Whole Japan, Statistics Bureau, Prime Ministers Office, Japan, March 1981

(4) General Report of the Population Census 1980 Vol. I, Dept. of Statistics, Ministry of Health, Malaysia

(5) Vital Statistics, Pen M'sia, Sabah and Sarawak, 1983

(6) Philippines 1980, Special Report No. 3, National Census & Statistics Office, Manila

(7) Census of Population 1980, Singapore, Year of Statistics, Singapore 1984/85, Dept. of Statistics, Singapore

(8) 1980 Population & Housing Census, National Statistical Office, Office of the Prime Minister, Thailand

Note: a) Sex ratio = $M/F \times 100$, M = the number of males, F = the number of females, (round off figures to the first decimal place)

b) Average number of persons per household = $\frac{\text{the number of persons who live in ordinary household}}{\text{the number of ordinary households}}$ (round off figures to the first decimal place)

1-2. Estimates of Mid-Year Population

(in millions)

	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
INDONESIA ⁽¹⁾	119.47	130.50	133.53	136.63	139.80	143.04	146.36	149.68	152.99	156.37	159.83
JAPAN ⁽²⁾	104.34	111.57	112.77	113.86	114.90	115.87	116.78	117.65	118.45	119.26	120.02
MALAYSIA	10.39	11.90	12.30	12.60	12.91	13.30*	13.74 ⁽³⁾	14.12 ⁽⁴⁾	14.45 ⁽⁴⁾	14.80 ⁽⁴⁾	15.10 ⁽⁴⁾
PHILIPPINES	36.85	42.26	43.34	44.42	45.50	46.58	48.40	49.53	50.74	51.97 ⁽⁵⁾	53.17 ⁽⁵⁾
SINGAPORE	2.07	2.26	2.29	2.33	2.35	2.38	2.41	2.44	2.47	2.50	2.53 ⁽⁶⁾
THAILAND	36.37	41.87	42.96	44.04	45.10	46.14	46.50	47.49	48.56	49.46 ^(7)a)	50.40 ^(7)a)

Source: Monthly Bulletin of Statistics Sept. 1983, United Nations, New York.

(1) Proyeksi Penduduk Indonesia 1980-2000 Serie LPDG-0661-8301, Central Bureau of Statistics

(2) Vital Statistics 1983, Japan, Ministry of Health and Welfare

(3) General Report of the Population Census 1980 Vol. I, Dept. of Statistics, Ministry of Health, Malaysia

(4) Population Estimates Computed by Information and Documentation System Unit, Planning and Development Division, Ministry of Health Based on the 1980 Pop. Census

(5) National Census & Statistics Office, Manila

(6) Yearbook of Statistics, Singapore 1984/85, Dept. of Statistics, Singapore

(7) Report of Working Group on Population Projections, National Statistical Office, July 1981

Note: a) Estimates based on total population figures, 1970 Population & Housing Census, National Statistical Office, Thailand

1-3. Population Projection

(in thousands)

	1980	1985	1990	1995	2000	2005	2010	2015	2020	2025	2030
INDONESIA⁽¹⁾	148,040	165,154	183,457	202,746	222,753	248,897	276,153	306,394	339,946	384,273	
JAPAN^(2) a)	116,916	120,301	122,834	125,383	128,119	130,008	130,276	129,332	128,115	127,184	126,297
MALAYSIA⁽³⁾	13,745	15,564	17,444	19,748	22,454						
PHILIPPINES^{b)}	48,317	54,352	60,185	65,397	69,885	81,591	87,206	92,430	97,682	102,686	107,123
SINGAPORE⁽⁴⁾	2,414	2,563	2,711	2,837	2,930						
THAILAND⁽⁵⁾	46,455	51,301	55,345	59,580	63,772	67,745					

Source: (1) Based on Population Projection, Central Bureau of Statistics Indonesia, Calculated by Helath Data Centre MOH
 (2) Japan Statistical Year Book, 1984, Statistics Bureau
 (3) Information and Documentation System Unit, Planning and Development Division Ministry of Health
 (4) Demographic Trends in Singapore (Census Monograph No. 1), Dept. of Statistics, S'pore
 (5) Report of Working Group on Population Projections, National Statistical Office, July 1981

Note: a) Population as of October 1 of the year stated
 b) From 1980–2000 = MOH Primer 1984 (Population based on medium assumption), from 2005–2030, Population Projections for the Philippines and its Regions: 1980–2030 (Series 2: Moderate Fertility and Moderate Mortality Decline)

1-4. Population by Age and Sex

	Year	Sex	Age									
			All Ages	0	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39
INDONESIA ⁽¹⁾	1984	T	161,579	23,334		21,281	19,111	16,926	14,945	13,186	10,644	8,577
		M	80,443	11,846		10,874	9,697	8,521	7,475	6,553	5,263	4,213
		F	81,145	11,488		10,407	9,414	8,405	7,470	6,632	5,380	4,363
JAPAN ⁽²⁾	1984	T	120,235	7,631		8,844	10,029	8,830	8,031	7,908	9,545	10,120
		M	59,155	3,917		4,534	5,144	4,525	4,088	3,987	4,795	5,085
		F	61,080	3,714		4,310	4,886	4,305	3,943	3,921	4,750	5,034
MALAYSIA ⁽³⁾	1980	T	13,136,109	1,779,564		1,782,782	1,633,536	1,493,464	1,265,133	1,058,434	874,744	671,303
		M	6,588,756	912,497		911,412	831,730	737,713	608,779	518,755	440,840	342,508
		F	6,547,353	867,067		871,370	801,806	755,751	656,354	539,679	433,904	328,795
PHILIPPINES ⁽⁴⁾	1980	T	48,316	1,640	6,060	6,635	5,976	5,279	4,609	3,871	3,012	2,430
		M	24,232	832	3,118	3,411	3,049	2,578	2,220	1,926	1,527	1,233
		F	24,084	808	2,942	3,224	2,927	2,701	2,389	1,945	1,485	1,197
SINGAPORE ⁽⁵⁾	1984	T	2,529	40	161	197	225	246	294	289	244	187
		M	1,289	21	84	102	116	126	152	148	124	95
		F	1,240	19	77	95	109	120	142	141	120	92
THAILAND ⁽⁶⁾	1984	T	50,396	6,340		6,274	6,088	6,017	5,095	4,256	3,652	3,028
		M	25,334	3,238		3,203	3,099	3,062	2,576	2,156	1,848	1,537
		F	25,062	3,102		3,071	2,989	2,955	2,519	2,100	1,804	1,491

Source: (1) Proyeksi Penduduk Indonesia 1980-2000, LPDG-0661-8301, Central Bureau of Statistics, (Mid-Year)

(2) Statistical Handbook of Japan 1985, Statistics Bureau, Management & Coordination Agency

(3) Dept. of Statistics, 1980 Population & Housing Census of Malaysia, General Report of the Population Census Vol 2

(4) 1980 Philippine Health Statistics, Ministry of Health, Manila

(5) Dept. of Statistics, Singapore

(6) Report of Working Group on Population Projections, National Statistical Office, July 1981.

(in thousands)

Age										
40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+	Unknown
7,893	7,030	5,727	4,381	3,160	2,317	1,570	935	561		
3,850	3,396	2,737	2,074	1,477	1,072	717	423	249		
4,042	3,634	2,990	2,307	1,683	1,246	853	512	312		
9,328	8,198	7,804	6,832	5,180	4,033	3,485	2,351	1,370	717	
4,651	4,079	3,868	3,311	2,234	1,736	1,479	967	521	234	
4,677	4,119	3,936	3,521	2,946	2,297	2,006	1,384	849	483	
624,041	473,354	414,754	319,848	269,745	188,166	146,563	76,223	39,238	25,217	
317,324	234,297	207,698	157,209	132,581	94,581	72,881	38,953	18,235	10,763	
306,717	239,057	207,056	162,639	137,164	93,585	73,632	37,270	21,003	14,454	
2,086	1,668	1,393	1,099	909	721	922				
1,050	828	686	530	443	350	448				
1,036	840	707	569	464	371	474				
141	122	101	84	65	51	39	22	10	4	—
71	62	52	43	33	24	18	9	4	1	—
70	60	49	41	32	27	21	13	6	3	—
2,255	1,791	1,607	1,314	1,027	705	492	455			—
1,129	870	771	628	483	324	220	190			—
1,126	921	863	686	544	381	272	265			—

1-5. Urban and Total Population

(in thousands)

	1950			1960			1970			1980		
	Total	Urban	Rate ^{a)} Urban	Total	Urban	Rate ^{a)} Urban	Total	Urban	Rate ^{a)} Urban	Total	Urban	Rate ^{a)} Urban
INDONESIA ⁽¹⁾	80,019	9,929	12.4	97,085 ^{b)}	14,358 ^{b)}	14.8 ^{b)}	119,143	20,733	17.4	146,776	32,846	22.4
JAPAN ⁽²⁾	84,115	31,366	37.3	94,300	59,678	63.3	104,666	75,429	72.1	117,060	89,187	76.2
MALAYSIA ⁽³⁾ Peninsular Malaysia Sabah Sarawak	6,250	1,272	20.4	8,170	2,060	25.2	10,439	2,787	26.7	13,745	4,687	34.1
							8,810	2,530	28.7	11,426	4,250	37.2
							653	107	16.5	1,011	208	20.6
							975	149	15.4	1,307	230	17.6
PHILIPPINES ⁽⁴⁾	20,859	5,660	27.1	28,098	8,513	30.3	37,540	12,366	32.9	48,098	17,944	37.3
SINGAPORE ⁽⁵⁾	1,022	815	79.8	1,446 ^{b)}	1,132 ^{b)}	78.0 ^{b)}	2,075	1,562	75.0	2,414	2,414	100.0
THAILAND	20,969	2,197	10.5	⁽⁶⁾ 26,258	3,274	12.5	⁽⁷⁾ 34,397	4,553	13.2	⁽⁸⁾ 44,824	7,633	17.0

Source: Demographic Indicators of Countries: Estimates & Projections as assessed in 1980, UN.

(1) Population of Indonesia, Central Bureau of Statistic

(2) 1980 Population Census of Japan, Statistical Bureau, Prime Minister's Office

(3) General Report of the Population Census 1980 Vol. 1, Dept. of Statistics, Malaysia

(4) Special Report No. 3, National Census & Statistics Office, Manila

(5) Report on the Census of Population 1970, Singapore, Vol. 1, Dept. of Statistics

(6) 1960 Population Census, Central Statistical Office, National Economic Development Board

(7) 1970 Population & Housing Census, National Statistical Office, Office of the Prime Minister

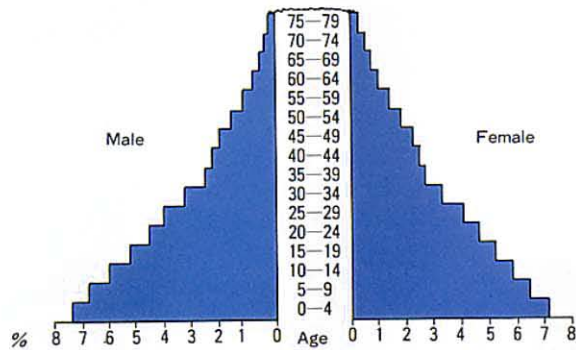
(8) 1980 Population & Housing Census, National Statistical Office, Office of the Prime Minister

Note:

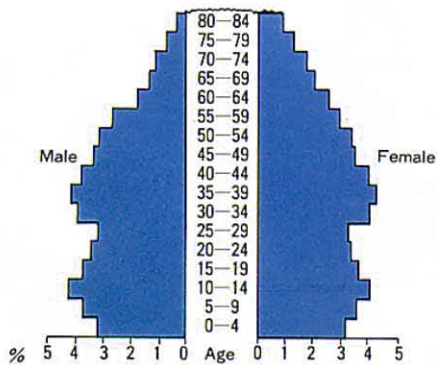
a) Urban Population / Total Population x 100
(round off figures to the second decimal place)

b) Data for 1957

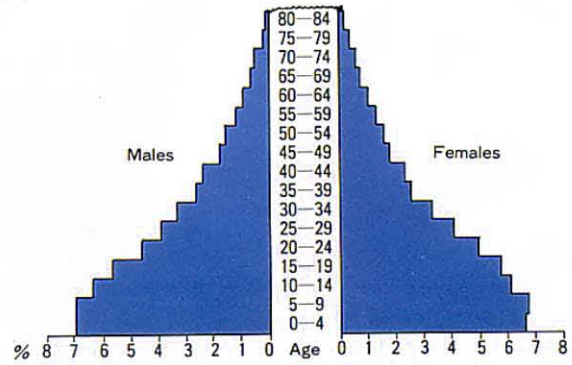
Fig. 1 Population Pyramid (1)



INDONESIA 1984

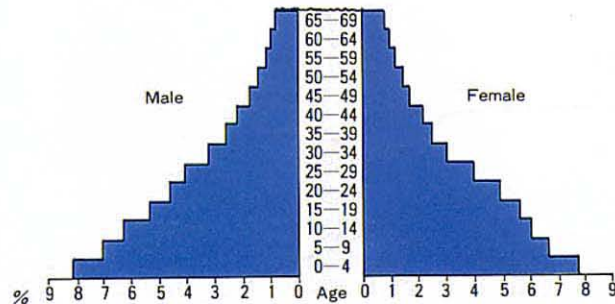


JAPAN 1984

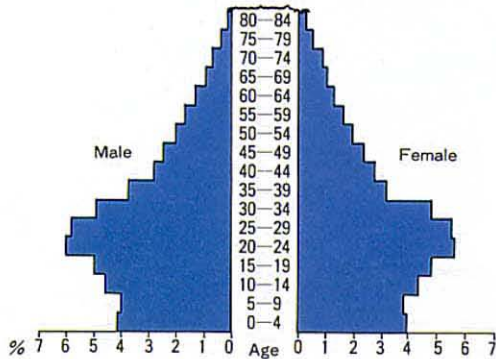


MALAYSIA 1980

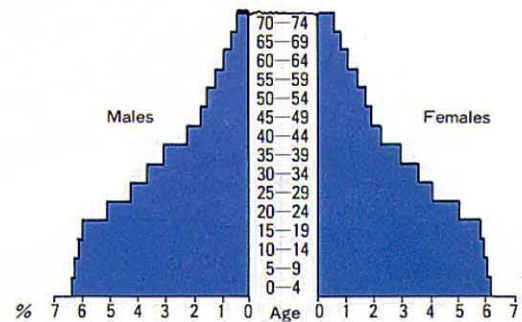
Fig. 1 Population Pyramid (2)



PHILIPPINES 1980



SINGAPORE 1984



THAILAND 1984

Fig. 2 Annual Change of Crude Death Rates (Per 1000)

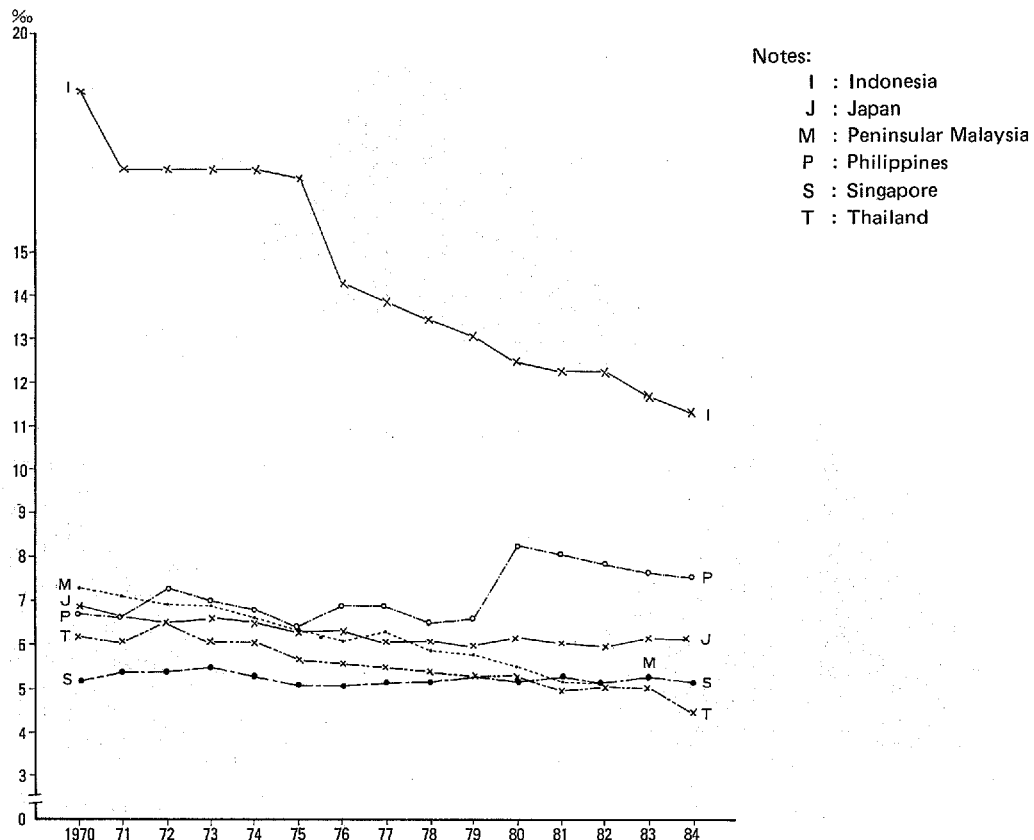
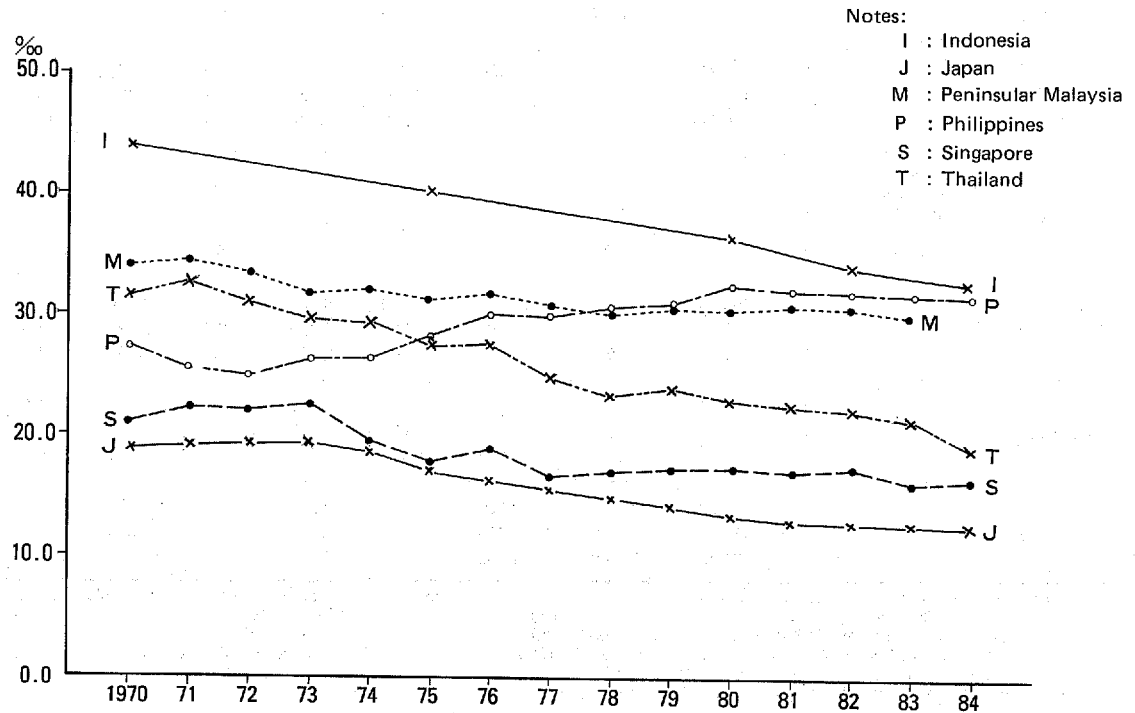


Fig. 3 Annual Change of Crude Live-birth Rate (Per 1000)



2-1. Deaths and Death Rates for All Causes (age groups)

	Sex	All Ages		0		1-4		5-14		15-24	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
INDONESIA ⁽¹⁾	T	1207.3 ^{a)}		1049.9		196.2		235.9		255.3	
JAPAN ⁽²⁾	T	740,247	619.3	8,920	600.3	3,158	51.9	3,535	18.9	8,838	52.8
	M	402,220	684.1	5,075	666.0	1,754	24.1	2,228	23.2	6,456	75.5
	F	338,027	556.6	3,845	531.8	1,404	47.4	1,307	14.3	2,382	29.1
MALAYSIA ⁽³⁾	Peninsular ^{b)} Malaysia	T	66,032	535	9,805	585		1,967	66	3,114	119
	Sabah ^{c)}	T	5,040	444	1,500	774		238	80	390	168
	Sarawak ^{c)}	T	5,257	373	760	417		122	32	208	70
PHILIPPINES ^(4) d)	T	298,006	6.2	65,700	40.2	36,028	5.9	14,694	1.2	16,076	1.6
	M	176,545	7.3	39,182	47.1	19,745	6.3	8,624	1.3	10,538	2.1
	F	121,461	5.0	26,518	32.8	16,283	5.5	6,068	1.0	5,538	1.1
SINGAPORE ⁽⁵⁾	T	13,320	526.7	382	952.6	113	69.9	133	31.5	440	81.5
	M	7,648	593.5	216	1038.5	57	67.6	72	32.9	310	111.5
	F	5,672	457.3	166	860.1	56	72.4	61	29.9	130	49.6
THAILAND ⁽⁶⁾	T	225,282	447.0	10,820	—	9,223	—	9,751	78.9	16,103	144.9
	M	130,844	516.5	6,078	—	5,092	—	5,504	87.3	10,692	189.6
	F	94,433	376.8	4,742	—	4,131	—	4,247	70.1	5,411	98.8

Source: (1) House Hold Health Survey in Indonesia 1980
(2) Vital Statistics Japan, Ministry of Health and Welfare 1984
(3) Vital Statistics Pen. M'SIA 1982, Sabah and Sarawak 1980
(4) Philippine Health Statistics, Ministry of Health, Manila 1980
(5) Report on Registration of Births and Deaths, 1983
(6) Health Statistics Division, Ministry of Public Health, 1983

Note: a) Rates were Calculated by Sampling Survey
b) For year 1982
c) For year 1980
d) Rate: per 1,000 population

(Rate: Per 100,000 Population)

25-34		35-44		45-54		55-64		65-74		75 & over		Unknown	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
273.2		682		1,503.3		4,427							
12,450	71.9	27,675	143.1	59,606	374.1	94,273	788.4	161,839	2,161.6	359,564	8,123.9	389	
8,034	92.2	17,916	185.1	40,440	511.0	59,853	1,085.1	93,789	2,932.7	166,359	9,700.2	316	
4,416	51.3	9,759	101.0	19,166	238.9	34,420	534.5	68,050	1,587.0	193,205	7,132.0	73	
2,808	147	3,250	263	5,921	673	9,939	1,752	14,186	4,490	14,850	10,440	192	
401	224	334	335	485	722	583	1,466	586	3,254	495	7,989	28	
233	115	303	221	507	534	3,027	2,578	—	—	—	—	97	
17,924	2.6	18,965	4.2	22,216	7.2	26,466	13.2	79,908			48.6		
11,976	3.5	12,440	5.4	14,572	9.6	16,635	17.1	42,811			53.6		
5,948	1.7	6,525	2.9	7,644	4.9	9,831	9.5	37,097			43.9		
567	106.2	622	189.4	1,258	561.4	2,285	1,532.5	3,543	3,897.7	3,937	10,360.5	40	
375	137.3	397	238.6	838	737.7	1,497	1,967.1	2,114	4,962.4	1,739	11,671.1	33	
192	73.6	225	138.9	420	380.1	788	1,079.5	1,429	2,958.6	2,198	9,515.2	7	
16,705	211.2	17,385	329.1	26,500	779.9	31,669	1,352.8	35,933	3,001.9	45,622	10,026.8	5,571	
11,557	288.6	11,262	422.4	16,634	1,013.6	19,085	1,717.8	20,405	3,750.9	21,350	11,236.8	3,190	
5,148	131.9	6,123	234.0	9,866	561.5	12,584	1,023.1	15,528	2,377.9	24,272	9,159.2	2,381	

3-1. Ten Leading Causes of Death

	Year	1	2	3	4
INDONESIA ⁽¹⁾	1980	Lower Respiratory Tract infection	Diarrhoea	Cardiovascular Disorders	Tuberculosis
JAPAN ⁽²⁾	1984	Malignant Neoplasms	Cerebrovascular Diseases	Heart Diseases	Pneumonia and Bronchitis
Peninsular ^(3) a) Malaysia	1984	Heart Diseases	Accidents	Diseases of Early Infancy	Cerebrovascular Diseases
MALAYSIA Sabah ^(4) a)	1984	Diseases of the Circulatory System	Diseases of the Respiratory System	Certain Conditions Originating in the Perinatal Period	Neoplasms
Sarawak ^(5) a)	1983	Other Penumonias	Cerebrovascular Diseases	Other Causes of Perinatal Morbidity and Mortality	Other forms of Heart Diseases
PHILIPPINES ⁽⁶⁾	1980	Pneumonia	Diseases of the Heart	Tuberculosis all forms	Diseases of the Vascular System
SINGAPORE ⁽⁷⁾	1984	Diseases of the Circulatory System	Neoplasms	Diseases of the Respiratory System	Accidents, Poisonings and Violence
THAILAND ⁽⁸⁾	1984	Diseases of the Heart	Accidents, Poisonings and Violence	Neoplasms	Diseases of the Digestive System

Source: (1) House Hold Health Survey in Indonesia 1980
 (2) Vital Statistics Japan, Ministry of Health and Welfare 1984
 (3) Information and Documentation System Unit, Planning and Development Division, Ministry of Health Malaysia 1984
 (4) Medical Dept. Sabah 1984
 (5) Medical Dept. Sarawak Annual Report 1983
 (6) Philippine Health Statistics, Ministry of Health, Manila 1980
 (7) Yearbook of Statistics, Singapore 1984/85
 (8) Health Statistics Division, Office of the Permanent Secretary, Ministry of Public Health

Note: a) Government Hospital Deaths only
 The "Symptoms and Ill-Defined Conditions" has been excluded from the "Ten Leading Causes of Death." Those who are interested in the figures of death, the cause of which being classified as symptoms and ill-defined conditions, please see the "Number of Deaths and Death Rates by Causes."

5	6	7	8	9	10
Tetanus	Diseases of the Nervous System	Liver Disorders	Injuries and Accidents	Neoplasms	Typhoid
Accidents, Poisoning and Violence	Suicide	Cirrhosis of Liver	Hypertensive Diseases	Renal Diseases	Diabetes Mellitus
Neoplasms	Pneumonia	Tuberculosis	Diseases of Liver	Gastro-enteritis	Complications of Pregnancy
Accidents	Intestinal Infectious Diseases	Diseases of the Digestive System	Signs, Symptoms and Ill-defined Conditions	Septicaemia and Pyemia	Tuberculosis
Other Disease of Digestive System	Tuberculosis of Respiratory System	Enteritis and other Diarrhoeal Diseases	Other Diseases of Circulatory System	Ischaemic Heart Diseases	Symptom and other Ill-defined Conditions
Malignant Neoplasms	Diarrhoea	Accidents	Avitaminosis and Other Nutritional Deficiency	Measles	Nephritis, Nephrotic Syndrome and Nephrosis
Endocrine, Nutritional and Metabolic Diseases	Diseases of Genito-urinary System	Infective and Parasitic Diseases	Diseases of the Digestive System	Congenital Anomalies	Certain Causes of Perinatal Mortality
Diseases of the Respiratory System	Cerebrovascular Diseases	Tuberculosis	Diseases of the Nervous System	Diseases of Genito-urinary System	Certain Causes of Perinatal Mortality

4-1. Deaths and Death Rates by Cause (ICD-9) (1)

	Year	Sex	All Causes		01-07		011		010, 019, 012-016		020-021	
					Infectious and Parasitic Diseases		Typhoid Fever		Other Intestinal Infectious Diseases		Tuberculosis of Respiratory System	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
INDONESIA												
JAPAN ⁽¹⁾	1984	T	740,247	619.3	11,581	9.7	—	—	1,146	1.0	4,703	3.9
		M	402,220	684.1	7,183	12.2	—	—	498	0.8	3,562	6.1
		F	338,027	556.6	4,398	7.2	—	—	648	1.1	1,141	1.9
MALAYSIA	1984	T	17,707	140.05	1,525	12.06	6	0.05	4	0.03	453	3.58
	1982	T	1,856	170.36	298	27.35	1	0.09	16	1.47	92	8.44
	1981	T	1,441	102.63	192	13.67	4	0.28	84	5.98	65	4.63
PHILIPPINES ⁽⁵⁾	1980	T	297,783	616.3	59,158	122.4	607	1.3	17	0.04	27,707	57.3
		M	176,545	728.6	35,389	146.0	371	1.5	9	0.04	16,950	69.9
		F	121,238	503.4	23,769	98.7	236	1.0	8	0.03	10,757	44.7
SINGAPORE ⁽⁶⁾	1984	T	13,161	520.4	390	15.4	—	—	39	1.5	152	6.0
		M	7,667	594.9	239	18.5	—	—	24	1.9	115	8.9
		F	5,494	442.9	151	12.2	—	—	15	1.2	37	3.0
THAILAND ⁽⁷⁾	1984	T	225,282	447.0	15,833	31.4	121	0.2	2,284	4.5	5,123	10.2
		M	130,849	516.5	9,523	37.6	75	0.3	1,286	5.1	3,449	13.6
		F	94,433	376.8	6,310	25.2	46	0.2	998	4.0	1,674	6.7

Source: (1) Vital Statistics, Japan, 1984
 (2) Information and Documentation System Unit, Planning and Development Division, Ministry of Health Malaysia 1984
 (3) Medical and Health Dept. Sabah. Annual Report 1982.

(4) Medical and Health Dept. Sawarak, Annual Report 1981.
 (5) Philippine Health Statistics, Ministry of Health, Manila, 1980.
 (6) Department of Statistics, Singapore.
 (7) Ministry of Public Health, Thailand (official data.)
 Note: a) Government Hospital Deaths only

(Rate: Per 100,000 Population)

022-025, 029		034		036		037		038		030-033, 035, 039		042		040, 041, 043-049	
Tuberculosis, Other Forms		Whooping Cough		Meningococcal Infection		Tetanus		Septicaemia		Other Bacterial Diseases		Measles		Other Viral Diseases	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
247	0.2	5	0.0	9	0.0	31	0.0	2,330	1.9	110	0.1	90	0.1	1,565	1.3
123	0.2	1	0.0	6	0.0	21	0.0	1,133	1.9	71	0.1	48	0.1	853	1.5
124	0.2	4	0.0	3	0.0	10	0.0	1,197	2.0	39	0.1	42	0.1	712	1.2
12	0.09	—	—	5	0.04	20	0.16	998	7.89	2	0.02	—	—	16	0.13
11	1.01	—	—	5	0.46	23	2.11	75	6.89	7	0.64	5	0.46	14	1.29
5	0.36	—	—	2	0.14	2	0.14	4	0.28	4	0.28	3	0.21	3	0.21
1,091	2.2	98	0.2	59	0.1	1,004	2.1	2,256	4.7	287	0.5	5,191	10.7	461	1.0
627	2.6	53	0.2	35	0.1	686	2.8	1,257	5.2	159	0.6	2,798	11.5	255	1.1
464	1.9	45	0.2	24	0.1	318	1.3	999	4.1	128	0.5	2,393	9.9	206	0.8
11	0.4	—	—	1	0.0	2	0.1	115	4.5	3	0.1	9	0.4	42	1.7
5	0.4	—	—	1	0.1	2	0.2	60	4.7	1	0.1	3	0.2	17	1.3
6	0.5	—	—	—	—	—	—	55	4.4	2	0.2	6	0.5	25	2.0
45	0.1	8	0.0	2	0.0	367	0.7	2,719	5.4	223	0.4	98	0.2	1,681	3.3
27	0.1	3	0.0	1	0.0	227	0.9	1,460	5.8	130	0.5	55	0.2	866	3.4
18	0.1	5	0.0	1	0.0	140	0.6	1,259	5.0	93	0.4	43	0.2	815	3.3

4-1. Deaths and Death Rates by Cause (ICD-9) (2)

	Year	Sex	052		050, 051, 053, 054, 059		06		07		08-14	
			Malaria		Other Arthropodborne Diseases		Venereal Diseases		Other Infectious and Parasitic Diseases		Malignant Neoplasms	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
INDONESIA												
JAPAN	1984	T	1	0.0	3	0.0	86	0.1	1,254	1.0	182,280	152.5
		M	1	0.0	1	0.0	61	0.1	804	1.4	107,175	182.3
		F	—	—	2	0.0	25	0.0	450	0.7	75,105	123.7
MALAYSIA	1984	T	9	0.07	—	—	—	—	—	—	1,370	10.84
	1982	T	43	3.95	—	—	—	—	4	0.37	102	9.36
	1981	T	—	—	—	—	3	0.21	1	0.07	138	9.83
PHILIPPINES	1980	T	1,091	2.2	19	0.04			465	1.0	16,019	33.2
		M	696	2.9	7	0.03			259	1.07	8,775	36.2
		F	395	1.6	12	0.05			206	0.8	7,244	30.1
SINGAPORE	1984	T	—	—	—	—	5	0.2	11	0.4	2,776	109.8
		M	—	—	—	—	4	0.3	7	0.5	1,700	131.9
		F	—	—	—	—	1	0.1	4	0.3	1,076	86.7
THAILAND	1984	T	2,221	4.4	—	—	18	0.0	925	1.8	13,159	26.1
		M	1,384	5.5	—	—	10	0.0	550	2.2	7,446	29.4
		F	837	3.3	—	—	6	0.0	375	1.5	5,713	22.8

(Rate: Per 100,000 Population)

08		090		091		093		094		095		100		101	
Malignant Neoplasm of Lip, Oral Cavity and Pharynx		Malignant Neoplasm of Oesophagus		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 Larynx		Malignant Neoplasm of Trachea, Bronchus and Lung	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
2,048	1.7	5,958	50	49,785	41.7	10,546	8.8	7,820	6.5	12,283	10.3	872	0.7	27,356	22.9
1,450	2.5	4,791	8.1	30,876	52.5	5,196	8.8	4,477	7.6	9,156	15.6	785	1.3	19,877	33.8
598	1.0	1,167	1.9	18,909	31.1	5,350	8.8	3,343	5.5	3,127	5.1	87	0.1	7,479	12.3
111	0.88	62	0.49	132	1.04	71	0.56	50	0.40	61	0.48	23	0.18	286	2.26
19	1.74	—	—	10	0.92	3	0.27	4	0.37	—	—	2	0.18	20	1.84
9	0.64	7	0.50	29	2.06	8	0.57	7	0.50	—	—	7	0.50	24	1.71
1,084	2.2	165	0.3	1,286	2.7	330	0.7	380	0.8			107	0.2	1,782	3.7
635	2.6	118	0.5	757	3.1	171	0.7	224	0.9			79	0.3	1,283	5.3
449	1.9	47	0.2	529	2.2	159	0.7	156	0.6			28	0.1	499	2.1
233	9.2	115	4.5	302	11.9	171	6.8	115	4.5	65	2.6	42	1.7	663	26.2
175	13.6	84	6.5	184	14.3	84	6.5	59	4.6	53	4.1	37	2.9	482	37.4
58	4.7	31	2.5	118	9.5	87	7.0	56	4.5	12	1.0	5	0.4	181	14.6
316	0.6	166	0.3	294	0.6	273	0.7	23	0.0	—	—	49	0.1	1,098	2.2
213	0.8	119	0.5	173	0.7	207	0.8	15	0.0	—	—	47	0.2	770	3.0
103	0.4	47	0.2	121	0.5	166	0.7	8	0.0	—	—	2	0.0	328	1.3

4-1. Deaths and Death Rates by Cause (ICD-9) (3)

	Year	Sex	113		120		122		124		126	
			Malignant Neoplasm of Female Breast		Malignant Neoplasm of Cervix Uteri		Malignant Neoplasm of Uterus, Other and Unspec.		Malignant Neoplasm of Prostate		Malignant Neoplasm of Bladder	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
INDONESIA												
JAPAN	1984	T	4,825	4.0	1,755	1.5	3,181	2.6	2,315	1.9	2,441	2.0
		M	• •	• •	• •	• •	• •	• •	2,315	3.9	1,669	2.8
		F	4,825	7.9	1,755	2.9	3,181	5.2	• •	• •	772	1.3
MALAYSIA	1984	T	62	0.49	56	0.44	11	0.09	16	0.13	33	0.26
	1982	T	3	0.27	5	0.46	2	0.18	3	0.27	—	—
	1981	T	2	0.14	4	0.28	1	0.07	2	0.14	—	—
PHILIPPINES	1980	T	902	1.9	190	0.4	704	1.5	254	0.5		
		M	• •	• •	• •	• •	• •	• •	254	1.0		
		F	902	3.7	190	0.8	704	2.9	• •	• •		
SINGAPORE	1984	T	119	4.7	92	3.6	16	0.6	32	1.3	42	1.7
		M	—	—	—	—	—	—	32	2.5	27	2.1
		F	119	9.6	92	7.4	16	1.3	• •	• •	15	1.2
THAILAND	1984	T	162	0.3	112	0.2	347	0.7	19	0.0	59	0.1
		M	• •	• •	• •	• •	• •	• •	19	0.1	39	0.2
		F	162	0.6	112	0.4	347	1.4	• •	• •	20	0.1

(Rate: Per 100,000 Population)

Rest		141		140, 149		15-17		181		180, 182, 183, 189		191		192	
Malignant Neoplasm of Other Sites		Leukaemia		Other Malignant Neoplasms of Lymphatic and Haemopoietic		Benign Neoplasm, Other and Unspecified Neoplasm		Diabetes Mellitus		Other Endocrine and Metabolic Diseases		Nutritional Marasmus		Other Protein-Calorie Malnutrition	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
40,114	33.6	5,212	4.4	5,769	4.8	6,387	5.3	9,470	7.9	1,649	1.4	—	—	260	0.2
20,303	34.5	2,943	5.0	3,337	5.7	2,670	4.5	4,443	7.6	778	1.3	—	—	148	0.3
19,811	32.6	2,269	3.7	2,432	4.0	3,717	6.1	5,027	8.3	871	1.4	—	—	112	0.2
101	0.80	148	1.17	205	1.62	28	0.22	262	2.07	1,783	14.10	—	—	—	—
28	2.57	12	1.10	1	0.09	2	0.18	14	1.29	7	0.64	—	—	—	—
15	1.07	10	0.71	10	0.71	7	0.50	29	2.06	5	0.36	—	—	—	—
5,818	12.0	1,285	2.7	362	0.7	544	1.1	1,663	3.4	1,628	3.4	418	0.9	26	0.05
3,750	15.5	689	2.8	220	0.9	263	1.1	821	3.4	910	3.6	227	0.9	13	0.05
2,068	8.6	597	2.5	142	0.6	281	1.2	842	3.5	718	3.0	191	0.8	13	0.05
613	24.2	77	3.0	79	3.1	41	1.6	469	18.5	26	1.0	—	—	15	0.6
384	29.8	49	3.8	50	3.9	19	1.5	176	13.7	12	0.9	—	—	2	0.2
229	18.5	28	2.3	29	2.3	22	1.8	293	23.6	14	1.1	—	—	13	1.0
9,613	19.1	349	0.7	179	0.4	—	—	1,571	3.1	120	0.2	97	0.2	—	—
5,527	21.8	197	0.8	120	0.5	—	—	738	2.9	46	0.2	34	0.1	—	—
4,086	16.3	152	0.6	59	0.2	—	—	833	3.3	74	0.3	63	0.3	—	—

4-1. Deaths and Death Rates by Cause (ICD-9) (4)

	Year	Sex	190, 193		200		209		21		220	
			Other Nutritional Deficiencies		Anaemias		Other Diseases of Blood and Blood-forming Organs		Mental Disorders		Meningitis	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
INDONESIA												
JAPAN	1984	T	220	0.2	1,477	1.2	1,223	1.0	3,145	2.6	559	0.5
		M	106	0.2	695	1.2	580	1.0	1,531	2.6	304	0.5
		F	114	0.2	782	1.3	643	1.1	1,614	2.7	255	0.4
MALAYSIA	1984	T	—	—	54	0.43	49	0.39	25	0.20	160	1.27
	1982	T	13	1.19	6	0.55	—	—	4	0.37	9	0.83
	1981	T	6	0.43	6	0.43	12	0.85	1	0.07	24	1.71
PHILIPPINES	1980	T	6,579	13.6	1,684	3.5	360	0.7	391	0.8	2,643	5.5
		M	3,566	14.7	909	3.6	184	0.8	280	1.2	1,491	6.2
		F		12.5	775	3.2	176	0.7	111	0.5	1,152	4.8
SINGAPORE	1984	T	2	0.1	16	0.6	12	0.5	6	0.2	22	0.9
		M	2	0.2	7	0.5	4	0.3	2	0.2	14	1.1
		F	—	—	9	0.7	8	0.6	4	0.3	8	0.6
THAILAND	1984	T	333	0.7	151	0.3	122	0.2	386	0.8	483	1.0
		M	193	0.8	74	0.3	71	0.3	330	1.3	299	1.2
		F	140	0.6	77	0.3	51	0.2	56	0.2	184	0.7

(Rate: Per 100,000 Population)

223		225		221, 222, 224, 229, 23, 24		25-30		250		251		26		270	
Multiple Sclerosis		Epilepsy		Other Diseases of Nervous System and Sense Organs		Diseases of the Circulatory System		Acute Rheumatic Fever		Chronic Rheumatic Heart Disease		Hypertensive Disease		Acute Myocardial Infarction	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
61	0.1	469	0.4	5,165	4.3	297,367	248.8	57	0.0	1,774	1.5	13,073	10.9	30,198	25.3
29	0.0	265	0.5	2,893	4.9	147,147	250.3	19	0.0	533	0.9	5,163	8.8	17,595	29.9
32	0.1	204	0.3	2,272	3.7	150,220	247.4	38	0.1	1,241	2.0	7,910	13.0	12,603	20.8
—	—	20	0.16	390	3.08	3,643	28.81	67	0.53	51	0.40	296	2.34	586	4.63
—	—	1	0.09	63	5.78	217	19.92	1	0.09	1	0.09	55	5.05	—	—
—	—	3	0.21	13	0.93	277	19.73	2	0.14	17	1.21	49	3.49	22	1.57
		738	1.5	1,670	3.5	51,457	106.5	27	0.06	2,243	4.6			6,253	12.9
		445	1.8	997	4.1	29,275	120.8	15	0.1	1,092	4.5			4,204	17.3
		293	1.2	673	2.8	22,182	92.1	12	0.05	1,151	4.8			2,049	8.5
—	—	9	0.4	66	2.6	4,637	183.3	1	0.0	82	3.2	239	9.5	1,905	75.3
—	—	3	0.2	42	3.3	2,577	200.0	1	0.1	30	2.3	116	9.0	1,227	95.2
—	—	6	0.5	24	1.9	2,060	166.0	—	—	52	4.2	123	9.9	678	54.7
—	—	208	0.4	3,905	7.8	25,872	51.3	5	0.0	177	0.4	1,621	3.2	580	1.2
—	—	130	0.5	2,335	9.2	15,776	62.3	3	0.0	90	0.4	960	3.8	338	1.3
—	—	78	0.3	1,570	6.3	10,096	40.3	2	0.0	87	0.4	661	2.6	242	1.0

4-1. Deaths and Death Rates by Cause (ICD-9) (5)

	Year	Sex	279		28		29		300		301, 302	
			Other Ischaemic Heart Diseases		Diseases of Pulmonary Circulation and Other Forms of Heart Disease		Cerebrovascular Disease		Atherosclerosis		Embolism, Thrombosis and Other Dis. of Arteries, Arterioles & Capillaries	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
INDONESIA	1980	T M F							4.14			
JAPAN	1984	T M F	19,015 9,242 9,773	15.9 15.7 16.1	85,175 42,212 42,963	71.3 71.8 70.7	140,093 68,262 71,831	117.2 116.1 118.3	3,829 1,583 2,246	3.2 2.7 3.7	3,410 2,099 1,311	2.9 3.6 2.2
MALAYSIA	1984	T	—	—	—	—	1,571	12.43	—	—	22	0.17
	1982	T	—	—	19	1.74	36	3.30	13	1.19	2	0.18
	1981	T	—	—	87	6.20	90	6.41	4	0.28	10	0.71
PHILIPPINES	1980	T	3,818	7.9	15,950	33.0	9,879	20.4	1,710	3.5	231	0.5
		M	2,008	8.3	8,494	35.1	5,843	24.1	822	3.4	126	0.5
		F	1,810	7.5	7,456	31.0	4,032	16.7	888	3.7	105	0.4
SINGAPORE	1984	T	549	21.7	381	15.1	1,413	55.9	9	0.4	43	1.7
		M	314	24.4	188	14.6	660	51.2	4	0.3	28	2.2
		F	235	18.9	193	15.6	753	60.7	5	0.4	15	1.2
THAILAND	1984	T	263	0.5	16,774	33.3	5,536	11.0	—	—	64	0.1
		M	169	0.7	10,265	40.5	3,404	13.4	—	—	34	0.1
		F	94	0.4	6,509	26.0	2,132	8.5	—	—	30	0.1

(Rate: Per 100,000 Population)

303		304, 305, 309		310-312		320		321		322		323		313-315, 319 324-327, 329	
Phlebitis, Thrombophlebitis, Venous Embolism and Thrombosis		Other Diseases of the Circulatory System		Acute Upper Respiratory Infection		Acute Bronchitis and Bronchiolitis		Pneumonia		Influenza		Bronchitis, Chronic and Unspecified, Emphysema and Asthma		Other Diseases of Respiratory System	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
								2.34				0.30			
81	0.1	662	0.6	1,276	1.1	1,737	1.5	38,895	32.5	191	0.2	13,480	11.3	8,922	7.5
42	0.1	397	0.7	528	0.9	884	1.5	22,327	38.0	85	0.1	8,614	14.7	5,762	9.8
39	0.1	265	0.4	748	1.2	853	1.4	16,568	27.3	106	0.2	4,866	8.0	3,160	5.2
68	0.54	126	1.00	—	—	26	0.21	518	4.10			24	0.19	—	—
19	1.74	19	1.74	18	1.65	11	1.01	239	21.94			16	1.47	18	1.65
6	0.43	54	3.85	42	3.00	15	1.07	131	9.33			15	1.07	47	3.35
322	0.7	936	1.9	178	0.4	2,756	5.7	45,209	93.6	1,913	4.0			3,904	8.1
184	0.8	606	2.5	95	0.4	1,594	6.6	25,388	104.8	997	4.1			2,084	8.6
138	0.6	330	1.4	83	0.3	1,162	4.8	19,821	82.3	916	3.8			1,820	7.4
7	0.3	8	0.3	2	0.1	1	0.0	1,204	47.6	6	0.2	153	6.0	730	28.9
4	0.3	5	0.4	2	0.2	1	0.1	613	47.6	3	0.2	96	7.4	555	43.1
3	0.2	3	0.2	—	—	—	—	591	47.6	3	0.2	57	4.6	175	14.1
5	0.0	847	1.7	471	2.5	2	0.0	3,757	7.5	230	0.5	717	1.4	2,106	4.2
2	0.0	511	2.0	264	2.9	2	0.0	2,273	9.0	127	0.5	474	1.9	1,309	5.2
3	0.0	336	1.3	207	2.1	—	—	1,484	5.9	103	0.4	243	1.0	797	3.2

4-1. Deaths and Death Rates by Cause (ICD-9) (6)

	Year	Sex	341		342		343, 344		347		33, 340, 345, 346, 348, 349	
			Ulcer of Stomach and Duodenum		Appendicitis		Hernia of Abdominal Cavity and Intestinal Obstruction		Chronic Liver Disease and Cirrhosis		Other Diseases of the Digestive System	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
INDONESIA	1980	T M F		0.18		0.07		0.12				
JAPAN	1984	T M F	4,606	3.9	141	0.1	2,716	2.3	16,991	14.2	13,485	11.3
			2,520	4.3	79	0.1	1,259	2.1	12,044	20.5	6,802	11.6
			2,086	3.4	62	0.1	1,457	2.4	4,947	8.1	6,683	11.0
MALAYSIA	1984	T	101	0.80	6	0.05	11	0.09	175	1.38	75	0.59
Peninsular Malaysia	1982	T	17	1.56	2	0.18	10	0.92	27	2.48	10	0.92
Sabah	1981	T	4	0.28	3	0.21	11	0.78	17	1.21	33	2.35
Sarawak												
PHILIPPINES	1980	T M F	4,627	9.6	356	0.7	144	0.3	2,049	4.2	4,453	9.2
			3,242	13.4	226	0.9	126	0.5	1,647	6.8	3,051	12.6
			1,385	5.8	130	0.5	18	0.1	402	1.7	1,402	5.8
SINGAPORE	1984	T M F	71	2.8	5	0.2	15	0.6	135	5.3	143	5.7
			44	3.4	3	0.2	7	0.5	97	7.5	88	6.8
			27	2.2	2	0.2	8	0.6	38	3.1	55	4.4
THAILAND	1984	T M F	726	1.4	96	0.2	182	0.4	4,410	8.8	4,733	9.4
			487	1.9	54	0.2	120	0.5	3,183	12.6	3,014	11.9
			239	1.0	42	0.2	62	0.2	1,227	4.9	1,719	6.9

(Rate: Per 100,000 Population)

350		351		360		37, 352, 353, 359 361-363, 369		38		390		391		394	
Nephritis, Nephrotic Syndrome and Nephrosis		Infections of Kidney		Hyperplasia of Prostate		Other Diseases of the Genitourinary System		Abortion		Haemorrhage of Pregnancy and Childbirth		Toxaemia of Pregnancy		Complications of the Puerperium	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
	1.04				0.05				0.11				0.53		
12,688	10.6	1,129	0.9	397	0.3	1,235	1.0	12	0.0	74	0.1	48	0.0	43	0.0
6,325	10.8	357	0.6	397	0.7	484	0.8	• •	• •	• •	• •	• •	• •	• •	• •
6,363	10.5	772	1.3	• •	• •	751	1.2	12	0.0	74	0.1	48	0.1	43	0.1
191	1.51	7	0.06	3	0.02	—	—	2	0.02	2	0.02	4	0.03	47	0.37
36	3.30	9	0.83	1	0.09	3	0.27	2	0.18	1	0.09	—	—	5	0.46
19	1.35	5	0.36	2	0.14	17	1.21	1	0.07	5	0.35	1	0.07	16	1.14
4,478	9.3	537	1.1	68	0.1	666	1.3	223	0.5					364	1.5
2,662	11.0	318	1.3	68	0.3	342	1.4	• •	• •	• •	• •			• •	• •
1,816	7.5	219	0.9	• •	• •	321	1.3	223	0.9	140	0.4			364	1.5
319	12.6	14	0.6			13	0.5	2	0.1	1	0.0			1	0.0
163	12.6	4	0.3	—	—	6	0.5	—	—	• •	• •	• •	• •	• •	• •
156	12.6	10	0.8	• •	• •	7	0.6	2	0.2	1	0.1	—	—	1	0.1
2,840	5.6	10	0.0	3	0.0	532	1.0	44	0.1	106	0.2	2	0.0	5	0.0
1,616	6.4	5	0.0	3	0.0	287	1.1	• •	• •	• •	• •	• •	• •	• •	• •
1,224	4.9	5	0.0	• •	• •	245	0.8	44	0.2	106	0.4	2	0.0	5	0.0

4-1. Deaths and Death Rates by Cause (ICD-9) (7)

	Year	Sex	392, 393, 399		40, 41		42		43		440	
			Other Direct Obstetric Causes		All Other Indirect Obstetric Causes		Diseases of Skin and Subcutaneous Tissue		Diseases of the Musculoskeletal System and Connective Tissue		Spina Bifida and Hydrocephalus	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
INDONESIA												
JAPAN	1984	T	27	0.0	24	0.0	754	0.6	3,665	3.1	160	0.1
		M	• •	• •	• •	• •	256	0.4	845	1.4	75	0.1
		F	27	0.0	24	0.0	498	0.8	2,820	4.6	85	0.1
MALAYSIA	1984	T	—	—	—	—	18	0.14	11	0.09	10	0.08
	1982	T	—	—	5	0.46	—	—	—	—	—	—
	1981	T	1	0.07	1	0.07	2	0.14	—	—	—	—
PHILIPPINES	1980	T					849	1.8	579	1.2		
		M					503	2.1	337	1.4		
		F					346	1.4	242	1.0		
SINGAPORE	1984	T	1	0.0			52	2.1	34	1.3	10	0.4
		M	• •	• •	• •	• •	22	1.7	9	0.7	5	0.4
		F	1	0.1	—	—	30	2.4	25	2.0	5	0.4
THAILAND	1984	T	296	0.6	1	0.0	98	0.2	70	0.1	2	0.0
		M	• •	• •	• •	• •	53	0.2	31	0.1	2	0.0
		F	296	1.2	1	0.0	45	0.2	39	0.2	—	0.0

(Rate: Per 100,000 Population)

442	441, 443-447, 449	453	450-452, 454, 455, 459	465	460-464, 466, 467, 469	E47-E53	E471
Congenital Anomalies of Heart and Circulatory System Number Rate	Other Congenital Anomalies Number Rate	Birth Trauma Number Rate	Other Conditions Originating in the Perinatal Period Number Rate	Senility without Mention of Psychosis Number Rate	Signs, Symptoms and Other Ill-defined Conditions Number Rate	Accidents and Adverse Effects Number Rate	Motor Vehicle Traffic Accidents Number Rate
2,614 2.2	1,509 1.3	403 0.3	3,458 2.9	28,805 24.1	2,321 1.9	29,344 24.6	12,432 10.4
1,436 2.4	813 1.4	239 0.4	1,974 3.4	10,149 17.3	1,379 2.3	21,223 36.1	9,347 15.9
1,178 1.9	696 1.1	164 0.3	1,484 2.4	18,656 30.7	942 1.6	8,121 13.4	3,085 5.1
160 1.27	2 0.02	— —	153 1.21	105 0.83	218 1.72	2,435 19.26	205 1.62
2 0.18	8 0.73	3 0.27	36 3.30	10 0.92	45 4.13	128 11.75	46 4.22
7 0.50	23 1.64	6 0.43	31 2.21	6 0.43	60 4.27	130 9.26	23 1.64
		379 0.8		9,334 19.3	15,730 32.6		2,093 4.3
		241 1.0		4,197 17.3	9,800 40.4		1,539 6.4
		138 0.6		5,137 21.3	5,930 24.6		554 2.3
91 3.6	70 2.8	6 0.2	145 5.7	236 9.3	58 2.3	537 21.2	343 13.6
57 4.4	32 2.5	5 0.4	76 5.9	89 6.9	36 2.8	451 35.0	285 22.1
34 2.7	38 3.1	1 0.1	69 5.6	147 11.9	22 1.8	86 6.9	58 4.7
281 0.6	341 0.7	— —	3,088 6.1	53,810 106.8	57,633 114.4	16,050 31.8	5,655 11.2
139 0.6	195 0.8	— —	1,748 6.9	25,463 100.5	32,880 129.8	11,929 47.1	4,357 17.2
142 0.6	146 0.6	— —	1,340 5.4	28,347 113.1	24,753 98.8	4,121 16.4	1,298 5.2

4.1. Deaths and Death Rates by Cause (ICD-9) (8)

	Year	Sex	E470, E472-E474, E479		E48		E50		E51		E521	
			Other Transport Accidents		Accidental Poisoning		Accidental Falls		Accidents Caused by Fire and Flames		Accidental Drowning and Submersion	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
INDONESIA												
JAPAN	1984	T	1,190	1.0	820	0.7	4,196	3.5	1,481	1.2	3,158	2.6
		M	982	1.7	548	0.9	2,762	4.7	918	1.6	2,170	3.7
		F	208	0.3	272	0.4	1,434	2.4	563	0.9	988	1.6
MALAYSIA	1984	T	1	0.01	273	2.16	99	0.78	19	0.15	5	0.04
	1982	T	4	0.36	29	2.66	3	0.27	9	0.83	—	—
	1981	T	13	0.93	9	0.64	20	0.14	3	0.21	3	0.21
PHILIPPINES	1980	T	30	0.06	58	0.1	764	1.6	133	0.3	913	1.9
		M	30	0.1	33	0.1	582	2.4	72	0.3	578	2.4
		F	1	0.00	25	0.1	182	0.8	61	0.2	335	1.4
SINGAPORE	1984	T	8	0.3	6	0.2	64	2.5	1	0.0	—	—
		M	7	0.5	6	0.5	47	3.6	—	—	—	—
		F	1	0.1	—	—	17	1.4	1	0.1	—	—
THAILAND	1984	T	197	0.4	251	0.5	296	0.6	212	0.4	2,345	4.7
		M	150	0.6	141	0.6	234	0.9	128	0.5	1,594	6.3
		F	47	0.2	110	0.4	62	0.2	84	0.3	751	3.0

(Rate: Per 100,000 Population)

E523		E524		E49, E520, E522, E529		E53		E54		E55		E56	
Accidents Caused by Machinery and by Cutting and Piercing Instruments		Accidents Caused by Firearm Missile		All Other Accidents, Including Late Effects		Drugs, Medicaments Causing Adverse Effects in Therapeutic Use		Suicide and Self-inflicted Injury		Homicide and Injury Purposely Inflicted by Other Persons		Other Violence	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
872	0.7	12	0.0	5,151	4.3	32	0.0	24,344	20.4	1,134	0.9	2,306	1.9
786	1.3	11	0.0	3,681	6.3	18	0.0	16,251	27.6	622	1.1	1,594	2.7
86	0.1	1	0.0	1,470	2.4	14	0.0	8,093	13.3	512	0.8	712	1.2
17	0.13	1	0.01	—	—	29	0.23	17	0.13	8	0.06	—	—
—	—	—	—	—	—	10	0.92	11	1.01	6	0.55	—	—
12	0.85	—	—	21	1.50	—	—	24	1.71	2	0.14	—	—
2	0.1	—	—	113	4.5	—	—	211	8.3	69	2.7	278	11.0
2	0.2	—	—	104	8.1	—	—	118	9.2	48	3.7	213	16.5
—	—	—	—	9	0.7	—	—	93	7.5	21	1.7	65	5.2
12	0.0	143	0.3	6,939	13.8	2	0.0	3,023	6.0	7,354	14.6	18	0.0
11	0.1	114	0.4	5,200	20.5	2	0.0	1,723	6.8	6,456	25.5	17	0.0
1	0.0	29	0.1	1,739	6.9	—	—	1,300	5.2	898	3.6	1	0.0

5-1. Number of Cases of Infections

	Year	Sex	Cholera	Typhoid Fever and Paratyphoid Fever	Typhoid Fever	Paratyphoid Fever	Amoebiasis and Bacillary Dysentery	Amoebiasis
INDONESIA ⁽¹⁾	1984	T	47,056		19,038 ^{a)}			
JAPAN ^{(2) (3)}	1984	T	55	338	196	142	997	102
		M	23	187	109	78	574	83
		F	32	151	87	64	423	19
MALAYSIA ⁽⁴⁾	1984	T	67	2,000				
Peninsular Malaysia	1984	T	22	1,383				
Sabah	1984	T	45	290				
Sarawak	1984	T	—	327				
PHILIPPINES ⁽⁵⁾	1980	T	1,898	3,222			27,378	
		M	1,208	1,947			17,381	
		F	690	1,275			9,997	
SINGAPORE ⁽⁶⁾	1984	T	40	118	97	21		
		M	30	72	60	12		
		F	10	46	37	9		
THAILAND ⁽⁷⁾	1984	T	645	6,584	6,537	47	12,984	2,570

Source: (1) Directorate General of CDC, Ministry of Health
(2) Statistics of Communicable Disease, Japan 1984
(3) Statistics of Food Poisoning, Japan 1984
(4) Health Division, Ministry of Health, Malaysia
(5) Philippine Health Statistics, Ministry of Health, 1980

Note: (6) Ministry of Environment and Ministry of Health
(7) Weekly Epidemiological Surveillance Record, Division of Epidemiology,
Ministry of Public Health
a) Sentinel Area from 27 Hospitals and 60 Health Centres
b) Viral Hepatitis

Bacillary Dysentery	Food Poisoning (Bacterial)	Tuber- culosis of All Forms	Leprosy	Diphtheria	Chickenpox	Infectious Hepatitis	Rabies	Malaria	Influenza (Grippe)
			125,300				84		
895 491 404	31,125 17,201 13,924	62,842	31	15 7 8				64	17,882
1,545 594 744 207	1,700 1,347 201 152	9,156 5,064 2,354 1,738	289 217 40 32	17 6 11 —	4,837 2,802 1,603 432	2,223 1,649 469 105	— — — —	30,424 7,192 22,220 1,012	
	719 384 335	112,307 57,881 54,426	886	1,910 1,070 840	1,112 817 295	9,578 6,227 3,351	362 248 114	39,678 21,426 18,252	202,884 99,413 103,471
	619	2,143 1,403 740	43 29 14	0	3,034 1,730 1,304	601 b) 458 b) 143 b)		193 152 41	
10,414	36,041	21,474	419	1,030	7,317	14,200	299	137,477	66,616

5-2. Number of Cases of Venereal Diseases

	Year	Sex	Syphilis & Sequelae: Incidence	Congenital Syphilis	Early Syphilis, Symptomatic	Early Syphilis, Latent	Cardio-vascular Syphilis	Syphilis of Central Nervous System	Late Syphilis, Latent	Other Forms Late Syphilis, with Symptom	Other Syphilis & Not Specified	Gonococcal Infection	Other Venereal Disease
INDONESIA ⁽¹⁾	1984	T	60									9,966	
JAPAN ⁽²⁾	1984	T	1,642	65	576	172			451	119	259	13,511	115
		M	1,035	21	430	109			268	71	136	11,647	105
		F	607	44	146	63			183	48	123	1,864	10
MALAYSIA ⁽³⁾	1984	T	849									4,845	
Peninsular Malaysia	1984	T	641									1,227	
Sabah	1984	T	15									1,460	
Sarawak	1984	T	193									2,158	
PHILIPPINES ⁽⁴⁾	1980	T	83									6,786	
		M	38									836	
		F	45									5,950	
SINGAPORE ⁽⁵⁾	1984	T	—	12	326	298	12	14	449	—	—	2,814	2,498
		M	—	6	221	142	9	9	238	—	—	1,173	2,084
		F	—	6	105	156	3	5	211	—	—	1,641	414
THAILAND ⁽⁶⁾	1984	T			3,443							29,989	14,278

Source: (1) Directorate General of CDC, Ministry of Health
(2) Statistics of Communicable Disease, Japan, 1984
(3) Communicable Disease Control Health Management and Information Unit, Health Division, Ministry of Health

(4) Philippine Health Statistics, Ministry of Health, 1980
(5) Ministry of Health
(6) Weekly Epidemiological Surveillance Record, Division of Epidemiology, Ministry of Public Health

6-1. Seasonal Distribution of Cholera (Cases)

	Year	Sex	Total	Months or Four-Week Periods												
				Jan. I	Feb. II	Mar. III	Apr. IV	May V	Jun. VI	VII	Jul. VIII	Aug. IX	Sept. X	Oct. XI	Nov. XII	Dec. XIII
INDONESIA ⁽¹⁾	1984	T	47,056	4,610	10,888	3,294	3,229	4,465	6,339	3,623	3,862	1,895	1,722	994	2,005	180
JAPAN ⁽²⁾	1984	T	55	1	—	1	—	1	2	—	1	2	6	22	19	—
		M	23	1	—	1	—	1	1	—	1	1	4	4	9	—
		F	32	—	—	—	—	—	1	—	—	1	2	18	10	—
MALAYSIA ⁽³⁾	1984	T	67	—	—	—	—	—	7	—	13	11	16	14	3	3
Peninsular Malaysia	1984	T	22	—	—	—	—	—	4	—	12	5	—	1	—	—
Sabah	1984	T	45	—	—	—	—	—	3	—	1	6	16	13	3	3
Sarawak	1984	T	—	—	—	—	—	—	—	—	—	—	—	—	—	—
PHILIPPINES ⁽⁴⁾	1980	T	1,898	152	145	150	119	139	107	—	227	243	156	189	134	137
SINGAPORE ⁽⁵⁾	1984	T	40	0	0	0	0	0	0	—	3	25	4	1	1	6
THAILAND ⁽⁶⁾	1984	T	645	60	105	90	41	52	67	—	31	58	28	30	23	60

Source: (1) Directorate General of CDC, Ministry of Health
(2) Statistics of Communicable Disease, Japan, 1984
(3) Communicable Disease Control Health Management and Information Unit, Health Division, Ministry of Health

(4) Philippine Health Statistics, Ministry of Health, 1980
(5) Ministry of Environment
(6) Weekly Epidemiological Surveillance Record, Division of Epidemiology, Ministry of Public Health

6-2. Seasonal Distribution of Typhoid Fever (Cases)

			Total	Months or Four-Week Periods												
				Jan. I	Feb. II	Mar. III	Apr. IV	May V	Jun. VI	VII	Jul. VIII	Aug. IX	Sept. X	Oct. XI	Nov. XII	Dec. XIII
INDONESIA ^(1) a)	1983 1984	T	27,791 19,038	2,229 2,268	2,237 1,792	2,303 1,391	2,135 1,326	2,235 1,301	2,154 1,156	. .	2,266 1,402	2,357 1,445	2,388 1,390	2,553 1,834	2,487 1,959	2,448 1,774
JAPAN ⁽²⁾	1984	T M F	196 109 87	11 8 3	16 10 6	12 6 6	17 10 7	15 11 4	24 7 17	. .	19 9 10	17 10 7	13 7 6	18 9 9	15 10 5	19 12 7
MALAYSIA ^(3) a)	1984	T	2,000	143	144	148	124	153	128		149	223	218	222	172	176
Peninsular Malaysia	1984	T	1,383	62	99	94	74	111	71		98	159	170	174	135	136
Sabah	1984	T	290	57	35	38	26	15	25		12	25	18	12	18	9
Sarawak	1984	T	327	24	10	16	24	27	32		39	39	30	36	19	31
PHILIPPINES ^(4) b)	1980	T	3,222	237	101	187	156	198	212	. .	291	275	260	448	443	414
SINGAPORE ⁽⁵⁾	1984	T	97	10	10	6	9	7	4	. .	12	9	6	10	12	2
THAILAND ⁽⁶⁾	1984	T	6,537	416	414	397	379	560	699	. .	799	803	579	614	523	334

Source: (1) Sentinel Area from 27 Hospitals and 60 Health Centres
 (2) Statistics of Communicable Disease, Japan, 1984
 (3) Communicable Disease Control, Health Management and Information Unit, Health Division, Ministry of Health
 (4) Philippine Health Statistics, Ministry of Health, 1980

Note:

(5) Ministry of Environment
 (6) Weekly Epidemiological Surveillance Record, Division of Epidemiology, Ministry of Public Health
 a) Data on Typhoid Fever Include Paratyphoid Fever
 b) Number of Cases by Typhoid Fever, Paratyphoid Fever and other Salmonella Infection

6-3. Seasonal Distribution of Paratyphoid Fever (Cases)

	Year	Sex	Total	Months or Four-Week Periods												
				Jan. I	Feb. II	Mar. III	Apr. IV	May V	Jun. VI	VII	Jul. VIII	Aug. IX	Sept. X	Oct. XI	Nov. XII	Dec. XIII
INDONESIA ^{a)}																
JAPAN ⁽¹⁾	1984	T	142	5	4	2	6	18	13		14	37	17	16	9	1
		M	78	3	3	1	3	8	9		6	18	10	11	5	1
		F	64	2	1	1	3	10	4		8	19	7	5	4	—
MALAYSIA ^{a)}																
Peninsular Malaysia																
Sabah																
Sarawak																
PHILIPPINES ^{a)}																
SINGAPORE ⁽²⁾	1984	T	21	0	0	1	2	0	2		6	3	4	0	1	2
THAILAND ⁽³⁾	1984	T	47	5	6	7	6	5	3		—	2	1	6	3	3

Source: (1) Statistics of Communicable Disease, Japan, 1984
 (2) Ministry of Environment
 (3) Weekly Epidemiological Surveillance Record, Division of
 Epidemiology, Ministry of Public Health

Note: a) Data on Paratyphoid Fever is included in Typhoid Fever

6-4. Seasonal Distribution of Bacillary Dysentery (Cases)

	Year	Sex	Total	Months or Four-Week Periods												
				Jan. I	Feb. II	Mar. III	Apr. IV	May V	Jun. VI	VII	Jul. VIII	Aug. IX	Sept. X	Oct. XI	Nov. XII	Dec. XIII
INDONESIA																
JAPAN ⁽¹⁾	1984	T	895	65	84	58	113	57	57		29	101	79	90	78	84
		M	491	35	41	32	58	32	34	• •	16	60	48	51	43	41
		F	404	30	43	26	55	25	23		13	41	31	39	35	43
MALAYSIA ⁽²⁾	1984	T	1,545	75	66	129	82	80	70		205	251	183	126	140	138
Peninsular Malaysia	1984	T	594	57	46	51	56	43	50		36	46	43	49	53	64
Sabah	1984	T	744	9	17	54	9	17	4		158	181	107	51	67	70
Sarawak	1984	T	207	9	3	24	17	20	16		11	24	33	26	20	4
PHILIPPINES ^(3) a)	1980	T	27,378	2,246	1,603	1,993	2,194	3,162	2,380		3,064	2,637	1,973	1,862	1,920	2,344
SINGAPORE																
THAILAND ⁽⁴⁾	1984	T	10,414	896	1,035	1,250	1,113	1,184	1,231	• •	890	626	515	556	576	542

Source: (1) Statistics of Communicable Disease, Japan, 1984

(2) Communicable Disease Control
Health Management and Information Unit
Health Division, Ministry of Health

(3) Philippine Health Statistics, Ministry of Health, 1980

(4) Weekly Epidemiological Surveillance Report, Division of Epidemiology,
Ministry of Public Health

Note: a) Number of Cases by Bacillary Dysentery and Amoebiasis

6-5. Seasonal Distribution of Food Poisoning (Cases)

	Year	Sex	Total	Months or Four-Week Periods												
				Jan. I	Feb. II	Mar. III	Apr. IV	May V	Jun. VI	VII	Jul. VIII	Aug. IX	Sept. X	Oct. XI	Nov. XII	Dec. XIII
INDONESIA⁽¹⁾	1984	T	641													
JAPAN⁽²⁾	1984	T	33,084	402	662	1,633	2,047	1,640	6,897	• •	4,885	4,048	4,658	1,603	2,893	1,716
MALAYSIA⁽³⁾	1984	T	1,700	179	36	350	174	93	95		139	108	204	230	70	22
Peninsular Malaysia	1984	T	1,347	168	22	248	141	74	76		112	85	187	168	50	16
Sabah	1984	T	201	7	14	28	32	19	7		21	13	11	23	20	6
Sarawak	1984	T	152	4	—	74	1	—	12		6	10	6	39	—	—
PHILIPPINES																
SINGAPORE⁽⁴⁾	1984	T	619	39	59	101	38	64	35	• •	52	82	23	64	47	15
THAILAND⁽⁵⁾	1984	T	36,041	2,635	3,188	3,663	3,564	3,611	3,664	• •	3,174	2,797	2,500	2,606	2,300	2,339

Source: (1) Directorate General of CDC, Ministry of Health
Indonesia

(2) Statistics of Food Poisoning, Japan 1984

(3) Communicable Disease Control
Health Management and Information Unit
Health Division, Ministry of Health

(4) Ministry of Environment

(5) Weekly of Epidemiological Surveillance Record, Division of
Epidemiology, Ministry of Public Health

7-1. Notifiable Infectious Diseases

ICD Number		Indonesia 1984	Japan 1984	Malaysia 1984 ⁽¹⁾	Philippines 1984	Singapore 1984	Thailand 1984
001	Cholera	v	v	v	v	v	v
002	Typhoid and Paratyphoid Fevers	v	v	v	v	v	v
003	Other Salmonella Infections		v	va)	v		
004	Shigellosis		v				v
008	Intestinal Infections due to Other Organisms		v	va)			
010~018	Tuberculosis		v	v	v	v	v
020	Plague	v	v	v		v	v
022	Anthrax		v	v			v
030	Leprosy		v	v	v	v	v
032	Diphtheria	v	v	v	v	v	v
033	Whooping Cough		v	v	v		v
034	Streptococcal Sore Throat and Scarlet Fever		v				
036	Meningococcal Infection	v	v	v			v
037	Tetanus	v	v	v	v		v
045	Acute Poliomyelitis	v	v	v	v	v	v
052	Chickenpox			v	v	v	v
055	Measles		v	v	v	v	v
060	Yellow Fever	v	v	v		v	v
061	Dengue	vf)		v	v	v	v
062	Mosquito-borne Viral Encephalitis		v	v		v	v
070	Viral Hepatitis			v	v	v	v
071	Rabies	v	v	v	v		v
072	Mumps			v			v
076	Trachoma						
081	Other Typhus		v	vb)			(Scrub Typhus) v
084	Malaria		v	v	v	v	v
087	Relapsing Fever	v	v	v			

Source (1) Communicable Disease Control Information System Manual. Planning and Development Division Ministry of Health

ICD Number		Indonesia 1984	Japan 1984	Malaysia 1984 ⁽¹⁾	Philippines 1984	Singapore 1984	Thailand 1984
090	Congenital Syphilis		v	vc)	v	v	v
098	Gonococcal Infections		v	v	v	v	v
099	Other Venereal Diseases		v ^{g)}	vd)		vh)	vh)
100	Leptospirosis						v
102	Yaws			v			v
120	Schistosomiasis [Bilharziasis]		v		v		
125	Filarial Infection and Dracontiasis		v	ve)	v		
487	Influenza		v		v		v

- Note:
- a) Only Food Poisoning
 - b) Epidemic and Fleaborne Typhas
 - c) Syphilis All Forms
 - d) Chancroid
 - e) Filariasis
 - f) Only Hemorrhagic Fever
 - g) Chancroid + Lymphogranuloma inguinale
 - h) All STDs

8-1. Infectious Diseases Specified by Immunization Program

	Indonesia 1984	Japan 1984	Malaysia 1984	Philippines 1984	Singapore 1984	Thailand 1984
Cholera				v		v
Diphtheria	v	v	v	v	v	v
Epidemic Typhus	a)					
Measles	b)	v	v	b)	v	b)
Mosquito-borne Viral Encephalitis		v				
Plague						
Poliomyelitis	v	v	v	v	v	v
Rubella		v			v	
Tetanus	v	v	v	v	v	v
Tuberculosis (BCG)	v	v	v	v	v	v
Typhoid and Paratyphoid Fever				v		v
Whooping Cough	v	v	v	v	v	v
Yellow Fever	a)		c)			

- Note:**
- a) Only on the occasion of outbreaks
 - b) In restricted areas
 - c) Immunization Required under Institute for Medical Research

9. Explanatory Notes for Vital Statistics

Crude Live-birth Rate = $B/P \cdot K$

Crude Death Rate = $D/P \cdot K$

where B = the number of live-births during a year

D = the number of deaths during a year

P = population at the middle of the year

K = 1,000

Refer to 9-1 & 9-2

Crude Marriage Rate (CMR) = $M/P \cdot K$

Crude Divorce Rate (CRR) = $D/P \cdot K$

Crude Birth Rate (CBR) = $B/P \cdot K$

Refer to 9-3

General Fertility Rate (GFR) = $B/F_{15-49} \cdot K$

where M = the number of marriages during a year

D = the number of divorces during a year

B = the number of births during a year

P = population at the middle of year

K = 1,000

F_{15-49} = the population of women at age (X; 15—49) at the 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

Refer to 10-1

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 = $DP/B \cdot 100,000$

where DP = deaths due to puerperal causes

Refer to 10-4

B = the number of live-births during a year

9-1. Crude Live-birth Rates

(per 1,000 Population)

Year	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
INDONESIA	43.8	40.2 ^{a)}					36.2		33.7		32.4 ^{b)}
JAPAN ⁽¹⁾	18.8	17.1	16.3	15.5	14.9	14.2	13.6	13.0	12.8	12.7	12.5
MALAYSIA											
Peninsular Malaysia	33.9	31.3	31.7	30.7	30.1	30.5	30.3	30.8	30.6	29.8	
Sabah	37.9	35.4	36.6	37.2	36.7 ⁽⁴⁾	35.4 ⁽⁴⁾	38.7 ⁽³⁾	42.4 ⁽⁵⁾	42.5 ^{c)}	39.1 ⁽²⁾	
Sarawak	30.4	29.7	29.1	29.1	28.2 ⁽⁴⁾	29.2 ⁽⁴⁾	29.4	28.6 ⁽⁶⁾	28.0 ^{c)}	27.0 ⁽²⁾	
PHILIPPINES	27.4 ⁽⁷⁾	28.3 ⁽⁷⁾	30.1 ⁽⁷⁾	29.9 ⁽⁷⁾	30.5 ⁽⁷⁾	30.7 ⁽⁷⁾	32.3 ⁽⁸⁾	32.1 ⁽⁸⁾	31.9 ⁽⁸⁾	31.7 ⁽⁸⁾	31.6 ⁽⁸⁾
SINGAPORE	22.1	17.8	18.8	16.6	16.9	17.3	17.3	17.0	17.3	16.2	16.4 ⁽⁹⁾
THAILAND ⁽¹⁰⁾	31.5	27.4	27.5	24.8	23.4	23.7	22.8	22.4	22.2	21.3	19.0

Source: Demographic Yearbook 1975, 1979, 1981, 1982, UN
Population and Vital Statistics Report, 1980, 1981, 1982, 1983,
UN

(1) Vital Statistics Japan, 1970-84, Ministry of Health & Welfare

(2) Vital Statistics, Pen. M'sia, Sabah and Sarawak, 1983

(3) Dept. of Statistics, Sabah

(4) Social Statistics Bulletin, Sabah 1980, Dept. of Statistics

(5) Annual Bulletin of Statistics, Sabah 1982, Dept. of Statistics

(6) Annual Statistics Bulletin, Sarawak 1982, Dept. of Statistics

(7) Philippine Health Statistics 1980, Ministry of Health

(8) Ministry of Health Primer, Manila, 1984

(9) Yearbook of Statistics, Singapore, 1984/85, Dept. of Statistics

(10) Health Statistics Division, Ministry of Public Health

a) Estimates for 1970-75 Prepared by the Population Division, UN

b) ESCAP population Data Sheet, 1984

c) Rate provided by Dept. of Statistics Malaysia

Note:

9-2. Crude Death Rates

(per 1,000 Population)

Year	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
INDONESIA ⁽¹⁾	18.7	16.7	14.3	13.9	13.5	13.1	12.5	12.3	12.3	11.7	11.3
JAPAN ⁽²⁾	6.9	6.3	6.3	6.1	6.1	6.0	6.2	6.1	6.0	6.2	6.2
MALAYSIA											
Peninsular Malaysia ⁽³⁾	7.3	6.4	6.1	6.3	5.9	5.8	5.5	5.2	5.2	5.3 ⁽⁶⁾	
Sabah	5.9	4.3	4.7	4.3	4.2 ⁽⁴⁾	3.9 ⁽⁴⁾	4.2 ^{b)}	4.6 ^{b)}	4.7 ^{c)}	4.4 ⁽⁶⁾	
Sarawak	5.2	5.0	4.4	4.7	4.2 ⁽⁵⁾	4.0 ⁽⁵⁾	4.2 ^{a)}	3.6 ^{a)}	3.6 ^{c)}	3.7 ⁽⁶⁾	
PHILIPPINES ⁽⁷⁾	6.7	6.4	6.9	6.9	6.5	6.6	8.3 ⁽⁸⁾	8.1 ⁽⁸⁾	7.9 ⁽⁸⁾	7.7 ⁽⁸⁾	7.6 ⁽⁸⁾
SINGAPORE	5.2	5.1	5.1	5.2	5.2	5.3	5.2	5.3	5.2	5.3	5.2 ⁽⁹⁾
THAILAND ⁽⁹⁾	6.2	5.7	5.6	5.5	5.4	5.3	5.3	5.0	5.1	5.1	4.5

Source: Demographic Yearbook 1975, 1979, 1981, 1982, UN Population and Vital Statistics Report, 1980, 1981, 1982, 1983, UN

- (1) Calculated by Health Data Centre, MOH, Based on 1980 Census
- (2) Vital Statistics Japan, 1970-84, Ministry of Health & Welfare
- (3) Vital Statistics, Pen. M'sia (by respective year) Dept. of Statistics
- (4) Social Statistical Bulletin, Malaysia 1980, Dept. of Statistics
- (5) Annual Statistics Bulletin M'sia 1981, Dept. of Statistics
- (6) Vital Statistics, Pen. M'sia, Sabah and Sarawak, 1983
- (7) Philippine Health Statistics 1980, Ministry of Health
- (8) Ministry of Health Primer, Manila, 1984
- (9) Yearbook of Statistics, Singapore, 1984/85, Dept. of Statistics
- (10) Health Statistics Division, Ministry of Public Health

- Note:**
- a) Rate Computed based on the absolute No. 08 deaths obtained from the Annual Statistical Bulletin, Sarawak 1982
 - b) Rate Computed based on the absolute No. 08 deaths obtained from the Annual Bulletin of Statistics, Sabah 1982
 - c) Rate Provided by Dept. of Statistics, Malaysia (unpublished)

9-3. Vital Statistics Rates

(Per 1,000 Population)

	Year	Crude Marriage Rates	Crude Divorce Rates	Birth		Death	
				Crude	General Fertility Rates	Crude	Infant
INDONESIA ⁽¹⁾	1984			33.2	134.3	11.5	89.9
JAPAN ⁽²⁾	1984	6.2	1.50	12.5	48.8	6.2	6.0
MALAYSIA							
Peninsular Malaysia	1983		2.1 ^{e)}	29.8 ⁽³⁾	120 ^{b)}	5.3 ⁽³⁾	20.3 ⁽³⁾
Sabah	1983		2.2 ^{a)}	39.1 ^{a)}	822 ^{c)}	4.4 ^{a)}	24.1 ^{a)}
Sarawak	1983		2.3 ^{a)}	27.0 ^{a)}	1603 ^{d)}	3.7 ^{a)}	15.0 ^{a)}
PHILIPPINES ⁽⁴⁾	1980			30.2	135.5	6.2	45.1
SINGAPORE ⁽⁵⁾	1984	9.9	0.9	16.4	60.7	5.2	8.8
THAILAND ⁽⁶⁾	1984	7.7 ⁽⁷⁾	0.6 ⁽⁷⁾	19.0	79.8	4.5	11.3

Source: (1) Calculated by Central Bureau of Statistics
 (2) Vital Statistics Japan, 1984, Ministry of Health & Welfare
 (3) Vital Statistics, Pen. M'sia 1983 Dept. of Statistics
 (4) Philippine Health Statistics 1980, Ministry of Health
 (5) Yearbook of Statistics, Singapore, 1984/85, Dept. of Statistics
 (6) Health Statistics Division, Ministry of Public Health
 (7) Ministry of Interior, 1983

Note: a) Rates provided by Dept. of Statistics, Malaysia (unpublished)
 b) Rates computed based on No. 08 Live birth and No. 08 women age from the Vital Statistics, Malaysia 1982
 c) For 1982 : Rate calculated based on the State Pop. Report 1980, Sabah
 d) For 1980 : Rate calculated based on the State Pop. Report 1980, Sarawak
 e) For year 1980 : Social Statistical Bulletin, M'SIA 1981

9-4. Natality, General Mortality and Natural Increase

	Year	Natality (live-born)				General Mortality				Natural Increase (0/00)
		(Number)			(0/00) Total	(Number)			(0/00) Total	
		Total	Male	Female		Total	Male	Female		
INDONESIA	1984 ^{a)}	4,990,314	—	—	32.4				11.3	21.1
JAPAN ⁽¹⁾	1984	1,489,780	764,597	725,183	12.5	740,247	402,220	338,027	6.2	6.3
MALAYSIA ⁽²⁾	1983	450,887	232,765	218,222	30.3	76,329	43,622	32,707	5.1	25.2
Peninsular Malaysia	1983	368,438	189,783	178,655	29.8	66,032	37,447	28,585	5.3	24.5
Sabah	1983	44,364	23,202	21,162	39.1	5,040	3,071	1,969	4.4	34.7
Sarawak	1983	38,085	19,780	18,305	27.0	5,257	3,104	2,153	3.7	23.3
PHILIPPINES ⁽³⁾	1980	1,456,860	758,123	698,737	30.2	298,006	176,545	121,461	6.2	24.0
SINGAPORE ⁽⁴⁾	1984	41,556	21,661	19,894	16.4	13,162	7,667	5,494	5.2	11.2
THAILAND ⁽⁵⁾	1984	956,680	489,114	467,566	19.0	225,282	130,849	94,433	4.5	14.5

Source: (1) Vital Statistics Japan, 1984, Ministry of Health & Welfare
(2) Vital Statistics, Pen. M'sia, Sabah and Sarawak, 1983
(3) Philippine Health Statistics 1980, Ministry of Health
(4) Monthly Digest of Statistics, June 1985, Department of Statistics, Singapore
(5) Health Statistics Division, Ministry of Public Health

Note: Figures for males and females may not add up to the total on account of unknown sex
a) Proceedings Seminar and Workshop on Research and Program Strategies for Intending the Reduction of Infant and Child Mortality in Indonesia, P.64

10-1. Late Fetal, Infant, Neonatal, Post-neonatal and Perinatal Mortality

	Year	Late Fetal Mortality		Infant Mortality		Neonatal Mortality		Post-neonatal Mortality		Perinatal Mortality	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
INDONESIA⁽¹⁾	1984	—	—	—	89.9	—	—	—	—	—	45.0
JAPAN⁽²⁾	1984	8,724	5.9	8,920	6.0	5,527	3.7	3,393	2.3	12,998	8.7
MALAYSIA⁽³⁾											
Peninsular Malaysia	1983			7,490	20.3	4,625	12.4	2,935	8.0	8,563	22.9
Sabah	1983			1,069	24.1	702	15.8	367	8.3		
Sarawak	1983			572	15.0	324	8.5	248	6.5		
PHILIPPINES⁽⁴⁾	1980	3,895	2.7	65,700	45.1	29,879	20.5	35,821	24.6		
SINGAPORE⁽⁵⁾	1983	223	5.5	382	9.4	269	6.6	113	2.8	434	10.6
THAILAND⁽⁶⁾	1984	809	0.8	10,820	11.3	4,830	5.0	5,990	6.3	4,042	4.2

- Source:** (1) Calculated by Central Bureau of Statistics
1980 Figure, Regional Situation on Mortality by WHO
(2) Vital Statistics Japan, 1984, Ministry of Health & Welfare
(3) Vital Statistics, Pen. M'sia, Sabah and Sarawak 1983
Dept. of Statistics,
(4) Philippine Health Statistics 1980, Ministry of Health
(5) Report on Registration of Births & Deaths, 1983
(6) Health Statistics Division, Ministry of Public Health,

10-2. Infant Deaths and Infant Mortality Rates 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
INDONESIA														
JAPAN ⁽¹⁾	1984	T M F	8,920 5,075 3,845	4,274		1,253	3,393		6.0 6.6 5.3		2.9		0.8	2.3
MALAYSIA														
Peninsular Malaysia ⁽²⁾	1983	T M F	7,490					— — —	20.3					— — —
Sabah ⁽³⁾	1983	T M F	1,069 614 455		1,069		614 455	— — —	24.1 13.8 10.3		24.1 13.8 10.3			
Sarawak ⁽⁴⁾	1983	T M F	572 324 248		572		324 248	— — —	15.0 8.5 6.5		15.0 8.5 6.5			
PHILIPPINES ⁽⁵⁾	1980	T M F	65,700 68,618 47,785			29,879	35,821		45.1 47.1 32.8			20.5	24.6	
SINGAPORE ⁽⁶⁾	1983	T M F	382 216 166	145 79 66	66 42 24	58 32 26	113 63 50	— — —						
THAILAND ⁽⁷⁾	1984	T M F	10,820 6,078 4,742	1,785 990 795	1,448 857 591	1,597 908 689	5,428 2,997 2,431	562 326 236	11.3 12.4 10.2	1.9 2.0 1.7	1.5 1.8 1.3	1.7 1.9 1.5	5.7 6.1 5.2	0.6 0.7 0.5

Source: (1) Vital Statistics Japan, 1983, Ministry of Health and Welfare
 (2) Vital Statistics, Pen. M'sia 1983, Dept. of Statistics, Malaysia
 (3) Vital Statistics, Sabah 1983
 Dept. of Statistics

(4) Vital Statistics, Sarawak 1983
 Dept. of Statistics
 (5) Philippine Health Statistics 1980, Ministry of Health
 (6) Report on Registration of Births and Deaths, Singapore, 1983
 (7) Health Statistics Division, Ministry of Public Health

10-3. Maternal Mortality Rates

(per 100,000 live births)

	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
INDONESIA											
JAPAN ^(1) a) b)	50.0	28.7	25.9	23.1	22.1	22.9	20.5	19.2	18.4	15.4	15.3
MALAYSIA ^{c)}											
Peninsular Malaysia ⁽²⁾	148	83	78	79	84	69	63	59	50	40 ⁽³⁾	
Sabah	11	72			79 ⁽⁵⁾	79 ⁽⁵⁾	107 ⁽⁵⁾	112 ⁽⁵⁾	90 ⁽⁵⁾	18 ⁽³⁾	
Sarawak ⁽⁴⁾	90	20	30	50	40	10	50 ⁽⁶⁾	28 ⁽⁶⁾	18 ⁽⁶⁾	20 ⁽³⁾	
PHILIPPINES ⁽⁷⁾	190	140	140	140	120	110	100 ⁽⁸⁾	90 ⁽⁸⁾	90 ⁽⁸⁾	80 ⁽⁸⁾	80 ⁽⁸⁾
SINGAPORE ^(9) d)	32.7	30.0	14.0	15.6	20.3	7.4	4.9	4.7	11.7	14.8	9.6
THAILAND ⁽¹⁰⁾	226.1	171.7	149.0	129.2	130.3	102.8	98.5	81.2	69.6	63.5	48.0

Source: Demographic Yearbook 1982, UN

- (1) Vital Statistics Japan, 1970-84, Ministry of Health and Welfare
- (2) Monthly Statistical Bulletin, Pen. M'sia, Feb. 1982, Dept. of Statistics
- (3) Vital Statistics, Pen. M'sia, Sabah and Sarawak, 1983
- (4) Annual report 1980, Medical and Health Department, Sarawak
- (5) Annual report 1982, Medical and Health Department, Sabah
- (6) Annual report 1982, Medical and Health Department, Sarawak
- (7) Philippine Health Statistics, 1980, Ministry of Health
- (8) Ministry of Health Primer, Manila, 1984
- (9) Report on the Registration of Births and Deaths, Singapore
- (10) Health Statistics Division, Ministry of Public Health

Note:

- a) All data classified by 1965 Revision
- b) Prior to 1973, excluding Okinawa
For Japanese nationals in Japan only
- c) Medically certified or inspected deaths only
- d) Data based on ICD9, 1975 Revision

Fig. 4 Number of Surviving out of 100,000 Born Alive at Selected Ages by Sex (1),

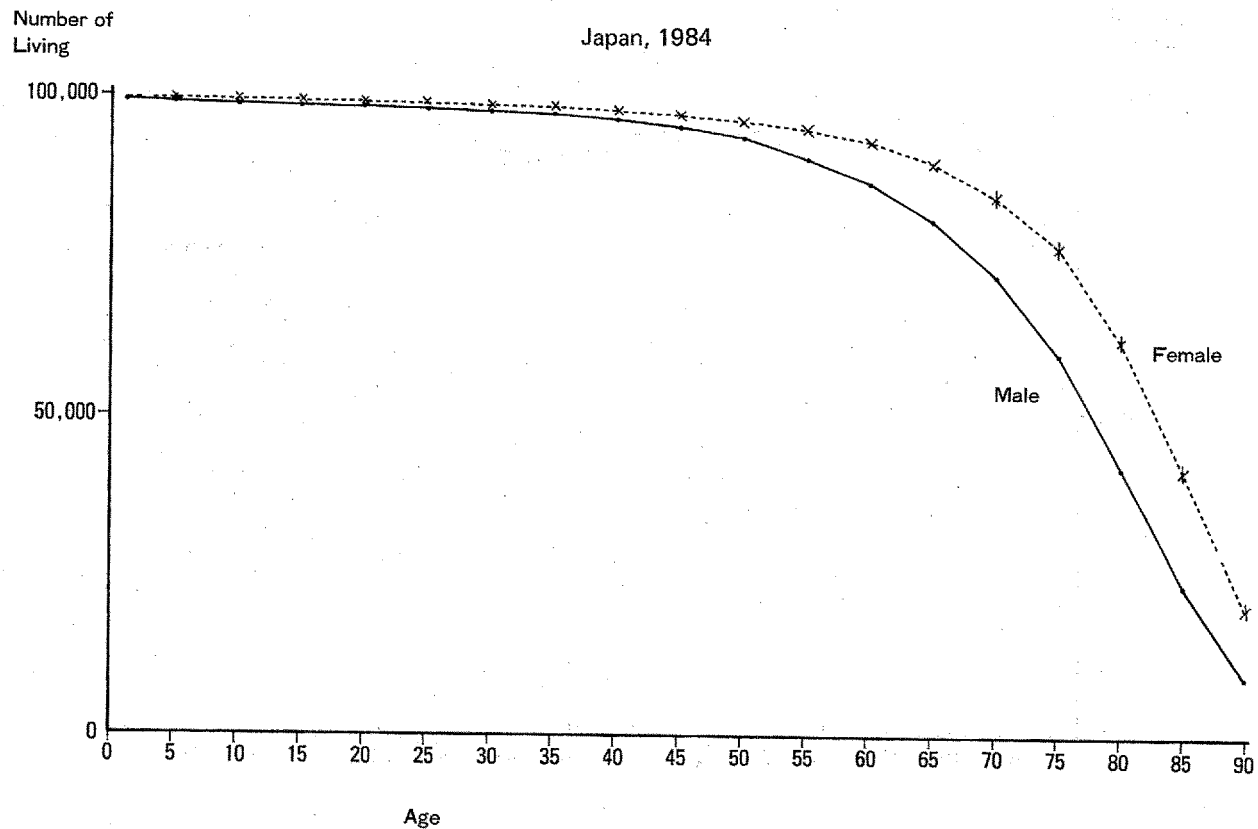


Fig. 4 Number of Surviving out of 100,000 Born Alive at Selected Ages by Sex (2),
Peninsular Malaysia, 1979

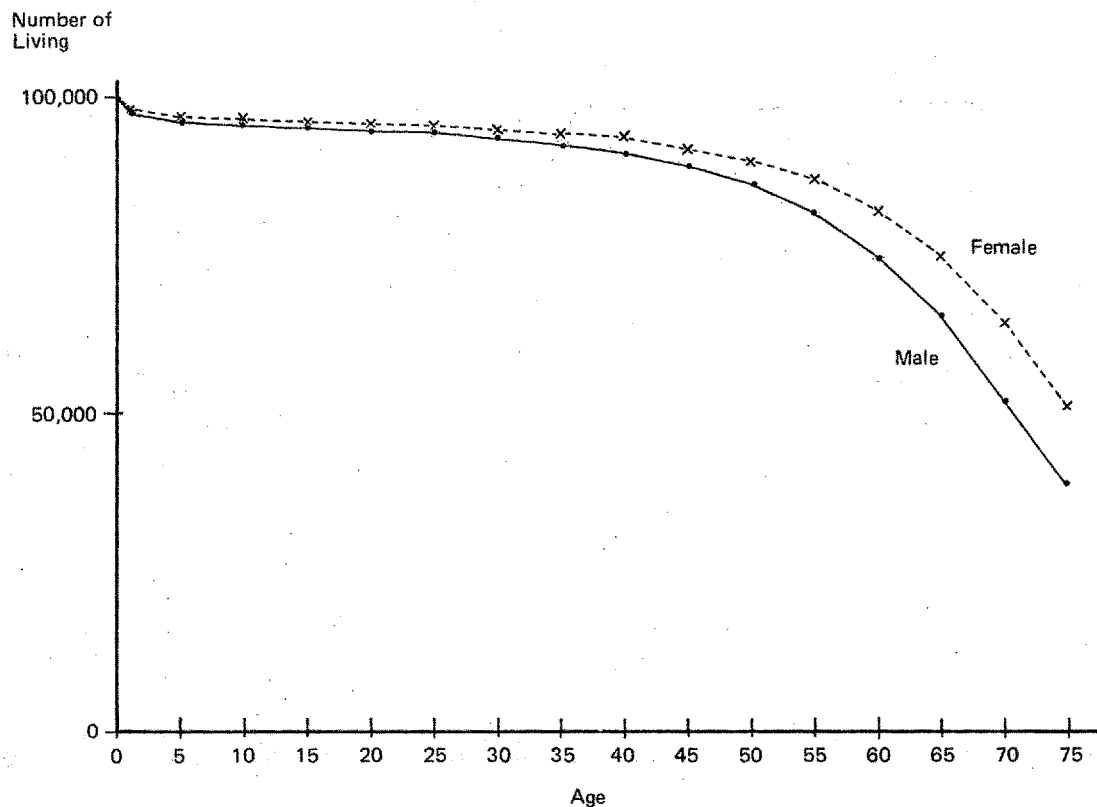
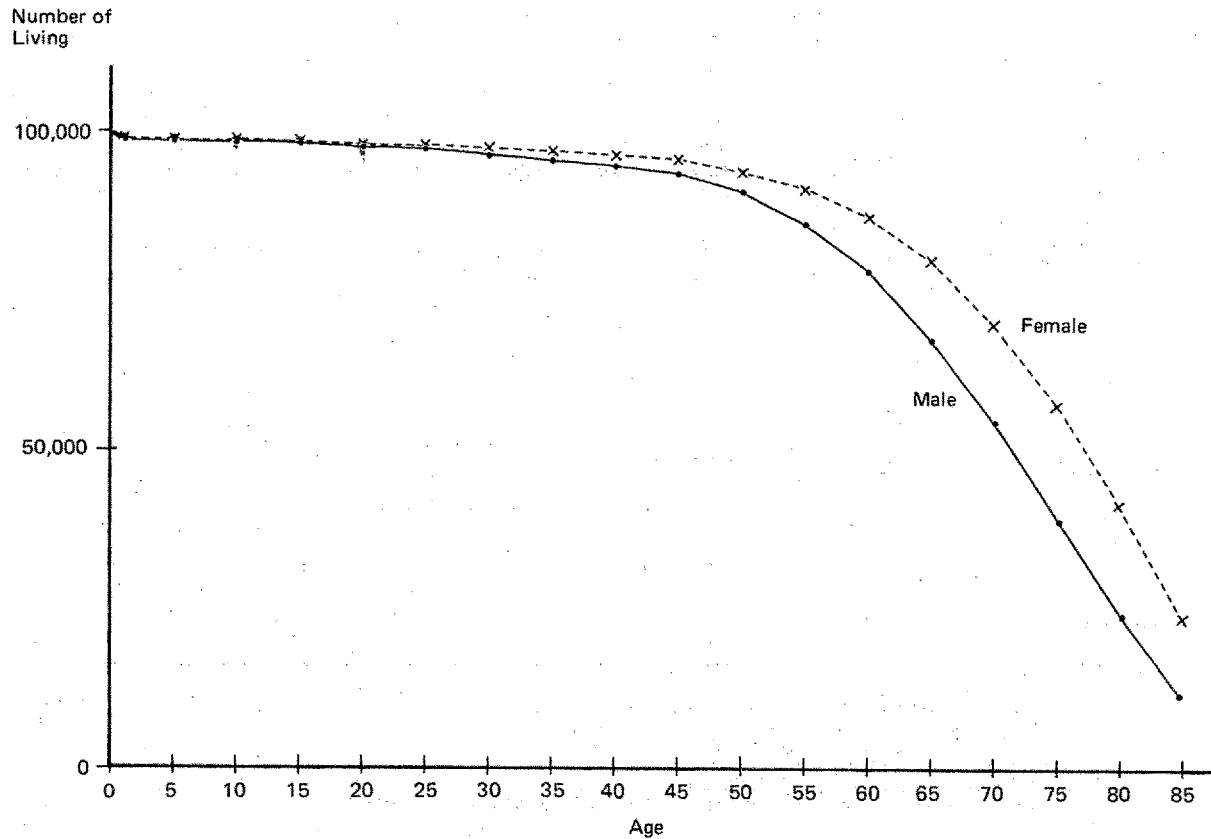


Fig. 4 Number of Surviving out of 100,000 Born Alive at Selected Ages by Sex (3),

Singapore, 1980



11-1. Expectation of Life at Specified Ages for Each Sex

	Year	Sex	Age								
			0	1	2	3	4	5	10	15	20
INDONESIA ⁽¹⁾	1984	T	57.84								
JAPAN ⁽²⁾	1984	M	74.54	74.04	73.10	72.14	71.18	70.20	65.29	60.36	55.56
		F	80.18	79.60	78.66	77.70	76.73	75.75	70.81	65.85	60.93
MALAYSIA											
Peninsular Malaysia ⁽³⁾	1983	M	67.55	68.10				64.58	59.82	55.01	50.37
		F	72.29	72.60				69.10	64.32	59.48	54.67
Sabah											
Sarawak											
PHILIPPINES ⁽⁴⁾	1984	M	61.0								
		F	64.6								
SINGAPORE ⁽⁵⁾	1980	M	68.7					64.8	59.9	55.0	50.2
		F	74.0					70.1	65.2	60.3	55.4
THAILAND ⁽⁶⁾	1980-1985	M	60.77								
		F	64.76								

Source: Demographic Yearbook 1982

(1) Calculated by Health Data Centre, MOH. Based on 1980 Census.

(2) Abridged Life Table 1984, Ministry of Health & Welfare Japan

(3) Data provided by Dept. of Statistics, Malaysia

(4) National Census & Statistics Office, Manila

(5) Yearbook of Statistics, Singapore, 1982/83, Dept. of Statistics

(6) Report of Working Group on Population Projection, National Statistical Office, July 1980

Note: a) 80 & over

b) 70 & over

Age													
25	30	35	40	45	50	55	60	65	70	75	80	85	90+
50.78	45.98	41.19	36.47	31.88	27.44	23.26	19.24	15.43	11.93	8.89	6.47	4.63	3.27
56.03	51.15	46.28	41.46	36.71	32.04	27.47	23.00	18.71	14.67	11.00	7.89	5.43	3.58
45.83	41.22	36.58	32.02	27.58	23.38	19.55	15.96	12.90	10.33	8.36	7.01 ^{a)}		
49.90	45.13	40.42	35.75	31.18	26.75	22.60	18.70	15.34	12.37	10.15	8.56 ^{a)}		
45.5	40.7	36.0	31.3	26.8	22.6	18.7	15.2	12.2	9.7 ^{b)}				
50.6	45.7	40.9	36.2	31.5	27.0	22.8	18.8	15.1	11.8 ^{b)}				

11-2. Number of Surviving out of 100,000 Born Alive by Age and Sex

	Year	Sex	Age							
			0	1	5	10	15	20	25	30
INDONESIA										
JAPAN ⁽¹⁾	1984	M	100,000	99,338	99,113	98,987	98,882	98,539	98,125	97,724
		F	100,000	99,471	99,280	99,200	99,137	99,017	98,844	98,630
MALAYSIA ⁽²⁾										
Peninsular Malaysia	1979	M	100,000	97,062	96,116	95,621	95,272	94,736	94,620	93,234
		F	100,000	97,716	96,812	96,430	96,152	95,796	95,325	94,813
Sabah										
Sarawak										
PHILIPPINES										
SINGAPORE ⁽³⁾	1980	M	100,000	98,746	98,481	98,353	98,176	97,755	97,180	96,560
		F	100,000	98,897	98,612	98,469	98,307	98,091	97,816	97,489
THAILAND										

Source: (1) Abridged Life Table 1984, Min. of Health & Welfare, Japan

(2) Vital Statistics, Pen. M'sia 1979, Dept. of Statistics

(3) Population Projections for Singapore, 1980-2030, Singapore Family Planning & Population Board

Age

35	40	45	50	55	60	65	70	75	80	85	90+
97,245 98,354	96,541 97,949	95,401 97,339	93,587 96,407	90,605 95,020	86,492 93,013	80,705 89,898	72,198 84,794	59,599 76,303	42,318 62,155	23,645 42,027	9,202 20,398
92,346 94,116	91,076 93,704	89,174 91,704	86,072 89,851	81,542 87,019	74,667 82,056	65,352 75,072	52,106 64,398	38,565 51,409	— —	— —	
95,881 97,081	94,932 96,457	93,411 95,507	90,623 93,855	85,802 91,127	78,538 86,768	67,978 80,194	54,423 70,702	39,325 57,474	24,028 41,447	11,382 23,963	

12-1. Per Capita Food Supplies (1)

	Year	Energy (k cal/day)			Protein (g/day)			Fat (g/day)		
		Total	Vegetable Products	Animal Products	Total	Vegetable Products	Animal Products	Total	Vegetable Products	Animal Products
INDONESIA ⁽¹⁾	1980	2,570	2,379	191	48.2	42.9	5.5	51.9	33.4	18.5
JAPAN ⁽²⁾	1983	2,147			80.9	40.0	40.9	58.6	30.3	28.3
MALAYSIA	1977	2,613	2,319	294	57.6	35.7	21.9	45.5	29.2	16.3
PHILIPPINES ⁽³⁾	1981	2,420				54				
SINGAPORE ⁽⁴⁾	1983	2,922	2,266	657	71.8	39.0	32.8	70.1	21.6	48.5
THAILAND	1977	2,098	1,952	146	46.3	32.2	14.1	22.5	13.8	8.7

Source: Food Balance Sheets 1975-77 Average and Per Capita Food Supplies 1961-65 Average 1967 to 1977, FAO. Rome 1980

(1) Central Bureau of Statistics, Welfare Indicators, 1982

(2) Japan Statistical Yearbook, 1984

(3) Key Indicators of Member Developing Countries of ADB Vol XV, April, 1984, Manila

(4) Food Supplies Analyses, FAO, Rome 1984

12-1. Per Capita Food Supplies (2)

(mg/day)

	Year	Calcium	Iron	Vitamin A	Vitamin B ₁	Vitamin B ₂	Vitamin C
INDONESIA	1977	221	13.6	30	1.06	0.48	56
JAPAN ⁽²⁾	1983	580	10.9	2,190 ^{a)}	1.37	1.29	134
MALAYSIA	1977	330	13.5	135	0.87	0.79	44
PHILIPPINES	1977	269	12.9	80	0.94	0.72	72
SINGAPORE	1977	656	21.8	269	1.59	1.38	76
THAILAND	1977	243	13.9	73	0.87	0.64	60

Note: a) Unit = i.u.

13-1. Housing Conditions

(%)

	Year		Percentage of households in occupied dwelling units with piped water	Percentage of households in occupied dwelling units by type of toilet facilities				Lighting			
				Flush/ Water	Pit or Moulded Bucket	Other	None	Electricity	Pressure/ Gas Lamp	Oil Lamp	Other
INDONESIA ⁽¹⁾	1980	Total	7.3	11.0 ^{a)}	25.3 ^{a)}	53.1 ^{a)}		13.9	—	85.0	0.8
		Urban	24.4	43.0	17.9	25.4		46.7	—	52.6	0.4
		Rural	2.4	5.1	26.6	58.2		5.5	—	93.3	0.9
JAPAN ⁽²⁾	1983	Total	94.0	58.5	41.5						
		Urban	95.9	67.0	33.0						
MALAYSIA ⁽³⁾	1980	Total	65.0	56.4	22.7	4.4	16.5	64.4	8.4	26.5	0.7
		Peninsular Malaysia	68.0	60.7	21.7	3.6	14.7	68.4	7.3	23.6	0.7
		Sabah	50.3	32.1	32.9	8.1	26.9	45.0	15.7	28.7	0.6
		Sarawak	47.8	56.4	22.7	4.4	16.5	41.6	13.2	44.5	0.7
PHILIPPINES ⁽⁴⁾	1983/84	Total	52.9	b)		c)	c)				
		Urban		72	13						
		Rural		47	28		17				
							25				
SINGAPORE ⁽⁵⁾	1984	Total	99.0	87.0	0.8			95.0			
THAILAND ⁽⁶⁾	1980	Total	18.9	4.2	50.3	44.1	1.3	43.0	0.7	54.8	0.2

Source: (1) Results of the Sub-Sample of the 1980 Population Census, Serie S No. 1, Biro Pusat Statistik, May 1982

(2) 1983 Housing Survey of Japan Vol. I, Part I, Statistics Bureau, March 1985

(3) Census of Housing, Malaysia 1980 Summary Report, Dept. of Statistics Malaysia, July 1982

(4) Environmental Sanitation, Ministry of Health, 1981

(5) Public Utilities Board and Ministry of Environment

(6) 1980 Population & Housing Census, Whole Kingdom, National Statistical Office

Note:

a) For 1971

b) For 1983

c) For 1984

14-1. Mean Length from Birth to One Year

(cm)

	People or Place	Year	Sex	Age					
				Birth	4 wks	3 mos	6 mos	9 mos	12 mos
INDONESIA	Jakarta ^{a)}	1964	M		52	59	64	67	71
			F		52	57	63	67	70
JAPAN ⁽¹⁾	National	1980	M	49.7	56.0	62.7	68.1	72.0	75.5
			F	49.3	55.2	61.1	66.8	70.6	74.1
MALAYSIA									
PHILIPPINES ⁽²⁾	National	1982	T	51.2	54.9	60.3	66.0	67.8	70.5
SINGAPORE ⁽³⁾	Malays	1972	M			60.2	65.3		73.6
			F			59.5	64.0		71.5
	Chinese	1972	M			61.8	66.5	71.0	74.5
			F			60.0	65.0	69.5	73.0
THAILAND	Bangkok		M	50.5 ^{b)}	56.1	62.0	67.8	71.9	73.5
			F	49.9	55.0	60.3	65.9	69.6	72.2

Source: Worldwide variation in human growth, Cambridge University Press, 1976

(1) Ministry of Health & Welfare, Japan

(2) Food and Nutrition Research Institute, Philippines

(3) Ministry of Health, Singapore

Note:

a) Low income group

b) Data from National center for Health Statistics of the United States (1977)

14-2. Mean Weight from Birth to One Year

(kgw)

	People or Place	Year	Sex	Age					
				Birth	4 wks	3 mos	6 mos	9 mos	12 mos
INDONESIA	Jakarta ^{a)}	1964	M	3.09	4.16	5.89	7.26	7.74	8.16
			F	3.01	3.79	5.43	6.80	7.50	8.01
JAPAN ⁽¹⁾	National	1980	M	3.23	5.08	6.84	8.15	9.04	9.71
			F	3.16	4.76	6.24	7.71	8.47	9.09
MALAYSIA ⁽²⁾	Pen. Malaysia	1982	T	3.09					
PHILIPPINES ⁽³⁾	National	1982	T	3.4	4.3	5.8	6.8	7.4	7.7
SINGAPORE ⁽⁴⁾	Malays	1972	M			6.0	7.2	8.1	8.8
			F			5.5	6.3	7.4	8.0
	Chinese	1972	M			6.5	8.1	8.9	9.2
			F			6.5	8.0	8.8	8.9
THAILAND	Bangkok		M	3.12	4.65	6.34	7.74	8.62	9.10
			F	3.01	4.46	5.61	7.33	7.97	8.50

Source: Worldwide variation in human growth, Cambridge University Press, 1976

Note: a) Low income group

(1) Ministry of Health & Welfare, Japan

(2) Ministry of Health, Malaysia

(3) Food and Nutrition Research Institute, Philippines

(4) Ministry of Health, Singapore

14-3. Mean Chest Circumference from Birth to One Year

(cm)

	People or Place	Year	Sex	Age					
				Birth	4 wks	3 mos	6 mos	9 mos	12 mos
INDONESIA	Jakarta ^{a)}	1964	M	31.5	34.5	38	40.5	42	43.5
			F	32.5	34.5	37	40	41.5	43
JAPAN ⁽¹⁾	National	1980	M	32.5	39.1	42.4	44.6	46.1	47.0
			F	32.4	38.2	41.2	43.6	44.9	45.7
MALAYSIA									
PHILIPPINES ⁽²⁾	National	1982	M		36.4	41.5	44.2	45.8	47.3
			F		35.2	39.9	42.8	43.8	45.4
SINGAPORE									
THAILAND	Bangkok		M	32.0	37.9	41.0	43.4	44.7	45.8
			F	31.9	37.5	40.1	42.7	43.5	44.1

Source: Worldwide variation in human growth, Cambridge University Press, 1976

Note: a) Low income group

(1) Ministry of Health & Welfare, Japan

(2) Food and Nutrition Research Institute, Philippines

14.4. Mean Height by Age (1 – 18 years)

	People or Place	Year	Sex	Age - Years						
				1	2	3	4	5	6	7
INDONESIA ⁽¹⁾	National	1977	M		82.2	88.5	97.2	102.4	107.1	112.1
			F		80.8	88.3	96.2	100.6	106.2	111.5
JAPAN ⁽²⁾	National	1983	M	80.9	89.1	96.3	103.4	109.5	115.8	121.6
			F	79.2	88.3	95.7	102.6	108.6	115.3	120.3
MALAYSIA ⁽³⁾	Rural	1960	M							109.7
			F						105.4	109.7
PHILIPPINES ⁽⁴⁾	National	1982	M	75.4	83.7	90.5	96.5	102.1	107.6	112.7
			F	74.8	82.8	89.4	96.6	102.2	107.2	112.4
SINGAPORE ⁽⁵⁾	National	1983	M						116.2	121.1
			F						115.4	120.5
THAILAND	Bangkok		M	73.5 ⁽³⁾	83.8 ⁽³⁾	93.5 ⁽³⁾	100.5 ⁽³⁾	105.0 ⁽³⁾	111.2 ^(6) a)	115.8 ^(6) a)
			F	72.2	84.0	93.0	99.0	103.5	110.5	115.3

Source: (1) Dept. of Growth & Development, Univ. of Tsukuba, Japan

(2) Ministry of Health & Welfare, Japan

(3) Worldwide variation in human growth, Cambridge University Press, 1976

(4) Food and Nutrition Institute, Philippines

(5) Ministry of Health, Singapore

(6) Burana Chavalittamrong and Ravadee Vathakanon, J. Med. Ass. Thailand, 1978

Note: a) 50 percentiles

(cm)

Age - Year										
8	9	10	11	12	13	14	15	16	17	18
118.0 116.1	122.6 121.2	125.2 125.5	129.6 130.8	133.2 136.4	142.7 143.7	147.7 146.1	153.2 149.1	157.8 150.7	159.4 152.4	161.2 151.2
125.7 126.3	132.4 131.9	137.1 137.8	142.4 145.0	149.5 150.7	156.9 154.0	163.5 156.3	167.1 156.7	168.3 156.8	170.4 156.4	169.7 157.3
111.8 112.8	114.3 117.9	121.9 123.4	129.3 131.8	133.4 137.2	138.4	141.4				
117.2 118.0	122.7 122.5	126.4 127.5	130.4 132.6	135.5 140.1	142.3 144.8	147.3 148.4	154.5 150.2	160.0 150.2	160.9 151.2	162.0 151.0
126.2 125.7	131.1 131.3	135.4 137.3	140.6 143.9	148.2 148.7	156.1 152.4	162.2 154.6	165.5 155.6	166.8 155.4	167.8 155.7	165.8 157.7
(6) a) 120.5 120.5	(6) a) 125.3 125.7	(6) a) 130.0 131.0	(6) a) 134.7 136.7	(6) a) 139.8 143.1	(6) a) 145.8 148.7	(6) a) 153.2 151.9	(6) a) 158.8 153.3	(6) a) 162.9 153.8	(6) a) 164.5 154.0	(6) a) 165.1 154.1

14-5. Mean Weight by Age (1 – 18 years)

	People or Place	Year	Sex	Age - Years						
				1	2	3	4	5	6	7
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	1982	M	11.1	12.9	14.6	16.7	18.6	20.8	23.4
			F	10.6	12.4	14.3	16.4	18.1	20.6	22.9
MALAYSIA ⁽³⁾	Rural	1960	M							17.8
			F						16.4	18.6
PHILIPPINES ⁽⁴⁾	National	1982	M	9.1	11.1	12.9	14.2	15.7	17.3	18.8
			F	8.8	10.7	12.3	13.8	15.6	16.8	18.7
SINGAPORE ⁽⁵⁾	National	1983	M						20.6	22.6
			F						19.9	22.4
THAILAND	Bangkok		M	9.1 ⁽³⁾	11.0 ⁽³⁾	13.4 ⁽³⁾	15.1 ⁽³⁾	16.83 ⁽³⁾	17.2 ^(6) a)	18.6 ^(6) a)
			F	8.5	10.9	13.0	14.5	16.08	16.8	18.3

Source: (1) Dept. of Growth & Development, Univ. of Tsukuba, Japan

(2) Ministry of Health & Welfare, Japan

(3) Worldwide variation in human growth, Cambridge University Press, 1976

(4) Food and Nutrition Research Institute, Philippines

(5) Ministry of Health, Singapore

(6) Burana Chavalittamrong and Ravadee Vathakanon, J. Med. Ass. Thailand, 1978

Note: a) 50 percentiles

(kgw)

Age - Years										
8	9	10	11	12	13	14	15	16	17	18
19.9 19.2	21.3 21.6	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
26.1 26.0	29.2 28.5	32.5 32.4	36.2 37.9	42.0 43.3	47.4 46.3	53.7 49.2	56.7 51.1	59.9 51.7	59.7 50.9	62.0 51.6
19.5 18.7	20.7 21.8	24.2 24.0	27.0 28.5	29.5 30.0	32.5	35.3				
20.5 21.1	22.7 22.8	24.7 25.2	26.6 27.7	29.2 32.7	34.0 36.5	37.6 41.2	43.0 43.9	47.8 44.6	49.9 45.8	51.3 46.1
25.3 24.5	28.3 27.4	31.3 31.3	34.4 36.1	39.5 40.0	44.7 43.6	49.4 45.5	52.7 47.0	54.3 47.7	55.9 47.5	54.6 50.2
(6) a) 20.2 20.1	(6) a) 22.1 22.3	(6) a) 24.2 24.8	(6) a) 26.5 27.9	(6) a) 29.1 32.5	(6) a) 32.8 37.1	(6) a) 38.1 40.4	(6) a) 43.2 42.6	(6) a) 46.6 44.1	(6) a) 48.8 44.9	(6) a) 50.4 45.5

15. Definition of the Main Terms Used in the Hospital Statistics (WHO)

Occupation and level of education	Personnel to be included in the data
1. Hospitals	All establishments 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 hospitals (principal)	Hospitals—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, specialized surgery, obstetrics, etc.)
3. Local or rural hospitals	Hospitals, usually in rural areas, permanently staffed by one or more physicians, which—in respect of their functions—are also general hospitals, but provide medical and nursing care of a more limited range than that provided by principal general hospitals.
4. Medical and maternity centres with beds	Small units, also known as rural health centres, bedded dispensaries, rural maternity homes, etc., not permanently staffed by a physician (but by a medical assistant, nurse, midwife, etc.), which offer inpatient accommodation and provide a limited range of medical and nursing care.
5. Specialized hospitals	Hospitals providing medical and nursing care primarily for only one discipline. This category does not include the specialized departments 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.
6. Government hospitals	All hospitals administered by a government authority at any level, whether central, intermediate, or local.

Occupation and level of education	Personnel to be included in the data
7. Private non-profit-making hospitals	All hospitals, whether subsidized by the government or not, operated on a non-profit-making basis by non-government bodies, such as religious missions, industrial enterprises, trusts, or philanthropic institutions.
8. Private profit-making hospitals	All private hospitals (or medical establishments with beds) operated on a profit-making basis.
9. Beds	A hospital bed is one regularly maintained and staffed for the accommodation and fulltime 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.
10. Admissions	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.
11. Discharges (including deaths)	The number of persons, living or dead, whose stay has terminated and whose departure has been officially recorded.
12. 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.

15-1. Comparative Table of Medical Facilities

	Indonesia (1984)	Japan (1984)	Malaysia (1984)			Philippines (1984)	Singapore (1984)	Thailand (1984)
			Peninsular Malaysia	Sabah	Sarawak			
General Hosp.	v	v	v	v	v	v	v	v
General & Rural Hosp.	v							
Local or Rural Hosp.	v		v	v	v			v
Medical Center	v				v	v		v
Internal Medicine Hosp.								
Medical & Maternity Center						v		v
Maternity Hosp.	v					v	v	v
Infectious Diseases Hosp.	v	v				v	v	v
Chronic Diseases Hosp.							v	
Leprosy Hosp.	v	v	v		v	v		v
Tuberculosis Hosp.	v	v	v			v		v
Pediatrics Hosp.						v	v	v
Oto-Rhino-Laryngology Hosp.								
Dermato-Venereology Hosp.								v
Ophthalmology Hosp.	v						v	v
Orthopedics Hosp.	v					v		
Mental Hosp.	v	v	v	v	v	v	v	v
Cancer Hosp.	v							v
Establ. for Drug Addicts	v		v					v
Other Specialized Hosp.						v		v
Rural Hosp. & Nursing Homes			v					
Tropical Diseases Hosp.						v		v

Fig. 5 Annual Change of Number of Hospitals (Per 100,000)

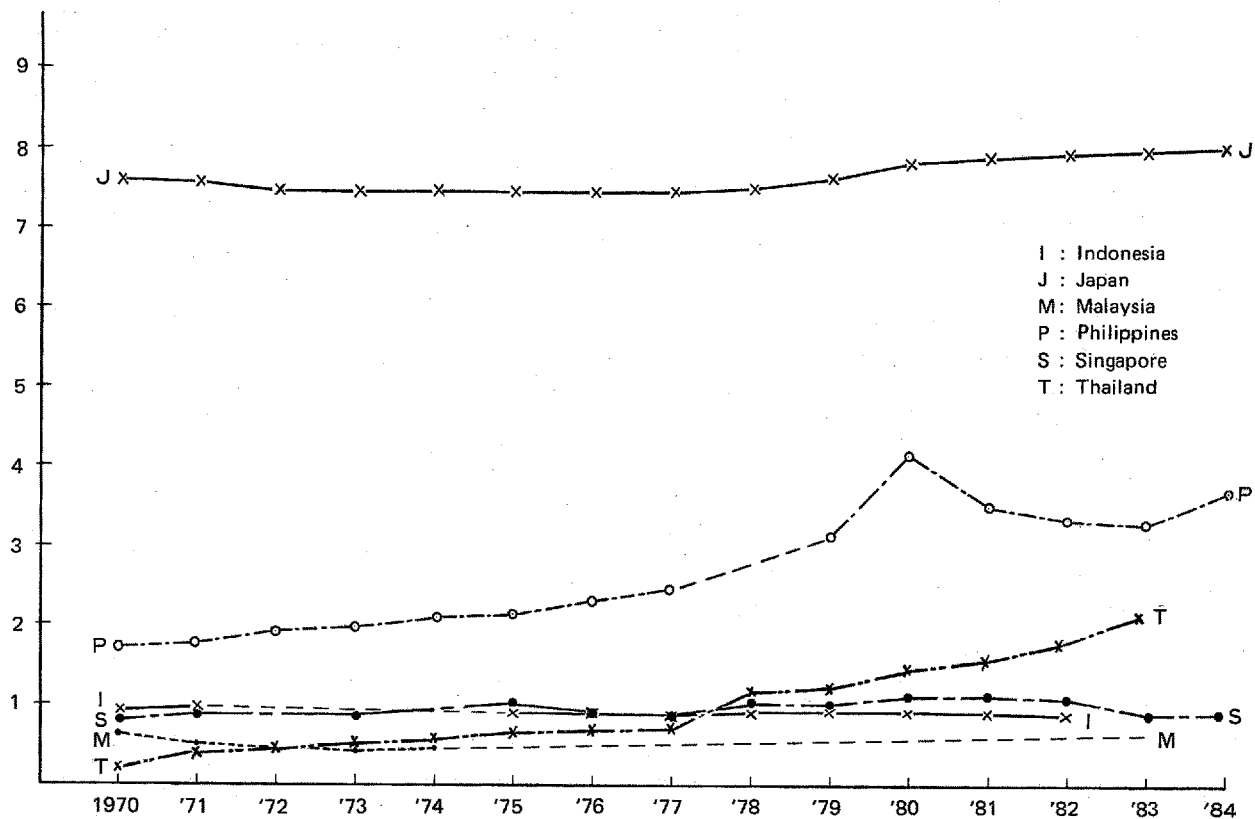


Fig. 6 Annual Change of Number of Beds (Per 100,000)

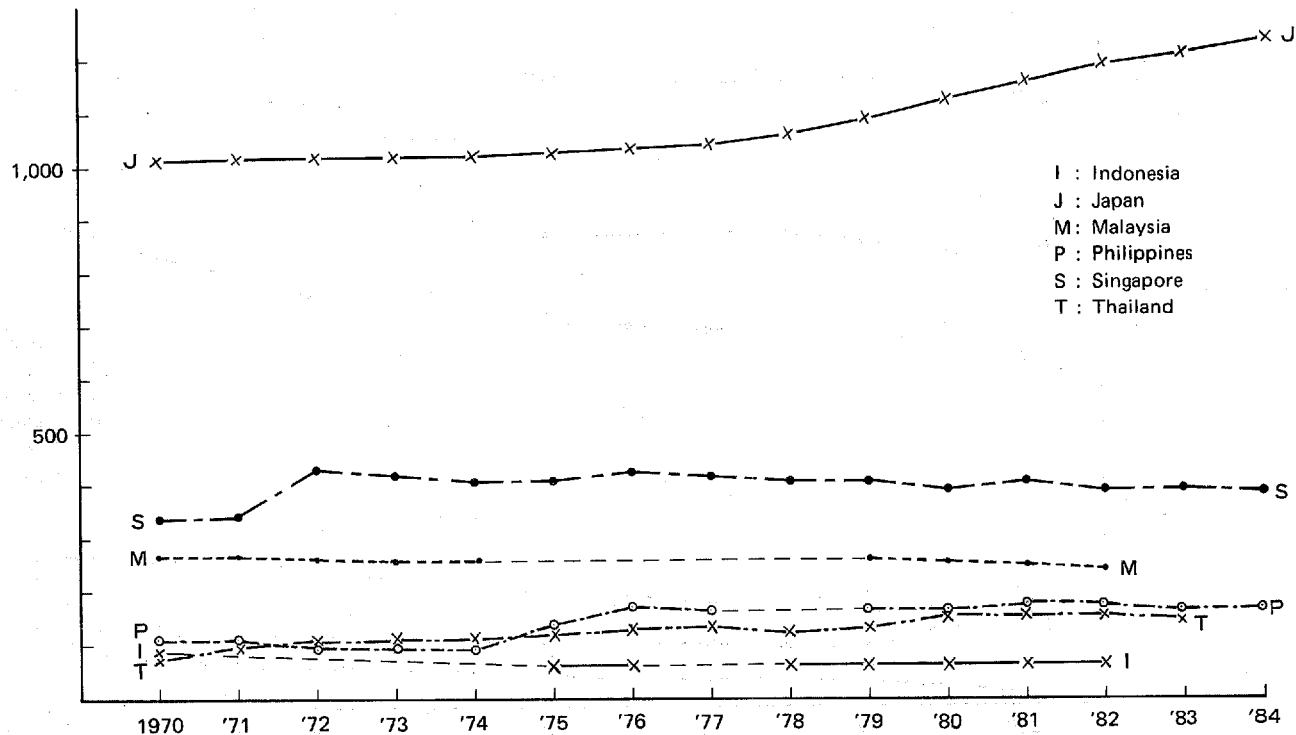


Fig. 7 Annual Change of Number of Physicians (Per 100,000)

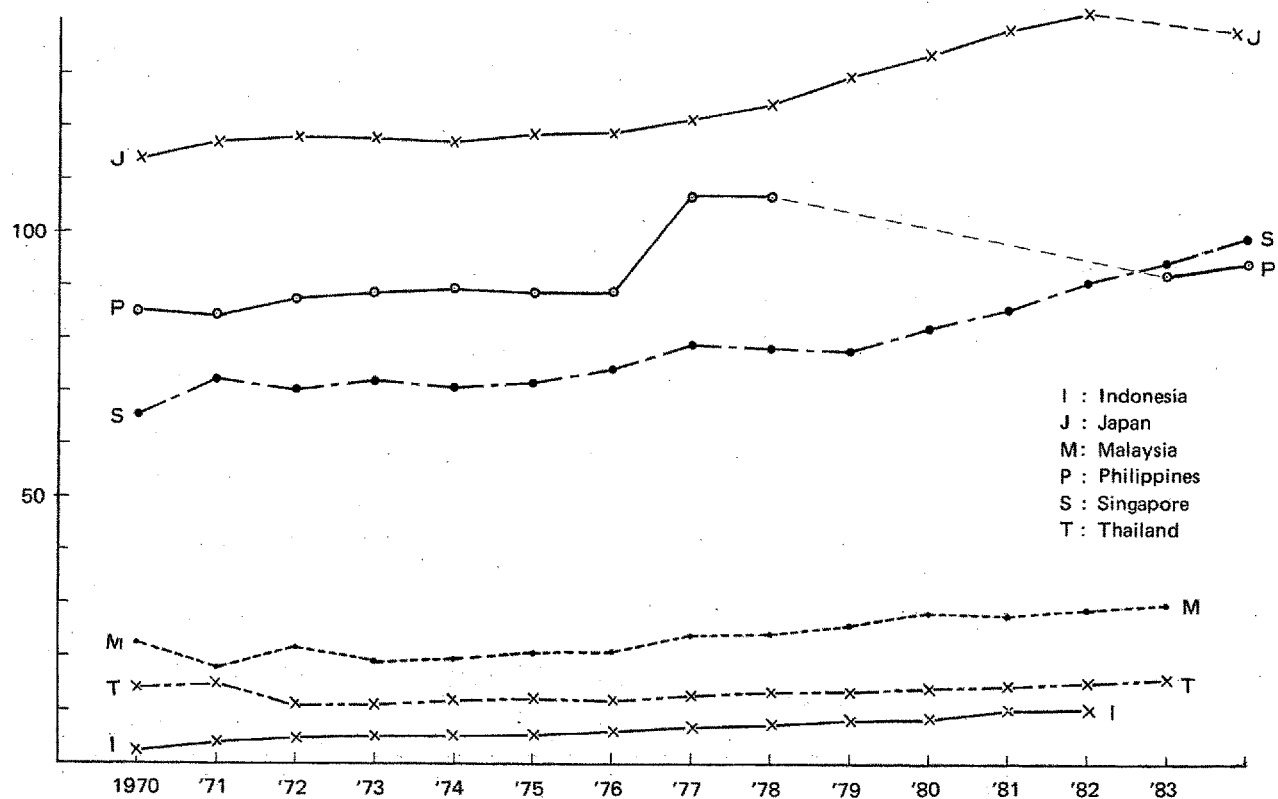
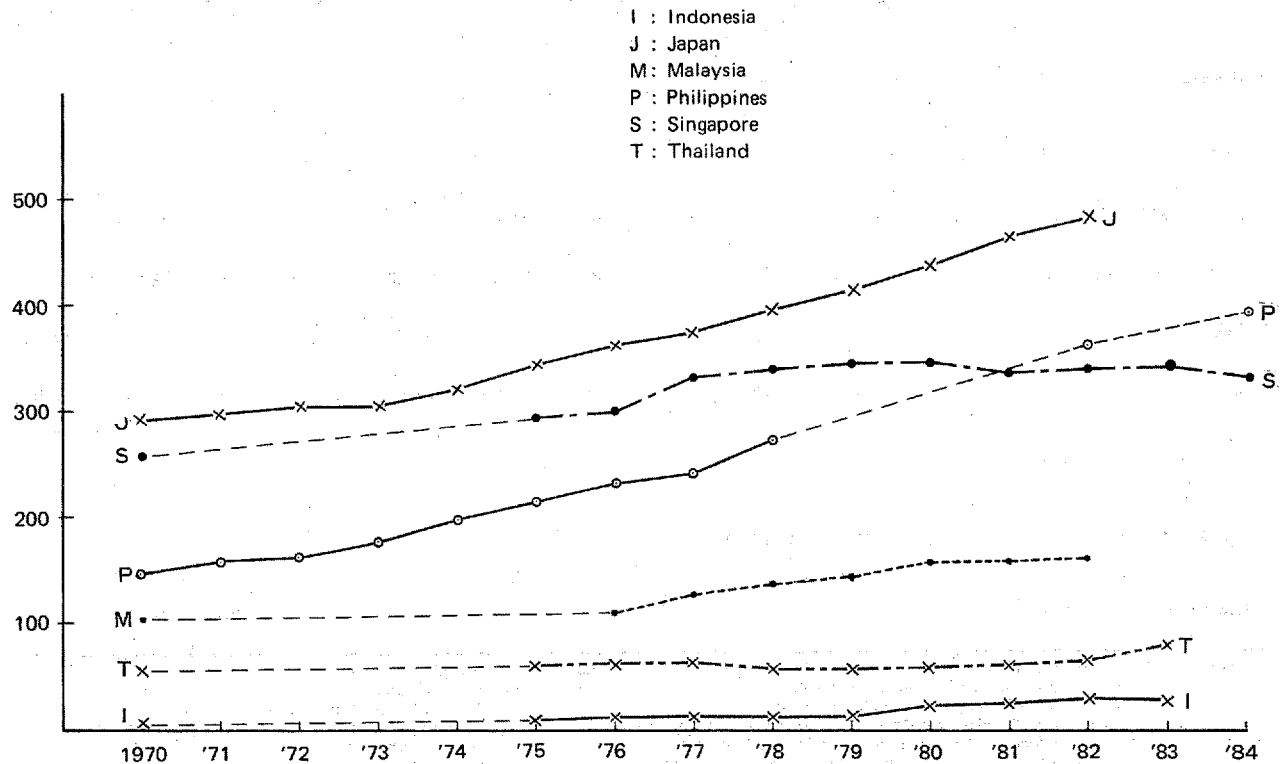


Fig. 8 Annual Change of Number of Nurses and Midwives (Per 100,000)



15-2. Hospital and Other Medical Establishments with Beds (1)

	Year	General Hospitals				General and Rural Hospitals				Local or Rural Hospitals			
		Establish-ments	Beds	Admis-sions or Discharges	Patient-Days	Establish-ments	Beds	Admis-sions or Discharges	Patient-Days	Establish-ments	Beds	Admis-sions or Discharges	Patient-Days
INDONESIA ⁽¹⁾	1984	674	81,122	1,333,042									
JAPAN	1984	8,500	1,050,113	8,203,010*	360,078,340*								
MALAYSIA ^(2) a)	1984	16	13,790	—		90	24,961	—	—	74	11,171	—	—
Peninsular Malaysia	1984	12	11,403	458,114		60	20,335	788,488		48	8,932	330,374	
Sabah	1984	3	1,159	51,220		15	2,232	101,339		12	1,073	50,119	
Sarawak	1984	1	1,228	29,925 ^{b)}		15	2,394	100,311 ^{b)}		14	1,166	70,386 ^{b)}	
PHILIPPINES ⁽³⁾	1984												
SINGAPORE	1984	13	5,181	214,818	1,277,082								
THAILAND ⁽⁴⁾	1983	96	15,253							667	49,175		

Source: Ministry of Health in each country

- (1) Directorate of Medical Care, MOH, Indonesia
 (2) Information and Documentation System Unit
 Planning and Development Division, Ministry of Health Malaysia
 (3) Bureau of Medical Services, Ministry of Health, Philippines
 (4) Health Statistics Division, Ministry of Public Health, Thailand

Note: a) District Hospital
 b) For year 1983
 Beds for Government Hospitals only
 Excluding Special Medical Institutions
 c) For year 1983
 * estimated

Medical Centers				Medical & Maternity Centers				Maternity Hospitals			
Establish- ments	Beds	Admis- sions or Discharges	Patient- Days	Establish- ments	Beds	Admis- sions or Discharges	Patient- Days	Establish- ments	Beds	Admis- sions or Discharges	Patient- Days
				486	10,499	301,092	1,219,754	519 ^{c)}	11,903 ^{c)}		
.			
.			
8	2,650	111,438	673,912					1	700	43,189	213,682
. . .				. . .				1	681	48,349	175,392
5	66			. . .				7	1,072		

15-2. Hospital and Other Medical Establishments with Beds (2)

	Year	Infectious Diseases Hospitals				Chronic Diseases Hospitals				Leprosy Hospitals			
		Establish-ments	Beds	Admis-sions or Discharges	Patient-Days	Establish-ments	Beds	Admis-sions or Discharges	Patient-Days	Establish-ments	Beds	Admis-sions or Discharges	Patient-Days
INDONESIA	1983	1	76			• •				26	3,794		
JAPAN	1984	12	15,042	365*	8,030*	• •				16	10,729	365*	2,859,775*
MALAYSIA													
Peninsular Malaysia	1984	• •				• •				2	1,260	402	
Sabah											—	—	—
Sarawak	1984									1	400	1,039 ^{a)}	—
PHILIPPINES	1984	1	900	37,754	187,804	• •				8	5,200	• •	
SINGAPORE	1984	1	272	7,509	42,727	1	425	360	115,732	• •			
THAILAND	1983	1	400			• •				3	2,590		

Note: a) For year 1982

* estimated

Tuberculosis Hospitals				Pediatrics Hospitals				Dermato-Venereology Hospitals			
Establish-ments	Beds	Admis-sions or Discharges	Patient-Days	Establish-ments	Beds	Admis-sions or Discharges	Patient-Days	Establish-ments	Beds	Admis-sions or Discharges	Patient-Days
12	886			. . .				. . .
31	60,067	3,285*	847,165*	. . .				. . .
1	300	1,785		. . .				. . .
—	—	—									
—	—	—									
2	1,052	14,429	74,372	1	242	8,284	68,984	. . .			
. . .				1	80	180	14,882	. . .			
2	536			1	482			1	43		

15-2. Hospital and Other Medical Establishments with Beds (3)

	Year	Ophthalmology Hospitals				Orthopedics Hospitals				Mental Hospitals			
		Establish-ments	Beds	Admis-sions or Discharges	Patient-Days	Establish-ments	Beds	Admis-sions or Discharges	Patient-Days	Establish-ments	Beds	Admis-sions or Discharges	Patient-Days
INDONESIA	1983	5	552			1	150			43	6,457		
JAPAN	1984	• •				• •				1,015	331,099	152,205	92,198,270
MALAYSIA													
Peninsular Malaysia	1984									2	5,098	6,016	
Sabah	1984	• •				• •				1	302	425	
Sarawak	1984									1	348	1,169 ^{a)}	
PHILIPPINES	1984	• •				1	700	8,392	212,002	1	5,200	6,011	1,523,225
SINGAPORE	1984	1	20	333	2,600	• •				3	3,009	6,437	953,440
THAILAND	1983	5	112			• •				15	7,325		

Note: a) From the Medical Department of Sarawak Annual Report 1981
New Admissions only of Bukit Padang Special Mental Institution
b) For year 1980

Cancer Hospitals				Establ. for Drug Addicts				Tropical Diseases Hospitals			
Establish- ments	Beds	Admis- sions or Discharges	Patient- Days	Establish- ments	Beds	Admis- sions or Discharges	Patient- Days	Establish- ments	Beds	Admis- sions or Discharges	Patient- Days
1 ^{b)}	60 ^{b)}			1 ^{b)}	20 ^{b)}	238 ^{b)}	4,978 ^{b)}		• •		
• •				• •				• •			
• •				• •				• •			
• •				• •				1	50	966	8,554
• •				• •						• •	
1	146			2	410			1	197		

15-2. Hospital and Other Medical Establishments with Beds (4)

	Year	Other Specialized Hospitals				Total			
		Establish-ments	Beds	Admis-sions or Discharges	Patient-Days	Establish-ments	Beds	Admis-sions or Discharges	Patient-Days
INDONESIA	1983	4	56			1,274	103,702		
JAPAN	1984	. . .				9,574	1,467,050	8,384,656	455,991,580*
MALAYSIA						90	24,961 ^{a)}	—	
Peninsular Malaysia	1984					60	20,335	788,488	
Sabah	1984	. . .				15	2,232	101,339	
Sarawak	1984					15	2,394	100,311 ^{b)}	
PHILIPPINES	1984	5	7,750	. . .		29	24,444	230,463 ^{b)}	2,962,535
SINGAPORE	1984	. . .				21	9,668	277,986	2,581,855
THAILAND	1983	1	10	. . .		808	77,817		

Note: a) Total Beds excluding those in Special Medical Institutions
b) Admission only

15-3. Hospital Utilization by Category of Hospitals (1)

	Year	All Hospitals					General Hospitals					
		Type	Population Per Bed	Beds Per 10,000 Pop.	Admissions Per 10,000 Pop.	Bed Occupancy Rate (%)	Type	Beds Per 10,000 Pop.	Admissions		Bed Occupancy Rate (%)	Aver. Length of Stay (Days)
									Per 10,000 Pop.	Per Bed		
INDONESIA	1983 1984	T	1,526 1,573	6.6 6.5			T	5	82.5	16.4		
JAPAN	1984	T	82.0	122.0	695.5*	85.6	T	100.9	657.6*	6.6	80.8	44.1
MALAYSIA ⁽¹⁾												
Peninsular Malaysia	1984	A	622	16.08	623	62.6	A	9.02	362	40	72.9	6.6
Sabah	1984	A	527	18.97	861	78.0 ^{c)}	A	9.85	435	44	76.0 ^{c)}	
Sarawak	1984	A	602	16.60	696 ^{b)}		A	8.52	208 ^{b)}	24 ^{b)}		
PHILIPPINES ⁽²⁾	1984	T	592	4.6	43.3							
SINGAPORE	1984	T	262	38.2	1,099.1	73.0	T	20.5	849.4	41.5	69.2	5.9
THAILAND ⁽³⁾	1983	T	635	15.7			T	3.1				

Source: Ministry of Health in each Country
 (1) Information and Documentation System Unit,
 Planning and Development Division, Ministry of Health, Malaysia
 (2) Bureau of Medical Services, Ministry of Health, Philippines
 (3) Health Statistics Division, Ministry of Public Health

Note: Category of Hospital
 T = Total
 A = Government hospital establishments
 B = Private non-profit hospital establishments
 b) For year 1983
 c) For year 1981 (from Medical & Health Dept. Sabah)
 * estimated

Local or Rural Hospitals						Medical and Maternity Centers					
Type	Beds Per 10,000 Pop.	Admissions		Beds Occupancy Rate (%)	Aver. Length of Stay (Days)	Type	Beds Per 10,000 Pop.	Admissions		Bed Occupancy Rate (%)	Aver. Length of Stay (Days)
		Per 10,000 Pop.	Per Bed					Per 10,000 Pop.	Per Bed		
T	2.4	70.2	30	52.3	5.6	T	1.1	30.1	28.7	7.9	4
. .						. .					
A	7.06	260	37	49.3	4.9	. .					
A	9.12	426	47	77.0 ^{c)}							
A	8.09	488 ^{b)}	60 ^{b)}								
. .						. .					
. .						. .					
T	9.9										

15-3. Hospital Utilization by Category of Hospitals (2)

	Year	Tuberculosis Hospitals						Mental Hospitals					
		Type	Beds Per 10,000 Pop.	Admissions		Beds Occupancy Rate (%)	Aver. Length of Stay (Days)	Type	Beds Per 10,000 Pop.	Admissions		Bed Occupancy Rate (%)	Aver. Length of Stay (Days)
				Per 10,000 Pop.	Per Bed					Per 10,000 Pop.	Per Bed		
INDONESIA	1983	T	0.05	0.4	4.6	52.1	39	T	0.4	1.9	13	89.3	115
JAPAN	1983	T	0.28	0.31	1.12	74.7	240.4	T	20.1	12.91	0.64	104.4	596.2
MALAYSIA													
Peninsular Malaysia	1984	A	2.37	1.41	5.95	59.7	36	A	4.03	4.76	1.18	84.40	291
Sabah	1984	A						A	2.57	3.61	1.41		
Sarawak	1981	A						A	2.59 ^{a)}	8.73 ^{a)}	3.35 ^{a)}		
PHILIPPINES	1984	T	0.2	2.71		74 ^{b)}	17 ^{b)}	Special	1.0	1.13		80.2	27.5
SINGAPORE	1984							T	11.9	25.5	2.1	81.2	148.1
THAILAND	1983	T	0.1					T	1.5				

Note: a) Patient Admission in Sarawak Mental Hospital, Sibü & Miri Psychiatric Units.
 — From Sarawak Medical Dept. Annual Report
 b) Lung Center only

Maternity Hospitals					
Type	Beds Per 10,000 Pop.	Admissions		Beds Occupancy Rate (%)	Aver. Length of Stay (Days)
		Per 10,000 Pop.	Per Bed		
T	0.08	5.4	42.6	45.7	4
Special	0.13	8.12		83.6	2.8
T	2.7	191.2	71.0	77.1	3.6
A	0.2				

15-4. Number of Hospitals

		1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
INDONESIA ⁽¹⁾		1,164	1,115	1,138	1,132	1,169	1,181	1,208	1,239	1,246	1,273 ^{b)}	1,306 ^{b)}
JAPAN ⁽²⁾		7,974	8,294	8,379	8,470	8,580	8,800	9,055	9,224	9,403	9,515	9,574
MALAYSIA ⁽³⁾											96	98
Peninsular Malaysia		64									64	65
Sabah			15	15	17						16	16
Sarawak		14	14	14	15	15					16	17
PHILIPPINES ⁽⁴⁾	Total	650	927	1,046	1,108		1,452	2,020	1,711	1,713	1,706	1,839
	Public	220	316	375	331		407	413	511	519	527	612 ^{c)}
	Private	430	611	671	777		1,045	1,607	1,200	1,194	1,179	1,227
SINGAPORE ⁽⁵⁾	Total	16	22	21	21	23	25	26	26	26	23	22
	Government	11	14	13	13	13	13	13	13	13	11	11
	Private	5	8	8	8	10	12	13	13	13	12	11
THAILAND ⁽⁶⁾	Total	98	281	294	317	512	542	636	654	718 ^{a)}	808	

Source: (1) Data from Ministry of Health, Indonesia
(2) Data from Ministry of Health & Welfare, Japan
(3) Information and Documentation System Unit
Planning Development Division, Ministry of Health, Malaysia
(4) Bureau of Medical Services, Ministry of Health, Philippines

Note: (5) Yearbook of Statistics, Singapore, 1984/85
(6) Health Statistics Division, Ministry of Public Health,
a) Revised Figure
b) Directorate of Medical Care, MOH, Indonesia
c) Including other Government Agencies

15.5. Number of Beds

		1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
INDONESIA⁽¹⁾		86,022	83,696	82,945		94,631	96,739	98,543	102,374	102,912	103,586 ^{a)}	104,966 ^{a)}
JAPAN⁽²⁾		1,062,553	1,164,098	1,184,737	1,207,003	1,232,779	1,269,081	1,319,406	1,362,161	1,401,999	1,440,381	1,467,050
MALAYSIA⁽³⁾							34,592 ^{c)}	35,291 ^{c)}	35,308 ^{c)}	35,605 ^{c)}	35,779	32,669
Peninsular Malaysia		27,927					29,186 ^{c)}	29,792 ^{c)}	29,527 ^{c)}	29,533 ^{c)}	29,661	26,993
Sabah			2,233	2,309			2,670 ^{c)}	2,670 ^{c)}	2,668 ^{c)}	2,924 ^{c)}	2,950	2,534
Sarawak		2,000	2,358	2,424	2,542	2,576	2,736 ^{c)}	2,829 ^{c)}	3,113 ^{c)}	3,148 ^{c)}	3,168	3,142
PHILIPPINES⁽⁴⁾	Total	40,289	55,323	75,630	72,144		76,294	81,976	88,070	88,250	84,142	90,279
	Public	19,725	27,075	44,577	38,045	44,802	39,129	39,625	46,631	48,199	45,187	47,861 ^{d)}
	Private	20,564	28,248	31,053	34,099		37,165	42,351	41,439	40,051	38,955	42,418
SINGAPORE⁽⁵⁾	Total		9,105	9,709	9,671	9,583	9,746	9,579	9,899	9,822	9,807	9,668
	Government	6,891	8,005	8,609	8,574	8,493	8,485	8,078	8,365	8,246	8,222	8,085
	Private		1,100	1,100	1,097	1,090	1,261	1,501	1,534	1,576	1,585	1,583
THAILAND⁽⁶⁾	Total	25,619	52,652	56,998	59,482	56,992	60,969	71,718	71,966	74,725 ^{e)}	78,438 ^{b)}	

Source: (1) Welfare Indicator, 1982
 (2) Data from Ministry of Health & Welfare, Japan
 (3) Information and Documentation System Unit
 Planning and Development Division, Ministry of Health,
 Malaysia
 (4) Bureau of Medical Services, Ministry of Health, Philippines
 (5) Yearbook of Statistics, Singapore, 1984/85

Note: (6) Health Statistics Division, Ministry of Public Health
 a) Directorate of Medical Care, MOH, Indonesia
 b) Included Private Maternity Centers
 c) Beds are those in Government Hospitals including
 d) Including other Government Agencies
 e) Revised Figure

16. Definition of Medical Personnel (WHO)

Occupation and level of education	Personnel to be included in the data
1. Physicians High (university) level	All graduates of a medical school of faculty actually working in your country in any medical field (practice, teaching, administration, research, laboratory, etc.).
2. Medical assistants Middle level	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. Multipurpose health auxiliaries Basic level	Personnel who may have no more than elementary general education and a few months of in-service training and who provide basic health services at the village level.
4. 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 your country in any dental field. (b) Personnel qualified from a dental school of non-university level and licensed to practise dentistry in your country.
5. Dental operating auxiliaries	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.
6. Dental non-operating auxiliaries (a) Dental laboratory technicians (b) Dental chairside assistants	Dental non-operating auxiliaries who assist dentists and dental operating auxiliaries in their clinical work but who do not carry out any independent intra-oral procedures. These dental personnel usually have technical training either in formal courses or by apprenticeship.

Occupation and level of education	Personnel to be included in the data
7. Pharmacists/Chemists High (university) level	All graduates of a faculty or school of pharmacy actually working in your country in pharmacies, hospitals, laboratories, industry, etc.
8. Pharmaceutical assistants Middle level	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. Veterinarians/Veterinary surgeons High (university) level	All graduates of a faculty or school of veterinary medicine actually working in your country in any field of veterinary activity, including teaching and public health.
10. Animal health assistants Middle level	Personnel carrying out limited diagnostic, preventive, and curative veterinary services. These personnel have no veterinary education of university level.
11. Professional Midwives High level (a) Non-nurse midwives (b) Nurse-midwives	All graduates of a midwifery school actually working in your country in any field of midwifery (practice in institutions and community health services, teaching, administration, private practice, etc.)
12. Assistant midwives/auxiliary midwives Middle level	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.
13. Auxiliary Nurse-midwives Middle level	Personnel performing certain nursing duties and midwifery duties in normal obstetrics, in principle under the supervision of a professional nurse or midwife. These personnel have simpler education and training in nursing and midwifery than the professional nurse-midwife.

Occupation and level of education	Personnel to be included in the data
14. Professional Nurses High level	All graduates of a nursing school working in your country in any nursing field (general nursing, specialized clinical nursing services in mental health, paediatrics, cardiovascular diseases, etc. — public health or occupational health, teaching, administration, research, etc.). These personnel are qualified and authorized to provide the most responsible and competent professional nursing service.
15. Assistant nurses/ auxiliary nurses Middle level	Personnel performing general patient care of a less complex nature in hospitals and other health services, in principle under the supervision of a professional nurse. These personnel do not have the full education and training of a professional nurse.
16. Nursing and mid-wifery aids Basic level	Personnel performing specified non-technical tasks in institutions or community health services under nursing supervision. These personnel usually have on-the-job or short training.
17. Physiotherapists/ Physical therapists	Professional personnel treating patients by exercise, physical means, and massage, usually as prescribed by a physician.
18. Medical laboratory technicians High-level 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.
19. Assistant medical laboratory technicians Middle-level	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.

Occupation and level of education	Personnel to be included in the data
20. Medical Physicists High (university) level	All graduates of a university or faculty of natural science with qualification in physics and mathematics and special education and training in the field of medical physics.
21. Medical radiological technicians High-level technicians	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. If possible, indicate the distribution of medical activity: (a) MRT (General) (b) MRT (Diagnosis) (c) MRT (Therapy)
22. Assistant medical radiological technicians Middle-level technicians	Auxiliary medical radiological personnel working under the direct supervision of a medical radiological technician or under a specialist or physician.
23. Sanitary engineers High (university) level	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.
24. Sanitarians High-level technicians	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.
25. Auxiliary sanitarians Middle-level technicians	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.

Occupation and level of education	Personnel to be included in the data
26. Other scientific or professional personnel Examples: Biochemists Biologists Entomologists Psychologists Nutritionists Dietitians Occupational therapists Speech therapists Other special therapists Health educators Health statisticians Medical record librarians	Scientific (university) or professional personnel working in the health field, but not classifiable under previous items (e.g., excluding physicians).
27. Other technical personnel Examples: Cardiology technicians Encephalographers Opticians Orthopaedic technicians Hearing aid technicians Health statistical technicians Medical record technicians	Technical personnel in the health field not classifiable under previous items.
28. Other health auxiliaries and aides Examples: Microscopists Laboratory aides Dark-room assistants	Health auxiliaries not classifiable under previous items, who generally have not more than primary general education and an elementary technical training by apprenticeship or in-service training.

Occupation and level of education	Personnel to be included in the data
29. Practitioners of traditional medicine/ midwifery Examples: Herb doctors Ayurvedic doctors Lay medical practitioners Medicine men Acupuncturists Traditional birth attendants	

16-1. Comparative Table of Medical Personnel

	Indonesia (1984)	Japan (1984)	Malaysia (1984)			Philippines (1984)	Singapore (1984)	Thailand (1984)
			Peninsular Malaysia	Sabah	Sarawak			
Physicians	v	v	v	v	v	v	v	v
Medical assistants			v	v	v			v
Multipurpose health auxiliaries			v	v	v	v		v
Dentists/Dental surgeons	v	v	v	v	v	v	v	v
Dental operating auxiliaries	v	v	v	v	v		v	v
Dental non-operating auxiliaries	v			v	v		v	v
Pharmacists/Chemists	v	v	v	v	v	v	v	v
Pharmaceutical assistants	v		v	v	v		v	v
Veterinarians/Veterinary surgeons		v	v	v	v	v	v	v
Animal health assistants					v		v	v
Professional midwives	v	v	v	v	v	v	v	v
Assistant midwives/Auxiliary midwives	v		v	v	v			v
Auxiliary nurse-midwives			v	v	v			v
Professional nurses	v	v	v	v	v	v	v	v
Assistant nurses/Auxiliary nurses	v	v	v	v	v		v	v
Nursing and midwifery aids	v		v	v	v	v		v
Physiotherapists/Physical therapists	v	v	v	v	v	v	v	v
Medical laboratory technicians	v	v	v	v	v	v	v	v
Assistant medical laboratory technicians	v	v	v	v	v		v	v
Medical physicist		v	v				v	
Medical radiological technicians	v	v	v	v	v	v	v	v
Assistant medical radiological technicians	v	v	v	v	v		v	v
Sanitarians	v		v	v	v	v	v	v
Auxiliary sanitarians			v	v	v		v	v
Sanitary engineers			v	v	v	v	v	v
Other scientific or professional personnel	v	v	v	v	v		v	v
Other technical personnel		v	v	v	v		v	v
Other health auxiliaries and aides	v		v	v	v		v	v
Practitioners of traditional medicine/Midwifery			v	v	v			v
Dental nurses	v		v	v	v		v	
Nurses including nurse-midwives			v	v	v		v	

16-2. Medical and Allied Health Personnel (1)

	Year	Physicians	Medical Assistants	Multi-purpose Health Auxiliaries	Dentists/ Dental Surgeons	Dental Operating Auxiliaries	Dental Non-operating Auxiliaries	Pharmacists/ Chemists
INDONESIA ⁽¹⁾	1983	16,698	• •	• •	2,364	2,538	56	3,587
	1984	17,760	• •	• •	2,664			3,926
JAPAN	1984	181,101	• •	• •	63,145	29,399	• •	129,700
MALAYSIA ^(2)a)	1983	4,474	3,901	—	858	—	—	675
Peninsular Malaysia	1983	4,082	3,288	—	774	—	—	598
Sabah	1983	174	316	—	48	—	—	36
Sarawak	1983	218	297	—	36	—	—	41
PHILIPPINES	1984	49,602 ^{b)}	• •	262,553 ^{c)}	20,304 ^{b)}	779 ^{f)} 1,290 ^{g)}	• •	26,005 ^{b)}
SINGAPORE	1984	2,504	• •	• •	588	248	46 ^{g)}	409
THAILAND ⁽³⁾	1983	7,902	276	232,105	1,247	325	481	2,990

Source: Ministry of Health in each country
 (1) The Health Situation of Indonesia
 (2) Information and Documentation System Unit
 Establishment Book, Ministry of Health & Operating
 Expenditure on Post Vol. II-1983, Ministry of Finance
 (3) Health Statistics Division, Ministry of Public Health

Note: a) As of Dec. 31, 1983
 b) Registered as of July, 1985
 c) Barangay Health Workers Trained only P : Private
 G : Government
 d) Entry used for Calculation of Population/Nursing and
 Midwifery Personnel Ratios
 e) Nursing Board, Ministry of Health
 f) Private
 g) Government

Pharmaceutical Assistants	Veterinarians/ Veterinary Surgeons	Animal Health Assist.	Professional Midwives	Assistant Midwives/ Auxiliary Midwives	Auxiliary Nurse-Midwives	Professional Nurses	Assistant Nurses/ Auxiliary Nurses	Nursing and Midwives Aids
21,880	. . .	. . .	17,658	19,858	. . .		42,996	43,492
. . .	25,655	. . .	24,649	. . .	. . .	308,415	281,762	. . .
1,119			6,162	—	—	19,127 ^{e)}	9,955 ^{e)}	—
945			5,423	—	—	17,916 ^{e)}	8,640 ^{e)}	
81	. . .	. . .	417	. —	—	640	979	—
93			322	—	—	571	336	—
. . .	2,122 ^{b)}	. . .	62,972 ^{b)}	. . .	. . .	146,891 ^{b)}		3,763
233	14 ^{g)}	120 ^{g)}	652 ^{d)}	. . .	. . .	5,692 ^{d)}	2,138 ^{d)}	. . .
737	474	186	9,100	136	8,062	26,444	11,500	1,268

16-2. Medical and Allied Health Personnel (2)

	Year	Physio- therapists/ Physical Therapists	Medical Laboratory Technicians	Assistant Medical Laboratory Technicians	Medical Physicists	Medical Radiological Technicians	Assistant Medical Radiological Technicians	Sanitary Engineers
INDONESIA ⁽¹⁾	1983	230	46	1,210	• •	44	196	1,969
JAPAN	1984	4,095 ^{e)} 583 ^{f)}	33,863 ^{e)} 5,421 ^{f)}	1,150 ^{e)} 569 ^{f)}	6,152 ^{e)}	16,855 ^{e)} 3,788 ^{f)}	2,207 ^{e)} 1,992 ^{f)}	• •
MALAYSIA ^(2)a)	1983	95	899	—	—	—	—	17
Peninsular Malaysia	1983	88	823	528	4	—	—	15
Sabah	1983	2	65	60	• •	—	—	1
Sarawak	1983	5	11	145	• •	—	—	1
PHILIPPINES	1984	3 ^{c)}	16,371 ^{b)}			2,146 ^{b)}	• •	120 ^{d)}
SINGAPORE	1984	34 ^{g)}	238 ^{g)}	77 ^{g)}	5 ^{g)}	102 ^{g)}	34 ^{g)}	155
THAILAND ⁽³⁾	1983	205	515	431	175	217	403	15

Source: Ministry of Health in each country
 (1) The Health Situation of Indonesia
 (2) Information and Documentation System Unit
 Establishment Book, Ministry of Health & Operating
 Expenditure on Post Vol. II-1983, Ministry of Finance
 (3) Health Statistics Division, Ministry of Public Health

Note: a) As of Dec. 31, 1983
 b) Registered as of July, 1985
 c) Ministry of Health, Central Office only
 d) Ministry of Health only
 e) Hospital—1984
 f) Clinics—1984
 g) Government

Sanitarians	Auxiliary Sanitarians	Other Scientific or Professional Personnel	Other Technical Personnel	Other Health Auxiliaries and Aids	Practitioners of Traditional Medicine/ Midwifery	Dental Nurses	Nurses Including Nurse-Midwives	Orthopaedic Technicians
5,105	. .		. .		. .	1,912	. .	
. .	. .		17,336 ^{g)} 7,563 ^{f)}	. .	. .	. .	. .	. .
—	—		—	—	—	785	—	—
—	—		—	—	—	607	—	—
—	—		—	—	—	60	—	—
—	—		—	—	—	118	—	—
2,622 ^{d)}	. .		. .	. .	. .	. .	. .
229 ^{g)}	343 ^{g)}	60 ^{g)}	49 ^{g)}	85 ^{g)}	. .	307 ^{g)}	7,830	. .
221	4,364					. .	. .

16-2. Medical and Allied Health Personnel (3)

	Year	Malaria Field Officers	Medical Social Technicians	Health Statistics Technicians	Medical Statistician	Dental Hygienists	Trained or rural Midwives	Traditional Birth Attendants
INDONESIA ⁽¹⁾	1979							
JAPAN	1984	• •	• •	• •	• •	29,178	• •	• •
MALAYSIA ^(2a)								
Peninsular Malaysia	1983	388	5	4	3	—	555	2,741
Sabah	1983	24	—	—	—	—	394 ^{b)}	—
Sarawak	1983	21	1	—	—	—	220	—
PHILIPPINES	1984	621 ^{c)}				1 ^{c)}		25,925 ^{c) d)}
SINGAPORE	1984	• •	• •			• •	• •	• •
THAILAND								

Source: Ministry of Health in each country

(1) The Health Situation of Indonesia

(2) Information and Documentation System Unit
Establishment Book, Ministry of Health & Operating
Expenditure on Post Vol. II-1983, Ministry of Finance

Note:

a) As of Dec. 31, 1983

b) Data provided by Medical Department, Sabah

c) Ministry of Health only

d) Division II Dentist for Year 1983

e) 1975-1984

f) Hospital-1984

g) Government

Laboratory Aids	Sanitary Inspectors	Medical Social Workers	Dental Practitioners	Veterinary Assistants	Nurse-midwives	Dental Technicians	Dispensers	Assistant Nurse-midwives
					893			
. .	. .	3,048 ^{e)}	. .	. .	. .	. . .	. .	. . .
		27	315 ^{f)}			222	—	—
—		27	205 ^{f)}		5,710	—	—	—
—		—	48 ^{f)}			—	—	—
—		—	62 ^{f)}			—	—	—
	2,622 ^{c)}							
. .	. .	38 ^{g)}	588	12 ^{g)}	. .	46 ^{g)}	204 ^{g)}	. .

16-2. Medical and Allied Health Personnel (4)

	Year	Nurses	Occupational Therapists	Dietitians	Radio- graphers	Nursing Auxiliaries	X-ray Assistant Technicians	Health Inspectors
INDONESIA ⁽¹⁾	1984	25,834						
JAPAN	1984	590,177	b) 1,333 c) 87	. .	. .	. .	. .	. .
MALAYSIA ^(2) a)	1983	19,127	43	38	320	—	356	1,206
Peninsular Malaysia	1983	17,916	36	38	272	—	318	926
Sabah	1983	640	4	—	14	—	4	137
Sarawak	1983	571	3	—	34	—	34	143
PHILIPPINES	1984	e) 146,891		e) 5,127				
SINGAPORE	1984	7,830	f) 18	f) 13	f) 102	. .	. .	f) 229
THAILAND ⁽³⁾	1983			41				

Source: Ministry of Health in each country
 (1) The Health Situation of Indonesia
 (2) Information and Documentation System Unit
 Establishment Book, Ministry of Health & Operating
 Expenditure on Post Vol. II-1983, Ministry of Finance
 (3) Health Statistics Division, Ministry of Public Health

Note: a) As of Dec. 31, 1983
 b) Hospital — 1984
 c) Clinics — 1984
 d) Registered as of June 30, 1984, Ministry of Health only
 e) Registered as of July, 1985
 f) Government
 g) Ministry of Health only

Assistant Health Inspectors	Biochemists	Health Educators	Midwives	Microscopists	Health Assistants	Entomologists	Dental Surgery Assistants	Nutritionists	Darkroom Assistants
			17,658						
.	.	.	24,649	.	.	.	.	^{b)} 19,734 ^{c)} 4,061	.
^{g)} 629	53	36	6,162	—	1,206	11		21	—
629	46	32	5,423	3	926	8		19	—
—	5	1	417	—	137	1		1	—
—	2	3	322	—	143	2		1	—
		^{d)} 127	^{e)} 62,972			^{d)} 5		^{e)} 5,127	
^{f)} 343	^{f)} 9	^{f)} 4	652	.	.		.	^{f)} 1	.
	68	159						373	27

16-3. Population/Health Personnel Ratios

	Year	Physicians per 10,000 Population	Population per Physicians	Dentists per 10,000 Population	Population per Dentists	Pharma- cists per 10,000 Population	Population per Phar- macists	Medical Assistants per 10,000 Population	Population per Medical Assistants	Nursing Personnels per 10,000 Population	Population per Nursing Personnels	Nursing and Midwifery Personnels per 10,000 Population	Population per Nursing and Midwifery Personnels
INDONESIA	1984	1.1	9,098	0.2	60,653	0.2	41,156	• •	• •	1.6	6,255	2.07	3,715
JAPAN	1984	15.1	664	5.25	1,904	10.79	927	• •	• •	49.08	209	52.86	194
MALAYSIA		3.02	3,220	0.54	18,548	0.46	21,928	2.64	3,794	12.92	774	17.09	585
Peninsular Malaysia	1983	3.32	3,005	0.59	17,037	0.49	20,513	2.68	3,731	14.61	685	19.03	526
Sabah	1983	1.54	6,498	0.30	33,256	0.32	31,408	2.79	3,578	5.66	1,767	9.35	1,070
Sarawak	1983	1.55	4,997	0.31	31,910	0.29	34,244	2.12	4,727	4.07	2,459	6.36	1,572
PHILIPPINES ⁽¹⁾	1984	9.33	1,072	3.82	2,619	4.89	2,045	• •	• •	27.63	362	49.47	253
SINGAPORE	1984	9.9	1,010	2.3	4,301	1.6	6,184	• •	• •	31.0	323	33.5	298
THAILAND	1983	1.60	6,259	0.26	39,662	0.61	16,541	0.06	179,199				

Source: Ministry of Health in each country

(1) Professional Regulation Commission (PRC), Philippines
Registered as of July 1985

**16-4. Number of Medical Personnel
Physicians**

	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
INDONESIA	3,578	8,279	8,977	9,805	10,456	11,681 ⁽¹⁾	12,931 ⁽¹⁾	15,400 ⁽¹⁾	16,000 ⁽¹⁾	16,698 ⁽¹⁾	17,760 ^{b)}
JAPAN	118,990	132,479	134,934	138,316	142,984	150,229	156,235	162,882	167,952	—	168,736
MALAYSIA^{a)}				3,058 ⁽³⁾	3,168 ⁽³⁾	3,514 ⁽³⁾	3,858 ⁽³⁾	3,941 ⁽³⁾	4,234 ⁽³⁾	4,474 ⁽³⁾	4,505 ⁽³⁾
Peninsular Malaysia	2,370	2,511 ⁽²⁾	2,659	2,789	2,906	3,207	3,518	3,584	3,856	4,082	4,111
Sabah				107	101	128	141	150	161	174	174
Sarawak	80	131	135	162	161	179	199	207	217	218	220
PHILIPPINES	31,515	37,276	38,490	47,801	49,110	6,839 ^{c)}	7,259 ^{c)}	7,378 ^{c)}	7,378 ^{c)}	47,989 ^{d)}	49,602 ^(4)d)
SINGAPORE⁽⁵⁾	1,363	1,622	1,705	1,847	1,861	1,851	1,976	2,091	2,225	2,361	2,504
THAILAND⁽⁶⁾	5,407	5,005	5,210	5,790	5,973	6,395	6,867	6,931	7,658	7,902	

Source: Data from Ministry of Health in each countries

(1) The Health Situation of Indonesia, Dept. of Health 1984

(2) Statistical Handbook of Peninsular Malaysia, 1976

(3) Medical Council Ministry of Health Malaysia

(4) Professional Regulation Commissioner (PRC), Philippines

(5) Yearbook of Statistics, Singapore

Note:

(6) Health Statistics Division, Ministry of Public Health, Thailand

a) As of Dec. 31

b) Consortium Health Science, Ministry of Education and Culture Medical Science, Jakarta, November 1984

c) Ministry of Health manpower only

d) Registered Physicians (Government & Private) as of July 1985

**16-4. Number of Medical Personnel
Dentists**

	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
INDONESIA⁽¹⁾	452						1,681	1,905	2,128	2,364	2,664 ^{c)}
JAPAN	37,859	43,586	44,382	45,715	48,731	50,821	53,602	56,841	58,362	—	63,145
MALAYSIA^(2)a)						644	691	720	798	858	957
Peninsular Malaysia		443	468	520	569	589	630	658	724	774	867
Sabah	15	9	10		28 ^{b)}	22	25	25	42	48	40
Sarawak						33	36	37	32	36	50
PHILIPPINES	12,174	13,096	13,370	13,694	14,181	777 ^{d)}	1,029 ^{d)}	1,090 ^{d)}	984 ^{d)}	8,057 ^{e)}	20,304 ^(3) f)
SINGAPORE⁽⁴⁾	398	419	433	464	476	494	485	501	530	555	588
THAILAND⁽⁵⁾	683	652	744	816	1,025	1,122	1,169	1,132	1,142	1,247	

Source: Data from Ministry of Health in each countries

(1) The Health Situation of Indonesia. Dept. of Health, 1984

(2) Dental Board, Ministry of Health

(3) Professional Regulation Commission (PRC) Philippines

(4) Yearbook of Statistics, Singapore,

(5) Health Statistics Division, Ministry of Public Health, Thailand

Note:

a) As of Dec. 31

b) From Annual Report Medical Department Sabah

c) Projection of Projection by Consortium Health Science 1983

d) Ministry of Health manpower only

e) Government and Private

f) Registered as of July 1985, Government and Private

**16-4. Number of Medical Personnel
Pharmacists**

	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
INDONESIA⁽¹⁾	1,486	1,847	2,011	2,323	2,475	2,723	3,013	3,213	3,389	3,587	3,926 ^{c)}
JAPAN	79,393	94,362	97,474	100,897	104,693	110,774	116,056	120,444	124,390	—	129,700
MALAYSIA^{a)}		258	291	342	371	413	488	516	626 ⁽²⁾	676 ⁽²⁾	734 ^{b)}
Peninsular Malaysia									595 ⁽²⁾	598 ⁽²⁾	676 ^{b)}
Sabah					15 ⁽³⁾	15 ⁽³⁾	17 ⁽³⁾	23 ⁽³⁾	12 ⁽²⁾	37 ⁽⁴⁾	29 ^{b)}
Sarawak									19 ⁽²⁾	41 ⁽²⁾	29 ^{b)}
PHILIPPINES	19,076	20,838	21,092	21,546	22,186	723 ^{d)}	518 ^{d)}	539 ^{d)}	504 ^{d)}	25,337 ^{e)}	26,005 ^(7) e)
SINGAPORE⁽⁵⁾	245	288	298	318	330	351	368	358	373	387	409
THAILAND⁽⁶⁾	1,407	1,913	2,074	2,236	1,160	1,266	2,650	2,680	3,097	2,990	

Source: Data from Ministry of Health in each country

- (1) The Health Situation of Indonesia, Dept. of Health 1984
- (2) Indicator for Monitoring and Evaluation of Strategy for Health for All by the year 2000 – Information and Documentation System Unit, Ministry of Health
- (3) From Annual Report Medical Department, Sabah 1982
- (4) Data provided by Medical Department, Sabah
- (5) Yearbook of Statistics, Singapore, Ministry of Health manpower only

Note:

- (6) Health Statistics Division, Ministry of Public Health, Thailand
- (7) Professional Regulation Commission (PRC), Philippines
- a) As of Dec. 31
- b) Pharmacy Board, Ministry of Health
- c) Directorate General Food & Drugs Control MOH, Indonesia
- d) Ministry of Health manpower only
- e) Registered Pharmacists (Government & Private) as of July 1985

**16-4. Number of Medical Personnel
Midwives**

	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
INDONESIA ⁽¹⁾	3,752	10,720	12,642	13,799	14,921	15,775	16,472	16,928	17,207	17,486	17,658 ^{a)}
JAPAN	28,087	26,742	26,804	26,618	26,493	26,267	25,867	25,538	25,416	—	24,649
MALAYSIA ⁽²⁾											
Peninsular Malaysia		3,767	4,008 ^{c)}	4,257 ^{c)}	4,474 ^{c)}	4,776 ^{c)}	5,002 ^{c)}	5,189 ^{c)}	5,353 ^{c)}	5,423 ^{c)}	5,468 ^{c)}
Sabah									417		
Sarawak									338 ^{a)}		
PHILIPPINES ⁽³⁾	16,082	26,680	31,958	27,430	30,295	8,698 ^{b)}	9,329 ^{b)}	9,470 ^{b)}	9,428 ^{b)}	14,021 ^{b)}	62,972 ^{d)}
SINGAPORE ⁽⁴⁾	1,058	930	925	863	857	807	779	766	722	710	652 ⁽³⁾
THAILAND ⁽⁵⁾	4,203	6,335	7,304	7,436	7,915	8,677	8,669	8,577	8,851	9,100	

Source: Data from Ministry of Health in each country
 (1) The Health Situation of Indonesia, Dept. of Health, 1984
 (2) Nursing Board Ministry of Health
 (3) Professional Regulation Commission (PRC), Philippines
 (4) Yearbook of Statistics, Singapore
 (5) Health Statistics Division, Ministry of Public Health, Thailand

Note: a) Centre of Education & Health Manpower 1984 MOH, Indonesia
 b) Ministry of Health manpower only
 c) Division II Midwives only
 d) Registered as of July 1985, Government & private

**16-4. Number of Medical Personnel
Nurses**

	1970	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984
INDONESIA ⁽¹⁾		9,856	11,284	13,912	16,140	18,426	20,201	21,589	22,205	22,487	25,834 ^{a)}
JAPAN	273,572	361,604	382,459	404,156	431,911	458,362	487,169	518,097	540,971	—	590,177
MALAYSIA ⁽²⁾											
Peninsular Malaysia			10,658	11,999	13,124	14,206	15,392	16,289	17,144	17,916	18,653
Sabah									633	640 ^{c)}	
Sarawak									554		623 ^{d)}
PHILIPPINES ⁽³⁾	38,918	64,155	71,585	80,781	94,411	8,523	9,605 ^{b)}	9,644 ^{b)}	9,075 ^{b)}	11,917 ^{b)}	146,891 ^{f)}
SINGAPORE ⁽⁴⁾	4,304	5,767	5,960	6,814	7,069	7,405	7,545	7,240	7,534	7,714	7,830
THAILAND ⁽⁵⁾	15,387	18,993	21,004	22,667	16,515	17,211	18,483	19,599	22,878 ^{e)}	26,444	

Source: Data from Ministry of Health in each country
 (1) The Health Situation of Indonesia, Dept. of Health, 1984
 (2) Nursing Board, Ministry of Health
 (3) Professional Regulation Commission (PRC), Philippines
 (4) Yearbook of Statistics, Singapore
 (5) Health Statistics Division, Ministry of Public Health, Thailand

Note: a) Centre of Education & Health Manpower 1984 MOH, Indonesia
 b) Ministry of Health manpower only
 c) From Medical Department, Sabah
 d) From Medical Department, Sarawak
 e) Revised Figure
 f) Registered as of July 1985 Government & private

17-1. Situation of Medical Schools

	Academic Year	Number of Medical Schools	Duration of Studies	Total Enrolment	Admissions	Graduates
INDONESIA ⁽¹⁾	1981/82	13	7 years ^{a)}	15,725 ^{b)} 46 ^{c)}	1,632 ^{b)} 24 ^{c)}	1,296
JAPAN ⁽²⁾	1983/84	80	6 years		8,360	14,154 ^{d)}
MALAYSIA ⁽³⁾	1983	3	5 to 6 years ^{a)}	480		
PHILIPPINES ⁽⁴⁾	1983-85	27	Pre - Med - 4 years Proper - 4 years Intern - 1 years	8,542 ^{f)}		7,507 ^{g)}
SINGAPORE ⁽⁵⁾	1984/85	1	5 years	800 ^{b)} 162 ^{c)}	168 ^{b)} 38 ^{c)}	115 ^{b)} 22 ^{c)}
THAILAND	1984	7	6 years			

Source: (1) Consorciom Medical Service
(2) Ministry of Health and Welfare, Japan
(3) Training and Manpower Development Division, Ministry of Health
(4) Association of Philippine Medical Colleges
(5) National University of Singapore

Note: a) 6 Years at the University of Indonesia Medical Faculty, Jakarta
b) Nations
c) Foreigners
d) Clinical trainee
e) 5 Years at the University of Malaya; 6 Years at the National University of Malaysia (including a 1-year premedical course)
f) Quota, only Freshman enrolment for school year 1983 - 1985
g) School year 1983 - 1985

Part II

THE OUTLINE OF HEALTH STATISTICS
IN
SEAMIC COUNTRIES

Sources of Medical and Health Statistics in Indonesia

I. POPULATION AND VITAL STATISTICS

1. *Background Information*

The main sources of information on population and vital statistics of Indonesia are from censuses and vital registration of birth and deaths.

Indonesia conducted its first population census in 1961 followed by ten-year interval censuses in 1971 and 1980. The whole process of censuses were carried out under the supervision of the Central Bureau of Statistics.

Based on the Presidential Decree No.52/1977 on population registration, all occurrences of births and deaths within Indonesia are required to be reported within stipulated periods. The registration system is not yet operating as good as it should be.

2. *Purpose*

The main purpose of conducting these censuses is to obtain updated information on the population in the country. The information is used for planning and for evaluating programmes such as housing, education, health, etc.

In the case of vital registration, the aim is to collect detailed information on births and deaths including the underlying causes of mortality. These data are essential for analysing the changes happened in the society.

3. *Coverage*

Census covers the whole population of Indonesia, included non-diplomatic foreigners, crew of Indonesian ships and tramps.

4. Contents

The contents of the 1980 census form, could be classified under the following broad categories:

- a. Demographic characteristics
- b. Economic characteristics and employments
- c. Houses and households
- d. Language and dialect spoken at home
- e. Religion.

Forms for birth registration include identification of the baby (name, sex, date of birth, location of birth and attendant), identification of the mother (name, address, age, citizenship) and identification of the father (name, age, address, citizenship).

Death registration include name, address, age, date of birth, citizenship, religion, marital status, employment status, and cause of death.

5. Data Collection Procedures

The census field workers visit the people at their place of residence on the census day. The houses are numbered, households identified and listed. Generally each head of the family is interviewed. The whole process of enumeration and data collection is carried out under the supervision of Central Bureau of Statistics.

The registration of births and deaths is done at the village level and sent to the central level through a long process, namely, district, regional and provincial level. The collection of vital statistics information is done under supervision of the Ministry of Home Affairs.

6. Analysis

The Central Bureau of Statistics is responsible for the tabulation and publication of the census results.

II. HEALTH SERVICES UTILIZATION STATISTICS

1. Background Information

In general health facilities which provide direct services to the community can be divided into two main categories, namely, the Health Centres and the Hospital. The reporting and recording system of these two kinds of facilities are regulated by Decrees of the Ministry of Health, No.651 of the year 1972 concerning Hospitals and No.63 of the year 1981 concerning the Health Centres.

In fact, these regulations are also valid for facilities of the private sectors, but up to now they only apply to government facilities.

2. Purpose

One of the objectives is to monitor and make a short-term appraisal of the performance of the various services within the Department of Health as well as the private sectors. The statistical information is also utilized in conjunction with other data for purposes of planning and evaluation.

3. Coverage

Statistics collected from the hospitals cover all activities of government and private hospitals. Report from the Health Centres covers only government facilities. Private practices or clinics have not yet been covered.

4. Contents

The hospital reporting system consists of four main parts, i.e:

- a. Hospital activities report containing information on patient admissions, bed occupancy, length of stay and discharges by type of class.
- b. Morbidity report of inpatients who been treated in the hospital.
- c. Morbidity report of outpatients who been covered by its outpatients departments.
- d. Inventory report.

The Health Centre Reporting and Recording System covers report on number and morbidity of patients, drugs, activities of Health Centre such as school health, public health nursing, health education, etc.

5. Data Collection Procedure

The data are presented in prescribed forms from hospital and Health Centres and submitted to the Directorate Generals, Medical Care and Community Health.

6. Tabulation and Publication

The data are collected and published annually in the form of special reports.

III. MORBIDITY STATISTICS

1. Background Information

Communicable diseases constitute one of the main health problems in Indonesia because of its high morbidity and mortality rate. It should therefore be handled in a direct and systematic way. For this purpose a quick and reliable information is necessary.

The reporting and recording from the health centres and hospitals include the morbidity data of patients, while epidemic diseases are reported directly to the Directorate General of Communicable Disease Control. Non epidemic diseases are reported through reporting and recording system of the health centres and hospitals to the Directorates General of Community Health and Medical Care once a month.

2. Purpose

Collection of information concerning the number of patients of all kinds of diseases (communicable and non-communicable) will be used for planning, monitoring, evaluation and control.

3. Coverage

The reports only cover data from Health Centres and Hospitals, while reports concerning diseases which treated by private practice or private clinics are not yet included.

Nevertheless, we already have information from Health Centres and hospitals throughout Indonesia, it can therefore be considered as representative of the situation in Indonesia.

4. Contents

Epidemic diseases are reported once a week, according to location. This report includes the number of patients and the number of deaths.

Other diseases are reported through the reporting and recording system, according to the age, type of diseases (ICD-IX) and number of cases once a month.

5. Data Collection Procedures

For epidemic diseases the completed forms are sent directly to the Directorate General of Communicable Disease Control. For other diseases, forms from the health centre and hospital are sent to the Directorates General of Community Health and Medical Care with a copy to the Provincial Health Office.

6. Analysis

From the reports the kinds of main diseases as well as the pattern of morbidity can be analyzed. The results are published yearly through epidemiological news, health survey reports, etc.

(Bureau of Planning, Ministry of Health)

Health Statistical Information System in Malaysia

1. Introduction

- 1.1. With rapid development taking place in Malaysia for the past two decades, Malaysian Government has recognized the importance of effective and efficient operation which can be achieved through appropriate action at corrective intervention based on informed and considered decisions depending on accurate and timely information.
- 1.2. In line with the New Economic Policy (NEP) of reducing poverty by raising income levels and increasing employment, and restructuring of society to eliminate the identification of groups with economic function, Ministry of Health (MOH) had also identified problem priorities; programme specific objectives and appropriate strategies to contribute towards a standard of health which enable people to lead an economically and socially productive life.
- 1.3. With a view to assist in overall health programme planning management, modern management techniques have been developed and used to improve on its performance at all levels leading to a growing need for valid and relevant information base.

2. Existing Health Statistical Information System Service

- 2.1. At present, the MOH Information System is still 'Statistical' in nature. Quite a lot of statistical information has been collected, but the rigidity and small amount of relevant data limits the value of the system. The information collected are in a summarized form, detailing the experience of workload over a definite period of time. The reports are compiled on a medium administrative level, and national figures are combination of district or state level. The information are used mainly for management of health services rather than for patient management.

- 2.2. There is duplication of data collection and the capacity to handle data is rather limited. The system is quite simple and does not require much expertise. But some of the specific system can be very well developed to meet specific needs. The rigidity of the system does not allow for changing requirement. It is a manual-based system.

3. *Types of Health and Health Related Information Used to Support the Management Functions of MOH*

The type of information collected and utilized would be categorised into :

- 3.1. Social and Social-Economic Development Status Information. These information are provided by Department of Statistics, the Prime Minister Department and The Registrar-General of Births and Deaths, Ministry of Home Affairs.

- * Population distribution by geographical division
- * Population by sex and age group
- * Population composition by ethnicity
- * Population growth rate
- * Crude birth rate
- * Crude death rate
- * Neo-natal death rate
- * Post-neonatal death rate
- * Toddler mortality rate
- * Maternal mortality rate
- * Gross reproduction rate
- * Net reproduction rate
- * Life expectancy by specific age group
- * Average weight of baby at birth
- * Dependency ratios.

3.2. Other Socio-Economic Development Status Information

- | | | |
|--|---|-----------------------|
| * Literary level by sex and age group | } | Ministry of Education |
| * School enrolment data by education level | | |
| * Gross national product | } | Ministry of Finance |
| * Gross domestic product | | |
| * Health budget as percentage of national budget | | |
| * Government health expenditure (per capita) | | |

- * Industrial absenteeism rate from work due to illness or injury
- * Percentage of labour force and its distribution

} Ministry of Labour and Manpower

Other related socio-economic information e.g. standard of living, housing, nutrition, employment, safety environment problems and social welfare, etc. required by MOH in the formulation of Five-Year Plan are also provided by other ministries/agencies like Economic Planning Unit; National Family Planning Board of the Prime Minister Department; Ministry of Social Welfare; Ministry of Environment, Science and Technology; etc.

These are useful information which form part of the strategy for the development of a comprehensive health service system in the country.

4. Information Related to Specific Health Problem

The information classified under this section is useful to the planners and implementators of the specific health programmes as a feedback to evaluate the performance, acceptance and effectiveness of the programme over a period of time or comparison over place. The information are specific to the each programme in terms of problem identification and performance assessment.

4.1. Communicable Diseases

A specific list of communicable diseases are compiled every year by geographical distribution, age, sex, etc. Absolute number, prevalence, incidence and mortality rates of the diseases are provided by MOH over time. These diseases include cholera, typhoid, food poisoning, dysentery, T.B., leprosy, diphtheria, poliomyelitis, measles, dengue fever/dengue haemorrhagic fever, infectious hepatitis, malaria, yaws, filariasis, sexually transmitted diseases, etc.

4.2. Principal Causes of outpatient Attendances and Admissions to Government Hospitals and Their Rates

In order to monitor the changing pattern of diseases over time, these information are compiled annually from hospital statistics. Though only absolute numbers and percentage distribution are provided, attempts have been made to relate diseases pattern to other demographic variables like age, sex and geographical distribution.

4.3. Hospital Utilization Indices

These include standard measures like bed occupancy rate; mean length of stay; outpatient/admission ratio. Similarly attempts have been made to analyse the data by clinical specialties/disciplines and type of medical care establishments.

4.4. Information on Specific Diseases

Diseases which are accounting for high morbidity or mortality pattern of the population at risk are being monitored at the national level. More detailed analyses are being done on these in terms of type, sex, age and other characteristics. Examples are cancer, accidents, heart and cardio-vascular disease, hypertension, nutritional deficiency, metabolic diseases, diabetes mellitus, etc.

4.5. Information Collected through Special Studies/Surveys

Sometimes through surveys or studies, we also collect information related to specific programmes. Examples are Dental Epidemiological Study for school children (1970); Dental Epidemiological Study for adults (1974), Peninsular Malaysia; Risk Approach Study in identifying problems related to high risk mothers for formulation of intervention strategy, etc.

Of course, this is not the complete list of specific programmes that generate information for own use, it includes other programmes like general sanitation, school health services, family planning services, occupational health, health education, food quality control and many others.

5. Health Service Improvement Information

5.1 Health Facilities—Two aspects would be distinguished. One relates to existing infrastructure which are providing medical, health and dental care services; the other relates to the development projects on new infrastructure under construction. As long as service infrastructure are concerned, they would be categorised into

- | | |
|---------|---------------------------------------|
| Medical | Special Hospital |
| | General Hospital |
| | District Hospital with Specialists |
| | District Hospital without Specialists |
| | Urban Polyclinics |
| Health | Health Centres |
| | Maternal and Child Health Centres |
| | Community Nurse Clinics |
| | Midwife Clinic |
| | Static Dispensaires |
| | Mobil Dispensaires |
| | Mobile Health Team |
| Dental | Urban Dental Clinics |

Hospital Dental Clinics
Health Centre Dental Clinics
School Dental Clinics
School Dental Centres
Mobile Dental Squads.

Information related to facilities are generally expressed in terms of absolute number and ratios related to population served. This includes

- * Acute Hospital beds per 1000 population by geographical distribution
- * Health Centre/rural population ratio
- * Midwife Clinics/rural population ratio
- * Dental Units/population ratio

On development projects, a monitoring system was established to assess the physical progress on construction on a quarterly basis.

5.2. Finance—The financing for the activities of MOH is divided into two components, i.e. the operating and development budget. Both operating and development budget and expenditure are available by specific health programmes.

5.3 Health Manpower—The following type of health and health-related manpower have been compiled on an annual basis and manpower/population ratios are tabulated by region; between public and private sectors for comparison purposes.

- * Doctor
- * Dentist
- * Pharmacist
- * Nurse
- * Assistant Nurse
- * Midwife (Division II)
- * Community Health Nurse/Midwife
- * Dental Nurse
- * Public Health Inspector
- * Medical Lab. Technologist
- * Radiographer
- * Pharmacist Assistant
- * Hospital Assistant

5.4. Health Manpower Training and Development

At present, the following types of manpower are being trained in local training institutions with a view to further develop adequate professional and paramedical personnel to meet future manpower requirements of the health section.

A listing on the type of manpower trained, number of training institutions and the annual intake capacity are provided each year.

— Types of manpower trained by MOH:

- * Nurse
- * Assistant Nurse
- * Community Health Nurse
- * Midwife (Division II)
- * Midwife
- * Hospital Assistant
- * Junior Hospital Assistant
- * Radiographer
- * Pharmacist Assistant
- * Pharmacy Lab. Assistant
- * Physiotherapist
- * Medical Lab. Technologist
- * Assistant Medical Lab. Technologist
- * Junior Lab. Technician
- * Public Health Inspector
- * Public Health Overseer
- * Anti-malarial Inspector
- * Dental Nurse
- * Dental Technician
- * Dental Surgeons Assistant
- * Health Education Officer

— Types of manpower trained by Ministry of Education :

- * Doctor
- * Dentist
- * Pharmacist

5.5 Information Related to Performance of Health Programmes

The types of information covered under this heading are mostly performance based and related to specific health programme.

5.5.1. Family Health Programme – Examples are

- * B.C.G. coverage of infants by geographical distribution
- * Polio immunization coverage for infants
- * Coverage of infants for diphtheria, pertussis and tetanus immunization by public health facilities
- * Deliveries attended by trained personnel
- * Coverage of ante-natal mothers for tetanus toxoid
- * Supplementary feeding beneficiaries, etc.

5.5.2. Environmental Sanitation Programme

- * Population coverage with safe water supply
- * Sanitary latrine population coverage.

5.5.3. Medical Care Programme

- * Outpatient attendance per 1000 population
- * Inpatient admission per 1000 population
- * Hospital care fatality rate.

5.5.4. Dental Care Programme

- * Primary school children covered by dental care service.

5.5.5. Special Programme

- * Leprosy/T.B. cases on treatment
- * Defaulter rate of leprosy/T.B.
- * Average monthly retrieval rate for leprosy/T.B.

6. *Current Development of Information System in MOH*

- 6.1. In the past five years, MOH has attempted to improve the traditional statistical information system by developing a management oriented system to support the management functions of the decision-makers within MOH. This need was necessary in view of the widening gap in data generation and information utilization,

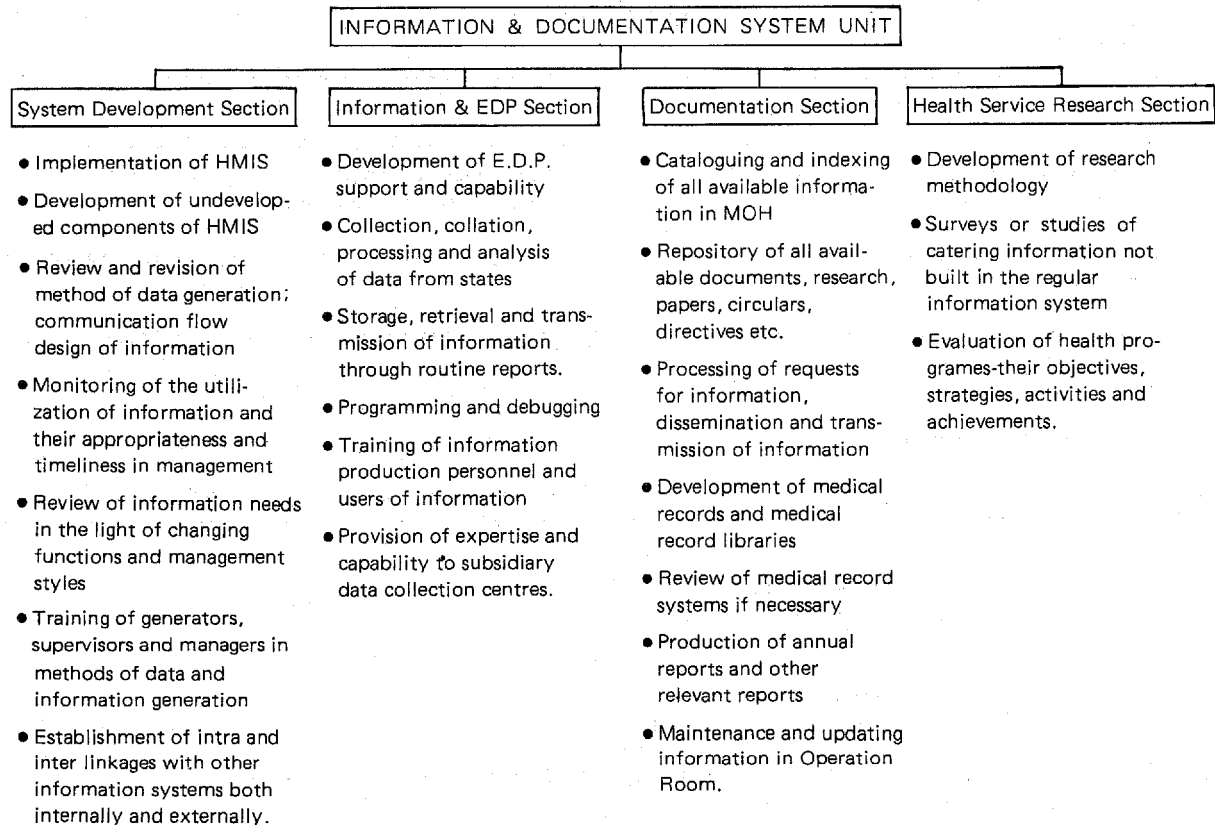
increasing tendency towards data duplication in collection; improper storage and retrieval system and lack of standardization procedures, inadequate data analysis and information extraction plus lack of prioritization of information for generation, selective and timely transmission of relevant and critical information. As such, a project entitled "Development of Health Management Information System" was initiated in 1976 to undertake the major task of improving the health statistics system of MOH.

- 6.2. MOH objectives were the point of departure for identification of functional sub-systems. As can be seen from Figure 1 that, the three main programmes which contribute to the overall Ministry's objectives are health, medical care and dental care sub-system. The other supportive/resource sub-systems are personnel, finance, supplies, facilities and training.
- 6.3. Within each programme sub-system, based on the objectives of the sub-system; a further breakdown of sub-sub-systems based on functions/activities is possible; and Figure 1 also shows the sub-sub-systems which constitute the functional components of MOH Programme.
- 6.4. Information common to two or more sub-sub-systems were consolidated for integration of generation. Information specific to a particular programme or sub-sub-system are generated separately. This is to ensure redundancy of data generation being avoided; hereby reducing the data generation work at the operational level.
- 6.5. As a result of this study, a new organisation called Central Unit of Information and Documentation System which is responsible for the collection, transmission, processing, storage, retrieval, information presentation and dissemination was established under the Directorate of Planning and Development. See Figure 2 for the structure and responsibilities under each section.

Figure 1. Subsystems and Sub-subsystems of the Ministry of Health

MINISTRY OF HEALTH – MALAYSIA – HEALTHSYSTEM –																							
RESOURCE MANAGEMENT			PROGRAMME SUBSYSTEMS																				
SUBSYSTEMS	SUB-SUBSYSTEMS	PATIENT CARE	HEALTH	DENTAL	SUB-SUBSYSTEMS					P.O.													
					Fluoridation	Personnel Dental Care	Health Supportive – Health Education, Epidemiology, Applied Food and Nutrition	Tuberculosis Control	Leprosy Control		Malaria Eradication	Occupational Health	Vector Control	Disease Control & International Health	Filariasis Control	General Sanitation	Food Sanitation	School Health	Family Planning	Child Care	Maternal Care	Patient-care Supportive	In-patient	Out-patient
FINANCE	Budget	General Finance	Manpower Supply	Manpower Maintenance	Technology for Training	Training of Man-power	Quality Control	Regulatory	Supply	Physical Facilities	???	P.O.	PROGRAMME OBJECTIVES (P.O.)										MINISTRY OF HEALTH'S OBJECTIVES
SERVICE (PERSONNEL)																							
TRAINING																							
SUPPLIES																							
FACILITIES																							
RESEARCH																							

Figure 2. Functions of Information and Documentation Systems Unit



6.6. Under HMIS, there has been a shift in information content from measurement of workload/output by activities towards measurement in the quality of health care services. The type of information identified, to a considerable extent, are supposed to measure coverage, continuity, accessibility, availability, and acceptability and utilization of health care services. The following table shows a few examples on the 'old' and 'new' type of information collected.

Traditional Information	New Information
1. Total number of complication of neo-nates referred to hospital.	1. Total number of complication of neo-nates referred to hospitals and health centres by types.
2. Total number of mothers covered by post-natal home visit.	2. Average number of post-natal home visits done per mother.
3. BCG immunization coverage of primary school children (Std. I and Std. VI).	3. B.C.G. Immunization coverage of — Std. I pupils without BCG scars. — Std. VI pupils with less than 2 BCG scars.
4. Total number of admission by sex.	4. Total number of admission by sex, and by discipline.
5. Hospital bed occupancy rate.	5. Bed occupancy rate by various discipline.

6.7. Apart from this, there are feasible potential benefits which include

- * Standardization — in information
 - in terminology
 - in forms.
- * Complete, consistent and more reliable information.
- * Information are comparable over
 - space
 - time
 - sub programmes/ activities.
- * Improved management because of better quality data and use-oriented information.
- * Integration with other system
- * Elimination of redundancy in data generation.

- 6.8. However, in view of prevailing economic recession, the implementation plan towards computerisation of the system has been deferred to a future date.

7. Other Health Information related Activities

Apart from collecting routine information; MOH also developed health indicators, summarized indices, used to measure performance and impact of health services on the population. They are also used to assess achievement of objectives to see if resources have been effectively and efficiently utilized.

- 7.1. Health Programme Indicators — Developed specifically to monitor the prevailing health problems and health actions towards specific goals or objectives and expected output or outcomes. It is supposed to be updated 5 yearly.
- 7.2. Indicators for Monitoring and Evaluation of Strategy for Health for All by the Year 2000 (HFA/2000)— Done at the recommendation of W.H.O. working group on indicators (W.H.O. Regional Office for Western Pacific Region) with the view and need to strengthen managerial processes for national health development.
- 7.3. MOH Annual Report —The First MOH Annual Report (being published) detailing the programme objectives, activities and achievements, etc. has being done.

8. Future Needs

From system planning view point, the following have been identified as priority areas which need immediate improvement and expansion of management information system.

- 8.1. Strengthening the gap between data generation and analysis, and utilization of information for decision making by management.
- 8.2. Improve the mechanism for data processing and retrieval system for increased number of variables for analysis.
- 8.3. Intensify the training of information system personnel, particularly in medical records, to meet changing needs.

REFERENCES

1. Third Malaysia Plan 1976 — 1980
2. 'General Report of the Population Census: 1980 Population and Housing Census of Malaysia' Department of Statistics Malaysia.
3. 'Social Statistics Bulletin' Malaysia 1980, Department of Statistics Malaysia.
4. 'Country Health Information Profile—Malaysia', Planning and Development Division, Ministry of Health Malaysia, 1983.
5. Report on 'WHO Working Group on Indicators for Monitoring and Evaluation of Strategy for Health for All The Year 2000' Manila, Philippines, 2 — 9 March 1982, Datuk (Dr.) Abdul Khalid bin Sahan.
6. 'Health Programme Indicators', Planning and Development Division, Ministry of Health 1981.
7. 'Indicators for Monitoring and Evaluation of Strategies for Health for All by the year 2000'. Planning and Development Division, Ministry of Health 1983.
8. 'Technical Report No. 1: Conceptual Phase — Health Management Information System Development Project', Ministry of Health/Government of Malaysia in collaboration with WHO Western Pacific Region Office, Manila.
9. 'The Development of operational Performance and Impact Indicators with special reference of Community Health' — Malaysia Country Report. Proceedings of the 6th SEAMIC Workshop, SEAMIC Tokyo 1979.
10. Working Documents related to the Development of Health Management Information System, Planning and Development Division, Ministry of Health Malaysia, 1976 — 1982.

(International Division, Ministry of Health)

Health Statistics in the Philippines

I. MORBIDITY STATISTICS

1. History

Data on notifiable diseases are based on informations gathered by field health personnel as provided for in the Law on Reporting of Communicable Diseases (Act 3573) passed in November 26, 1929.

2. Purpose

The purpose of these statistics is to obtain information on the trend of occurrence of major communicable diseases and their epidemiological features for surveillance and institution of appropriate preventive and control measures.

3. Coverage

Nationwide.

4. Contents of Reporting Forms

Weekly number of cases and deaths of Notifiable Diseases by age and sex and by place of occurrence.

5. Data Collection Procedure

The DIC-2 Forms used are submitted simultaneously to the Regional Health Office and the Disease Intelligence Center by the City Health Office, Municipalities, Provincial Health Office comprising such regions.

6. Consolidation, Analysis and Presentation

These reports are consolidated for the regions and the whole country. The 10 leading causes are listed, and the annual morbidity rates, incidence rates and expected levels are computed.

The DIC takes charge of the tabulation and results are released through the following regular publications:

- A. DIC Bulletin—Weekly
- B. Weekly Disease Intelligence—Weekly
- C. Philippine Health Statistics—Annual
- D. State of Health—every 3 years

II. MORTALITY STATISTICS

1. History

Deaths and fetal deaths are registered in accordance with Civil Registry Act Number 3753 within 48 hours after death.

2. Purpose

These statistics are used for medical and legal purposes. Medical—to gather information on the causes of death for specific group of people for purposes of prevention and control. Legal—so that the deceased person will be relieved from social, legal and official obligations.

3. Coverage

Nationwide.

4. Contents of Reporting Form

The reports are based on the data compiled from the death certificates of the Office of the Local Civil Registrar and are submitted to the DIC, Ministry of Health using the DIC Form 3 (Monthly Mortality Report). These data are tabulated by place of occurrence, by cause, age, sex and medical attendance.

5. Data Collection Procedure

Data are gathered by field health personnel of each Municipalities, Cities, Provincial Health Office and are simultaneously submitted to the Regional Health Office and the Disease Intelligence Center, Ministry of Health

every month or after each calendar year.

6. Consolidation, Analysis and Presentation

The Disease Intelligence Center consolidates monthly reports from City Health Office and Provincial Health Office and makes the final analysis of the annual data. These are presented by frequencies, comparisons, trends and distribution of total mortality, infant mortality, maternal mortality and fetal mortality throughout the Philippines in the Annual Philippine Health Statistics.

III. NATALITY STATISTICS

1. History

As provided for by the Civil Registry Act #3753 and Presidential Decree #651 s. 1975, all livebirths shall be registered within 30 days from date of birth.

2. Purpose

The purpose of these statistics is to determine the number of livebirths in the Philippines and in addition to obtain the fertility rates among Filipinos and statistical indices computed to be used in the appraisal of the nation's state of health.

3. Coverage

Nationwide.

4. Contents of Reporting Form

Nativity statistics are consolidated using DIC form 4 (Monthly report on births) and are tabulated by sex, nationality, place of birth, attendance, age of mother and legitimacy.

5. Data Collection Procedure

All municipalities/cities/provincials in their health offices submit their monthly report to their respective Regional Health Office and to the Disease Intelligence Center, Ministry of Health.

6. Consolidation, Analysis and Presentation

Appropriate and practical graphical and diagrammatic presentation are made at each level as released by the

DIC in its annual Philippine Health Statistics. These data presents the monthly and annual trends, sex ratios, attendance by birth, illegitimacy ratio and births by location.

IV. POPULATION STATISTICS

1. History

The Disease Intelligence Center obtain yearly population statistics from the National Census and Statistics Office. The first census was done in March 1903 and the latest was held in May 1980.

2. Purpose

The purpose of this census is to provide data on the present situation of population in the Philippines.

3. Coverage

Nationwide.

4. Contents of Reporting Form

The population by municipalities/cities/provinces/regions and the total Philippine population are tabulated by age, sex and other demographic characteristics such as distribution by occupation, educational attainment, income, rural or urban.

5. Data Collection Procedure

The population statistics or censuses are conducted in the Philippines every 10 or 5 years using enumerator or interview method.

6. Consolidation, Analysis and Presentation

The total population by age, sex, citizenship, place of birth, marital status, educational characteristics and language is released by the National Census and Statistics Office with their summary of the population projection by regions/province for 1970–2000.

Using the geometric method and based on the most recent census counts, the Disease Intelligence Center prepares official estimates of our population and make releases in the annual Philippine Health Statistics, City Health Office and Provincial Health Office.

(Planning Service, Minsitry of Health)

Sources of Medical and Health Statistics in Singapore

I. POPULATION & VITAL STATISTICS

1. Background Information

The main sources of information on population and vital statistics of Singapore are from 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, 1957, 1970 and 1980. 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 used for planning and for evaluating 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 1980 Census of Population, the detailed information collected on the population could be classified under the following broad categories.

- (i) Demographic characteristics
- (ii) Literacy and educational qualifications
- (iii) Economic characteristics and employment
- (iv) Geographic distribution
- (v) Houses and households
- (vi) Income and mode of transport
- (vii) Language and dialects spoken at home
- and (viii) Religion and fertility.

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

(a) Births

- (i) Number and rate
- (ii) Number and percentage distribution by birth attendant
- (iii) Number and rate by age of mother and ethnicity
- (iv) Number by occupation of father and birth order
- (v) Number by birth weight and gestation period
- (vi) Crude birth rate
- (vii) Age specific fertility rate
- (viii) Total fertility rate
- (ix) General fertility rate
- and (x) Gross reproduction rate.

(b) Deaths

- (i) All deaths, number and rate by age, sex, ethnic group, medical attendance and cause
- (ii) Infant deaths, number and rate by sex, ethnic group and cause
- (iii) Neonatal deaths, number and rate by sex, ethnic group and cause
- (iv) Perinatal deaths, number and rate
- (v) Still births, number and rate
- (vi) Maternal deaths, number and rate
- (vii) Crude death rate

- (viii) Causes of deaths by age and sex (coding based on ICD9)
- and (ix) Standardized mortality ratio.

5. Data Collection Procedure

In the 1980 Population Census, the required particulars of all persons in Singapore were recorded at their place of residence on the designated Census Day by field enumerators despatched to the different Census Districts. All census houses were numbered, households identified and listed, and particulars of persons recorded. Households were revisited to confirm or update particulars of members to refer to Census Day. The whole process of enumeration and data collection was carried out under the supervision of the Department of Statistics, Ministry of Trade and Industry.

Vital statistics on births and deaths are processed from special Preliminary Report Forms completed by the various vital registration centres. Processing of the statistical information is undertaken by the Department of Statistics on behalf of 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 and the Yearbook of Statistics, Singapore. Detailed information on births and deaths are published annually in the Annual Report of the Registration of Births, Deaths and Marriages.

II. HEALTH SERVICE UTILIZATION STATISTICS

1. Background Information

Prior to 1976, the responsibility of data collection and the determination of the type of data to be collected rest 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 (HMIS) for both administrative and planning purposes, the overall system of data collection was revamped in 1976. The task of developing and maintaining the HMIS was put under the charge of the Research and Evaluation Section of the Ministry of Health. The HMIS 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 the private hospitals. However, information on activities of private clinics are not monitored routinely and are obtained thus far from ad hoc surveys.

2. Purpose

One of the prime objectives is to monitor and make 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 are 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 are currently confined to private hospitals.

4. Contents

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

- (i) Use of inpatient facilities eg. hospital admissions, bed-days, bed occupancy, duration of stay and discharges by speciality
 - (ii) Surgical operations and anaesthetic procedures
 - (iii) Outpatient attendances at hospital specialist clinics, A&E departments, primary health care and dental clinics
 - (iv) Radiological and laboratory investigations and extent of use of services of various other para-clinical and ancillary departments eg. Radiotherapy, Physiotherapy etc.
 - (v) Use of drugs
 - (vi) Home nursing service
 - (vii) Health screening and immunization
 - (viii) Government health manpower and workload indicators
- and (ix) Government health expenditure, revenue and costing.

5. Data Collection Procedure

The statistical returns are submitted on prescribed forms on a monthly basis by the various service centres to the Research and Evaluation Section of the Ministry of Health for processing.

6. Tabulation and Publication

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

III. 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 Registration of Dentists Act, the Registration of Pharmacists Act, the Nurses Registration Act and the Midwives Act.

Special manpower registers for these groups of personnel are kept and updated periodically. To facilitate records maintenance and faster retrieval of statistical information, these registers have been computerised.

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, 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 are 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 Research and Evaluation Section, Ministry of Health is responsible for the tabulation and analysis of the statistical data. Reports on these key health personnel are published annually.

IV. PATIENT DISEASE 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 that of tuberculosis, leprosy, venereal disease and cancer.

In 1974, the scope of morbidity data was extended to the outpatient level and since then records of cases seen at all government outpatient dispensaries, maternal and child health and school health 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.

To supplement the morbidity data collected on inpatients, special censuses and studies have also been conducted on long staying patients particularly those in the mental institutions. Mainly because the available morbidity data collected are inadvertently biased towards certain groups of people who seek medical attention from hospitals and clinics, ad hoc morbidity and other health examination surveys have also been carried from time to time to obtain additional information which would provide a better understanding of the disease problems prevailing in the community.

2. Purpose

The main purpose of collecting the data is to study the morbidity patterns of patients and to analyse the epidemiological profile of patients with different disease conditions. This is to help 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 hospitalised patients include:

- (i) Socio-economic profile eg. age, sex, ethnicity, nationality, occupation

- (ii) Patient classification by speciality
 - (iii) Source of referral
 - (iv) Diagnoses (coding based on ICD9)
 - (v) Surgical operation
 - and (vi) 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

In the case of government hospital inpatients, the data are extracted from the admission forms and discharge summaries while private hospitals submit their data on special returns prescribed by the Ministry of Health. Morbidity data on outpatients are compiled from daily tally sheets completed by doctors attached to the government primary health care clinics.

6. Tabulation and Publication

The Research and Evaluation Section, Ministry of Health is responsible for co-ordinating, editing and coding the returns. The inpatient returns of both government and private hospitals are processed by computer. The statistics are published annually in three separate reports.

V. STATISTICS ON NOTIFIABLE DISEASES

1. Background Information

Statistics from notification of specific infectious diseases eg. cholera, enteric fevers, dengue haemorrhagic fever, malaria, viral encephalitis, viral hepatitis, tuberculosis, venereal disease 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 could be instituted promptly.

3. Coverage

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

4. Contents

All reported cases of notifiable infectious diseases by type including information on profile of infected persons and geographical distribution of occurrence of these diseases.

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 a "Weekly Infectious Diseases Bulletin" and the "Monthly Epidemiological News Bulletin".

VI. STATISTICS ON PREVENTIVE HEALTH CARE SERVICES

a. IMMUNIZATION

1. Background Information

Immunization of pre-school children is the responsibility of the MCHS with follow-up home visits by Staff Nurses of MCHS and Public Health Inspectors of the Ministry of the Environment to cover missed cases or defaulters of the programme.

The SHS is responsible for the immunization of school children at regular intervals and the Ministry of Defence for national servicemen.

Immunization against smallpox, cholera and yellow fever is provided by the Port Health Authority to any mem-

ber 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:

- (i) Number of immunizations administered
- (ii) Number of children immunized by age
- (iii) Type of immunization
- (iv) Immunization coverage rate.

5. Data Collection Procedure

Data are collected from the various M&CH Clinics and from vaccination records kept by SHS 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 is tabulated and published in the Report of the Childhood Immunization Programme in Singapore by the Quarantine & Epidemiology Department of the Ministry of the Environment. Information is also available in the Maternal & Child Health Services Annual Report and School Health Services Annual Report.

b. CONTRACEPTION, STERILIZATION AND LEGALISED ABORTION

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 desirous of practising

family planning could obtain professional advice and contraceptive supplies.

In 1972, all existing programme activities of the Board were intensified and many new measures were initiated. Both the Abortion Act (1969) and the Voluntary Sterilization Act (1969) legalising abortion and sterilization were repealed at the end of 1974 and replaced by the Abortion Act, 1974 and Sterilization Act, 1974 which further liberalised abortion and sterilization in the Republic.

The collection of statistics on contraceptive methods used started in 1966/67 while statistics on sterilizations and legalised abortions were collected as from 1970.

2. Purpose

The purpose of collecting the data is to monitor the progress of the family planning programme activities and to provide the necessary information for policy formulation and programme planning.

3. Coverage

All persons who seek advice on family planning at the government clinics and those who have undergone sterilization or abortion.

4. Contents

The statistical data collected include:

- (i) Attendances by government clinic and contraceptive methods according to new cases/revisit.
- (ii) Profile of family planning new acceptors.
- (iii) Number of sterilizations and profile of persons who have undergone sterilization.
- (iv) Number of legalised abortions performed and profile of persons who have had their pregnancies terminated.

5. Data Collection Procedure

Monthly returns on family planning acceptors from government clinics and sterilization and abortion returns from all clinics/institutions are submitted to the Research and Evaluation Unit of the Singapore Family Planning and Population Board for data processing.

6. Tabulation and Publication

The Research and Evaluation Unit of the Board is responsible for statistical tabulation and data analyses. The information is published annually.

(Research & Evaluation Section, Ministry of Health)

Health Statistics in Thailand

I. 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, sub-district (*tambon*), and village. The health care delivery systems are provided along with such 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 marriage. 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 has been 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.

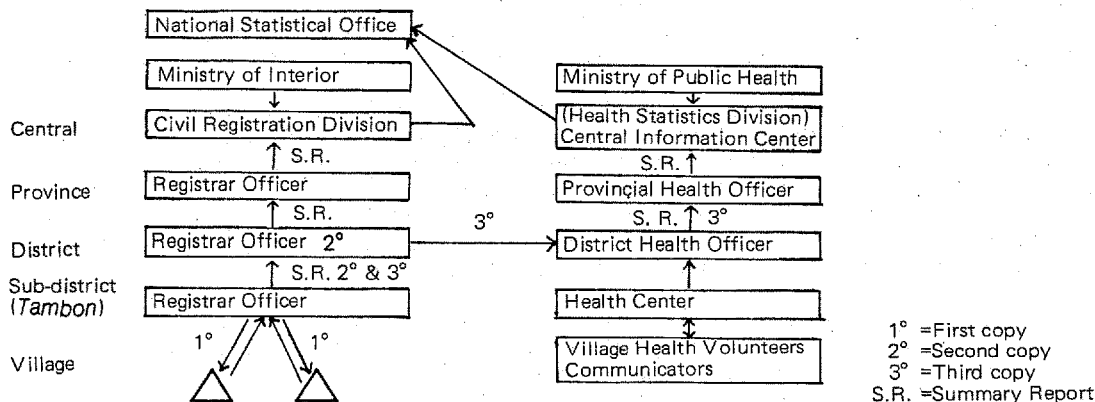
Within the context of health situation of the population, a variety of health information other than health and vital statistics are required so as to identify health problems. Health policies have been planned in accordance with the health problems of the people and subjected to the improvement of the unsatisfied health situations. Health development plans are formulated to serve such policies and are included in the 5-year national economic

and social development plans. Particularly in the 4th 5-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 requirement of 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 the satisfactory circumstances, 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.

II. 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 nationwide which is very essential as a source of vital statistics. The raw data are collected through the channel of local registrar office from 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 will produce 3 copies of allied certificate. The first copy will be handed to the informant and the second and the third copies will be transferred to the district registrar officer with a summary report on a monthly basis.

The district registrar officer will collect reports and certificates from all sub-districts within its district and prepare the summary report to be presented to the provincial level. The 2^o copy of the certificate will be kept as the legal document at the district office while the 3^o copy will be passed to the district health officer. At this junction, the vital registration system and the health system is coordinated.

The provincial registrar officer will collect the monthly report on vital events presented by all district registrar offices and prepare the summary report to be submitted to the central level which is under the responsibility of the Civil Registration Division, Department of Local Administration, Ministry of Interior. The reports are made on a monthly basis and at the end of each year the Civil Registration Division will publish the total number of population, birth, death and other movements.

When the 3^o copies of vital certificate are passed from the District Registrar Officer to the District Health Officer, a summary report on vital events will be prepared and submitted to the Provincial Health Officer together with the actual 3^o copies. In this connection, at provincial level, the summation of total number of births and deaths is computed and sent to the central level of the Ministry of Health in terms of the summary report.

The Central Information Center or the Health Statistics Division of the Ministry of Public Health collect and compile the total number of vital events from the summary reports and prepare the annual report for the Ministry after having analysed and performed various types of statistical presentation.

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

III. HEALTH STATISTICS

Other health statistics can be obtained within the system of the Ministry of Public Health. In the above diagramme, the flow of information can be illustrated from the grass-root of the health delivery system. The information can be classified into Health Status, Health Activities, and Health Resources.

1. Health Status

1.1 Morbidity from the outpatient and inpatient in hospitals and health institutions. The disease categorization

is based on the A-list and the 9th edition of the International Classification of Diseases provided by WHO.

- 1.2. Epidemiological data obtained from the prompt reports on surveillance scheme which provide the prompt information at the occurrence of disease or unfavorable conditions of the population concerning with ill-health.
- 1.3. Natality, mortality and cause of death statistics are obtained from vital registration system.
- 1.4. Data Collection Procedure
Morbidity statistics for in-patients and out-patients are submitted on monthly basis from public hospitals and health service centres compiled for the whole province and separately for municipal areas in each province. Epidemiological data are submitted in prescribed forms on daily basis for some specified communicable diseases and on a weekly basis for other communicable diseases from public and private health service centres.
- 1.5. Tabulation and Publication
Natality, morbidity and mortality data are published in *Public Health Statistics*. Epidemiological data are published yearly in *Epidemiological Surveillance Report* and in other special publications weekly, monthly and quarterly.

2. Health Activities

- 2.1. This kind of health information can be obtained from each level of 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 were designed and put into practice according to the requirements of the responsible health units. The publication of information is undertaken on an annual basis.
For the time being, there is still no responsible persons to do this job in specific, so the health service personnel have to perform this task consuming much of their time until the complaints are made due to insufficient time for rendering services.
- 2.2. Coverage
Activities on health projects or programs undertaken by public health personnel at all levels.

2.3. Contents of report

1. Health care delivery
2. Mental health
3. Referral system
4. Immunization
5. Venereal disease control
6. Leprosy control
7. Tuberculosis control
8. Worm and parasite control
9. Malaria control
10. Veterinary public health
11. Diarrhoea control
12. Maternal and child health
13. School health
14. Nutrition
15. Dental health
16. Environmental health
17. Health education
18. Health supervision
19. Epidemiological surveillance
20. Primary health care
21. Food sanitation
22. Planning management information

2.4. 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 are sent to the Provincial Health Information Centre. The data are then compiled for the whole province and separately for municipal areas and are sent to the Central Health Information Centre on a quarterly and 6-month basis.

2.5. 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

- 3.1. 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 comprised of 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.
- 3.2. Coverage
The data collected cover health resources of all government, state enterprise and private hospitals and health service units.
- 3.3. Contents
1. Number of health service units classified by number of beds, specialities and type of organization
 2. Number of health personnel
 3. Buildings and construction
 4. Equipment
 5. Budget and finance
- 3.4. 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 except for Bangkok. The questionnaire is used for health institutions in Bangkok.
- 3.5. Tabulation and Publication
The data are collected and published annually in summary in *Public Health Statistics* and in more details in *Report on Health Resources*.

(Health Statistics Division, Ministry of Public Health)

Health Resources Statistics in Japan

I. SURVEY ON MEDICAL CARE INSTITUTIONS

1. History

Before the formal establishment of the Survey on 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 survey on medical care institutions in 1948, some improvements in survey method and data collection procedure were made and they resulted in the establishment of the Survey on Medical Care Institutions, which has been conducted on regular basis since 1953.

In 1973, a major modification for structural arrangement and procedure was made. It divided the survey into two portions, the Main Detailed Survey and the Brief Monthly Survey.

2. Purpose

The purpose of the survey is to provide the data on the geographical distribution, characteristics, manpower and equipments of medical care institutions.

3. Coverage

The Main Detailed Survey is conducted as of December 31 every three years and the Brief Monthly Survey is done as of the end of every month.

4. Contents of Questionnaire

A. Main Detailed Survey

- a. Name of medical care institution
- b. Address
- c. Type of ownership
- d. Number of beds, by kind
- e. Equipments installed
- f. Speciality
- g. Number of personnel, by kind

B. Brief Monthly Survey

- a. Name of medical care institution
- b. Address
- c. Type of ownership
- d. Type of reporting (establishment, abolished or suspended)
- e. Number of beds, by kind
- f. Speciality

5. Data Collection Procedure

The questionnaire prepared by a responsible person in the institution is submitted to the Health Center that administers the area where the medical care institution is located. The collected questionnaires are sent to the Statistics and Information Department through the prefectural and designated city governments.

6. Tabulation and Publication

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

II. HOSPITAL REPORT

1. History.

The original of the Report was started as the *Weekly Hospital Report* in 1945 and in 1948 it was modified to the monthly report, together with the extension of the coverage of the tuberculosis and leprosy hospitals.

The Hospital Report was initiated in November 1948 with the enactment of 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 subsequently.

2. Purpose

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

3. Coverage

All hospitals in Japan.

4. Contents of Reporting Forms

A. Patient schedule (monthly)

Number of inpatients, outpatients, newborns, etc.

B. Employee schedule (annual)

Number of physicians, pharmacists, nurses, etc.

5. Data Collection Procedure

The reporting forms are filled out by the superintendent of the hospitals and 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 through publications and other media.

III. SURVEY ON PHYSICIANS, DENTISTS, AND PHARMACISTS

1. History

Originally, the Survey on Physicians, Dentists, and Pharmacists had been included in the *Statistical Report on Public Health Services*.

In 1948 with the enactment of the Medical Practitioners Law and Dentists Law and in 1954 with the amendment

of the Pharmaceutical Affairs Law, the reporting forms on physicians, dentists, and pharmacists were separated from the Statistical Report and composed the new statistics, the Survey on Physicians, Dentists and Pharmacists in 1954.

2. Purpose

The survey has the purpose to collect the information on the number and geographical distribution of these health personnel.

3. Coverage

The survey covers all physicians, dentists, and pharmacists registered in Japan.

4. Date

As of December 31, annually. (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. Type of license
- G. Speciality
- H. Employment status

6. Data Collection Procedure

The reporting form filled out by each medical profession is submitted to a Health Center. At the Health Center, editing work is done and the reporting form is sent to the Statistics and Information Department via the prefectural government where the reporting form is duplicated for local use.

7. Tabulation and Publication

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

IV. STATISTICAL REPORT ON PUBLIC HEALTH SERVICES

1. History

The *Statistical Report on Home Affairs*, the original of the *Statistical Report on Public Health Services*, was initiated in 1886.

As the Ministry of Health and Welfare was established in 1938, it was newly enacted as the Statistical Report on Public Health 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 on reporting forms to meet the administrative demands.

2. Purpose

The purpose of the Report is to collect the data on the present situation of the health administrative activities in the prefectural and designated city governments.

3. Coverage (for Reporting Forms Relating to Health Resources)

The Report covers all public health nurses, midwives, nurses, dental hygienists and dental technicians working in Japan.

4. Data

As of December 31 (reporting forms on health manpower)

5. Contents of Reporting Form

- A. Type of health occupations
- B. Age and sex
- C. Place of work

6. Data Collection Procedure

The five active health personnel are required to report their characteristics annually to the prefectural and designated city governments, where the reporting forms are filled out and sent to the Statistics and Information Department.

7. Tabulation and Publication

The Statistics and Information Department takes charge of the whole tabulation and the results are released through publications.

V. SURVEY ON SOCIAL WELFARE INSTITUTIONS

1. History

The Statistical Report on Social Welfare Services, the original of *the Survey on Social Welfare Institutions*, had been carried out until 1955.

In 1956 the Survey on Social Welfare Institutions was initiated in order to collect the data on the manpower and functions of the institution directly from each institution.

2. Purpose

The purpose of the Survey is to provide the data on the geographical distribution and functions of the Social Welfare Institutions.

3. Coverage

The Survey covers all social welfare institutions in Japan.

4. Date

As of October 1, annually.

5. Contents of Questionnaire

- A. Type of institution
- B. Name of institution
- C. Address
- D. Number of staffs
- E. Capacity

6. Data Collection Procedure

The Ministry of Health and Welfare plans the survey and the Welfare Offices conduct it under the supervision of

the prefectural and designated city governments.

The Welfare Offices deliver the questionnaires, which are filled out by the superintendent of the institution and collect them to send to the Statistics and Information Department through the prefectural and designated city governments.

7. Tabulation and Publication

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

VIII. POPULATION CENSUS

1. History

The population censuses in Japan have been taken almost every five years since 1920, the 1980 Population Census being the thirteenth one.

Regular quinquennial censuses included the large-scale censuses and the simplified censuses. The censuses that were taken every ten years starting 1920 were the large-scale censuses, while the censuses that were taken in the fifth year after the large-scale decennial censuses were simplified censuses. The main difference between the large-scale census and the simplified census during the prewar period was the number of questions asked in the census. In a simplified census, questions were limited to basic characteristics of population, i.e., name, sex, age, marital status, etc., while a large-scale census covered questions on the economic characteristics such as occupation and industry in addition to the basic characteristics of population.

After World War II, the scale of census-taking has generally been amplified so as to satisfy the increased demands from the variety of users of the census results. The 1955, 1965 and 1975 censuses, which were taken as the simplified census, covered almost equal number of items as the prewar large-scale census. The 1980 Population Census was taken as a large-scale one and the number of questions was increased than before.

2. Purpose

The purpose of this census is to provide the data on the present situation of population in Japan.

3. Coverage

The 1980 Population Census covered the whole population in Japan.

This census used the so-called de jure population concept in enumerating the people. It means, a person was enumerated at the place where he or she usually lived and was counted as the population of that area.

4. Date

The 1980 Population Census was taken as of 0:00 A.M. of October 1, 1980. This date is the same as past regular censuses since 1920.

5. Contents of Questionnaire

A. For household member

- a. Name
- b. Sex
- c. Year and month of birth
- d. Relationship to the head of the household
- e. Marital status
- f. Nationality
- g. Time moved into the present house
- h. Previous address
- i. Education
- j. Type of activity
- k. Name and kind of business of employer or a self-employed person's business (industry)
- l. Kind of work (occupation)
- m. Employment status
- n. Place of work or location of school

B. For household

- a. Type of household
- b. Number of household members
- c. Source of household income
- d. Type of tenure of dwelling
- e. Number of dwelling rooms
- f. Area of floor space of dwelling rooms
- g. Type of building and the number of stories

6. Data Collection Procedure

The field enumeration of the 1980 Population Census was conducted, within their respective jurisdictions, by the mayors or the heads of city, ward and village, under the supervision of the governments of prefectures. The whole procedure was planned and administered by the Statistics Bureau, the Prime Minister's Office.

7. Tabulation and Publication

The Statistics Bureau, the Prime Minister's Office takes charge of the whole tabulation of the census results and the results are released through publications and other media.

IX. VITAL STATISTICS

1. History

The modern Meiji Government was established in Japan after the Meiji Restoration of 1868, and the administrative organization was rearranged and modernized throughout the country. Following this, by 1872, the family registration system was established and came to function as a permanent source of vital statistics in Japan since then. The jurisdiction of vital statistics system has been transferred since 1947 to the Ministry of Health and Welfare, in view of making full use of the collected data mainly for public health activities.

2. Method of Collecting Data

The characteristics of the present vital statistics system of Japan can be represented mostly by the fact that it is based on the Family Registration System under which the legal status of an individual and its changes are recorded. Because of its legal nature, the Family Registration System is at present under the jurisdiction of the Ministry of Justice.

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

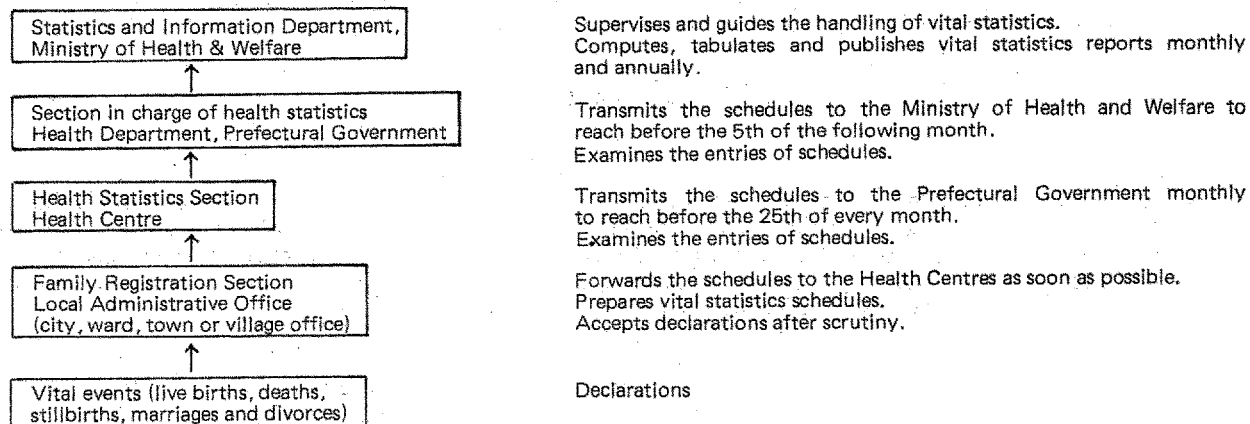
The declaration of birth has to be made with the birth certificate of the physician or the midwife who attended the birth. It should be declared by either father, mother, the person who lives with them or anyone who attended the birth, within 14 days after the birth.

The death has to be declared with the doctor's death certificate or autopsy on the body. The death declaration should be made by the relative or anyone of others who lived with the deceased, the landowner, or the caretaker of the land, within 7 days after the death or the time when the death was known.

The declaration of stillbirth has to be made as a rule with the doctor's or midwife's certificate of stillbirth or dead foetus; and is to be declared by father, mother, the person who lives with them or anyone who attended the stillbirth within 7 days after the stillbirth.

These channels of collecting vital statistics data can be illustrated in the chart as follows:

Channels of collecting vital statistics data



3. Publications of 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 kinds of publications:

(1) Monthly Prompt Report of Vital Statistics

This Monthly Prompt Report covers total figures of live births, deaths, stillbirths, marriages and divorces by prefecture. It should be noted that the figures included in this report represent merely the number of schedules for each type of vital events forwarded from Prefectural Government and received by the Ministry of Health and Welfare.

(2) Monthly Report of Vital Statistics