

SEAMIC HEALTH STATISTICS

1991

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International Medical Foundation of Japan

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Preface

The SEAMIC HEALTH STATISTICS has been published annually since 1979 as part of the SEAMIC activities sponsored by the International Medical Foundation of Japan. It has been presenting in a uniform manner, information relevant to health developments in the countries participating in the SEAMIC. The publication has been appreciated by users both in those countries and in others.

This year's issue follows the same general pattern as in the 1990 edition. However, in accordance with the decisions taken at the 5th SEAMIC Technical Meeting on Health Statistics held in Bangkok in August 1992, tables on seasonal distribution of cases of cholera, typhoid fever, paratyphoid fever, bacillary dysentery and food poisoning have been discontinued and, hence, do not appear in the present issue. On the other hand, data on expenditures of the Ministry of Health are included as a new item.

In view of the evolving information needs of the users, the contents of the publication will continue to be reviewed for improvements. Suggestions in this regard would be much appreciated.

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

February, 1993

Kazuo Uemura
Chairman
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SEAMIC HEALTH STATISTICS

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Explanation of Symbols

••	Category not applicable
(blank) or NA	Data not available
—	Nil
0	Not nil, but less than half of the unit employed
0.0	
*	Provisional or estimated

Part I

Health Statistics

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

	Latest Census						Annual Rate of Increase (%)	Surface Area (km ²)	Density (Persons/km ²)
	Date	Total	Male	Female	Sex Ratio	Persons per Household			
BRUNEI ⁽¹⁾	26 August 1981	192,832	102,942	89,890	114.5	5.8	a) 3.4	5,765	43
INDONESIA ⁽²⁾	1990	179,322,000	89,436,285	89,885,715	99.5	4.5	(3) b) 2.08	1,919,443	93
JAPAN ⁽⁴⁾	1 October 1990	123,611,167	60,696,724	62,914,443	96.5	2.99	c) 0.42	377,737	332
MALAYSIA ⁽⁵⁾	14 Augnst 1991	17,566,982	8,861,124	8,705,858	102	4.91	d) 2.3	329,758	53
Peninsular Malaysia		14,127,556	7,080,980	7,046,576	100	4.87	2.2	131,598	107
Sabah		1,791,209	936,772	854,437	110	5.09	3.8	73,711	24
Sarawak		1,648,217	843,372	804,845	105	4.97	2.4	124,449	13
PHILIPPINES ⁽⁶⁾	1 May 1990	60,487,185	30,410,475	30,076,710	101.1	5.6	d) 2.5	300,000	201
SINGAPORE ^(7) e)	30 June 1990	2,705,115	1,370,059	1,335,056	102.6	4.2	f) 1.7	633	4,273
THAILAND ⁽⁸⁾	1 April 1980	44,824,540	22,328,607	22,495,933	99.2	5.2	g) 1.9	513,000	109.8

Source: (1) Statistics Section, Economic Planning Unit, Ministry of Finance
(2) *Population Projection Indonesia by Province*, Central Bureau of Statistics
(3) *Rate of Population Growth Urban and Rural*, Central Bureau of Statistics
(4) *1990 Population Census of Japan*, Statistics Bureau, Management and Coordination Agency
(5) *Population and Housing Census of Malaysia, 1991*
(6) National Statistics Office
(7) *Census of Population 1990 Singapore Yearbook of Statistics*, Singapore 1991, Department of Statistics

(8) *1980 Population and Housing Census*, National Statistics Office, Office of the Prime Minister

Note: a) Annual rate of increase 1980 - 1989
b) Annual rate of increase 1979 - 1988
c) Annual rate of increase 1985 - 1990
d) Annual rate of increase 1978 - 1987
e) Refer to Singapore residents only
f) Annual rate of increase 1981 - 1990
g) Annual rate of increase 1980 - 1988

1-2 Estimates of Mid-year Population

(in millions)

	1970	1975	1980	1984	1985	1986	1987	1988	1989	1990
BRUNEI ⁽¹⁾	a) 0.14	0.16	0.19	0.22	0.22	b) 0.23	0.23	0.24	0.25	
INDONESIA ⁽²⁾	119.47	130.50	146.36	159.83	163.37	168.35	172.01	174.68	177.36	178.44
JAPAN ⁽³⁾	103.72	111.94	117.06	120.31	121.05	121.67	122.26	122.78	122.46	122.79
MALAYSIA ⁽⁴⁾	10.39	11.90	13.76	15.27	15.68	16.12	16.53	16.92	17.35	17.76
PHILIPPINES ⁽⁵⁾	36.68	42.07	48.32	53.35	54.67	56.00	57.06	58.72	58.72	60.48
SINGAPORE ^(6) c)	2.07	2.26	2.28	2.44	2.48	2.52	2.55	2.60	2.65	2.71
THAILAND ⁽⁷⁾	36.37	41.39	46.52	d) 50.40	d) 51.68	d) 52.65	53.15	54.54	55.45	56.34

Source : (1) Statistics Section, Economic Planning Unit, Ministry of Finance

(2) *Indonesian Population Projection 1980-2000*, Central Bureau of Statistics(3) *Japan Statistical Yearbook 1990*, Statistics Bureau, Management and Coordination Agency(4) *Current Population Estimates, Peninsular Malaysia, Sabah and Sarawak-1990*, Department of Statistics

(5) National Statistics Office

(6) *Report on Registration of Births and Deaths, 1990*, National Registration Department(7) *Report of Working Group on Population Projections*,

Office of the National Economic and Social Development Board.

Note : a) For 1981, Population Census

b) Population Survey

c) Population figures from 1980 onwards refer to Singapore residents only.

d) Estimates based on total population figures, *1980 Population & Housing Census*, National Statistical Office

1-3 Population Estimates and Projections

(in thousands)

	1995	2000	2005	2010	2015	2020	2025	2030	2035
BRUNEI (1)	295	337	a) 348.2						
INDONESIA (2)	181,205	183,097	185,009	186,941	188,894	190,866	192,860	194,874	
JAPAN (3) b)	125,463	127,385	129,346	130,397	130,033	128,345	125,806	122,972	120,132
MALAYSIA (4)	19,748	22,454							
PHILIPPINES (5)	68,424	75,224	81,591	87,206	92,430	97,682	102,686	107,123	
SINGAPORE (6) c)		2,995		3,177		3,285		3,303	
THAILAND (7)	60,506	64,389	67,910	70,865	73,208				

Source : (1) Statistics Section, Economic Planning Unit, Ministry of Finance

(2) Based on Population formula Census 1990, Central Bureau of Statistics.

Calculated by Centre for Health Data

(3) *Future Populations for Japan*, Provisionally prepared in June 1992, Institute of Population Problems, Ministry of Health and Welfare

(4) Information and Documentation System Unit, Planning and Development Division, Ministry of Health

(5) Based on Population Projections, (*Series 2 : Moderate Fertility Decline and Moderate Mortality Decline*), National Statistics Office, Manila

(6) Population Planning Unit, Ministry of Health

(7) *Report of Working Group on Population Projections*, Office of the National Economic and Social Development Board, 1985

Note : a) Year : 2001

b) Population on 1 October

c) Based on actual population count, 1990

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	
(1) BRUNEI	1989	T	249.0		33.4		30.5	26.1	24.1	27.7	26.1	22.8
		M	128.6		17.2		15.6	13.2	11.9	14.0	14.1	11.7
		F	120.4		16.2		14.9	12.9	12.2	13.7	12.0	11.1
(2) a) INDONESIA	1990	T	179,247.8		20,886.6		23,080.6	21,436.5	18,919.5	16,148.0	15,540.8	13,191.0
		M	89,375.7		10,766.2		11,790.8	10,988.2	9,552.5	7,661.9	7,388.8	6,573.2
		F	89,872.1		10,120.4		11,289.8	10,438.3	9,367.0	8,486.1	8,152.0	6,617.8
(3) b) JAPAN	1990	T	122,721		6,470		7,437	8,496	9,968	8,721	7,977	7,713
		M	60,249		3,317		3,810	4,358	5,108	4,438	4,036	3,892
		F	62,472		3,152		3,627	4,138	4,860	4,284	3,941	3,821
(4) MALAYSIA	1990	T	17,763		2,436		2,235	1,870	1,838	1,679	1,559	1,335
		M	8,952		1,256		1,150	958	938	855	771	647
		F	8,810		1,180		1,085	912	900	824	788	687
(5) PHILIPPINES	1990	T	60,487.1	1,814.5	6,638.4	8,049.7	7,457.9	6,633.9	5,762.3	4,937.8		4,194.9
		M	30,410.4	928.1	3,407.9	4,120.5	3,796.4	3,317.9	2,863.6	2,455.9		2,107.4
		F	30,076.7	886.4	3,230.5	3,929.2	3,661.5	3,316.0	2,898.7	2,481.9		2,087.3
(6) c) SINGAPORE	1990	T	2,705.1	46.6	176.8	205.0	197.9	221.4	232.3	283.7		293.0
		M	1,370.1	24.2	91.5	106.4	102.4	114.5	118.4	143.6		149.4
		F	1,335.1	22.4	85.3	98.6	95.5	107.0	113.9	140.0		143.7
(7) THAILAND	1990	T	56,340		6,240		6,357	6,207	6,156	6,008	5,169	4,453
		M	28,143		3,167		3,212	3,147	3,135	3,056	2,614	2,225
		F	28,197		3,073		3,145	3,060	3,021	2,952	2,555	2,222

Source : (1) Statistics Section, Economic Planning Unit, Ministry of Finance

(2) *Population Projection, Indonesia by Province 1985-1995*

Central Bureau of Statistics, p 116-118.

(3) *Vital Statistics 1990*, Ministry of Health and Welfare

(4) *Vital Statistics Peninsular Malaysia, Sabah & Sarawak-1990*,
Department of Statistics

(5) National Statistics Office

(6) Department of Statistics

(7) *Report of Working Group on Population Projections*,

Office of the National Economics and Social Development Board

Note : a) Excluding non-permanent resident (home less people, sailor, boat people and remote area communities) 7,420 person

b) Japanese resident population only

c) Refer to Singapore resident population only. (figures may not add up due to rounding)

(in thousands)

Age										
35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
17.1	11.3	8.2	6.3	5.3	3.5	2.7	3.9			
9.1	5.9	4.5	3.4	2.6	1.9	1.6	1.9			
8.0	5.4	3.7	2.9	2.7	1.6	1.1	2.0			
11,252.5	8,000.3	7,623.8	6,696.1	4,912.7	4,589.4	2,861.4	2,060.0	2,048.6		
5,816.1	3,962.0	3,737.3	3,298.3	2,344.0	2,270.8	1,365.6	957.0	893.0		
5,436.4	4,038.3	3,886.5	3,397.8	2,568.7	2,318.6	1,495.8	1,103.0	1,155.6		
8,946	10,618	8,990	8,069	7,714	6,736	5,091	3,810	3,014	1,831	1,122
4,500	5,333	4,472	3,991	3,782	3,234	2,189	1,557	1,197	678	357
4,446	5,284	4,518	4,078	3,932	3,501	2,902	2,253	1,818	1,153	766
1,099	892	672	615	448	376	264	205	112	117	
542	452	343	311	218	183	124	95	51	51	
556	440	330	303	230	193	140	110	60	65	
3,496.0	2,750.5	2,220.1	1,904.9	1,439.0	1,127.5	807.4	563.2	385.6	184.8	116.6
1,765.7	1,387.8	1,112.7	944.3	705.4	546.9	376.7	264.9	176.7	80.9	50.0
1,730.3	1,362.7	1,107.4	960.6	733.4	580.6	430.7	300.3	208.9	103.9	66.6
252.7	204.0	127.6	117.5	99.8	82.8	59.7	45.0	32.3	17.5	9.6
128.7	103.3	64.3	59.1	49.7	40.9	29.3	20.5	13.9	7.0	3.2
124.0	100.7	63.3	58.4	50.1	41.9	30.5	24.5	18.4	10.5	6.5
3,634	2,775	2,246	2,029	1,645	1,285	893	607	636		
1,810	1,391	1,115	981	784	609	418	272	261		
1,824	1,384	1,131	1,048	861	676	475	335	375		

1 - 5 Urban and Total Population

(in thousands)

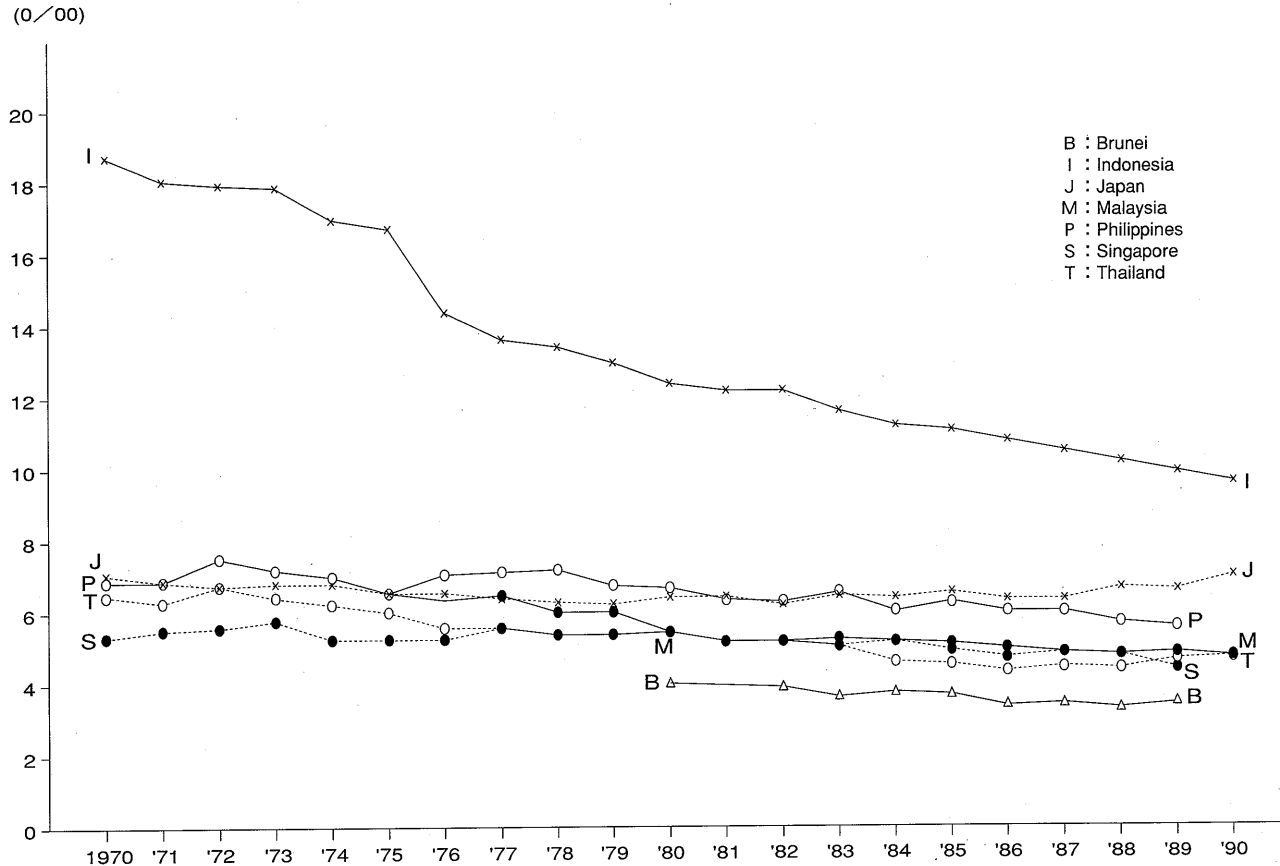
	1960			1970			1980			1990		
	Total	Urban	(%)	Total	Urban	(%)	Total	Urban	(%)	Total	Urban	(%)
BRUNEI (1)	84	37	43.6	a) 136	87	63.6	b) 193	115	59.4			
INDONESIA (2)	c) 97,085	14,358	14.8	119,143	20,733	17.4	146,776	32,846	22.4	175,588	50,456	28.7
JAPAN (3)	94,300	59,698	63.3	104,666	75,429	72.1	117,600	89,187	76.2	123,611	95,644	77.4
MALAYSIA (4)	8,170	2,060	25.2	10,439	2,787	26.7	13,745	4,687	34.1	(5) 17,877.2	7,282.0	40.7
Peninsular Malaysia				8,810	2,530	28.7	11,426	4,250	37.2	14,605.2	6,527.2	44.7
Sabah				653	107	16.7	1,011	208	20.6	1,517.4	388.3	25.6
Sarawak				975	149	15.4	1,307	230	17.6	1,754.6	366.3	20.9
PHILIPPINES (6)	28,098	8,513	30.3	37,540	12,366	32.9	48,098	17,944	37.3	60,487	29,419	48.6
SINGAPORE (7)	c) 1,446	1,132	78.0	2,075	1,562	75.0	d) 2,282	2,282	100.0	d) e) 2,483	2,483	100.0
THAILAND	(8) 26,258	3,274	12.5	(9) 34,397	4,553	13.2	(10) 44,824	7,633	17.0	e) 53,870	9,697	18.0

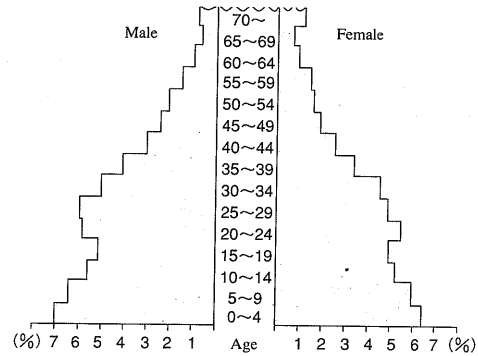
Source : (1) Statistics Section, Economic Planning Unit, Ministry of Finance
 (2) *Population of Indonesia*, Central Bureau of Statistics
 (3) *Japan Statistical Yearbook 1990*, Management and Coordination Agency
 (4) *General Report of the Population Census 1991, Vol. 1*, Department of Statistics
 (5) *Fifth Malaysia Plan Report 1986 - 1990*
 (6) National Statistics Office
 (7) *Report on the Census of Population 1970, Singapore, Vol. 1*, Department of Statistics
 (8) *1960 Population Census*, Central Statistics Office, National Economic Development Board
 (9) *1970 Population & Housing Census*, National Statistical Office, Office of the Prime Minister

(10) *1980 Population & Housing Census*, National Statistical Office, Office of the Prime Minister

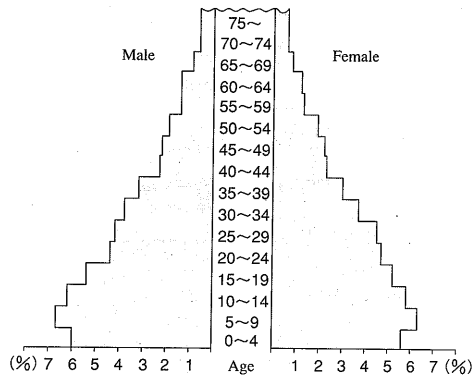
Note : a) For 1971
 b) For 1981
 c) For 1957
 d) Population figure from 1980 onwards refer to Singapore Residents only.
 e) For 1985

Fig.1 Recent Trends in Death Rates (Per 1,000)

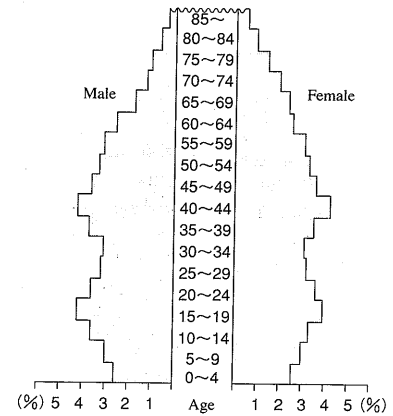




BRUNEI DARUSSALAM 1989

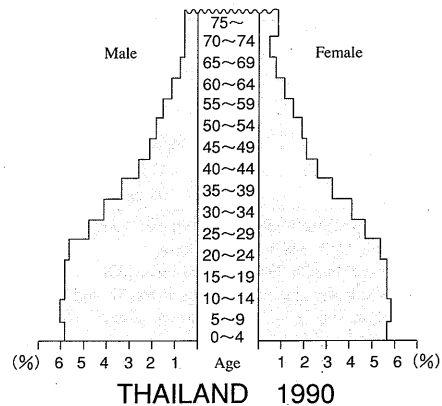
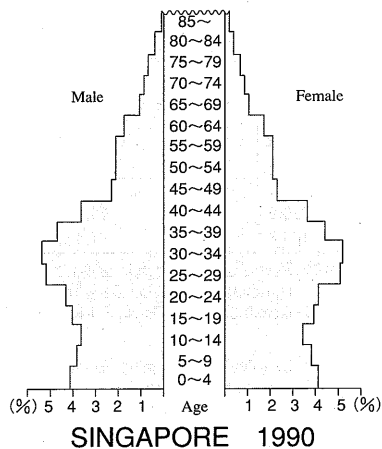
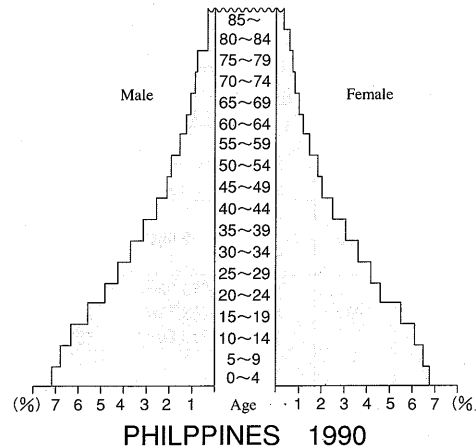
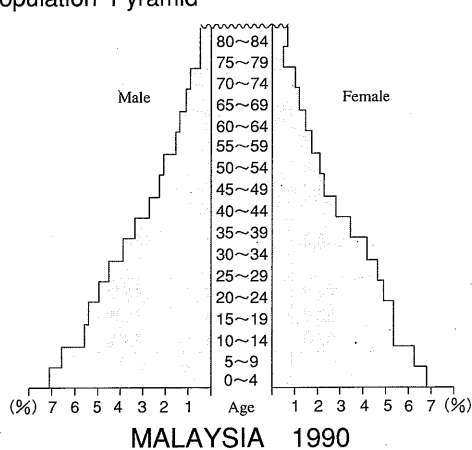


INDONESIA 1990



JAPAN 1990

Fig.2 Population Pyramid



2 Deaths and Death Rates by Age

	Year	Sex	All ages		0		1-4		5-14		15-24	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI (1)	1989	T	827	332.1	77			230.5	21	37.1	42	81.1
		M	498	387.2	44			255.8	20	69.4	31	119.7
		F	329	273.3	33			203.7	1	3.6	11	42.5
INDONESIA (2 a)	1986	T	2,055	703.0	571	7,180.0	324	1,060.0	124	160.0	97	180.0
JAPAN (3)	1990	T	820,305	668.4	5,616	459.7	3,367	45.0	2,619	14.8	9,148	48.9
		M	443,718	736.5	3,123	498.1	1,409	52.2	1,604	19.6	6,670	69.9
		F	376,587	602.8	2,493	419.3	958	37.4	1,015	13.1	2,478	27.1
MALAYSIA (4) Peninsular Malaysia Sabah Sarawak	1990	T	71,439	488.6	6,614			339.6	1,652	49.4	2,875	99.6
		T	5,491	372.9	1,283			474.4	231	61.3	281	108.0
		T	6,329	378.9	564			258.2	134	36.0	279	76.5
PHILIPPINES (5)	1989	T	325,621	541.8	43,026	2,474.0	30,073	452.1	13,476	102.8	17,666	145.4
		M	192,077	636.4	24,952	2,800.0	16,071	472.5	8,676	112.6	12,009	194.0
		F	133,544	446.4	18,074	2,131.5	14,002	430.8	4,800	92.5	5,657	95.0
SINGAPORE (6)	1990	T	13,891 b)	460.5	406 b)			177.6	91	21.7	284	50.5
		M	7,727	509.1	230			194.3	55	25.3	203	72.0
		F	6,162	411.2	175			158.8	36	17.9	81	28.8
THAILAND	1990	T	252,512	448.2	12,237			196.1	6,645	52.9	16,378	134.6
		M	147,887	524.5	7,172			226.5	3,892	61.2	12,106	195.5
		F	104,625	371.8	5,065			164.8	2,753	44.4	4,272	71.5

Source : (1) Birth and Death Registry, Ministry of Health and Statistics Section Economic Planning Unit, Ministry of Finance.

(2) Household Health Survey in Indonesia 1986

(3) *Vital Statistics, Japan*, Ministry of Health and Welfare 1990

(4) *Vital Statistics, Peninsular Malaysia, Sabah & Sarawak-1990*, Department of Statistics

(5) *Philippine Health Statistics*, Department of Health 1989, Health Intelligence Service.

(6) *Report on Registration of Birth and Deaths, 1990*

National Registration Department, Singapore

(7) Health Statistics Division, Ministry of Public Health

Note : a) Calculated by sampling survey

b) Include unknown sex

(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	Total	Rate
56	114.5	54	190.1	72	496.6	103	1,170.5	402			6,090.9		
39	151.2	26	173.3	44	557.0	56	1,244.4	238			6,800.0		
17	73.6	28	209.0	28	424.2	47	1,093.0	164			5,290.2		
98	225.4	109	371.5	181	810.2	186	1,248.2	149	2,048.1	216	6,844.1		
9,315	59.4	23,862	122.0	51,986	304.71	110,269	763.1	159,744	1,794.7	444,930	7,456.5	449	
6,180	78.0	15,218	154.8	34,379	406.2	75,667	1,078.5	94,401	2,520.0	204,687	9,170.6	380	
3,135	40.4	8,644	88.8	17,607	204.8	34,602	465.5	65,343	1,267.6	240,243	6,428.8	69	
3,214	133.5	4,080	244.0	6,529	602.5	10,724	1,550.4	15,222	3,890.1	20,409	10,597.1	120	
388	172.3	354	250.4	546	607.8	756	1,409.3	790	2,726.9	831	7,671.1	19	
259	98.8	331	184.8	579	497.5	994	1,241.7	1,535	3,056.4	1,608	6,010.3	46	
22,160	236.2	23,128	364.2	28,515	714.9	35,053	1,377.6	110,510			4,924.8		
15,470	341.3	15,810	495.4	18,919	965.2	22,536	1,809.3	57,618			5,408.9		
6,690	138.0	7,318	231.7	9,596	383.7	12,517	936.6	52,982			4,494.9		
540	79.1	764	151.1	1,165	446.3	2,411	1,278.5	3,316	3,080.7	4,862	7,966.3	52 b)	
352	102.9	470	183.5	735	555.7	1,540	1,646.1	1,932	3,800.3	2,175	8,854.1	35	
188	55.4	294	117.9	430	333.9	871	916.6	1,384	2,436.7	2,687	7,368.3	16	
18,269	189.9	19,791	308.8	27,431	641.7	38,744	1,322.3	108,422			5,076.0	4,595	
13,517	279.3	13,425	419.4	17,178	819.6	23,519	1,688.4	54,352			5,715.3	2,726	
4,752	99.4	6,366	198.4	10,253	470.5	15,225	990.6	54,070			4,562.9	1,869	

3 Ten Leading Causes of Death

	Year	1	2	3	4	
BRUNEI ⁽¹⁾	1989	Heart Diseases	Malignant Neoplasms	Accidents, Poisoning & Violence	Pneumonia	
INDONESIA ⁽²⁾	1989	Parasitic and Infectious Diseases	Diarrhoea	Respiratory Diseases	Cardiovascular Diseases	
JAPAN ⁽³⁾	1990	Malignant Neoplasms	Diseases of Heart	Cerebrovascular Diseases	Pneumonia & Bronchitis	
MALAYSIA ^(4) a)	Peninsular Malaysia	1990	Heart Diseases and Diseases of Pulmonary Circulation	Certain Conditions Originating in the Perinatal Period	Cerebrovascular Diseases	Accidents
	Sabah	1990	Certain Conditions Originating in the Perinatal Period	Septicaemia	Heart Diseases and Diseases of Pulmonary Circulation	Pneumonia
	Sarawak	1990	Heart Diseases and Diseases of Pulmonary Circulation	Certain Conditions Originating in the Perinatal Period	Malignant Neoplasms	Cerebrovascular Diseases
PHILIPPINES ⁽⁵⁾	1989	Pneumonia	Heart Diseases	Diseases of the Vascular System	Tuberculosis, All Forms	
SINGAPORE ⁽⁶⁾	1990	Diseases of Heart	Cancer	Cerebrovascular Diseases	Pneumonia	
THAILAND ^(7) b)	1990	Diseases of Pulmonary Circulation and Other Forms of Heart Diseases	Other Accident, Including Late Effect	Malignant Neoplasm of Other and Unspecified Sites	Diseases of the Digestive System Other than Oral Cavity, Salivary Glands and Jaws	

Source : (1) Ministry of Health
 (2) Household Health Survey Indonesia in 1986
 (3) *Vital Statistics, Japan*, Ministry of Health and Welfare
 (4) Information and Documentation System Unit, Ministry of Health
 (5) *Philippine Health Statistics*, Health Intelligence Service, Department of Health
 (6) National Registration Department, Singapore

(7) Health Statistics Division, Office of the Permanent Secretary, Ministry of Public Health

Note : a) Government hospitals only
 b) First 10 leading cause groups of death according to ICD Basic Tabulation List, 9th Revision

5	6	7	8	9	10
Hypertensive Diseases	Bronchitis, Emphysema and Asthma	Septicaemia	Cerebrovascular Diseases	Congenital Anomalies	Conditions Originating in the Perinatal Period
Tuberculosis	Certain Conditions Originating in the Perinatal Period	Injuries and Accidents	Diseases of Digestive System	Neoplasms	Diseases of Nervous System
Accidents, Poisoning and Violence	Suicide	Chronic Liver Diseases & Cirrhosis of Liver	Nephritis, Nephrotic Syndrome & Nephrosis	Hypertensive Diseases	Diabetes Mellitus
Malignant Neoplasms	Septicaemia	Nephritis, Nephrotic Syndrome and Nephrosis	Congenital Anomalies	Symptoms, Signs and Ill - defined Conditions	Pneumonia
Malignant Neoplasms	Cerebrovascular Diseases	Accidents	Tuberculosis	Nephritis, Nephrotic Syndrome and Nephrosis.	Symptoms, Signs and Ill - defined Conditions
Septicaemia	Accidents	Pneumonia	Tuberculosis	Symptoms, Signs and Ill - defined Conditions.	Nephritis, Nephrotic Syndrome and Nephrosis.
Malignant Neoplasms	Accidents	Diarrheal Diseases	Measles	Nephritis Nephrotic Syndrome and nephrosis	Septicaemia
Accidents	Diabetes Mellitus	Nephritis and Nephrosis	Congenital Anomalies	Bronchitis, Emphysema and Asthma	Septicaemia
Transport Accidents	Diseases of Respiratory System Other than the Upper Respiratory Tract	Cerebrovascular Diseases	Diseases of Nervous System	Malignant Neoplasms of Digestive Organs and Peritoneum	Homicide and Injury Purposely Inflicted by Other Persons

[Brunei Darussalam]

4 Trends in the Leading Causes of Death (1)

Year		1980	1981	1982	1983	1984	1985	1986	1987	1988
Order										
No.1	Cause of Death	Accidents, Poisoning & Violence	Diseases of Heart	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Malignant Neoplasms
	Death Rate per 100,000 Population	36.2	38.4	43.0	31.7	32.0	37.0	39.8	40.2	43.1
No.2	Cause of Death	Diseases of Heart	Accidents, Poisoning & Violence	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms	Diseases of Heart	Malignant Neoplasms	Malignant Neoplasms	Diseases of Heart
	Death Rate per 100,000 Population	34.0	38.4	35.0	25.5	26.4	32.4	27.0	35.5	35.6
No.3	Cause of Death	Malignant Neoplasms	Malignant Neoplasms	Diseases of Heart	Diseases of Heart	Diseases of Heart	Malignant Neoplasms	Diseases of Heart	Diseases of Heart	Accidents, Poisoning & Violence
	Death Rate per 100,000 Population	32.4	25.4	30.0	24.5	26.4	28.8	24.3	32.1	29.8
No.4	Cause of Death	Certain Condition Originating in the Perinatal Period	Certain Condition Originating in the Perinatal Period	Cerebro-vascular Diseases	Pneumonia	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Cerebro-vascular Diseases
	Death Rate per 100,000 Population	28.6	19.7	27.0	15.4	16.2	18.0	19.4	15.0	17.8
No.5	Cause of Death	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Pneumonia	Cerebro-vascular Diseases	Congenital Anomalies	Pneumonia	Pneumonia	Bronchitis Emphysema & Asthma	Diabetes Mellitus
	Death Rate per 100,000 Population	23.8	19.2	14.0	13.0	13.0	13.1	12.4	12.8	12.4

Source : Ministry of Health, Brunei

[Indonesia]

4 Trends in the Leading Causes of Death (2)

Year		1972	1980	1986
Order				
No.1	Cause of Death	Diarrhoea	Lower Re- spiratory Tract Infection	Diarrhoea
	Death Rate per 100,000 Population	425.7	146	84.5
No.2	Cause of Death	Lower Re- spiratory Tract Infection	Diarrhoea	Tuberculosis
	Death Rate per 100,000 Population	331.1	137.9	60.2
No.3	Causes of Death	Tuberculosis	Cardio- vascular Diseases	Diphtheria, Measles & Cough
	Death Rate per 100,000 Population	165.6	73	53
No.4	Cause of Death	Cardiovascular Disorder & Nervous System	Tuberculosis	Tetanus
	Death Rate per 100,000 Population	141.9	61.7	42.1
No.5	Cause of Death	Tetanus	Tetanus	Malaria
	Death Rate per 100,000 Population	141.9	47.9	23.9

Source : Household Health Survey in Indonesia

[Japan]

4 Trends in the Leading Causes of Death (3)

Year		1899	1920	1930	1940	1950	1960	1970	1980	1985	1989	1990
Order												
No.1	Cause of Death	Pneumonia and Bronchitis	Pneumonia and Bronchitis	Gastro-enteritis	Tuber-culosis	Tuber-culosis	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms
	Death Rate per 100,000 Population	206.1	408.6	221.4	212.9	146.4	160.7	175.8	139.5	156.1	173.6	173.2
No.2	Cause of Death	Cerebro-vascular Diseases	Gastro-enteritis	Pneumonia and Bronchitis	Pneumonia and Bronchitis	Cerebro-vascular Diseases	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms	Diseases of Heart	Diseases of Heart	Diseases of Heart
	Death Rate per 100,000 Population	170.5	254.2	200.1	185.8	127.1	100.4	116.3	139.1	117.3	128.1	126.7
No.3	Cause of Death	Tuber-culosis	Tuber-culosis	Tuber-culosis	Cerebro-vascular Diseases	Pneumonia and Bronchitis	Diseases of Heart	Diseases of Heart	Diseases of Heart	Cerebro-vascular Diseases	Cerebro-vascular Diseases	Cerebro-vascular Diseases
	Death Rate per 100,000 Population	155.7	223.7	185.6	177.7	93.2	73.2	86.7	106.2	112.2	98.5	102.3
No.4	Cause of Death	Gastro-enteritis	Influenza	Cerebro-vascular Diseases	Gastro-enteritis	Gastro-enteritis	Pneumonia and Bronchitis	Accidents, Poisoning & Violence	Pneumonia and Bronchitis	Pneumonia and Bronchitis	Pneumonia and Bronchitis	Pneumonia and Bronchitis
	Death Rate per 100,000 Population	149.7	193.7	162.8	159.2	82.4	58	42.5	33.7	42.7	52.7	44.7
No.5	Cause of Death	Senility	Cerebro-vascular Diseases	Senility	Senility	Malignant Neoplasms	Accidents, Poisoning & Violence	Pneumonia and Bronchitis	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence	Accidents, Poisoning & Violence
	Death Rate per 100,000 Population	127.2	157.6	118.8	124.5	77.4	49.3	34.1	25.1	24.6	25.4	14.8

Source : Ministry of Health and Welfare

[Peninsular Malaysia]

4 Trends in the Leading Causes of Death (4)

Year		1980	1985	1986	1987	1988	1989	1990
Order								
No.1	Cause of Death	Heart Diseases	Heart Diseases and Diseases of Pulmonary Circulation	Heart Diseases and Diseases of Pulmonary Circulation	Heart Diseases and Diseases of Pulmonary Circulation	Heart Diseases and Diseases of Pulmonary Circulation	Heart Diseases and Diseases of Pulmonary Circulation	Heart Diseases and Diseases of Pulmonary Circulation
	Death Rate per 100,000 Population	25.0	27.5	26.3	23.6	24.4	23.8	23.8
No.2	Cause of Death	Diseases of Early Infancy	Certain Condition Originating in the Perinatal Period	Accidents	Certain Condition Originating in the Perinatal Period	Certain Condition Originating in the Perinatal Period	Certain Condition Originating in the Perinatal Period	Certain Condition Originating in the Perinatal Period
	Death Rate per 100,000 Population	22.7	18.9	15.1	15.1	14.2	13.4	14.1
No.3	Cause of Death	Accidents	Accidents	Certain Condition Originating in the Perinatal Period	Accidents	Cerebrovascular Diseases	Cerebrovascular Diseases	Cerebrovascular Diseases
	Death Rate per 100,000 Population	20.0	17.8	14.7	13.1	11.9	12.5	12.7
No.4	Cause of Death	Cerebrovascular Diseases	Cerebrovascular Diseases	Malignant Neoplasms	Malignant Neoplasms	Accidents	Accidents	Accidents
	Death Rate per 100,000 Population	12.1	12.2	11.0	11.4	11.9	12.5	12.7
No.5	Cause of Death	Neoplasms	Malignant Neoplasms	Cerebrovascular Diseases	Cerebrovascular Diseases	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms
	Death Rate per 100,000 Population	11.9	11.3	10.9	11.1	11.8	12.4	12.0

Source : Annual Report - 1980, 1985-1990 of Ministry of Health Malaysia

[Philippines]

4 Trends in the Leading Causes of Death (5)

Year		1960	1965	1970	1975	1980	1985	1986	1987	1988	1989
Order	Cause of Death										
No.1	Cause of Death	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia
	Death Rate per 100,000 Population	100.4	83.4	118.2	102	93.6	96.7	90.4	91.9	80.8	77.0
No.2	Cause of Death	Tuberculosis (All forms)	Respiratory Tuberculosis	Tuberculosis (All forms)	Tuberculosis (All forms)	Diseases of Heart	Diseases of Heart	Diseases of Heart	Diseases of Heart	Diseases of Heart	Diseases of Heart
	Death Rate per 100,000 Population	92.1	83.4	80.1	69.2	60.8	66.3	69.9	67.7	69.1	74.6
No.3	Cause of Death	Gastro-enteritis & Colitis	Gastro-enteritis & Colitis	Diseases of Vascular System	Diseases of Heart	Tuberculosis (All forms)	Tuberculosis (All forms)	Tuberculosis (All forms)	Diseases of Vascular System	Diseases of Vascular System	Diseases of Vascular System
	Death Rate per 100,000 Population	60.5	46	35.8	56.6	59.6	57.9	54.6	52.1	53.1	56.1
No.4	Cause of Death	Bronchitis	Bronchitis	Gastro-enteritis & Colitis	Diseases of Vascular System	Diseases of Vascular System	Diseases of Vascular System	Diseases of Vascular System	Tuberculosis (All forms)	Tuberculosis (All forms)	Tuberculosis (All forms)
	Death Rate per 100,000 Population	57.2	43.1	35	31.8	43.8	49.7	52.5	50.0	46.0	43.8
No.5	Cause of Death	Beri-beri	Beri-beri	Diseases of Heart	Malignant Neoplasms	Diarrhoea	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms
	Death Rate per 100,000 Population	54.4	32.8	34	29.4	33.2	33.2	32.6	35.5	36.1	36.5

Source : *Philippine Health Statistics, 1960-1989*, Health Intelligence Service

[Singapore]

4 Trends in the Leading Causes of Death (6)

Year Order		1950	1955	1960	1970	1980	1985	1987	1988	1989	1990
No.1	Cause of Death	Tuberculosis	Pneumonia	Cancer	Cancer	Diseases of Heart	Diseases of Heart	Cancer	Diseases of Heart	Diseases of Heart	Diseases of Heart
	Death Rate per 100,000 Population	145	79	62	77	111	118	120	121	124	110
No.2	Cause of Death	Infantile Convulsions	Tuberculosis	Pneumonia	Diseases of Heart	Cancer	Cancer	Diseases of Heart	Cancer	Cancer	Cancer
	Death Rate per 100,000 Population	133	76	56	76	106	113	119	121	122	108
No.3	Cause of Death	Pneumonia	Diseases of Heart	Diseases of Heart	Cerebro-vascular Disease	Cerebro-vascular Disease	Cerebro-vascular Disease	Cerebro-vascular Disease	Cerebro-vascular Disease	Cerebro-vascular Disease	Cerebro-vascular Disease
	Death Rate per 100,000 Population	131	56	49	50	60	55	51	60	58	55
No.4	Cause of Death	Gastro-enteritis	Gastro-enteritis	Tuberculosis	Accidents	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia	Pneumonia
	Death Rate per 100,000 Population	108	54	39	41	47	50	38	39	42	39
No.5	Cause of Death	Diseases of Early Infancy	Cancer	Gastro-enteritis	Pneumonia	Accidents	Accidents	Accidents	Accidents	Accidents	Accidents
	Death Rate per 100,000 Population	79	50	33	41	37	42	36	36	39	33

Source : National Registration Department

[Thailand]

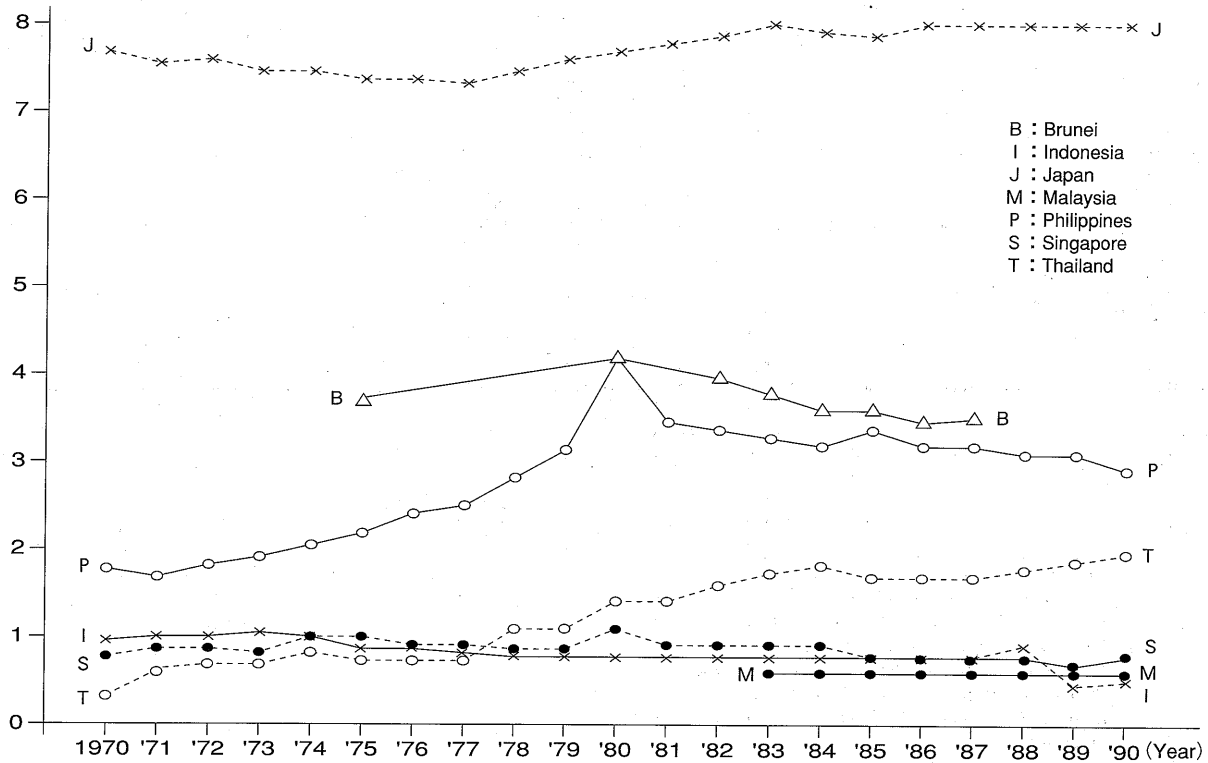
4 Trends in the Leading Causes of Death (7)

Year		1930	1940	1950	1960	1970	1980	1985	1987	1988	1989	1990
Order												
No.1	Cause of Death	Malaria	Malaria	Malaria	Gastro-enteritis	Accidents	Accidents	Diseases of Heart	Diseases of Pulmonar Circulation and Other Forms of Heart Diseases			
	Death Rate per 100,000 Population	342.4	277.8	195	38.7	27.2	35.9	36.4	40.3	42.1	47.5	49.6
No.2	Causes of Death	Gastro-enteritis	Gastro-enteritis	T.B. of Respiratory System	T.B. of Respiratory System	T.B. of Respiratory System	Diseases of Heart	Accidents and Poisoning	Diseases of Digestive System Other than Oral Cavity, Salivary Gland and Jaws		Other Accident Including Late Effect	
	Death Rate per 100,000 Population	159.8	168.8	65.5	34.7	20.8	31.4	28.9	19.8	18.7	21.5	25.3
No.3	Cause of Death	T.B. of Respiratory System	Dysentery	Gastro-enteritis	Pneumonia	Diarrhoea	Malignant Neoplasms	Malignant Neoplasms	Malignant Neoplasms of Other and Unspecified Sites			
	Death Rate per 100,000 Population	79.2	110	66.1	32.5	17.6	23.6	27	17.8	18.7	20.2	22.0
No.4	Cause of Death	Dysentery	T.B. of Respiratory System	Pneumonia	Malaria	Diseases of Heart	T.B. of Respiratory System	T.B. of Respiratory System	Other Accident Including Late Effect		Diseases of Digestive System Other than Oral Cavity, Salivary Glands and Jaws	
	Death Rate per 100,000 Population	74.3	80.9	39.4	30.2	15.3	14.3	10.3	16.4	18.7	19.1	18.4
No.5	Cause of Death	Pneumonia	Pneumonia	Dysentery	Diseases of Heart	Pneumonia	Pneumonia	Pneumonia	Diseases of Respiratory System Other than the Upper Respiratory Tract			Transport Accidents
	Death Rate per 100,000 Population	22	48.7	32.8	19	14.8	10	7.4	12.6	12.6	13.8	15.2

Source : Health Statistics Division, Ministry of Public Health

Fig.3 Recent Trends in Number of Hospitals (Per 100,000 Population)

(Number of Hospitals)



5 Deaths and Death Rates by Causes (ICD-9) (1)

	Basic Tabulation List				01-07		010		011		012, 014	
	Year	Sex	All Causes		Infectious and Parasitic Diseases		Cholera		Typhoid and Paratyphoid Fevers		Dysentery (amoebiasis and bacillary)	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
(1) BRUNEI	1989	T	b) 770	300.2	21	8.2	—		—		—	
		M	444	335.3	15	11.3	—		—		—	
		F	325	261.9	6	4.8	—		—		—	
(2) a) INDONESIA	1990	T	1,418		367		30		44		74	
		M	836		211		12		24		45	
		F	582		156		18		20		29	
(3) JAPAN	1990	T	820,305	668.4	12,006	9.8	—		2	0.0	5	0.0
		M	443,718	736.5	7,165	11.9	—		2	0.0	3	0.0
		F	376,587	602.8	4,841	7.7	—		—		2	0.0
(4) a) Peninsular Malaysia	1990	T	71,439		1,291		1		15		3	
(4) a) Sabah		T	5,491		459		2		3		—	
(4) a) Sarawak		T	6,329		259		—		—		—	
(5) PHILIPPINES	1989	T	325,621	541.0	51,258	85.3			1,222	2.0	638	1.4
		M	192,077	636.4	30,924	102.7			730	2.4	403	1.3
		F	133,544	446.4	20,334	68.0			492	1.6	280	0.9
(6) SINGAPORE	1990	T	13,891 b)	460.5	347	11.5	1	0.0			3	0.1
		M	7,727	509.1	206	13.6	—		—		2	0.1
		F	6,162	411.2	141	9.4	1	0.1			1	0.1
THAILAND	1990	T	252,512	448.2	12,508	22.2	21	0.1	89	0.2	20	0.0
		M	147,887	524.5	7,644	27.1	32	0.1	48	0.2	12	0.0
		F	104,625	371.8	4,864	17.3	19	0.1	41	0.1	8	0.0

Source : (1) Ministry of Health

(2) Directorate General of Medical Care, Ministry of Health

Based on 10-day sample of discharges from hospital for each quarter

(3) *Vital Statistics, Japan*, Ministry of Health and Welfare

(4) *Vital Statistics Peninsular Malaysia, Sabah & Sarawak-1990*

(5) *Philippine Health Statistics*, Department of Health

(6) *Report on Registration of Birth and Deaths 1990*, National Registration Department

(7) Ministry of Public Health (official data)

Note : a) Government hospital only, include medical and non medical certified deaths

b) Include unknown sex

(rate per 100,000 population)

013,015,016,019	020-021	022-025,029	033	034	036	037	038
Other Intestinal Infectious Diseases	Tuberculosis of Respiratory System	Tuberculosis of Other Forms	Diphtheria	Whooping Cough	Meningococcal Infection	Tetanus	Septicaemia
Number Rate	Number Rate	Number Rate	Number Rate	Number Rate	Number Rate	Number Rate	Number Rate
1 0.4	7 2.7	—	—	—	—	—	11 4.3
1 0.8	5 3.8	—	—	—	—	—	7 5.3
—	2 1.6	—	—	—	—	—	4 3.2
44	74	2	—	—	—	33	8
24	45	—	—	—	—	25	3
20	29	2	—	—	—	8	5
719 0.6	3,457 2.8	207 0.2	—	4 0.0	8 0.0	26 0.0	3,481 2.8
294 0.5	2,631 4.4	114 0.2	—	2 0.0	5 0.0	11 0.0	1,615 2.7
425 0.7	826 1.3	93 0.1	—	2 0.0	3 0.0	0.0 0.0	1,866 3.0
66	251	35	1	2	2	10	703
47	71	12	4	—	—	7	257
1	43	—	—	—	—	—	191
6,221 10.4	25,649 42.7	651 1.1	117 0.2	12 0.0	144 0.3	1,040 1.7	4,952 8.2
3,556 11.8	16,397 54.3	372 1.2	49 0.2	5 0.0	92 0.3	704 2.3	2,737 9.1
2,665 8.9	9,252 30.9	279 0.9	68 0.2	7 0.0	74 0.2	336 1.1	2,215 7.4
41 1.4	104 3.4	9 0.3	1 0.0	1 0.0	1 0.0	—	128 4.2
14 0.9	79 5.2	5 0.3	1 0.1	1 0.1	—	—	63 4.2
27 1.8	25 1.7	4 0.3	—	—	1 0.1	—	65 4.3
1,408 2.5	3,857 6.8	80 0.1	33 0.1	6 0.0	4 0.0	253 0.4	3,436 6.1
825 2.9	2,642 9.4	54 0.2	21 0.1	2 0.0	4 0.0	158 0.6	1,821 6.5
583 2.1	1,215 4.3	26 0.1	12 0.0	4 0.0	—	95 0.3	1,615 5.7

5 Deaths and Death Rates by Causes (ICD-9) (2)

	Year	Sex	030-032,035,039		040		042		046		047	
			Other Bacterial Diseases		Acute Poliomyelitis		Measles		Viral Hepatitis		Rabies	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1989	T	—	—	—	—	—	—	—	—	—	—
		M	—	—	—	—	—	—	—	—	—	—
		F	—	—	—	—	—	—	—	—	—	—
INDONESIA	1990	T	19	—	—	—	5	—	—	—	—	—
		M	10	—	—	—	2	—	—	—	—	—
		F	9	—	—	—	3	—	—	—	—	—
JAPAN	1990	T	66	0.0	—	—	53	0.0	1,194	1.0	—	—
		M	35	0.0	—	—	27	0.0	693	1.2	—	—
		F	31	0.0	—	—	26	0.0	501	0.8	—	—
MALAYSIA Peninsular Malaysia Sabah Sarawak	1990	T	15	—	—	—	3	—	17	—	1	—
		T	7	—	—	—	13	—	—	—	—	—
		T	10	—	—	—	—	—	—	—	—	—
PHILIPPINES	1989	T	168	0.3	32	0.1	6,734	11.2	850	1.4	424	0.7
		M	88	0.3	15	0.1	3,521	11.7	552	1.8	273	0.9
		F	80	0.3	17	0.1	3,213	10.7	298	1.0	151	0.5
SINGAPORE	1990	T	5	0.2	—	—	—	—	22	0.7	—	—
		M	3	0.2	—	—	—	—	17	1.1	—	—
		F	2	0.1	—	—	—	—	5	0.3	—	—
THAILAND	1990	T	24	0.0	17	0.0	23	0.0	—	—	166	0.3
		M	21	0.1	12	0.0	8	0.0	—	—	102	0.4
		F	3	0.0	5	0.0	15	0.1	—	—	64	0.2

(rate per 100,000 population)

(184)		065.4 ^{a)}		061 ^{a)}		044,045		041,043,048,049		052		06		Rest of 01-07	
AIDS (HIV)		Dengue Haemorrhagic Fever		Dengue		Other Arthropod-borne Viral Diseases		Other Viral Diseases		Malaria		Venereal Diseases		Other Infectious and Parasitic Diseases	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
		—		—		—		—		—		—		2	0.8
		—		—		—		—		—		—		2	1.5
		—		—		—		—		—		—		—	
								21		13		—		—	
								13		8		—		—	
								8		5		—		—	
4	0.0	—		—		10	0.0	368	0.3	1	0.0	32	0.0	2,373	1.9
2	0.0	—		—		6	0.0	176	0.3	1	0.0	27	0.0	1,523	2.5
2	0.0	—		—		4	0.0	192	0.3	—		5	0.0	850	1.4
—		—		11		1		37		33		3		81	
—		—		—		2		—		9		25		—	
—		—		—		—		—		—		—		7	
—		199	0.3	—		47	0.1	253	0.4	989	1.6	9	0.0	204	0.3
—		104	0.3	—		27	0.1	155	0.5	614	2.0	4	0.0	115	0.4
—		95	0.3	—		20	0.1	98	0.3	375	1.2	5	0.0	89	0.3
5	0.2	2	0.1	—		—		10	0.3	3	0.1	7	0.2	9	0.3
5	0.3	1	0.1	—		—		5	0.3	2	0.1	6	0.4	7	0.5
—		1	0.1	—		—		5	0.3	1	0.1	1	0.1	2	0.1
6	0.0	695	1.2	—		1	0.0	3	0.0	1,287	2.3	9	0.0	1,040	1.8
6	0.0	344	1.2	—		1	0.0	1	0.0	921	3.3	6	0.0	603	2.1
—		351	1.2	—		—	0.0	2	0.0	366	1.3	3	0.0	437	1.6

Note : a) Four-Digit Subcategories

5 Deaths and Death Rates by Causes (ICD-9) (3)

	Year	Sex	08-14		091		093		094		095	
			Malignant Neoplasms		Malignant Neoplasm of Stomach		Malignant Neoplasm of Colon		Malignant Neoplasm of Rectum, Rectosigmoid Junction and Anus		Malignant Neoplasm of Liver Specified as Primary	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1989	T	94	36.6	9	3.5	4	1.6	2	0.8	1	0.4
		M	44	33.2	4	3.0	2	1.5	1	0.8	—	—
		F	50	40.3	5	4.0	2	1.6	1	0.8	1	0.8
INDONESIA	1990	T	73		6		1		3		11	
		M	40		4		1		2		9	
		F	33		2		—		1		2	
JAPAN	1990	T	217,413	173.2	47,471	38.7	15,509	12.6	9,270	7.6	24,233	19.7
		M	130,395	216.4	29,909	49.6	7,791	12.9	5,569	9.2	17,786	29.5
		F	87,018	139.3	17,562	28.1	7,718	12.4	3,701	5.9	6,447	10.3
MALAYSIA Peninsular Malaysia Sabah Sarawak	1990	T	2,808		241		157		103		260	
		T	227		15		—		5		44	
		T	176		23		15		4		—	
PHILIPPINES	1989	T	21,933	36.5	1,471	2.4	245	0.4	594	1.0		
		M	11,853	39.3	845	2.8	136	0.4	317	1.0		
		F	10,080	33.7	626	2.1	109	0.4	277	0.9		
SINGAPORE	1990	T	3,269	108.4	364	12.1	265	8.8	135	4.5	104	3.4
		M	1,902	125.3	229	15.1	121	8.0	77	5.1	71	4.7
		F	1,367	91.2	135	9.0	144	9.6	58	3.9	33	2.2
THAILAND	1990	T	22,152	39.3	357	0.6	720	1.3	11	0.0	3,844	6.8
		M	12,821	45.5	211	0.7	425	1.5	4	0.0	2,678	9.5
		F	9,331	33.2	146	0.5	295	1.0	7	0.0	1,166	4.1

(per 100,000 population)

101		113		120		122		Rest of (08-13)		141.		140, 149		15-17	
Malignant Neoplasm of Trachea, Bronchus and Lung		Malignant Neoplasm of Female Breast		Malignant Neoplasm of Cervix Uteri		Malignant Neoplasm of Uterus, Other and Unspecified		Malignant Neoplasm of Other Sites		Leukemia		Other Malignant Neoplasm of Lympha- tic and Haemopoietic Tissue		Benign Neoplasm, Carcinoma in Situ, Other and Unspecified Neoplasms	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
21	8.2	7	2.7	3	1.2	2	0.8	35	13.6	4	1.6	6	2.3	—	
12	9.1	..	..	..	..	..	..	19	14.4	2	1.5	4	3.0	—	
9	7.3	7	5.6	3	2.4	2	1.6	16	12.9	2	1.6	2	1.6	—	
13		5		5		5		14		6		4		25	
8		..	..	..	..	..	..	6		4		3		14	
5		5		5		5		8		2		1		11	
36,486	29.7	5,848	4.8	1,875	1.5	2,698	2.2	62,831	51.2	5,633	4.6	5,241	4.3	7,123	5.8
26,872	44.6	..	..	..	..	..	..	34,984	58.1	3,225	5.4	3,156	5.2	3,928	6.5
9,614	15.4	5,848	9.4	1,875	3.0	2,698	4.3	27,847	44.6	2,408	3.9	2,085	3.3	3,195	5.1
648		221		120		34		660		231		133		109	
42		15		9		—		64		15		18		15	
41		5		7		—		56		18		7		8	
3,309	5.5	1,548	2.4	387	0.6	969	0.6	7,636	12.7	1,595	2.6	456	0.8	127	0.2
2,410	8.0	..	..	..	..	..	..	4,925	16.3	779	2.6	268	0.9	66	0.2
899	3.0	1,548	5.2	387	1.3	969	3.2	2,711	9.1	814	2.7	188	0.6	61	0.2
737	24.4	190	6.3	74	2.5	20	0.7	1,174	38.9	110	3.6	96	3.2	45	1.5
525	34.6	..	..	..	..	..	..	755	49.7	63	4.2	61	4.0	14	0.9
212	14.1	190	12.7	74	4.9	20	1.3	419	28.0	47	3.1	35	2.3	31	2.1
1,650	2.9	231	0.4	136	0.2	441	0.8	13,926	24.7	633	1.1	203	0.4	2	0.0
1,172	4.2	..	..	..	..	..	..	7,835	27.8	370	1.3	126	0.4	2	0.0
478	1.7	231	0.8	136	0.5	441	1.6	6,091	21.6	263	0.9	77	0.3	—	

5 Deaths and Death Rates by Causes (ICD-9) (4)

	Year	Sex	181		180, 182, 183, 189		19		200		209	
			Diabetes Melitus		Other Endocrine and Metabolic Diseases		Nutritional Deficiencies		Anaemias		Other Diseases of Blood and Blood-forming Organs	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1989	T	27	10.5	4	1.6	2	0.8	2	0.8	—	—
		M	15	11.3	2	1.5	2	1.5	2	1.5	—	—
		F	12	9.7	2	1.6	—	—	—	—	—	—
INDONESIA	1990	T	25		6		1		10		1	
		M	12		4		1		2		—	
		F	13		2		—		8		1	
JAPAN	1990	T	9,470	7.7	2,189	1.8	574	0.5	1,606	1.3	2,223	1.8
		M	4,491	7.5	1,040	1.7	308	0.5	698	1.2	1,144	1.9
		F	4,979	8.0	1,149	1.8	266	0.4	908	1.5	1,079	1.7
MALAYSIA Peninsular Malaysia Sabah Sarawak	1990	T	727		123		38		61		98	
		T	27		41		5		32		—	
		T	10		63		2		4		—	
PHILIPPINES	1989	T	3,339	5.6	3,372	5.6	7,789	13.0	2,466	4.1	461	0.8
		M	1,573	5.2	1,842	6.1	4,240	14.0	1,226	4.1	222	0.7
		F	1,766	5.9	1,530	5.1	3,549	11.9	1,240	4.1	239	0.8
SINGAPORE	1990	T	332	11.0	38	1.3	13	0.4	22	0.7	28	0.9
		M	127	8.4	12	0.8	5	0.3	9	0.6	13	0.9
		F	205	13.7	26	1.7	8	0.5	13	0.9	15	1.0
THAILAND	1990	T	2,828	5.0	208	0.4	310	0.6	244	0.4	61	0.1
		M	1,154	4.1	120	0.4	202	0.7	124	0.4	32	0.1
		F	1,674	5.9	88	0.3	108	0.4	120	0.4	29	0.1

(rate per 100,000 population)

21		220		221-225 229, 23, 24		25-30		25		26		270		279	
Mental Disorders		Meningitis		Other Diseases of Nervous System and Sense Organs		Diseases of Circulatory System		Rheumatic Fever and Rheumatic Heart Diseases		Hypertensive Disease		Acute Myocardial Infarction		Other Ischaemic Heart Diseases	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
—	—	—	—	10	3.9	209	81.5	1	0.4	30	11.7	74	28.8	26	10.1
—	—	—	—	6	4.5	135	102.0	—	—	19	14.4	50	37.8	19	14.4
—	—	—	—	4	3.2	74	55.9	1	0.9	11	8.9	24	19.3	7	5.6
6	—	23	—	53	—	188	—	4	—	20	—	21	—	12	—
1	—	13	—	36	—	104	—	1	—	15	—	14	—	9	—
5	—	10	—	17	—	84	—	3	—	5	—	7	—	3	—
3,068	2.5	475	0.4	6,014	4.9	304,448	248.1	1,387	1.1	9,246	7.5	31,933	26.0	19,504	15.9
1,263	2.1	269	0.4	3,228	5.4	147,230	244.4	444	0.7	3,399	5.6	17,883	29.7	9,466	15.7
1,805	2.9	206	0.3	2,786	4.5	157,218	251.7	943	1.5	5,847	9.4	14,050	22.5	10,038	16.1
53	—	143	—	398	—	8,098	—	156	—	81	—	2,680	—	532	—
6	—	48	—	52	—	734	—	4	—	5	—	178	—	18	—
3	—	18	—	24	—	799	—	8	—	15	—	126	—	3	—
450	0.7	2,680	4.0	4,977	8.3	78,550	130.7	2,198	3.6	15,487	25.8	13,525	22.5	4,803	8.0
324	1.1	1,328	4.4	2,859	9.5	44,634	147.9	1,017	3.4	8,926	29.6	8,654	28.7	2,419	8.0
126	0.4	1,352	3.5	2,118	7.1	33,916	113.4	1,181	3.9	6,561	21.9	4,871	16.3	2,384	8.0
19	0.6	16	0.5	127	4.2	5,152	170.8	51	1.7	211	7.0	1,757	58.2	889	29.5
7	0.5	6	0.4	72	4.7	2,768	182.4	20	1.3	91	6.0	1,052	69.3	492	32.4
12	0.8	10	0.7	55	3.7	2,384	159.1	31	2.1	120	8.0	705	47.0	397	26.5
619	1.1	366	0.6	5,279	9.4	40,187	71.3	296	0.5	2,557	4.5	285	0.5	443	0.8
539	1.9	250	0.9	3,283	11.6	24,583	87.2	143	0.5	1,466	5.2	180	0.6	316	1.1
80	0.3	116	0.4	1,996	7.1	15,604	55.4	153	0.5	1,091	3.9	105	0.4	127	0.5

5 Deaths and Death Rates by Causes (ICD-9) (5)

			28		29		300		301-305, 309		310-312	
	Year	Sex	Other Heart Diseases		Cerebrovascular Disease		Atherosclerosis		Other Disease of Circulatory System		Acute Upper Respiratory Infection	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1989	T	39	15.2	37	14.4	1	0.4	1	0.4	—	—
		M	21	15.9	24	18.1	1	0.8	1	0.8	—	—
		F	18	14.5	13	10.5	—	—	—	—	—	—
INDONESIA	1990	T			129		—		2		1	
		M			64		—		1		—	
		F			65		—		1		1	
JAPAN	1989	T	112,681	91.8	121,944	99.4	2,118	1.7	5,635	4.6	992	0.8
		M	53,989	89.6	57,627	95.6	885	1.5	3,537	5.9	402	0.7
		F	58,692	93.9	64,317	103.0	1,233	2.0	2,098	3.4	590	0.9
MALAYSIA Peninsular Malaysia Sabah Sarawak	1990	T	1,990		2,486		1		172		—	
		T	249		266		1		13		1	
		T	420		207		—		20		—	
PHILIPPINES	1989	T	21,600	35.9	17,593	29.3	2,263	3.8	664	1.1	99	0.2
		M	11,737	38.9	10,171	33.7	1,032	3.4	430	1.4	59	0.2
		F	9,863	33.0	7,422	24.8	1,231	4.1	234	0.8	40	0.2
SINGAPORE	1990	T	477	15.8	1,666	55.2	10	0.3	91	3.0	2	0.1
		M	257	16.9	793	52.2	8	0.5	55	3.6	2	0.1
		F	220	14.7	873	58.3	2	0.1	36	2.4	—	—
THAILAND	1990	T	27,917	49.6	5,888	10.5	2	0.0	2,799	5.0	201	0.4
		M	17,108	60.7	3,701	13.1	2	0.0	1,667	5.9	120	0.4
		F	10,809	38.4	2,187	7.8	—	—	1,132	4.0	81	0.3

(rate per 100,000 population)

320		321		322		323		313-315,319 324-327,329		341		347		33, 340, 342-346 348, 349	
Acute Bronchitis and Bronchiolitis		Pneumonia		Influenza		Bronchitis, Chronic and Unspecified, Emphysema and Asthma		Other Diseases of Respiratory System		Ulcer of Stomach and Duodenum		Chronic Liver Disease and Cirrhosis		Other Diseases of Digestive System	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
1	0.4	26	10.1	—	—	12	4.7	35	13.6	1	0.4	3	1.2	6	2.3
—	—	14	10.6	—	—	7	5.3	22	16.6	1	0.8	1	0.8	2	1.5
1	0.8	12	9.7	—	—	5	4.0	13	10.5	—	—	2	1.6	4	3.2
2	—	76	—	—	—	20	—	34	—	3	—	46	—	59	—
2	—	35	—	—	—	14	—	27	—	2	—	28	—	41	—
—	—	41	—	—	—	6	—	7	—	1	—	18	—	18	—
1,550	1.3	68,194	55.6	448	0.4	14,938	12.2	13,937	11.4	3,615	2.9	16,804	13.7	17,486	14.2
772	1.3	38,596	64.1	207	0.3	9,630	16.0	8,843	14.7	1,933	3.2	11,516	19.1	8,778	14.6
778	1.2	29,598	47.4	241	0.4	5,308	8.5	5,094	8.2	1,682	2.7	5,288	8.5	8,708	13.9
3	—	811	—	—	—	291	—	1,467	—	124	—	304	—	804	—
2	—	186	—	—	—	1	—	202	—	19	—	14	—	83	—
—	—	49	—	—	—	17	—	97	—	5	—	5	—	82	—
1,105	1.8	46,268	77.0	770	1.3	7,690	12.8	6,910	11.5	6,098	9.4	2,699	4.5	4,381	7.3
599	2.0	25,019	82.9	420	1.4	4,876	16.2	3,544	11.7	4,365	12.8	2,173	7.2	3,144	10.4
506	1.7	2,124	71.0	350	1.2	2,814	9.4	3,364	11.2	1,744	5.8	526	1.7	1,237	4.1
1	0.0	1,191	39.5	3	0.1	140	4.6	775	25.7	66	2.2	128	4.2	180	6.0
1	0.1	592	39.0	1	0.1	74	4.9	526	34.7	43	2.8	98	6.5	102	6.7
—	—	599	40.0	2	0.1	66	4.4	249	16.6	23	1.5	30	2.0	78	5.2
5	0.0	3,831	6.8	199	0.4	1,019	1.8	2,265	4.0	733	1.3	5,134	9.1	4,514	8.0
3	0.0	2,412	8.6	105	0.4	656	2.3	1,541	5.5	484	1.7	3,683	13.1	2,985	10.6
2	0.0	1,419	5.0	94	0.3	363	1.3	724	2.6	249	0.9	1,451	5.2	1,529	5.4

5 Deaths and Death Rates by Causes (ICD-9) (6)

	Year	Sex	350		351-353, 359, 36, 37		38		39		40, 41	
			Nephritis, Nephrotic Syndrome and Nephrosis		Other Diseases of Genito-urinary System		Abortion		Other Direct Obstetric Causes		Indirect Obstetric Causes	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1989	T	11	4.3	1	0.4	—	—	—	—	—	—
		M	6	4.5	—	—	..	..	..	..	..	..
		F	5	4.0	1	0.8	—	—	—	—	—	—
INDONESIA	1990	T	42		7		2		1			
		M	26		1		..	..	..	..	..	..
		F	16		6		2		1			
JAPAN	1990	T	17,140	14.0	2,505	2.0	11	0.0	81	0.1	13	0.0
		M	8,319	13.8	962	1.6	..	..	..	..	..	..
		F	8,821	14.1	1,543	2.5	11	0.0	81	0.1	13	0.0
MALAYSIA Peninsular Malaysia Sabah Sarawak	1990	T	1,047		113		9		49		1	
		T	56		3		1		6		1	
		T	65		—		1		2		1	
PHILIPPINES	1989	T	5,110	8.5	960	1.6	162	0.3	1,415	2.4	—	—
		M	3,070	10.2	516	1.7	..	..	..	..	..	..
		F	2,040	6.8	444	1.5	162	0.5	1,415	4.7	—	—
SINGAPORE	1990	T	235	7.8	111	3.7	1	0.0	—	—	—	—
		M	112	7.4	28	1.8	..	..	..	..	..	..
		F	123	8.2	83	5.5	1	0.1	—	—	—	—
THAILAND	1990	T	4,254	7.6	399	0.7	40	0.1	189	0.3	8	0.0
		M	2,325	8.2	216	0.8	..	..	..	..	..	..
		F	1,929	6.9	183	0.7	40	0.1	189	0.6	8	0.0

(rate per 100,000 population)

42		43		44		45		465		460-464, 466 467, 469		E47-E56		E47	
Diseases of Skin and Subcutaneous Tissue		Diseases of Musculoskeletal System and Connective Tissue		Congenital Anomalies		Certain Conditions Originating in the Perinatal Period		Senility without Mention of Psychosis		Signs, Symptoms and Other Ill- defined Conditions		Accidents and Adverse Effects		Transport Accidents	
Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
—	—	—	—	(b) 12	4.7	23	9.0	11	4.3	173	67.4	67	26.1	35	13.6
—	—	—	—	—	—	13	9.8	4	3.0	75	56.6	56	42.3	28	21.2
—	—	—	—	5	4.0	10	8.1	7	5.6	98	79.0	11	8.9	7	5.6
7	—	—	—	—	—	—	—	1	—	58	—	119	—	53	—
5	—	—	—	—	—	—	—	1	—	31	—	94	—	41	—
2	—	—	—	—	—	—	—	—	—	27	—	25	—	12	—
657	0.5	3,375	2.8	3,571	2.9	1,794	1.5	24,187	19.7	6,026	4.9	55,612	44.3	15,828	12.9
259	0.4	850	1.4	1,890	3.1	1,043	1.7	8,054	13.4	3,455	5.7	36,664	59.1	11,481	19.1
398	0.6	2,525	4.0	1,681	2.7	751	1.2	16,133	25.8	2,571	4.1	18,948	30.3	4,347	7.0
78	—	91	—	892	—	2,058	—	1,265	—	833	—	3,877	—	1,235	—
4	—	2	—	49	—	378	—	50	—	145	—	470	—	71	—
1	—	—	—	171	—	225	—	—	—	19	—	264	—	67	—
380	0.6	602	1.0	2,760	4.6	15,653	27.7	12,387	20.6	8,564	14.2	24,412	40.4	2,812	4.7
203	0.7	358	1.2	1,569	5.2	9,799	32.5	5,200	17.2	5,242	17.4	20,678	68.0	2,004	6.6
177	0.6	244	0.8	1,191	4.0	5,854	22.9	7,187	24.0	3,322	11.1	3,734	12.4	808	2.7
65	2.2	60	2.0	189 b)	6.3	123	4.1	108	3.6	92 b)	3.1	1,008	33.4	261	8.7
19	1.3	9	0.6	98	6.5	76	5.0	43	2.8	49	3.2	708	46.6	210	13.8
46	3.1	51	3.4	90	6.0	47	3.1	65	4.3	42	2.8	300	20.0	51	3.4
92	0.2	136	0.2	1,563	2.8	1,735	3.1	69,558	123.5	39,618	70.3	32,255	57.3	8,566	15.2
45	0.2	90	0.3	875	3.1	1,046	3.7	31,836	112.9	23,612	83.7	25,099	89.0	6,938	24.6
47	0.2	46	0.2	688	2.4	686	2.4	37,722	134.0	16,006	56.9	7,156	25.4	1,628	5.8

5 Deaths and Death Rates by Causes (ICD-9) (7)

	Year	Sex	E 48		E 50		E 51		E 521		E 49, E 520, E 522 E 529	
			Accidental Poisoning		Accidental Falls		Accidents Caused by Fire and Flames		Accidental Drowning and Submersion		All Other Accidents Including Late Effects	
			Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
BRUNEI	1989	T	8	3.1	4	1.6	3	1.2	13	5.1	3	1.2
		M	8	6.0	3	2.3	2	1.5	11	8.3	3	2.3
		F	—	—	1	0.8	1	0.8	2	1.6	—	—
INDONESIA	1989	T	1	—	10	—	3	—	1	—	47	—
		M	1	—	10	—	2	—	—	—	36	—
		F	—	—	—	—	1	—	1	—	11	—
JAPAN	1990	T	561	0.5	4,243	3.5	1,208	1.0	3,146	2.6	9,675	7.9
		M	352	0.6	2,744	4.6	703	1.2	1,958	3.2	6,616	11.0
		F	209	0.3	1,499	2.4	505	0.8	1,188	1.9	3,059	4.9
MALAYSIA Peninsular Malaysia Sabah Sarawak	1990	T	1	—	608	—	138	—	2	—	194	—
		T	88	—	6	—	—	—	—	—	150	—
		T	43	—	95	—	—	—	39	—	—	—
PHILIPPINES	1989	T	196	0.3	547	0.9	55	0.1	2,691	4.5	—	—
		M	114	0.4	406	1.3	29	0.1	1,933	6.4	—	—
		F	82	0.3	141	0.5	26	0.1	758	2.5	—	—
SINGAPORE	1990	T	11	0.4	78	2.6	2	0.1	32	1.1	62	2.1
		M	8	0.5	61	4.0	—	—	28	1.8	51	3.4
		F	3	0.2	17	1.1	2	0.1	4	0.3	11	0.7
THAILAND	1990	T	286	0.5	285	0.5	188	0.3	2,956	5.2	11,321	20.1
		M	167	0.6	224	0.8	105	0.4	2,037	7.2	8,943	31.7
		F	119	0.4	61	0.2	83	0.3	919	3.3	2,378	8.4

(rate per 100,000 population)

E 53		E 54		E 55		E 56	
Drugs, Medicaments Causing Adverse Effects in Therapeutic Use		Suicide and Self-inflicted Injury		Homicide & Injury Inflicted by Other Persons		Other Violence	
Number	Rate	Number	Rate	Number	Rate	Number	Rate
—	—	—	—	1	0.4	—	—
—	—	—	—	1	0.8	—	—
—	—	—	—	—	—	—	—
		1	—	2	—	—	—
		1	—	2	—	—	—
		—	—	—	—	—	—
119	0.1	20,088	16.4	744	0.6	—	—
66	0.1	12,316	20.4	428	0.7	—	—
53	0.1	7,772	12.4	316	0.5	—	—
3	—	18	—	24	—	1,656	—
14	—	6	—	8	—	127	—
2	—	9	—	7	—	2	—
686	1.1	294	0.5	148	0.2	16,983	28.2
573	1.9	203	0.7	119	0.4	15,297	50.7
113	0.4	91	0.3	29	0.1	1,686	5.6
		354	11.7	41	1.4	167	5.5
		201	13.2	25	1.6	124	8.2
		153	10.2	16	1.1	43	2.9
32	0.1	3,801	6.7	4,768	8.5	52	0.1
25	0.1	2,472	8.8	4,154	14.7	34	0.1
7	0.0	1,329	4.7	614	2.2	18	0.1

6 Morbidity Statistics (ICD-9)(1)

	Four Digit Subcategories	001	002	004, 006	003, 005	010-018	030
	Year	Cholera	Typhoid and Paratyphoid Fever	Amoebiasis and Bacillary Dysentery	Food Poisoning (Bacterial)	Tuberculosis of All Forms	Leprosy
BRUNEI ⁽¹⁾	1989	—	19	4	16	128	2
INDONESIA ⁽²⁾	1990	24,208				469,033	
JAPAN ^{(3) (4) (5)}	1990	73	147	920	37,561	51,821	12
MALAYSIA ⁽⁶⁾		2,066	2,214	549	1,255	10,873	285
Peninsular Malaysia	1990	406	1,832	264	1,128	6,219	169
Sabah		1,589	134	110	83	2,875	61
Sarawak		71	248	175	44	1,779	55
PHILIPPINES ⁽⁷⁾	1989	—	b) 17,794			204,508	4,228
SINGAPORE ⁽⁸⁾	1990	26	231	108	807	1,591	36
THAILAND ⁽⁹⁾	1990	—	12,153	88,034	55,868	20,058	469

Source : (1) Health Statistics Unit, Public Health Department
(2) Directorate General of CDC, Ministry of Health, Indonesia
(3) *Statistics of Communicable Diseases*, Japan 1990
(4) *Statistics of Food Poisoning*, Japan 1990
(5) *Annual Report of Surveillance of Tuberculosis and Infectious Diseases*
Ministry of Health & Welfare
(6) Health Division, Ministry of Health
(7) *Philippine Health Statistics, 1989*, Health Intelligence Service, Department of Health

(8) Ministry of the Environment and Ministry of Health
(9) *Preliminary Annual Summary 1990*, Division of
Epidemiology, Ministry of Public Health

Note: a) Including Snspect Cholera
b) Include Other Salmonella Inf. (003)

032	052	070	071	084	487	033	036	037	055
Diphtheria	Chickenpox	Viral Hepatitis (A, B, Non-A, Non-B)	Rabies	Malaria	Influenza (Grippe)	Whooping Cough	Meningococcal Infection	Tetanus	Measles
—	1,700	4	NA	c) 19	NA	—	26	—	d) 39
2,200		37,154		1,305,471					
5	183,129	3,979	—	55	25,021	583	3,732	47	3,259
9	—	1,422	—	50,500	—	23	—	30	563
3	—	1,157	—	14,066	—	23	—	15	530
6	—	187	—	35,190	—	—	—	14	—
—	—	78	—	1,244	—	—	—	1	33
1,297	16,931	16,084	319	125,114	773,802	9,466		3,102	68,496
1	18,934	440	—	216		—	—	—	143
58	18,464	16,918	177	122,166	73,176	493	28	833	29,371

Note : c) Imported Cases
d) Suspected cases

6 Morbidity Statistics (ICD-9) (2)

		056	072	279.8	045	047-049, 082-084	060, 061, 065	125	120	090-097	098	099
		Rubella	Mumps	AIDS (HIV)	Acute Poliomyelitis	Viral Meningitis & Encephalitis	Viral Haemorrhagic Fever	Filariasis	Schistosomiasis	Syphilis	Gonococcal Infections	Other Venereal Diseases
BRUNEI ⁽¹⁾	1989	27	230	1	—	—	NA	29	NA	13	26	—
INDONESIA ⁽²⁾	1990								—			
JAPAN ^{(3) (4)}	1990	49,651	79,147	(e) 67	—	67	—	—	5	1,877	5,646	61
MALAYSIA ⁽⁵⁾		—	—	12	—	39	—	—	—	1,457	2,908	(f) 46
Peninsular Malaysia	1990	—	—	12	—	30	—	—	—	958	1,153	(f) 44
Sabah		—	—	—	—	7	—	—	—	42	1,053	—
Sarawak		—	—	—	—	2	—	—	—	457	702	(f) 2
PHILIPPINES ⁽⁶⁾	1989				335		2,240	188	25,699	99	8,635	
SINGAPORE ⁽⁷⁾	1990	3	67	8	—	(g) 4	(h) 1,733	—	—	780	3,834	8,435
THAILAND ⁽⁸⁾	1990	2,339	20,943	65 (ARC 190)	4	3,015	113,855			12,308	55,581	41,516

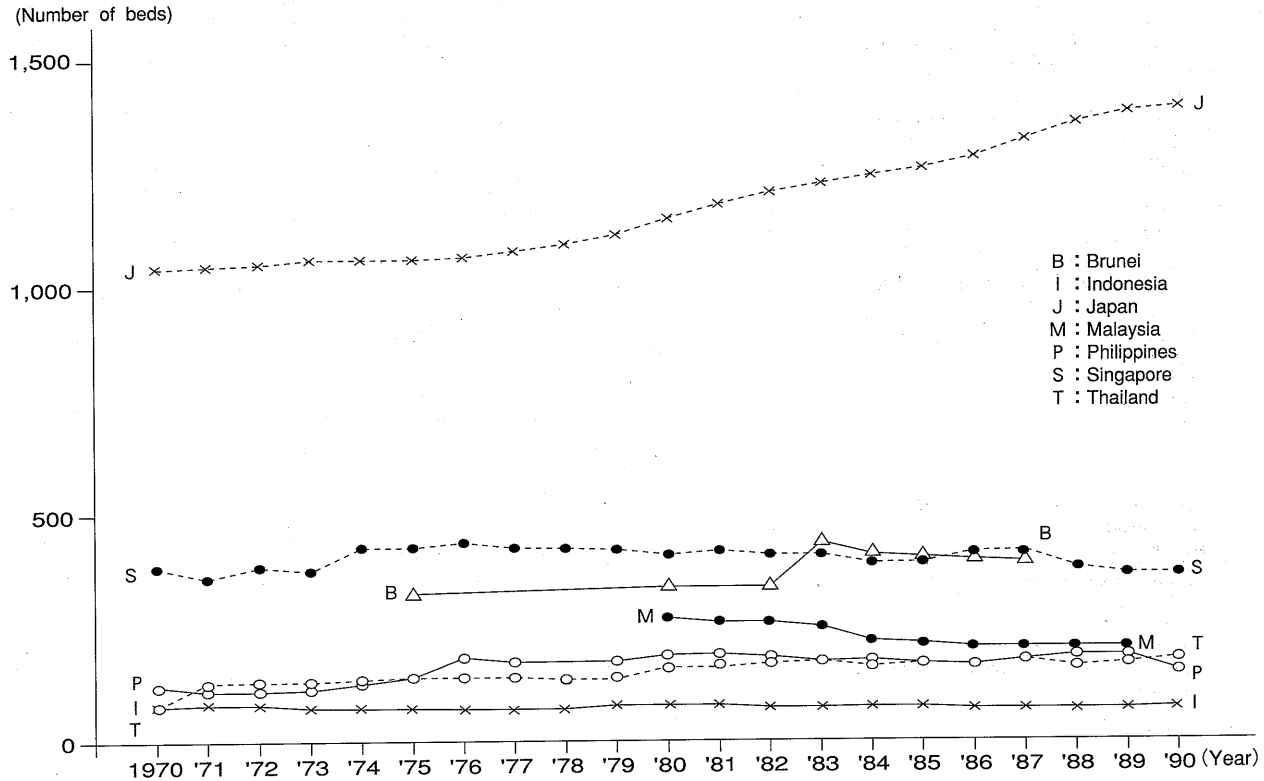
Note : (e) Exclude the infections by the blood clotting factor drug

(f) Chancroid

(g) Viral encephalitis only

(h) Dengue fever/dengue hemorrhagic fever

Fig.4 Recent Trends in Number of Beds (Per 100,000)



7 Notifiable Infectious Diseases

ICD-9 Categories		Brunei 1989	Indonesia 1990	Japan 1990	Malaysia 1990	Philippines 1989	Singapore 1990	Thailand 1990
001	Cholera	V	V	V	V	V	V	V
002	Typhoid and Paratyphoid Fevers	V		V	V	V	V	
003	Other Salmonella Infections	V			V	V		
004	Shigella			V	V			
008	Intestinal Infections due to Other Organisms	V		V a)				
010-018	Tuberculosis	V		V	V	V	V	
020	Plague	V	V	V	V		V	V
022	Anthrax			V				V
030	Leprosy	V		V	V	V	V	
032	Diphtheria	V	V	V	V	V	V	V
033	Whooping Cough	V	V	V	V	V		
034	Streptococcal Sore Throat and Scarlet Fever			V b)				
036	Meningococcal Infection			V				V
037	Tetanus	V		V	V	V		Vc)
045	Acute Poliomyelitis	V	V	V	V	V	V	V
050	Smallpox							V
052	Chickenpox	V		V		V	V	
055	Measles	V	V	V	V	V	V	
060	Yellow Fever			V	V		V	V
061	Dengue		Vd)		V	V	V	
062	Mosquito-borne Viral Encephalitis	V		V	V		V	V
070	Viral Hepatitis	V		V	V	V	V	
071	Rabies		V	V	V			V

- Note: a) Infectious diarrhoea only
 b) Scarlet fever only
 c) Tetanus neonatorum
 d) Haemorrhagic fever only
 e) Chancroid + lymphogranuloma inguinale
 f) Chancroid
 g) All STDs
 h) Filariasis only

ICD-9 Categories	Brunei 1988	Indonesia 1990	Japan 1990	Malaysia 1990	Philippines 1989	Singapore 1990	Thailand 1990
072 Mumps	V					V	
076 Trachoma							
081 Other Typhus	V			V			V
084 Malaria	V		V	V	V	V	V
087 Relapsing Fever			V				
090 Congenital Syphilis			V	V	V	V	
098 Gonococcal Infections	V		V	V	V	V	
099 Other Venereal Diseases	V		V e)	V f)		V g)	
100 Leptospirosis	V						
102 Yaws							V
120 Schistosomiasis[Bilharziasis]		V			V		
124 Trichinosis							V
125 Filarial Infection and Dracontiasis	V		V h)	V			
279.5 AIDS							V
487 Influenza			V		V		

8 Infectious Diseases Specified by Immunization Programme

	Brunei 1989	Indonesia 1990	Japan 1990	Malaysia 1990	Philippines 1989	Singapore 1990	Thailand 1990
Cholera	V	V			V		V
Diphtheria	V	V	V	V	V	V	V
Epidemic Typhus							
Measles	V	V	V	V	V	V	V a)
Mosquito-borne Viral Encephalitis			V				V a)
Mumps						V	
Plague							
Poliomyelitis	V	V	V	V	V	V	V
Rubella	V		V b)	V		V	V b)
Tetanus	V	V	V	V	V	V	V
Tuberculosis (BCG)	V	V	V	V	V	V	V
Typhoid and Paratyphoid Fever	V	V			V		V
Whooping Cough	V	V	V	V	V	V	V
Yellow Fever	V			V c)			

Note: a) In restricted areas

b) Women only

c) Required under Institute for Medical Research

9 Explanatory Notes on Vital Statistics

Crude Live-birth Rate = $(B/P) \times 1,000$

Crude Death Rate = $(D/P) \times 1,000$

where B = Number of live-births during a year

D = Number of deaths during a year

P = Population at middle of year

Crude Marriage Rate = $(M/P) \times 1,000$

Crude Divorce Rate = $(D/P) \times 1,000$

Crude Birth Rate = $(B/P) \times 1,000$

General Fertility Rate = $(B/F_{15-49}) \times 1,000$

where M = Number of marriages during a year

D = Number of divorces during a year

B = Number of births during a year

P = Population at middle of year

F_{15-49} = Population of women at ages 15–49 at middle of year

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

Late fetal deaths: Fetal deaths after at least 28 weeks' gestation
Fetal deaths of unknown gestational age are included

Infant deaths: Deaths under one year

Neonatal deaths: Deaths under four weeks

Post-neonatal deaths: Deaths from four weeks to under one year

Perinatal deaths: Late fetal deaths and deaths under one week

Maternal Mortality Rate is computed as the ratio of maternal deaths in a year to 100,000 live-births of the same year

Maternal Mortality Rate = $(D_p/B) \times 100,000$

where D_p = Direct obstetric deaths (Chapter XI in ICD-9) during a year

B = Number of live-births during a year

9-1 Crude Live-birth Rates

(per 1,000 population)

Year	1970	1975	1980	1985	1986	1987	1988	1989	1990
(1) BRUNEI			31.2	30.1	30.6	30.3	28.5	27.8	
(2) a) INDONESIA	43.8	40.2	35.4	32.7	32.2	31.7	31.3	30.8	30.3
(3) JAPAN	18.8	17.1	13.6	11.9	11.4	11.1	10.8	10.2	10.0
(4) MALAYSIA				31.9	33.1	29.5	30.0	27.1	28.0
Peninsular Malaysia	33.9	31.3	30.3	31.3	30.2	28.6	28.8	26.2	27.0
Sabah	37.9	35.4	38.7	42.3	42.7	40.9	42.1	36.8	38.8
Sarawak	30.4	29.7	29.4	27.7	27.7	28.1	30.0	26.4	27.4
(5) PHILIPPINES	27.4	28.8	30.2	26.3	26.7	27.6	26.7	26.0	
(6) b) SINGAPORE	22.1	17.7	17.6	16.6	(c) 14.8	16.6	19.8	17.5	18.4
(7) THAILAND	31.5	27.4	22.8	18.8	18	16.5	16.0	16.3	17.0

Source: (1) Birth & Death Registry and Economic Planning Unit
 (2) Central Bureau of Statistics
 (3) *Vital Statistics Japan*, 1990, Ministry of Health & Welfare
 (4) *Yearbook of Statistics, Malaysia*, Department of Statistics
 (5) *Philippine Health Statistics 1970, 1975, 1986, 1989*, Health Intelligence Service, Department of Health

(6) *Year book of Statistics, Singapore 1991*, Department of Statistics
 (7) Health Statistics Division, Ministry of Public Health

Note: a) Calculated by Central Bureau of Statistics in 1985, based on National Census since 1980
 b) Rates from 1980 onward refer to those of Singapore residents only

9-2 Crude Death Rates

(per 1,000 population)

Year	1970	1975	1980	1985	1986	1987	1988	1989	1990
BRUNEI ⁽¹⁾			4.0	3.6	3.2	3.3	3.2	3.3	
INDONESIA ⁽²⁾	18.7	16.7	12.5	11.2	10.9	10.6	10.3	10.0	9.7
JAPAN ⁽³⁾	6.9	6.3	6.2	6.3	6.2	6.2	6.5	6.4	6.7
MALAYSIA ⁽⁴⁾			5.3	5.0	4.8	4.7	4.7	4.7	4.6
Peninsular Malaysia	7.3	6.4	5.5	5.3	5.0	4.9	4.9	4.9	4.9
Sabah	5.9	4.3	4.2	4.1	4.1	4.0	3.9	3.8	3.7
Sarawak	5.2	5	4.2	3.7	3.9	3.1	3.3	3.8	3.8
PHILIPPINES ⁽⁵⁾	6.7	6.4	6.2	6.1	5.8	5.8	5.5	5.4	5.1
SINGAPORE ^(6) a)	5.2	5.1	4.9	4.9	4.6	4.7	4.9	4.9	4.8
THAILAND ⁽⁷⁾	6.2	5.8	5.3	4.4	4.1	4.3	4.2	4.5	4.5

Source : (1) Birth & Death Registry and Economic Planning Unit
 (2) Central Bureau of Statistics
 (3) *Vital Statistics Japan, 1990*, Ministry of Health & Welfare
 (4) *Yearbook of Statistics, Malaysia*, Department of Statistics

(5) *Philippine Health Statistics 1970, 1975, 1986, 1989*,
 Health Intelligence Service, Department of Health
 (6) *Year book of Statistics, Singapore 1991*,
 Department of Statistics, Singapore
 (7) Health Statistics Division, Ministry of Public Health

Note: a) Rates from 1980 onward refer to those of Singapore residents only

9-3 Vital Statistics Rates

(per 1,000 population)

	Year	Crude Marriage Rate	Crude Divorce Rate	Crude Birth Rate	General Fertility Rate	Crude Death Rate	Infant a) Mortality Rate
(1) BRUNEI	1989	7.2	0.8	27.8	104.7	3.3	9.2
(2) INDONESIA	1990			30.3		9.7	61.4
(3) JAPAN	1990	5.9	1.3	10.0	39.2	6.7	4.6
(4) MALAYSIA				28.0	108.5	4.6	12.6
Peninsular Malaysia	1990	b) 2.8	c) 2.7	27.0	104.9	4.9	13.1
Sabah		b) 1.6	c) 2.2	38.8	150.0	3.7	17.1
Sarawak		b) 2.7	c) 2.3	27.0	103.8	3.8	10.0
(5) PHILIPPINES	1989	NA	NA	26.0	103.9	5.4	27.5
(6) e) SINGAPORE	1990	9.0	1.3	18.4	61.4	4.8	6.7
(7) THAILAND	1990	(8) 7.1	(8) 0.6	17.0	63.4	4.5	8.0

Source : (1) Birth & Death Registry and Economic Planning Unit
 (2) Calculated by Central Bureau of Statistics, based on national census 1980
 (3) *Vital Statistics Japan, 1990*, Ministry of Health & Welfare
 (4) *Yearbook of Statistics, Malaysia 1990*, Department of Statistics
 (5) *Philippine Health Statistics 1989*, Department of Health
 (6) *Yearbook of Statistics, Singapore, 1990*, Department of Statistics
 (7) Health Statistics Division, Ministry of Public Health
 (8) Ministry of Interior, 1984

Note: a) per 1,000 live birth
 b) Muslim marriages are excluded in the above table
 c) For 1980 : *Social Statistical Bulletin, Malaysia 1981*
 d) Rate computed based on population & birth rate
 e) Rates refer to those of Singapore residents only

9-4 Natality, Mortality and Natural Increase

	Year	Natality (live-born)				General Mortality				Natural Increase (%)
		Number			(‰)	Number			(‰)	
		Total	Male	Female		Total	Male	Female		
⁽¹⁾ BRUNEI	1989	6,923	3,560	3,363	27.8	827	498	329	3.3	24.5
⁽²⁾ INDONESIA	1989				30.3				9.7	20.6
⁽³⁾ JAPAN	1990	1,221,688	627,043	594,645	10.0	820,371	443,768	376,603	6.7	3.3
⁽⁴⁾ MALAYSIA	1990									
Peninsular Malaysia		395,321	204,137	191,184	27.0	71,439	40,092	31,347	4.9	22.2
Sabah		57,111	29,669	27,442	38.8	5,472	3,341	2,131	3.7	35.1
Sarawak		45,090	23,520	21,570	27.0	6,333	3,818	2,515	3.8	23.2
⁽⁵⁾ PHILIPPINES	1989	1,565,254	813,925	751,329	26.0	325,621	192,077	133,544	5.4	20.6
^(6) a) SINGAPORE	1990	51,142	26,500	24,641	18.4	13,891	7,727	6,162	4.8	13.6
⁽⁷⁾ THAILAND	1990	956,237	491,010	465,227	17.0	252,512	147,887	104,625	4.5	12.5

Source : (1) Birth & Death Registry and Economic Planning Unit

(2) Calculated by Central Bureau of Statistics

(3) *Vital Statistics Japan, 1990*, Ministry of Health & Welfare

(4) *Vital Statistics Peninsular Malaysia, Sabah and Sarawak 1990*.

(5) *Philippine Health Statistics 1989*, Health Intelligence Service, Department of Health

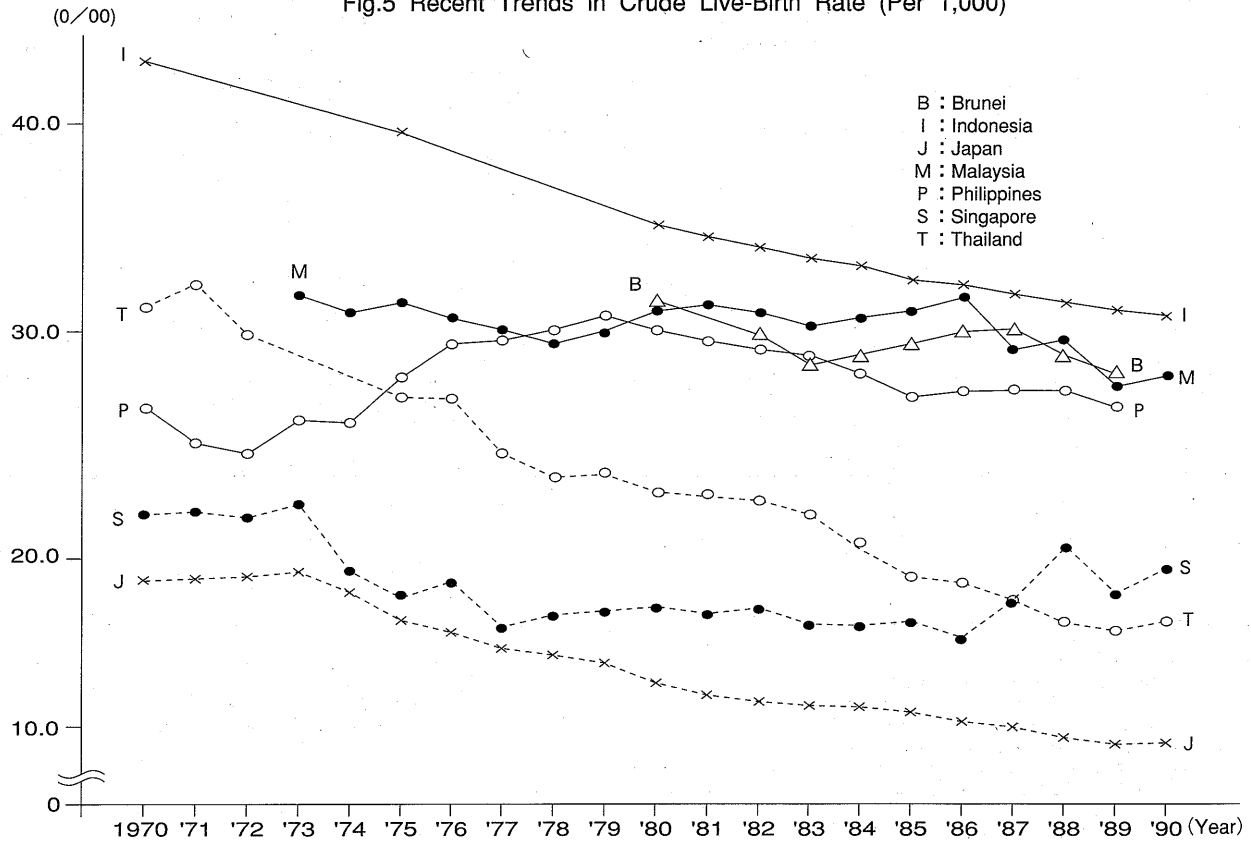
(6) *Report on Registration of Births and Deaths, 1990*, National Registration Department

(7) Health Statistics Division, Ministry of Public Health

Note: Figures for male and female may not add up to the total on account of unknown sex

a) Rates refer to those of Singapore residents only

Fig.5 Recent Trends in Crude Live-Birth Rate (Per 1,000)



10-1 Late Fetal, Infant, Neonatal, Post-neonatal and Perinatal Mortality (per 1,000 live-births)

	Year	Late Fetal Mortality		Infant Mortality		Neonatal Mortality		Post-neonatal Mortality		Perinatal Mortality	
		Number	Rate	Number	Rate	Number	Rate	Number	Rate	Number	Rate
(1) BRUNEI	1989	48	7.0	4.8	7.0	26	3.8	21	3.0	70	10.2
(2) INDONESIA	1989				a) 61.4						
(3) JAPAN	1990	4,564	3.8	5,616	4.6	3,179	2.6	2,337	1.9	7,001	5.7
(4) MALAYSIA	1990										
Peninsular Malaysia		3,036	7.6	5,188	13.1	3,311	8.4	1,877	4.8	5,547	13.9
Sabah		228	4.0	979	17.1	669	11.7	310	5.4	805	14.0
Sarawak		145	3.2	451	10.0	284	6.3	167	3.7	373	8.2
(5) PHILIPPINES	1989	4,446	2.8	43,026	27.5	19,848	12.7	23,178	14.8	19,493	12.4
(6) SINGAPORE	1990	206	4.0	341	6.7	238	4.7	103	2.0	376	7.3
(7) b) THAILAND	1990			7,694	8.0	3,392	3.5	4,302	4.5	NA	—

Source : (1) Birth & Death Registry and Economic Planning Unit
(2) Ministry of Health, Indonesia 1989
(3) *Vital Statistics Japan, 1990*, Ministry of Health & Welfare
(4) *Vital Statistics Peninsular Malaysia, Sabah and Sarawak 1990*, Department of Statistics
(5) *Philippine Health Statistics 1989*, Health Intelligence Service, Department of Health
(6) *Report on Registration of Birth and Deaths, 1990*
National Registration Department
(7) Health Statistics Division, Ministry of Public Health

Note : a) Central Bureau of Statistics, Demographic Parameter Approximate and Family Planning User in Indonesia, 1985-1995
b) While the vital registration system of the whole country was revised for improvement in 1984, the registration of stillbirth has no longer been emphasized since then. The stillbirth data are therefore incomplete and not valid enough to be presented in the vital statistics.

10-2 Infant Mortality by Age and Sex

	Year	Sex	Number						Rate (per 1,000 live-births)					
			Total	1 day	2-6	7-27	28-365	Unknown	Total	1 day	2-6	7-27	28-365	Unknown
BRUNEI ⁽¹⁾	1988	T	48	22		4	22	—	7.0	3.2		0.6	3.2	—
INDONESIA ⁽²⁾	1990	T							61.4					
JAPAN ⁽³⁾	1990	T	5,616	1,266	1,071	842	2,437	—	4.6	1.0	0.9	0.7	2.0	
		M	3,123	699	624	444	1,356	—	5.0	1.1	1.0	0.7	2.2	
		F	2,493	567	447	398	1,081	—	4.2	1.0	1.0	0.7	1.8	
MALAYSIA ⁽⁴⁾	1990	T	5,188						13.1					
		M	2,982						14.6					
		F	2,206						11.5					
		T	979						17.1					
		M	553						18.6					
		F	426						15.5					
		T	451						10.0					
		M	250						10.6					
		F	201						9.3					
PHILIPPINES ⁽⁵⁾	1989	T	43,026	15,047		4,801	23,178	—	27.5	9.6		3.1	14.8	—
SINGAPORE ⁽⁶⁾	1990	T	341	114	56	68	103	—	6.7	2.2	1.1	1.3	2.0	—
		M	188	65	29	41	53	—	7.1	2.5	1.1	1.5	2.0	—
		F	152	48	27	27	50	—	6.2	1.9	1.1	1.1	2.0	—
THAILAND ⁽⁷⁾	1990	T	7,694	1,157	1,124	1,111	4,108	194	8.0	1.2	1.2	1.2	4.3	0.2
		M	4,507	691	678	637	2,386	115	9.2	1.4	1.4	1.3	4.9	0.2
		F	3,187	466	446	474	1,722	79	6.9	1.0	1.0	1.0	3.7	0.2

Source : (1) Birth & Death Registry and Economic Planning Unit
(2) Calculated by Central Bureau of Statistics, based on National Census 1980
(3) *Vital Statistics Japan, 1990*, Ministry of Health & Welfare
(4) *Vital Statistics Peninsular Malaysia, Sabah and Sarawak 1990*, Department of Statistics, Malaysia

(5) Health Intelligence Service, Department of Health
(6) *Report on Registration of Births and Deaths, Singapore 1990*, National Registration Department
(7) Health Statistics Division, Ministry of Public Health

10-3 Maternal Mortality Rates

(per 100,000 live-births)

	1970	1975	1980	1985	1986	1987	1988	1989	1990	
BRUNEI ⁽¹⁾			70			10				
INDONESIA										
JAPAN ⁽²⁾	50.0	28.7	20.5	15.8	13.5	12.0	9.6	10.7	8.6	
MALAYSIA ^(3) a)										
Peninsular Malaysia	148	83	63	37	30	28	26	20	20	
Sabah	11	72	107	19	10	14	19	25	19	
Sarawak	90	20	50	10	12	1	15	12	7	
PHILIPPINES ⁽⁴⁾	(5) 190	(5) 140	110	90	90	(5) 105.3	110	100.9		
SINGAPORE ⁽⁶⁾	32.7	30.0	4.9	4.7	13.0	6.9	11.3	4.2	2.0	
THAILAND ⁽⁷⁾	226.1	171.7	98.5	42	34.7	37.2	27.2	22.8	24.8	

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

Note: a) Medically certified or inspected deaths only

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

	Year	Sex	Age								
			0	1	2	3	4	5	10	15	20
BRUNEI ⁽¹⁾	1981	M	70.1	70.3				66.7	61.9	57.1	52.4
		F	72.7	72.7				69.0	64.1	59.3	54.5
INDONESIA ⁽²⁾	1986	M	58.8	64.5				60.3	55.9	51.3	46.9
		F	62.5	65.5				63.2	58.7	54.1	49.6
JAPAN ⁽³⁾	1990	M	75.9	75.2	74.4	73.4	72.4	71.5	66.5	61.5	56.8
		F	81.9	81.3	80.3	79.3	78.4	77.4	72.4	67.5	62.5
MALAYSIA ⁽⁴⁾ Peninsular Malaysia	1989	M	68.8	68.8				65.1	60.3	55.5	50.8
		F	73.3	73.2				69.5	64.6	59.7	54.9
PHILIPPINES ⁽⁵⁾	1990	M	62.8	64.6	64.2	63.5	62.7	61.9	57.4	52.7	48.2
		F	66.4	67.6	67.2	66.4	65.6	64.8	60.2	55.5	51.0
SINGAPORE ⁽⁶⁾	1990	M	73.1	72.6				68.7	63.7	58.8	54.0
		F	77.6	77.0				73.1	68.2	63.3	58.3
THAILAND ⁽⁷⁾	1985	M	61.8	64.7				62.0	57.4	52.8	48.3
	- 1990	F	67.5	69.3				66.2	61.6	56.8	52.1

Source : (1) *Brunei Statistical Yearbook 1986*

(2) Calculated by Centre for Health Data, using model life table for developing countries, UN, 1982

(3) *The 16th Complete Life Tables for Japan 1990*, Ministry of Health & Welfare, Japan

(4) *Abridged Life Table 1989*, Department of Statistics, Malaysia

(5) National Statistics Office, calculated by interpolation using west model life table

(6) *Abridged Life Table 1990*, Ministry of Health

(7) National Statistical Office

Age														
25	30	35	40	45	50	55	60	65	70	75	80	85	90	95+
47.8 49.7	43.2 44.9	38.5 40.1	33.9 35.4	29.4 31.0	25.1 26.6	21.1 22.7	17.3 19.2	13.7 16.1	10.6 12.9	7.6 10.0	5.7 7.2	4.2 5.2		
42.6 45.3	38.4 40.9	34.1 36.7	29.9 32.5	25.8 28.3	21.9 24.2	18.3 20.3	14.9 16.6	11.8 13.2	9.2 10.1	6.8 7.5	4.9 5.3			
52.0 57.6	47.2 52.7	42.4 47.8	37.6 43.0	32.9 38.2	28.4 33.5	24.1 28.9	20.0 24.4	16.2 20.0	12.7 15.9	9.4 12.1	6.9 8.7	4.9 6.1	3.5 4.2	2.5 2.9
46.1 50.0	41.5 45.2	36.9 40.5	32.3 35.7	27.8 31.1	23.5 26.6	19.6 22.3	16.0 18.3	12.8 14.7	9.9 11.3	7.6 8.6	5.4 6.2			
43.8 46.5	39.4 42.1	35.1 37.7	30.8 33.3	26.6 29.0	22.5 24.8	18.8 20.8	15.3 17.0	12.2 13.5	9.4 10.4	7.0 7.7	5.0 5.5			
49.2 53.5	44.4 48.6	39.6 43.7	34.8 38.9	30.1 34.2	25.7 29.5	21.5 25.1	17.8 20.9	14.4 16.9	11.5 13.4	8.9 10.2	6.6 7.3	4.3 4.6		
43.9 47.6	39.5 43.0	35.1 38.5	30.8 34.1	26.6 29.6	22.6 25.3	18.8 21.3	15.3 17.4	12.2 13.8	9.4 10.7	7.0 7.9	5.0 5.7			

11-2 Survivors at Specified Ages for Each Sex

	Year	Sex	Age							
			0	1	5	10	15	20	25	30
(1) BRUNEI	1981	M	100,000	98,320	97,810	97,436	97,126	96,553	95,797	95,087
		F	100,000	98,704	98,272	98,091	97,809	97,437	97,059	96,667
(2) INDONESIA	1986	M	100,000	92,570	90,001	89,112	88,447	87,391	85,917	84,379
		F	100,000	93,996	91,571	90,762	90,136	89,211	87,988	86,585
(3) JAPAN	1990	M	100,000	99,505	99,295	99,187	99,102	98,794	98,406	98,050
		F	100,000	99,583	99,431	99,360	99,304	99,188	99,031	98,858
(4) MALAYSIA Peninsular Malaysia	1989	M	100,000	98,480	98,071	97,785	97,495	96,953	96,234	95,446
		F	100,000	98,806	98,424	98,205	98,005	97,752	97,435	97,043
(5) PHILIPPINES	1986	M	100,000	93,882	92,002	91,285	90,741	89,842	88,588	87,293
		F	100,000	95,083	93,325	92,698	92,212	91,471	90,475	89,316
(6) SINGAPORE	1990	M	100,000	99,342	99,212	99,100	98,984	98,716	98,337	97,927
		F	100,000	99,418	99,292	99,201	99,102	98,958	98,750	98,528
(7) THAILAND	1985	M	100,000	94,797	93,971	93,358	93,336	92,336	91,454	89,926
	-1986	F	100,000	95,234	95,242	94,639	94,129	93,421	92,672	91,892

Source : (1) *Brunei Statistical Yearbook 1986*

(2) Calculated by Centre for Health Data, using model life table for developing countries

(3) *The 16th Complete Life Tables for Japan 1990*, Ministry of Health & Welfare

(4) *Abridged Life Table 1989*, Department of Statistics, Malaysia

(5) Calculated by interpolation using west model life table, National Statistics Office

(6) *Abridged Life Table 1990*, Ministry of Health

(7) The survey of population change 1985-1986

Age												
35	40	45	50	55	60	65	70	75	80	85	90	95 +
94,297 96,065	93,386 95,306	91,805 93,927	89,627 91,624	85,842 87,809	80,563 81,701	73,601 73,207	62,993 64,942	50,187 53,999	31,312 41,422	14,851 25,421		
82,663 84,988	80,602 83,137	77,956 80,939	74,440 78,183	69,636 74,460	63,159 69,465	54,542 62,405	43,755 52,768	31,158 40,095	18,314 25,602			
97,634 98,628	97,063 98,292	96,145 97,765	94,646 96,964	92,274 95,760	88,312 93,991	82,599 91,324	74,678 87,080	63,038 79,849	46,859 67,782	27,600 48,736	11,570 26,265	2,976 8,953
94,490 96,540	93,361 95,816	91,712 94,725	89,241 93,145	84,986 90,444	78,572 86,282	69,152 79,410	57,463 69,726	41,986 55,322	27,245 39,187			
85,846 87,981	84,084 86,339	81,758 84,457	78,537 81,925	73,998 78,436	67,661 73,646	59,044 66,771	47,978 57,104	34,726 44,057	20,861 28,685			
97,469 98,234	96,835 97,803	95,827 97,087	94,039 95,981	90,735 94,068	85,135 90,902	76,714 85,898	65,613 78,183	51,370 66,604	36,247 52,557	21,781 35,760		
88,353 91,042	86,634 90,001	84,503 85,466	81,433 86,597	77,294 83,438	71,174 77,737	61,635 70,765	50,750 61,589	36,496 49,615	23,648 39,094			

Fig.6 Survivors at Specified Ages for Each Sex (1) BRUNEI, 1981

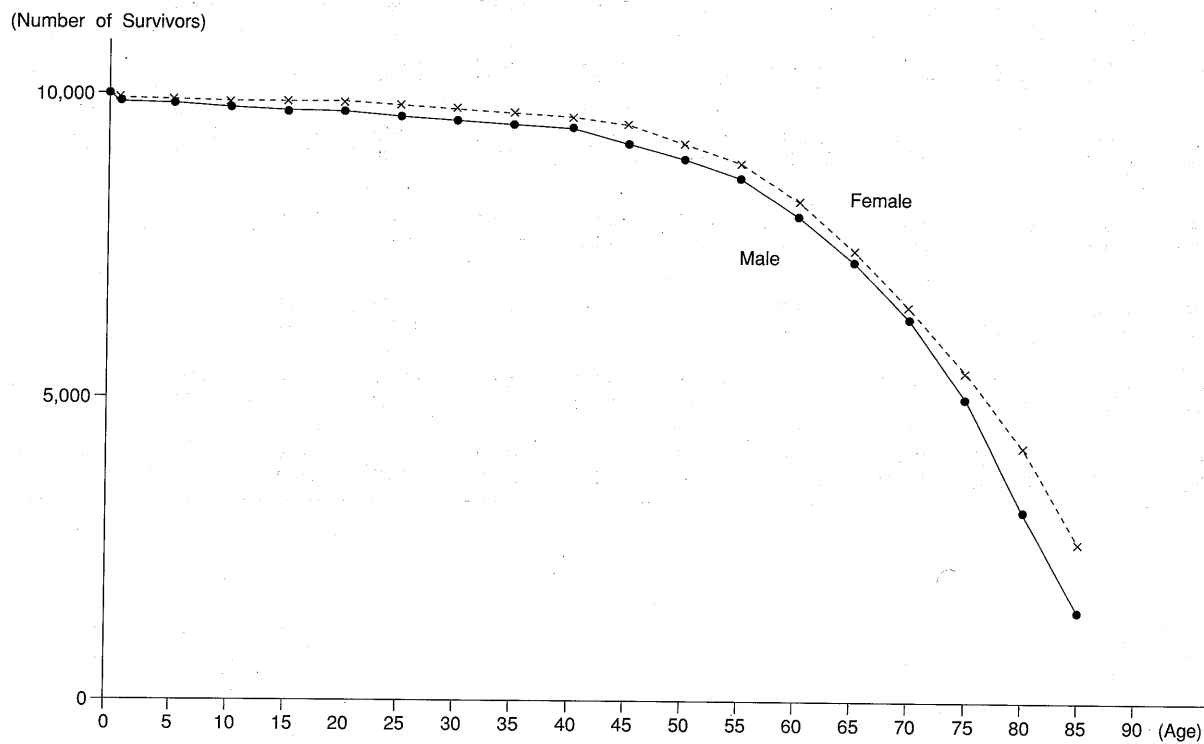


Fig.6 Survivors at Specified Ages for Each Sex (2) INDONESIA, 1986

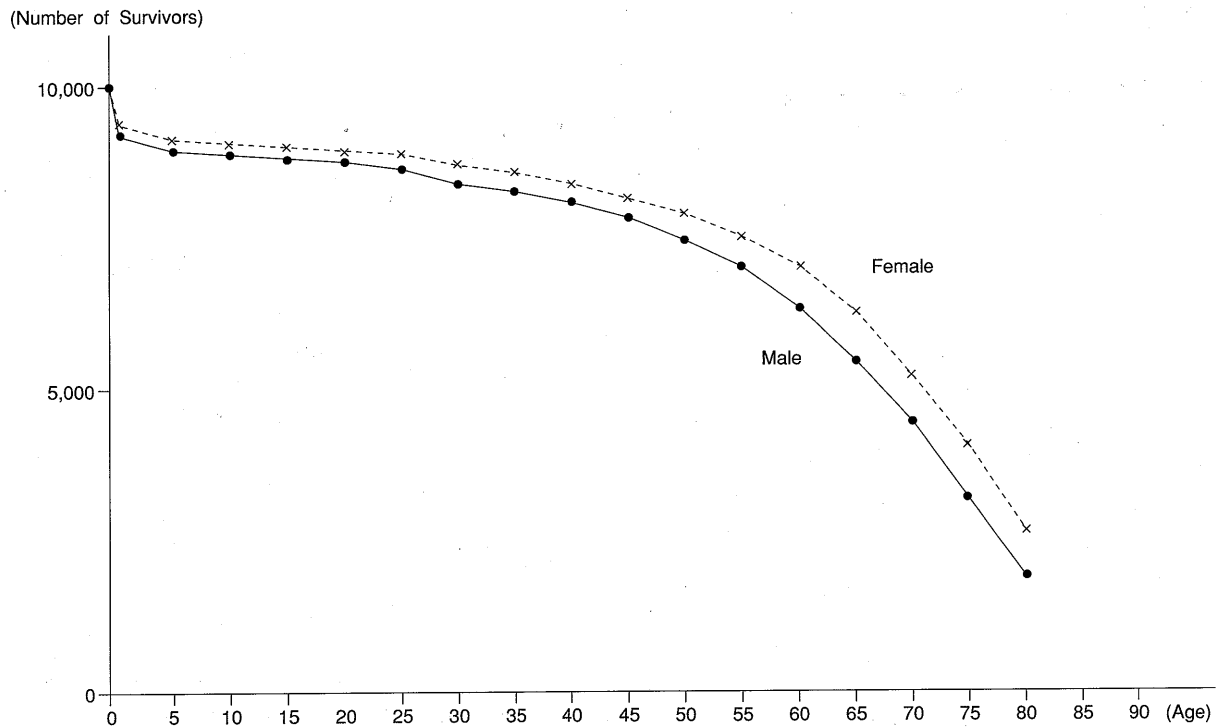


Fig.6 Survivors at Specified Ages for Each Sex (3) JAPAN, 1990

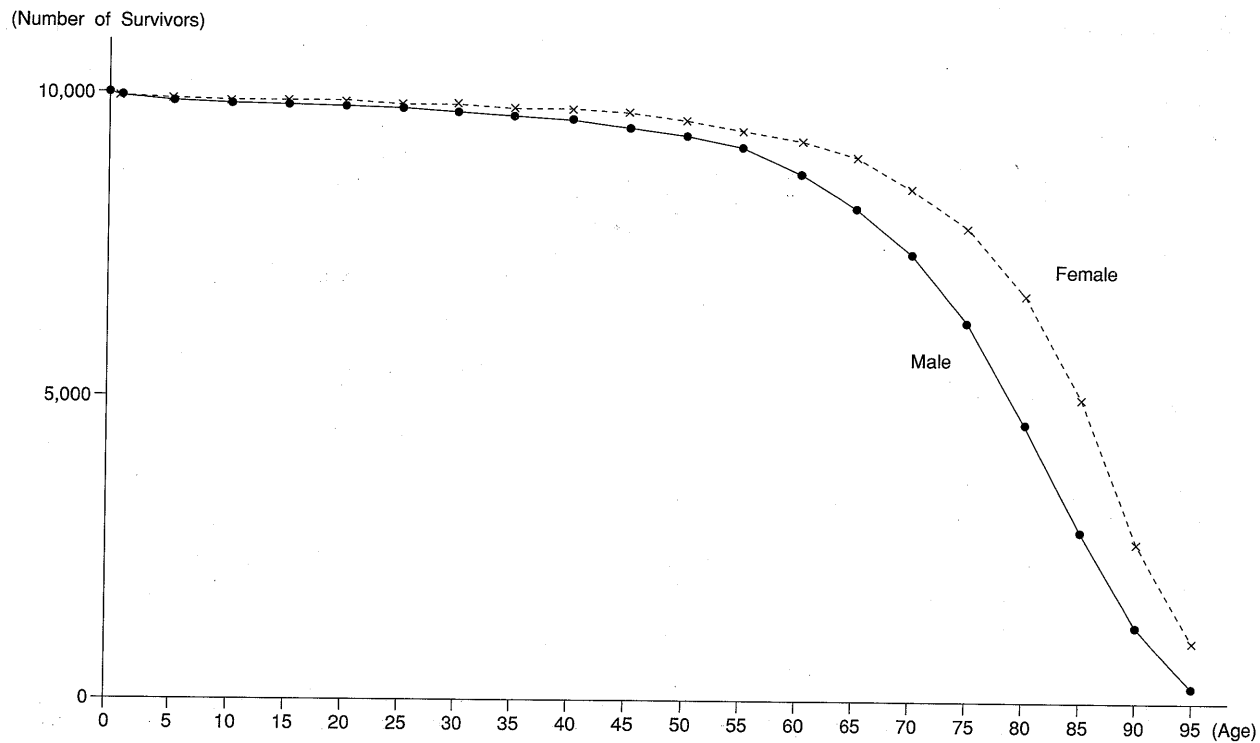


Fig.6 Survivors at Specified Ages for Each Sex (4) PENINSULAR MALAYSIA, 1989

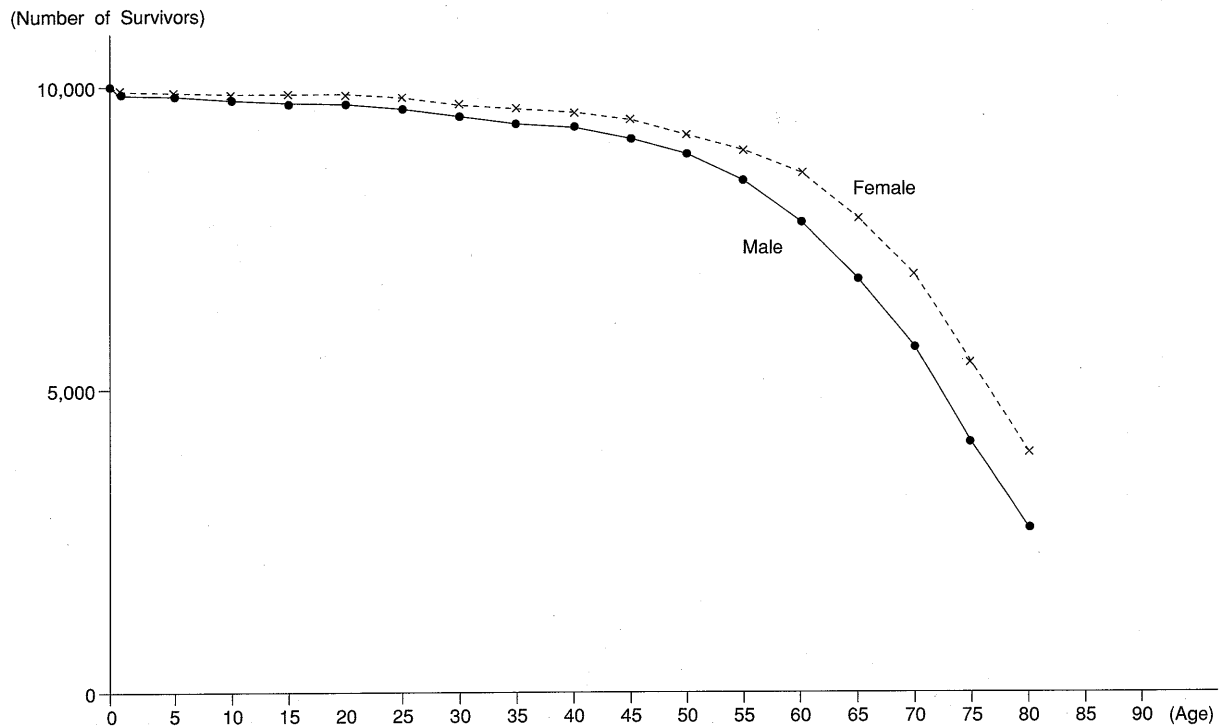


Fig.6 Survivors at Specified Ages for Each Sex (5) PHILIPPINES, 1986

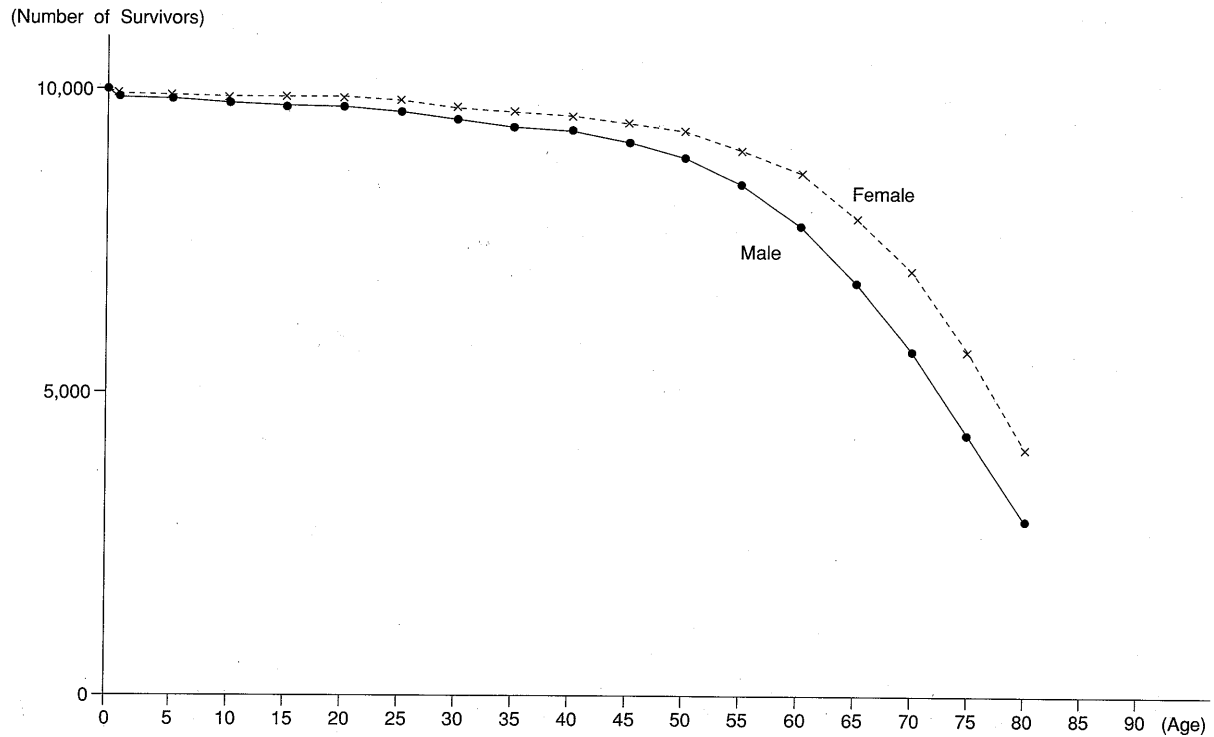


Fig.6 Survivors at Specified Ages for Each Sex (6) SINGAPORE, 1990

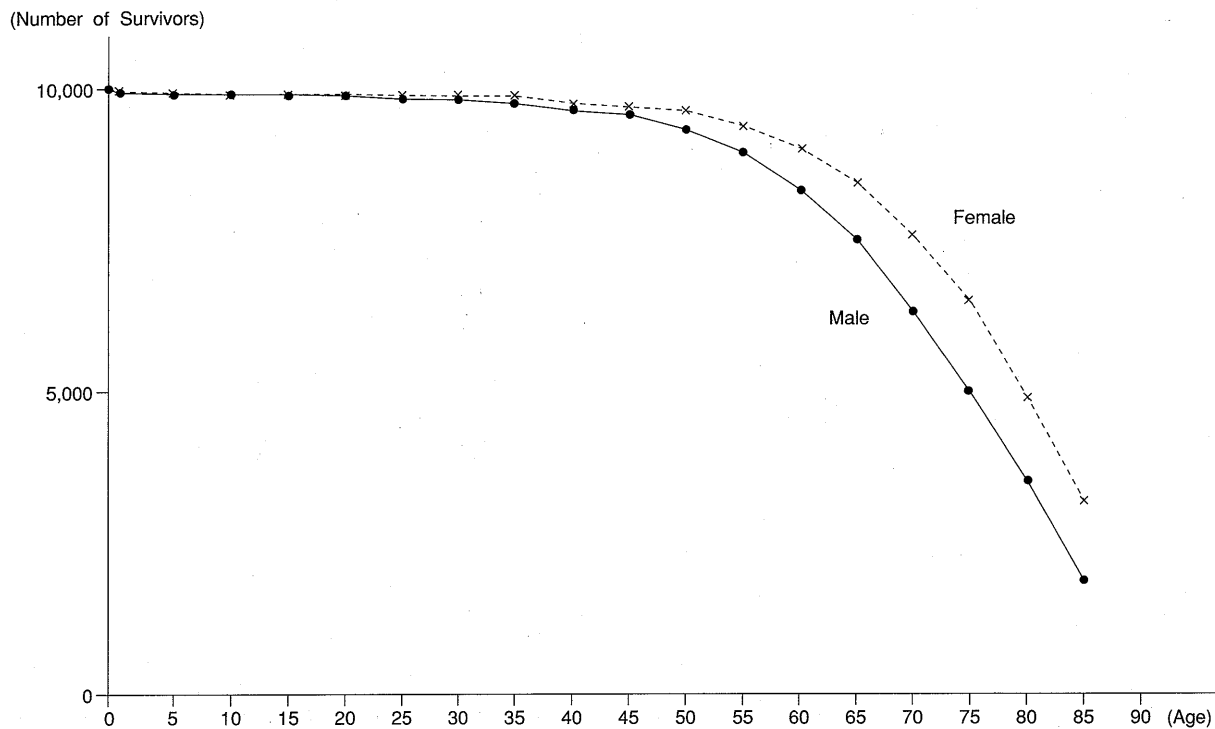
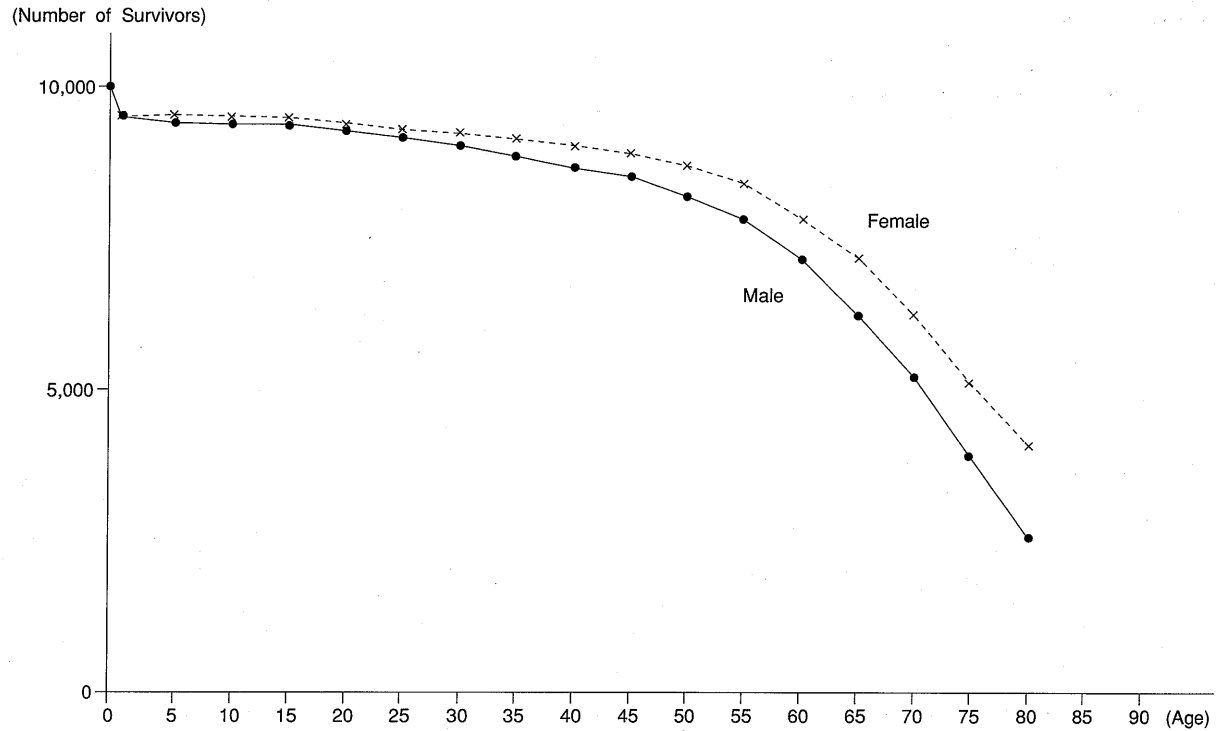


Fig.6 Survivors at Specified Ages for Each Sex (7) THAILAND, 1985-1986



12 Per Capita Food Intake (1)

	Year	Energy (kcal/day)			Protein (g/day)			Fat (g/day)		
		Total	Vegetable Products	Animal Products	Total	Vegetable Products	Animal Products	Total	Vegetable Products	Animal Products
BRUNEI										
(1) INDONESIA	1987	1,986	1,912	74	44.1	35.3	8.8			
(2) JAPAN	1990	2,026	1,556	470	78.7	37.3	41.4	56.9	29.4	27.5
(3) MALAYSIA	1977	a) 2,549	a) 2,195	a) 354	57.6	35.7	21.9	45.5	29.2	16.3
(4) PHILIPPINES	1987	1,753	1,541	212	49.7	31.1	18.6	30	19	11
(5) SINGAPORE	1983	2,922	2,266	657	71.8	39.0	32.8	70.1	21.6	48.5
(6) THAILAND	1986	1,766	1,412	354	50.8	27.9	22.9	42.6	13.4	29.2

Source : (1) *Welfare Indonesia 1988*, Central Bureau of Statistics
 (2) *National Nutrition Survey 1990*, Health Promotion and Nutrition Division, Ministry of Health and Welfare
 (3) *Food Balance Sheets 1975-77, Average and Per Capita Food Supplies 1961-65, Average 1967 to 1977*, FAO, 1980
 (4) Actual Food Consumption Survey (Food weighing Technique), Food and Nutrition Research Institute Department of Science & Technology 1987
 (5) *Food Supplies Analyses*, FAO, Rome 1984
 (6) Nutrition Division, Ministry of Public Health

Note: a) For 1982

12 Per Capita Food Intake (2)

	Year	Calcium (mg/day)	Iron (mg/day)	Vitamin A (mg/day)	Vitamin B ₁ (mg/day)	Vitamin B ₂ (mg/day)	Vitamin C (mg/day)	Carbohydrate (g/day)
BRUNEI								
INDONESIA	1986	215	10.0	a) 1,096	1.18		142	
JAPAN	1990	531	11.1	a) 2,567	1.23	1.33	120	287
MALAYSIA	1977	330	13.5	135	0.87	0.79	44	
PHILIPPINES	1987	420	10.7	b) 389.7	0.68	0.56	53.6	313
SINGAPORE	1983	656	21.8	269	1.59	1.38	76	
THAILAND	1986	300.8	11.8	a) 4,679.3	0.89	0.73	95.9	

Note: a) Unit = IU

b) Unit = Retinol Equivalent, mcg.

13-1 Socio-Economic Indicators

	Year	Literacy Rates (%)	Year	Per Capita GNP ^{a)} (in US \$)	Year	Labour Force Participation Rate (%)
BRUNEI	1986	b) 87	1988	12,423	1986	c) 60.3
INDONESIA	1985	(1) 80.91	1988	(2) 425	1987	57.4
JAPAN	1990	d) 99.99	1990	25,430	1990	(3) 63.3
MALAYSIA	1980	Male : 80 Female : 64	1990	2,287	1990	66.5
PHILIPPINES	1990	93.5 (4)	1988	618	1990	64.5 (5)
SINGAPORE	1990	e) 90.1	1990	10,408	1990	f) 64.9
⁽⁶⁾ THAILAND	1984	g) 87.7	1988	893	1988	74.4

Source : (1) *Statistical Year Book of Indonesia, 1988*, Central Bureau of Statistics
(2) *Statistical Profile of Mothers and Children in Indonesia 1989*
(3) *Labour Force Survey*, Statistics Bureau, Management and Coordination Agency
(4) National Statistics Office NSO, 1990 Census of the Population & Housing
(5) NSO, Household Surveys Division
(6) Office of the National Economic and Social Development Board

Note: a) Figures for each country converted into US \$ by SEAMIC, using yearly average exchange rates shown in IMF International Financial Statistics.
b) Age 9 years and over
c) Age 15 years and over
d) Children enrolled
e) Per 100 resident population aged 10 years and over
f) Per 100 population aged 15 years and over
g) 7 years old

13-2 Expenditure of the Ministry of Health

	Fiscal Year	Total Health Budget	Health Budget as % of National Budget	Per Capita Health Budget	Health Expenditure			
					Total	Personal Services	Maintenance and Other Operating Expenses	Capital Outlay (Development Expenditure)
BRUNEI	1989	US \$ 73,429,056	4.5%	US \$ 291.74	a) US \$ 58,615,327	US \$ 33,932,180	US \$ 24,025,636	US \$ 660,587
INDONESIA	1987	US \$ 126,176,470	0.94%	US \$ 0.61	NA	NA	NA	NA
JAPAN b)	1991	US \$ 90,430,784,373	17.3%	US \$ 729.03	NA	NA	NA	NA
MALAYSIA	1990	US \$ 680,365,858	5.5%	US \$ 50.50	US \$ 656,431,546	US \$ 324,983,446	US \$ 161,564,414	US \$ 169,883,686
PHILIPPINES	1990	US \$ 314,861,082	3.1%	US \$ 5.15	US \$ 191,675,642	US \$ 123,185,440	US \$ 152,013,262	US \$ 39,662,379
SINGAPORE	1989	US \$ 262,784	NA	US \$ 97.93	US \$ 257,479	US \$ 132,628	US \$ 96,760	US \$ 28,092
THAILAND	1989	US \$ 456,505,330	4.1%	US \$ 8.27	NA	NA	NA	NA

Source : Ministry of Health in each country

Note : Figures for each country converted into US \$ by SEAMIC/IMFJ, using yearly average exchange rates shown in IMF International Financial Statistics

Note : Figures for each country converted into US \$ by SEAMIC/IMFJ, using yearly average exchange rates shown in IMF International Financial Statistics

a) Excluding Average yearly developmental project expenditure (10.662 Million Brunei Dollars)

b) including budget for social welfare

14 Family Planning Methods Used

(%)

	Year	Reversible				Irreversible	a) Natural	b) Others
		Oral Contraceptive	IUD	Injection	Condom	Sterilization (Tubal ligation, Vasectomy)		
BRUNEI								
INDONESIA	1990	37.8	26.8	22.5	2.4	5.2	5.3	
JAPAN ^(1) c)	1990	5.7		—	73.9	9.8	15.3	9.0
MALAYSIA	1991	73.7	4.6	1.7	13.0	5.0	1.4	0.6
PHILIPPINES ^(2) d)	1990	59.2	8.4	—	11.6	12.0 0.1	1.4	1.6
SINGAPORE ^{e)}	1987	11.1	6.7	0.4	31.6	32.7	16.2	1.3
THAILAND ⁽³⁾	1990	25.2	12.1	15.3	—	47.3	—	—

Source : (1) Institute of Population Problems
 (2) Family Planning, Department of Health
 (3) Department of Health, Ministry of Public Health

Note: a) Basic body temperature, cervical mucus, rhythm Method
 b) Diaphragm, etc.
 c) Plural choice
 d) Department of Health only
 e) % of all those practising contraception
 f) Married women of reproductive age (15~44 years)

15 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	Kerosene
BRUNEI	1981	Total	90.1	54.6	2.8	38.6	4.1	85.7	2.7	10.9	0.7	
(1) INDONESIA	1989	Total	12.9	17.6	20.6	58.6	3.3	40.8	10.74	45	0.50	
		Urban	33.6	39	11.8	43.2	5.8	83.9	5.4	10.6	0.1	
		Rural	3.3	9.3	23.6	64.5	2.3	28.3	12.8	58.3	0.6	
(2) JAPAN	1988	Total	a) 94.0	67.2	32.8							
(3) MALAYSIA	1980	Total	65.0	56.4	22.7	4.4	16.5	64.4	8.4	26.5	0.7	
Peninsular Malaysia		Total	68.0	60.7	21.7	3.6	14.7	68.4	7.3	23.6	0.7	
Sabah		Total	50.3	32.1	32.9	8.1	26.9	45	15.7	28.7	0.6	
Sarawak		Total	47.8	56.4	22.7	4.4	16.5	41.6	13.2	44.5	0.7	
(4) PHILIPPINES	1990	Total	73.0	68.0	2.0	14.4	16.0	55.1	1.7 b)	0.1	0.5	42.6
		Urban	89.4	83.6	1.9	6.0	8.5	79.2	1.2 b)	0.1	0.2	19.3
		Rural	57.2	52.2	2.1	22.3	23.3	31.9	2.0 b)	0.2	0.7	65.1
(5) SINGAPORE	1990	Total	99.0	97.5	2.5			95.4	4.6			
(6) THAILAND	1980	Total	18.9	4.2	50.3	44.1	1.3	43	0.7	54.8	0.2	

Source : (1) *Welfare Indicators 1989*, Central Bureau of Statistics
 (2) *1983 Housing Survey of Japan, Vol. 1, Part 1*, Statistics Bureau, March 1988
 (3) *Census of Housing, Malaysia 1980 Summary Report*, Department of Statistics Malaysia, July 1982
 (4) *Census of Population Housing 1990*, National Statistics Office

(5) Public Utilities Board and Ministry of the Environment
 (6) *1980 Population & Housing Census*, Whole Kingdom, National Statistical Office

Note: a) 1983
 b) Liquefied Petroleum Gas

16-1: Mean Length of Infants from Birth to One Year

(cm)

	Population or Place	Year	Sex	Age					
				Birth	4 wks	3 mos	6 mos	9 mos	12 mos
BRUNEI									
(1) INDONESIA	Bogor	1978	M F	49.7 49.1	53.8 52.9	60.4 58.9	66.6 64.5	70.3 68.5	73.3 71.9
(2) JAPAN	National	1990	M F	49.6 48.9	56.7 55.6	63.2 61.5	68.5 66.8	72.0 70.6	75.4 74.2
MALAYSIA									
(3) PHILIPPINES	National	1986	M F	49.9 48.7	53.7 52.2	59.7 58.1	65.9 64.2	69.4 68.0	81.3 74.6
(4) SINGAPORE	Malays	1972	M F			60.2 59.5	65.3 64.0		73.6 71.5
	Chinese	1972	M F			61.8 60.0	66.5 65.0	71.0 69.5	74.5 73.0
(5) THAILAND	Bangkok		M F	50.5 49.9	56.1 55.0	62.0 60.3	67.8 65.9	71.9 69.6	73.5 72.2

Source : (1) *Indonesian Nutrition*, Vol. X, No. 1, 1985

(2) Ministry of Health and Welfare

(3) Food and Nutrition Research Institute

(4) Ministry of Health

(5) *Worldwide Variation in Human Growth*, Cambridge University Press, 1976

16-2 Mean Weight of Infants from Birth to One Year

(kg)

	Population or Place	Year	Sex	Age					
				Birth	4 wks	3 mos	6 mos	9 mos	12 mos
BRUNEI									
(1) INDONESIA	Bogor	1978	M F	3.2 3.0	4.2 3.9	5.9 5.5	7.5 6.9	8.4 7.7	8.9 8.5
(2) JAPAN	National	1990	M F	3.2 3.1	5.1 4.7	6.9 6.3	8.1 7.5	9.0 8.4	9.6 9.0
(3) MALAYSIA	Peninsular Malaysia	1990	T	3.2					
(4) PHILIPPINES	National	1987	M F	3.2 3.0	4.2 3.9	5.8 5.3	7.2 6.7	7.9 7.4	9.3 9.0
(5) SINGAPORE	Malays	1972	M			6.0	7.2	8.1	8.8
			F			5.5	6.3	7.4	8.0
	Chinese	1972	M F			6.5 6.5	8.1 8.0	8.9 8.8	9.2 8.9
(6) THAILAND	Bangkok		M F	3.1 3.0	4.7 4.5	6.4 5.6	7.7 7.3	8.6 8.0	9.1 8.5

Source : (1) *Indonesian Nutrition*, Vol. X, No. 1, 1985

(2) Ministry of Health and Welfare, Japan

(3) Ministry of Health

(4) Food and Nutrition Research Institute

(5) Ministry of Health

(6) *Worldwide Variation in Human Growth*, Cambridge University Press, 1976

16-3 Mean Chest Circumference of Infants from Birth to One Year

(cm)

	Population or Place	Year	Sex	Age					
				Birth	4 wks	3 mos	6 mos	9 mos	12 mos
BRUNEI									
⁽¹⁾ INDONESIA	Bogor	1976	T	—	36.3	40.4	43.1	44.5	45.4
⁽²⁾ JAPAN	National	1990	M F	32.2 32.0	38.6 37.6	42.2 41.0	44.2 43.1	45.6 44.5	46.5 45.4
MALAYSIA									
⁽³⁾ PHILIPPINES	National	1987	M F	34.5 34.3	37.8 36.8	41.7 40.0	43.5 42.1	44.1 43.2	46.1 45.0
SINGAPORE									
⁽⁴⁾ THAILAND	Bangkok		M F	32.0 31.9	37.9 37.5	41.0 40.1	43.4 42.7	44.7 43.5	45.8 44.1

Source : (1) *Berita Ilmu Pengetahuan dan Teknologi*, LIPI, 1980

(2) Ministry of Health and Welfare

(3) Food and Nutrition Research Institute

(4) *Worldwide Variation in Human Growth*, Cambridge University Press, 1976

16-4 Mean Height by Age (1-18 years)

	Population or Place	Year	Sex	Age						
				1	2	3	4	5	6	7
BRUNEI										
(1) INDONESIA	West Sumatra Central Java and West Nusa Tenggara	1988	M F						108.9 108.0	111.7 110.7
(2) JAPAN	National	1990	M F	(3) 80.0 (3) 78.3	(3) 89.7 (3) 89.0	(3) 96.5 (3) 95.2	(3) 104.0 (3) 102.9	110.9 110.1	116.8 116.0	122.5 121.8
(4) MALAYSIA	National	1960	M F						105.4	109.7 109.7
(5) PHILIPPINES	National	1987	M F	75.7 75.0	84.6 83.0	91.0 90.9	97.9 96.9	102.9 102.6	108.4 108.1	114.2 113.9
(6) SINGAPORE	National	1983	M F						116.2 115.4	121.1 120.5
(7) THAILAND	a) Bangkok b) Ubonratchatani	1984	M F	(4) 73.5 (4) 72.2	(4) 83.8 (4) 84.0	(4) 93.5 (4) 93.0	(4) 100.5 (4) 99.0	(4) 105.0 (4) 103.5	113.5 115.7	116.9 116.2

Source : (1) *Report on Height and Growth of First Year Preliminary School Children in 1988/89*. Ministry of Population and Environment and Centre for Nutrition Research and Development, 1989, p 30-32

(2) Ministry of Education, Science and Culture

(3) *National Nutrition Survey*, Health Service Bureau, Ministry of Health and Welfare

(4) *Worldwide Variation in Human Growth*, Cambridge University Press, 1976

(5) Food and Nutrition Research Institute

(6) Ministry of Health

(7) Ohsawa's Laboratory, Otsuma Women's University

Note: a) 1-5 years of age

b) 6-18 years of age

(cm)

Age										
8	9	10	11	12	13	14	15	16	17	18
113.5 112.6										
128.1	133.2	138.6	144.4	151.4	158.8	164.5	167.9	169.5	170.4	(3) 170.5
127.4	133.1	139.5	146.3	151.5	154.7	156.4	157.2	157.6	157.9	(3) 157.5
111.8 112.8	114.3 117.9	121.9 123.4	129.3 131.8	133.4 137.2	138.4	141.4				
118.4 118.8	123.0 123.4	126.8 128.9	131.7 135.2	137.8 140.8	144.7 144.8	149.5 147.6	155.1 149.8	159.2 150.4	161.2 150.6	163.0 151.3
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
123.1	127.0	130.9	137.5	141.8	148.9	155.1	158.3	162.4	163.1	163.1
121.1	127.2	133.9	139.5	148.1	147.7	149.4	150.9	154.5	153.6	153.6

16-5 Mean Weight by Age (1-18 years)

	Population or Place	Year	Sex	Age						
				1	2	3	4	5	6	7
BRUNEI										
(1) INDONESIA	National	1977	M F		10.4 10.1	12.1 11.6	13.8 13.2	15.5 14.5	15.7 15.7	18.2 17.0
JAPAN (2)	National	1990	M F	(3) 10.9 (3) 10.1	(3) 13.1 (3) 12.5	(3) 14.8 (3) 14.2	(3) 16.5 (3) 16.6	19.3	21.5	24.0
(4) MALAYSIA	National	1960	M F						16.4	17.8 18.6
(5) PHILIPPINES	National	1987	M F	9.3 9.0	11.3 10.7	12.7 12.4	14.4 13.8	15.5 15.2	17.3 16.7	19.1 18.8
(6) SINGAPORE	National	1983	M F						20.6 19.9	22.6 22.4
(1) THAILAND	a) Bangkok b) Ubonratchatani	1984	M F	(4) 9.1	(4) 11.0	(4) 13.4	(4) 15.1	(4) 16.8	18.8	20.4
				8.5	10.9	13.0	14.5	16.1	18.0	19.5

Source : (1) Ohsawa's Laboratory, Otsuma Women's University
 (2) Ministry of Education, Science and Culture
 (3) *National Nutrition Survey*, Health Service Bureau, Ministry of Health and Welfare
 (4) *Worldwide Variation in Human Growth*, Cambridge University Press, 1976
 (5) Food and Nutrition Research Institute
 (6) Ministry of Health

Note: a) 1-5 years of age
 b) 6-18 years of age

(kg)

Age										
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
27.2 26.6	30.3 29.9	33.9 34.0	38.0 38.9	43.5 43.9	49.0 47.5	54.2 50.2	59.0 52.1	60.7 52.6	62.0 52.8	(3) 62.3 (3) 51.7
19.5 18.7	20.7 21.8	24.2 24.0	27 28.5	29.5 30.0	32.5	35.5				
20.6 20.8	22.6 22.9	24.3 25.7	26.9 29.3	30.6 33.3	35.2 36.8	38.8 40.4	43.1 43.3	47.3 45.3	49.5 46.0	51.9 46.3
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
23.4 21.6	24.8 24.0	25.9 29.4	30.3 31.6	31.1 38.4	37.9 38.4	44.9 40.7	46.7 45.0	51.0 47.8	51.8 47.4	53.0 49.1

17 Definitions Used in Hospital Statistics (WHO)

	Definition
1. Hospital	Any establishment permanently staffed by at least one physician that can offer inpatient accommodation and provide active medical and nursing care. Establishments providing principally custodial care should not be included.
2. General Hospital (principal)	A hospital other than local or rural hospitals providing medical and nursing care for more than one category of medical discipline (e.g., general medicine, specialized medicine, general surgery, specialized surgery, obstetrics, etc.)
3. Local or Rural Hospital	A hospital, usually in rural areas, permanently staffed by one or more physicians, which in respect of their functions is also a general hospital, but provides medical and nursing care of a more limited range than that provided by principal general hospitals.
4. Medical and Maternity Centre with Beds	A small unit, also known as rural health centre, bedded dispensary, a rural maternity home, etc., not permanently staffed by a physician (but by a medical assistant, nurse, midwife, etc.), which offers inpatient accommodation and provides a limited range of medical and nursing care.
5. Specialized Hospital	A hospital providing medical and nursing care primarily for only one discipline. This category does not include the specialized department administratively attached to a principal general hospital and sometimes located in an annex or separate building; their beds (and the related data) are included with the principal general hospital.
6. Government Hospital	Any hospital administered by a government authority at any level, whether central, intermediate, or local.

	Definition
7. Private Non-profit-making Hospital	Any hospital, whether subsidized by the government or not, operated on a non-profit-making basis by a non-government body, such as a religious mission, an industrial enterprise, a trust, or a philanthropic institution.
8. Private Profit-making Hospital	Any private hospital (or medical establishment with beds) operated on a profit-making basis.
9. Bed	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. Admission	An inpatient admission is the formal admission by a hospital of an inpatient and always involves the allocation of a hospital bed. Healthy babies born in the hospital should not be counted if they do not require special care.
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.

17-1 Comparative Table on Medical Establishments

	Malaysia (1989)								
	Brunei (1988)	Indonesia (1989)	Japan (1990)	Peninsular Malaysia	Sabah	Sarawak	Philippines (1990)	Singapore (1990)	Thailand (1990)
1 General Hospital	V	V	V	V	V	V	V	V	V
2 Local or Rural Hospital				a) V	a) V	a) V	V		V
3 Medical Center							V	V	
4 Maternity Hospital		V					V	V	V
5 Infectious Diseases Hospital		V	V				V		V
6 Chronic Diseases Hospital								V	
7 Leprosy Hospital		V	V	V		V	V		V
8 Tuberculosis Hospital		V	V	V			V		V
9 Pediatrics Hospital							V		V
10 Ophthalmology Hospital		V						V b)	V
11 Orthopedics Hospital		V					V		
12 Mental Hospital		V	V	V	V	V	V	V	V
13 Estab. for Drug Addicts		V					V		V
14 Other Specialized Hospital		V					V	V c)	V

Note: a) District & Divisional Hospitals

b) Singapore National Eye Centre is an ophthalmology hospital only and provides only ambulatory care.

c) National Skin Center is a dermatology hospital only and provides only ambulatory care. STD cases requiring inpatient treatment are admitted into an annex of one of the acute hospitals.

17—2 Hospitals and Other Medical Establishments with Beds (1)

	Year	1 General Hospitals				2 Local or Rural Hospitals				3 Medical Centres			
		Establish-ments	Beds	Admissions or Discharges	Patient-Days	Establish-ments	Beds	Admissions or Discharges	Patient-Days	Establish-ments	Beds	Admissions or Discharges	Patient-Days
BRUNEI	1988	8	971	a) 23,396	91,118								
(1) INDONESIA	1990	774	93,006	3,038,645	18,414,820	566	40,167	1,286,901	6,972,294				
JAPAN	1990	9,006	1,253,909	9,952,959	414,255,622								
(2) MALAYSIA	1991	16	13,688	670,931	3,517,838	81	12,650	633,444	2,473,127				
Peninsular Malaysia		12	11,789	566,841	2,987,747	54	9,481	466,109	1,745,709				
Sabah		3	1,163	68,117	320,289	12	1,338	69,682	257,397				
Sarawak		1	736	35,973	209,802	15	1,831	97,653	469,938				
(3) PHILIPPINES	1990	537	40,359	b) 1,414,770	b) 7,148,949	497	19,935	987,835	4,208,788	8	2,950	c) 138,175	d) 858,708
SINGAPORE	1990	13	5,995	293,777	1,541,590					1	10	316	1,719
(4) THAILAND	1990	392	63,825			567	12,445			—	—	—	—

Source : Ministry of Health in each country

- (1) Directorate of Medical Care, Ministry of Health
- (2) Information and Documentation System Unit
- (3) Hospital Operation & Management Services, Department of Health
- (4) Health Statistics Division, Ministry of Public Health

- Note : a) Based on 4 government hospitals
b) Excluding TB and mental hospitals
c) Excluding one medical center
d) Special hospital under Department of Health

4 Maternity Hospitals				5 Infectious Diseases Hospitals				6 Chronic Diseases Hospitals			
Establish- ments	Beds	Admissions or Discharges	Patient- Days	Establish- ments	Beds	Admissions or Discharges	Patient- Days	Establish- ments	Beds	Admissions or Discharges	Patient- Days
52	2,486	66,561	278,036	1	103	4,411	13,962	..			
..				10	199	151	6,678	..			
..				..				..			
d) 1	700	45,092	154,413	e) 1	900	23,034	148,462	..			
1	490	36,079	130,194	..				1	454	217	112,754
8	1,019			1	400	12,445		..			

Note : e) Special hospitals under Department of Health

17-2 Hospitals and Other Medical Establishments with Beds (2)

	Year	7 Leprosy Hospitals				8 Tuberculosis Hospitals				9 Pediatric Hospitals			
		Establish-ments	Beds	Admissions or Discharges	Patient-Days	Establish-ments	Beds	Admissions or Discharges	Patient-Days	Establish-ments	Beds	Admissions or Discharges	Patient-Days
BRUNEI	1988												
⁽¹⁾ INDONESIA	1990	25	3,202	2,568	699,766	10	715	7,563	165,486	• •			
JAPAN	1990	16	9,398	108	2,498,126	15	42,210	1,447	316,276	• •			
⁽²⁾ MALAYSIA	1991	3	3,178	4,866	771,100	1	276	2,302	20,988				
Peninsular Malaysia		2	2,916	4,811	752,813	1	276	2,302	127,677				
Sabah		—	—	—	—	—	—	—	—				
Sarawak		1	262	55	18,287	—	—	—	—				
⁽³⁾ PHILIPPINES	1990	f) 8	4,920	1,977	450,944	1	738	7,556	181,720	f) 2	450	17,091	130,940
SINGAPORE	1990	• •				• •				• •			
⁽⁴⁾ THAILAND	1990	5	2,637			2	686		156,881	1	538	12,101	135,387

Note : f) Under Department of Health

17-2 Hospitals and Other Medical Establishments with Beds (3)

10 Ophtalmology Hospitals				11 Orthopedics Hospitals				12 Mental Hospitals			
Establish- ments	Beds	Admissions or Discharges	Patient- Days	Establish- ments	Beds	Admissions or Discharges	Patient- Days	Establish- ments	Beds	Admissions or Discharges	Patient- Days
8	623	11,527	84,228	1	180	1,377	51,930	47	7,924	29,642	2,376,613
..				..				1,049	359,087	173,787	94,662,457
..				..				3	3,640	6,431	978,967
								1	3,000	5,062	801,175
								1	302	593	62,707
								1	338	776	115,085
..				g) 1	700	8,034	161,533	g) h) 1	5,200	h) 4,042	h) 1,443,266
i) 1				..				3	2,810	6,366	895,173
4	87	703	4,073	—				10	7,372	25,662	2,518,011

Note :g) A special hospital under Department of Health

h) For 1987

i) Singapore National Eye Centre provides only ambulatory care

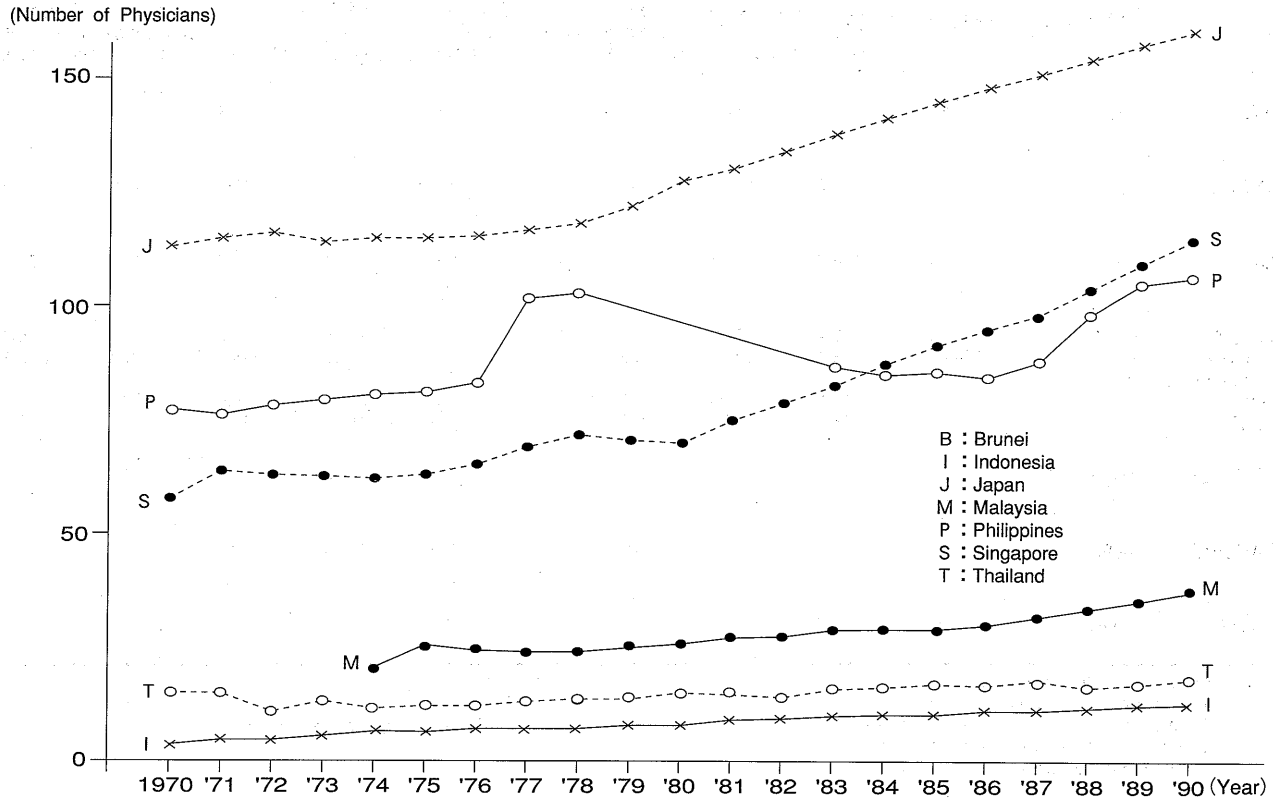
17—2 Hospitals and Other Medical Establishments with Beds (4)

	Year	13 Establ. for Drug Addicts				14 Other Specialized Hospitals				15 Total			
		Establish- ments	Beds	Admissions or Discharges	Patient- Days	Establish- ments	Beds	Admissions or Discharges	Patient- Days	Establish- ments	Beds	Admissions or Discharges	Patient- Days
BRUNEI	1988									8	971	23,396	91,118
(1) INDONESIA	1990	1	30	398	6,600	27	973	39,941	155,468	924	107,112	2,968,039	21,579,613
JAPAN	1990			• •						10,096	1,949,493	10,128,452	511,678,363
(2) MALAYSIA	1991									104	33,432	1,317,974	7,762,020
Peninsular										70	27,462	1,045,125	6,308,515
Malaysia										16	2,803	138,392	640,393
Sabah										18	3,167	134,457	813,112
Sarawak													
(3) PHILIPPINES	1990	21		1,563		j) 4	803	35,852	191,834	537	41,246	1,414,770	7,148,949
SINGAPORE	1990			• •		k) 1				21	9,759	336,755	2,681,430
(4) THAILAND	1990	2	400	5,181	184,197	7	1,003	4,855	69,477	1,043	90,740		

Note : j) Including a hospital under Department of Health

k) Include National Skin Center that is a Dermatology Hospital only and provides only ambulatory care. STD cases requiring inpatient treatment are admitted into an annexe of one of the acute hospitals.

Fig.7 Recent Trends in Number of Physicians (Per 100,000)



17-3 Hospital Utilization by Category of Hospital (1)

	Year	All Hospitals					General Hospitals					
		Type	Population per Bed	Bed per 10,000 population	Admissions per 10,000 Population	Bed Occupancy Rate (%)	Type	Bed per 10,000 population	Admissions		Bed Occupancy Rate(%)	Average Length of Stay (Days)
									per 10,000 Population	per Bed		
BRUNEI	1988		249	40	969	33		40	969	249	33	
⁽¹⁾ INDONESIA	1989		1,670	6.0	165.9	55.2		5.1	157.6	30.9	52.8	6.2
JAPAN	1990	T	63.0	134.8	825.4	83.6	T	99.8	811.0	7.9	81.9	38.1
⁽²⁾ MALAYSIA	1991	A	544.5	18.4	724.0	63.6	A	7.5	368.6	49.0	70.4	5.4
Peninsular			544.1	18.4	699.4	62.9		7.9	379.3	48.1	69.4	5.3
Malaysia			554.6	18.0	890.3	62.6		7.5	438.2	58.6	75.7	4.7
Sabah			538.7	18.5	788.1	70.3		4.3	210.9	48.9	78.1	5.8
Sarawak												
⁽³⁾ PHILIPPINES	1990	T	1,726	4.1	138.3	78.9	T	0.7	29.6	42.9	87.3	5.5
SINGAPORE	1990	T	309	32.4	1,116.4	80.7	T	19.9	973.9	49.0	76.7	5.2
⁽⁴⁾ THAILAND	1990	T	739	13.6			T	13.5				

Source : Ministry of Health in each country

- (1) Directorate of Medical Care, Ministry of Health
- (2) Information and Documentation System Unit
- (3) Hospital Operations & Management Service
- (4) Health Statistics Division

Note : Type of hospitals

T=Total

A=Government hospital establishments

District Hospitals						Tuberculosis					
Type	Bed per 10,000 population	Admissions		Bed Occupancy Rate(%)	Average Length of Stay (Days)	Type	Bed per 10,000 population	Admissions		Bed Occupancy Rate (%)	Average Length of Stay (Days)
		per 10,000 Population	per Bed					per 10,000 Population	per Bed		
							0.0	0.4	9.1	62.1	24.9
						T	3.4	0.1	0.03	48.4	150.2
A	6.9	348.0	50.1	53.6	3.9	A	0.2	1.3	8.3	20.8	9.1
	6.3	311.9	49.2	50.5	3.7		0.2	1.5	8.3	20.8	9.1
	8.6	448.2	52.1	52.1	3.7		—	—	—	—	—
	10.7	572.4	53.3	70.3	4.8		—	—	—	—	—
	1.0	55.5	53.6	80.1	4.3	T	0.1			76	22
..						T	..				
	1.8					T	0.1				

	Year	Type	Mental Hospitals					Type	Meternal Hospitals				
			Bed per 10,000 population	Admissions		Bed Occupancy Rate(%)	Average Length of Stay (Days)		Bed per 10,000 population	Admissions		Bed Occupancy Rate(%)	Average Length of Stay (Days)
				per 10,000 Population	per Bed					per 10,000 Population	per Bed		
BRUNEI													
⁽¹⁾ INDONESIA	1989		0.4	1.6	3.8	83.6	80.6	T	0.1	3.1	24.2	26.0	3.9
JAPAN	1990	T	29.2	14.2	0.5	97.3	489.6						
⁽²⁾ MALAYSIA Peninsular Malaysia Sabah Sarawak	1991	A	2.0 2.0 1.9 2.0	3.5 3.4 3.8 4.6	1.8 1.7 2.0 2.3								
⁽³⁾ PHILIPPINES	1990	Special	0.5	NA	NA	76.9	28.9	Special	0.1	4.5	64.4	60.4	3.5
SINGAPORE	1990	T	9.3	21.1	2.3	88.3	215.8	T	1.6	119.6	73.6	81.3	3.6
⁽⁴⁾ THAILAND	1990	T	1.3					T	0.2				

Source : Ministry of Health in each country

(1) Directorate of Medical Care

(2) Information and Documentation System Unit

(3) Hospital Operation & Management Service

(4) Health Statistics Division

17-4 Number of Hospitals

		1970	1975	1980	1984	1985	1986	1987	1988	1989	1990
BRUNEI	Total		6	8	8	8	8	8			
INDONESIA		1,164	1,115	1,208	1,306	1,367	1,408	a) 1,436	1,500	b) 924	b) 950
JAPAN		7,974	8,294	9,055	9,574	9,608	9,699	9,841	10,034	10,081	10,096
MALAYSIA					98	101	101	102	102	102	102
Peninsular		64			65	68	68	69	69	69	69
Malaysia					16	16	16	16	16	16	16
Sabah			15		17	17	17	17	17	17	17
Sarawak		14	14								
	Total	650	927	2,020	1,706	1,846	1,815	1,846	1,805	1,805	1,726
PHILIPPINES							b)				c)
	Public	220	316	413	527	612	624	617	619	619	594
	Private	430	611	1,607	1,179	1,229	1,191	1,229	1,186	1,186	1,132
	Total	17	23	26	22	21	22	21	21	20	21
SINGAPORE		11	13	13	11	10	10	10	10	10	11
	Private	6	10	13	11	11	12	13	11	10	10
THAILAND	Total	98	281	636	850	910	888	910	941		1,043

Source: Ministry of Health in each country

Note: a) Directorate of Medical Care, MOH, Indonesia, 1987

b) Excluding maternity hospitals

c) Licensed only

17-5 Number of Beds

		1970	1975	1980	1984	1985	1986	1987	1988	1989	1990
BRUNEI			506	630	876	876	876	876			
INDONESIA		86,022	83,696	98,543	104,966	110,361	111,300	a) 112,328	116,847	107,112	109,387
JAPAN		1,062,553	1,164,098	1,319,406	1,467,050	1,495,328	1,533,887	1,582,393	1,634,309	1,661,952	1,676,803
MALAYSIA				a) 35,291	32,669	32,495	a) 32,960	33,161		33,341	
Peninsular Malaysia	27,927			a) 29,792	26,993	26,491	27,185	27,272		27,445	
Sabah			2,233	a) 2,670	2,534	2,809	2,799	2,799	2,803	2,799	
Sarawak	2,000		2,358	a) 2,829	3,142	3,195	2,976	3,090	3,090	3,097	
PHILIPPINES	Total	40,289	55,323	81,976	84,142 (1982)	90,279	89,668	97,735	90,414	90,414	86,948
	Public	19,725	27,075	39,625	45,187	47,861	48,045	57,470	50,703	50,703	48,602
	Private	20,564	28,248	42,351	38,955	42,418	41,623	40,265	39,711	39,711	38,346
SINGAPORE	Total	7,760	9,311	9,585	9,687	10,000	10,111	10,027	9,730	9,644	9,759
	Public	6,891	8,211	8,078	8,085	8,329	8,274	8,191	7,893	7,893	7,922
	Private	869	1,100	1,507	1,602	1,671	1,837	1,836	1,837	1,792	1,837
THAILAND	Total	25,619	52,652	71,718	c) 81,070	c) 84,045	c) 84,438	89,633	88,009	89,982	90,740

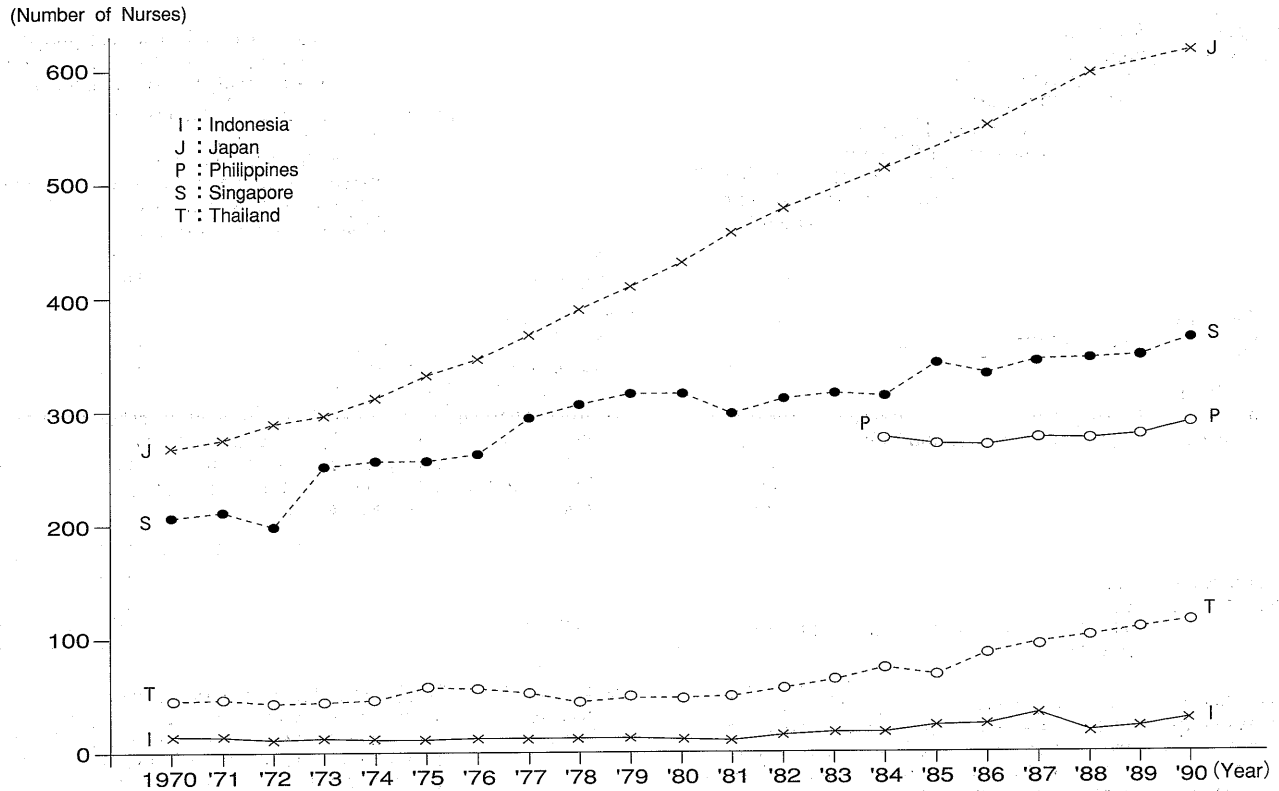
Source: Ministry of Health in each country

Note: a) Including those in government hospitals

b) Including other government agencies

c) Including private maternity centres

Fig.8 Recent Trends in Number of Nurses (Per 100,000)



18 Definition of Medical Personnel (WHO)

	Definition
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 practice 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	Dental non-operating auxiliaries who assist dentists and dental operating auxiliaries in their clinical work but do not carry out any independent intra-oral procedures. These dental personnel usually have technical training either in formal courses or by apprenticeship.

	Definition
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 medications, 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/Auxiliary 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 that the professional nurse-midwife.

	Definition
14. Professional Nurse 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, pediatrics, 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.

	Definition
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. 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.
23. Sanitary engineers High (university) level	
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.

	Definition
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 records technicians	Technical personnel in the health field not classifiable under previous items.

	Definition
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.
29. Practitioners of Traditional Medicine/Midwifery examples: Herb doctors Ayurvedic doctors Lay medical practitioners Medicine men Acupuncturists Traditional birth attendants	

18-1 Comparative Table on Medical Personnel (1)

	Brunei (1988)	Indonesia (1990)	Japan (1990)	Malaysia (1990)			Philippines (1990)	Singapore (1990)	Thailand (1990)
				Peninsular Malaysia	Sabah	Sarawak			
1 Physicians	✓	✓	✓	✓	✓	✓	✓	✓	✓
2 Medical assistants				✓	✓	✓			✓
3 Multipurpose health auxiliaries							✓		
4 Dentists/Dental auxiliaries	✓	✓	✓	✓	✓	✓	✓	✓	✓
5 Dental operation auxiliaries	✓		✓				✓	✓	
6 Dental non-operating auxiliaries								✓	
7 Pharmacists/Chemists	✓	✓	✓	✓	✓	✓	✓	✓	✓
8 Pharmaceutical assistants	✓	✓		✓	✓	✓		✓	✓
9 Veterinarians/Veterinary surgeons	✓						✓	✓	✓
10 Animal health assistants								✓	✓
11 Professional midwives	✓		✓	✓	✓	✓	✓	✓	✓
12 Assistant midwives/Auxiliary midwives	✓								
13 Auxiliary nurse-midwives	✓								✓
14 Professional nurses	✓		✓	✓	✓	✓	✓	✓	✓
15 Assistant nurses/Auxiliary nurses	✓		✓	✓	✓	✓		✓	✓
16 Nursing and miwifery aids		✓							✓
17 Physiotherapists/Physical therapists	✓	✓	✓	✓	✓	✓	✓	✓	✓
18 Medical laboratory technicians	✓	✓	✓	✓	✓	✓	✓	✓	✓
19 Assistant medical laboratory technicians	✓	✓	✓	✓	✓	✓		✓	
20 Medical physicist	✓								
21 Medical radiological technicians	✓	✓	✓					✓	✓
22 Assistant medical radiological technicians	✓		✓					✓	
23 Sanitary engineers		✓		✓	✓	✓	✓	✓	✓
24 Sanitarians	✓	✓					✓	✓	✓
25 Auxiliary sanitarians	✓							✓	

18-1 Comparative Table on Medical Personnel (2)

	Brunei (1988)	Indonesia (1987)	Japan (1990)	Malaysia (1990)			Philippines (1990)	Singapore (1990)	Thailand (1990)
				Peninsular Malaysia	Sabah	Sarawak			
26 Other scientific or professional personnel	V							V	V
27 Other technical personnel			V					V	
28 Other health auxiliaries and aides								V	V
29 Practitioners of traditional midwifery									
30 Dental nurses		V		V	V	V		V	
31 Nurses including nurse-midwives		V						V	
32 Orthopaedic technicians		V							
33 Malaria field officers							V		V
34 Medical social technicians									
35 Health statistics technicians	V			V					V
36 Medical statisticians	V			V					V
37 Dental hygienists			V				V		V
38 Trained or rural midwives							V		
39 Traditional birth attendants							V		
40 Laboratory aides									V
41 Sanitary inspectors		V					V		
42 Medical social workers	V		V				V	V	
43 Dental practitioners								V	
44 Veterinary assistants								V	
45 Nurse-midwives		V							
46 Dental technicians				V	V	V		V	
47 Dispensers		V						V	
48 Assistant nurse-midwives									
49 Nurses		V	V	V	V	V	V	V	V
50 Occupational therapists	V		V				V	V	V

	Brunei (1988)	Indonesia (1987)	Japan (1990)	Malaysia (1990)			Philippines (1990)	Singapore (1990)	Thailand (1990)
				Peninsular Malaysia	Sabah	Sarawak			
51 Dietitians	V						V	V	V
52 Radiographers	V	V		V	V	V		V	
53 Nursing auxiliaries									
54 X-ray assistant technicians	V								
55 Health inspectors	V	V		V	V	V		V	
56 Assistant health inspectors		V		V	V	V		V	
57 Biochemists	V								V
58 Health educators	V	V					V	V	V
59 Midwives		V	V	V	V			V	
60 Microscopists	V								
61 Health assistants	V								
62 Entomologists							V		V
63 Dental surgery assistants				V	V	V			
64 Nutritionists		V	V				V		V
65 Darkroom assistants	V								

18-2 Medical and Allied Health Personnel (1)

	Year	1. Physicians	2. Medical Assistants	3. Multi-purpose Health Auxiliaries	4. Dentists/ Dental Surgeons	5. Dental Operating Auxiliaries	6. Dental Non-operating Auxiliaries	7. Pharmacists/ Chemists
BRUNEI	1988	171	..	..	19	36	..	8
INDONESIA ⁽¹⁾	1990	25,752	..	..	5,545	3,253		5,399
JAPAN	1990	211,797	..	..	74,028	32,433	..	150,627
MALAYSIA ⁽²⁾			a)					
Peninsular Malaysia		7,012	3,342		1,471			1,239
Sabah	1990	6,327	2,410	..	1,343	..	..	1,125
Sarawak		291	498		56			45
		349	434		72			69
PHILIPPINES	1990	b) 72,593	..	c) 208,162	b) 28,204	a) 3,639	..	b) 36,674
SINGAPORE	1990	3,573	..	..	776	250	a) 34	e) 587
THAILAND ⁽³⁾	1990	12,520	218		2,285	..	..	4,168

Source: Ministry of Health in each country

(1) Personnel Bureau, 1989

(2) *Establishment Book*, information and Documentation System Unit

(3) Health Resources Report, Health Statistics Division

Note: a) Government only

b) Cumulative total

c) Barangay health workers active only as of December, 1990

d) Department of Health only for 1988

e) Pharmacists only

8. Pharmaceutical Assistants	9. Veterinarians/ Veterinary Surgeons	10. Animal Health Assistant	11. Professional Midwives	12. Assistant Midwives/ Auxiliary Midwives	13. Auxiliary Nurse-Midwives	14. Professional Nurses	15. Assistant Nurses/ Auxiliary Nurses	16. Nursing & Midwives Aids
16	5	..	187	128	92	328	132	..
	..	..	26,054	..	..	50,350	..	38,770
..	..	..	22,918	..	..	404,764	340,537	..
a) 1,567 1,320 111 136	..	..	a) 5,492 3,921 493 1,078	..	..	a) 11,569 9,624 1,056 889	a) 9,378 7,773 1,284 321	..
..	b) 3,576	..	b) 71,092	..	..	174,112	..	d) 5,178
198	21	a) 302	543	..	..	f) 7,184	f) 2,511	..
1,601	698	1,743	10,796	..	16,514	39,021	21,651	

Note: f) Entry used for calculation of population/nursing and midwifery personnel ratios

18-2 Medical and Allied Health Personnel (2)

	Year	17. Physio- therapists/ Physical Therapists	18. Medical Laboratory Technicians	19. Assistant Medical Laboratory Technicians	20. Medical Physicists	21. Medical Radiological Technicians	22. Assistant Medical Radiological Technicians	23. Sanitary Engineers
BRUNEI	1988	8	43	23	1	10	18	
INDONESIA ⁽¹⁾	1990	374	284	3,499	..	223	..	1,473
JAPAN	1990	9,849	47,353	1,252	..	28,207	2,978	..
MALAYSIA ⁽²⁾ Peninsular Malaysia Sabah Sarawak	1990	a) 173 47 7 16	a) 1,300 1,079 152 139	a) 1,234 1,137 29 154	..	..	..	a) 60 63 5 2
PHILIPPINES	1990	1,543	2,577	..	..	(3) d) 3,486	..	146
SINGAPORE	1990	a) 12	a) 83	a) 24	..	a) 43	a) 39	a) 177
THAILAND ⁽⁴⁾	1990	507	1,140	2,913	..	238	..	39

Source: Ministry of Health in each country

(1) Center for Manpower Education

(2) *Establishment Book*, information and Documentation System Unit

(3) Radiological Health Service

(4) Health Resources Report, Health Statistics Division

Note: a.) Government only

d.) Department of Health only, for 1988

24. Sanitarians	25. Auxiliary Sanitarians	26. Other Scientific or Professional Personnel	27. Other Technical Personnel	28. Other Health Auxiliaries and Aids	29. Practitioners of Traditional Medicine/ Midwifery	30. Dental Nurses	31. Nurses Including Nurse-Midwives	32. Orthopaedic Technicians
25	18	2	..	..	..	..	..	..
2,387	..	..	..	..	..	3,191	53,913	34
..	..	..	30,009	..	..	..	..	..
..	..	..	..	..	..	a) 1,091 823 99 177	..	..
g) 2,380	..	..	..	..	..	..	..	..
a) 230	a) 378	a) 55	a) 22	a) 39	..	301	9,695	..
734	..	..	..	10,686	..	..	..	..

Note: g) Department of Health only

18-2 Medical and Allied Health Personnel (3)

	Year	33. Malaria Field Officers	34. Medical Social Technicians	35. Health Statistics Technicians	36. Medical Statistician	37. Dental Hygienists	38. Trained or Rural Midwives	39. Traditional Birth Attendants
BRUNEI	1988	..	..	2	1	..	..	..
INDONESIA ⁽¹⁾	1990	..	...	..	..	3,253	..	..
JAPAN	1990	..	..	..	..	48,974	..	..
MALAYSIA ⁽²⁾ Peninsular Malaysia Sabah Sarawak	1990	..	..	a) 9 9	a) 3 3	..	..	..
PHILIPPINES	1990	g) 707	..	..	..	(3) 6	g) 11,604	g) 33,464
SINGAPORE	1990	..	..	..	..	..	..	..
THAILAND ⁽⁴⁾	1990	16,951	..	305	808	987		

Source: Ministry of Health in each country

(1) Center for Manpower Education

(2) *Establishment Book*, information and Documentation System Unit

(3) Professional Regulation Commission

(4) *Health Resources Report*, Health Statistics Division

Note: a) Government only

g) Department of Health only

h) Social workers only

40. Laboratory Aids	41. Sanitary Inspectors	42. Medical Social Workers	43. Dental Practitioners	44. Veterinary Assistants	45. Nurse-midwives	46. Dental Technicians	47. Dispensers	48. Assistant Nurse-midwives
..	..	1	..	..	..	..	..	..
100	3,147	..	..	..	46,360	119	11,729	7,561
..	..	4,630	..	..	..	..	..	..
..	..	..	..	..	..	a) 337	..	..
..	..	..	..	..	..	282	..	..
..	..	..	..	..	..	23	..	..
..	..	..	..	..	..	32	..	..
..	g) 2,863	h) 7,711	..	..	..	..	..	..
..	..	a) 28	776	a) 6	..	a) 34	a) 163	..
698	..	..	..	..	..	..	..	..

18-2 Medical and Allied Health Personnel (4)

	Year	49. Nurses	50. Occupational Therapists	51. Dietitians	52. Radiographers	53. Nursing Auxiliaries	54. X-ray Assistant Technicians	55. Health Inspectors
BRUNEI	1988	..	5	5	10	..	18	25
(1) INDONESIA	1990	65,200	568	5,178	467	..	..	1,993
JAPAN	1990	745,301	3,816	..	..	..	..	..
(2) MALAYSIA	1990	a)						a)
11,569					362	..	..	1,671
Peninsular Malaysia		9,624			319	..	..	1,332
Sabah		1,056			23	..	..	136
Sarawak		889			36	..	..	203
PHILIPPINES	1990	(3) 174,112	(3) i) 162	(3) 7,544	..	..	..	..
SINGAPORE	1990	a) 9,957	a) 13	a) 9	a) 43	..	..	a) 230
(4) THAILAND	1990	..	312	314		..	..	..

Source: Ministry of Health in each country

(1) Center for Manpower Education

(2) *Establishment Book*, information and Documentation System Unit

(3) Professional Regulation Commission

(4) *Health Resources Report*, Health Statistics Division

Note: a) Government only

i) DIV II. Dentist private section

56. Assistant Health Inspectors	57. Bio-chemists	58. Health Educators	59. Midwives	60. Microscopists	61. Health Assistants	62. Entomologists	63. Dental Sugery Assistants	64. Nutritionists	65. Darkroom Assistants
..	15	4	..	8	18		..		9
5,375	..	78	18,439	..	..	..	..	1,210	..
..	..	..	22,918	..	..	..	..	27,639	..
a) 2,171 1,641 210 320			a) 5,492 3,921 493 1,078				a) 835 748 42 45		
..	..	a) 109	(3) 71,092	..	..	g) 21	..	(3) 7,544	..
a) 378	..	a) 6	543	..	..	..	..	..	..
..	95	353	..	151	..	15	..	..	—

Note: g) Department of Health only

18-3 Population/Health Personnel Ratios

	Year	Physicians per 10,000 Population	Population per Physician	Dentists per 10,000 Population	Population per Dentist	Pharmacists per 10,000 Population	Population per Pharma- cist	Medical Assistants per 10,000 Population	Population per Medical Assistant	Nursing Personnel per 10,000 Population	Population per Nursing Personnel	Nursing & Midwifery Personnel per 10,000 Population	Population per Nursing & Midwifery Personnel
BRUNEI	1988	7.1	1,412	1.2	8,621	0.3	30,175			30.6	327	47.5	211
INDONESIA	1990	1.4	6,964	0.3	32,339	0.30	33,214	..	..	a) 1.56	a) 6,407	a) 2.6	a) 3,858
JAPAN	1990	17.1	580	5.99	1,659	12.2	815	..	..	60.3	165	62.6	160
MALAYSIA Peninsular Malaysia Sabah Sarawak	1990	3.9	2,536	0.83	12,089	0.70	14,353	1.88	5,321	6.51	1,537	3.09	3,238
		4.33	2,311	0.92	10,886	0.77	12,996	1.65	6,066	6.58	1,519	7.17	1,395
		1.98	5,061	0.38	26,297	0.31	32,726	3.38	2,957	7.17	1,395	3.35	2,987
		2.06	4,843	0.43	23,477	0.41	24,498	2.57	3,895	5.26	1,901	6.38	1,568
(1) PHILIPPINES	1990	12.0	833	4.66	2,145	4.90	2,043	..	..	28.8	347	40.5	247
SINGAPORE	1990	11.8	844	2.6	3,887	1.9	5,139	..	..	32.1	311	33.9	295
THAILAND	1990	2.22	4,500	0.31	24,656	0.74	13,617	0.04	258,440	10.76	929	..	..

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

Note : a) For 1989

18-4 Number of Physicians

	1970	1975	1980	1984	1985	1986	1987	1988	1989	1990
BRUNEI							171			
INDONESIA	3,578	8,279	(1) 12,931	(2) 17,760	(3) 19,875	(3) 20,176	(3) 22,053	(4) 23,367	24,823	25,752
JAPAN	118,990	132,479	156,235	181,101	NA	191,346	NA	201,658	NA	211,797
(5) MALAYSIA										
Peninsular Malaysia	2,370	2,757 2,511	3,858 3,518	4,505 4,111	4,939 4,541	5,394 4,938	5,794 5,300	6,274 5,737	6,577 5,981	7,012 6,327
Sabah		104	141	174	174	216	225	252	277	291
Sarawak	80	142	199	220	224	240	269	285	319	349
PHILIPPINES	31,515	37,276	(6) 50,848	(6) 56,613	(6) 58,015	(6) 61,620	(6) 63,340	(6) 65,893	(6) 68,682	(6) 72,593
(7) SINGAPORE	1,363	1,622	1,976	2,504	2,631	2,781	2,939	3,162	3,397	3,573
(8) THAILAND	5,407	5,005	6,867	8,058	8,650	9,464	11,260			12,520

Source: Ministry of Health in each country

- (1) *The Health Situation of Indonesia*, Department of Health 1984
- (2) Consortium Health Science, Ministry of Education and Culture Medical Science, Jakarta, November 1984
- (3) Personnel Bureau 1987
- (4) Personnel Bureau 1989
- (5) Medical Council, Ministry of Health

(6) Professional Regulation Commissioner (PRC), Registered

- (7) *Yearbook of Statistics*, Singapore 1991 (cumulative)
- (8) Health Statistics Division, Ministry of Health

18-5 Number of Dentists

	1970	1975	1980	1984	1985	1986	1987	1988	1989	1990
BRUNEI							31			
(1) INDONESIA	452		1,681	2,664	a) 4,237	a) 4,237	a) 4,583	4,907	5,290	5,545
JAPAN	37,859	43,586	53,602	63,145	NA	66,797	NA	70,572	NA	74,028
(2) b) MALAYSIA		433	691	957	1,041	1,130	1,220	1,288	1,401	1,471
Peninsular Malaysia	15	9	630	867	949	1,030	1,106	1,183	1,289	1,343
Sabah			25	40	36	46	51	47	49	56
Sarawak			36	50	56	60	63	58	83	72
PHILIPPINES	12,174	13,096	(3) 15,158	(3) 19,652	(3) 21,148	(3) 22,479	(3) 23,724	(3) 24,814	(3) 26,937	(3) 28,204
(4) SINGAPORE	398	419	485	588	604	632	654	688	740	776
THAILAND	683	652	1,169	1,326	1,451	1,395	1,468	1,670		2,285

Source: Ministry of Health in each country

(1) *The Health Situation of Indonesia*, Department of Health

(2) Dental Council

(3) Professional Regulation Commissioner (PRC), Registered (cumulative)

(4) Ministry of Health

Note: a) Personnel Bureau, June, 1987

b) As of December 31

18-6 Number of Pharmacists

	1970	1975	1980	1984	1985	1986	1987	1988	1989	1990
BRUNEI							9			
(1) INDONESIA	1,486	1,847	3,013	(2) 3,926	(2) 4,268	4,513	(2) 4,814	(2) 5,085	5,207	5,399
JAPAN	79,393	94,362	116,056	129,700	NA	135,990	NA	143,429	NA	150,627
MALAYSIA		258	488	(3) 734	(3) 843	963	(3) 1,050	1,084	1,170	1,239
Peninsular Malaysia				(3) 676	732	828	929	956	1,018	1,125
Sabah			(4) 17	(3) 29	64	84	64	70	80	45
Sarawak				(3) 29	47	51	57	58	72	69
PHILIPPINES	19,076	20,838	(5) 23,225	(5) 25,705	(5) 26,440	(5) 25,088	(5) 27,493	(5) 27,732	(5) 28,764	(5) 29,612
(6) SINGAPORE	245	288	368	409	436	387	487	526	557	587
(7) THAILAND	1,407	1,913	2,650	3,312	3,376	2,990	3,622	3,681		4,163

Source: Ministry of Health in each country

- (1) *The Health Situation of Indonesia*, Department of Health 1984
- (2) Directorate General, Food & Drugs Control, Ministry of Health Indonesia,
- (3) Pharmacy Board, Ministry of Health
- (4) *Annual Report*, Medical Department, Sabah, 1982

(5) Professional Regulation Commissioner (PRC), Registered (cumulative)

(6) *Yearbook of Statistics*, Singapore 1991

(7) Health Statistics Division, Ministry of Public Health

18-7 Number of Midwives

	1970	1975	1980	1984	1985	1986	1987	1988	1989	1990
BRUNEI							185			
(1) INDONESIA	3,752	10,720	16,472	17,685		22,500		(2) 15,393	(3) 18,439	22,405
JAPAN	28,087	26,742	25,867	24,649	NA	24,056	NA	23,320	NA	22,918
(4) MALAYSIA							(5) a) 5,256	5,389	5,509	5,492
Peninsular Malaysia		3,767	(4) 5,002	(4) 5,468	5,673	(5) 3,795	3,819	3,883	3,913	3,921
Sabah				400	—		444	472	499	493
Sarawak					970		993	1,034	1,089	1,078
(6) PHILIPPINES	16,082	26,680	42,114	53,717	55,841	57,863	60,169	63,094	66,621	71,092
(7) SINGAPORE	1,058	930	779	652	623	603	588	569	550	543
(8) THAILAND	4,203	6,335	8,669	8,573	7,716	6,279	8,934	11,122		10,796

Source: Ministry of Health in each country

- (1) *The Health Situation of Indonesia*, Department of Health, 1984
 (2) Centre for Health Manpower Education, Ministry of Health 1988
 (3) Biro Kepegawaian, Data Jumlah yang bekerja di Depkes
 (4) Nursing Board, Ministry of Health
 (5) Division II, Midwives & Jururawat Desa

(6) Professional Regulation Commissioner (PRC),
 Registered (cumulative)

(7) *Yearbook of Statistics*, Singapore 1989

(8) Health Statistics Division, Ministry of Public Health

Note: a) Government only

18-8 Number of Nurses

	1970	1975	1980	1984	1985	1986	1987	1988	1989	1990
BRUNEI							779			
(1) INDONESIA		9,856	20,201					(2) 23,084	(3) 27,921	
JAPAN	273,572	361,604	487,169	590,177	NA	639,936	NA	694,999	NA	745,301
(4) MALAYSIA Peninsular Malaysia Sabah Sarawak			15,392	18,653 695 623	19,479 779 778	20,170 — —	21,340 — —	22,020 — —	22,752	23,308
(5) PHILIPPINES	38,918	64,155	114,657	145,235	148,514	151,870	155,747	160,657	165,012	174,112
(6) SINGAPORE	4,304	5,767	7,545	7,830	8,393	8,570	8,723	8,954	9,237	9,695
(7) THAILAND	15,387	18,993	18,483	31,827	38,683	40,952	45,038	51,091		60,672

Source: Ministry of Health in each country

(1) *The Health Situation of Indonesia, 1984*

(2) Centre for Health Manpower Education, Ministry of Health 1988

(3) Biro Kepegawaian, Data Jumlah yang bekerja di Depkes

(4) Nursing Board, Ministry of Health

(5) Professional Regulation Commissioner (PRC), Registered (cumulative)

(6) *Yearbook of Statistics, Singapore 1991*

(7) Health Statistics Division

19 Situation of Medical Schools

	Academic Year	Number of Medical Schools	Duration of Studies	Total Enrolment	Admissions	Graduates
BRUNEI		—				
(1) INDONESIA	1990	24	6 Years			a) 1,599
(2) JAPAN	1990/91	80	6 Years		7,740	b) 8,256
(3) MALAYSIA	1990	3	6 Years	2,088	—	—
(4) PHILIPPINES	1989/1990	26	Pre - Med - 4 Years Proper - 4 Years Intern - 1 Year	—	2,828	2,520
(5) SINGAPORE	1990/91	1	5 Years	c) 778 d) 60	c) 141 d) 9	c) 143 d) 24
(6) THAILAND	1990	9	6 Years			770

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

Note: a) Data up to July 1986
 b) Those who succeeded in national examination
 c) Singaporeans
 d) Non-Singaporeans