

# **SEAMIC HEALTH STATISTICS**

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**by**

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## Preface

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

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

In the present edition, health statistical data and their background information provided by our partners in Negara Brunei Darussalam are included for the first time in this serial publication. We are privileged that thus all the ASEAN countries and Japan have come up with their most updated figures for comparison.

March, 1989

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Coordinator  
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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  |             |            |            |              |                          | Mid-year<br>Estimates<br>1987<br>(in thousands) | Annual<br>Rate of<br>Increase<br>1978-87<br>(%) | Surface<br>Area<br>1987<br>(km <sup>2</sup> ) | Density<br>1987<br>(Person/km <sup>2</sup> ) |
|--------------------|----------------|-------------|------------|------------|--------------|--------------------------|-------------------------------------------------|-------------------------------------------------|-----------------------------------------------|----------------------------------------------|
|                    | Date           | Total       | Male       | Female     | Sex<br>Ratio | Persons per<br>Household |                                                 |                                                 |                                               |                                              |
| (1)<br>BRUNEI      | 26 August 1981 | 192,832     | 102,942    | 89,890     | 114.5        | 5.8                      | 234                                             | b)<br>3.2                                       | 5,765                                         | 41                                           |
| (2)<br>INDONESIA   | Oct.-Nov. 1985 | 164,629,618 | 81,934,415 | 82,695,203 | 99.1         | 4.9                      | 172,009                                         | 2.2                                             | 1,919,443                                     | 85                                           |
| (3)<br>JAPAN       | 1 October 1985 | 121,047,196 | 59,495,663 | 61,551,533 | 96.7         | 3.2                      | 122,264                                         | 0.6                                             | 372,313                                       | 328                                          |
| (4)<br>MALAYSIA    | 10 June 1980   | (5)         |            |            |              |                          |                                                 |                                                 |                                               |                                              |
| Peninsular         |                | 13,745,241  | 6,918,370  | 6,826,871  | 101.3        | 5.4                      | 16,528                                          | 2.3                                             | 329,758                                       | 50                                           |
| Malaysia           |                | 11,426,613  | 5,731,116  | 5,695,497  | 100.6        | 5.3                      | 13,655                                          | 2.2                                             | 131,598                                       | 104                                          |
| Sabah              |                | 1,011,046   | 528,255    | 482,791    | 109.4        | 5.5                      | 1,323                                           | 3.8                                             | 73,711                                        | 18                                           |
| Sarawak            |                | 1,307,582   | 658,999    | 648,583    | 101.6        | 5.7                      | 1,550                                           | 2.4                                             | 124,449                                       | 12                                           |
| (6)<br>PHILIPPINES | 1 May 1980     | 48,098,460  | 24,128,755 | 23,969,705 | 100.7        | 5.6                      | 56,004                                          | 2.5                                             | 300,000                                       | 187                                          |
| (7)<br>SINGAPORE   | 24 June 1980   | 2,413,945   | 1,231,760  | 1,182,185  | 104.2        | 4.7                      | 2,612.8                                         | 1.2                                             | 623                                           | 4,197                                        |
| (8)<br>THAILAND    | 1 April 1980   | 44,824,540  | 22,328,607 | 22,495,933 | 99.2         | 5.2                      | a)<br>50,396                                    | 2.1                                             | 513,000                                       | 98                                           |

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

(2) *Proyeeksi-Penduduk Indonesia Per Provinsi*, Central Bureau of Statistics 1985-1995(3) *Japan Statistical Yearbook 1988*, Statistics Bureau  
Management and Coordination Agency, 1988(4) *General Report of the Population Census 1980*, Vol.1,  
Department of Statistics, Ministry of Health(5) *Current Population Estimates 1987*, Department of Statistics

(6) National Statistics Office

(7) *Census of Population 1980 Singapore*, Yearbook of Statistics,  
Singapore 1987, Department of Statistics(8) *1980 Population and Housing Census*, National Statistics Office,  
Office of the Prime Minister

Note: a) For 1985

b) Annual Rate of Increase 1981-1987

c) As of October 1

## 1-2 Estimates of Mid-year Population

(in millions)

|                            | 1970       | 1975   | 1980   | 1982   | 1983          | 1984          | 1985          | 1986          | 1987   |
|----------------------------|------------|--------|--------|--------|---------------|---------------|---------------|---------------|--------|
| BRUNEI <sup>(1)</sup>      | a)<br>0.14 | 0.16   | 0.19   | 0.20   | 0.21          | 0.22          | 0.22          | b)<br>0.23    | 0.23   |
| INDONESIA <sup>(2)</sup>   | 119.47     | 130.50 | 146.36 | 152.99 | 156.37        | 159.83        | 163.37        | 168.35        | 172.01 |
| JAPAN <sup>(3)</sup>       | 103.72     | 111.94 | 117.06 | 118.73 | 119.54        | 120.31        | 121.05        | 121.67        | 122.26 |
| MALAYSIA <sup>(4)</sup>    | 10.39      | 11.90  | 13.76  | 14.51  | 14.89         | 15.27         | 15.68         | 16.12         | 16.53  |
| PHILIPPINES <sup>(5)</sup> | 36.68      | 42.07  | 48.32  | 50.78  | 52.06         | 53.35         | 54.67         | 56.00         | 57.06  |
| SINGAPORE <sup>(6)</sup>   | 2.07       | 2.26   | 2.41   | 2.47   | 2.50          | 2.53          | 2.56          | 2.59          | 2.61   |
| THAILAND                   | 36.37      | 41.39  | 46.52  | 48.54  | (7)c<br>49.46 | (7)c<br>50.40 | (7)c<br>51.68 | (7)c<br>52.65 | 53.15  |

Source: (1) Statistics Section, Economic Planning Unit, Ministry of Finance  
 (2) *Indonesian Population Projection 1980-2000*, Central Bureau of Statistics  
*Indonesian Population Projection 1985-2000*, Central Bureau of Statistics  
 (3) *Japan Statistical Yearbook 1988*, Statistics Bureau Management  
 and Coordination Agency  
 (4) *Current Population Estimates, Peninsular Malaysia,  
 Sabah and Sarawak-1987*, Department of Statistics  
 (5) National Statistics Office

(6) *Yearbook of Statistics Singapore 1987*, Department of Statistics  
 (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) Estimates based on total population figures, *1980 Population &  
 Housing Census*, National Statistical Office

### 1-3 Population Projection

(in thousands)

|                               | 1990    | 1995    | 2000    | 2005    | 2010    | 2015    | 2020    | 2025    | 2030    |
|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| <sup>(1)</sup><br>BRUNEI      | 254     | 295     | 337     | NA      | NA      | NA      | NA      | NA      | NA      |
| <sup>(2)</sup><br>INDONESIA   | 183,457 | 202,746 | 222,753 | 248,897 | 276,153 | 306,394 | 339,946 | 384,273 | NA      |
| <sup>(3)a</sup><br>JAPAN      | 124,225 | 127,565 | 131,192 | 131,247 | 135,823 | 135,938 | 135,304 | 134,642 | 134,067 |
| <sup>(4)</sup><br>MALAYSIA    | 17,444  | 19,748  | 22,454  | NA      | NA      | NA      | NA      | NA      | NA      |
| <sup>(5)</sup><br>PHILIPPINES | 61,480  | 68,424  | 75,224  | 81,591  | 87,206  | 92,430  | 97,682  | 102,686 | 107,123 |
| <sup>(6)</sup><br>SINGAPORE   | 2,717   | NA      | 2,995   | NA      | 3,151   | 3,232   |         | 3,214   |         |
| <sup>(7)</sup><br>THAILAND    | 56,340  | 60,506  | 64,389  | 67,910  | 70,865  | 73,208  |         |         |         |

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

(2) Based on Population Projection, Central Bureau of Statistics  
Indonesia, Calculated by Centre for Health Data

(3) *Future Population for Japan*, Provisionally Prepared in December  
1986, 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) Population as of October 1 of the year started

# 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)<br>BRUNEI      | 1987 | T   | 233.8     | 31.4     |         | 28.7     | 25.3     | 25.4     | 26.1     | 24.6     | 20.4     |
|                    |      | M   | 120.6     | 15.9     |         | 14.7     | 12.6     | 12.6     | 13.7     | 12.9     | 10.6     |
|                    |      | F   | 113.2     | 15.5     |         | 14.0     | 12.7     | 12.8     | 12.4     | 11.7     | 9.8      |
| (2)<br>INDONESIA   | 1987 | T   | 172,009.5 | 22,833.8 |         | 21,279.8 | 21,309.6 | 18,327.0 | 15,548.0 | 13,919.9 | 12,022.5 |
|                    |      | M   | 85,625.5  | 11,464.0 |         | 10,920.8 | 10,911.6 | 9,174.4  | 7,466.1  | 6,609.6  | 5,873.8  |
|                    |      | F   | 86,384.0  | 11,187.8 |         | 10,359.0 | 10,398.0 | 9,152.6  | 8,081.9  | 7,310.3  | 6,148.7  |
| (3)a<br>JAPAN      | 1987 | T   | 121,534   | 7,119    |         | 7,917    | 9,565    | 9,616    | 8,308    | 7,738    | 8,167    |
|                    |      | M   | 59,723    | 3,649    |         | 4,057    | 4,902    | 4,933    | 4,234    | 3,912    | 4,119    |
|                    |      | F   | 61,811    | 3,470    |         | 3,860    | 4,663    | 4,683    | 4,074    | 3,826    | 4,048    |
| (4)b<br>MALAYSIA   | 1987 | T   | 16,527.8  | 2,372.0  |         | 1,970.3  | 1,865.0  | 1,753.9  | 1,634.8  | 1,430.1  | 1,201.3  |
|                    |      | M   | 8,328.6   | 1,221.7  |         | 1,012.4  | 952.9    | 896.0    | 821.8    | 695.8    | 588.6    |
|                    |      | F   | 8,199.2   | 1,150.2  |         | 957.9    | 912.1    | 857.9    | 813.0    | 734.3    | 612.7    |
| (5)<br>PHILIPPINES | 1986 | T   | 56,004.1  | 1,690.2  | 6,371.1 | 7,608.0  | 6,742.6  | 6,046.7  | 5,346.0  | 4,666.5  | 3,956.3  |
|                    |      | M   | 28,112.4  | 866.0    | 3,256.8 | 3,888.9  | 3,467.3  | 3,095.4  | 2,629.0  | 2,240.9  | 1,952.3  |
|                    |      | F   | 27,891.7  | 824.2    | 3,114.3 | 3,719.1  | 3,275.3  | 2,951.3  | 2,717.0  | 2,425.6  | 2,004.0  |
| (6)<br>SINGAPORE   | 1987 | T   | 2,612.8   | 39.4     | 165.6   | 194.6    | 212.3    | 224.5    | 269.2    | 298.4    | 272.5    |
|                    |      | M   | 1,330.2   | 20.5     | 86.0    | 101.4    | 109.9    | 115.7    | 137.9    | 154.1    | 139.4    |
|                    |      | F   | 1,282.6   | 18.9     | 79.6    | 93.2     | 102.4    | 108.8    | 131.3    | 144.3    | 133.1    |
| (7)<br>THAILAND    | 1986 | T   | 52,654    | 6,417    |         | 6,289    | 6,190    | 6,090    | 5,441    | 4,635    | 3,853    |
|                    |      | M   | 26,369    | 3,253    |         | 3,187    | 3,152    | 3,105    | 2,762    | 2,327    | 1,922    |
|                    |      | F   | 26,285    | 3,164    |         | 3,102    | 3,038    | 2,985    | 2,679    | 2,308    | 1,931    |

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

(2) *Proyeksi Penduduk Indonesia Per Provinsi 1985-1995*

Central Bureau of Statistics

(3) *Vital Statistics 1987*, Ministry of Health and Welfare

(4) *Current Population Estimates 1987*, Department of Statistics

(5) National Statistics Office

(6) *Demographic Trends in Singapore*

(Census Monograph No. 1), Department of Statistics

(7) *Report of Working Group on Population Projection*

Office of the National Economics and Social Development

Board, 1985

Note: a) Japanese Population Estimates as of 1st October 1987

b) Figures in thousands

(in thousands)

| Age     |         |         |         |         |         |         |         |         |       |      |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|-------|------|
| 35-39   | 40-44   | 45-49   | 50-54   | 55-59   | 60-64   | 65-69   | 70-74   | 75-79   | 80-84 | 85+  |
| 14.9    | 9.7     | 7.3     | 5.9     | 4.5     | 3.4     | 2.3     | 3.9     |         |       |      |
| 7.9     | 5.2     | 4.0     | 3.0     | 2.4     | 1.9     | 1.3     | 1.9     |         |       |      |
| 7.0     | 4.5     | 3.3     | 2.9     | 2.1     | 1.5     | 1.0     | 2.0     |         |       |      |
| 9,688.9 | 8,209.5 | 7,275.0 | 6,235.6 | 5,109.5 | 4,005.5 | 2,937.4 | 1,993.9 | 1,312.3 |       |      |
| 4,880.6 | 4,145.0 | 3,617.6 | 3,052.3 | 2,472.0 | 1,925.2 | 1,407.8 | 932.8   | 589.1   |       |      |
| 4,808.3 | 4,064.5 | 3,657.4 | 3,183.3 | 2,637.5 | 2,080.3 | 1,529.6 | 1,061.1 | 723.2   |       |      |
| 10,834  | 8,997   | 8,577   | 8,111   | 7,307   | 6,010   | 4,403   | 3,654   | 2,741   | 1,541 | 931  |
| 5,444   | 4,498   | 4,263   | 4,013   | 3,580   | 2,778   | 1,830   | 1,530   | 1,100   | 581   | 301  |
| 5,390   | 4,499   | 4,314   | 4,098   | 3,727   | 3,232   | 2,573   | 2,124   | 1,641   | 960   | 630  |
| 993.3   | 734.9   | 666.3   | 525.1   | 438.1   | 324.6   | 263.7   | 156.4   | 116.9   | 81.6  |      |
| 498.8   | 375.5   | 341.0   | 261.0   | 212.8   | 158.6   | 124.9   | 75.4    | 54.9    | 36.7  |      |
| 494.5   | 359.4   | 325.3   | 264.1   | 225.3   | 166.0   | 138.8   | 81.0    | 62.0    | 44.8  |      |
| 3,100.4 | 2,451.9 | 2,078.0 | 1,655.6 | 1,341.0 | 1,029.3 | 794.1   | 586.6   | 323.8   | 147.7 | 68.1 |
| 1,566.8 | 1,242.6 | 1,043.7 | 818.2   | 653.5   | 488.7   | 375.6   | 275.7   | 151.8   | 69.8  | 29.4 |
| 1,533.6 | 1,209.3 | 1,034.3 | 837.4   | 687.5   | 540.6   | 418.5   | 310.9   | 172.0   | 77.9  | 38.7 |
| 229.5   | 151.1   | 139.4   | 109.1   | 94.3    | 70.5    | 55.3    | 41.1    | 28.0    | 12.6  | 5.4  |
| 116.4   | 76.8    | 69.8    | 55.1    | 47.7    | 35.7    | 26.9    | 18.6    | 12.2    | 4.7   | 1.4  |
| 113.1   | 74.3    | 69.6    | 54.0    | 46.6    | 34.8    | 28.4    | 22.5    | 15.8    | 7.9   | 4.0  |
| 2,997   | 2,377   | 2,114   | 1,815   | 1,453   | 1,083   | 777     | 551     | 572     |       |      |
| 1,503   | 1,190   | 1,035   | 875     | 699     | 519     | 362     | 250     | 228     |       |      |
| 1,494   | 1,187   | 1,079   | 940     | 754     | 564     | 415     | 301     | 344     |       |      |

# 1-5 Urban and Total Population

(in thousands)

|                  | 1960   |        |      | 1970  |         |        | 1980  |       |         | 1985 <sup>g)</sup> |       |     |
|------------------|--------|--------|------|-------|---------|--------|-------|-------|---------|--------------------|-------|-----|
|                  | 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  | (3) |
|                  |        |        |      |       |         |        |       |       |         |                    |       |     |
| JAPAN (4)        | 94,300 | 59,698 | 63.3 |       | 104,666 | 75,429 | 72.1  |       | 117,600 | 89,187             | 76.2  |     |
|                  |        |        |      |       |         |        |       |       |         |                    |       |     |
| MALAYSIA (5)     | 8,170  | 2,060  | 25.2 |       | 10,439  | 2,787  | 26.7  |       | 13,745  | 4,687              | 34.1  |     |
|                  |        |        |      |       | 8,810   | 2,530  | 28.7  |       | 11,426  | 4,250              | 37.2  |     |
|                  |        |        |      |       | 653     | 107    | 16.7  |       | 1,011   | 208                | 20.6  |     |
|                  |        |        |      |       | 975     | 149    | 15.4  |       | 1,307   | 230                | 17.6  |     |
| PHILIPPINES (6)  | 28,098 | 8,513  | 30.3 |       | 37,540  | 12,366 | 32.9  |       | 48,098  | 17,944             | 37.3  |     |
|                  |        |        |      |       |         |        |       |       |         |                    |       |     |
| SINGAPORE (7) c) | 1,446  | 1,132  | 78.0 |       | 2,075   | 1,562  | 75.0  |       | 2,414   | 2,414              | 100.0 |     |
|                  |        |        |      |       |         |        |       |       |         |                    |       |     |
| THAILAND         | (8)    |        |      | (9)   |         |        |       | (10)  |         |                    |       |     |
|                  | 26,258 | 3,274  | 12.5 |       | 34,397  | 4,553  | 13.2  |       | 44,824  | 7,633              | 17.0  |     |

Source: (1) Statistics Section, Economic Planning Unit, Ministry of Finance  
 (2) *Population of Indonesia*, Central Bureau of Statistics  
 (3) *Statistical Yearbook of Indonesia 1986*, Central Bureau of Statistics  
 (4) *Japan Statistical Yearbook 1988*, Management and Coordination Agency  
 (5) *General Report of the Population Census 1980, Vol. 1*, Department of Statistics  
 (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

Fig.1 Annual Change of Death Rates (Per 1,000)

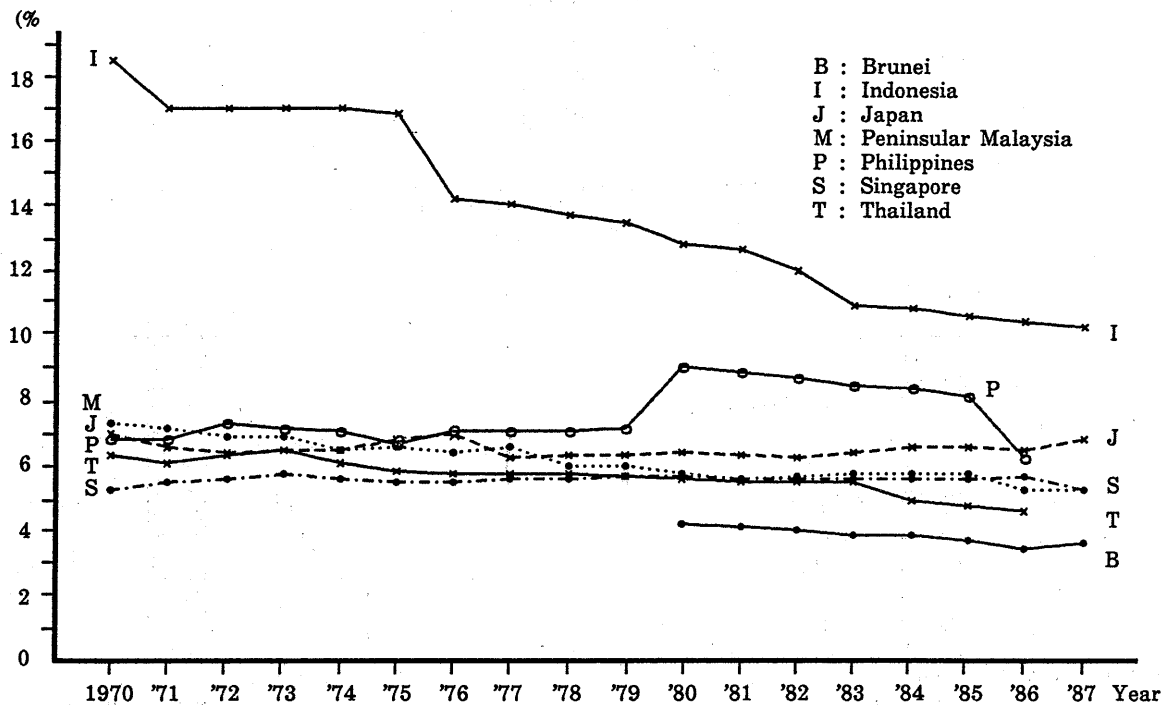


Fig.2 Population Pyramid

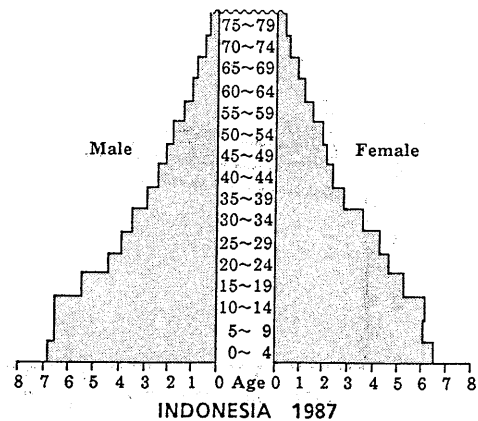
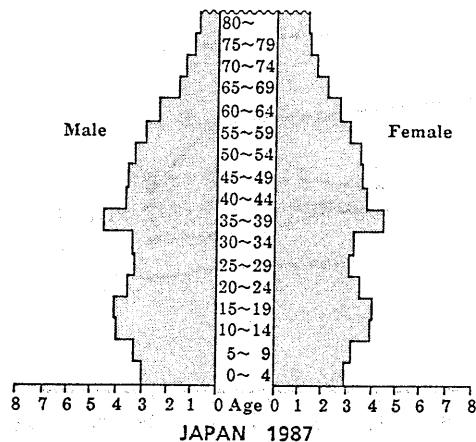
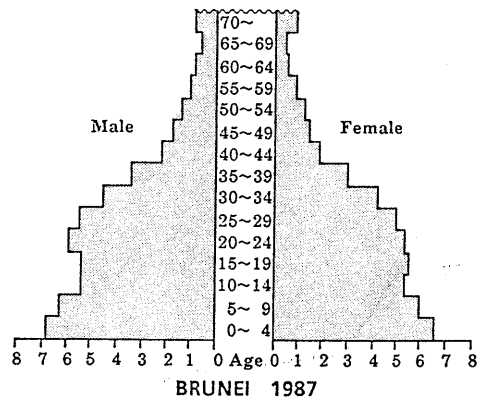
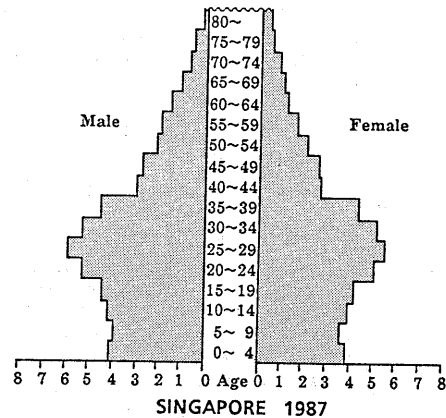
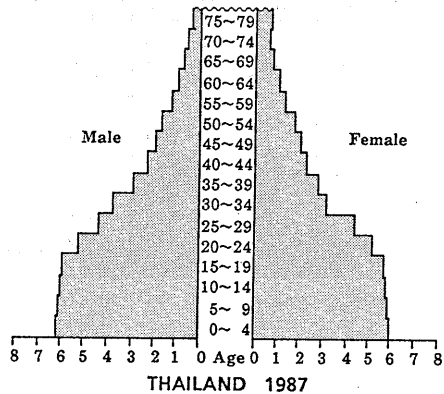
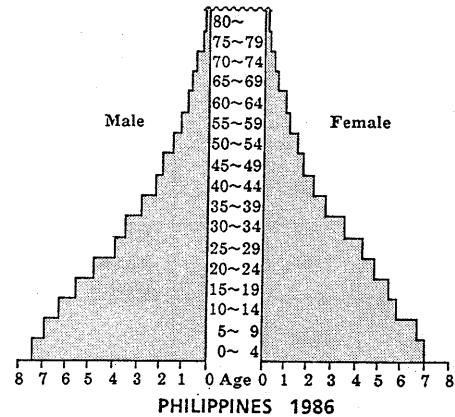
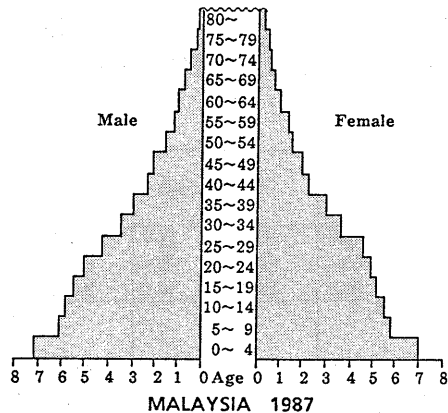


Fig.2 Population Pyramid



2-1 Number of 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)a)<br>INDONESIA                                            | 1986 | T   | 2,055    | 703.0 | 571    | 7180.0  | 324    | 1060.0 | 124    | 160.0  | 97     | 180.0 |
| (2)<br>JAPAN                                                  | 1987 | T   | 751,172  | 618.1 | 6,711  | 494.5   | 2,666  | 46.3   | 2,978  | 17.0   | 8,699  | 48.5  |
|                                                               |      | M   | 408,094  | 683.3 | 3,734  | 535.7   | 1,576  | 53.4   | 1,855  | 20.7   | 6,336  | 69.1  |
|                                                               |      | F   | 343,078  | 555.0 | 2,977  | 451.7   | 1,090  | 38.8   | 1,123  | 13.2   | 2,363  | 26.9  |
| (3)<br>MALAYSIA<br>Peninsular<br>Malaysia<br>Sabah<br>Sarawak | 1986 | T   | 66,475   | 498.9 | 7,952  | ↔ 422.6 |        |        | 1,737  | 56.5   | 2,969  | 107.4 |
|                                                               |      | T   | 5,114    | 402.4 | 1,487  | ↔ 618.0 |        |        | 200    | 62.2   | 292    | 123.2 |
|                                                               |      | T   | 5,184    | 342.4 | 564    | ↔ 287.0 |        |        | 117    | 31.3   | 199    | 60.2  |
| (4)<br>PHILIPPINES                                            | 1986 | T   | 326,749  | 583.4 | 52,063 | 3,091.8 | 36,532 | 567.1  | 15,793 | 110.28 | 18,473 | 162.1 |
|                                                               |      | M   | 193,118  | 686.9 | 30,633 | 3,936.9 | 19,635 | 602.88 | 8,832  | 120.0  | 12,486 | 218.1 |
|                                                               |      | F   | 133,631  | 479.1 | 21,430 | 2,624.1 | 16,897 | 530.6  | 6,961  | 99.95  | 5,987  | 105.6 |
| (5)<br>SINGAPORE                                              | 1986 | T   | 13,170   | 504.2 | 321    | 822.3   | 68     | 41.1   | 118    | 29.0   | 294    | 59.6  |
|                                                               |      | M   | 7,410    | 557.1 | 191    | 931.7   | 40     | 46.5   | 71     | 33.6   | 200    | 78.9  |
|                                                               |      | F   | 5,760    | 449.1 | 130    | 687.8   | 28     | 35.2   | 47     | 24.0   | 94     | 39.2  |
| (6)<br>THAILAND                                               | 1983 | T   | 218,025  | 414.1 | 9,350  |         | 6,880  |        | 7,666  | 61.4   | 13,112 | 113.7 |
|                                                               |      | M   | 125,086  | 474.4 | 5,516  |         | 3,787  |        | 4,351  | 68.6   | 8,746  | 149.1 |
|                                                               |      | F   | 92,939   | 353.6 | 3,834  |         | 3,093  |        | 3,315  | 54.0   | 4,366  | 7.1   |

Source: (1) Household Health Survey in Indonesia 1986

Note: a) Calculated by sampling survey

(2) Vital Statistics, Japan, Ministry of Health and Welfare 1987

(3) Vital Statistics 1986, Department of Statistics

(4) Philippine Health Statistics, Department of Health

1986, Health Intelligence Service

(5) Department of Statistics, Singapore

(6) Health Statistics Division, Ministry of Public Health, 1983

| (per 100,000 population) |       |        |       |        |         |         |         |         |         |           |          |         |      |
|--------------------------|-------|--------|-------|--------|---------|---------|---------|---------|---------|-----------|----------|---------|------|
| 25-34                    |       | 35-44  |       | 45-54  |         | 55-64   |         | 65-74   |         | 75 & over |          | Unknwon |      |
| Number                   | Rate  | Number | Rate  | Number | Rate    | Number  | Rate    | Number  | Rate    | Number    | Rate     | Total   | Rate |
|                          |       |        |       |        |         |         |         |         |         |           |          |         |      |
| 98                       | 225.4 | 109    | 371.5 | 181    | 810.2   | 186     | 1,248.2 | 149     | 2,048.1 | 216       | 6,844.1  |         |      |
| 10,246                   | 64.4  | 25,160 | 126.8 | 55,263 | 330.9   | 101,440 | 761.7   | 152,000 | 1,886.6 | 385,502   | 7,395.0  | 557     |      |
| 6,804                    | 84.7  | 16,133 | 162.3 | 36,883 | 445.1   | 67,283  | 1,058.2 | 88,627  | 2,637.7 | 178,438   | 9,002.9  | 475     |      |
| 3,442                    | 43.7  | 9,027  | 91.3  | 18,380 | 218.5   | 34,157  | 490.8   | 63,373  | 1,349.2 | 207,064   | 6,408.7  | 82      |      |
|                          |       |        |       |        |         |         |         |         |         |           |          |         |      |
| 3,169                    | 149.9 | 3,437  | 248.0 | 5,929  | 6,139.3 | 10,165  | 1,639.3 | 14,202  | 4,088.1 | 16,657    | 9,781.0  | 258     |      |
| 362                      | 175.6 | 369    | 328.6 | 516    | 649.9   | 660     | 1,506.8 | 643     | 2,783.5 | 533       | 7,402.8  | 52      |      |
| 246                      | 108.6 | 305    | 202.9 | 475    | 466.1   | 852     | 1,189.9 | 1,169   | 2,687.4 | 1,158     | 5969.1   | 99      |      |
| 23,022                   | 266.9 | 22,245 | 400.6 | 27,292 | 757.1   | 32,428  | 1,406.7 | 98,678  | ←————→  | 4,991.8   |          | 23      |      |
| 15,936                   | 380.0 | 15,037 | 535.2 | 17,943 | 981.7   | 20,718  | 1,857.3 | 51,883  | ←————→  | 5,387.3   |          | 15      |      |
| 7,086                    | 159.9 | 7,208  | 262.7 | 9,349  | 498.7   | 11,710  | 984.2   | 46,795  | ←————→  | 4,616.0   |          | 8       |      |
|                          |       |        |       |        |         |         |         |         |         |           |          |         |      |
| 505                      | 88.5  | 648    | 170.3 | 1,233  | 496.2   | 2,401   | 1,456.9 | 3,251   | 3,372.4 | 4,254     | 9,247.8  | 77      |      |
| 317                      | 108.0 | 401    | 207.6 | 760    | 608.5   | 1,549   | 1,857.3 | 1,873   | 4,116.5 | 1,944     | 10,623.0 | 64      |      |
| 188                      | 67.8  | 247    | 131.8 | 473    | 382.7   | 852     | 1,046.7 | 1,378   | 2,707.3 | 2,310     | 8,339.4  | 13      |      |
| 14,682                   | 173.0 | 16,194 | 301.3 | 25,297 | 643.8   | 31,371  | 1,237.0 | 37,425  | 2,818.1 | 50,812    | 8,883.2  | 5,596   |      |
| 10,180                   | 239.6 | 10,383 | 385.6 | 15,666 | 820.2   | 18,871  | 1,549.3 | 21,079  | 3,444.3 | 23,447    | 10,283.8 | 3,420   |      |
| 4,502                    | 106.2 | 5,811  | 216.7 | 9,631  | 477.0   | 12,500  | 948.4   | 16,346  | 2,283.0 | 27,365    | 7,954.9  | 2,176   |      |

### 3-1 Ten Leading Causes of Death

|                    | Year                         | 1                                 | 2                                                      | 3                                                      | 4                            |                          |
|--------------------|------------------------------|-----------------------------------|--------------------------------------------------------|--------------------------------------------------------|------------------------------|--------------------------|
| BRUNEI             |                              |                                   |                                                        |                                                        |                              |                          |
| (1)<br>INDONESIA   | 1986                         | Parasitic and Infectious Diseases | Diarrhoea                                              | Respiratory Diseases                                   | Cardiovascular Disorders     |                          |
| (2)<br>JAPAN       | 1987                         | Malignant Neoplasms               | Diseases of Heart                                      | Cerebrovascular Diseases                               | Pneumonia & Bronchitis       |                          |
| MALAYSIA           | (3)b)<br>Peninsular Malaysia | 1987                              | Heart Diseases and Diseases of Pulmonary Circulation   | Certain Conditions Originating in the Perinatal Period | Accidents                    | Malignant Neoplasms      |
|                    | (3)b)<br>Sabah               | 1987                              | Certain Conditions Originating in the Perinatal Period | Heart Diseases and Diseases of Pulmonary Circulation   | Pneumonia                    | Malignant Neoplasms      |
|                    | (3)b)<br>Sarawak             | 1987                              | Heart Diseases and Diseases of Pulmonary Circulation   | Certain Conditions Originating in the Perinatal Period | Malignant Neoplasms          | Cerebrovascular Diseases |
| (4)<br>PHILIPPINES | 1986                         | Pneumonia                         | Diseases of Heart                                      | Tuberculosis All Forms                                 | Diseses of Vascular System   |                          |
| (5)<br>SINGAPORE   | 1987                         | Cancer                            | Diseases of Heart                                      | Cerebrovascular Diseases                               | Penumonia                    |                          |
| (6)<br>THAILAND    | 1986                         | Diseases of Heart                 | Neoplasms                                              | Accidents, Poisonings and Violence                     | Diseases of Digestive System |                          |

Source: (1) Household Health Survey in Indonesia 1986

(2) *Vital Statistics, Japan*, Ministry of Health and Welfare 1986

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

(4) *Philippine Health Statistics*, Health Intelligence Service, Department of Health

(5) Department of Statistics, Singapore

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

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

| 5                                 | 6                                                      | 7                                           | 8                                         | 9                                             | 10                                        |
|-----------------------------------|--------------------------------------------------------|---------------------------------------------|-------------------------------------------|-----------------------------------------------|-------------------------------------------|
|                                   |                                                        |                                             |                                           |                                               |                                           |
| 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                         |
| Cerebrovascular Diseases          | Septicaemia                                            | Congenital Anomalies                        | Nephritis, Nephrotic Syndrome & Nephrosis | Symptoms, Signs & Ill defined Conditions      | Pneumonia                                 |
| Septicaemia                       | Accidents                                              | Cerebrovascular Diseases                    | Intestinal Infections                     | Tuberculosis                                  | Nephritis, Nephrotic Syndrome & Nephrosis |
| Accidents                         | Symptoms, Signs & Ill defined Conditions               | Septicaemia                                 | Pneumonia                                 | Tuberculosis                                  | Congenital Anomalies                      |
| Malignant Neoplasms               | Diarrhoea                                              | Accidents                                   | Measles                                   | Avitaminosis and Other Nutritional Deficiency | Nephritis, Nephrotic Syndrome & Nephrosis |
| Accidents                         | Diabetes Mellitus                                      | Hypertensive Diseases                       | Nephritis and Nephrosis                   | Tuberculosis                                  | Bronchitis, Emphysema and Asthma          |
| Diseases of Respiratory System    | Tuberculosis                                           | Cerebrovascular Diseases                    | Diseases of Nervous System                | Diseases of Genito-urinary System             | Certain Causes of Perinatal Mortality     |

# 4-1 Changes in the Order of Cause of Death (1)

| [Brunei] |                                   | Year |      |      |  |  |  |  |  |  |  |
|----------|-----------------------------------|------|------|------|--|--|--|--|--|--|--|
| Order    |                                   | 1972 | 1980 | 1985 |  |  |  |  |  |  |  |
| No.1     | Causes of Death                   |      |      |      |  |  |  |  |  |  |  |
|          | Death Rate per 100,000 Population |      |      |      |  |  |  |  |  |  |  |
| No.2     | Causes of Death                   |      |      |      |  |  |  |  |  |  |  |
|          | Death Rate per 100,000 Population |      |      |      |  |  |  |  |  |  |  |
| No.3     | Causes of Death                   |      |      |      |  |  |  |  |  |  |  |
|          | Death Rate per 100,000 Population |      |      |      |  |  |  |  |  |  |  |
| No.4     | Causes of Death                   |      |      |      |  |  |  |  |  |  |  |
|          | Death Rate per 100,000 Population |      |      |      |  |  |  |  |  |  |  |
| No.5     | Causes of Death                   |      |      |      |  |  |  |  |  |  |  |
|          | Death Rate per 100,000 Population |      |      |      |  |  |  |  |  |  |  |

# 4-1 Changes in the Order of Cause of Death (2)

[Indonesia]

| Year  |                                  | 1972                                     | 1980                              | 1985                         |  |  |  |  |  |  |  |  |
|-------|----------------------------------|------------------------------------------|-----------------------------------|------------------------------|--|--|--|--|--|--|--|--|
| Order |                                  |                                          |                                   |                              |  |  |  |  |  |  |  |  |
| No.1  | Causes of Death                  | Diarrhoea                                | Lower Respiratory Tract Infection | Diarrhoea                    |  |  |  |  |  |  |  |  |
|       | Death Rate per 100,00 Population | 425.7                                    | 146                               | 84.5                         |  |  |  |  |  |  |  |  |
| No.2  | Causes of Death                  | Lower Respiratory Tract Infection        | Diarrhoea                         | Tuberculosis                 |  |  |  |  |  |  |  |  |
|       | Death Rate per 100,00 Population | 331.1                                    | 137.9                             | 60.2                         |  |  |  |  |  |  |  |  |
| No.3  | Causes of Death                  | Tuberculosis                             | Cardio-vascular Diseases          | Diphtheria, Measles, & Cough |  |  |  |  |  |  |  |  |
|       | Death Rate per 100,00 Population | 165.6                                    | 73                                | 53                           |  |  |  |  |  |  |  |  |
| No.4  | Causes of Death                  | Cardiovascular Disorder & Nervous System | Tuberculosis                      | Tetanus                      |  |  |  |  |  |  |  |  |
|       | Death Rate per 100,00 Population | 141.9                                    | 61.7                              | 42.1                         |  |  |  |  |  |  |  |  |
| No.5  | Causes of Death                  | Tetanus                                  | Tetanus                           | Malaria                      |  |  |  |  |  |  |  |  |
|       | Death Rate per 100,00 Population | 141.9                                    | 47.9                              | 23.9                         |  |  |  |  |  |  |  |  |

Source: Household Survey

# 4-1 Changes in the Order of Cause of Death (3)

[Japan]

| Year  |                                  | 1899                      | 1920                      | 1930                      | 1940                      | 1950                      | 1960                            | 1970                              | 1980                            | 1985                            | 1986                            | 1987                            |
|-------|----------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------------|-----------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Order |                                  |                           |                           |                           |                           |                           |                                 |                                   |                                 |                                 |                                 |                                 |
| No.1  | Causes of Death                  | Pneumonia and Bronchitis  | Pneumonia and Bronchitis  | Gastro-enteritis          | Tuberculosis              | Tuberculosis              | Cerebro-vascular Diseases       | Cerebro-vascular Diseases         | Cerebro-vascular Diseases       | Malignant Neoplasm              | Malignant Neoplasm              | Malignant Neoplasm              |
|       | Death Rate per 100,00 Population | 206.1                     | 408.6                     | 221.4                     | 212.9                     | 146.4                     | 160.7                           | 175.8                             | 139.5                           | 156.0                           | 158.5                           | 164.2                           |
| No.2  | Causes of Death                  | Cerebro-vascular Diseases | Gastro-enteritis          | Pneumonia and Bronchitis  | Pneumonia and Bronchitis  | Cerebro-vascular Diseases | Malignant Neoplasm              | Malignant Neoplasm                | Malignant Neoplasm              | Diseases of Heart               | Diseases of Heart               | Diseases of Heart               |
|       | Death Rate per 100,00 Population | 170.5                     | 254.2                     | 200.1                     | 185.8                     | 127.1                     | 100.4                           | 116.3                             | 139.1                           | 117.3                           | 117.9                           | 118.3                           |
| No.3  | Causes of Death                  | Tuberculosis              | Tuberculosis              | Tuberculosis              | 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 100,00 Population | 155.7                     | 223.7                     | 185.6                     | 177.7                     | 93.2                      | 73.2                            | 86.7                              | 106.2                           | 112.2                           | 106.9                           | 101.7                           |
| No.4  | Causes of Death                  | Gastro-enteritis          | Influenza                 | Cerebro-vascular Diseases | Gastro-enteritis          | Gastro-enteritis          | Pneumonia and Bronchitis        | Accidents, Poisoning and Violence | Pneumonia and Bronchitis        | Pneumonia and Bronchitis        | Pneumonia and Bronchitis        | Pneumonia and Bronchitis        |
|       | Death Rate per 100,00 Population | 149.7                     | 193.7                     | 162.8                     | 159.2                     | 82.4                      | 58                              | 42.5                              | 33.7                            | 42.7                            | 43.9                            | 45.1                            |
| No.5  | Causes of Death                  | Senility                  | Cerebro-vascular Diseases | Senility                  | Senility                  | Malignant Neoplasm        | Accidents, Poisoning & Violence | Pneumonia and Bronchitis          | Accidents, Poisoning & Violence | Accidents, Poisoning & Violence | Accidents, Poisoning & Violence | Accidents, Poisoning & Violence |
|       | Death Rate per 100,00 Population | 127.2                     | 157.6                     | 118.8                     | 124.5                     | 77.4                      | 49.3                            | 34.1                              | 25.1                            | 24.4                            | 23.7                            | 25.4                            |

Source: Ministry of Health and Welfare

# 4-1 Changes in the Order of Cause of Death (4)

[Philippines]

| Year  |                                  | 1960                       | 1965                       | 1970                        | 1975                        | 1980                        | 1981                        | 1982                        | 1983                        | 1984                        | 1985                        | 1986                        |
|-------|----------------------------------|----------------------------|----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Order |                                  |                            |                            |                             |                             |                             |                             |                             |                             |                             |                             |                             |
| No.1  | Causes of Death                  | Pneumonia                  | Pneumonia                  | Pneumonia                   | Pneumonia                   | Pneumonia                   | Pneumonia                   | Pneumonia                   | Pneumonia                   | Pneumonia                   | Pneumonia                   | Pneumonia                   |
|       | Death Rate per 100,00 Population | 100.4                      | 83.4                       | 118.2                       | 102                         | 93.6                        | 87.1                        | 89.3                        | 93.6                        | 86.4                        | 96.7                        | 90.4                        |
| No.2  | Causes of Death                  | T.B. (All forms)           | Respiratory T.B.           | T.B. (All forms)            | T.B. (All forms)            | Diseases of Heart           | Diseases of Heart           | Diseases of Heart           | Diseases of Heart           | Diseases of Heart           | Diseases of Heart           | Diseases of Heart           |
|       | Death Rate per 100,00 Population | 92.1                       | 83.4                       | 80.1                        | 69.2                        | 60.8                        | 68.7                        | 72.5                        | 62.6                        | 58.9                        | 66.3                        | 69.9                        |
| No.3  | Causes of Death                  | Gastro-enteritis & Colitis | Gastro-enteritis & Colitis | Diseases of Vascular System | Diseases of Heart           | T.B. (All forms)            | T.B. (All forms)            | T.B. (All forms)            | T.B. (All forms)            | T.B. (All forms)            | T.B. (All forms)            | T.B. (All forms)            |
|       | Death Rate per 100,00 Population | 60.5                       | 46                         | 35.8                        | 56.6                        | 59.6                        | 55.1                        | 55.7                        | 55                          | 52.6                        | 57.9                        | 54.6                        |
| No.4  | Causes of Death                  | Bronchitis                 | Bronchitis                 | Gastro-enteritis & Colitis  | Diseases of Vascular System | Diseases of Vascular System | Diseases of Vascular System | Diseases of Vascular System | Diseases of Vascular System | Diseases of Vascular System | Diseases of Vascular System | Diseases of Vascular System |
|       | Death Rate per 100,00 Population | 57.2                       | 43.1                       | 35                          | 31.8                        | 43.8                        | 42.6                        | 42.4                        | 51.9                        | 51                          | 49.7                        | 52.5                        |
| No.5  | Causes of Death                  | Beri-beri                  | Beri-beri                  | Diseases of Heart           | Malignant Neoplasm          | Diarrhoea                   | Malignant Neoplasm          | Diarrhoea                   | Malignant Neoplasm          | Malignant Neoplasm          | Malignant Neoplasm          | Malignant Neoplasm          |
|       | Death Rate per 100,00 Population | 54.4                       | 32.8                       | 34                          | 29.4                        | 33.2                        | 32.7                        | 33.1                        | 34.6                        | 33.3                        | 33.2                        | 32.6                        |

Source: Philippine Health Statistics, 1960-1984, Health Intelligence Service

# 4-1 Changes in the Order of Cause of Death (5)

| [Singapore] |                                  | Year                      | 1950                      | 1955             | 1960                     | 1970                     | 1980                     | 1982             | 1983                     | 1984                     | 1985                     | 1986                     | 1987   |
|-------------|----------------------------------|---------------------------|---------------------------|------------------|--------------------------|--------------------------|--------------------------|------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------|
| Order       |                                  |                           |                           |                  |                          |                          |                          |                  |                          |                          |                          |                          |        |
| No.1        | Causes of Death                  | Tuberculosis              | Pneumoni                  | Cancer           | Cancer                   | Cancer                   | Cancer                   | Cancer           | Cancer                   | Disease of Heart         | Disease of Heart         | Cancer                   | Cancer |
|             | Death Rate per 100,00 Population | 145.0                     | 78.9                      | 64.8             | 78.8                     | 108.7                    | 110.4                    | 116.0            | 118.0                    | 117.2                    | 112.9                    | 121.3                    |        |
| No.2        | Causes of Death                  | Pneumonia                 | Tuberculosis              | Pneumonia        | Disease of Heart         | Disease of Heart         | Disease of Heart         | Disease of Heart | Cancer                   | Cancer                   | Disease of Heart         | Disease of Heart         |        |
|             | Death Rate per 100,00 Population | 131.0                     | 75.8                      | 55.9             | 68.9                     | 106.7                    | 108.3                    | 108.3            | 111.4                    | 114.9                    | 110.6                    | 115.3                    |        |
| No.3        | Causes of Death                  | Gastro-enteritis          | Diseases of Early Infancy | Disease of Heart | Cerebro-vascular Disease | Cerebro-vascular Disease | Cerebro-vascular Disease | Pneumonia        | Cerebro-vascular Disease | Cerebro-vascular Disease | Cerebro-vascular Disease | Cerebro-vascular Disease |        |
|             | Death Rate per 100,00 Population | 108.0                     | 54.5                      | 48.1             | 50.2                     | 59.9                     | 59.4                     | 60.5             | 55.9                     | 55.4                     | 52.4                     | 51.4                     |        |
| No.4        | Causes of Death                  | Diseases of Early Infancy | Gastro-enteritis          | Tuberculosis     | Accidents                | Pneumonia                | Pneumonia                | Cerebro-vascular | Pneumonia                | Pneumonia                | Pneumonia                | Pneumonia                |        |
|             | Death Rate per 100,00 Population | 79.0                      | 54.4                      | 39.2             | 41.3                     | 46.8                     | 55.6                     | 58.1             | 48.6                     | 50.3                     | 41.8                     | 38.2                     |        |
| No.5        | Causes of Death                  | Disease of Heart          | Cancer                    | Gastro-enteritis | Pneumonia                | Accidents                | Accidents                | Accidents        | Accidents                | Accidents                | Accidents                | Accidents                |        |
|             | Death Rate per 100,00 Population | 63.0                      | 52.2                      | 33.0             | 40.8                     | 37.2                     | 39.1                     | 43.4             | 43.3                     | 42.3                     | 39.6                     | 35.6                     |        |

Source: Household Survey

# 4-1 Changes in the Order of Cause of Death (6)

[Thailand]

| Year  |                                  | 1930                       | 1940                       | 1950                       | 1960                       | 1970                       | 1980                       | 1982                       | 1983                       | 1984                       | 1985                       | 1986                       |
|-------|----------------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|
| Order |                                  |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |                            |
| No.1  | Causes of Death                  | Malaria                    | Malaria                    | Malaria                    | Gastro-enteritis           | Accidents                  | Accidents                  | Accidents                  | Accidents                  | Diseases of Heart          | Diseases of Heart          | Diseases of Heart          |
|       | Death Rate per 100,00 Population | 342.4                      | 277.8                      | 195                        | 38.7                       | 27.2                       | 35.9                       | 33.5                       | 35.4                       | 35.3                       | 36.4                       | 37.4                       |
| 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          | Diseases of Heart          | Diseases of Heart          | Accidents                  | Accidents and Poisoning    | Malignant Neoplasm         |
|       | Death Rate per 100,00 Population | 159.8                      | 168.8                      | 65.5                       | 34.7                       | 20.8                       | 31.4                       | 34.1                       | 33.7                       | 31.8                       | 28.9                       | 27.9                       |
| No.3  | Causes of Death                  | T.B. of Respiratory System | Dysentery                  | Gastro-enteritis           | Pneumonia                  | Diarrhoea                  | Malignant Neoplasm         | Malignant Neoplasm         | Malignant Neoplasm         | Malignant Neoplasm         | Malignant Neoplasm         | Accidents and Poisoning    |
|       | Death Rate per 100,00 Population | 79.2                       | 110                        | 66.1                       | 32.5                       | 17.6                       | 23.6                       | 26.1                       | 27                         | 26.1                       | 27                         | 24.8                       |
| No.4  | Causes of Death                  | Dysentery                  | T.B. of Respiratory System | Pneumonia                  | Malaria                    | Diseases of Heart          | T.B. of Respiratory System | T.B. of Respiratory System | T.B. of Respiratory System | T.B. of Respiratory System | T.B. of Respiratory System | T.B. of Respiratory System |
|       | Death Rate per 100,00 Population | 74.3                       | 80.9                       | 39.4                       | 30.2                       | 15.3                       | 14.3                       | 11.9                       | 11                         | 10.2                       | 10.3                       | 9.8                        |
| No.5  | Causes of Death                  | Pneumonia                  | Pneumonia                  | Dysentery                  | Diseases of Heart          | Pneumonia                  | Pneumonia                  | Pneumonia                  | Pneumonia                  | Pneumonia                  | Pneumonia                  | Pneumonia                  |
|       | Death Rate per 100,00 Population | 22                         | 48.7                       | 32.8                       | 19                         | 14.8                       | 10                         | 9.6                        | 10                         | 7.5                        | 7.4                        | 6.3                        |

Source: Health Statistics Division, Ministry of Public Health

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

|                            | Year | Sex | All Causes |        | Infectious and Parasitic Diseases |       | Typhoid Fever |      | Other Intestinal Infectious Diseases |      | Tuberculosis of Respiratory System |      |
|----------------------------|------|-----|------------|--------|-----------------------------------|-------|---------------|------|--------------------------------------|------|------------------------------------|------|
|                            |      |     | Number     | Rate   | Number                            | Rate  | Number        | Rate | Number                               | Rate | Number                             | Rate |
| <b>BRUNEI</b>              |      |     |            |        |                                   |       |               |      |                                      |      |                                    |      |
| (1a)                       | 1987 | T   | 27,047     | 15.69  |                                   |       | 666           | 0.39 | 1,259                                | 0.73 | 1,405                              | 0.82 |
| <b>INDONESIA</b>           |      | M   | 15,450     | 18.01  |                                   |       | 392           | 0.46 | 684                                  | 0.80 | 885                                | 1.03 |
|                            |      | F   | 11,589     | 13.40  |                                   |       | 274           | 0.32 | 575                                  | 0.66 | 520                                | 0.60 |
| (2)                        | 1987 | T   | 751,172    | 618.1  | 11,128                            | 9.2   | -             | -    | 799                                  | 0.7  | 3,836                              | 3.2  |
| <b>JAPAN</b>               |      | M   | 408,094    | 683.3  | 6,658                             | 11.2  | -             | -    | 325                                  | 0.5  | 2,859                              | 4.8  |
|                            |      | F   | 343,078    | 555.0  | 4,470                             | 7.3   | -             | -    | 474                                  | 0.8  | 977                                | 1.6  |
| Peninsular Malaysia        | 1987 | T   | 17,384     | 127.30 | 1,718                             | 12.58 | 6             | 0.04 | 18                                   | 0.13 | 320                                | 2.34 |
| (3a) <b>MALAYSIA</b> Sabah |      | T   | 3,004      | 227.05 | 728                               | 55.02 | 4             | 0.30 | 16                                   | 1.20 | 109                                | 8.23 |
| Sarawak                    |      | T   | 1,890      | 121.93 | 161                               | 10.38 | 4             | 0.25 | 2                                    | 0.12 | 49                                 | 3.16 |
| (4)                        | 1984 | T   | 326,749    | 583.4  | 57,243                            | 102.2 | 1,012 b)      | 1.8  | 275                                  | 0.5  | 29,944                             | 53.5 |
| <b>PHILIPPINES</b>         |      | M   | 193,118    | 686.9  | 34,302                            | 122.0 | 584           | 2.1  | 170                                  | 0.6  | 18,698                             | 66.5 |
|                            |      | F   | 133,431    | 479.1  | 22,941                            | 82.3  | 428           | 1.5  | 125                                  | 0.4  | 11,246                             | 40.3 |
| (5)                        | 1987 | T   | 13,170     | 504.2  | 432                               | 16.5  | 1             | 0.0  | 38                                   | 1.5  | 174                                | 6.7  |
| <b>SINGAPORE</b>           |      | M   | 7,410      | 557.1  | 269                               | 20.2  | 1             | 0.1  | 20                                   | 1.5  | 132                                | 9.9  |
|                            |      | F   | 5,760      | 449.1  | 163                               | 12.7  | -             | -    | 18                                   | 1.4  | 42                                 | 3.3  |
| (6)                        | 1986 | T   | 218,025    | 414.1  | 14,024                            | 26.6  | 87            | 0.2  | 2,026                                | 3.8  | 5,138                              | 9.8  |
| <b>THAILAND</b>            |      | M   | 125,086    | 474.4  | 8,410                             | 31.9  | 50            | 0.2  | 1,158                                | 4.4  | 3,314                              | 12.6 |
|                            |      | F   | 92,939     | 353.6  | 5,614                             | 21.4  | 37            | 0.1  | 868                                  | 3.1  | 1,824                              | 6.9  |

Source: (1) Directorate General of Medical Care, MOH  
Based on 10-day sample of discharges from hospital for each quarter in 1986  
(2) *Vital Statistics, Japan*, Ministry of Health and Welfare 1985  
(3) Information and Documentation System Unit, Ministry of Health  
(4) *Philippine Health Statistics*, Department of Health  
(5) Department of Statistics, Ministry of Health  
(6) Ministry of Public Health (official data)

Note: a) Government hospitals only (p. 32)  
b) Include paratyphoid fever (p. 32)

c) Include malignant neoplasm of pleura (p. 35)  
d) Lymphatic tissue only (p. 36)  
e) Include goiter, thyrotoxicosis, hypothyroidism (p. 36)  
f) Include with and without heart involvement (p. 40)  
g) Include accidents by suffocation and foreign bodies (p. 47)  
h) Include unknown sex (p. 45)  
i) Uteris only (p. 36)  
j) Hernia of Abdominal Cavity only (p. 42)  
k) Hemorrhage related to pregnancy only (p. 43)  
l) Includes complications of pregnancy (p. 43)  
m) Includes all kinds (p. 46)

(per 100,000 population)

| Tuberculosis,<br>Other Forms |      | Whooping Cough |      | Meningococcal<br>Infection |      | Tetanus |      | Septicaemia |       | Other Bacterial<br>Diseases |      | Measles |      | Other Viral<br>Diseases |      |
|------------------------------|------|----------------|------|----------------------------|------|---------|------|-------------|-------|-----------------------------|------|---------|------|-------------------------|------|
| Number                       | Rate | Number         | Rate | Number                     | Rate | Number  | Rate | Number      | Rate  | Number                      | Rate | Number  | Rate | Number                  | Rate |
| 18                           | 0.01 | 0              | 0.00 | 0                          | 0.00 | 548     | 0.32 | 329         | 0.19  | 192                         | 0.11 | 18      | 0.01 | 420                     | 0.24 |
| 9                            | 0.01 | 0              | 0.00 | 0                          | 0.00 | 402     | 0.47 | 137         | 0.16  | 119                         | 0.14 | 0       | 0.00 | 55                      | 0.06 |
| 9                            | 0.01 | 0              | 0.00 | 0                          | 0.00 | 146     | 0.17 | 192         | 0.22  | 73                          | 0.08 | 18      | 0.02 | 365                     | 0.42 |
| 186                          | 0.2  | 9              | 0.0  | 1                          | 0.0  | 19      | 0.0  | 2,788       | 2.3   | 211                         | 0.2  | 96      | 0.1  | 1,463                   | 1.2  |
| 100                          | 0.2  | 3              | 0.0  | 1                          | 0.0  | 6       | 0.0  | 1,281       | 2.2   | 116                         | 0.2  | 45      | 0.1  | 788                     | 1.3  |
| 86                           | 0.1  | 6              | 0.0  | 0                          | 0.0  | 13      | 0.0  | 1,507       | 2.4   | 95                          | 0.2  | 51      | 0.1  | 675                     | 1.1  |
| 16                           | 0.11 | -              | -    | 4                          | 0.02 | 7       | 0.05 | 1,154       | 8.45  | 76                          | 0.55 | -       | -    | 33                      | 0.24 |
| 20                           | 1.51 | -              | -    | 1                          | 0.07 | 22      | 1.66 | 196         | 14.81 | 16                          | 1.20 | 114     | 9    | 16                      | 1.20 |
| 4                            | 0.25 | -              | -    | -                          | -    | 1       | 0.06 | 77          | 4.96  | 6                           | 0.38 | -       | -    | 6                       | 0.38 |
| 660                          | 1.1  | 28             | 0.0  | 52                         | 8.1  | 1,034   | 1.8  | 4,531       | 8.1   | 205                         | 0.4  | 6,249   | 11.2 | 231                     | 0.4  |
| 389                          | 1.3  | 11             | 0.0  | 30                         | 6.1  | 695     | -    | 2,521       | 8.9   | 107                         | 0.4  | 3,249   | 11.5 | 127                     | 0.5  |
| 271                          | 0.9  | 17             | 0.1  | 22                         | 1.1  | 339     | -    | 2,010       | 7.2   | 98                          | 0.4  | 3,000   | 10.7 | 104                     | 0.4  |
| 12                           | 0.5  | -              | -    | 2                          | 0.1  | 1       | 0.0  | 142         | 5.4   | 4                           | 0.2  | -       | -    | 43                      | 1.6  |
| 9                            | 0.7  | -              | -    | 2                          | 0.2  | 1       | 0.1  | 64          | 4.8   | 3                           | 0.2  | -       | -    | 26                      | 2.0  |
| 3                            | 0.2  | -              | -    | -                          | -    | -       | -    | 78          | 6.1   | 1                           | 0.1  | -       | -    | 17                      | 1.3  |
| 29                           | 0.1  | 9              | 0.0  | 2                          | 0.0  | 330     | 0.6  | 2,978       | 5.7   | 236                         | 0.4  | 56      | 0.1  | 927                     | 1.8  |
| 20                           | 0.1  | 6              | 0.0  | 1                          | 0.0  | 203     | 0.8  | 1,609       | 6.1   | 138                         | 0.5  | 34      | 0.1  | 532                     | 2.0  |
| 9                            | 0.0  | 3              | 0.0  | 1                          | 0.0  | 127     | 0.5  | 1,369       | 5.2   | 98                          | 0.4  | 22      | 0.1  | 395                     | 1.5  |

5-1 Deaths and Death Rates by Cause (ICD-9) (2)

|                     |      | Year | Sex | Malaria |      | Other Arthropodborne Diseases |      | Venereal Diseases |      | Other Intestinal and Parasitic Diseases |       | Malignant Neoplasms |       |
|---------------------|------|------|-----|---------|------|-------------------------------|------|-------------------|------|-----------------------------------------|-------|---------------------|-------|
|                     |      |      |     | Number  | Rate | Number                        | Rate | Number            | Rate | Number                                  | Rate  | Number              | Rate  |
| BRUNEI              |      |      |     |         |      |                               |      |                   |      |                                         |       |                     |       |
| INDONESIA           |      | 1987 | T   | 91      | 0.05 | 0                             | 0.00 | 0                 | 0.00 | 73                                      | 0.04  | 46                  | 0.03  |
|                     |      |      | M   | 55      | 0.06 | 0                             | 0.00 | 0                 | 0.00 | 64                                      | 0.07  | 46                  | 0.05  |
|                     |      |      | F   | 36      | 0.04 | 0                             | 0.00 | 0                 | 0.00 | 9                                       | 0.01  | 0                   | 0.00  |
| JAPAN               |      | 1987 | T   | 1       | 0.0  | -                             | -    | 68                | 0.1  | 270                                     | 0.2   | 199,563             | 164.2 |
|                     |      |      | M   | 1       | 0.0  | -                             | -    | 44                | 0.1  | 150                                     | 0.3   | 119,161             | 199.5 |
|                     |      |      | F   | -       | -    | -                             | -    | 24                | 0.0  | 120                                     | 0.2   | 80,402              | 130.1 |
| Peninsular Malaysia | 1987 | T    | 20  | 0.14    | -    | -                             | 7    | 0.05              | 11   | 0.08                                    | 1,559 | 11.41               |       |
| MALAYSIA Sabah      | 1987 | T    | 64  | 4.83    | 18   | 1.36                          | 1    | 0.07              | 3    | 0.02                                    | 247   | 18.66               |       |
| Sarawak             | 1987 | T    | 1   | 0.06    | -    | -                             | -    | -                 | 5    | 0.32                                    | 197   | 12.70               |       |
| PHILIPPINES         |      | 1986 | T   | 1,156   | 2.1  | 46                            | 0.1  | -                 | -    | 217                                     | 0.4   | 18,204              | 32.5  |
|                     |      |      | M   | 705     | 2.5  | 28                            | 0.1  | -                 | -    | 128                                     | 0.5   | 9,966               | 35.5  |
|                     |      |      | F   | 451     | 1.6  | 18                            | 0.1  | -                 | -    | 89                                      | 0.3   | 8,338               | 29.9  |
| SINGAPORE           |      | 1987 | T   | -       | -    | -                             | -    | 2                 | 0.1  | 13                                      | 0.5   | 3,131               | 119.8 |
|                     |      |      | M   | -       | -    | -                             | -    | 2                 | 0.2  | 9                                       | 0.7   | 1,858               | 139.7 |
|                     |      |      | F   | -       | -    | -                             | -    | -                 | -    | 4                                       | 0.3   | 1,273               | 99.3  |
| THAILAND            |      | 1986 | T   | 1,540   | 2.9  | -                             | -    | 18                | 0.0  | 643                                     | 1.2   | 14,709              | 29.9  |
|                     |      |      | M   | 992     | 3.8  | -                             | -    | 14                | 0.1  | 340                                     | 1.3   | 8,376               | 31.8  |
|                     |      |      | F   | 548     | 2.1  | -                             | -    | 4                 | 0.0  | 303                                     | 1.2   | 6,333               | 24.1  |

(per 100,000 population)

| Malignant Neoplasm<br>of Lip, Oral Cavity<br>and Pharynx |      | Malignant<br>Neoplasm of<br>Oesophagus |      | Malignant<br>Neoplasm of<br>Stomach |      | Malignant<br>Neoplasm of<br>Colon |      | Malignant Neoplasm<br>of Rectum,<br>Rectosigmoid<br>Junction & Anus |      | Malignant Neoplasm<br>of Liver, Specified<br>as Primary |      | Malignant<br>Neoplasm of<br>Larynx |      | Malignant Neoplasm<br>of Trachea, Bronchus<br>and Lung |      |
|----------------------------------------------------------|------|----------------------------------------|------|-------------------------------------|------|-----------------------------------|------|---------------------------------------------------------------------|------|---------------------------------------------------------|------|------------------------------------|------|--------------------------------------------------------|------|
| Number                                                   | Rate | Number                                 | Rate | Number                              | Rate | Number                            | Rate | Number                                                              | Rate | Number                                                  | Rate | Number                             | Rate | Number                                                 | Rate |
| 0                                                        |      | 0 0.00<br>0 0.00<br>0 0.00             |      | 18 0.01<br>9 0.01<br>9 0.01         |      | 9 0.01<br>9 0.01<br>0 0.00        |      | 18 0.01<br>0 0.00<br>18 0.02                                        |      | 265 0.15<br>210 0.24<br>55 0.06                         |      | 9 0.01<br>9 0.01<br>0 0.00         |      | 183 0.11<br>137 0.16<br>46 0.05                        |      |
| 2,293 1.9                                                |      | 6,700 5.5                              |      | 48,340 39.9                         |      | 12,708 11.3                       |      | 8,328 6.9                                                           |      | 15,429 12.7                                             |      | 816 0.7                            |      | 31,729 26.1                                            |      |
| 1,643 2.8                                                |      | 5,573 9.3                              |      | 30,237 50.8                         |      | 6,453 12.5                        |      | 4,844 8.2                                                           |      | 11,629 19.5                                             |      | 729 1.2                            |      | 23,132 38.7                                            |      |
| 650 1.1                                                  |      | 1,127 1.8                              |      | 18,103 29.4                         |      | 6,255 10.2                        |      | 3,484 5.6                                                           |      | 3,800 6.1                                               |      | 87 0.1                             |      | 8,597 13.9                                             |      |
| 133 0.97                                                 |      | 54 0.39                                |      | 107 0.78                            |      | 54 0.39                           |      | 37 0.27                                                             |      | 102 0.74                                                |      | 29 0.21                            |      | 369 2.70                                               |      |
| 26 1.96                                                  |      | 8 0.60                                 |      | 27 2.04                             |      | 11 0.83                           |      | 13 0.98                                                             |      | 28 2.11                                                 |      | 4 0.30                             |      | 37 2.79                                                |      |
| 11 0.70                                                  |      | 7 0.45                                 |      | 26 1.67                             |      | 3 0.19                            |      | 7 0.45                                                              |      | 19 1.22                                                 |      | 2 0.12                             |      | 35 2.25                                                |      |
| 1,180 2.1                                                |      | 216 0.4                                |      | 1,354 2.4                           |      | 171 0.3                           |      | 487 0.9                                                             |      |                                                         |      | 123 0.2                            |      | 2,336 <sup>c</sup> 4.2                                 |      |
| 679 2.4                                                  |      | 133 0.5                                |      | 747 2.7                             |      | 102 0.4                           |      | 290 1.0                                                             |      |                                                         |      | 85 0.3                             |      | 1,711 6.1                                              |      |
| 501 1.8                                                  |      | 83 0.3                                 |      | 607 2.2                             |      | 69 0.2                            |      | 197 0.7                                                             |      |                                                         |      | 38 0.1                             |      | 625 2.2                                                |      |
| 209 8.0                                                  |      | 98 3.8                                 |      | 367 14.0                            |      | 243 9.3                           |      | 111 4.2                                                             |      | 97 3.7                                                  |      | 34 1.3                             |      | 781 29.9                                               |      |
| 154 11.6                                                 |      | 76 5.7                                 |      | 215 16.2                            |      | 120 9.0                           |      | 67 5.0                                                              |      | 73 5.5                                                  |      | 31 2.3                             |      | 568 42.7                                               |      |
| 55 4.3                                                   |      | 22 1.7                                 |      | 152 11.9                            |      | 123 9.6                           |      | 44 3.4                                                              |      | 24 1.9                                                  |      | 3 0.2                              |      | 213 16.6                                               |      |
| 886 0.5                                                  |      | 136 0.3                                |      | 286 0.5                             |      | 378 0.7                           |      | 15 0.0                                                              |      | 8 0.0                                                   |      | 33 0.1                             |      | 1,070 2.0                                              |      |
| 187 0.7                                                  |      | 100 0.4                                |      | 186 0.7                             |      | 228 0.9                           |      | 5 0.0                                                               |      | 7 0.0                                                   |      | 31 0.1                             |      | 722 2.7                                                |      |
| 99 0.4                                                   |      | 36 0.1                                 |      | 100 0.4                             |      | 150 0.6                           |      | 10 0.0                                                              |      | 1 0.0                                                   |      | 32 0.0                             |      | 348 1.3                                                |      |

5-1 Deaths and Death Rates by Cause (ICD-9) (3)

|             |                     | Year | Sex | Malignant Neoplasm of Female Breast |      | Malignant Neoplasm of Cervix Uteri |      | Malignant Neoplasm Uterus, Other and Unspec. |      | Malignant Neoplasm of Prostate |      | Malignant Neoplasm of Bladder |      |
|-------------|---------------------|------|-----|-------------------------------------|------|------------------------------------|------|----------------------------------------------|------|--------------------------------|------|-------------------------------|------|
|             |                     |      |     | Number                              | Rate | Number                             | Rate | Number                                       | Rate | Number                         | Rate | Number                        | Rate |
| BRUNEI      |                     |      |     |                                     |      |                                    |      |                                              |      |                                |      |                               |      |
| INDONESIA   |                     | 1987 | T   | 37                                  | 0.02 | 46                                 | 0.03 | 0                                            | 0.00 | 9                              | 0.01 | 18                            | 0.01 |
|             |                     |      | M   | ..                                  | ..   | ..                                 | ..   | ..                                           | ..   | 9                              | 0.01 | 18                            | 0.02 |
|             |                     |      | F   | 37                                  | 0.04 | 46                                 | 0.05 | 0                                            | 0.00 | ..                             | ..   | 0                             | 0.00 |
| JAPAN       |                     | 1986 | T   | 5,231                               | 4.3  | 1,792                              | 1.5  | 2,278                                        | 1.9  | 2,969                          | 2.4  | 2,621                         | 2.2  |
|             |                     |      | M   | ..                                  | ..   | ..                                 | ..   | ..                                           | ..   | 2,969                          | 5.0  | 1,815                         | 3.0  |
|             |                     |      | F   | 5,231                               | 8.5  | 1,792                              | 2.9  | 2,278                                        | 3.7  | ..                             | ..   | 806                           | 1.3  |
| MALAYSIA    | Peninsular Malaysia | 1987 | T   | 89                                  | 0.65 | 65                                 | 0.47 | 8                                            | 0.05 | 14                             | 0.10 | 22                            | 0.16 |
|             | Sabah               | 1987 | T   | 8                                   | 0.60 | 6                                  | 0.45 | -                                            | -    | 1                              | 0.07 | 2                             | 0.15 |
|             | Sarawak             | 1987 | T   | 6                                   | 0.38 | 6                                  | 0.38 | -                                            | -    | -                              | -    | 1                             | 0.06 |
| PHILIPPINES |                     | 1986 | T   | 1,238                               | 2.2  | 255                                | 0.5  | 803 i)                                       | 1.4  | 310                            | 0.6  | -                             | -    |
|             |                     |      | M   | ..                                  | ..   | ..                                 | ..   | ..                                           | ..   | 310                            | 1.1  | -                             | -    |
|             |                     |      | F   | 1,238                               | 4.4  | 255                                | 0.9  | 803                                          | 2.9  | ..                             | ..   | -                             | -    |
| SINGAPORE   |                     | 1987 | T   | 178                                 | 6.8  | 77                                 | 2.9  | 26                                           | 1.0  | 29                             | 1.1  | 39                            | 1.5  |
|             |                     |      | M   | ..                                  | ..   | ..                                 | ..   | ..                                           | ..   | 29                             | 2.2  | 27                            | 2.0  |
|             |                     |      |     | 178                                 | 13.9 | 77                                 | 6.0  | 26                                           | 2.0  | ..                             | ..   | 12                            | 0.9  |
| THAILAND    |                     | 1986 | T   | 158                                 | 0.3  | 106                                | 0.2  | 337                                          | 0.6  | 27                             | 0.1  | 52                            | 0.1  |
|             |                     |      | M   | ..                                  | ..   | ..                                 | ..   | ..                                           | ..   | 27                             | 0.1  | 35                            | 0.1  |
|             |                     |      | F   | 158                                 | 0.6  | 106                                | 0.4  | 337                                          | 1.3  | ..                             | ..   | 17                            | 0.1  |

(per 100,000 population)

| Malignant Neoplasm of Other Sites |      | Leukemia |      | Other Malignant Neoplasms of Lymphatic and Haemopoietic |      | Benign Neoplasm, Other and Unspecific Neoplasms |      | Diabetes Mellitus |      | Other Endocrine and Metabolic Diseases |      | Nutritional Marasmus |      | Other Protein-calorie Malnutrition |      |
|-----------------------------------|------|----------|------|---------------------------------------------------------|------|-------------------------------------------------|------|-------------------|------|----------------------------------------|------|----------------------|------|------------------------------------|------|
| Number                            | Rate | Number   | Rate | Number                                                  | Rate | Number                                          | Rate | Number            | Rate | Number                                 | Rate | Number               | Rate | Number                             | Rate |
| 246                               | 0.14 | 82       | 0.05 | 46                                                      | 0.03 | 301                                             | 0.17 | 438               | 0.25 | 110                                    | 0.06 | 55                   | 0.03 | 47                                 | 0.03 |
| 128                               | 0.15 | 55       | 0.06 | 18                                                      | 0.02 | 128                                             | 0.15 | 237               | 0.28 | 27                                     | 0.03 | 28                   | 0.03 | 28                                 | 0.03 |
| 118                               | 0.14 | 27       | 0.03 | 28                                                      | 0.03 | 173                                             | 0.20 | 201               | 0.23 | 83                                     | 0.20 | 27                   | 0.03 | 19                                 | 0.02 |
| 46,079                            | 37.9 | 5,642    | 4.6  | 6,608                                                   | 5.4  | 6,576                                           | 5.4  | 9,134             | 7.5  | 205                                    | 0.2  | -                    | -    | -                                  | -    |
| 22,987                            | 38.5 | 3,334    | 5.6  | 3,816                                                   | 6.4  | 3,580                                           | 6.0  | 4,261             | 7.1  | 92                                     | 0.2  | -                    | -    | -                                  | -    |
| 23,092                            | 37.4 | 2,308    | 3.7  | 2,792                                                   | 4.5  | 2,996                                           | 4.9  | 4,873             | 7.9  | 113                                    | 0.2  | -                    | -    | -                                  | -    |
| 80                                | 0.58 | 124      | 0.90 | 77                                                      | 0.56 | 72                                              | 0.52 | 223               | 1.63 | 6                                      | 0.04 | -                    | -    | 25                                 | 0.18 |
| 8                                 | 0.60 | 16       | 1.20 | 19                                                      | 1.43 | 6                                               | 0.45 | 23                | 1.73 | 2                                      | 0.15 | -                    | -    | 7                                  | 0.52 |
| 13                                | 0.83 | 20       | 1.29 | 14                                                      | 0.90 | 3                                               | 0.19 | 15                | 0.96 | 2                                      | 0.12 | -                    | -    | -                                  | -    |
| 6,902                             | 12.3 | 1,325    | 2.4  | 291 d)                                                  | 0.5  | 191                                             | 0.30 | 2,858             | 5.1  | 2,590 e)                               | 4.6  | 333                  | 0.6  | 752                                | 1.3  |
| 4,410                             | 15.7 | 677      | 2.4  | 184                                                     | 0.7  | 71                                              | 0.2  | 1,288             | 4.6  | 1,437                                  | 5.1  | 161                  | 0.6  | 417                                | 1.5  |
| 2,492                             | 8.9  | 648      | 2.3  | 107                                                     | 0.4  | 120                                             | 0.4  | 1,570             | 5.6  | 1,153                                  | 4.1  | 172                  | 0.6  | 335                                | 1.2  |
| 635                               | 24.3 | 106      | 4.1  | 101                                                     | 3.9  | 38                                              | 1.50 | 492               | 18.8 | 26                                     | 1.0  | -                    | -    | 3                                  | 0.1  |
| 371                               | 27.9 | 61       | 4.6  | 66                                                      | 5.0  | 20                                              | 1.5  | 205               | 15.4 | 9                                      | 0.7  | -                    | -    | -                                  | -    |
| 264                               | 20.6 | 45       | 3.5  | 35                                                      | 2.7  | 18                                              | 1.4  | 287               | 22.4 | 17                                     | 0.3  | -                    | -    | 3                                  | 0.2  |
| 11,388                            | 21.6 | 372      | 0.7  | 68                                                      | 0.1  | -                                               | -    | 1,798             | 3.4  | 90                                     | 0.2  | 97                   | 0.2  | 2                                  | 0.0  |
| 6,625                             | 25.1 | 189      | 0.7  | 45                                                      | 0.2  | -                                               | -    | 829               | 3.1  | 36                                     | 0.1  | 51                   | 0.2  | 1                                  | 0.0  |
| 4,763                             | 18.1 | 183      | 0.7  | 23                                                      | 0.1  | -                                               | -    | 969               | 3.7  | 54                                     | 0.2  | 46                   | 0.2  | 1                                  | 0.0  |

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

|             | Year    | Sex | Other Nutritional Deficiency |      | Anaemias |      | Other Diseases of Blood and Blood-forming Organs |      | Mental Disorders |      | Menigitis |      |
|-------------|---------|-----|------------------------------|------|----------|------|--------------------------------------------------|------|------------------|------|-----------|------|
|             |         |     | Number                       | Rate | Number   | Rate | Number                                           | Rate | Number           | Rate | Number    | Rate |
| BRUNEI      |         |     |                              |      |          |      |                                                  |      |                  |      |           |      |
| INDONESIA   | 1987    | T   | 27                           | 0.02 | 220      | 0.13 | 27                                               | 0.02 | 164              | 0.09 | 511       | 0.30 |
|             |         | M   | 18                           | 0.02 | 137      | 0.16 | 18                                               | 0.02 | 128              | 0.15 | 246       | 0.29 |
|             |         | F   | 9                            | 0.01 | 91       | 0.11 | 9                                                | 0.01 | 36               | 0.04 | 265       | 0.31 |
| JAPAN       | 1987    | T   | 431                          | 0.4  | 1,519    | 1.2  | 1,745                                            | 1.4  | 2,857            | 2.4  | 536       | 0.4  |
|             |         | M   | 244                          | 0.4  | 666      | 1.1  | 891                                              | 1.5  | 1,349            | 2.3  | 287       | 0.5  |
|             |         | F   | 187                          | 0.3  | 853      | 1.4  | 854                                              | 1.4  | 1,508            | 2.4  | 249       | 0.4  |
| MALAYSIA    | 1987    | T   | 7                            | 0.05 | 65       | 0.47 | 79                                               | 0.57 | 16               | 0.11 | 129       | 0.94 |
|             | Sabah   | T   | 8                            | 0.60 | 21       | 1.58 | 14                                               | 1.05 | 1                | 0.07 | 69        | 5.21 |
|             | Sarawak | T   | 1                            | 0.06 | 11       | 0.70 | 10                                               | 0.64 | 1                | 0.06 | 24        | 1.54 |
| PHILIPPINES | 1986    | T   | 4,728                        | 8.4  | 2,362    | 4.2  | 345                                              | 0.6  | 416              | 0.7  | 2,582     | 4.6  |
|             |         | M   | 2,611                        | 9.3  | 1,224    | 4.4  | 197                                              | 0.7  | 292              | 1.0  | 1,440     | 5.1  |
|             |         | F   | 2,117                        | 7.6  | 1,138    | 4.1  | 148                                              | 0.5  | 124              | 0.4  | 1,142     | 4.1  |
| SINGAPORE   | 1987    | T   | -                            | -    | 21       | 0.8  | 14                                               | 0.5  | 23               | 0.9  | 20        | 0.8  |
|             |         | M   | -                            | -    | 11       | 0.8  | 6                                                | 0.5  | 4                | 0.3  | 8         | 0.6  |
|             |         | F   | -                            | -    | 10       | 0.8  | 8                                                | 0.6  | 19               | 1.5  | 12        | 0.9  |
| THAILAND    | 1986    | T   | 128                          | 0.2  | 144      | 0.3  | 63                                               | 0.1  | 334              | 0.6  | 402       | 0.8  |
|             |         | M   | 122                          | 0.5  | 67       | 0.2  | 33                                               | 0.1  | 270              | 1.0  | 257       | 1.0  |
|             |         | F   | 6                            | 0.0  | 77       | 0.3  | 30                                               | 0.1  | 64               | 0.2  | 145       | 0.6  |

(per 100,000 population)

| Multiple Sclerosis |      | Epilepsy |      | Other Diseases of Nervous System and Sense Organ |      | Diseases of Circulatory System |       | Acute Rheumatic Fever |      | Chronic Rheumatic Heart Disease |      | Hypertensive Disease |      | Acute Myocardial Infarction |       |
|--------------------|------|----------|------|--------------------------------------------------|------|--------------------------------|-------|-----------------------|------|---------------------------------|------|----------------------|------|-----------------------------|-------|
| Number             | Rate | Number   | Rate | Number                                           | Rate | Number                         | Rate  | Number                | Rate | Number                          | Rate | Number               | Rate | Number                      | Rate  |
| 0                  | 0.00 | 9        | 0.01 | 1,433                                            | 0.83 | 0                              | 0.00  |                       |      | 67                              | 0.04 | 402                  | 0.23 | 365                         | 0.21  |
| 0                  | 0.00 | 0        | 0.00 | 694                                              | 0.81 | 0                              | 0.00  |                       |      | 36                              | 0.04 | 237                  | 0.28 | 265                         | 0.31  |
| 0                  | 0.00 | 9        | 0.01 | 739                                              | 0.85 | 0                              | 0.00  |                       |      | 21                              | 0.02 | 165                  | 0.19 | 100                         | 0.12  |
| 61                 | 0.1  | 437      | 0.4  | 6,079                                            | 5.0  | 285,649                        | 235.0 | 37                    | 0.0  | 1,492                           | 1.2  | 10,734               | 8.8  | 29,797                      | 24.5  |
| 25                 | 0.0  | 235      | 0.4  | 3,338                                            | 5.6  | 139,473                        | 233.5 | 10                    | 0.0  | 487                             | 0.8  | 4,090                | 6.8  | 16,860                      | 28.2  |
| 36                 | 0.1  | 202      | 0.3  | 2,741                                            | 4.4  | 146,176                        | 236.5 | 27                    | 0.0  | 1,005                           | 1.6  | 6,644                | 10.7 | 12,937                      | 20.9  |
| 6                  | 0.04 | 22       | 0.16 | 212                                              | 1.55 | 4,953                          | 36.27 | 1                     | 0.01 | 93                              | 0.68 | 159                  | 1.16 | 1,690                       | 12.37 |
| 2                  | 0.15 | -        | -    | 27                                               | 2.04 | 450                            | 34.01 | -                     | -    | 7                               | 0.52 | 24                   | 1.81 | 86                          | 6.50  |
| -                  | -    | -        | -    | 19                                               | 1.22 | 556                            | 35.87 | -                     | -    | 14                              | 0.90 | 29                   | 1.87 | 83                          | 5.35  |
|                    |      | 823      | 1.5  | 1,512                                            | 2.7  | 68,565                         | 122.4 | 21                    | 0.0  | 2,201                           | 3.9  | 10,705               | 19.1 | 10,361                      | 18.5  |
|                    |      | 455      | 1.6  | 870                                              | 3.1  | 38,982                         | 138.7 | 11                    | 0.0  | 1,036                           | 3.7  | 6,169                | 21.9 | 6,679                       | 23.8  |
|                    |      | 368      | 1.3  | 642                                              | 2.3  | 29,583                         | 106.1 | 10                    | 0.0  | 1,165                           | 4.2  | 4,536                | 16.3 | 3,682                       | 13.2  |
| -                  | -    | 13       | 0.5  | 69                                               | 2.6  | 4,675                          | 178.9 | -                     | -    | 59                              | 2.3  | 320                  | 12.2 | 1,689                       | 64.6  |
| -                  | -    | 9        | 0.7  | 41                                               | 3.1  | 2,492                          | 187.3 | -                     | -    | 24                              | 1.8  | 147                  | 11.1 | 1,030                       | 77.4  |
| -                  | -    | 4        | 0.3  | 28                                               | 2.2  | 2,183                          | 170.2 | -                     | -    | 35                              | 2.7  | 173                  | 13.5 | 657                         | 51.2  |
| -                  | -    | 226      | 0.4  | 4,095                                            | 7.8  | 27,137                         | 51.5  | 2                     | 0.0  | 263                             | 0.5  | 1,697                | 3.2  | 370                         | 0.7   |
| -                  | -    | 146      | 0.6  | 2,476                                            | 9.4  | 16,541                         | 62.7  | 2                     | -    | 143                             | 0.5  | 1,019                | 3.9  | 224                         | 0.8   |
| -                  | -    | 80       | 0.3  | 1,619                                            | 6.2  | 10,596                         | 40.3  | -                     | -    | 120                             | 0.5  | 678                  | 2.6  | 146                         | 0.6   |

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

|             |                     | Year | Sex   | Other Ischaemic Heart Diseases |        | Diseases of Pulmonary Circulation and Other Forms of Heart Diseases |        | Cerebrovascular Diseases |       | Atherosclerosis |       | Embolism, Thrombosis and Other Diseases of Arteries, Arterioles |      |
|-------------|---------------------|------|-------|--------------------------------|--------|---------------------------------------------------------------------|--------|--------------------------|-------|-----------------|-------|-----------------------------------------------------------------|------|
|             |                     |      |       | Number                         | Rate   | Number                                                              | Rate   | Number                   | Rate  | Number          | Rate  | Number                                                          | Rate |
| BRUNEI      |                     |      |       |                                |        |                                                                     |        |                          |       |                 |       |                                                                 |      |
| INDONESIA   |                     | 1987 | T     | 155                            | 0.09   | 1,424                                                               | 0.83   | 2,035                    | 1.18  | 0               | 0.00  | 9                                                               | 0.01 |
|             |                     | M    | 128   | 0.15                           | 794    | 0.92                                                                | 1,195  | 1.39                     | 0     | 0.00            | 9     | 0.01                                                            |      |
|             |                     | F    | 27    | 0.03                           | 630    | 0.73                                                                | 840    | 0.97                     | 0     | 0.00            | 0     | 0.00                                                            |      |
| JAPAN       |                     | 1987 | T     | 18,272                         | 15.0   | 94,348                                                              | 77.6   | 123,566                  | 101.7 | 2,732           | 2.2   | 4,018                                                           | 3.3  |
|             |                     | M    | 8,804 | 14.7                           | 46,415 | 77.7                                                                | 58,744 | 98.4                     | 1,182 | 2.0             | 2,520 | 4.2                                                             |      |
|             |                     | F    | 9,468 | 15.3                           | 47,933 | 77.5                                                                | 64,822 | 104.9                    | 1,550 | 2.5             | 1,498 | 2.4                                                             |      |
| MALAYSIA    | Peninsular Malaysia | 1987 | T     | 184                            | 1.34   | 1,205                                                               | 8.82   | 1,514                    | 11.08 | 2               | 0.01  | 39                                                              | 0.28 |
|             | Sabah               | 1987 | T     | 19                             | 1.43   | 151                                                                 | 11.41  | 150                      | 11.33 | -               | -     | 4                                                               | 0.30 |
|             | Sarawak             | 1987 | T     | 14                             | 0.90   | 246                                                                 | 15.87  | 150                      | 9.67  | -               | -     | 5                                                               | 0.32 |
| PHILIPPINES |                     | 1986 | T     | 3,791                          | 6.8    | 20,857                                                              | 37.2   | 15,441 f)                | 27.6  | 2,218           | 4.0   | 329                                                             | 0.6  |
|             |                     | M    | 1,933 | 6.9                            | 11,380 | 40.5                                                                | 8,998  | 32.0                     | 1,022 | 3.6             | 193   | 0.7                                                             |      |
|             |                     | F    | 1,858 | 6.7                            | 9,477  | 34.0                                                                | 6,443  | 23.1                     | 1,196 | 4.3             | 136   | 0.5                                                             |      |
| SINGAPORE   |                     | 1987 | T     | 778                            | 29.8   | 407                                                                 | 15.6   | 1,343                    | 21.4  | 13              | 0.5   | 58                                                              | 2.2  |
|             |                     | M    | 428   | 32.2                           | 204    | 15.3                                                                | 610    | 45.9                     | 6     | 0.5             | 39    | 2.9                                                             |      |
|             |                     | F    | 350   | 27.3                           | 203    | 15.8                                                                | 733    | 57.1                     | 7     | 0.5             | 19    | 1.5                                                             |      |
| THAILAND    |                     | 1986 | T     | 354                            | 0.7    | 18,694                                                              | 35.5   | 4,844                    | 9.2   | -               | -     | 73                                                              | 0.1  |
|             |                     | M    | 230   | 0.9                            | 11,311 | 42.9                                                                | 3,042  | 11.5                     | -     | -               | 44    | 0.2                                                             |      |
|             |                     | F    | 124   | 0.5                            | 7,383  | 28.1                                                                | 1,802  | 6.9                      | -     | -               | 29    | 0.1                                                             |      |

(per 100,000 population)

| Pleuritis,<br>Thrombophlebitis,<br>Venous Embolism<br>and Thrombosis |      | Other Diseases of<br>Circulatory<br>System |      | Acute Upper<br>Respiratory<br>Infection |      | Acute Bronchitis<br>and Bronchiolitis |      | Pneumonia |       | Influenza |      | Bronchitis, Chronic<br>and Unspecified,<br>Emphysema and Asthma |      | Other Diseases of<br>Respiratory System |      |
|----------------------------------------------------------------------|------|--------------------------------------------|------|-----------------------------------------|------|---------------------------------------|------|-----------|-------|-----------|------|-----------------------------------------------------------------|------|-----------------------------------------|------|
| Number                                                               | Rate | Number                                     | Rate | Number                                  | Rate | Number                                | Rate | Number    | Rate  | Number    | Rate | Number                                                          | Rate | Number                                  | Rate |
| 9                                                                    | 0.01 | 55                                         | 0.03 | 37                                      | 0.02 | 128                                   | 0.07 | 1,971     | 1.14  | 0         | 0.00 | 420                                                             | 0.24 | 392                                     | 0.23 |
| 0                                                                    | 0.00 | 37                                         | 0.04 | 18                                      | 0.02 | 91                                    | 0.11 | 1,049     | 1.22  | 0         | 0.00 | 164                                                             | 0.19 | 182                                     | 0.21 |
| 9                                                                    | 0.01 | 18                                         | 0.02 | 19                                      | 0.02 | 37                                    | 0.04 | 922       | 1.07  | 0         | 0.00 | 256                                                             | 0.30 | 110                                     | 0.13 |
| 87                                                                   | 0.1  | 506                                        | 0.4  | 964                                     | 0.8  | 1,436                                 | 1.2  | 49,013    | 40.3  | 121       | 0.1  | 13,624                                                          | 11.2 | 10,738                                  | 8.8  |
| 43                                                                   | 0.1  | 318                                        | 0.5  | 420                                     | 0.7  | 727                                   | 1.2  | 27,930    | 46.8  | 47        | 0.1  | 8,743                                                           | 14.6 | 7,015                                   | 11.7 |
| 44                                                                   | 0.1  | 188                                        | 0.3  | 544                                     | 0.9  | 709                                   | 1.1  | 21,083    | 34.1  | 74        | 0.1  | 4,881                                                           | 7.9  | 3,723                                   | 6.0  |
| 4                                                                    | 0.02 | 60                                         | 0.43 | -                                       | -    | 4                                     | 0.02 | 533       | 3.90  | -         | -    | 16                                                              | 0.11 | 785                                     | 5.74 |
| 2                                                                    | 0.15 | 7                                          | 0.52 | 3                                       | 0.22 | 3                                     | 0.22 | 257       | 19.42 | -         | -    | 8                                                               | 0.60 | 86                                      | 6.50 |
| -                                                                    | -    | 6                                          | 0.38 | -                                       | -    | 1                                     | 0.06 | 64        | 4.12  | -         | -    | 3                                                               | 0.19 | 116                                     | 7.48 |
| 322                                                                  | 0.7  | 709                                        | 1.3  | 173                                     | 0.3  | 1,812                                 | 3.2  | 50,621    | 90.4  | 1,221     | 2.2  |                                                                 |      | 5,386                                   | 9.6  |
| 184                                                                  | 0.8  | 479                                        | 1.7  | 105                                     | 0.4  | 1,012                                 | 3.6  | 27,583    | 92.5  | 682       | 2.4  |                                                                 |      | 2,914                                   | 10.4 |
| 138                                                                  | 0.6  | 230                                        | 0.8  | 68                                      | 0.2  | 800                                   | 2.9  | 23,038    | 82.6  | 539       | 1.9  |                                                                 |      | 2,472                                   | 8.9  |
| 7                                                                    | 0.3  | 3                                          | 0.1  | -                                       | -    | -                                     | -    | 998       | 38.2  | 3         | 0.1  | 177                                                             | 6.8  | 764                                     | 29.2 |
| 1                                                                    | 0.1  | 3                                          | 0.2  | -                                       | -    | -                                     | -    | 513       | 38.6  | 1         | 0.1  | 106                                                             | 8.0  | 520                                     | 39.1 |
| 6                                                                    | 0.5  | -                                          | -    | -                                       | -    | -                                     | -    | 485       | 37.8  | 2         | 0.2  | 71                                                              | 5.5  | 244                                     | 19.0 |
| 3                                                                    | 0.0  | 837                                        | 1.6  | 467                                     | 0.9  | -                                     | -    | 3,319     | 6.3   | 353       | 0.7  | 842                                                             | 1.6  | 1,411                                   | 2.7  |
| 2                                                                    | 0.0  | 524                                        | 2.0  | 254                                     | 1.0  | -                                     | -    | 2,003     | 7.6   | 199       | 0.8  | 561                                                             | 2.1  | 897                                     | 3.4  |
| 1                                                                    | 0.0  | 313                                        | 1.2  | 213                                     | 0.8  | -                                     | -    | 1,316     | 5.0   | 154       | 0.6  | 281                                                             | 1.7  | 514                                     | 2.0  |

5-1 Deaths and Death Rates by Cause (ICD-9) (6)

|                        | Year | Sex | Ulcer of Stomach<br>and Duodenum |      | Appendicitis |      | Hernia of Abdominal<br>Cavity and Intestinal<br>Obstruction |      | Chronic Liver<br>Disease and<br>Cirrhosis |      | Other Diseases of<br>Digestive System |      |
|------------------------|------|-----|----------------------------------|------|--------------|------|-------------------------------------------------------------|------|-------------------------------------------|------|---------------------------------------|------|
|                        |      |     | Number                           | Rate | Number       | Rate | Number                                                      | Rate | Number                                    | Rate | Number                                | Rate |
| BRUNEI                 |      |     |                                  |      |              |      |                                                             |      |                                           |      |                                       |      |
| INDONESIA              | 1987 | T   | 27                               | 0.02 | 46           | 0.03 | 502                                                         | 0.29 | 1,077                                     | 0.62 | 1,077                                 | 0.62 |
|                        |      | M   | 27                               | 0.03 | 27           | 0.03 | 319                                                         | 0.37 | 785                                       | 0.91 | 684                                   | 0.80 |
|                        |      | F   | 0                                | 0.00 | 19           | 0.02 | 183                                                         | 0.21 | 292                                       | 0.34 | 393                                   | 0.45 |
| JAPAN                  | 1987 | T   | 3,874                            | 3.2  | 100          | 0.1  | 2,744                                                       | 2.3  | 16,672                                    | 13.7 | 13,526                                | 11.1 |
|                        |      | M   | 2,067                            | 3.5  | 58           | 0.1  | 1,217                                                       | 2.0  | 11,514                                    | 19.3 | 6,852                                 | 11.5 |
|                        |      | F   | 1,807                            | 2.9  | 42           | 0.1  | 1,527                                                       | 2.5  | 5,158                                     | 8.3  | 6,674                                 | 10.8 |
| Peninsular<br>Malaysia | 1987 | T   | 72                               | 0.52 | 7            | 0.05 | 64                                                          | 0.46 | 152                                       | 1.11 | 431                                   | 3.15 |
| MALAYSIA Sabah         | 1987 | T   | 16                               | 1.20 | 3            | 0.22 | 23                                                          | 1.73 | 23                                        | 1.73 | 87                                    | 6.57 |
| Sarawak                | 1987 | T   | 22                               | 1.41 | 4            | 0.25 | 13                                                          | 0.83 | 19                                        | 1.22 | 59                                    | 3.80 |
| PHILIPPINES            | 1986 | T   | 5,665                            | 10.1 | 306          | 0.5  | 144                                                         | 0.3  | 2,347                                     | 4.2  | 4,450                                 | 7.9  |
|                        |      | M   | 3,952                            | 14.1 | 201          | 0.7  | 119                                                         | 0.4  | 1,861                                     | 6.6  | 3,080                                 | 11.0 |
|                        |      | F   | 1,713                            | 6.1  | 105          | 0.4  | 25                                                          | 0.1  | 486                                       | 1.7  | 1,370                                 | 4.9  |
| SINGAPORE              | 1987 | T   | 58                               | 2.2  | -            | -    | 13                                                          | 0.5  | 133                                       | 5.1  | 125                                   | 4.8  |
|                        |      | M   | 34                               | 2.6  | -            | -    | 3                                                           | 0.2  | 106                                       | 8.0  | 68                                    | 5.1  |
|                        |      | F   | 24                               | 1.9  | -            | -    | 10                                                          | 0.8  | 27                                        | 2.1  | 57                                    | 4.4  |
| THAILAND               | 1986 | T   | 773                              | 1.5  | 94           | 0.2  | 129                                                         | 0.2  | 4,211                                     | 8.0  | 4,568                                 | 8.7  |
|                        |      | M   | 508                              | 1.9  | 58           | 0.2  | 80                                                          | 0.3  | 2,977                                     | 11.3 | 2,982                                 | 11.3 |
|                        |      | F   | 265                              | 1.0  | 36           | 0.1  | 49                                                          | 0.2  | 1,244                                     | 4.7  | 1,586                                 | 6.0  |

(per 100,000 population)

| Nephritis, Nephrotic Syndrome and Nephrosis |      | Infections of Kidney |      | Hyperplasia of Prostate |      | Other Diseases of Genito-urinary System |      | Abortion |      | Haemorrhage of Pregnancy and Childbirth |      | Toxaemia of Pregnancy |      | Complications of Puerperium |      |
|---------------------------------------------|------|----------------------|------|-------------------------|------|-----------------------------------------|------|----------|------|-----------------------------------------|------|-----------------------|------|-----------------------------|------|
| Number                                      | Rate | Number               | Rate | Number                  | Rate | Number                                  | Rate | Number   | Rate | Number                                  | Rate | Number                | Rate | Number                      | Rate |
| 438                                         | 0.25 | 27                   | 0.02 | 91                      | 0.05 | 137                                     | 0.08 | 55       | 0.03 | 137                                     | 0.08 | 100                   | 0.06 | 46                          | 0.03 |
| 292                                         | 0.34 | 9                    | 0.01 | 91                      | 0.11 | 73                                      | 0.09 | ..       | ..   | ..                                      | ..   | ..                    | ..   | ..                          | ..   |
| 146                                         | 0.17 | 18                   | 0.02 | ..                      | ..   | 64                                      | 0.07 | 55       | 0.06 | 137                                     | 0.16 | 100                   | 0.12 | 46                          | 0.05 |
| 14,329                                      | 11.8 | 964                  | 0.8  | 246                     | 0.2  | 1,264                                   | 1.0  | -        | -    | 63                                      | 0.1  | 19                    | 0.0  | 43                          | 0.0  |
| 7,034                                       | 11.8 | 278                  | 0.5  | 246                     | 0.4  | 447                                     | 0.8  | ..       | ..   | ..                                      | ..   | ..                    | ..   | ..                          | ..   |
| 7,295                                       | 11.9 | 686                  | 1.1  | ..                      | ..   | 817                                     | 1.3  | -        | -    | 63                                      | 0.1  | 19                    | 0.0  | 43                          | 0.1  |
| 546                                         | 3.99 | 3                    | 0.02 | 3                       | 0.02 | 180                                     | 1.31 | 4        | 0.02 | 21                                      | 0.15 | 11                    | 0.08 | 8                           | 0.05 |
| 90                                          | 6.80 | -                    | -    | 1                       | 0.07 | 16                                      | 1.20 | -        | -    | 1                                       | 0.07 | 2                     | 0.14 | 4                           | 0.28 |
| 11                                          | 0.70 | 1                    | 0.06 | 1                       | 0.06 | 27                                      | 1.74 | 3        | 0.19 | 4                                       | 0.25 | 2                     | 0.12 | -                           | -    |
| 5,273                                       | 9.4  | 365                  | 0.7  | 37                      | 0.1  | 942                                     | 1.7  | 182      | 0.3  | 132 k)                                  | 0.2  |                       |      | 1,573 l)                    | 2.8  |
| 3,104                                       | 11.4 | 216                  | 0.8  | 37                      | 0.1  | 452                                     | 1.6  | ..       | ..   | ..                                      | ..   |                       |      | ..                          | ..   |
| 2,169                                       | 7.8  | 149                  | 0.5  | ..                      | ..   | 490                                     | 1.8  | 182      | 0.7  | 132                                     | 0.5  |                       |      | 1,573                       | 5.6  |
| 277                                         | 10.6 | 11                   | 0.4  | -                       | -    | 105                                     | 4.0  | 1        | 0.0  | -                                       | -    | 1                     | 0.0  | 1                           | 0.0  |
| 135                                         | 10.1 | 5                    | 0.4  | -                       | -    | 43                                      | 3.2  | -        | -    | ..                                      | ..   | ..                    | ..   | ..                          | ..   |
| 142                                         | 11.1 | 6                    | 0.5  | ..                      | ..   | 62                                      | 4.8  | 1        | 0.1  | -                                       | -    | 1                     | 0.1  | 1                           | 0.1  |
| 2,923                                       | 5.6  | 13                   | 0.0  | 2                       | 0.0  | 319                                     | 0.6  | 33       | 0.1  | 77                                      | 0.1  | 8                     | 0.0  | 4                           | 0.0  |
| 1,644                                       | 6.2  | 7                    | 0.0  | 2                       | 0.0  | 161                                     | 0.6  | ..       | ..   | ..                                      | ..   | ..                    | ..   | ..                          | ..   |
| 1,279                                       | 4.9  | 6                    | -    | ..                      | ..   | 158                                     | 0.6  | 33       | 0.1  | 77                                      | 0.3  | 8                     | 0.0  | 4                           | 0.0  |

## 5-1 Deaths and Death Rates by Cause (ICD-9) (7)

|                        | Year | Sex | Other Direct<br>Obstetric Causes |      | All Other Indirect<br>Obstetric Causes |      | Diseases of Skin<br>and Subcutaneous<br>Tissue |      | Diseases of<br>Musculoskeletal<br>System and<br>Connective Tissue |      | Spina Bifida and<br>Hydrocephalus |      |
|------------------------|------|-----|----------------------------------|------|----------------------------------------|------|------------------------------------------------|------|-------------------------------------------------------------------|------|-----------------------------------|------|
|                        |      |     | Number                           | Rate | Number                                 | Rate | Number                                         | Rate | Number                                                            | Rate | Number                            | Rate |
| BRUNEI                 |      |     |                                  |      |                                        |      |                                                |      |                                                                   |      |                                   |      |
| INDONESIA              | 1987 | T   | 292                              | 0.17 | 18                                     | 0.01 | 100                                            | 0.06 | 55                                                                | 0.03 | 0                                 | 0.00 |
|                        |      | M   | ..                               | ..   | ..                                     | ..   | 55                                             | 0.06 | 46                                                                | 0.05 | 0                                 | 0.00 |
|                        |      | F   | 292                              | 0.34 | 18                                     | 0.02 | 43                                             | 0.04 | 9                                                                 | 0.01 | 0                                 | 0.00 |
| JAPAN                  | 1987 | T   | 16                               | 0.0  | 16                                     | 0.0  | 587                                            | 0.5  | 3,287                                                             | 2.7  | 31                                | 0.0  |
|                        |      | M   | ..                               | ..   | ..                                     | ..   | 219                                            | 0.4  | 780                                                               | 1.3  | 11                                | 0.0  |
|                        |      | F   | 16                               | 0.0  | 16                                     | 0.0  | 368                                            | 0.6  | 2,507                                                             | 4.1  | 20                                | 0.0  |
| Peninsular<br>Malaysia | 1987 | T   | 15                               | 0.10 | 2                                      | 0.01 | 16                                             | 0.11 | 32                                                                | 0.22 | 24                                | 0.17 |
| MALAYSIA Sabah         | 1987 | T   | 9                                | 0.68 | 2                                      | 0.15 | 6                                              | 0.45 | 8                                                                 | 0.60 | 2                                 | 0.15 |
| Sarawak                | 1987 | T   | 2                                | 0.12 | -                                      | -    | 2                                              | 0.12 | 4                                                                 | 0.25 | 1                                 | 0.06 |
| PHILIPPINES            | 1986 | T   |                                  |      |                                        |      | 356                                            | 0.6  | 562                                                               | 1.0  |                                   |      |
|                        |      | M   |                                  |      |                                        |      | 185                                            | 0.7  | 316                                                               | 1.1  |                                   |      |
|                        |      | F   |                                  |      |                                        |      | 171                                            | 0.6  | 246                                                               | 0.9  |                                   |      |
| SINGAPORE              | 1987 | T   | -                                | -    | -                                      | -    | 86                                             | 3.3  | 32                                                                | 1.2  | 4                                 | 0.2  |
|                        |      | M   | -                                | -    | -                                      | -    | 24                                             | 1.8  | 5                                                                 | 0.4  | 1                                 | 0.1  |
|                        |      | F   | -                                | -    | -                                      | -    | 62                                             | 4.8  | 27                                                                | 2.1  | 3                                 | 0.2  |
| THAILAND               | 1986 | T   | 204                              | 0.4  | 2                                      | 0.0  | 75                                             | 0.1  | 73                                                                | 0.1  | 9                                 | 0.0  |
|                        |      | M   | ..                               | ..   | ..                                     | ..   | 42                                             | 0.2  | 46                                                                | 0.2  | 4                                 | 0.0  |
|                        |      | F   | 204                              | 0.8  | 2                                      | 0.0  | 31                                             | 0.1  | 27                                                                | 0.1  | 5                                 | 0.0  |

(per 100,000 population)

| Congenital Anomalies of Heart & Circulatory System |      | Other Congenital Anomalies |      | Birth Trauma |      | Other Conditions Originating in the Perinatal Period |       | Senility without Mention of Psychosis |       | Signs, Symptoms and Other ill-defined Conditions |       | Accidents and Adverse Effects |       | Motor Vehicle Traffic Accidents |      |
|----------------------------------------------------|------|----------------------------|------|--------------|------|------------------------------------------------------|-------|---------------------------------------|-------|--------------------------------------------------|-------|-------------------------------|-------|---------------------------------|------|
| Number                                             | Rate | Number                     | Rate | Number       | Rate | Number                                               | Rate  | Number                                | Rate  | Number                                           | Rate  | Number                        | Rate  | Number                          | Rate |
| 37                                                 | 0.02 | 127                        | 0.07 | 0            | 0.00 | 2,227                                                | 1.29  | 0                                     | 0.00  | 1,086                                            | 0.63  | 465                           | 0.27  | 1,068                           | 0.62 |
| 27                                                 | 0.03 | 82                         | 0.10 | 0            | 0.00 | 1,195                                                | 1.39  | 0                                     | 0.00  | 593                                              | 0.69  | 274                           | 0.32  | 794                             | 0.92 |
| 10                                                 | 0.01 | 45                         | 0.05 | 0            | 0.00 | 1,032                                                | 1.19  | 0                                     | 0.00  | 493                                              | 0.57  | 191                           | 0.22  | 274                             | 0.32 |
| 1,151                                              | 1.0  | 2,525                      | 2.1  | 243          | 0.2  | 2,336                                                | 1.9   | 25,274                                | 20.8  | 3,792                                            | 3.1   | 55,671                        | 45.8  | 12,544                          | 10.3 |
| 659                                                | 1.1  | 1,282                      | 2.1  | 137          | 0.2  | 1,337                                                | 2.2   | 8,658                                 | 14.5  | 2,216                                            | 3.7   | 37,758                        | 63.2  | 9,208                           | 15.4 |
| 492                                                | 0.8  | 1,243                      | 2.0  | 106          | 0.2  | 999                                                  | 1.6   | 16,616                                | 26.9  | 1,576                                            | 2.5   | 17,913                        | 29.0  | 3,336                           | 5.4  |
| 253                                                | 1.85 | 273                        | 1.99 | 22           | 0.16 | 2,042                                                | 14.95 | 41                                    | 0.30  | 500                                              | 0.03  | 1,785                         | 13.07 | 1,274                           | 9.32 |
| 27                                                 | 2.04 | 36                         | 2.72 | 2            | 0.15 | 384                                                  | 29.02 | 10                                    | 0.75  | 71                                               | 5.36  | 162                           | 12.24 | 66                              | 4.98 |
| 7                                                  | 0.45 | 29                         | 1.87 | 1            | 0.06 | 221                                                  | 14.25 | 1                                     | 0.06  | 82                                               | 5.29  | 134                           | 8.64  | 56                              | 3.61 |
|                                                    |      |                            |      | 91           | 0.2  |                                                      |       | 12,968                                | 23.2  | 14,052                                           | 25.1  |                               |       | 1,999                           | 3.6  |
|                                                    |      |                            |      | 58           | 0.2  |                                                      |       | 5,659                                 | 20.1  | 8,709                                            | 31.0  |                               |       | 1,406                           | 5.0  |
|                                                    |      |                            |      | 33           | 0.1  |                                                      |       | 7,309                                 | 26.2  | 5,343                                            | 19.1  |                               |       | 593                             | 2.1  |
| 87                                                 | 3.3  | 80 h)                      | 3.1  | 6            | 0.2  | 122                                                  | 4.7   | 125                                   | 4.8   | 76                                               | 2.9   | 431                           | 16.5  | 233                             | 8.9  |
| 53                                                 | 4.0  | 41                         | 3.1  | 3            | 0.2  | 73                                                   | 5.5   | 43                                    | 3.2   | 41                                               | 3.1   | 342                           | 25.7  | 180                             | 13.5 |
| 34                                                 | 2.7  | 36                         | 2.8  | 7            | 0.2  | 49                                                   | 3.8   | 82                                    | 6.4   | 35                                               | 2.7   | 89                            | 6.9   | 53                              | 4.1  |
| 551                                                | 1.0  | 254                        | 0.5  | 1            | 0.0  | 2,025                                                | 3.8   | 60,231                                | 114.4 | 50,238                                           | 95.4  | 13,052                        | 24.8  | 4,208                           | 8.0  |
| 297                                                | 1.1  | 153                        | 0.6  | 1            | 0.0  | 1,183                                                | 4.5   | 28,300                                | 107.3 | 28,796                                           | 109.2 | 9,696                         | 36.8  | 3,261                           | 12.4 |
| 254                                                | 1.0  | 101                        | 0.4  | -            | -    | 842                                                  | 3.2   | 31,931                                | 121.5 | 21,442                                           | 81.5  | 3,356                         | 12.8  | 947                             | 3.6  |

5-1 Deaths and Death Rates by Cause (ICD-9) (8)

|                        | Year | Sex | Other Transport<br>Accidents |      | Accidental<br>Poisoning |      | Accidental<br>Falls |      | Accidents Caused<br>by Fire and Flames |      | Accidental Drowning<br>and Submersion |      |
|------------------------|------|-----|------------------------------|------|-------------------------|------|---------------------|------|----------------------------------------|------|---------------------------------------|------|
|                        |      |     | Number                       | Rate | Number                  | Rate | Number              | Rate | Number                                 | Rate | Number                                | Rate |
| BRUNEI                 |      |     |                              |      |                         |      |                     |      |                                        |      |                                       |      |
| INDONESIA              | 1987 | T   | 27                           | 0.02 | 119                     | 0.07 | 110                 | 0.06 | 164                                    | 0.10 | 0                                     | 0.00 |
|                        |      | M   | 27                           | 0.03 | 82                      | 0.10 | 82                  | 0.10 | 91                                     | 0.11 | 0                                     | 0.00 |
|                        |      | F   | 0                            | 0.00 | 37                      | 0.04 | 28                  | 0.03 | 73                                     | 0.08 | 0                                     | 0.00 |
| JAPAN                  | 1987 | T   | 1,218                        | 1.0  | 754                     | 0.6  | 3,836               | 3.2  | 1,081                                  | 0.9  | 2,864                                 | 2.4  |
|                        |      | M   | 1,017                        | 1.7  | 506                     | 0.8  | 2,515               | 4.2  | 657                                    | 1.1  | 1,913                                 | 3.2  |
|                        |      | F   | 201                          | 0.3  | 248                     | 0.4  | 1,321               | 2.1  | 424                                    | 0.7  | 951                                   | 1.5  |
| Peninsular<br>Malaysia | 1987 | T   | 6                            | 0.04 | 201                     | 1.47 | 90                  | 0.65 | 91                                     | 0.66 | 2                                     | 0.01 |
| MALAYSIA Sabah         | 1987 | T   | 2                            | 0.15 | 32                      | 0.41 | 16                  | 1.20 | 13                                     | 0.98 | 2                                     | 0.15 |
| Sarawak                | 1987 | T   | 7                            | 0.45 | 22                      | 1.41 | 13                  | 0.80 | 7                                      | 0.45 | 1                                     | 0.06 |
| PHILIPPINES            | 1986 | T   | 14                           | 0.0  | 191                     | 0.3  | 495                 | 0.9  | 75                                     | 0.1  | 1,758                                 | 3.3  |
|                        |      | M   | 10                           | 0.0  | 115m)                   | 0.4  | 377                 | 1.3  | 38                                     | 0.1  | 1,169                                 | 4.4  |
|                        |      | F   | 4                            | 0.0  | 76                      | 0.3  | 118                 | 0.4  | 37                                     | 0.1  | 589                                   | 2.2  |
| SINGAPORE              | 1987 | T   | 8                            | 0.3  | 13                      | 0.5  | 76                  | 2.9  | 1                                      | 0.0  | -                                     | -    |
|                        |      | M   | 6                            | 0.5  | 9                       | 0.7  | 57                  | 4.3  | -                                      | -    | -                                     | -    |
|                        |      | F   | 2                            | 0.2  | 4                       | 0.3  | 19                  | 1.5  | 1                                      | 0.1  | -                                     | -    |
| THAILAND               | 1986 | T   | 200                          | 0.4  | 180                     | 0.3  | 168                 | 0.3  | 147                                    | 0.3  | 2,406                                 | 4.6  |
|                        |      | M   | 158                          | 0.6  | 112                     | 0.4  | 133                 | 0.5  | 84                                     | 0.3  | 1,614                                 | 6.1  |
|                        |      | F   | 42                           | 0.2  | 68                      | 0.3  | 35                  | 0.1  | 63                                     | 0.2  | 792                                   | 3.0  |

(per 100,000 population)

| Accidents Caused by Machinery and by Cutting and Piercing Instruments |      | Accidents Caused by Firearm Missile |      | All Other Accidents Including Late Effects |      | Drugs, Medicaments Causing Advers Effect In Therapeutic Use |      | Suicide and Self-inflicted Injury |      | Homicide and Injury Purposely Inflicted by Other Persons |      | Other Violence |      |
|-----------------------------------------------------------------------|------|-------------------------------------|------|--------------------------------------------|------|-------------------------------------------------------------|------|-----------------------------------|------|----------------------------------------------------------|------|----------------|------|
| Number                                                                | Rate | Number                              | Rate | Number                                     | Rate | Number                                                      | Rate | Number                            | Rate | Number                                                   | Rate | Number         | Rate |
|                                                                       |      |                                     |      |                                            |      |                                                             |      |                                   |      |                                                          |      |                |      |
| 9                                                                     | 0.01 | 9                                   | 0.01 | 456                                        | 0.26 | 9                                                           | 0.01 | 27                                | 0.02 | 18                                                       | 0.01 | 0              | 0.00 |
| 9                                                                     | 0.01 | 9                                   | 0.01 | 310                                        | 0.36 | 9                                                           | 0.01 | 18                                | 0.02 | 9                                                        | 0.01 | 0              | 0.00 |
| 0                                                                     | 0.00 | 0                                   | 0.00 | 146                                        | 0.17 | 0                                                           | 0.00 | 9                                 | 0.01 | 9                                                        | 0.01 | 0              | 0.00 |
| 1,173                                                                 | 1.0  | 10                                  | 0.0  | 4,775                                      | 3.9  | 104                                                         | 0.1  | 23,831                            | 19.6 | 918                                                      | 0.8  | 2,667          | 2.2  |
| 1,050                                                                 | 1.8  | 10                                  | 0.0  | 3,248                                      | 5.4  | 56                                                          | 0.1  | 15,281                            | 25.6 | 539                                                      | 0.9  | 1,814          | 3.0  |
| 123                                                                   | 0.2  | -                                   | -    | 1,527                                      | 2.5  | 48                                                          | 0.1  | 8,550                             | 13.8 | 379                                                      | 0.6  | 853            | 1.4  |
|                                                                       |      |                                     |      |                                            |      |                                                             |      |                                   |      |                                                          |      |                |      |
| 2                                                                     | 0.01 | 7                                   | 0.05 | 111                                        | 0.81 | 1                                                           | 0.01 | 241                               | 1.76 | 37                                                       | 0.27 | 21             | 0.15 |
| 2                                                                     | 0.15 | 3                                   | 0.22 | 28                                         | 2.11 | 1                                                           | 0.07 | 24                                | 1.81 | 11                                                       | 0.83 | 3              | 0.22 |
| 1                                                                     | 0.06 | -                                   | -    | 27                                         | 1.74 | -                                                           | -    | 38                                | 2.45 | 2                                                        | 0.12 | 2              | 0.12 |
|                                                                       |      |                                     |      |                                            |      |                                                             |      |                                   |      |                                                          |      |                |      |
|                                                                       |      |                                     |      |                                            |      | 577 g)                                                      | 1.0  | 171                               | 0.3  | 199                                                      | 0.4  |                |      |
|                                                                       |      |                                     |      |                                            |      | 458                                                         | 1.6  | 98                                | 0.3  | 178                                                      | 0.6  |                |      |
|                                                                       |      |                                     |      |                                            |      | 119                                                         | 0.4  | 73                                | 0.3  | 21                                                       | 0.1  |                |      |
| -                                                                     | -    | -                                   | -    | 98                                         | 3.8  | 2                                                           | 0.1  | 302                               | 11.6 | 45                                                       | 1.7  | 153            | 5.9  |
| -                                                                     | -    | -                                   | -    | 88                                         | 6.6  | 2                                                           | 0.2  | 172                               | 12.9 | 33                                                       | 2.5  | 113            | 8.5  |
| -                                                                     | -    | -                                   | -    | 10                                         | 0.8  | -                                                           | -    | 130                               | 10.1 | 12                                                       | 0.9  | 40             | 3.1  |
| 12                                                                    | 0.0  | 65                                  | 0.1  | 5,653                                      | 10.7 | 13                                                          | 0.0  | 2,860                             | 5.4  | 5,425                                                    | 10.3 | 44             | 0.1  |
| 11                                                                    | 0.0  | 56                                  | 0.2  | 4,262                                      | 16.2 | 5                                                           | 0.0  | 1,815                             | 6.9  | 4,720                                                    | 17.9 | 30             | 0.1  |
| 1                                                                     | 0.0  | 9                                   | 0.0  | 1,391                                      | 5.3  | 8                                                           | 0.0  | 1,045                             | 4.0  | 705                                                      | 2.7  | 14             | 0.1  |

# 6-1 Number of Cases of Infections

|                     | Year | Sex | Cholera | Typhoid<br>Fever and<br>Paratyphoid<br>Fever | Typhoid<br>Fever | Paratyphoid<br>Fever | Amoebiasis<br>and<br>Bacillary<br>Dysentery | Amoebiasis |
|---------------------|------|-----|---------|----------------------------------------------|------------------|----------------------|---------------------------------------------|------------|
| (1)<br>BRUNEI       | 1987 | T   |         | 6                                            |                  |                      | 10                                          |            |
| (2)<br>INDONESIA    | 1987 | T   | 659     | -                                            | -                | -                    | -                                           | -          |
| (3)(4)<br>JAPAN     | 1987 | T   | 34      | 172                                          | 145              | 27                   | 1,275                                       | 90         |
|                     |      | M   | 20      | 102                                          | 86               | 16                   | 672                                         | 71         |
|                     |      | F   | 14      | 70                                           | 59               | 11                   | 603                                         | 19         |
| (5)<br>MALAYSIA     |      | T   | 584     | 2,962                                        | -                | -                    | -                                           | -          |
| Peninsular Malaysia | 1987 | T   | 520     | 2,237                                        | -                | -                    | -                                           | -          |
| Sabah               |      | T   | 49      | 319                                          | -                | -                    | -                                           | -          |
| Sarawak             |      | T   | 15      | 406                                          | -                | -                    | -                                           | -          |
| (6)<br>PHILIPPINES  |      | T   | -       | 13,764                                       |                  |                      |                                             |            |
|                     | 1986 | M   | -       | 8,245                                        |                  |                      |                                             |            |
|                     |      | F   | -       | 5,519                                        |                  |                      |                                             |            |
| (7)<br>SINGAPORE    |      | T   | 63      | 132                                          | 114              | 18                   |                                             |            |
|                     | 1987 | M   | 40      | 76                                           | 64               | 12                   |                                             |            |
|                     |      | F   | 23      | 56                                           | 50               | 6                    |                                             |            |
| (8)<br>THAILAND     | 1986 | T   | 213     | 7,142                                        | 7,003            | 139                  | 14,847                                      | 3,589      |

Source: (1) Ministry of Health

(2) Directorate General of CDC, Ministry of Health, Indonesia 1987

(3) *Statistics of Communicable Diseases*, Japan 1987

(4) *Statistics of Food Poisoning*, Japan 1987

(5) Health Division, Ministry of Health

(6) *Philippine Health Statistics*, 1986 Health Intelligence Service,  
Department of Health

(7) Ministry of Environment and Ministry of Health

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

Note: a) Including suspected cholera

b) Hospital surveillance system

c) Reported unusual event

d) Weekly report

e) Typhoid and paratyphoid fever and other salmonella infection

f) Viral hepatitis

| Bacillary<br>Dysentery | Food<br>Poisoning<br>(Bacterial) | Tuberculosis<br>of all<br>Forms | Leprosy | Diphtheria | Chickenpox | Infectious<br>Hepatitis | Rabies | Malaria | Influenza<br>(Grippe) |
|------------------------|----------------------------------|---------------------------------|---------|------------|------------|-------------------------|--------|---------|-----------------------|
|                        | 19                               | 189                             | 3       |            | 1,009      | 16                      |        | 23      |                       |
| -                      | -                                | 431,293                         | 119,303 | 232        | -          | 2,489                   | 637    | 19,311  |                       |
| 1,185                  | 19,207                           |                                 |         | 7          |            |                         |        | 45      |                       |
| 601                    | 9,924                            | 56,496                          | 15      | 4          |            |                         |        | 40      | 5,759                 |
| 584                    | 9,283                            |                                 |         | 3          |            |                         |        | 5       |                       |
| 955                    | 2,272                            | 9,432                           | 294     | 26         | -          | 4,529                   | -      | 33,151  | -                     |
| 955                    | 2,272                            | 9,432                           | 294     | 26         | -          | 4,529                   | -      | 33,151  | -                     |
| 955                    | 2,272                            | 9,432                           | 294     | 26         | -          | 4,529                   | -      | 33,151  | -                     |
| 955                    | 2,272                            | 9,432                           | 294     | 26         | -          | 4,529                   | -      | 33,151  | -                     |
|                        |                                  | 153,129                         | 1,815   | 1,630      | 3,121      | 14,523                  |        | 124,153 | 397,715               |
|                        |                                  | 81,158                          | 1,087   | 924        | 1,919      | 9,309                   |        | 47,043  | 185,335               |
|                        |                                  | 71,971                          | 1,728   | 706        | 1,202      | 5,214                   |        | 57,110  | 212,380               |
|                        | 614                              | 1,616                           | 44      | 1          | 4,312      | 752                     |        | 165     |                       |
|                        |                                  | 1,084                           | 29      | 1          | 2,269      | 550                     |        | 120     |                       |
|                        |                                  | 532                             | 15      |            | 2,043      | 202                     |        | 45      |                       |
| 11,258                 | 44,937                           | 20,285                          | 641     | 632        | 12,533     | 21,548                  | 219    | 111,812 | 77,825                |

## 6-2 Number of Cases of Venereal Diseases

|                     | Year | Sex | Syphilis<br>&<br>Sequelae | Congenital<br>Syphilis | Early<br>Syphilis<br>Symptomatic | Early<br>Syphilis<br>Latent | Cardio-<br>Vascular<br>Syphilis | Syphilis of<br>Central<br>Nervous<br>System | Late<br>Syphilis<br>Latent | Other Forms<br>Late Syphilis<br>with<br>Symptom | Other<br>Syphilis<br>& Not<br>Specified | Gonococcal<br>Infection | Other<br>Venereal<br>Diseases |
|---------------------|------|-----|---------------------------|------------------------|----------------------------------|-----------------------------|---------------------------------|---------------------------------------------|----------------------------|-------------------------------------------------|-----------------------------------------|-------------------------|-------------------------------|
| (1)<br>BRUNEI       | 1987 | T   | 16                        |                        |                                  |                             |                                 |                                             |                            |                                                 |                                         | 199                     | 1                             |
| (2)<br>INDONESIA    | 1987 | T   |                           |                        |                                  |                             |                                 |                                             |                            |                                                 |                                         | 9,958                   |                               |
| (3)<br>JAPAN        | 1986 | T   | 2,928                     | 45                     | 1,589                            | 362                         |                                 |                                             | 277                        | 385                                             | 270                                     | 6,528                   | 73                            |
|                     |      | M   | 1,874                     | 13                     | 1,103                            | 207                         |                                 |                                             | 163                        | 239                                             | 149                                     | 5,646                   | 70                            |
|                     |      | F   | 1,054                     | 32                     | 486                              | 155                         |                                 |                                             | 114                        | 146                                             | 121                                     | 882                     | 3                             |
| (4)<br>MALAYSIA     | 1987 | T   | 1,887                     |                        |                                  |                             |                                 |                                             |                            |                                                 |                                         | 5,409                   | 171                           |
| Peninsular Malaysia |      | T   | 1,473                     |                        |                                  |                             |                                 |                                             |                            |                                                 |                                         | 2,238                   | 160                           |
| Sabah               |      | T   | 30                        |                        |                                  |                             |                                 |                                             |                            |                                                 |                                         | 1,209                   | -                             |
| Sarawak             |      | T   | 384                       |                        |                                  |                             |                                 |                                             |                            |                                                 |                                         | 1,962                   | 11                            |
| (5)<br>PHILIPPINES  | 1986 | T   | 69                        |                        |                                  |                             |                                 |                                             |                            |                                                 |                                         |                         | 11,731                        |
|                     |      | M   | 29                        |                        |                                  |                             |                                 |                                             |                            |                                                 |                                         |                         | 2,029                         |
|                     |      | F   | 40                        |                        |                                  |                             |                                 |                                             |                            |                                                 |                                         |                         | 9,702                         |
| (6)<br>SINGAPORE    | 1987 | T   | 896                       | 17                     | 457                              | 193                         | 8                               | 7                                           | 214                        | -                                               | -                                       | 6,120                   | 4,232                         |
|                     |      | M   | 558                       | 13                     | 334                              | 80                          | 6                               | 7                                           | 118                        | -                                               | -                                       | 3,826                   | 3,509                         |
|                     |      | F   | 338                       | 4                      | 123                              | 113                         | 2                               | -                                           | 96                         | -                                               | -                                       | 2,294                   | 723                           |
| (7)<br>THAILAND     | 1986 | T   | -                         | -                      | 8,141                            |                             |                                 | -                                           | -                          | -                                               | -                                       | 55,033                  | 24,059                        |

Source: (1) Ministry of Health

(2) Directorate General of CDC, Ministry of Health, Indonesia, 1987

(3) *Statistics of Communicable Disease, Japan, 1986*

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

(5) *Philippine Health Statistics, 1986*, Health Intelligence Service, Department of Health

(6) Ministry of Health

(7) *Weekly Epidemiological Surveillance Record*, Division of Epidemiology,

# 7-1 Seasonal Distribution of Cholera (Cases)

|                     | Year | Sex | Total     | Month |      |      |      |      |      |      |      |       |      |      |      |
|---------------------|------|-----|-----------|-------|------|------|------|------|------|------|------|-------|------|------|------|
|                     |      |     |           | Jan.  | Feb. | Mar. | Apr. | May. | Jun. | Jul. | Aug. | Sept. | Oct. | Nov. | Dec. |
| (1)<br>BRUNEI       | 1987 |     |           |       |      |      |      |      |      |      |      |       |      |      |      |
| (2)<br>INDONESIA    | 1987 | T   | a)<br>659 | 1     |      | 14   | 65   | 129  | 88   | 171  | 60   | 90    | 17   | 11   | 13   |
| (3)<br>JAPAN        | 1987 | T   | 34        | 1     | 0    | 4    | 1    | 1    | 4    | 10   | 6    | 4     | 3    | 0    | 0    |
|                     |      | M   | 20        | 0     | 0    | 3    | 0    | 1    | 3    | 4    | 5    | 2     | 2    | 0    | 0    |
|                     |      | F   | 14        | 1     | 0    | 1    | 1    | 0    | 1    | 6    | 1    | 2     | 1    | 0    | 0    |
| (4)<br>MALAYSIA     |      | T   | 584       | 37    | 36   | 41   | 64   | 239  | 74   | 14   | 3    | 2     | 7    | 40   | 27   |
| Peninsular Malaysia |      | T   | 520       | 37    | 36   | 41   | 64   | 239  | 66   | 6    | 2    | 1     | 2    | 10   | 16   |
| Sabah               |      | T   | 49        |       |      |      |      |      | 8    | 8    | 1    | 1     | -    | 20   | 11   |
| Sarawak             |      | T   | 15        |       |      |      |      |      |      | -    | -    | -     | 5    | 10   | -    |
| (5)<br>PHILIPPINES  | 1986 | T   | -         | -     | -    | -    | -    | -    | -    | -    | -    | -     | -    | -    | -    |
| (6)<br>SINGAPORE    | 1987 | T   | 63        | 1     | 1    | 1    | 4    | 15   | 8    | 1    | 3    | 21    | 3    | 1    | 4    |
| (7)<br>THAILAND     | 1986 | T   | 213       | -     | -    | -    | -    | -    | -    | -    | 4    | 16    | 39   | 16   | 138  |

Source: (1) Ministry of Health

(2) Directorate General of CDC, Ministry of Health Indonesia, 1987

(3) *Statistics of Communicable Disease, Japan, 1986*

(4) Health Division, Ministry of Health

(5) *Philippine Health Statistics 1986*, Health Intelligence Service

Department of Health

(6) Ministry of Environment

(7) *Weekly Epidemiological Surveillance Record*, Division of Epidemiology

Ministry of Public Health

Note: a) Including suspected cholera

7-2 Seasonal Distribution of Typhoid Fever (Cases)

|                     | Year | Sex | Total  | Month |       |       |       |       |       |       |       |       |       |       |       |
|---------------------|------|-----|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                     |      |     |        | Jan.  | Feb.  | Mar.  | Apr.  | May.  | Jun.  | Jul.  | Aug.  | Sept. | Oct.  | Nov.  | Dec.  |
| (1)<br>BRUNEI       | 1987 |     | 6      | 0     | 0     | 0     | 0     | 0     | 2     | 0     | 0     | 3     | 0     | 0     | 1     |
| (2)a<br>INDONESIA   | 1986 | T   | 24,807 | 2,299 | 1,661 | 1,757 | 2,206 | 2,128 | 2,271 | 2,631 | 2,296 | 2,097 | 2,221 | 2,044 | 1,196 |
| (3)<br>JAPAN        | 1987 | T   | 145    | 13    | 7     | 5     | 16    | 17    | 12    | 11    | 16    | 11    | 15    | 11    | 11    |
|                     |      | M   | 86     | 8     | 6     | 4     | 8     | 10    | 5     | 8     | 8     | 8     | 12    | 3     | 6     |
|                     |      | F   | 59     | 5     | 1     | 1     | 8     | 7     | 7     | 3     | 8     | 3     | 3     | 8     | 5     |
| (4)b<br>MALAYSIA    | 1987 | T   | 1,962  | 182   | 195   | 263   | 235   | 356   | 428   | 386   | 218   | 222   | 177   | 154   | 146   |
| Peninsular Malaysia |      | T   | 2,237  | 107   | 143   | 160   | 157   | 326   | 365   | 333   | 178   | 162   | 120   | 94    | 92    |
| Sabah               |      | T   | 319    | 30    | 21    | 71    | 32    | 13    | 35    | 24    | 18    | 18    | 19    | 18    | 20    |
| Sarawak             |      | T   | 406    | 45    | 31    | 32    | 46    | 17    | 28    | 29    | 22    | 42    | 38    | 42    | 34    |
| (5)c<br>PHILIPPINES | 1986 | T   | 13,764 | 1,169 | 1,153 | 1,035 | 886   | 1,106 | 1,108 | 1,015 | 935   | 739   | 1,158 | 1,111 | 2,355 |
| (6)<br>SINGAPORE    | 1987 | T   | 114    | 23    | 7     | 2     | 6     | 6     | 6     | 12    | 11    | 22    | 10    | 7     | 2     |
| (7)<br>THAILAND     | 1986 | T   | 7,003  | 408   | 392   | 354   | 433   | 496   | 766   | 764   | 744   | 796   | 728   | 654   | 468   |

Source: (1) Ministry of Health

(2) Directorate General of CDC, Ministry of Health, 1986

(3) *Statistics of Communicable Disease, Japan, 1986*

(4) Health Division, Ministry of Health

(5) *Philippine Health Statistics*, Health Intelligence Service.  
Department of Health(6) *Weekly Epidemiological Surveillance Record*, Division of Epidemiology  
Ministry of Public Health(7) *Weekly Epidemiological Surveillance Record*, Division of Epidemiology  
Ministry of Public Health

Note: a) Including paratyphoid fever from sentinel area

b) Including paratyphoid fever

c) Including paratyphoid fever and other  
salmonella infection

### 7-3 Seasonal Distribution of Paratyphoid Fever (Cases)

|                                                           | Year | Sex         | Total          | Month       |             |             |             |             |             |             |             |             |             |             |             |
|-----------------------------------------------------------|------|-------------|----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                                                           |      |             |                | Jan.        | Feb.        | Mar.        | Apr.        | May.        | Jun.        | Jul.        | Aug.        | Sept.       | Oct.        | Nov.        | Dec.        |
| (1)<br>BRUNEI                                             |      |             |                |             |             |             |             |             |             |             |             |             |             |             |             |
| a)<br>INDONESIA                                           |      |             |                |             |             |             |             |             |             |             |             |             |             |             |             |
| (2)<br>JAPAN                                              | 1987 | T<br>M<br>F | 27<br>16<br>11 | 1<br>1<br>0 | 2<br>1<br>1 | 1<br>0<br>1 | 6<br>4<br>2 | 3<br>3<br>0 | 5<br>3<br>2 | 0<br>0<br>0 | 1<br>1<br>0 | 2<br>0<br>2 | 1<br>1<br>0 | 1<br>0<br>1 | 4<br>2<br>2 |
| a)<br>MALAYSIA<br>Peninsular Malaysia<br>Sabah<br>Sarawak | 1986 | T<br>T<br>T |                |             |             |             |             |             |             |             |             |             |             |             |             |
| a)<br>PHILIPPINES                                         | 1984 | T<br>M<br>F |                |             |             |             |             |             |             |             |             |             |             |             |             |
| (3)<br>SINGAPORE                                          | 1987 | T           | 18             | 1           | 1           | 2           | 1           | 1           | 1           | 1           | 3           |             | 4           | 3           |             |
| (4)<br>THAILAND                                           | 1986 | T           | 139            | 2           | 3           | 1           | 2           | 7           | 13          | 28          | 23          | 22          | 16          | 8           | 14          |

Source: (1) Ministry of Health

(2) *Statistics of Communicable Diseases, Japan, 1985*

(3) Ministry of Environment

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

Note: a) Included in typhoid fever (7-2)

# 7-4 Seasonal Distribution of Bacillary Dysentery (Cases)

|                     | Year | Sex | Total  | Month |      |       |       |      |       |      |      |       |      |       |      |
|---------------------|------|-----|--------|-------|------|-------|-------|------|-------|------|------|-------|------|-------|------|
|                     |      |     |        | Jan.  | Feb. | Mar.  | Apr.  | May. | Jun.  | Jul. | Aug. | Sept. | Oct. | Nov.  | Dec. |
| (1)<br>BRUNEI       | 1987 |     | 10     | 0     | 0    | 1     | 0     | 4    | 3     | 0    | 0    | 0     | 1    | 1     | 0    |
| INDONESIA           |      |     |        |       |      |       |       |      |       |      |      |       |      |       |      |
| (2)<br>JAPAN        | 1987 | T   | 1,185  | 67    | 80   | 252   | 142   | 62   | 42    | 42   | 77   | 103   | 79   | 155   | 84   |
|                     |      | M   | 601    | 41    | 39   | 120   | 87    | 31   | 15    | 20   | 43   | 54    | 35   | 69    | 47   |
|                     |      | F   | 584    | 26    | 41   | 132   | 55    | 31   | 27    | 22   | 34   | 49    | 44   | 86    | 37   |
| (3a)<br>MALAYSIA    |      | T   | 955    | 46    | 56   | 49    | 54    | 67   | 65    | 69   | 59   | 128   | 121  | 141   | 100  |
| Peninsular Malaysia | 1987 | T   | 511    | 25    | 44   | 31    | 37    | 41   | 48    | 50   | 39   | 45    | 43   | 59    | 49   |
| Sabah               |      | T   | 291    | 4     | 8    | 10    | 15    | 17   | 3     | 7    | 6    | 72    | 59   | 64    | 26   |
| Sarawak             |      | T   | 153    | 17    | 4    | 8     | 2     | 9    | 14    | 12   | 14   | 11    | 19   | 18    | 25   |
| PHILIPPINES         |      |     |        |       |      |       |       |      |       |      |      |       |      |       |      |
| SINGAPORE           |      |     |        |       |      |       |       |      |       |      |      |       |      |       |      |
| (4)<br>THAILAND     | 1986 | T   | 11,258 | 859   | 912  | 1,231 | 1,381 | 906  | 1,170 | 897  | 574  | 565   | 769  | 1,270 | 724  |

Source: (1) Ministry of Health

(2) *Statistics of Communicable Disease, Japan, 1986*

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

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

Note: a) Number of cases by dysentery, all forms

# 7-5 Seasonal Distribution of Food Poisoning (Cases)

|                     | Year | Sex | Total  | Month |       |       |       |       |       |       |       |       |       |       |       |
|---------------------|------|-----|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                     |      |     |        | Jan.  | Feb.  | Mar.  | Apr.  | May.  | Jun.  | Jul.  | Aug.  | Sept. | Oct.  | Nov.  | Dec.  |
| (1)<br>BRUNEI       | 1987 |     | 19     | 5     | 3     | 1     | 0     | 3     | 0     | 2     | 0     | 0     | 2     | 1     | 2     |
| (2)<br>INDONESIA    | 1986 | T   | 321    | -     | 8     | 97    | 20    | -     | 6     | -     | -     | 80    | -     | 21    | -     |
| (3)<br>JAPAN        | 1987 | T   | 19,207 | 68    | 561   | 579   | 559   | 1,852 | 2,077 | 3,900 | 3,546 | 3,333 | 2,453 | 199   | 80    |
| (4)<br>MALAYSIA     | 1987 | T   | 2,272  | 396   | 32    | 174   | 153   | 171   | 451   | 141   | 62    | 171   | 157   | 185   | 179   |
| Peninsular Malaysia |      | T   | 1,880  | 377   | 22    | 130   | 109   | 101   | 442   | 113   | 55    | 148   | 95    | 142   | 146   |
| Sabah               |      | T   | 283    | 7     | 8     | 17    | 27    | 69    | 7     | 13    | 6     | 10    | 56    | 43    | 20    |
| Sarawak             |      | T   | 109    | 12    | 2     | 27    | 17    | 1     | 2     | 15    | 1     | 13    | 6     | -     | 13    |
| PHILIPPINES         |      |     |        |       |       |       |       |       |       |       |       |       |       |       |       |
| (5)<br>SINGAPORE    | 1987 | T   | 614    | 69    | 117   | 102   | 25    | 11    | 42    | 19    | 20    | 32    | 131   | 22    | 24    |
| (6)<br>THAILAND     | 1986 | T   | 44,937 | 3,316 | 3,346 | 4,280 | 4,481 | 4,424 | 4,618 | 4,474 | 3,396 | 3,202 | 3,468 | 2,979 | 2,953 |

Source: (1) Ministry of Health

(2) Directorate General of CDC, Ministry of Health, Indonesia, 1986

(3) *Statistics of Food Poisoning, Japan 1986*

(4) Health Division, Ministry of Health

(5) Ministry of Environment

(6) *Weekly Epidemiology Surveillance Record*, Division of Epidemiology, Ministry of Public Health

# 8-1 Notifiable Infectious Diseases

| ICD Number |                                              | (1)    |                | (2)        |               |                  |                |                     |
|------------|----------------------------------------------|--------|----------------|------------|---------------|------------------|----------------|---------------------|
|            |                                              | Brunei | Indonesia 1987 | Japan 1987 | Malaysia 1987 | Philippines 1985 | Singapore 1987 | Thailand 1986       |
| 001        | Cholera                                      |        | V              | V          | V             | V                | V              | V                   |
| 002        | Typhoid and Paratyphoid Fevers               |        | V              | V          | V             | V                | V              | V                   |
| 003        | Other Salmonella Infections                  |        |                | V          | V             | V                |                |                     |
| 004        | Shigella                                     |        |                | V          | V             |                  |                | V                   |
| 008        | Intestinal Infections due to Other Organisms |        |                | V          |               |                  |                |                     |
| 010-018    | Tuberculosis                                 |        |                | V          | V             | V                | V              | V                   |
| 020        | Plague                                       |        | V              | V          | V             |                  | V              | V                   |
| 022        | Anthrax                                      |        |                | V          |               |                  |                | V                   |
| 030        | Leprosy                                      |        |                | V          | V             | V                | V              | V                   |
| 032        | Diphtheria                                   |        | V              | V          | V             | V                | V              | V                   |
| 033        | Whooping Cough                               |        |                | V          | V             | V                |                | V                   |
| 034        | Streptococcal Sore Throat and Scarlet Fever  |        |                | V          |               |                  |                |                     |
| 036        | Meningococcal Infection                      |        | V              | V          |               |                  |                | V                   |
| 037        | Tetanus                                      |        | V              | V          | V             | V                |                | V                   |
| 045        | Acute Poliomyelitis                          |        | V              | V          | V             | V                | V              | V                   |
| 052        | Chickenpox                                   |        |                |            |               | V                | V              | V                   |
| 055        | Measles                                      |        |                | V          | V             | V                | V              | V                   |
| 060        | Yellow Fever                                 |        | V              | V          | V             |                  | V              | V                   |
| 061        | Dengue                                       |        | a)<br>V        |            | V             | V                | V              | V                   |
| 062        | Mosquito-borne Viral Encephalitis            |        |                | V          | V             |                  | V              | V                   |
| 070        | Viral Hepatitis                              |        |                |            | V             | V                | V              | V                   |
| 071        | Rabies                                       |        | V              | V          | V             |                  |                | V                   |
| 072        | Mumps                                        |        |                |            |               |                  |                | V                   |
| 076        | Trachoma                                     |        |                |            |               |                  |                |                     |
| 081        | Other Typhus                                 |        |                | V          | V             |                  |                | (Scrub Typhus)<br>V |
| 084        | Malaria                                      |        |                | V          | V             | V                | V              | V                   |
| 087        | Relapsing Fever                              |        | V              | V          |               |                  |                |                     |

Source: (1) Directorate General of CDC, Ministry of Health, 1986

(2) Communicable Disease Control Information System Manual, Ministry of Health

| ICD Number                              | (1)    |                | (2)        |               |                  |                |               |
|-----------------------------------------|--------|----------------|------------|---------------|------------------|----------------|---------------|
|                                         | Brunei | Indonesia 1987 | Japan 1987 | Malaysia 1987 | Philippines 1985 | Singapore 1987 | Thailand 1986 |
| 090 Congenital Syphilis                 |        | V              | V          | V             | V                | V              | V             |
| 098 Gonococcal Infections               |        | V              | V          | V             | V                | V              | V             |
| 099 Other Venereal Diseases             |        | c)             | c)         | d)            |                  | e)             | e)            |
| 100 Leptospirosis                       |        | V              | V          | V             |                  | V              | V             |
| 102 Yaws                                |        |                |            |               |                  |                | V             |
| 120 Schistosomiasis [Bilharziasis]      |        | V              | V          |               | V                |                |               |
| 125 Filarial Infection and Dracontiasis |        | V              | V          | V             | V                |                |               |
| 487 Influenza                           |        | V              | V          |               | V                |                | V             |

Note: a) Only hemorrhagic fever

b) Syphilis, all forms

c) Chancroid + lymphogranuloma inguinale

d) Chancroid

e) All STDs

f) Only filariasis

### 9-1 Infectious Diseases Specified by Immunization Program

|                                   | Brunei | Indonesia 1986 | Japan 1987 | Malaysia 1986 | Philippines 1985 | Singapore 1987 | Thailand 1986 |
|-----------------------------------|--------|----------------|------------|---------------|------------------|----------------|---------------|
| Cholera                           |        |                |            |               | V                |                | V             |
| Diphtheria                        |        | V              | V          | V             | V                | V              | V             |
| Epidemic Typhus                   |        | a)<br>V        |            |               |                  |                |               |
| Measles                           |        | b)<br>V        | V          | V             | V                | V              | b)<br>V       |
| Mosquito-borne Viral Encephalitis |        |                | V          |               |                  |                |               |
| Plague                            |        |                |            |               |                  |                |               |
| Poliomyelitis                     |        | V              | V          | V             | V                | V              | V             |
| Rubella                           |        |                | V          |               |                  | V              |               |
| Tetanus                           |        | V              | V          | V             | V                | V              | V             |
| Tuberculosis (BCG)                |        | V              | V          | V             | V                | V              | V             |
| Typhoid and Paratyphoid Fever     |        |                |            |               | V                |                | V             |
| Whooping Cough                    |        | V              | V          | V             | V                | V              | V             |
| Yellow Fever                      |        | a)<br>V        |            | c)<br>V       |                  |                |               |

Note: a) Only on the occasion of outbreak

b) In restricted areas

c) Required under Institute for Medical Research

## 10 Explanatory Notes for 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<sub>15-49</sub> = 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<sub>p</sub> = Deaths due to puerperal causes(Class XI in the Eighth International Classification)

B = Number of live-births during a year

# 10-1 Crude Live-birth Rates

(per 1,000 population)

| Year                | 1970        | 1975        | 1980 | 1982 | 1983 | 1984       | 1985        | 1986        | 1987        |
|---------------------|-------------|-------------|------|------|------|------------|-------------|-------------|-------------|
| (1)<br>BRUNEI       |             |             | 31.2 | 29.7 | 28.8 | 29.3       | 30.1        | 30.6        | 30.3        |
| INDONESIA           | 43.8        | a)<br>40.2  | 35.4 | 34.3 | 33.7 | b)<br>33.2 | b)<br>32.7  | b)<br>32.2  | b)<br>31.7  |
| (2)<br>JAPAN        | 18.8        | 17.1        | 13.6 | 12.8 | 12.7 | 12.5       | 11.9        | 11.4        | 11.1        |
| (3)<br>MALAYSIA     |             |             |      |      | 30.9 | 31.3       | 31.9        | 31          | 29.5        |
| Peninsular Malaysia | 33.9        | 31.3        | 30.3 | 30.6 | 30.3 | 30.7       | 31.3        | 30.2        | 28.6        |
| Sabah               | 37.9        | 35.4        | 38.7 | 42.5 | 40.7 | 42.7       | 42.3        | 42.7        | 40.9        |
| Sarawak             | 30.4        | 29.7        | 29.4 | 28   | 28.6 | 27.5       | 28.6        | 27.7        | 28.1        |
| (4)<br>PHILIPPINES  | (5)<br>27.4 | (5)<br>28.3 | 33.6 | 33.2 | 32.9 | 32.6       | 32.2        | (5)<br>26.7 |             |
| SINGAPORE           | 22.1        | 17.8        | 17.3 | 17.3 | 16.2 | 16.4       | (6)<br>16.6 | (6)<br>14.8 | (6)<br>16.7 |
| (7)<br>THAILAND     | 31.5        | 27.4        | 22.8 | 22.2 | 21.3 | 19         | 18.8        | 18          |             |

Source: *Demographic Yearbook 1975, 1979, 1982*, UN  
*Population and Vital Statistics Report, 1980, 1981, 1982, 1983*, UN  
 (1) Birth & Death Registry and Economic Planning Unit  
 (2) *Vital Statistics Japan, 1970-87*, Ministry of Health & Welfare  
 (3) *Yearbook of Statistics, Malaysia 1987*, Department  
 of Statistics  
 (4) National Statistics Office

(5) *Philippine Health Statistics 1970, 1975, 1986*, Health Intelligence  
 Service, Department of Health  
 (6) *Monthly Digest of Statistics, July 1988*, Department of Statistics  
 (7) Health Statistics Division, Ministry of Public Health

Note: a) Estimates for 1970-75 prepared by the Population Division, UN  
 b) Calculated by Central Bureau of Statistics 1985, based on National  
 Census 1980

# 10-2 Crude Death Rates

(per 1,000 population)

| Year                | 1970       | 1975       | 1980 | 1982 | 1983 | 1984       | 1985       | 1986       | 1987     |
|---------------------|------------|------------|------|------|------|------------|------------|------------|----------|
| (1)<br>BRUNEI       |            |            | 4.0  | 3.9  | 3.5  | 3.6        | 3.6        | 3.2        | 3.3      |
| (2)<br>INDONESIA    | 18.7       | 16.7       | 12.5 | 12.3 | 11.7 | 11.3       | 11.18      | 10.87      | 10.56    |
| (3)<br>JAPAN        | 6.9        | 6.3        | 6.2  | 6.0  | 6.2  | 6.2        | 6.3        | 6.2        | 6.2      |
| MALAYSIA (4)        |            |            | 5.3  |      | 5.1  | 5.1        | 5.0        | 4.8        | 4.7      |
| Peninsular Malaysia | 7.3        | 6.4        | 5.5  | 5.2  | 5.3  | 5.3        | 5.3        | 5          | 4.9      |
| Sabah               | 5.9        | 4.3        | 4.2  | 4.7  | 4.5  | 4.3        | 4.1        | 4.1        | 4.0      |
| Sarawak             | 5.2        | 5          | 4.2  | 3.6  | 3.9  | 3.9        | 3.7        | 3.5        | 3.1      |
| (5)<br>PHILIPPINES  | (6)<br>6.7 | (6)<br>6.4 | 8.7  | 8.4  | 8.3  | 8.1        | 7.9        | (8)<br>5.8 |          |
| SINGAPORE           | 5.2        | 5.1        | 5.2  | 5.2  | 5.3  | (7)<br>5.2 | (7)<br>5.2 | (7)<br>5   | (7)<br>5 |
| (8)<br>THAILAND     | 6.2        | 5.8        | 5.3  | 5.1  | 5.1  | 4.5        | 4.4        | 4.1        |          |

Source: *Demographic Yearbook 1975, 1979, 1982*, UN

*Population and Vital Statistics Report, 1980, 1981, 1982, 1983*, UN

(1) Birth & Death Registry and Economic Planning Unit

(2) Calculated by Health Data Centre, Ministry of Health Based on 1980 Census

(3) *Vital Statistics Japan, 1970-87*, Ministry of Health & Welfare

(4) *Yearbook of Statistics, Malaysia 1986*, Department of Statistics

(5) National Statistics Office

(6) *Philippine Health Statistics 1970, 1975, 1986*, Health Intelligence Service, Department of Health

(7) *Yearbook of Statistics, Singapore 1986*, Department of Statistics

(8) Health Statistics Division, Ministry of Public Health

### 10-3 Vital Statistics Rates

(per 1,000 population)

|                     | Year         | Crude Marriage Rates | Crude Divorce Rates | Crude Birth Rates | General Fertility Rates | Crude Death Rates | Infant Mortality Rates |
|---------------------|--------------|----------------------|---------------------|-------------------|-------------------------|-------------------|------------------------|
| (1)<br>BRUNEI       | 1986         | 7.4                  | NA                  | 30.6              | 117.3                   | 3.2               | 10.0                   |
| (2)<br>INDONESIA    | 1986<br>1987 | a)<br>7.85<br>7.85   | a)<br>0.81<br>0.81  | 32.22<br>31.74    | 129.9<br>127.8          | 10.87<br>10.56    | 84.19<br>70.0          |
| (3)<br>JAPAN        | 1987         | 5.7                  | 1.30                | 11.1              | 43.7                    | 6.2               | 5.0                    |
| (4)<br>MALAYSIA     | 1986         | NA                   | NA                  | 29.5              | c)<br>123.4             | 4.7               | 15.24                  |
| Peninsular Malaysia |              | NA                   | b)<br>2.7           | 28.6              | 119.16                  | 4.9               | 15.22                  |
| Sabah               |              | NA                   | b)<br>2.2           | 40.9              | 192.21                  | 4                 | 20.27                  |
| Sarawak             |              | NA                   | b)<br>2.3           | 28.1              | 110.19                  | 3.1               | 9.52                   |
| (5)<br>PHILIPPINES  | 1986         | d)<br>6.9            | NA                  | 26.7              | 112.7                   | 5.8               | 35.0                   |
| (6)<br>SINGAPORE    | 1987         | 9.0                  | 1.0                 | 16.7              | 56.3                    | 5.0               | 7.4                    |
| (7)<br>THAILAND     | 1986         | (8)<br>7.8           | (8)<br>0.6          | 18.0              | 82.4                    | 4.1               | 9.5                    |

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, 1987*, Ministry of Health & Welfare  
 (4) *Yearbook of Statistics, Malaysia 1986*, Department of Statistics  
 (5) *Philippine Health Statistics, 1980*, Department of Health  
 (6) *Yearbook of Statistics, Singapore, 1986*, Department of Statistics  
 (7) Health Statistics Division, Ministry of Public Health  
 (8) Ministry of Interior, 1984

Note: a) Compiled by Ministry of Religious Affairs, 1985  
 Data up to 1986 are only for moslem population  
 b) For 1980: Social Statistical Bulletin, Malaysia 1981  
 c) Rate computed based on population & Birth data from the vital statistics, Malaysia 1986  
 d) National Statistics Office, 1985

# 10-4 Natality, Mortality and Natural Increase

|                     | Year | Natality (live-born) |         |         |        | General Mortality |         |         |        | Natural Increase (0/00) |
|---------------------|------|----------------------|---------|---------|--------|-------------------|---------|---------|--------|-------------------------|
|                     |      |                      | Number  |         | (0/00) | Number            |         |         | (0/00) |                         |
|                     |      | Total                | Male    | Female  |        | Total             | Male    | Female  |        |                         |
| (1)<br>BRUNEI       | 1987 | 7,088                |         |         | 30.3   | 765               |         |         | 3.3    | 27.0                    |
| (2)<br>INDONESIA    | 1986 |                      |         |         | 32.2   |                   |         |         | 10.9   | 21.3                    |
|                     | 1987 |                      |         |         | 31.7   |                   |         |         | 10.6   | 21.1                    |
| (3)<br>JAPAN        | 1987 | 1,346,658            | 692,304 | 654,354 | 11.1   | 751,172           | 408,094 | 343,078 | 6.2    | 4.9                     |
| (4)<br>MALAYSIA     | 1986 | 495,545              | 256,086 | 239,459 | 31.0   | 76,773            | 44,404  | 32,369  | 4.8    | 26.2                    |
| Peninsular Malaysia |      | 402,433              | 207,373 | 195,060 | 30.2   | 66,475            | 38,058  | 28,417  | 5.0    | 25.2                    |
| Sabah               |      | 51,410               | 26,552  | 24,858  | 42.7   | 5,114             | 3,178   | 1,936   | 4.1    | 38.6                    |
| Sarawak             |      | 41,702               | 22,161  | 19,541  | 27.7   | 5,184             | 3,168   | 2,016   | 3.5    | 24.1                    |
| (5)<br>PHILIPPINES  | 1986 | 1,493,995            | 779,644 | 714,351 | 26.7   | 326,749           | 193,118 | 133,631 | 5.8    | 20.9                    |
| (6)<br>SINGAPORE    | 1987 | 43,616               | 22,570  | 21,042  | 16.7   | 13,173            | 7,410   | 5,760   | 5.0    | 11.7                    |
| (7)<br>THAILAND     | 1986 | 945,827              | 482,972 | 462,855 | 18.0   | 218,025           | 125,086 | 92,938  | 4.1    | 13.9                    |

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

(2) Calculated by Central Bureau of Statistics, 1985, based on National Census 1980

(3) *Vital Statistics Japan 1987*, Ministry of Health & Welfare

(4) *Vital Statistics, Peninsular Malaysia, Sabah and Sarawak 1986*

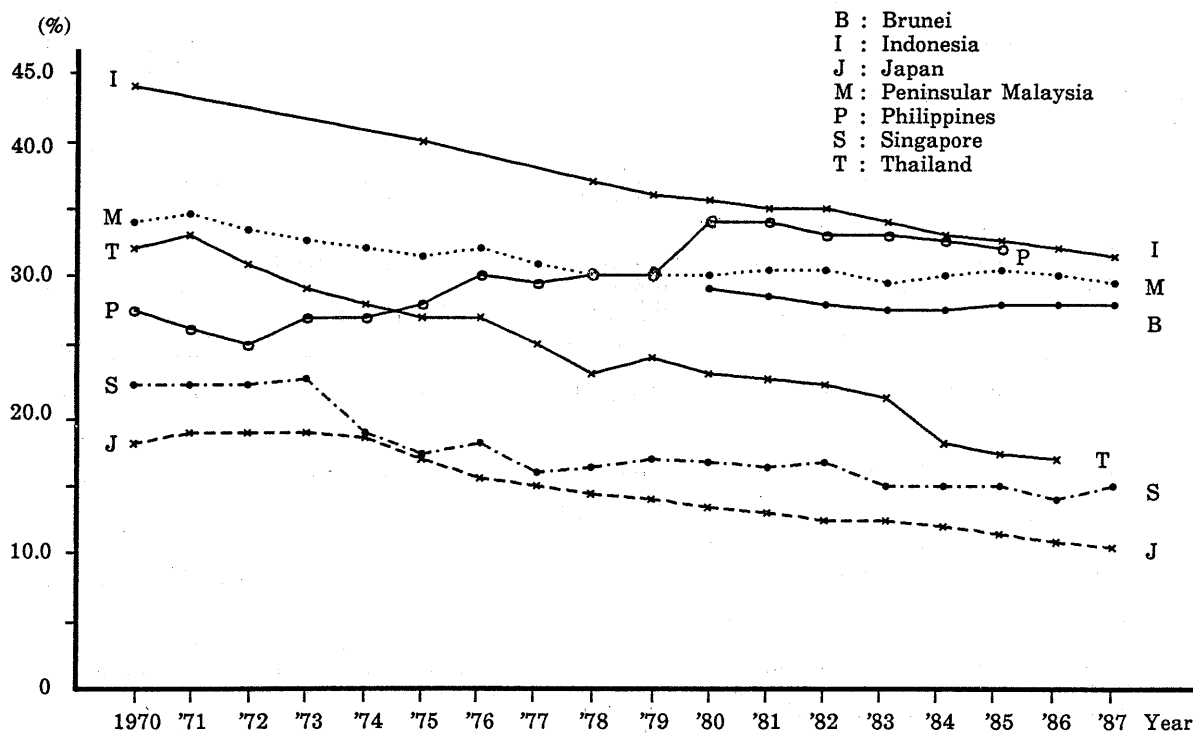
(5) *Philippine Health Statistics 1986*, Health Intelligence Service, Department of Health

(6) *Monthly Digest of Statistics, July 1988*, Department of Statistics

(7) Health Statistics Division, Ministry of Public Health

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

Fig.3 Annual Change of Crude Live-birth Rate (Per 1,000)



# 11-1 Late Fetal, Infant, Neonatal, Post-neonatal and Perinatal Mortality

|                     | Year | Late Fetal Mortality |      | Infant Mortality |      | Neonatal Mortality |      | Post-neonatal Mortality |      | Perinatal Mortality |      |
|---------------------|------|----------------------|------|------------------|------|--------------------|------|-------------------------|------|---------------------|------|
|                     |      | Number               | Rate | Number           | Rate | Number             | Rate | Number                  | Rate | Number              | Rate |
| (1)<br>BRUNEI       | 1987 |                      |      | 71               | 10.0 | 40                 | 5.6  | 31                      | 4.4  | 84                  | 11.8 |
| (2)<br>INDONESIA    | 1986 |                      |      |                  | 84.2 |                    |      |                         |      |                     |      |
|                     | 1987 |                      |      |                  | 70.0 |                    |      |                         |      |                     |      |
| (3)<br>JAPAN        | 1987 | 6,252                | 4.6  | 6,711            | 5.0  | 3,933              | 2.9  | 2,778                   | 2.1  | 9,317               | 6.9  |
| (4)<br>MALAYSIA     |      |                      |      |                  |      |                    |      |                         |      |                     |      |
| Peninsular Malaysia | 1986 | 4,218                | 10.4 | 6,239            | 15.5 | 3,881              | 9.6  | 2,358                   | 5.9  | 7,266               | 17.9 |
| Sabah               |      | 179                  | 3.5  | 1,089            | 21.2 | 749                | 14.6 | 340                     | 6.6  | 842                 | 16.3 |
| Sarawak             |      | 131                  | 3.1  | 426              | 10.2 | 288                | 6.9  | 138                     | 3.3  | 351                 | 8.4  |
| (5)<br>PHILIPPINES  | 1986 | 8,400                | 5.6  | 52,263           | 35.0 | 21,718             | 14.5 | 30,545                  | 20.4 | 24,612              | 16.5 |
| (6)<br>SINGAPORE    | 1987 | 206                  | 4.7  | 324              | 7.4  | 246                | 5.6  | 78                      | 1.8  | 397                 | 9.1  |
| (7)a<br>THAILAND    | 1986 |                      |      | 8,990            | 9.5  | 3,452              | 3.6  | 5,538                   | 5.9  | b)<br>3,028         | 3.2  |

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

(2) Ministry of Health, Indonesia 1987

(3) *Vital Statistics Japan 1987*, Ministry of Health & Welfare

(4) *Vital Statistics Peninsular Malaysia, Sabah and Sarawak 1986*,  
Department of Statistics

(5) *Philippine Health Statistics, 1986*, Health Intelligence Service, Department of Health

(6) *Singapore Demographic Bulletin, June 1987*, Department of Statistics

(7) Health Statistics Division, Ministry of Public Health

Note: a) In 1984, the vital registration system of the whole country has been revised for improvement while the registration of still birth was not emphasized for practices. So the still birth data was incomplete and not valid enough to be presented in the vital statistics.

b) Since 1984, as mentioned earlier about the abolishment of the registration of still birth, so the data on that particular item included perinatal deaths cannot be gathered completely, because the figures can only be collected from the hospital.

# 11-2 Infant Mortality by Age and Sex

|                     | Year | Sex | Number |        |       |       |        |         | Rate (per 1,000 live births) |        |     |      |        |         |
|---------------------|------|-----|--------|--------|-------|-------|--------|---------|------------------------------|--------|-----|------|--------|---------|
|                     |      |     | Total  | 1 days | 2-6   | 7-27  | 28-365 | Unknown | Total                        | 1 days | 2-6 | 7-27 | 28-365 | Unknown |
| (1)<br>BRUNEI       | 1987 | T   | 71     | 35     |       | 5     | 31     | -       | 10.0                         | 4.9    |     | 0.7  | 4.4    | -       |
| (2)<br>INDONESIA    | 1987 | T   |        |        |       |       |        |         | 70.0                         |        |     |      |        |         |
| (3)<br>JAPAN        | 1987 | T   | 6,711  | 1,575  | 1,490 | 868   | 2,748  | -       | 5.0                          | 1.2    | 1.1 | 0.6  | 2.0    | -       |
|                     |      | M   | 3,734  | 887    | 839   | 480   | 1,528  | -       | 5.4                          | 1.3    | 1.2 | 0.7  | 2.2    | -       |
|                     |      | F   | 2,977  | 688    | 651   | 388   | 1,250  | -       | 4.5                          | 1.1    | 1.0 | 0.6  | 1.9    | -       |
| (4)<br>MALAYSIA     | 1985 | T   | 6,239  |        |       |       |        |         | 15.50                        |        |     |      |        |         |
| Peninsular Malaysia |      | M   | 3,594  |        |       |       |        |         | 17.33                        |        |     |      |        |         |
|                     |      | F   | 2,645  |        |       |       |        |         | 13.56                        |        |     |      |        |         |
|                     |      | T   | 1,089  |        |       |       |        |         | 21.20                        |        |     |      |        |         |
| Sabah               |      | M   | 615    |        |       |       |        |         | 23.20                        |        |     |      |        |         |
|                     |      | F   | 474    |        |       |       |        |         | 19.10                        |        |     |      |        |         |
|                     |      | T   | 426    |        |       |       |        |         | 10.20                        |        |     |      |        |         |
| Sarawak             |      | M   | 253    |        |       |       |        |         | 11.40                        |        |     |      |        |         |
|                     |      | F   | 173    |        |       |       |        |         | 8.90                         |        |     |      |        |         |
| (5)<br>PHILIPPINES  | 1986 | T   | 52,263 | 16,212 |       | 5,506 | 30,545 | 0       | 35.0                         | 10.9   |     | 3.7  | 20.4   | 0       |
| (6)<br>SINGAPORE    | 1986 | T   | 359    | 150    | 43    | 55    | 111    | -       | 9.4                          | 3.9    | 1.1 | 1.5  | 2.9    | -       |
|                     |      | M   | 192    | 84     | 27    | 30    | 51     | -       | 9.6                          | 4.2    | 1.3 | 1.5  | 2.6    | -       |
|                     |      | F   | 166    | 66     | 16    | 24    | 60     | -       | 9.0                          | 3.6    | 0.9 | 1.3  | 3.2    | -       |
| (7)<br>THAILAND     | 1986 | T   | 8,990  | 1,217  | 1,062 | 1,173 | 4,869  | 669     | 9.5                          | 1.3    | 1.1 | 1.2  | 5.2    | 0.7     |
|                     |      | M   | 5,156  | 660    | 659   | 696   | 2,774  | 367     | 10.7                         | 1.4    | 1.4 | 1.4  | 5.7    | 0.8     |
|                     |      | F   | 3,834  | 557    | 403   | 477   | 2,095  | 302     | 8.3                          | 1.2    | 0.9 | 1.0  | 4.5    | 0.6     |

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 1987, Ministry of Health and Welfare

(4) Vital Statistics, Peninsular Malaysia, Sabah and Sarawak 1986, Department Statistics, Malaysia

(5) Health Intelligence Service, Department of Health

(6) Report on Registration of Births and Deaths, Singapore 1986

(7) Health Statistics Division, Ministry of Public Health

### 11-3 Maternal Mortality Rates

(per 100,000 live births)

|                     | 1970       | 1975       | 1980 | 1982 | 1983 | 1984 | 1985 | 1986         | 1987 |
|---------------------|------------|------------|------|------|------|------|------|--------------|------|
| (1)<br>BRUNEI       |            |            | 70   | 50   | 70   | 50   | -    | -            | 10   |
| INDONESIA           |            |            |      |      |      |      |      |              |      |
| (2)<br>JAPAN        | 50.0       | 28.7       | 20.5 | 18.4 | 15.4 | 15.3 | 15.8 | 13.5         | 12.0 |
| MALAYSIA (3)a       |            |            |      |      |      |      |      |              |      |
| Peninsular Malaysia | 148        | 83         | 63   | 50   | 40   | 39   | 37   | 30           |      |
| Sabah               | 11         | 72         | 107  | 17   | 17   | 20   | 19   | 10           |      |
| Sarawak             | 90         | 20         | 50   | 18   | 20   | 30   | 10   | 12           |      |
| (4)<br>PHILIPPINES  | (5)<br>190 | (5)<br>140 | 110  | 140  | 100  | 90   | 90   | (5)<br>105.3 |      |
| (6)b<br>SINGAPORE   | 32.7       | 30         | 4.9  | 11.7 | 14.8 | 12.0 | 4.7  | 13.0         | 4.6  |
| (7)<br>THAILAND     | 226.1      | 171.7      | 98.5 | 69.6 | 63.5 | 48   | 42   | 34.7         |      |

Source: *Demographic Yearbook 1982*, UN

(1) Birth & Death Registry and Economic Planning Unit

(2) *Vital Statistics Japan, 1970-87*, Ministry of Health and Welfare

(3) *Vital Statistics, Peninsular Malaysia, Sabah and Sarawak (Respective years)*

(4) Projections by Department of Health

(5) *Philippine Health Statistics 1986*, Intelligent Service, Department of Health

(6) *Report on the Registration of Births and Deaths*

(7) Health Statistics Division, Ministry of Public Health

Note: a) Medically certified or inspected deaths only

b) Data based on ICD 9, 1975 Revision

## 12-1 Expectation of Life at Specified Ages for Each Sex

|                            | Year      | Sex    | Age            |                |                |                |                |                |                |                |                |
|----------------------------|-----------|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|                            |           |        | 0              | 1              | 2              | 3              | 4              | 5              | 10             | 15             | 20             |
| (1)<br>BRUNEI              | 1981      | M<br>F | 70.1<br>72.7   | 70.3<br>72.7   |                |                |                | 66.7<br>69.0   | 61.9<br>64.1   | 57.1<br>59.3   | 52.4<br>54.5   |
| (2)<br>INDONESIA           | 1986      | M<br>F | 58.84<br>62.50 | 62.54<br>65.48 |                |                |                | 60.29<br>63.17 | 55.86<br>58.72 | 51.26<br>54.11 | 46.85<br>49.64 |
| (3)<br>JAPAN               | 1987      | M<br>F | 75.61<br>81.39 | 75.01<br>80.76 | 74.07<br>79.81 | 73.12<br>78.85 | 72.15<br>77.87 | 71.17<br>76.89 | 66.25<br>71.94 | 61.31<br>66.98 | 56.50<br>62.05 |
| MALAYSIA                   |           |        |                |                |                |                |                |                |                |                |                |
| (4)<br>Peninsular Malaysia | 1985      | M      | 67.93          | 68.28          |                |                |                | 64.67          | 59.89          | 55.06          | 50.42          |
| Sabah                      |           | F      | 72.95          | 73.07          |                |                |                | 69.45          | 64.64          | 59.79          | 54.97          |
| Sarawak                    |           |        |                |                |                |                |                |                |                |                |                |
| (5)<br>PHILIPPINES         | 1986      | M<br>F | 61.6<br>65.2   | 64.6<br>67.6   | 64.2<br>67.2   | 63.5<br>66.4   | 62.7<br>65.6   | 61.9<br>64.8   | 57.4<br>60.2   | 52.7<br>55.5   | 48.2<br>51.0   |
| (6)<br>SINGAPORE           | 1987      | M<br>F | 71.4<br>76.3   | 71.1<br>75.9   |                |                |                | 67.2<br>72.0   | 62.3<br>67.2   | 57.4<br>62.1   | 52.6<br>57.2   |
| (7)<br>THAILAND            | 1985-1986 | M<br>F | 63.82<br>68.85 | 66.31<br>70.91 |                |                |                | 62.88<br>67.27 | 58.28<br>62.68 | 53.48<br>58.01 | 48.86<br>53.43 |

Source: (1) *Brunei Statistical Yearbook 1986*

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

(3) *The 40th Abridged Life Table for Japan 1987*, Ministry of Health & Welfare, Japan

(4) *Abridged Life Table 1985*, Department of Statistics, Malaysia

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

(6) *Abridged Life Table 1987*, 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  | 43.2  | 38.5  | 33.9  | 29.4  | 25.1  | 21.1  | 17.3  | 13.7  | 10.6  | 7.6   | 5.7  | 4.2  |      |      |
| 49.7  | 44.9  | 40.1  | 35.4  | 31.0  | 26.6  | 22.7  | 19.2  | 16.1  | 12.9  | 10.0  | 7.2  | 5.2  |      |      |
| 42.61 | 38.35 | 34.10 | 29.90 | 25.83 | 21.93 | 18.27 | 14.89 | 11.84 | 9.15  | 6.83  | 4.87 |      |      |      |
| 45.30 | 40.90 | 36.71 | 32.47 | 28.29 | 24.20 | 20.28 | 16.56 | 13.15 | 10.10 | 7.50  | 5.32 |      |      |      |
| 51.71 | 46.90 | 42.10 | 37.35 | 32.71 | 28.21 | 23.95 | 19.94 | 16.12 | 12.56 | 9.43  | 6.88 | 4.95 | 3.51 | 2.46 |
| 57.15 | 52.26 | 47.38 | 42.54 | 37.77 | 33.07 | 28.49 | 24.00 | 19.67 | 15.55 | 11.77 | 8.50 | 5.89 | 3.92 | 2.51 |
| 45.86 | 41.29 | 36.67 | 32.12 | 27.72 | 23.49 | 19.63 | 16.15 | 13.19 | 10.49 | 8.76  | 7.21 |      |      |      |
| 50.17 | 45.40 | 40.67 | 35.98 | 31.42 | 26.96 | 22.79 | 18.85 | 15.44 | 12.30 | 10.13 | 8.3  |      |      |      |
| 43.8  | 39.4  | 35.1  | 30.8  | 26.6  | 22.5  | 18.8  | 15.3  | 12.2  | 9.4   | 7.0   | 5.0  |      |      |      |
| 46.5  | 42.1  | 37.7  | 33.3  | 29.0  | 24.8  | 20.8  | 17.0  | 13.5  | 10.4  | 7.7   | 5.5  |      |      |      |
| 47.8  | 43.1  | 38.3  | 33.6  | 29.0  | 24.6  | 20.6  | 17.0  | 13.7  | 10.8  | 8.3   | 6.1  | 4.2  |      |      |
| 52.3  | 47.5  | 42.7  | 37.9  | 33.2  | 28.6  | 24.2  | 20.1  | 16.3  | 12.8  | 10.0  | 7.1  | 4.5  |      |      |
| 44.30 | 40.01 | 35.68 | 31.34 | 27.07 | 22.99 | 19.09 | 15.52 | 12.53 | 9.69  | 7.49  | 5.2  |      |      |      |
| 48.84 | 44.24 | 39.63 | 35.05 | 30.62 | 26.23 | 22.12 | 18.56 | 15.15 | 12.03 | 9.33  | 6.17 |      |      |      |

12-2 Survivors at Specified Ages for Each Sex

|                     | Year | Sex | Age     |        |        |        |        |        |        |        |
|---------------------|------|-----|---------|--------|--------|--------|--------|--------|--------|--------|
|                     |      |     | 0       | 1      | 5      | 10     | 15     | 20     | 25     | 30     |
| (1)<br>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)<br>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)<br>JAPAN        | 1987 | M   | 100,000 | 99,464 | 99,248 | 99,134 | 99,044 | 98,726 | 98,346 | 97,957 |
|                     |      | F   | 100,000 | 99,548 | 99,390 | 99,328 | 99,260 | 99,149 | 98,983 | 98,792 |
| (4)<br>MALAYSIA     |      |     |         |        |        |        |        |        |        |        |
| Peninsular Malaysia | 1985 | M   | 100,000 | 98,193 | 97,646 | 97,302 | 96,990 | 96,368 | 95,474 | 94,558 |
| Sabah<br>Sarawak    |      | F   | 100,000 | 98,593 | 98,087 | 97,819 | 97,604 | 97,306 | 96,920 | 96,467 |
| (5)<br>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)<br>SINGAPORE    | 1987 | M   | 100,000 | 99,063 | 98,865 | 98,738 | 98,567 | 98,227 | 97,715 | 97,193 |
|                     |      | F   | 100,000 | 99,222 | 99,092 | 98,996 | 98,875 | 98,698 | 98,465 | 98,189 |
| THAILAND            |      |     |         |        |        |        |        |        |        |        |

Source: (1) *Brunei Statistical Yearbook 1986*

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

(3) *Abridged Life Table 1986*, Ministry of Health & Welfare(4) *Abridged life table 1985*, Department of Statistics, Malaysia

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

(6) *Abridged Life Table 1985*, Ministry of Health

| Age              |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                |
|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|----------------|
| 35               | 40               | 45               | 50               | 55               | 60               | 65               | 70               | 75               | 80               | 85               | 90               | 95+            |
| 94,297<br>96,065 | 93,386<br>95,306 | 91,805<br>93,927 | 89,627<br>91,624 | 85,842<br>87,809 | 80,563<br>81,701 | 73,601<br>73,207 | 62,993<br>64,942 | 50,187<br>53,999 | 31,312<br>41,422 | 14,851<br>25,421 |                  |                |
| 82,663<br>84,988 | 80,602<br>83,137 | 77,956<br>80,939 | 74,440<br>78,183 | 69,636<br>74,460 | 63,159<br>69,465 | 54,542<br>62,405 | 43,755<br>52,768 | 31,158<br>40,095 | 18,314<br>25,602 |                  |                  |                |
| 97,525<br>98,553 | 96,905<br>98,198 | 95,915<br>97,642 | 94,344<br>96,794 | 91,664<br>95,505 | 87,609<br>93,623 | 82,037<br>90,802 | 74,061<br>86,319 | 62,361<br>78,838 | 45,839<br>66,174 | 26,985<br>47,049 | 11,385<br>24,908 | 2,913<br>7,789 |
| 93,603<br>95,890 | 92,435<br>95,110 | 90,660<br>93,900 | 87,983<br>92,170 | 83,434<br>89,246 | 76,864<br>84,964 | 66,956<br>77,614 | 55,210<br>67,977 | 39,401<br>53,014 | 25,690<br>37,613 |                  |                  |                |
| 85,846<br>87,981 | 84,084<br>86,339 | 81,758<br>84,457 | 78,537<br>81,925 | 73,998<br>78,436 | 67,661<br>73,646 | 59,044<br>66,771 | 47,978<br>57,104 | 34,726<br>44,057 | 20,861<br>28,685 |                  |                  |                |
| 96,626<br>97,773 | 95,787<br>97,286 | 94,554<br>96,491 | 92,510<br>95,197 | 88,663<br>92,898 | 82,388<br>89,320 | 73,523<br>83,581 | 61,964<br>75,301 | 47,605<br>63,403 | 32,310<br>48,090 | 17,094<br>31,389 |                  |                |
|                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                  |                |

Fig.4 Survivors at Specified Ages for Each Sex (1)  
Japan, 1987

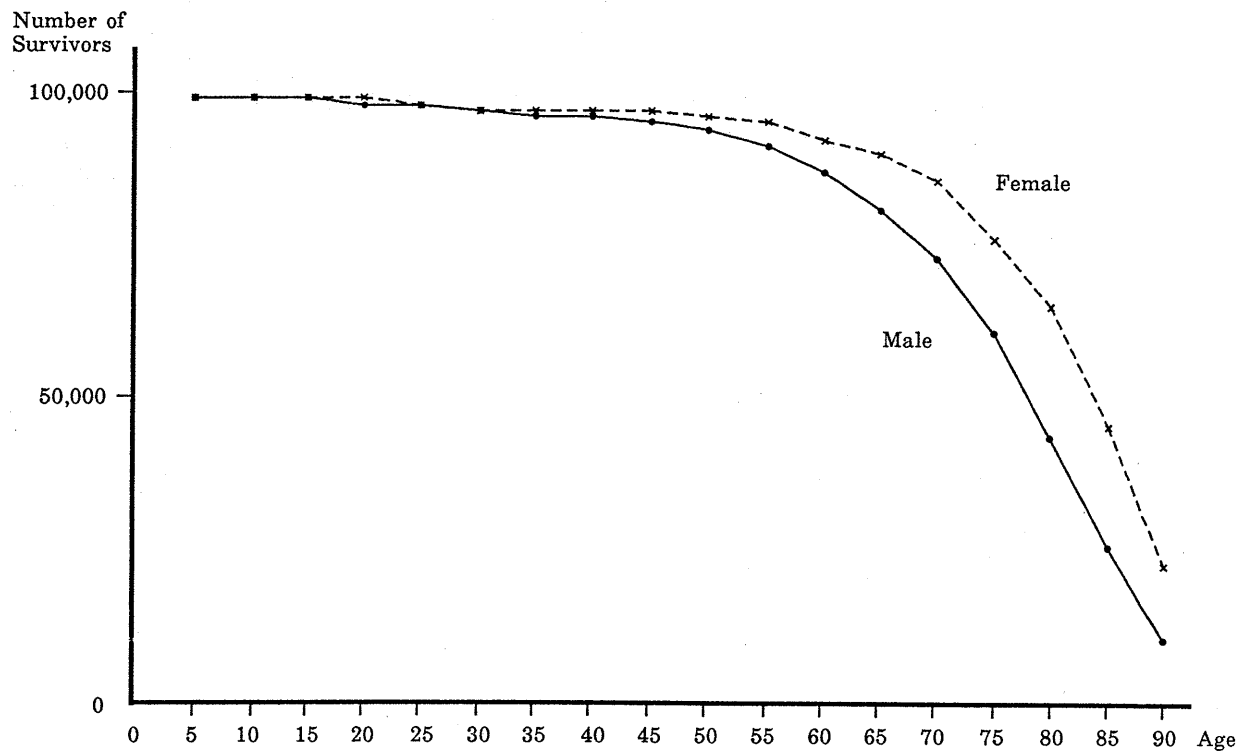


Fig.4 Survivors at Specified Ages for Each Sex (2)  
Peninsular Malaysia, 1985

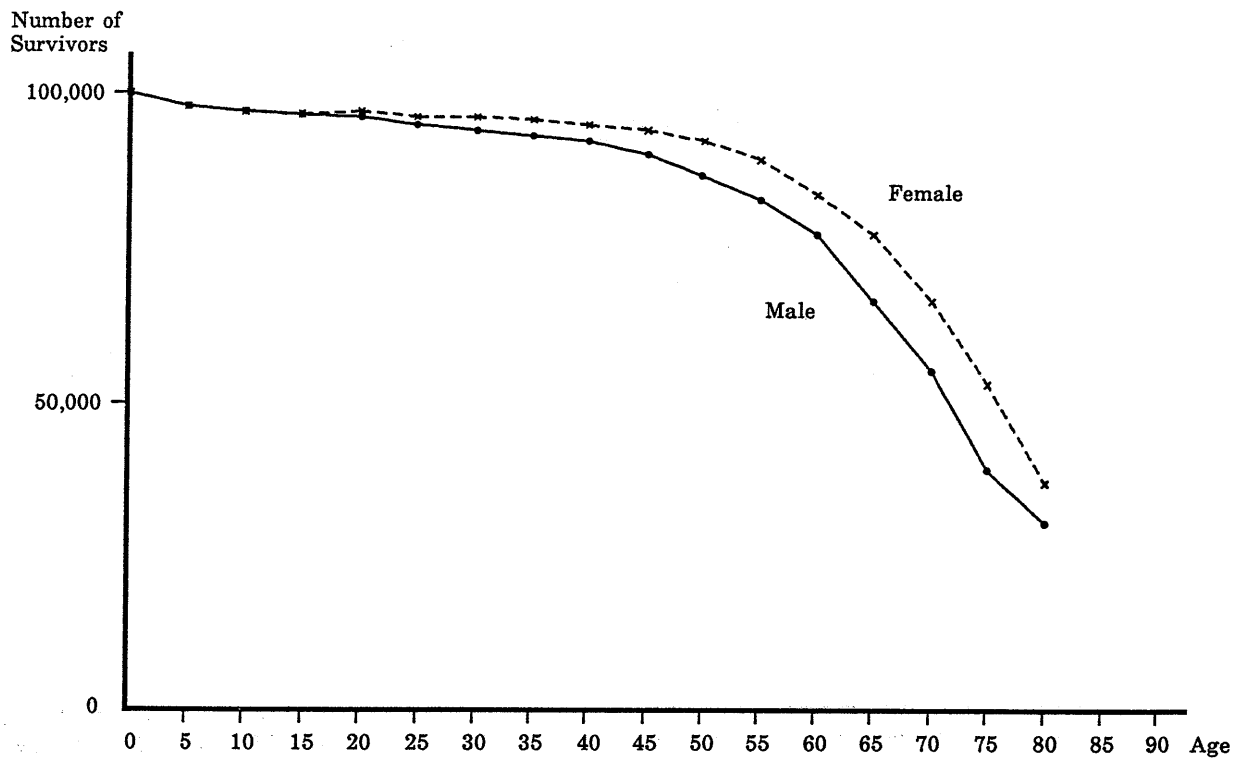


Fig.4 Survivors at Specified Ages for Each Sex (3)  
Singapore, 1987

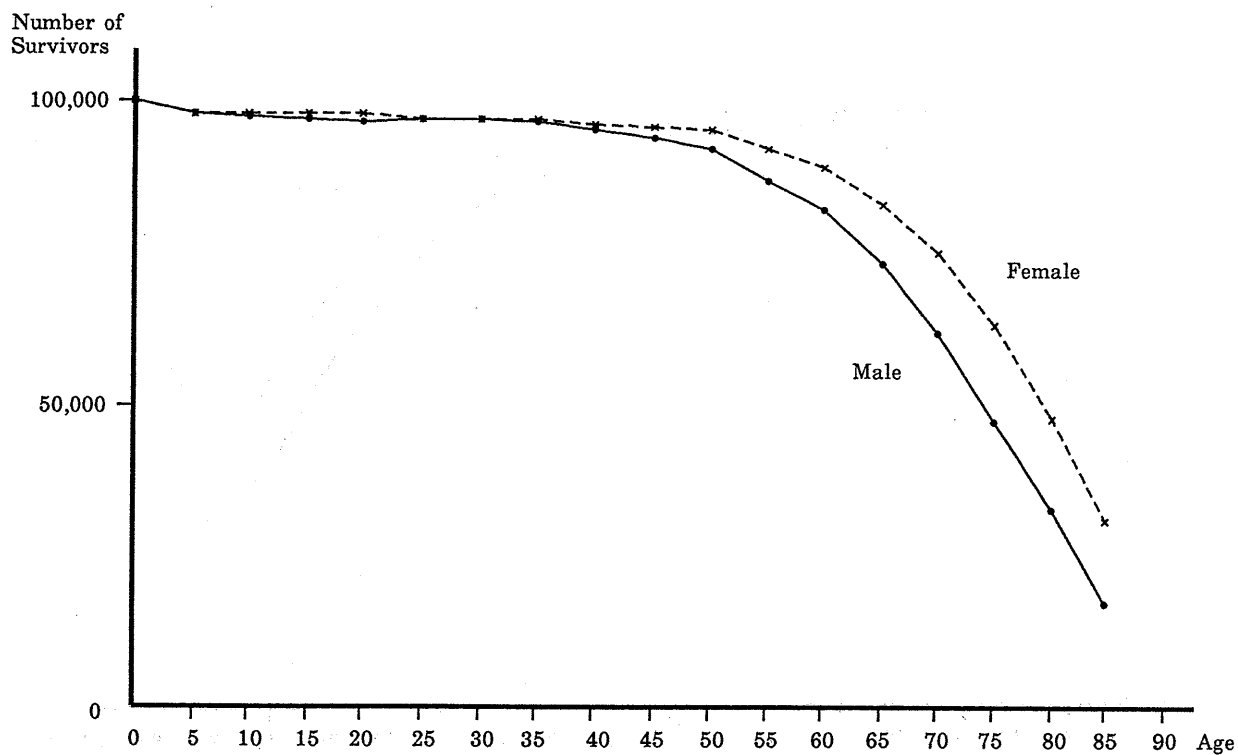


Fig.4 Survivors at Specified Ages for Each Sex (4)  
Indonesia, 1986

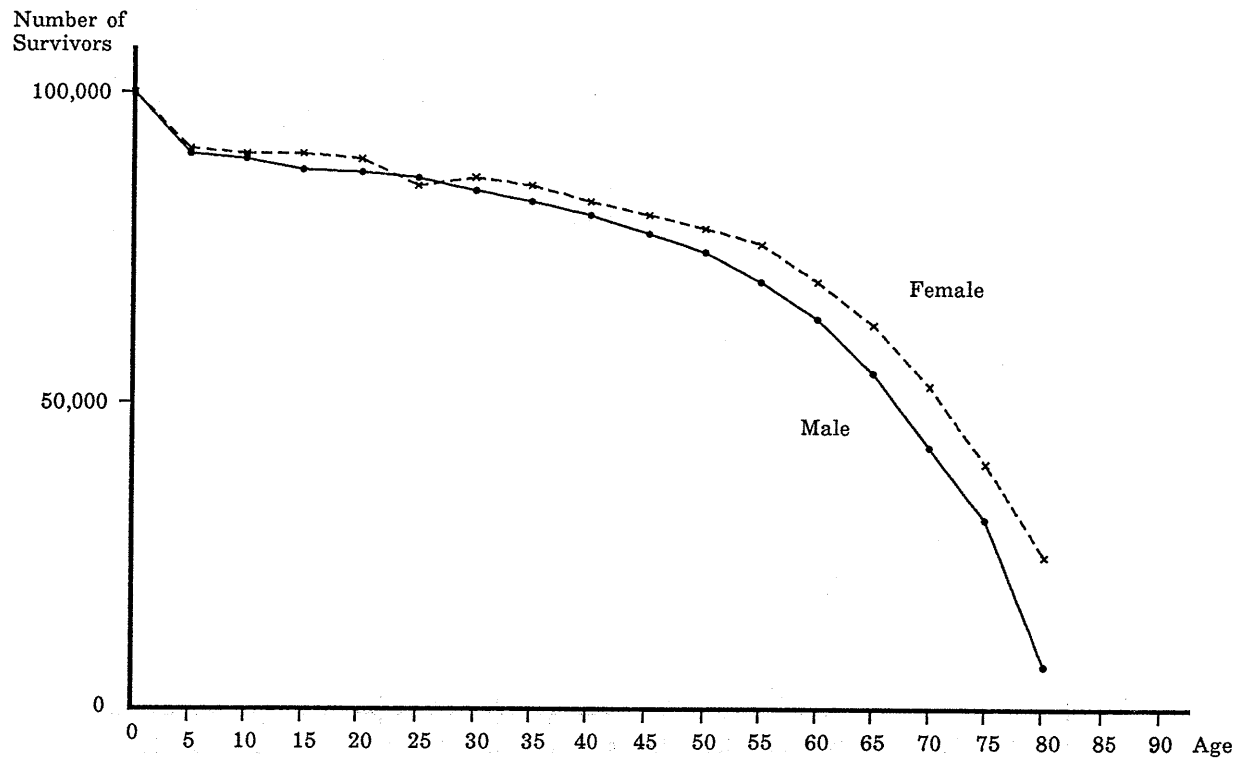


Fig.4 Survivors at Specified Ages for Each Sex (5)  
Philippines, 1986

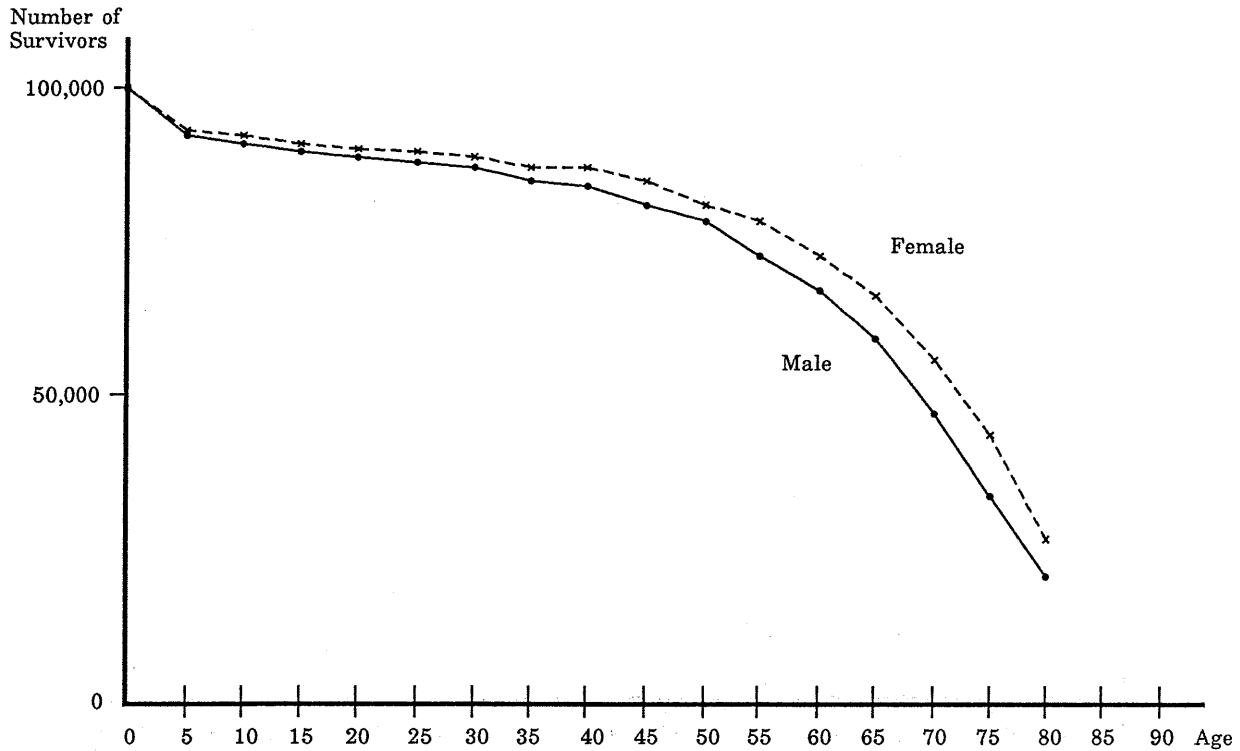
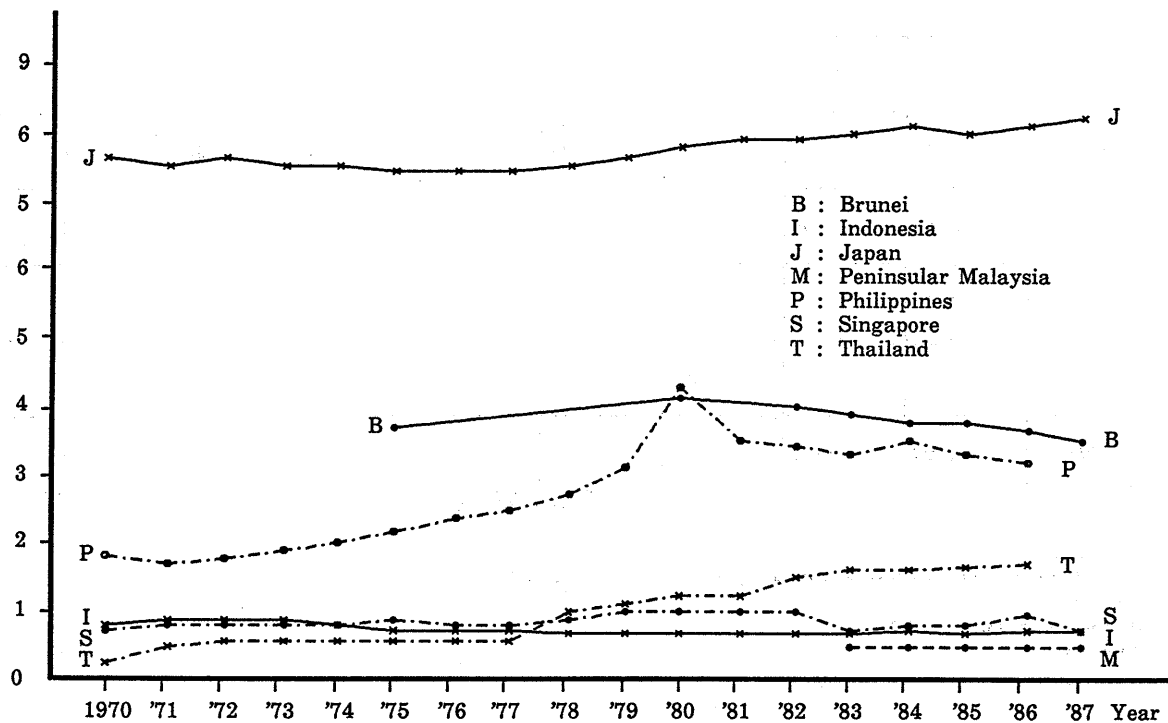


Fig.5 Annual Change of Number of Hospitals (Per 100,000 population)



13-1 Per Capita Food Intake (1)

|                   | Year | Energy (k cal/day) |                    |                 | Protein (g/day) |                    |                 | Fat (g/day) |                    |                 |
|-------------------|------|--------------------|--------------------|-----------------|-----------------|--------------------|-----------------|-------------|--------------------|-----------------|
|                   |      | Total              | Vegetable Products | Animal Products | Total           | Vegetable Products | Animal Products | Total       | Vegetable Products | Animal Products |
| BRUNEI            |      |                    |                    |                 |                 |                    |                 |             |                    |                 |
| (1)<br>INDONESIA  | 1985 | 2,519              | 2,458              | 61              | 52.7            | 46.5               | 6.5             | 46.1        | 42.5               | 3.7             |
| (2)<br>JAPAN      | 1986 | 2,075              |                    |                 | 79              | 39                 | 40              | 57          | 29                 | 28              |
| MALAYSIA          | 1977 | a)<br>2,549        | a)<br>2,195        | a)<br>354       | 57.6            | 35.7               | 21.9            | 45.5        | 29.2               | 16.3            |
| (3)<br>PHILIPPINE | 1981 | 2,420              |                    |                 |                 | 54                 |                 |             |                    |                 |
| (4)<br>SINGAPORE  | 1983 | 2,922              | 2,266              | 657             | 71.8            | 39.0               | 32.8            | 70.1        | 21.6               | 48.5            |
| THAILAND          | 1977 | 2,098              | 1,952              | 146             | 46              | 32                 | 14              | 23          | 14                 | 9               |

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

(1) *Welfare Indonesia 1987*, Central Bureau of Statistics

(2) *Japan Statistical Yearbook 1988*, Statistical Bureau, Management & Coordination Agency

(3) Form Actual Food Consumption Surveys (Food weighing Technique), Food and Nutrition Research Institute

(4) *Food Supplies Analysis*, FAO, 1984

Note: a) For 1982

13-1 Per Capita Food Intake (2)

(mg/day)

|                      | Year | Calcium | Iron | Vitamin A   | Vitamin B1 | Vitamin B2 | Vitamin C |
|----------------------|------|---------|------|-------------|------------|------------|-----------|
| BRUNEI               |      |         |      |             |            |            |           |
| INDONESIA            | 1983 | 215     | 10.0 | a)<br>1,096 | 1.18       | -          | 142       |
| JAPAN <sup>(2)</sup> | 1986 | 551     | 11   | a)<br>2,169 | 1.4        | 1.3        | 124       |
| MALAYSIA             | 1977 | 330     | 13.5 | 135         | 0.87       | 0.79       | 44        |
| PHILIPPINE           | 1982 | 450     | 16.8 |             | 0.74       | 0.58       | 62        |
| SINGAPORE            | 1977 | 656     | 21.8 | 269         | 1.59       | 1.38       | 76        |
| THAILAND             | 1977 | 243     | 13.9 | 73          | 0.87       | 0.64       | 60        |

Note: a) Unit=i.u.

## 14-1 Housing Conditions

(%)

|             | Year |                     | Percentage of Households in Occupied Dwelling Units with Piped Water | Percentage of Households in Occupied Dwelling Units by Type of Toilet Facilities |                       |       |      | Lighting    |                    |          |       |
|-------------|------|---------------------|----------------------------------------------------------------------|----------------------------------------------------------------------------------|-----------------------|-------|------|-------------|--------------------|----------|-------|
|             |      |                     |                                                                      | Flush/ Water                                                                     | Pit or Moulded Bucket | Other | None | Electricity | Pressure/ Gas Lamp | Oil Lamp | Other |
| BRUNEI      |      |                     |                                                                      |                                                                                  |                       |       |      |             |                    |          |       |
| (1)         |      | Total               | (2)                                                                  | (2)                                                                              | (2)                   |       |      |             |                    |          |       |
| INDONESIA   | 1985 | Total               | 10.8                                                                 | 14.9                                                                             | 19.7                  | 65.3  | -    | 30.5        | -                  | 68.8     | 0.8   |
|             |      | Urban               | 32.4                                                                 | 38.4                                                                             | 17                    | 44.6  | -    | 72.8        | -                  | 26.9     | 0.2   |
|             |      | Rural               | 3.3                                                                  | 6.8                                                                              | 20.7                  | 72.5  | -    | 15.9        | -                  | 83.1     | 0.9   |
| (3)         |      | Total               | 94                                                                   | 58.5                                                                             | 41.5                  |       |      |             |                    |          |       |
| JAPAN       | 1983 | Urban               | 95.9                                                                 | 67                                                                               | 33                    |       |      |             |                    |          |       |
| (4)         |      | Total               | 65                                                                   | 56.4                                                                             | 22.7                  | 4.4   | 16.5 | 64.4        | 8.4                | 26.5     | 0.7   |
| MALAYSIA    | 1980 | Total               | 68                                                                   | 60.7                                                                             | 21.7                  | 3.6   | 14.7 | 68.4        | 7.3                | 23.6     | 0.7   |
|             |      | Peninsular Malaysia | 50.3                                                                 | 32.1                                                                             | 32.9                  | 8.1   | 26.9 | 45          | 15.7               | 28.7     | 0.6   |
|             |      | Sabah               | 47.8                                                                 | 56.4                                                                             | 22.7                  | 4.4   | 16.5 | 41.6        | 13.2               | 44.5     | 0.7   |
|             |      | Sarawak             | 71.4                                                                 | 67.9                                                                             | 16.0                  |       | 16.1 | 57          |                    |          |       |
| (5)         |      | Total               | 71.4                                                                 | 67.9                                                                             | 16.0                  |       | 16.1 | 57          |                    |          |       |
| PHILIPPINES | 1985 | Urban               | 85.1                                                                 | 79.4                                                                             | 10.3                  |       | 10.3 | 85.4        |                    |          |       |
|             |      | Rural               | 60.6                                                                 | 58.8                                                                             | 70.6                  |       | 20.7 | 39.7        |                    |          |       |
| (6)         |      | Total               | 99                                                                   | 96                                                                               | 4                     |       |      | 95          | 5                  |          |       |
| SINGAPORE   | 1987 | Total               | 99                                                                   | 96                                                                               | 4                     |       |      | 95          | 5                  |          |       |
| (7)         |      | Total               | 18.9                                                                 | 4.2                                                                              | 50.3                  | 44.1  | 1.3  | 43          | 0.7                | 54.8     | 0.2   |
| THAILAND    | 1980 | Total               | 18.9                                                                 | 4.2                                                                              | 50.3                  | 44.1  | 1.3  | 43          | 0.7                | 54.8     | 0.2   |

Source: (1) *Welfare Indicators 1986*, Central Bureau of Statistics

(2) 1985 Inter Censal Population Survey

(3) *1983 Housing Survey of Japan, Vol. 1. Part 1*, Statistics Bureau, March 1985(4) *Census of Housing, Malaysia 1980 Summary Report*, Department of Statistics Malaysia, July 1982

(5) Family Income &amp; Expenditure Survey, 1985, National Statistics Office

(6) Public Utilities Board and Ministry of Environment

(7) *1980 Population & Housing Census*, Whole Kingdom, National Statistical Office

Note: a) For 1982

15-1 Mean Length from Birth to One Year

(cm)

|          | People or Place | Year     | Sex | Age   |      |      |      |      |       |
|----------|-----------------|----------|-----|-------|------|------|------|------|-------|
|          |                 |          |     | Birth | 4wks | 3mos | 6mos | 9mos | 12mos |
| BRUNEI   |                 |          |     |       |      |      |      |      |       |
| (1)      | INDONESIA       | Bogor    | M   | 49.7  | 53.8 | 60.4 | 66.6 | 70.3 | 73.3  |
|          |                 |          | F   | 49.1  | 52.9 | 58.9 | 64.5 | 68.5 | 71.9  |
|          |                 |          | T   | 49.4  | 53.5 | 59.7 | 65.6 | 69.4 | 72.6  |
| (2)      | JAPAN           | National | M   | 49.7  | 56.0 | 62.7 | 68.1 | 72.0 | 75.5  |
|          |                 |          | F   | 49.3  | 55.2 | 61.1 | 66.8 | 70.6 | 74.1  |
| MALAYSIA |                 |          |     |       |      |      |      |      |       |
| (3)      | PHILIPPINE      | National | M   | 49.9  | 53.7 | 59.7 | 65.9 | 69.4 | 71.7  |
|          |                 |          | F   | 48.7  | 52.2 | 58.1 | 64.2 | 68.0 | 70.6  |
| (4)      | SINGAPORE       | Malays   | M   |       |      | 60.2 | 65.3 |      | 73.6  |
|          |                 |          | F   |       |      | 59.5 | 64.0 |      | 71.5  |
|          |                 | Chinese  | M   |       |      | 61.8 | 66.5 | 71.0 | 74.5  |
|          |                 |          | F   |       |      | 60.0 | 65.0 | 69.5 | 73.0  |
| (5)      | THAILAND        | Bangkok  | M   | 50.5  | 56.1 | 62.0 | 67.8 | 71.9 | 73.5  |
|          |                 |          | F   | 49.9  | 55.0 | 60.3 | 65.9 | 69.6 | 72.2  |

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

(2) Ministry of Health &amp; Welfare

(3) Food and Nutrition Research Institute

(4) Ministry of Health

(5) *Worldwide Variation in Human Growth*, Cambridge University Press, 1976Note: a) Data from National Center for Health  
Statistics of the United States, 1977

15-2 Mean Weight from Birth to One Year

(kgw)

|            | People or Place     | Year | Sex | Age   |      |      |      |      |       |
|------------|---------------------|------|-----|-------|------|------|------|------|-------|
|            |                     |      |     | Birth | 4wks | 3mos | 6mos | 9mos | 12mos |
| BRUNEI     |                     |      |     |       |      |      |      |      |       |
| (1)        |                     |      | M   | 3.2   | 4.2  | 5.9  | 7.5  | 8.4  | 8.9   |
| INDONESIA  | Bogor               | 1978 | F   | 3.0   | 3.9  | 5.5  | 6.9  | 7.7  | 8.5   |
| (2)        |                     |      | M   | 3.23  | 5.08 | 6.84 | 8.15 | 9.04 | 9.71  |
| JAPAN      | National            | 1980 | F   | 3.16  | 4.76 | 6.24 | 7.71 | 8.47 | 9.09  |
| (3)        |                     |      |     |       |      |      |      |      |       |
| MALAYSIA   | Peninsular Malaysia | 1986 | T   | 3.14  |      |      |      |      |       |
| (4)        |                     |      | M   | 3.21  | 4.21 | 5.77 | 7.22 | 7.93 | 8.29  |
| PHILIPPINE | National            | 1986 | F   | 2.96  | 3.87 | 5.32 | 6.70 | 7.43 | 7.82  |
| (5)        |                     |      | M   |       |      | 6.0  | 7.2  | 8.1  | 8.8   |
| SINGAPORE  | Malays              | 1972 | F   |       |      | 5.5  | 6.3  | 7.4  | 8.0   |
|            |                     |      | M   |       |      | 6.5  | 8.1  | 8.9  | 9.2   |
|            | Chinese             | 1972 | F   |       |      | 6.5  | 8.0  | 8.8  | 8.9   |
|            |                     |      |     |       |      |      |      |      |       |
| (6)        |                     |      | M   | 3.12  | 4.65 | 6.35 | 7.74 | 8.62 | 9.10  |
| THAILAND   | Bangkok             |      | F   | 3.01  | 4.46 | 5.61 | 7.33 | 7.97 | 8.50  |

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

(2) Ministry of Health &amp; 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

15-3 Mean Chest Circumference from Birth to One Year

(cm)

|                   | People or Place | Year | Sex    | Age            |                |                |                |                |                |
|-------------------|-----------------|------|--------|----------------|----------------|----------------|----------------|----------------|----------------|
|                   |                 |      |        | Birth          | 4wks           | 3mos           | 6mos           | 9mos           | 12mos          |
| BRUNEI            |                 |      |        |                |                |                |                |                |                |
| (1)<br>INDONESIA  | Bogor           | 1976 | T      | -              | 36.3           | 40.4           | 43.1           | 44.5           | 45.4           |
| (2)<br>JAPAN      | National        | 1980 | M<br>F | 32.5<br>32.4   | 39.1<br>38.2   | 42.4<br>41.2   | 44.6<br>43.6   | 46.1<br>44.9   | 47.0<br>45.7   |
| MALAYSIA          |                 |      |        |                |                |                |                |                |                |
| (3)<br>PHILIPPINE | National        | 1986 | M<br>F | 34.46<br>34.32 | 37.75<br>36.75 | 41.68<br>39.95 | 43.53<br>42.12 | 44.07<br>43.22 | 46.08<br>44.96 |
| SINGAPORE         |                 |      |        |                |                |                |                |                |                |
| (4)<br>THAILAND   | Bangkok         |      | M<br>F | 32.0<br>31.9   | 37.9<br>37.5   | 41.0<br>40.1   | 43.4<br>42.7   | 44.7<br>43.5   | 45.8<br>44.1   |

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

(2) Ministry of Health &amp; Welfare

(3) Food and Nutrition Research Institute

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

15-4 Mean Height by Age (1-18)

|                    | People or Place   | Year | Sex | Age         |             |             |              |              |        |        |
|--------------------|-------------------|------|-----|-------------|-------------|-------------|--------------|--------------|--------|--------|
|                    |                   |      |     | 1           | 2           | 3           | 4            | 5            | 6      | 7      |
| BRUNEI             |                   |      |     |             |             |             |              |              |        |        |
| (1)<br>INDONESIA   | National          | 1977 | M   |             | 82.2        | 88.5        | 97.2         | 102.4        | 107.1  | 112.1  |
|                    |                   |      | F   |             | 80.8        | 88.3        | 96.2         | 100.6        | 106.2  | 111.5  |
| (2)<br>JAPAN       | National          | 1986 | M   | (3)<br>80.4 | (3)<br>89.7 | (3)<br>96.7 | (3)<br>103.2 | 110.8        | 116.5  | 122.2  |
|                    |                   |      | F   | (3)<br>78.5 | (3)<br>88.2 | (3)<br>95.6 | (3)<br>102.1 | 109.9        | 115.8  | 121.5  |
| (4)<br>MALAYSIA    | National          | 1960 | M   |             |             |             |              |              |        | 109.7  |
|                    |                   |      | F   |             |             |             |              |              | 105.4  | 109.7  |
| (5)<br>PHILIPPINES | National          | 1986 | M   | 71.68       | 80.48       | 87.53       | 94.05        | 140.25       | 106.11 | 111.22 |
|                    |                   |      | F   | 70.59       | 79.67       | 86.66       | 93.40        | 99.83        | 105.54 | 110.51 |
| (6)<br>SINGAPORE   | National          | 1983 | M   |             |             |             |              |              | 116.2  | 121.1  |
|                    |                   |      | F   |             |             |             |              |              | 115.4  | 120.5  |
| (1)<br>THAILAND    | a) Bangkok        | 1984 | M   | (4)<br>73.5 | (4)<br>83.8 | (4)<br>93.5 | (4)<br>100.5 | (4)<br>105.0 | 113.5  | 116.9  |
|                    | b) Ubonratchatani |      | F   | (4)<br>72.2 | (4)<br>84.0 | (4)<br>93.0 | (4)<br>99.0  | (4)<br>103.5 | 115.7  | 116.2  |

Source: (1) Ohsawa's Laboratory, Otsuma Women's University

(2) Ministry of Education, Science and Culture

(3) National Nutrition Survey, 1985, 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

(cm)

| Age    |        |        |        |        |        |        |        |        |        |              |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------------|
| 8      | 9      | 10     | 11     | 12     | 13     | 14     | 15     | 16     | 17     | 18           |
|        |        |        |        |        |        |        |        |        |        |              |
| 118.0  | 122.6  | 125.2  | 129.6  | 133.2  | 142.7  | 147.7  | 153.2  | 157.8  | 159.4  | 161.2        |
| 116.1  | 121.2  | 125.5  | 130.8  | 136.4  | 143.7  | 146.1  | 149.1  | 150.7  | 152.4  | 151.2        |
| 127.7  | 132.9  | 137.9  | 143.6  | 150.2  | 157.7  | 163.9  | 167.6  | 169.4  | 170.3  | (3)<br>169.6 |
| 127.1  | 132.8  | 138.9  | 145.6  | 151.0  | 154.4  | 156.3  | 157.1  | 157.5  | 157.7  | (3)<br>157.1 |
| 111.8  | 114.3  | 121.9  | 129.3  | 133.4  | 138.4  | 141.4  |        |        |        |              |
| 112.8  | 117.9  | 123.4  | 131.8  | 137.2  |        |        |        |        |        |              |
| 115.90 | 120.54 | 125.56 | 129.43 | 134.94 | 141.97 | 148.95 | 154.90 | 159.32 | 161.75 | 162.49       |
| 115.40 | 120.65 | 125.89 | 132.40 | 138.19 | 143.52 | 147.33 | 149.56 | 150.70 | 151.26 | 151.53       |
| 126.2  | 131.1  | 135.4  | 140.6  | 148.2  | 156.1  | 162.2  | 165.5  | 166.8  | 167.8  | 165.8        |
| 125.7  | 131.3  | 137.3  | 143.9  | 148.7  | 152.4  | 154.6  | 155.6  | 155.4  | 155.7  | 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        |

15-5 Mean Weight by Age (1-18)

|                    | People or Place                       | Year | Sex    | Age                        |                            |                            |                            |                     |                |                |
|--------------------|---------------------------------------|------|--------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------|----------------|----------------|
|                    |                                       |      |        | 1                          | 2                          | 3                          | 4                          | 5                   | 6              | 7              |
| BRUNEI             |                                       |      |        |                            |                            |                            |                            |                     |                |                |
| (1)<br>INDONESIA   | National                              | 1977 | M<br>F |                            | 10.4<br>10.1               | 12.1<br>11.6               | 13.8<br>13.2               | 15.5<br>14.5        | 15.7<br>15.7   | 18.2<br>17.0   |
| (2)<br>JAPAN       | National                              | 1986 | M<br>F | (6)<br>11.0<br>(6)<br>10.4 | (6)<br>12.9<br>(6)<br>12.6 | (6)<br>14.8<br>(6)<br>14.3 | (6)<br>16.6<br>(6)<br>16.2 | 19.2<br>18.8        | 21.2<br>20.8   | 23.8<br>23.3   |
| (3)<br>MALAYSIA    | National                              | 1960 | M<br>F |                            |                            |                            |                            |                     | 16.4           | 17.8<br>18.6   |
| (4)<br>PHILIPPINES | National                              | 1986 | M<br>F | 8.29<br>7.82               | 10.37<br>9.74              | 11.94<br>11.54             | 13.61<br>13.22             | 15.06<br>14.74      | 16.59<br>16.20 | 18.21<br>17.75 |
| (5)<br>SINGAPORE   | National                              | 1983 | M<br>F |                            |                            |                            |                            |                     | 20.6<br>19.9   | 22.6<br>22.4   |
| (1)<br>THAILAND    | a)<br>Bangkok<br>b)<br>Ubonratchatani | 1984 | M<br>F | (3)<br>9.1<br>8.5          | (3)<br>11.0<br>10.9        | (3)<br>13.4<br>13.0        | (3)<br>15.1<br>14.5        | (3)<br>16.8<br>16.1 | 18.8<br>18.0   | 20.4<br>19.5   |

Source: (1) Ohsawa's Laboratory, Otsu Women's University  
 (2) Ministry of Education, Science and Culture  
 (3) *Worldwide variation in Human Growth*, Cambridge University Press, 1976  
 (4) Food and Nutrition Research Institute  
 (5) Ministry of Health  
 (6) National Nutrition Survey 1985, Health Service Bureau, Ministry of Health & Welfare

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

(kgw)

| Age   |       |       |       |       |       |       |       |       |       |             |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| 8     | 9     | 10    | 11    | 12    | 13    | 14    | 15    | 16    | 17    | 18          |
| 19.9  | 21.3  | 23.3  | 25.7  | 27.3  | 31.8  | 37.1  | 40.9  | 44.7  | 46.9  | 48.7        |
| 19.2  | 21.6  | 23.4  | 26.3  | 30.3  | 33.4  | 37.6  | 40.4  | 43.2  | 44.6  | 45.9        |
| 26.7  | 29.7  | 33.1  | 37.0  | 42.2  | 47.7  | 53.3  | 58.3  | 60.4  | 61.8  | (6)<br>61.1 |
| 26.2  | 29.4  | 33.3  | 38.2  | 43.4  | 47.1  | 50.0  | 52.1  | 52.8  | 52.8  | (6)<br>51.7 |
| 19.5  | 20.7  | 24.2  | 27    | 29.5  |       |       |       |       |       |             |
| 18.7  | 21.8  | 24.0  | 28.5  | 30.0  | 32.5  | 35.5  |       |       |       |             |
| 19.94 | 21.81 | 23.82 | 25.83 | 28.99 | 33.24 | 38.09 | 42.93 | 47.09 | 49.90 | 51.41       |
| 19.52 | 21.61 | 23.98 | 27.07 | 31.16 | 35.55 | 39.29 | 42.04 | 44.60 | 45.33 | 46.08       |
| 25.3  | 28.3  | 31.3  | 34.4  | 39.5  | 44.7  | 49.4  | 52.7  | 54.3  | 55.9  | 54.6        |
| 24.5  | 27.4  | 31.3  | 36.1  | 40.0  | 43.6  | 45.5  | 47.0  | 47.7  | 47.5  | 50.2        |
| 23.4  | 24.8  | 25.9  | 30.3  | 31.1  | 37.9  | 44.9  | 46.7  | 51.0  | 51.8  | 53.0        |
| 21.6  | 24.0  | 29.4  | 31.6  | 38.4  | 38.4  | 40.7  | 45.0  | 47.8  | 47.4  | 49.1        |

## 16 Definition of the Main Terms Used in the Hospital Statistics (WHO)

| Occupation and level of education          | Personnel to be included in the data                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Hospitals                               | All establishments permanently staffed by at least one physician that can offer inpatient accommodation and provide active medical and nursing care. Establishments providing principally custodial care should not be included.                                                                                                                |
| 2. General Hospitals (principal)           | Hospitals—other than local or rural hospitals—providing medical and nursing care for more than one category of medical discipline (e.g., general medicine, specialized medicine, general surgery, specialized surgery, obstetrics, etc.)                                                                                                        |
| 3. Local or Rural hospitals                | Hospitals, usually in rural areas, permanently staffed by one or more physicians, which in respect of their functions are also general hospitals, but provide medical and nursing care of a more limited range than that provided by principal general hospitals.                                                                               |
| 4. Medical and Maternity Centres with Beds | Small units, also known as rural health centres, bedded dispensaries, rural maternity homes, etc., not permanently staffed by a physician (but by a medical assistant, nurse, midwife, etc.), which offer inpatient accommodation and provide a limited range of medical and nursing care.                                                      |
| 5. Specialized Hospitals                   | Hospitals providing medical and nursing care primarily for only one discipline. This category does not include the specialized 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 hospitals                    | All hospitals administered by a government authority at any level, whether central, intermediate, or local.                                                                                                                                                                                                                                     |

| Occupation and level of education      | Personnel to be included in the data                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7. Private Non-profit-making Hospitals | All hospitals, whether subsidized by the government or not, operated on a non-profit-making basis by non-government bodies, such as religious missions, industrial enterprises, trusts, or philanthropic institutions.                                                                                                                                                                                                                                         |
| 8. Private Profit-making Hospitals     | All private hospitals (or medical establishments with beds) operated on a profit-making basis.                                                                                                                                                                                                                                                                                                                                                                 |
| 9. Beds                                | A hospital bed is one regularly maintained and staffed for the accommodation and fulltime care of a succession of inpatients and is situated in wards or a part of the hospital where continuous medical care for inpatients is provided. The total of such beds constitutes the normally available bed complement of the hospital. Cribs and bassinets main-tained for use by healthy newborn infants who do not require special care should not be included. |
| 10. Admissions                         | An inpatient admission is the formal admission by a hospital of an inpatient and always involves the allocation of a hospital bed. Healthy babies born in the hospital should not be counted if they do not require special care.                                                                                                                                                                                                                              |
| 11. Discharges (including deaths)      | The number of persons, living or dead, whose stay has terminated and whose departure has been officially recorded.                                                                                                                                                                                                                                                                                                                                             |
| 12. Patient days                       | Total of daily censuses of inpatients in the hospitals during the year. Not included in the daily censuses are healthy babies born in the hospitals if they do not require special care. The day of admission and the day of discharge should be counted together as one day.                                                                                                                                                                                  |

16-1 Comparative Table of Medical Establishments

|                                | Indonesia<br>(1986) | Japan<br>(1987) | Malaysia (1986)        |       |         | Philippines<br>(1986) | Singapore<br>(1987) | Thailand<br>(1986) |
|--------------------------------|---------------------|-----------------|------------------------|-------|---------|-----------------------|---------------------|--------------------|
|                                |                     |                 | Peninsular<br>Malaysia | Sabah | Sarawak |                       |                     |                    |
| 1 General Hospital             | V                   | V               | V                      | V     | V       |                       | V                   | V                  |
| 2 General & Rural Hospital     | V                   |                 |                        |       |         |                       |                     | V                  |
| 3 Local or Rural Hospital      | V                   |                 | V                      | V     | V       |                       |                     | V                  |
| 4 Medical Center               | V                   |                 |                        |       |         | V                     |                     | V                  |
| 5 Medical & Maternity Center   | V                   |                 |                        |       |         |                       |                     | V                  |
| 6 Maternity Hospital           | V                   |                 |                        |       |         | V                     | V                   | V                  |
| 7 Infectious Diseases Hospital | V                   | V               |                        |       |         | V                     |                     | V                  |
| 8 Chronic Diseases Hospital    |                     |                 |                        |       |         |                       | V                   |                    |
| 9 Leprosy Hospital             | V                   | V               | V                      |       | V       | V                     |                     | V                  |
| 10 Tuberculosis Hospital       | V                   | V               | V                      |       |         | V                     |                     | V                  |
| 11 Pediatrics Hospital         |                     |                 |                        |       |         | V                     | V                   | V                  |
| 12 Dermato-Venerology Hospital |                     |                 |                        |       |         |                       | V                   | V                  |
| 13 Ophthalmology Hospital      | V                   |                 |                        |       |         |                       | V                   | V                  |
| 14 Orthopedics Hospital        | V                   |                 |                        |       |         | V                     |                     |                    |
| 15 Mental Hospital             | V                   | V               | V                      | V     | V       | V                     | V                   | V                  |
| 16 Cancer Hospital             | V                   |                 |                        |       |         |                       |                     | V                  |
| 17 Estab. for Drug Addicts     | V                   |                 | V                      |       |         | V                     |                     | V                  |
| 18 Tropical Diseases Hospital  |                     |                 |                        |       |         | V                     |                     | V                  |
| 19 Other Specialized Hospital  | V                   |                 |                        |       |         | V                     |                     |                    |

## 16-2 Hospital and Other Medical Establishments with Beds (1)

|                     | Year | 1 General Hospitals |           |                             |                  | 2 General Hospitals |        |                             |                  | 3 General Hospitals |        |                             |                  |
|---------------------|------|---------------------|-----------|-----------------------------|------------------|---------------------|--------|-----------------------------|------------------|---------------------|--------|-----------------------------|------------------|
|                     |      | Establish-<br>ments | Beds      | Admissions<br>or Discharges | Patient-<br>Days | Establish-<br>ments | Beds   | Admissions<br>or Discharges | Patient-<br>Days | Establish-<br>ments | Beds   | Admissions<br>or Discharges | Patient-<br>Days |
| BRUNEI              |      |                     |           |                             |                  |                     |        |                             |                  |                     |        |                             |                  |
| (1)<br>INDONESIA    | 1987 | 734                 | 88,276    |                             |                  |                     |        |                             |                  |                     |        |                             |                  |
|                     | 1986 | 703                 | 85,241    | 2,530,408                   | 16,811,241       | 298                 | 61,765 | 1,796,433                   | 12,859,361       | 405                 | 23,476 | 733,975                     | 3,951,480        |
| JAPAN               | 1986 | 8,613               | 1,117,700 | 8,682,985                   | 380,943,505      |                     |        | ..                          |                  |                     |        | ..                          |                  |
| (2)<br>MALAYSIA     | 1987 | 16                  | 13,510    | 601,106                     | 3,534,660        |                     |        |                             |                  | a)<br>79            | 12,535 | 559,456                     | 2,582,350        |
| Peninsular Malaysia |      | 12                  | 11,615    | 510,450                     | 3,024,755        |                     |        |                             |                  | 53                  | 9,447  | 420,769                     | 1,833,685        |
| Sabah               |      | 3                   | 1,159     | 55,359                      | 291,270          |                     |        |                             |                  | 12                  | 1,338  | 56,648                      | 248,950          |
| Sarawak             |      | 1                   | 736       | 35,297                      | 218,635          |                     |        |                             |                  | 14                  | 1,750  | 82,039                      | 499,685          |
| (3)<br>PHILIPPINES  | 1986 | 537                 | 40,359    |                             |                  |                     |        |                             |                  |                     |        | ..                          |                  |
| SINGAPORE           | 1987 | 14                  | 6,035     | 272,754                     | 1,507,223        |                     |        | ..                          |                  |                     |        | ..                          |                  |
| (4)<br>THAILAND     | 1986 | 67                  | 16,461    |                             |                  | 265                 | 43,902 |                             |                  | 512                 | 10,377 |                             |                  |

Source: Ministry of Health in each country

(1) Directorate of Medical Care, Ministry of Health

(2) Information and Documentation System Unit

(3) Hospital Operations &amp; Management Services, Department of Health

(4) Health Statistics Division, Ministry of Public Health

Note: a) District hospitals

b) Excluding one medical center

c) Special hospitals under Department of Health

| 4 Medical Centers   |       |                             |                  | 5 Medical & Maternity Centers |      |                             |                  | 6 Maternity Hospitals |                |                             |                    |
|---------------------|-------|-----------------------------|------------------|-------------------------------|------|-----------------------------|------------------|-----------------------|----------------|-----------------------------|--------------------|
| Establish-<br>ments | Beds  | Admissions<br>or Discharges | Patient-<br>Days | Establish-<br>ments           | Beds | Admissions<br>or Discharges | Patient-<br>Days | Establish-<br>ments   | Beds           | Admissions<br>or Discharges | Patient-<br>Days   |
|                     |       |                             |                  |                               |      |                             |                  |                       |                |                             |                    |
| 3                   | 52    | 1,083                       | 2,049            | -                             | -    | -                           | -                | 32<br>30              | 1,810<br>1,771 | 58,515<br>60,764            | 239,155<br>239,045 |
| ..                  |       |                             |                  | ..                            |      |                             |                  | ..                    |                |                             |                    |
| ..                  |       |                             |                  | ..                            |      |                             |                  | ..                    |                |                             |                    |
| 8                   | 2,770 | b)<br>108,245               | c)<br>631,703    |                               |      |                             |                  | c)<br>1               | 700            | 36,856                      | 176,396            |
| ..                  |       |                             |                  | ..                            |      |                             |                  | 1                     | 561            | 32,642                      | 114,896            |
| 4                   | 56    |                             |                  | ..                            |      |                             |                  | 7                     | 1,137          |                             |                    |

# 16-2 Hospital and Other Medical Establishments with Beds (2)

|                     | Year | 7 Infectious Diseases Hospitals |        |                             |                  | 8 Chronic Diseases Hospitals |      |                             |                  | 9 Leprosy Hospitals |        |                             |                  |
|---------------------|------|---------------------------------|--------|-----------------------------|------------------|------------------------------|------|-----------------------------|------------------|---------------------|--------|-----------------------------|------------------|
|                     |      | Establish-<br>ments             | Beds   | Admissions<br>or Discharges | Patient-<br>Days | Establish-<br>ments          | Beds | Admissions<br>or Discharges | Patient-<br>Days | Establish-<br>ments | Beds   | Admissions<br>or Discharges | Patient-<br>Days |
| BRUNEI              |      |                                 |        |                             |                  |                              |      |                             |                  |                     |        |                             |                  |
| INDONESIA           | 1987 | 1                               | 76     | 4,663                       | 13,665           | ..                           |      |                             |                  | 25                  | 3,170  | 2,679                       | 992,532          |
| JAPAN               | 1986 | 13                              | 14,109 | 365                         | 10,585           | ..                           |      |                             |                  | 16                  | 10,205 | 0                           | 2,715,965        |
| MALAYSIA            | 1987 |                                 |        |                             |                  |                              |      |                             |                  | 2                   | 1,102  | 1,731                       | 180,675          |
| Peninsular Malaysia |      |                                 |        |                             |                  |                              |      |                             |                  | 1                   | 836    | 1,694                       | 149,285          |
| Sabah               |      |                                 |        |                             |                  |                              |      |                             |                  | ..                  | ..     | ..                          | ..               |
| Sarawak             |      |                                 |        |                             |                  |                              |      |                             |                  | 1                   | 266    | 37                          | 31,390           |
| PHILIPPINES         | 1986 | a)<br>1                         | 900    | 31,041                      | 165,323          |                              |      | ..                          |                  | b)<br>8             | 5,000  | ..                          | ..               |
| SINGAPORE           | 1987 |                                 |        |                             |                  | 1                            | 505  | 328                         | 94,364           | ..                  |        |                             |                  |
| THAILAND            | 1986 | 2                               | 430    |                             |                  |                              |      | ..                          |                  | 3                   | 2,483  |                             |                  |

Note: a) Special hospitals under Department of Health  
b) Sanitaria hospital under Department of Health  
c) Included under Department of Health Hospitals

| 10 Tuberculosis Hospitals |        |                             |                  | 11 Pediatrics Hospitals |      |                             |                  | 12 Dermato-Venereology Hospitals |      |                             |                  |
|---------------------------|--------|-----------------------------|------------------|-------------------------|------|-----------------------------|------------------|----------------------------------|------|-----------------------------|------------------|
| Establish-<br>ments       | Beds   | Admissions<br>or Discharges | Patient-<br>Days | Establish-<br>ments     | Beds | Admissions<br>or Discharges | Patient-<br>Days | Establish-<br>ments              | Beds | Admissions<br>or Discharges | Patient-<br>Days |
|                           |        |                             |                  |                         |      |                             |                  |                                  |      |                             |                  |
| 11                        | 738    | 6,391                       | 154,562          | ..                      |      |                             |                  | ..                               |      |                             |                  |
| 22                        | 51,367 | 2,555                       | 598,965          | ..                      |      |                             |                  | ..                               |      |                             |                  |
| 1                         | 276    | 2,559                       | 60,225           | ..                      |      |                             |                  | ..                               |      |                             |                  |
| 1                         | 276    | 2,559                       | 60,225           |                         |      |                             |                  |                                  |      |                             |                  |
| ..                        | ..     | ..                          | ..               |                         |      |                             |                  |                                  |      |                             |                  |
| ..                        | ..     | ..                          | ..               |                         |      |                             |                  |                                  |      |                             |                  |
| 1                         | 738    | 7,556                       | 181,720          | c)<br>1                 | 450  | 13,516                      | 97,139           | ..                               |      |                             |                  |
| ..                        |        |                             |                  | 1                       | 80   | 148                         | 8,872            | 1                                | 35   | 800                         | 8,103            |
| 2                         | 686    |                             |                  | 1                       | 538  |                             |                  | 1                                | 43   |                             |                  |

16-2 Hospital and Other Medical Establishments with Beds (3)

|                     | Year | 13 Ophthalmology Hospitals |      |                             |                  | 14 Orthopedics Hospitals |      |                             |                  | 15 Mental Hospitals |         |                             |                  |
|---------------------|------|----------------------------|------|-----------------------------|------------------|--------------------------|------|-----------------------------|------------------|---------------------|---------|-----------------------------|------------------|
|                     |      | Establish-<br>ments        | Beds | Admissions<br>or Discharges | Patient-<br>Days | Establish-<br>ments      | Beds | Admissions<br>or Discharges | Patient-<br>Days | Establish-<br>ments | Beds    | Admissions<br>or Discharges | Patient-<br>Days |
| BRUNEI              |      |                            |      |                             |                  |                          |      |                             |                  |                     |         |                             |                  |
| INDONESIA           | 1987 | 6                          | 614  | 8,248                       | 76,013           | 1                        | 150  | 1,114                       | 48,980           | 43                  | 7,343   | 25,697                      | 2,307,111        |
| JAPAN               | 1986 | ..                         |      |                             |                  | ..                       |      |                             |                  | 1,035               | 340,506 | 159,870                     | 93,642,575       |
| MALAYSIA            | 1986 | ..                         |      |                             |                  | ..                       |      |                             |                  | 4                   | 5,738   | 8,129                       | 1,634,470        |
| Peninsular Malaysia |      |                            |      |                             |                  |                          |      |                             |                  | 2                   | 5,098   | 6,892                       | 1,464,380        |
| Sabah               |      |                            |      |                             |                  |                          |      |                             |                  | 2                   | 302     | 380                         | 75,555           |
| Sarawak             |      |                            |      |                             |                  |                          |      |                             |                  | 1                   | 338     | 857                         | 94,535           |
| PHILIPPINES         | 1986 |                            |      | ..                          |                  | a)<br>1                  | 700  | 8,083                       | 200,817          | a)<br>1             | 5,200   | 4,042                       | 1,443,266        |
| SINGAPORE           | 1987 | 1                          | 20   | 227                         | 1,487            | ..                       |      |                             |                  | 3                   | 2,949   | 6,237                       | 908,197          |
| THAILAND            | 1986 | 7                          | 131  |                             |                  | ..                       |      |                             |                  | 13                  | 6,831   |                             |                  |

Note: a) Special hospitals under Department of Health

b) Hospitals under Department of Health

| 16 Cancer Hospitals |      |                             |                  | 17 Establ. for Drug Addicts |      |                             |                  | 18 Tropical Diseases Hospitals |      |                             |                  |
|---------------------|------|-----------------------------|------------------|-----------------------------|------|-----------------------------|------------------|--------------------------------|------|-----------------------------|------------------|
| Establish-<br>ments | Beds | Admissions<br>or Discharges | Patient-<br>Days | Establish-<br>ments         | Beds | Admissions<br>or Discharges | Patient-<br>Days | Establish-<br>ments            | Beds | Admissions<br>or Discharges | Patient-<br>Days |
|                     |      |                             |                  |                             |      |                             |                  |                                |      |                             |                  |
| 1                   | 60   |                             |                  | 1                           | 30   | 165                         | 3,313            |                                |      |                             |                  |
|                     |      |                             |                  |                             |      |                             |                  |                                |      |                             |                  |
|                     |      |                             |                  |                             |      |                             |                  |                                |      |                             |                  |
|                     |      |                             |                  |                             |      |                             |                  |                                |      |                             |                  |
|                     |      |                             |                  | 21                          |      | 1,563                       |                  | b)<br>1                        | 50   | 929                         | 8,933            |
|                     |      |                             |                  |                             |      |                             |                  |                                |      |                             |                  |
| 1                   | 200  |                             |                  | 2                           | 570  |                             |                  | 1                              | 213  |                             |                  |

16-2 Hospital and Other Medical Establishments with Beds (4)

|                     | Year | 19 Other Specialized Hospitals |      |                             |                  | 20 Total            |         |                             |                  |
|---------------------|------|--------------------------------|------|-----------------------------|------------------|---------------------|---------|-----------------------------|------------------|
|                     |      | Establish-<br>ments            | Beds | Admissions<br>or Discharges | Patient-<br>Days | Establish-<br>ments | Beds    | Admissions<br>or Discharges | Patient-<br>Days |
| BRUNEI              | 1987 |                                |      |                             |                  | 8                   |         |                             |                  |
| INDONESIA           | 1987 | 4                              | 191  | 2,986                       | 21,738           | 1,436               | 112,328 |                             |                  |
|                     | 1986 | 3                              | 52   | 1,083                       | 2,083            | 1,408               | 111,300 | 2,921,113                   | 21,731,039       |
| JAPAN               | 1986 |                                |      |                             |                  | 9,699               | *****   | 8,846,140                   | 477,311,230      |
| MALAYSIA            | 1987 |                                |      |                             |                  | 102                 | 33,161  | 1,172,981                   | 7,992,350        |
| Peninsular Malaysia |      |                                |      |                             |                  | 69                  | 27,272  | 942,364                     | 6,532,330        |
| Sabah               |      |                                |      |                             |                  | 16                  | 2,799   | 112,387                     | 615,775          |
| Sarawak             |      |                                |      |                             |                  | 17                  | 3,090   | 118,230                     | 844,245          |
| PHILIPPINES         | 1986 | 3                              | 603  | 17,885                      | 135,223          | 48                  | 57,470  | 229,716                     | 3,040,520        |
| SINGAPORE           | 1987 |                                |      |                             |                  | 22                  | 10,185  | 313,136                     | 2,643,142        |
| THAILAND            | 1986 |                                |      |                             |                  | 888                 | 84,014  |                             |                  |

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

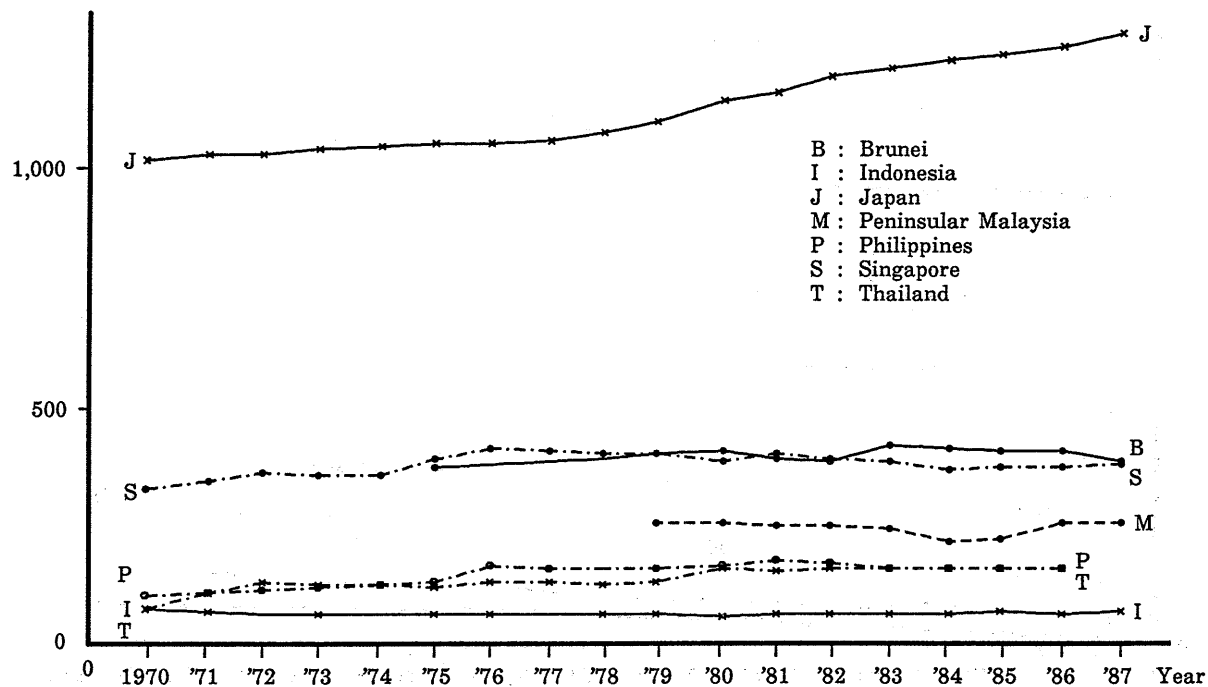


Fig.7 Annual Change of Number of Physicians ( Per 100,000 )

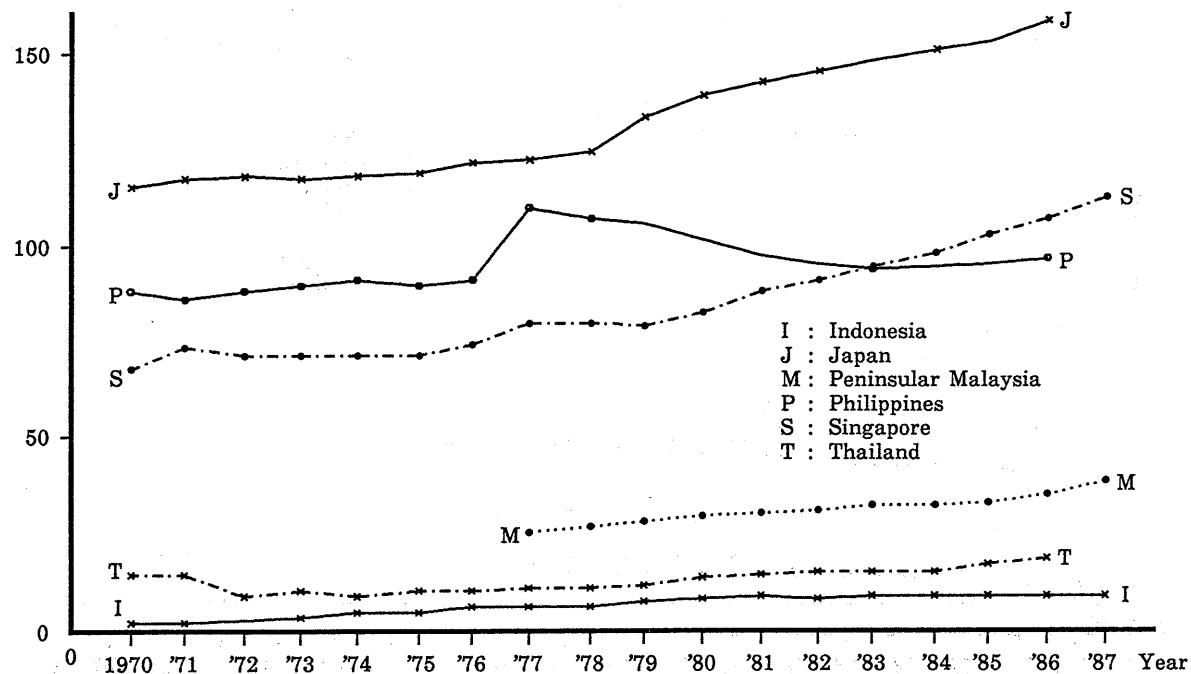
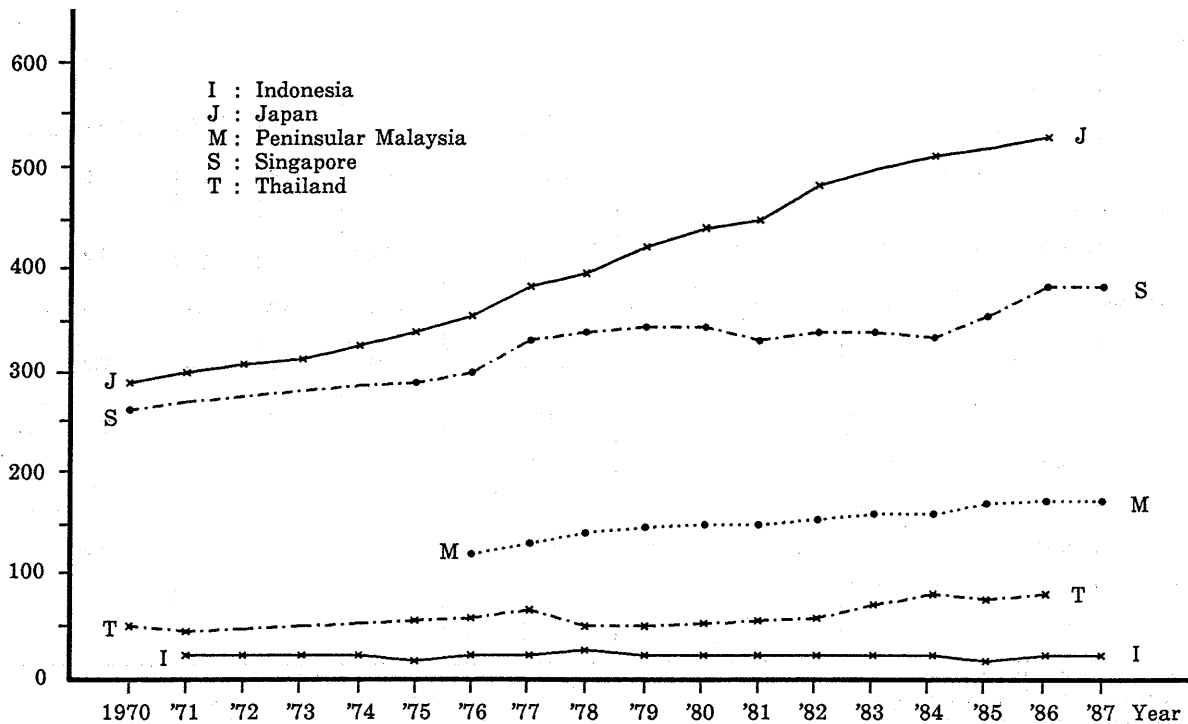


Fig.8 Annual Change of Number of Nurses (Per 100,000)



16-3 Hospital Utilization by Category or Hospital (1)

|                     | Year | All Hospitals |                    |                            |                                  |                        | General Hospitals |                            |                                  |         |                        |                               |
|---------------------|------|---------------|--------------------|----------------------------|----------------------------------|------------------------|-------------------|----------------------------|----------------------------------|---------|------------------------|-------------------------------|
|                     |      | Type          | Population per Bed | Beds per 10,000 Population | Admissions per 10,000 Population | Bed Occupancy Rate (%) | Type              | Beds per 10,000 Population | Admissions per 10,000 Population | Per Bed | Bed Occupancy Rate (%) | Average Length of Stay (Days) |
| BRUNEI              | 1987 | A             | 309                | 32.4                       | 872.6                            | NA                     |                   |                            |                                  |         |                        |                               |
| (1)<br>INDONESIA    | 1987 |               | 1,534              | 6.52                       |                                  |                        |                   | 5.0                        |                                  |         | 57.6                   | 7.0                           |
|                     | 1986 |               | 1,498              | 6.68                       | 175.23                           | 53.49                  |                   | 3.70                       | 151.80                           | 29.68   | 54.03                  | 6.64                          |
| JAPAN               | 1986 | T             | 79.3               | 126.1                      | 727.0                            | 85.7                   | T                 | 104.2                      | 713.6                            | 7.8     | 83.9                   | 39.7                          |
| (2)<br>MALAYSIA     | 1987 | A             | 498.4              | 20.06                      | 709.7                            | 66.03                  | A                 | 1223.4                     | 363.7                            | 44.5    | 71.9                   | 5.90                          |
| Peninsular Malaysia |      |               | 501.0              | 19.97                      | 690.1                            | 65.63                  |                   | 1175.6                     | 373.8                            | 43.9    | 71.3                   | 5.95                          |
| Sabah               |      |               | 472.6              | 18.05                      | 849.6                            | 60.27                  |                   | 1141.4                     | 418.5                            | 47.8    | 68.9                   | 5.25                          |
| Sarawak             |      |               | 501.6              | 19.93                      | 762.8                            | 74.85                  |                   | 2106.0                     | 227.7                            | 48.0    | 81.4                   | 6.22                          |
| (3)<br>PHILIPPINES  | 1986 | T             | 3,273              | 3.1                        | 41.0                             |                        |                   |                            |                                  |         |                        |                               |
| SINGAPORE           | 1987 | T             | 257                | 39.0                       | 1198.5                           | 74.3                   | T                 | 23.1                       | 1043.9                           | 45.2    | 71.4                   | 5.5                           |
| (4)<br>THAILAND     | 1986 | T             | 627                | 15.9                       |                                  |                        | T                 | 3.1                        |                                  |         |                        |                               |

Source: (1) Directorate of Medical Care, 1986

(2) Information and Documentation System Unit,

(3) Bureau of Medical Services 1986

(4) Health Statistics Division

Note: Category of hospitals

T=Total

A=Government hospital establishments

| Local or Rural Hospitals |                                  |                          |         |                              |                                     | Medical and Maternity Centers |                                  |                          |         |                              |                                     |
|--------------------------|----------------------------------|--------------------------|---------|------------------------------|-------------------------------------|-------------------------------|----------------------------------|--------------------------|---------|------------------------------|-------------------------------------|
| Type                     | Beds per<br>10,000<br>Population | Admissions               |         | Beds<br>Occupancy<br>Rate(%) | Average<br>Length of<br>Stay (Days) | Type                          | Beds per<br>10,000<br>Population | Admissions               |         | Bed<br>Occupancy<br>Rate (%) | Average<br>Length of<br>Stay (Days) |
|                          |                                  | per 10,000<br>Population | Per Bed |                              |                                     |                               |                                  | per 10,000<br>Population | Per Bed |                              |                                     |
|                          |                                  |                          |         |                              |                                     |                               |                                  |                          |         |                              |                                     |
| T                        | 1.40                             | 44.03                    | 31.26   | 46.11                        | 5.38                                | T                             | 0.8                              |                          |         |                              |                                     |
|                          |                                  |                          |         |                              |                                     |                               |                                  |                          |         |                              |                                     |
| A                        | a)<br>7.58                       | 338.5                    | 44.6    | 56.5                         | 4.64                                |                               |                                  |                          |         |                              |                                     |
|                          | 6.91                             | 308.1                    | 44.5    | 53.2                         | 4.37                                |                               |                                  |                          |         |                              |                                     |
|                          | 10.11                            | 428.2                    | 42.3    | 51.0                         | 4.50                                |                               |                                  |                          |         |                              |                                     |
|                          | 11.29                            | 529.3                    | 46.9    | 78.2                         | 6.90                                |                               |                                  |                          |         |                              |                                     |
|                          |                                  |                          |         |                              |                                     |                               |                                  |                          |         |                              |                                     |
|                          |                                  |                          |         |                              |                                     |                               |                                  |                          |         |                              |                                     |
| T                        | 2.0                              |                          |         |                              |                                     |                               |                                  |                          |         |                              |                                     |

Note: a) District Hospital

16-3 Hospital Utilization by Category or Hospital (2)

|                     | Year | Tuberculosis Hospitals |                            |                       |         |                         |                               | Mental Hospitals |                            |                       |         |
|---------------------|------|------------------------|----------------------------|-----------------------|---------|-------------------------|-------------------------------|------------------|----------------------------|-----------------------|---------|
|                     |      | Type                   | Beds per 10,000 Population | Admissions            |         | Beds Occupancy Rate (%) | Average Length of Stay (Days) | Type             | Beds per 10,000 Population | Admissions            |         |
|                     |      |                        |                            | per 10,000 Population | Per Bed |                         |                               |                  |                            | per 10,000 Population | Per Bed |
| BRUNEI              |      |                        |                            |                       |         |                         |                               |                  |                            |                       |         |
| INDONESIA           | 1987 |                        | 0.04                       |                       |         |                         |                               |                  | 0.43                       |                       |         |
|                     | 1986 |                        |                            | 0.43                  | 8.32    | 56.35                   | 24.72                         |                  | 0.44                       | 1.44                  | 3.28    |
| JAPAN               | 1986 | T                      | 4.2                        | 0.21                  | 0.05    | 55.9                    | 200.3                         | T                | 28.0                       | 13.14                 | 0.46    |
| MALAYSIA            | 1987 | A                      | 0.16                       | 1.54                  | 9.27    | 59.8                    | 23.2                          | A                | 3.47                       | 4.91                  | 1.41    |
| Peninsular Malaysia |      |                        | 0.20                       | 1.87                  | 9.27    | 59.8                    | 23.2                          |                  | 3.73                       | 5.04                  | 1.35    |
| Sabah               |      |                        | -                          | -                     | -       | -                       | -                             |                  | 2.28                       | 2.87                  | 1.25    |
| Sarawak             |      |                        | -                          | -                     | -       | -                       | -                             |                  | 2.18                       | 5.52                  | 2.5     |
| PHILIPPINES         | 1986 | T                      | 0.1                        | 1.35                  |         | 76                      | 22                            | Special          | 0.9                        | 0.7                   |         |
| SINGAPORE           | 1987 |                        |                            |                       |         |                         |                               | T                | 11.3                       | 23.9                  | 2.1     |
| THAILAND            | 1986 | T                      | 0.1                        |                       |         |                         |                               | T                | 1.3                        |                       |         |

| Maternity Hospitals   |                               |         |                            |                       |         |                         |                               |
|-----------------------|-------------------------------|---------|----------------------------|-----------------------|---------|-------------------------|-------------------------------|
| Bed Occupancy Rate(%) | Average Length of Stay (Days) | Type    | Beds per 10,000 Population | Admissions            |         | Beds Occupancy Rate (%) | Average Length of Stay (Days) |
|                       |                               |         |                            | per 10,000 Population | Per Bed |                         |                               |
|                       |                               |         |                            |                       |         |                         |                               |
| 53.49                 | 130                           | T       | 0.11                       | 3.64                  | 34.3    | 36.98                   | 3.93                          |
| 100.60                | 532.6                         |         |                            |                       |         |                         |                               |
| 78.04                 | 195.37                        |         |                            |                       |         |                         |                               |
| 78.69                 | 214.93                        |         |                            |                       |         |                         |                               |
| 68.54                 | 174.08                        |         |                            |                       |         |                         |                               |
| 76.62                 | 84.48                         |         |                            |                       |         |                         |                               |
| 76.90                 | 28.9                          | Special | 0.13                       | 6.6                   |         | 69                      | 2.2                           |
| 84.3                  | 145.6                         | T       | 2.1                        | 124.9                 | 58.2    | 68.6                    | 3.5                           |
|                       |                               | A       | 0.2                        |                       |         |                         |                               |

16-4 Number of Hospitals

|                     |            | 1970  | 1975  | 1980  | 1982  | 1983  | 1984  | 1985  | 1986  | 1987        |
|---------------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| BRUNEI              | Total      |       | 6     | 8     | 8     | 8     | 8     | 8     | 8     | 8           |
| INDONESIA           |            | 1,164 | 1,115 | 1,208 | 1,246 | 1,273 | 1,306 | 1,367 | 1,408 | a)<br>1,436 |
| JAPAN               |            | 7,974 | 8,294 | 9,055 | 9,403 | 9,515 | 9,574 | 9,608 | 9,699 | 9,841       |
| MALAYSIA            |            |       |       |       |       | 96    | 98    | 101   | 101   | 102         |
| Peninsular Malaysia |            | 64    |       |       |       | 64    | 65    | 68    | 68    | 69          |
| Sabah               |            |       | 15    |       |       | 16    | 16    | 16    | 16    | 16          |
| Sarawak             |            | 14    | 14    |       |       | 16    | 17    | 17    | 17    | 17          |
|                     | Total      | 650   | 927   | 2,020 | 1,713 | 1,706 | 1,839 | 1,815 | 1,846 |             |
| PHILIPPINES         | Public     | 220   | 316   | 413   | 519   | 527   | 612   | 624   | 617   |             |
|                     | Private    | 430   | 611   | 1,607 | 1,194 | 1,179 | 1,227 | 1,191 | 1,229 |             |
|                     | Total      | 16    | 22    | 26    | 26    | 23    | 22    | 22    | 22    | 22          |
| SINGAPORE           | Government | 11    | 14    | 13    | 13    | 11    | 11    | 10    | 10    | c)<br>11    |
|                     | Private    | 5     | 8     | 13    | 13    | 12    | 11    | 12    | 12    | 11          |
| THAILAND            | Total      | 98    | 281   | 636   | 718   | 808   | 850   | 856   | 888   |             |

Source: Ministry of Health in each country

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

b) Include: Medical Centers, Regional, Provincial, District

Municipal, Special, Sanitaries & Medicare

Community Hospitals under Department of Health

c) Includes Government subvented private hospital

16-5 Number of Beds

|                     |            | 1970      | 1975      | 1980         | 1982         | 1983      | 1984         | 1985         | 1986          | 1987      |
|---------------------|------------|-----------|-----------|--------------|--------------|-----------|--------------|--------------|---------------|-----------|
| BRUNEI              |            |           | 509       | 630          | 643          | 876       | 876          | 876          | 876           | 876       |
| INDONESIA           |            | 86,022    | 83,696    | 98,543       | 102,912      | 103,586   | 104,966      | 110,361      | a)<br>111,300 | 112,328   |
| JAPAN               |            | 1,062,553 | 1,164,098 | 1,319,406    | 1,401,999    | 1,440,381 | 1,467,050    | 1,495,328    | 1,533,887     | 1,582,393 |
| MALAYSIA            |            |           |           | a)<br>35,291 | a)<br>35,605 | 35,779    | 32,669       | 32,495       | a)<br>32,960  | 33,161    |
| Peninsular Malaysia |            | 27,927    |           | a)<br>29,792 | a)<br>29,533 | 29,661    | 26,993       | 26,491       | 27,185        | 27,272    |
| Sabah               |            |           | 2,233     | a)<br>2,670  | a)<br>2,924  | 2,950     | 2,534        | 2,809        | 2,799         | 2,799     |
| Sarawak             |            | 2,000     | 2,358     | a)<br>2,829  | a)<br>3,148  | 3,168     | 3,142        | 3,195        | 2,976         | 3,090     |
|                     | Total      | 40,289    | 55,323    | 81,976       | 88,250       | 84,142    | 90,279       | 89,668       | 97,735        |           |
| PHILIPPINES         |            |           |           |              |              |           | b)<br>47,861 |              |               |           |
|                     | Public     | 19,725    | 27,075    | 39,625       | 48,199       | 45,187    | 47,861       | 48,045       | 57,470        |           |
|                     | Private    | 20,564    | 28,248    | 42,351       | 40,051       | 38,955    | 42,418       | 41,623       | 40,265        |           |
|                     | Total      |           | 9,105     | 9,579        | 9,822        | 9,807     | 9,668        | 9,866        | 9,974         | 10,185    |
| SINGAPORE           |            |           |           |              |              |           |              |              | c)<br>7,898   |           |
|                     | Government | 6,891     | 8,005     | 8,078        | 8,246        | 8,222     | 8,085        | 8,047        | 7,898         | 8,349     |
|                     | Private    |           | 1,100     | 1,501        | 1,576        | 1,585     | 1,583        | 1,819        | 2,076         | 1,836     |
| THAILAND            |            |           |           |              |              |           | d)<br>81,070 | d)<br>84,045 | d)<br>84,438  |           |
|                     | Total      | 25,619    | 52,652    | 71,718       | 74,725       | 78,438    | 81,070       | 84,045       | 84,438        |           |

Source: Ministry of Health in each country

Note: a) Including those in government hospitals

b) Including other government agencies

c) Including private maternity centers

d) Including Government subvented private hospital

## 17 Definition of Medical Personnel (WHO)

| Occupation and level of education                                                                           | Personnel to be included in the data                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Physicians<br>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<br>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<br>Basic level                                                           | Personnel who may have 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<br>(a) High (university) level<br>(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.<br>(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<br>(a) Dental laboratory technicians<br>(b) Dental chairside assistants | Dental non-operating auxiliaries who assist dentists and dental operating auxiliaries in their clinical work but who do not carry out any independent intra-oral procedures. These dental personnel usually have technical training either in formal courses or by apprenticeship. |

| Occupation and level of education                                                       | Personnel to be included in the data                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7. Pharmacists/Chemists<br>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<br>Middle level                                            | Personnel assisting in pharmacies, hospitals, or dispensaries to make and dispense medicaments, under the supervision of a pharmacist. These personnel do not have pharmaceutical education of university level or equivalent.                                                  |
| 9. Veterinarians/<br>Veterinary Surgeons<br>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<br>Middle level                                            | Personnel carrying out limited diagnostic, preventive, and curative veterinary services. These personnel have no veterinary education of university level.                                                                                                                      |
| 11. Professional Midwives<br>High level<br>(a) Non-nurse midwives<br>(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/<br>Auxiliary Midwives<br>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<br>Middle level                                            | Personnel performing certain nursing duties and midwifery duties in normal obstetrics, in principle under the supervision of a professional nurse or midwife. These personnel have simpler education and training in nursing and midwifery than the professional nurse-midwife. |

| Occupation and level of education                               | Personnel to be included in the data                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 14. Professional Nurse<br>High level                            | All graduates of a nursing school working in your country in any nursing field (general nursing, specialized clinical nursing services in mental health, paediatrics, cardiovascular diseases, etc. - public health or occupational health, teaching, administration, research, etc.). These personnel are qualified and authorized to provide the most responsible and competent professional nursing service. |
| 15. Assistant Nurses/<br>auxiliary nurses<br>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-<br>wifery Aids<br>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/<br>Physical therapists                    | Professional personnel treating patients by exercise, physical means, and message, usually as prescribed by a physician.                                                                                                                                                                                                                                                                                        |
| 18. Medical Laboratory<br>Technicians<br>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<br>Laboratory Technicians<br>Middle-level | Auxiliary technical laboratory personnel working under the supervision of a professional laboratory technologist or technician. These auxiliary personnel do not have the full training and theoretical knowledge of the professional.                                                                                                                                                                          |

| Occupation and level of education                                                | Personnel to be included in the data                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 20. Medical Physicists<br>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<br>Technicians<br>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.<br>If possible, indicate the distribution of medical activity: (a) MRT (General)<br>(b) MRT (Diagnosis)<br>(c) MRT (Therapy) |
| 22. Assistant Medical<br>radiological technicians<br>Middle-level<br>technicians | Auxiliary medical radiological personnel working under the direct supervision of a medical radiological technician or under a specialist or physician.                                                                                                                                                     |
| 23. Sanitary engineers<br>High (university) level                                | Professionally qualified engineers specialized in the prevention, control, and management of environmental factors that influence man's health adversely, e.g., in the design and operation of facilities for control and the planning and administration of environmental health programmes.              |
| 24. Sanitarians<br>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<br>Middle-level<br>technicians                         | Personnel who perform to a limited extent the functions of a professional sanitarian but do not have the full training and theoretical knowledge of the professional.                                                                                                                                      |

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

| Occupation and level of education                                                                                                                                                                            | Personnel to be included in the data |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|
| <b>29. Practitioners of Traditional Medicine/ Midwifery</b><br>Examples:<br>Herb doctors<br>Ayurvedic doctors<br>Lay medical Practitioners<br>Medicine men<br>Acupuncturists<br>Traditional Birth Attendants |                                      |

17-1 Comparative Table of Medical Personnel

|                                               | Brunei | Indonesia<br>(1987) | Japan<br>(1987) | Malaysia (1987)        |       |         | Philippines<br>(1986) | Singapore<br>(1987) | Thailand<br>(1986) |
|-----------------------------------------------|--------|---------------------|-----------------|------------------------|-------|---------|-----------------------|---------------------|--------------------|
|                                               |        |                     |                 | Peninsular<br>Malaysia | Sabah | Sarawak |                       |                     |                    |
| 1 Physicians                                  |        | V                   | V               | V                      | V     | V       | V                     | V                   | V                  |
| 2 Medical assistants                          |        |                     |                 | V                      | V     | V       |                       |                     | V                  |
| 3 Multipurpose health auxiliaries             |        |                     |                 | V                      | V     | V       | V                     |                     | V                  |
| 4 Dentists/Dental surgeons                    |        | V                   | V               | V                      | V     | V       | V                     | V                   | V                  |
| 5 Dental operating auxiliaries                |        | V                   | V               | V                      | V     | V       | V                     | V                   | V                  |
| 6 Dental non-operating auxiliaries            |        | V                   |                 |                        | V     | V       |                       | V                   | V                  |
| 7 Pharmacists/Chemists                        |        | V                   | V               | V                      | V     | V       | V                     | V                   | V                  |
| 8 Pharmaceutical assistants                   |        | V                   |                 | V                      | V     | V       |                       | V                   | V                  |
| 9 Veterinarians/Veterinary surgeons           |        | V                   | V               | V                      | V     | V       | V                     | V                   | V                  |
| 10 Animal health assistants                   |        |                     |                 |                        |       | V       |                       | V                   | V                  |
| 11 Professional midwives                      |        | V                   | V               | V                      | V     | V       | V                     | V                   | V                  |
| 12 Assistant midwives/Auxiliary midwives      |        | V                   |                 | V                      | V     | V       |                       |                     | V                  |
| 13 Auxiliary nurse-midwives                   |        | V                   |                 | V                      | V     | V       |                       |                     | V                  |
| 14 Professional nurses                        |        | V                   | V               | V                      | V     | V       | V                     | V                   | V                  |
| 15 Assistant nurses/Auxiliary nurses          |        | V                   | V               | V                      | V     | V       |                       | V                   | V                  |
| 16 Nursing and midwifery aids                 |        | V                   |                 | V                      | V     | V       | V                     |                     | V                  |
| 17 Physiotherapists/Physical therapists       |        | V                   | V               | V                      | V     | V       | V                     | V                   | V                  |
| 18 Medical laboratory technicians             |        | V                   | V               | V                      | V     | V       | V                     | V                   | V                  |
| 19 Assistant medical laboratory technicians   |        | V                   | V               | V                      | V     | V       |                       | V                   | V                  |
| 20 Medical physicist                          |        |                     | V               | V                      |       |         |                       | V                   | V                  |
| 21 Medical radiological technicians           |        | V                   | V               | V                      | V     | V       | V                     | V                   | V                  |
| 22 Assistant medical radiological technicians |        | V                   | V               | V                      | V     | V       |                       | V                   | V                  |
| 23 Sanitary engineers                         |        | V                   |                 | V                      | V     | V       | V                     | V                   | V                  |
| 24 Sanitarians                                |        | V                   |                 | V                      | V     | V       | V                     | V                   | V                  |
| 25 Auxiliary sanitarians                      |        | V                   |                 | V                      | V     | V       |                       | V                   | V                  |
| 26 Other scientific or professional personnel |        | V                   | V               | V                      | V     | V       |                       | V                   | V                  |
| 27 Other technical personnel                  |        |                     | V               | V                      | V     | V       |                       | V                   | V                  |
| 28 Other health auxiliaries and aides         |        | V                   |                 | V                      | V     | V       |                       | V                   | V                  |
| 29 Practitioners of traditional midwifery     |        | V                   |                 | V                      | V     | V       |                       |                     | V                  |
| 30 Dental nurses                              |        | V                   |                 | V                      | V     | V       |                       | V                   | V                  |
| 31 Nurses including nurse-midwives            |        | V                   |                 | V                      | V     | V       |                       | V                   | V                  |

|                                  | Indonesia<br>(1987) | Japan<br>(1987) | Malaysia (1987)        |       |         | Philippines<br>(1986) | Singapore<br>(1987) | Thailand<br>(1986) |
|----------------------------------|---------------------|-----------------|------------------------|-------|---------|-----------------------|---------------------|--------------------|
|                                  |                     |                 | Peninsular<br>Malaysia | Sabah | Sarawak |                       |                     |                    |
| 32 Orthopaedic technicians       |                     |                 |                        |       |         |                       |                     | V                  |
| 33 Malaria field officers        |                     |                 |                        |       |         | V                     |                     | V                  |
| 34 Medical social technicians    |                     |                 |                        |       |         |                       |                     | V                  |
| 35 Health statistics technicians |                     |                 | V                      |       |         |                       |                     | V                  |
| 36 Medical statisticians         |                     |                 | V                      |       |         |                       |                     | V                  |
| 37 Dental hygienists             |                     | V               |                        |       |         | V                     |                     | V                  |
| 38 Trained or rural midwives     |                     |                 | V                      |       |         | V                     |                     | V                  |
| 39 Traditional birth attendants  |                     |                 |                        |       |         | V                     |                     | V                  |
| 40 Laboratory aides              |                     |                 |                        |       |         |                       |                     | V                  |
| 41 Sanitary inspectors           |                     |                 |                        |       |         | V                     |                     | V                  |
| 42 Medical social workers        |                     | V               |                        |       |         | V                     | V                   | V                  |
| 43 Dental practitioners          |                     |                 | V                      | V     | V       |                       | V                   | V                  |
| 44 veterinary assistants         |                     |                 |                        |       |         |                       | V                   | V                  |
| 45 Nursemidwives                 | V                   |                 |                        |       |         |                       |                     | V                  |
| 46 Dental technicians            | V                   |                 | V                      | V     | V       |                       | V                   | V                  |
| 47 Dispensers                    |                     |                 | V                      | V     | V       |                       | V                   | V                  |
| 48 Assistant nursemidwives       |                     |                 |                        |       |         |                       |                     | V                  |
| 49 Nurses                        | V                   | V               | V                      |       |         | V                     | V                   | V                  |
| 50 Occupational therapists       |                     | V               | V                      | V     | V       | V                     | V                   | V                  |
| 51 Dietitians                    | V                   |                 | V                      | V     | V       | V                     | V                   | V                  |
| 52 Radiographers                 |                     |                 | V                      | V     | V       |                       | V                   |                    |
| 53 Nursing auxiliaries           |                     |                 |                        |       |         |                       |                     | V                  |
| 54 X-ray assistant technicians   |                     |                 |                        |       |         |                       |                     | V                  |
| 55 Health inspectors             |                     |                 | V                      | V     | V       |                       | V                   | V                  |
| 56 Assistant health inspectors   |                     |                 | V                      | V     | V       |                       | V                   | V                  |
| 57 Biochemists                   |                     |                 | V                      | V     | V       |                       |                     | V                  |
| 58 Health educators              | V                   |                 | V                      | V     | V       | V                     | V                   | V                  |
| 59 Midwives                      | V                   | V               | V                      |       |         | V                     | V                   | V                  |
| 60 Microscopists                 |                     |                 |                        |       |         |                       |                     | V                  |
| 61 Health assistants             |                     |                 |                        |       |         |                       |                     | V                  |
| 62 Entomologists                 |                     |                 | V                      | V     | V       | V                     |                     | V                  |

[illegible]

# 17-2 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              | 1987       | 171           |                       |                                     | 31                           |                                 |                                     | 9                        |
| (1)<br>INDONESIA    | 1987<br>a) | 22,053        | ..                    | ..                                  | 4,583                        |                                 |                                     | 4,814                    |
|                     | 1986       | 20,768        | ..                    | ..                                  | 4,037                        |                                 |                                     |                          |
| JAPAN               | 1986       | 191,346       | ..                    | ..                                  | 66,797                       | 31,139                          | ..                                  | 135,990                  |
| (2)<br>MALAYSIA     | 1987       | 5,794         | b)<br>3,042           | -                                   | 1,220                        | -                               | -                                   | 1,050                    |
| Peninsular Malaysia |            | 5,300         | 2,210                 | -                                   | 1,106                        | -                               | -                                   | 929                      |
| Sabah               |            | 225           | 416                   | -                                   | 51                           | -                               | -                                   | 64                       |
| Sarawak             |            | 269           | 416                   | -                                   | 63                           | -                               | -                                   | 57                       |
| PHILIPPINES         | 1986       | c)<br>53,556  | ..                    | d)<br>127,329                       | c)<br>22,467                 | e)<br>779<br>b)<br>1,290        | ..                                  | c)<br>26,854             |
| SINGAPORE           | 1987       | 2,939         | ..                    | ..                                  | 654                          | 283                             | b)<br>43                            | g)<br>487                |
| (3)<br>THAILAND     | 1986       | 9,464         | 14                    | 245,986                             | 1,395                        | 484                             | 484                                 | 3,356                    |

Source: (1) Personnel Bureau, 1987

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

(3) Health Statistics Division

Note: a) Data as of March, 1986

b) Government

c) Registered as of December, 1986

d) Barangay health workers active only as of December, 1985

e) Private

f) Department of Health only, 1986

g) Pharmacists only

h) Entry used for calculation of Population/Nursing and  
Midwifery Personnel Ratios

| 8. Pharmaceutical Assistants | 9. Veterinarians/ Veterinarian 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 |
|------------------------------|-----------------------------------------|-----------------------------|---------------------------|--------------------------------------------|-------------------------------|-------------------------|----------------------------------------|-----------------------------|
|                              |                                         |                             | 185                       |                                            |                               | 779                     |                                        |                             |
|                              |                                         |                             | 165                       |                                            |                               | 4,414                   |                                        | 4,579                       |
|                              |                                         |                             | 511                       |                                            |                               | 13,263                  |                                        | 13,774                      |
| ..                           |                                         | ..                          | 24,056                    |                                            | ..                            | 333,040                 | 288,411                                | ..                          |
| b)<br>1,407                  | ..                                      | ..                          | b)<br>5,256               | -                                          | -                             | b)<br>10,883            | b)<br>8,872                            | -                           |
| 1,185                        | ..                                      | ..                          | 3,819                     | -                                          | -                             | 9,215                   | 7,485                                  | -                           |
| 89                           | ..                                      | ..                          | 444                       | -                                          | -                             | 832                     | 1,053                                  | -                           |
| 133                          | ..                                      | ..                          | 993                       | -                                          | -                             | 836                     | 334                                    | -                           |
| ..                           | c)<br>2,576                             |                             | c)<br>65,899              | ..                                         | ..                            | 151,870                 |                                        | f)<br>5,178                 |
| 246                          | 61                                      | b)<br>110                   | h)<br>586                 | ..                                         | ..                            | h)<br>6,447             | h)<br>2,266                            | ..                          |
| 1,155                        | 770                                     | 2,252                       | 6,279                     | 94                                         | 4,105                         | 40,952                  | 16,474                                 | 1,185                       |

17-2 Medical and Allied Health Personnel (2)

|                             | Year | 17. Physio-<br>therapists/<br>Physical<br>Therapists | 18. Medical<br>Laboratory<br>Technicians | 19. Assistant<br>Medical<br>Laboratory<br>Technicians | 20. Medical<br>Physicists | 21. Medical<br>Radiological<br>Technicians | 22. Assistant<br>Medical<br>Radiological<br>Technicians | 23. Sanitary<br>Engineers |
|-----------------------------|------|------------------------------------------------------|------------------------------------------|-------------------------------------------------------|---------------------------|--------------------------------------------|---------------------------------------------------------|---------------------------|
| BRUNEI                      |      |                                                      |                                          |                                                       |                           |                                            |                                                         |                           |
| <sup>(1)</sup><br>INDONESIA | 1987 | 91                                                   | 169                                      | 765                                                   | ..                        | 104                                        |                                                         | 858                       |
| JAPAN                       | 1986 | 5,415                                                | 36,346                                   | 974                                                   | 5,598                     | 20,919                                     | 2,236                                                   | ..                        |
| <sup>(2)</sup><br>MALAYSIA  | 1987 | *)<br>131                                            | *)<br>1,179                              | *)<br>1,217                                           | *)<br>11                  | -                                          | -                                                       | *)<br>18                  |
| Peninsular Malaysia         |      | 111                                                  | 948                                      | 1,033                                                 | 10                        | -                                          | -                                                       | 15                        |
| Sabah                       |      | 5                                                    | 97                                       | 33                                                    | -                         | -                                          | -                                                       | 1                         |
| Sarawak                     |      | 15                                                   | 134                                      | 151                                                   | 1                         | -                                          | -                                                       | 2                         |
| PHILIPPINES                 | 1986 | c)<br>873                                            | c)<br>17,534                             |                                                       |                           | d)<br>3,168                                | ..                                                      | c)<br>1,214               |
| SINGAPORE                   | 1987 | f)<br>21                                             | f)<br>235                                | f)<br>87                                              |                           | f)<br>113                                  | f)<br>33                                                | f)<br>166                 |
| THAILAND                    | 1986 | 210                                                  | 471                                      | 344                                                   | 201                       | 282                                        | 513                                                     | 20                        |

Source: (1) Personnel Bureau

(2) *Establishment Book*, Information and Documentation  
System Unit, Ministry of Health

(3) Health Statistics Division

Note: a) Ministry of Health, Central Office only

b) For 1985

c) Preregistered as of December, 1986

d) Registered as of December 1986, Radiological Health Service

e) Department of Health only

\*) Government only

| 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 |
|-----------------|---------------------------|------------------------------------------------|-------------------------------|---------------------------------------|------------------------------------------------------|-------------------|-------------------------------------|-----------------------------|
|                 |                           |                                                |                               |                                       |                                                      |                   |                                     |                             |
| ..              | ..                        | ..                                             | ..                            | ..                                    | ..                                                   | 592               | 13,774                              | 23                          |
| ..              | ..                        |                                                | a)<br>18,223                  | ..                                    | ..                                                   | ..                | ..                                  | 1,632                       |
| -               | -                         | -                                              | -                             | -                                     | -                                                    | 1,012             | -                                   | -                           |
| -               | -                         | -                                              | -                             | -                                     | -                                                    | 773               | -                                   | -                           |
| -               | -                         | -                                              | -                             | -                                     | -                                                    | 83                | -                                   | -                           |
| -               | -                         | -                                              | -                             | -                                     | -                                                    | 156               | -                                   | -                           |
| e)<br>2,711     | ..                        |                                                | ..                            | ..                                    | ..                                                   | ..                | ..                                  |                             |
| f)<br>216       | f)<br>358                 | f)<br>79                                       | f)<br>53                      | f)<br>86                              | ..                                                   | 331               | 8,713                               | ..                          |
| 388             | 4,089                     | 1,113                                          | 1,152                         | 71                                    | ..                                                   | ..                | ..                                  | ..                          |

17-2 Medical and Allied Health Personnel (3)

|                     | Year | 33.Malaria<br>Field<br>Officers | 34. Medical<br>Social<br>Technicians | 35.Health<br>Statistics<br>Technicians | 36.Medical<br>Statistician | 37.Dental<br>Hyginists | 38. Trained<br>or Rural<br>Midwives | 39.Traditional<br>Birth<br>Attendants |
|---------------------|------|---------------------------------|--------------------------------------|----------------------------------------|----------------------------|------------------------|-------------------------------------|---------------------------------------|
| BRUNEI              |      |                                 |                                      |                                        |                            |                        |                                     |                                       |
| (1)<br>INDONESIA    | 1987 |                                 |                                      |                                        |                            |                        |                                     |                                       |
| JAPAN               | 1986 | ..                              | ..                                   | ..                                     | ..                         | 32,666                 | ..                                  | ..                                    |
| (2)<br>MALAYSIA     | 1987 | -                               | -                                    | 9                                      | 3                          | -                      | a)<br>2,029                         | -                                     |
| Peninsular Malaysia |      | -                               | -                                    | 9                                      | 3                          | -                      | 775                                 | -                                     |
| Sabah               |      | -                               | -                                    | -                                      | -                          | -                      | 444                                 | -                                     |
| Sarawak             |      | -                               | -                                    | -                                      | -                          | -                      | 810                                 | -                                     |
| PHILIPPINES         | 1986 | c)<br>621                       | -                                    | -                                      | -                          | d)<br>6                | c)<br>9,789                         | c)<br>31,292                          |
| SINGAPORE           | 1987 | ..                              | ..                                   | ..                                     | ..                         | ..                     | ..                                  | ..                                    |
| THAILAND            | 1986 | ..                              | ..                                   | 88                                     | 869                        | 698                    |                                     |                                       |

Source: (1) Centre for Health Manpower Education, 1987  
(2) *Establishment Book*, Information and Documentation  
System Unit

Note: a) Government  
b) DIV II, dentist private sector  
c) Ministry of Health only  
d) Professional regulation commission, 1986

| 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 |
|--------------------|------------------------|---------------------------|--------------------------|--------------------------|--------------------|------------------------|---------------|-----------------------------|
|                    |                        |                           |                          |                          |                    |                        |               |                             |
| 185                |                        |                           |                          |                          |                    | 24                     | 1,262         |                             |
| 186                |                        |                           |                          |                          |                    | 15                     | 1,508         |                             |
| 187                |                        |                           |                          |                          |                    | 12                     | 1,893         |                             |
| ..                 | ..                     | 3,619                     | ..                       | ..                       | ..                 | ..                     | ..            | ..                          |
| -                  | -                      | -                         | b)<br>275                | -                        | -                  | a)<br>291              | a)<br>1,407   | -                           |
| -                  | -                      | -                         | 182                      | -                        | -                  | 240                    | 1,185         | -                           |
| -                  | -                      | -                         | 38                       | -                        | -                  | 23                     | 89            | -                           |
| -                  | -                      | -                         | 55                       | -                        | -                  | 28                     | 133           | -                           |
|                    | c)<br>2,711            | 315                       |                          |                          |                    |                        |               |                             |
| ..                 | ..                     | a)<br>40                  | 654                      | a)<br>12                 | ..                 | a)<br>43               | a)<br>205     |                             |
| 12                 | ..                     | ..                        | ..                       | ..                       | ..                 | ..                     | ..            | ..                          |

# 17-2 Medical and Allied Health Personnel (4)

|                     | Year | 49.Nurses     | 50.Occupa-<br>tional<br>Therapists | 51.Dietitians | 52.Radio-<br>graphers | 53.Nursing<br>Auxillaries | 54.X-ray<br>Assistant<br>Technicians | 55.Health<br>Inspectors |
|---------------------|------|---------------|------------------------------------|---------------|-----------------------|---------------------------|--------------------------------------|-------------------------|
| BRUNEI              |      |               |                                    |               |                       |                           |                                      |                         |
| (1)<br>INDONESIA    | 1987 | 13,263        |                                    | 630           | 104                   |                           |                                      | 498                     |
| JAPAN               | 1986 | 639,936       | 1,986                              | ..            | ..                    | ..                        | ..                                   | ..                      |
| (3)<br>MALAYSIA     | 1987 | a)<br>10,883  | a)<br>43                           | a)<br>35      | a)<br>316             | -                         | -                                    | a)<br>931               |
| Peninsular Malaysia |      | 9,215         | 36                                 | 27            | 260                   | -                         | -                                    | 756                     |
| Sabah               |      | 832           | 3                                  | 4             | 16                    | -                         | -                                    | 79                      |
| Sarawak             |      | 836           | 4                                  | 4             | 40                    | -                         | -                                    | 97                      |
| PHILIPPINES         | 1986 | b)<br>151,870 | b)<br>109                          | b)<br>5,673   |                       |                           |                                      |                         |
| SINGAPORE           | 1987 | a)<br>8,713   | a)<br>14                           | a)<br>13      | a)<br>113             | ..                        | ..                                   | a)<br>216               |
| (4)<br>THAILAND     | 1986 | ..            | 12                                 | 98            | ..                    | ..                        | ..                                   | ..                      |

Source: (1) Centre for Health Manpower Education, 1987

(2) Center for Training for Health Personnel, 1986

(3) *Establishment Book*, Information and Documentation  
System Unit, Ministry of Health

(4) Health Statistics Division, Ministry of Public Health

Note: a) Government, 1986

b) Registered as of 1986, Professional Registrations Commission

c) Department of Health only

| 56. Assistant Health Inspectors | 57. Bio-chemists | 58. Health Educators | 59. Midwives | 60. Microscopists | 61. Health Assistants | 62. Entomologists | 63. Dental Surgery Assistants | 64. Nutritionists | 65. Darkroom Assistants |
|---------------------------------|------------------|----------------------|--------------|-------------------|-----------------------|-------------------|-------------------------------|-------------------|-------------------------|
|                                 |                  |                      |              |                   |                       |                   |                               |                   |                         |
|                                 | 858              | (2)<br>78            | 511          |                   |                       |                   |                               | 630               |                         |
| ..                              | ..               | ..                   | 24,056       | ..                | ..                    | ..                | ..                            | 20,642            |                         |
| a)<br>2,182                     | a)<br>50         | a)<br>49             | a)<br>5,256  | -                 | -                     | a)<br>16          | a)<br>870                     | a)<br>15          | -                       |
| 1,661                           | 43               | 43                   | 3,819        | -                 | -                     | 13                | 783                           | 13                | -                       |
| 202                             | 5                | 3                    | 444          | -                 | -                     | 1                 | 38                            | 1                 | -                       |
| 319                             | 2                | 3                    | 993          | -                 | -                     | 2                 | 49                            | 1                 | -                       |
|                                 |                  | a)<br>144            | b)<br>65,899 |                   |                       | c)<br>7           |                               | b)<br>5,673       |                         |
| a)<br>358                       |                  | a)<br>7              | 586          | ..                | ..                    |                   | ..                            |                   | ..                      |
|                                 | 36               | 239                  | ..           | 6                 | ..                    | 57                | ..                            | 362               | 13                      |

### 17-3 Population/Health Personnel Ratios

|                     | Year | Physicians<br>per 10,000<br>Population | Population<br>per<br>Physicians | Dentists<br>per 10,000<br>Population | Population<br>per<br>Dentists | Pharmacists<br>per 10,000<br>Population | Population<br>per<br>Pharma-<br>cists | Medical<br>Assistants<br>per 10,000<br>Population | Population<br>per<br>Medical<br>Assistants | Nursing<br>Personnels<br>per 10,000<br>Population | Population<br>per<br>Nursing<br>Personnels | Nursing &<br>Midwifery<br>Personnels<br>per 10,000<br>Population | Population<br>per Nursing<br>& Midwifery<br>Personnels |
|---------------------|------|----------------------------------------|---------------------------------|--------------------------------------|-------------------------------|-----------------------------------------|---------------------------------------|---------------------------------------------------|--------------------------------------------|---------------------------------------------------|--------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------|
| BURNEI              | 1987 | 7.3                                    | 1,367.0                         | 1.3                                  | 7,542.0                       | 0.4                                     | 25,978.0                              |                                                   |                                            | 33.3                                              | 300.0                                      | 7.9                                                              | 1,264.0                                                |
| INDONESIA           | 1987 | 1.3                                    | 7,815                           | 0.2                                  | 37,605                        | 0.28                                    | 35,800                                |                                                   |                                            | 0.76                                              | 12,994                                     | 0.799                                                            | 12,512                                                 |
|                     | 1985 | 1.2                                    | 8,309                           | 0.3                                  | 38,979                        | 0.2                                     | 41,811                                | ..                                                | ..                                         | 1.6                                               | 39,094                                     | 0.26                                                             | 37,637                                                 |
|                     | 1986 | 1.8                                    | 8,486                           | 0.3                                  | 39,807                        | 0.25                                    | 39,974                                |                                                   |                                            |                                                   | 24,352                                     | 0.42                                                             | 23,728                                                 |
| JAPAN               | 1986 | 15.7                                   | 636                             | 5.49                                 | 1,822                         | 11.18                                   | 895                                   | ..                                                | ..                                         | 52.6                                              | 190                                        | 54.57                                                            | 183                                                    |
| MALAYSIA            | 1987 | 3.50                                   | 2,863                           | 0.73                                 | 13,547                        | 0.63                                    | 15,741                                | 1.84                                              | 5,433                                      | 6.58                                              | 1,519                                      | 9.76                                                             | 1,024                                                  |
| Peninsular Malaysia |      | 3.88                                   | 2,576                           | 0.80                                 | 12,346                        | 0.68                                    | 14,730                                | 1.61                                              | 6,179                                      | 6.74                                              | 1,482                                      | 9.54                                                             | 1,048                                                  |
| Sabah               |      | 1.70                                   | 5,880                           | 0.38                                 | 25,939                        | 0.48                                    | 20,670                                | 3.14                                              | 3,180                                      | 6.28                                              | 1,590                                      | 9.64                                                             | 1,037                                                  |
| Sarawak             |      | 1.73                                   | 5,763                           | 0.40                                 | 24,603                        | 0.36                                    | 27,193                                | 2.68                                              | 3,726                                      | 5.39                                              | 1,854                                      | 11.84                                                            | 848                                                    |
| (1)<br>PHILIPPINES  | 1986 | 9.56                                   | 1,046                           | 4.01                                 | 2,493                         | 4.80                                    | 2,085                                 | ..                                                | ..                                         | 27.12                                             | 369                                        | 38.88                                                            | 257                                                    |
| SINGAPORE           | 1987 | 11.2                                   | 889                             | 2.5                                  | 3,995                         | 1.9                                     | 5,365                                 | ..                                                | ..                                         | 33.3                                              | 300                                        | 35.6                                                             | 281                                                    |
| THAILAND            | 1986 | 1.80                                   | 5,564                           | 0.26                                 | 37,745                        | 0.64                                    | 15,690                                | 0.00                                              | 3,761,000                                  | 7.78                                              | 1,286                                      | ..                                                               | ..                                                     |

Source: Ministry of Health in each country

(1) Professional Regulation Commission (PRC)

17-4 Number of Physicians

|                     | 1970    | 1975           | 1980           | 1981           | 1983           | 1984           | 1985           | 1986           | 1987           |
|---------------------|---------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| BRUNEI              |         |                |                |                |                |                |                |                | 171            |
| INDONESIA           | 3,578   | 8,279          | (1)<br>12,931  | (1)<br>15,400  | (1)<br>16,698  | (2)<br>17,760  | (3)<br>19,875  | (3)<br>20,176  | (3)<br>22,053  |
| JAPAN               | 118,990 | 132,479        | 156,235        | 162,882        |                | 181,101        | -              | 191,346        | -              |
| (4)<br>MALAYSIA     |         |                |                |                |                |                |                |                |                |
| Peninsular Malaysia | 2,370   | 2,757<br>2,511 | 3,858<br>3,518 | 3,941<br>3,584 | 4,474<br>4,082 | 4,505<br>4,111 | 4,939<br>4,541 | 5,394<br>4,938 | 5,794<br>5,300 |
| Sabah               |         | 104            | 141            | 150            | 174            | 174            | 174            | 216            | 225            |
| Sarawak             | 80      | 142            | 199            | 207            | 218            | 220            | 224            | 240            | 269            |
| PHILIPPINES         | 31,515  | 37,276         | a)<br>7,259    | a)<br>7,378    | (5)b<br>47,989 | (5)b<br>49,602 | (5)b<br>49,602 | (5)b<br>53,556 |                |
| (6)<br>SINGAPORE    | 1,363   | 1,622          | 1,976          | 2,091          | 2,361          | 2,504          | 2,631          | 2,781          | 2,939          |
| (7)<br>THAILAND     | 5,407   | 5,005          | 6,867          | 6,931          | 7,902          | 8,058          | 8,650          | 9,464          |                |

Source: (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) Personal Bureau 1987  
 (4) Medical Council, Ministry of Health  
 (5) Professional Regulation commissioner(PRC)  
 (6) Yearbook of Statistics, Singapore 1987  
 (7) Health Statistics Division, Ministry of Public Health

Note: a) Department of Health Manpower only  
 b) Registered physicians (government & private) as of 1986

17-5 Number of Dentists

|                     | 1970   | 1975   | 1980        | 1982      | 1983        | 1984            | 1985            | 1986            | 1987        |
|---------------------|--------|--------|-------------|-----------|-------------|-----------------|-----------------|-----------------|-------------|
| BRUNEI              |        |        |             |           |             |                 |                 |                 | 31          |
| (1)<br>INDONESIA    | 452    |        | 1,681       | 2,128     | 2,364       | 2,664           | a)<br>4,237     | a)<br>4,237     | a)<br>4,583 |
| JAPAN               | 37,859 | 43,586 | 53,602      | 58,632    | -           | 63,145          | -               | 66,797          |             |
| (2)b)<br>MALAYSIA   |        | 443    | 691         | 798       | 858         | 957             | 1,041           | 1,130           | 1,220       |
| Peninsular Malaysia | 15     | 9      | 630         | 724       | 774         | 867             | 949             | 1,030           | 1,106       |
| Sabah               |        |        | 25          | 42        | 48          | 40              | 36              | 46              | 51          |
| Sarawak             |        |        | 36          | 32        | 36          | 50              | 56              | 60              | 63          |
| PHILIPPINES         | 12,174 | 13,096 | c)<br>1,029 | c)<br>984 | d)<br>8,057 | (3)d)<br>20,304 | (3)d)<br>20,542 | (3)d)<br>22,467 |             |
| (4)<br>SINGAPORE    | 398    | 419    | 485         | 530       | 555         | 588             | 604             | 632             | 654         |
| THAILAND            | 683    | 652    | 1,169       | 1,142     | 1,247       | 1,326           | 1,451           | 1,395           |             |

Source: (1) The Health Situation of Indonesia, 1984

(2) Dental Council

(3) Professional Regulation Commissioner (PRC)

Note: a) Personnel Bureau, June, 1987

b) As of December 31

c) Government and private

d) Registered as of 1986, government and private

## 17-6 Number of Pharmacists

|                             | 1970   | 1975   | 1980      | 1982       | 1983         | 1984            | 1985            | 1986            | 1987            |
|-----------------------------|--------|--------|-----------|------------|--------------|-----------------|-----------------|-----------------|-----------------|
| BRUNEI                      |        |        |           |            |              |                 |                 |                 | 9               |
| <sup>(1)</sup><br>INDONESIA | 1,486  | 1,847  | 3,013     | 3,389      | 3,587        | a)<br>3,926     | a)<br>4,268     | a)<br>4,513     | a)<br>4,814     |
| JAPAN                       | 79,393 | 94,362 | 116,056   | 124,390    |              | 129,700         |                 | 135,990         |                 |
| MALAYSIA                    |        | 258    | 488       | (2)<br>626 | (2)<br>676   | c)<br>734       | c)<br>843       | c)<br>963       | c)<br>1,050     |
| Peninsular Malaysia         |        |        |           | (2)<br>595 | (2)<br>598   | c)<br>676       | c)<br>732       | c)<br>828       | c)<br>929       |
| Sabah                       |        |        | (3)<br>17 | (2)<br>12  | (4)<br>37    | c)<br>29        | c)<br>64        | c)<br>84        | c)<br>64        |
| Sarawak                     |        |        |           | (2)<br>19  | (2)<br>41    | c)<br>29        | c)<br>47        | c)<br>51        | c)<br>57        |
| PHILIPPINES                 | 19,076 | 20,838 | d)<br>518 | d)<br>504  | e)<br>25,337 | (5)e)<br>26,005 | (5)e)<br>26,005 | (5)e)<br>26,854 | (5)e)<br>26,854 |
| <sup>(6)</sup><br>SINGAPORE | 245    | 288    | 368       | 373        | 387          | 409             | 436             | 454             | 487             |
| <sup>(7)</sup><br>THAILAND  | 1,407  | 1,913  | 2,650     | 3,097      | 2,990        | 3,312           | 3,376           | 3,356           |                 |

Source: (1) The Health Situation of Indonesia, Department of Health, 1984

(2) Indicator for Monitoring and Evaluation of Strategy for Health for All by the year 2000, Information and Documentation System Unit, Ministry of Health

(3) Annual Report, Medical Department, Sabah, 1982

(4) Data provided by Medical Department

(5) Professional Regulation Commission (PRC)

(6) Yearbook of Statistics, Singapore, 1987

(7) Health Statistics Division, Ministry of Public Health

Note: a) Directorate General, Food &amp; Drugs Control, Ministry of Health Indonesia, 1987

b) As of Dec. 31

c) Pharmacy Board, Ministry of Health

d) Department of Health manpower only

e) Registered pharmacists (government &amp; private) as of 1986

17-7 Number of Midwives

|                               | 1970   | 1975   | 1980                    | 1982                    | 1983                    | 1984                    | 1985                     | 1986                     | 1987                  |
|-------------------------------|--------|--------|-------------------------|-------------------------|-------------------------|-------------------------|--------------------------|--------------------------|-----------------------|
| BRUNEI                        |        |        |                         |                         |                         |                         |                          |                          | 185                   |
| <sup>(1)</sup><br>INDONESIA   | 3,752  | 10,720 | 16,472                  | 17,207                  | 17,486                  | 17,685                  | <sup>(2)</sup><br>51,375 | <sup>(3)</sup><br>22,500 | <sup>(2)</sup><br>511 |
| JAPAN                         | 28,087 | 26,742 | 25,867                  | 25,416                  |                         | 24,649                  |                          | 24,056                   |                       |
| <sup>(4)</sup><br>MALAYSIA    |        |        |                         |                         |                         |                         |                          |                          | <sup>(5)c)</sup>      |
| Peninsular Malaysia           |        | 3,767  | <sup>(5)</sup><br>5,002 | <sup>(5)</sup><br>5,353 | <sup>(5)</sup><br>5,432 | <sup>(5)</sup><br>5,468 | <sup>(5)</sup><br>5,673  | <sup>(5)</sup><br>3,795  | 5,256<br>3,819        |
| Sabah                         |        |        |                         | 417<br>a)               |                         | 400                     | -                        | -                        | 444                   |
| Sarawak                       |        |        |                         | 338                     |                         |                         | 970                      | -                        | 993                   |
| <sup>(6)</sup><br>PHILIPPINES | 16,082 | 26,680 | a)<br>9,329             | a)<br>9,428             | 14,021                  | b)<br>62,972            | b)<br>62,972             | b)<br>65,899             |                       |
| <sup>(7)</sup><br>SINGAPORE   | 1,058  | 930    | 779                     | 722                     | 710                     | 652                     | 650                      | 601                      | 586                   |
| <sup>(8)</sup><br>THAILAND    | 4,203  | 6,335  | 8,669                   | 8,851                   | 9,100                   | 8,573                   | 7,716                    | 6,279                    |                       |

Source: (1) *The Health Situation of Indonesia*, Department of Health, 1984

(2) Centre for Health Manpower Education, Ministry of Health  
1987

(3) Internation General, Ministry of Health, September, 1986

(4) Nursing Board, Ministry of Health

(5) Division II, Midwives & Jururawat Desa

(6) Professional Regulation Commission(PRC)

(7) *Yearbook of Statistics, Singapore, 1986*

(8) Health Statistics Division, Ministry of Public Health

Note: a) Department of Health manpower only

b) Registered as of 1986, government & private

c) Government only

17-8 Number of Nurses

|                     | 1970    | 1975    | 1980        | 1982         | 1983         | 1984          | 1985          | 1986          | 1987          |
|---------------------|---------|---------|-------------|--------------|--------------|---------------|---------------|---------------|---------------|
| BRUNEI              |         |         |             |              |              |               |               |               | 779           |
| (1)<br>INDONESIA    |         | 9,856   | 20,201      | 22,205       | 22,487       | (2)<br>25,834 | (2)<br>30,515 | (2)<br>37,618 | (2)<br>50,881 |
| JAPAN               | 273,572 | 361,604 | 487,169     | 540,971      | NA           | 590,177       | NA            | 639,936       | NA            |
| (3)<br>MALAYSIA     |         |         |             |              |              |               |               |               |               |
| Peninsular Malaysia |         |         | 15,392      | 17,144       | 17,916       | 18,653        | 19,479        | 20,170        | 21,340        |
| Sabah               |         |         |             | 633          | 640          | 695           | 779           | -             |               |
| Sarawak             |         |         |             | 554          |              | 623           | 778           | -             |               |
| (4)<br>PHILIPPINES  | 38,918  | 64,155  | a)<br>9,605 | a)<br>9,075  | a)<br>11,917 | b)<br>146,891 | a)<br>146,891 | b)<br>151,870 |               |
| (5)<br>SINGAPORE    | 4,304   | 5,767   | 7,545       | 7,534        | 7,714        | 7,830         | 8,395         | 8,568         | 8,713         |
| (6)<br>THAILAND     | 15,387  | 18,993  | 18,483      | b)<br>22,878 | 26,444       | 31,827        | 38,683        | 40,952        |               |

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

(2) Centre for Health Manpower

(3) Nursing Board, Ministry of Health

(4) Professional Regulation Commission (PRC)

(5) *Yearbook of Statistics, Singapore, 1987*

(6) Health Statistics Division

Note: a) Department of Health manpower only

b) Registered as of 1986, government & private

# 18-1 Situation of Medical Schools

|                    | Academic Year                 | Number of Medical Schools | Duration of Studies                                 | Total Enrolment   | Admissions      | Graduates         |
|--------------------|-------------------------------|---------------------------|-----------------------------------------------------|-------------------|-----------------|-------------------|
| BRUNEI             |                               |                           |                                                     |                   |                 |                   |
| (1)<br>INDONESIA   | 1986                          | b)<br>10                  | 7 Years                                             |                   | 11,688          | d)<br>21,694      |
| (2)<br>JAPAN       | 1987/88                       | 80                        | 6 Years                                             |                   | 8,140           | e)<br>7,854       |
| (3)<br>MALAYSIA    | 1985                          | 3                         | 6 Years                                             | 2,052             | -               | -                 |
| (4)<br>PHILIPPINES | 1985/86<br>1984/85<br>1986/87 | 28                        | Pre-Med-4 Years<br>Proper-4 Years<br>Intern-1 Years | f)<br>4,045<br>h) |                 | g)<br>2,958<br>h) |
| (5)<br>SINGAPORE   | 1987/88                       | 1                         | 5 Years                                             | 851<br>i)<br>152  | 164<br>i)<br>17 | 140<br>i)<br>29   |
| (6)<br>THAILAND    | 1986                          | 8                         | 6 Years                                             |                   |                 | 750               |

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) Government

b) Private

c) 6 Years at the Medical Faculty, University of Indonesia, Jakarta

d) Date up to July 1986

e) Those who succeeded in national examination

f) Quota, only freshman enrolment for school year 1984-1985

g) School year 1984-1985

h) Singaporeans

i) Non-Singaporeans

j) Date up to July 1986