4 Important causes of ill-health

- Cancers
- Communicable diseases
- Congenital malformations
- Dental caries
- Disability
- Heart attack
- HIV/AIDS
- Mental disorders

Cancers, males

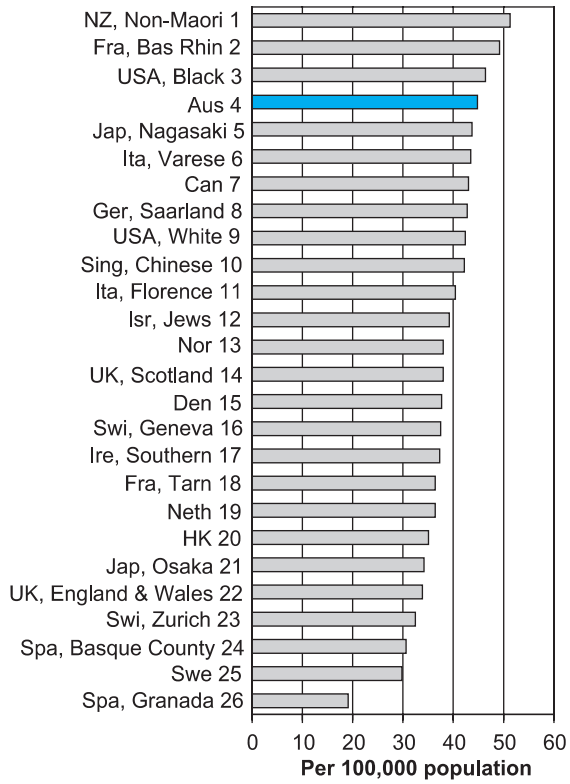

Figure 1: Colorectal cancer incidence, males, 1988–1992

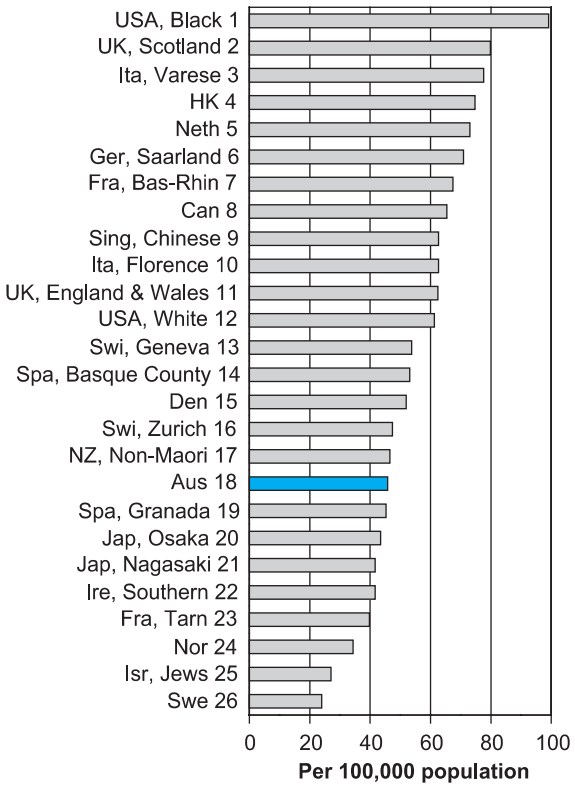

Figure 2: Lung cancer incidence, males, 1988–1992

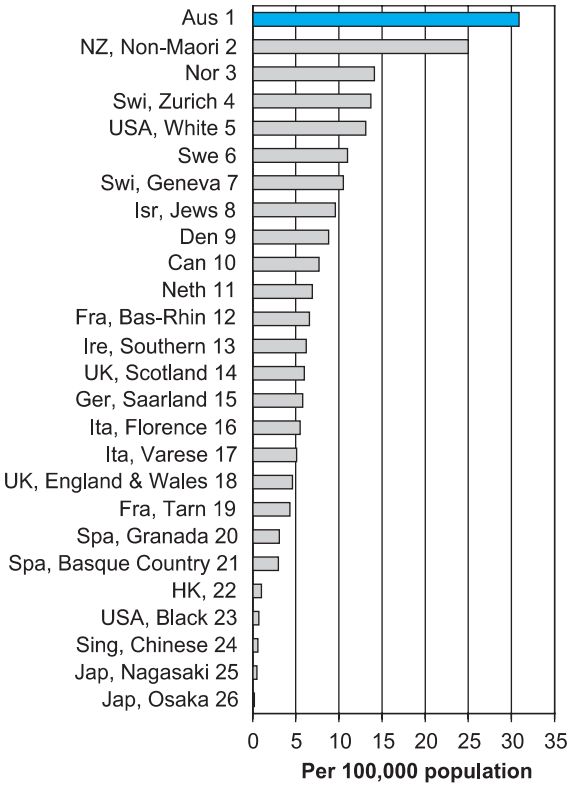

Figure 3: Melanoma incidence, males, 1988–1992

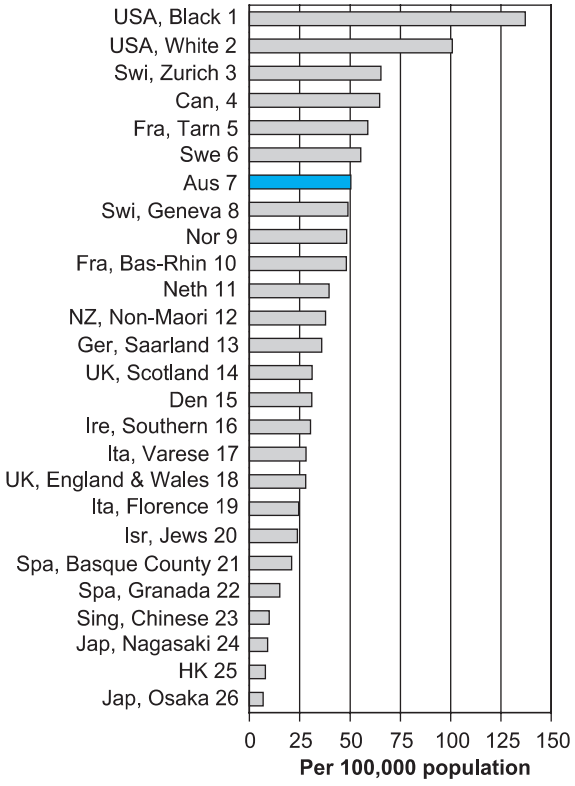

Figure 4: Prostate cancer incidence, males, 1988–1992

Cancers, males

Cancer incidence, males (per 100,000 population)

Country/region	Year	Colorectal ICD 153–54	Lung ICD 162	Melanoma ICD 172	Prostate ICD 185	Bladder ICD 188	NHL[(a)] ICD 200, 202
Australia	1990	44.8	45.8	30.9	50.4	14.1	12.6
Canada	1988–92	43.0	65.4	7.7	64.7	18.7	13.1
Denmark	1988–92	37.7	51.9	8.8	31.0	27.9	9.8
France, Bas-Rhin	1988–92	49.2	67.4	6.6	48.1	23.1	12.1
France, Tarn	1988–92	36.4	39.7	4.3	58.8	24.7	6.8
Germany, Saarland	1988–92	42.8	70.9	5.8	35.9	23.1	9.4
Hong Kong	1988–92	35.1	74.7	1.0	7.9	14.5	8.7
Ireland, Southern	1988–92	37.3	41.6	6.2	30.4	12.2	8.9
Israel, Jews	1988–92	39.2	27.0	9.6	23.9	25.2	12.6
Italy, Florence	1988–91	40.4	62.6	5.5	24.4	35.2	9.8
Italy, Varese	1988–92	43.5	77.6	5.1	28.2	35.0	13.9
Japan, Nagasaki	1988–92	43.7	41.7	0.5	9.1	11.2	13.5
Japan, Osaka	1988–92	34.2	43.5	0.2	6.8	7.4	6.1
Netherlands	1989–92	36.4	73.0	6.9	39.6	15.2	10.6
New Zealand, Non-Maori	1988–92	51.3	46.5	25.0	37.8	14.0	10.3
Norway	1988–92	38.0	34.3	14.1	48.4	16.6	10.1
Singapore, Chinese	1988–92	42.2	62.7	0.6	9.8	7.7	6.1
Spain, Basque County	1988–91	30.6	53.1	3.0	21.0	27.1	8.1
Spain, Granada	1988–92	19.1	45.3	3.1	15.1	23.5	5.6
Sweden	1988–92	29.8	23.9	11.0	55.3	17.3	10.8
Switzerland, Geneva	1988–92	37.5	53.7	10.5	49.0	32.5	13.5
Switzerland, Zurich	1988–92	32.5	47.4	13.7	65.4	22.4	12.9
UK, England & Wales	1988–90	33.9	62.4	4.6	28.0	20.3	9.6
UK, Scotland	1988–92	38.0	79.8	6.0	31.2	22.9	9.4
USA, White	1988–92	42.4	61.3	13.1	100.8	24.0	16.3
USA, Black	1988–92	46.4	99.1	0.7	137.0	11.1	12.3

(a) Non-Hodgkin's lymphomas.

Sources: Parkin et al. 1997; Jelfs et al. 1996.

- Cancer describes a range of diseases in which abnormal cells proliferate and spread out of control. Many cancers can be serious and even fatal. Each year, about 345,000 new cancer cases are diagnosed in Australia, most of which are non-melanocytic skin cancers which are less life-threatening than other cancers. Cancer occurs more commonly in males than females, with the most common registerable cancers among males being prostate, colorectal, lung and melanoma. About 30% of male deaths in Australia are caused by cancers.
- National information about people with newly diagnosed cancers is only available for a limited number of countries; however, many developed countries have regional cancer registries. Latest regional incidence data for males position Australia in the top half of developed countries for a number of major cancers. Australian males had a colorectal cancer incidence rate of 44.8 per 100,000 population in 1990, fourth highest among comparison groups (Figure 1) Colorectal cancer is considered a disease of economically developed countries. Prostate cancer, one of the most common cancers among males, was also high; a rate of 50.4 in 1990 ranking Australian males seventh amongst comparison groups (Figure 4).
- The Australian male lung cancer rate of 45.8 per 100,000 population in 1990 was moderate compared to other developed countries (Figure 2). However, the melanoma rate of 30.9 in 1990 was the highest in the world. Melanoma rates for the Asian comparison groups were especially low (Figure 3). Incidence of non-Hodgkin's lymphomas is also high among Australian males, ranking equal seventh among comparison groups. Australian males ranked 20th for bladder cancer incidence.

For more information, see:

Parkin DM, Whelan SL, Ferlay J et al. 1997. Cancer incidence in five continents, Volume VII. IARC Scientific Publications No. 143. Lyon: International Agency for Research on Cancer.

Cancers, females

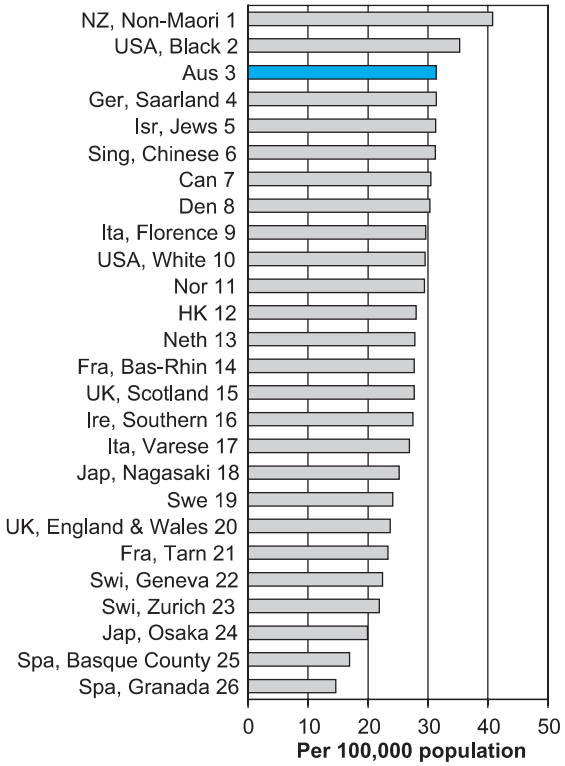

Figure 1: Colorectal cancer incidence, females, 1988–1992

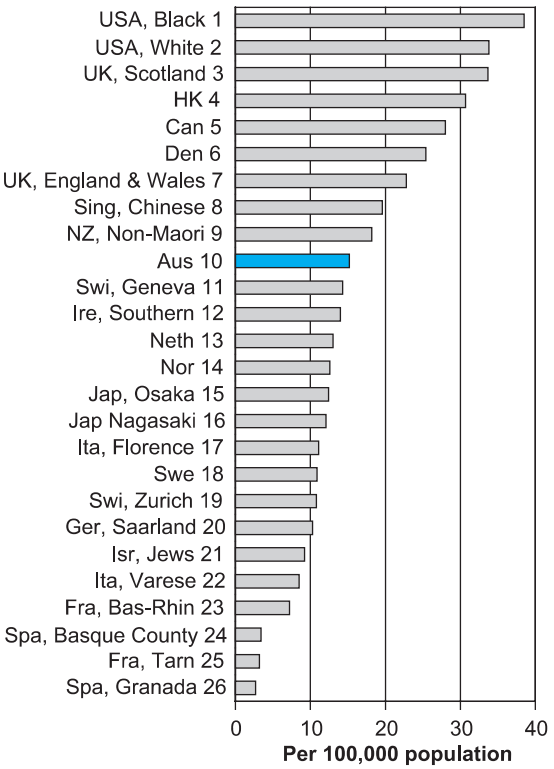

Figure 2: Lung cancer incidence, females, 1988–1992

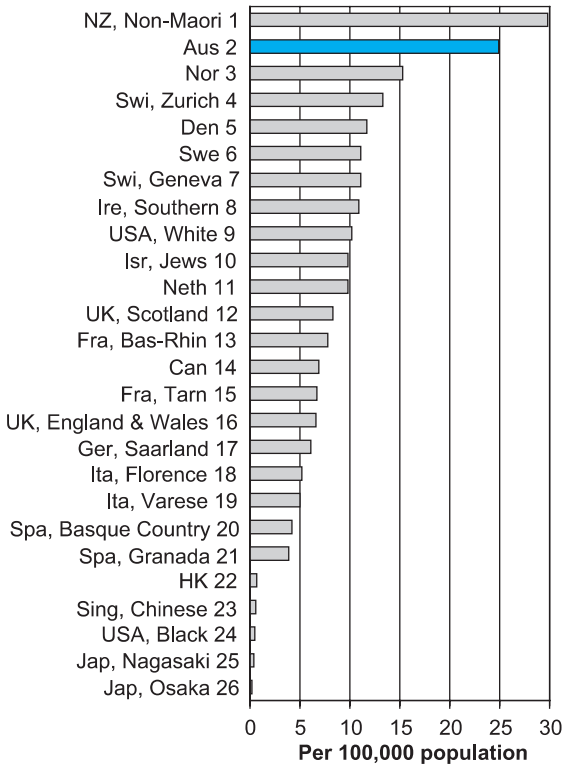

Figure 3: Melanoma incidence, females, 1988–1992

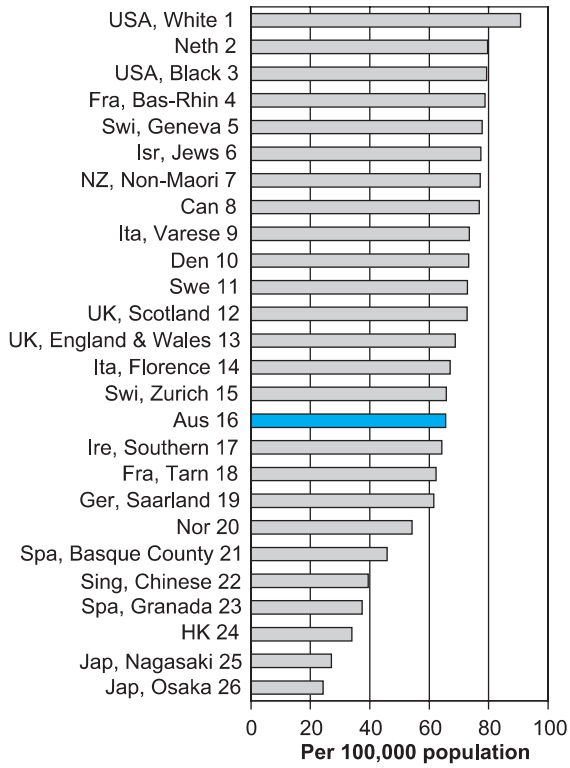

Figure 4: Breast cancer incidence, females, 1988–1992

Cancers, females

Cancer incidence, females (per 100,000 population)

Country/region	Year	Colorectal ICD 153–54	Lung ICD 162	Melanoma ICD 172	Breast ICD 174	Uterus ICD 179, 182	Cervix ICD 180
Australia	1990	31.4	15.2	24.9	65.5	9.5	10.2
Canada	1988–92	30.5	28.0	6.9	76.8	14.8	7.8
Denmark	1988–92	30.3	25.4	11.7	73.3	15.2	15.2
France, Bas-Rhin	1988–92	27.7	7.2	7.8	78.8	16.7	10.0
France, Tarn	1988–92	23.3	3.2	6.7	62.3	10.2	7.7
Germany, Saarland	1988–92	31.4	10.3	6.1	61.5	13.9	11.4
Hong Kong	1988–92	28.0	30.7	0.7	34.0	7.2	15.3
Ireland, Southern	1988–92	27.5	14.0	10.9	64.2	8.6	6.5
Israel, Jews	1988–92	31.3	9.2	9.8	77.4	11.4	5.3
Italy, Florence	1988–91	29.6	11.1	5.2	67.0	12.9	6.2
Italy, Varese	1988–92	26.9	8.5	5.0	73.5	12.8	6.4
Japan, Nagasaki	1988–92	25.2	12.1	0.4	27.1	4.9	11.3
Japan, Osaka	1988–92	19.9	12.4	0.2	24.3	4.2	9.2
Netherlands	1989–92	27.8	13.0	9.8	79.6	10.8	7.1
New Zealand, Non-Maori	1988–92	40.8	18.2	29.8	77.2	9.5	11.9
Norway	1988–92	29.4	12.6	15.3	54.2	12.6	12.7
Singapore, Chinese	1988–92	31.2	19.6	0.6	39.5	7.0	16.3
Spain, Basque County	1988–91	16.9	3.4	4.2	45.8	9.7	6.0
Spain, Granada	1988–92	14.6	2.7	3.9	37.4	9.2	5.6
Sweden	1988–92	24.1	10.9	11.1	72.9	14.7	8.0
Switzerland, Geneva	1988–92	22.4	14.3	11.1	77.8	12.9	6.1
Switzerland, Zurich	1988–92	21.9	10.8	13.3	65.7	15.2	6.8
UK, England & Wales	1988–90	23.7	22.8	6.6	68.8	9.4	12.5
UK, Scotland	1988–92	27.7	33.7	8.3	72.7	8.3	12.7
USA, White	1988–92	29.5	33.8	10.2	90.7	18.4	7.5
USA, Black	1988–92	35.3	38.5	0.5	79.3	12.0	12.0

Sources: Parkin et al. 1997; Jelfs et al. 1996.

- Cancer is generally less common among females than males. In the late 1980s and early 1990s however, Australian females exhibited a high incidence of several different cancers compared to other developed countries. Colorectal cancer is one of these—a rate of 31.4 new cases per 100,000 population ranking equal third among the comparison regions, exceeded only by white New Zealand and Afro-American females (Figure 1). The Basque County and Granada regions of Spain and Osaka in Japan had the lowest rates among the comparison regions.
- Australian females rated better for lung cancer—a rate of 15.2 new cases per 100,000 population in 1990, ranking 10th (Figure 2). Females from Hong Kong, Scotland and the United States recorded comparatively high rates, females from France and Spain low rates.
- As for Australian males, Australian females also had an extremely high incidence of melanoma—24.9 cases per 100,000 population in 1990 (Figure 3). This was exceeded only by the rate for white New Zealand females. Females in Asian countries such as Hong Kong, Japan and Singapore, and Afro-American females exhibited the lowest rates.
- Australian females ranked in the lower half of the comparison regions for breast cancer incidence, at 65.5 new cases per 100,000 population in 1990 (Figure 4). United States and Dutch females recorded the highest rates, and Japanese and Hong Kong females the lowest.
- For uterine cancer, Australia ranked relatively low at equal 17th, and for cancer of the cervix ranked 11th. Japanese females had low rates of uterine cancer, but higher rates of cervical cancer, exceeded by females from Singapore, Hong Kong and Denmark. Jewish and Spanish females also exhibited low incidence rates of cervical cancer in the late 1980s and early 1990s.

For more information, see:

Parkin DM, Whelan SL, Ferlay J et al. 1997. Cancer incidence in five continents, Volume VII. IARC Scientific Publications No. 143. Lyon: International Agency for Research on Cancer.

Communicable diseases

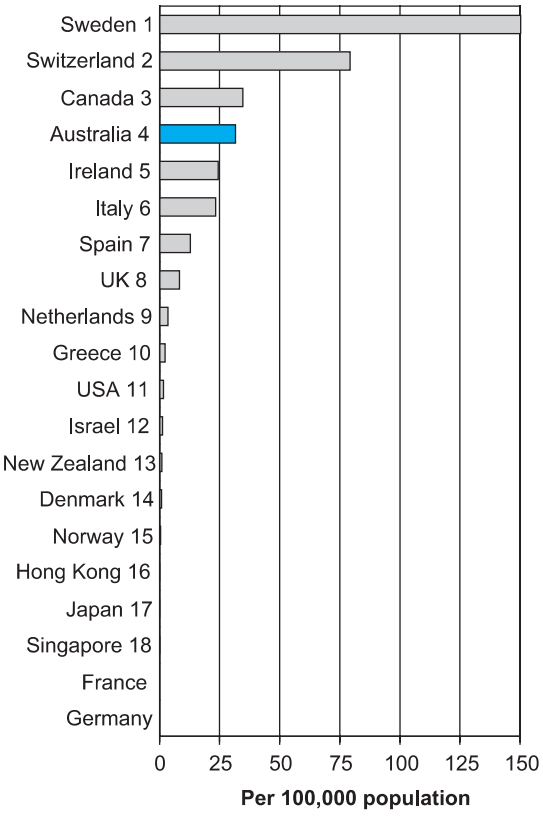

Figure 1: Reported cases of pertussis, 1994

Figure 2: Reported cases of tuberculosis, 1993

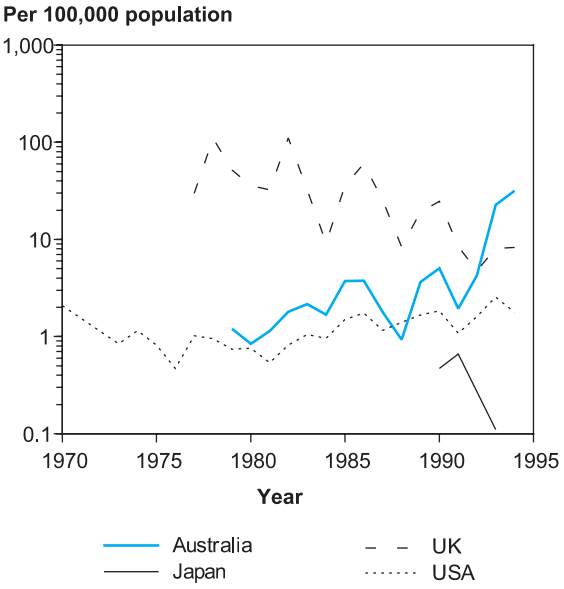

Figure 3: Trends in reported cases of pertussis, 1970 to 1995

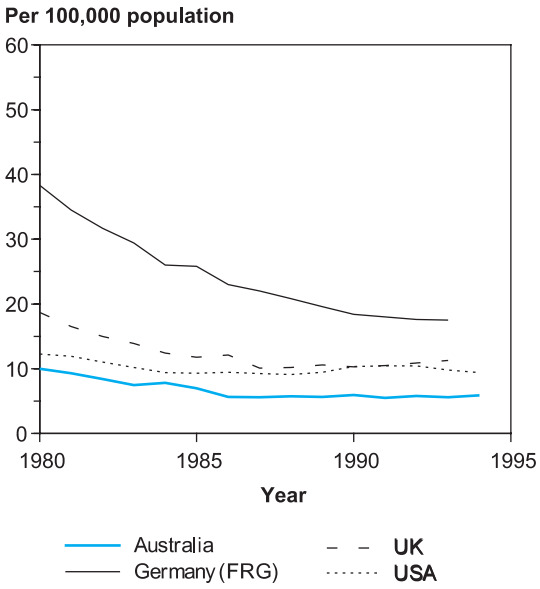

Figure 4: Trends in reported cases of tuberculosis, 1970 to 1995

Communicable diseases

Reported cases of pertussis, tuberculosis and measles (per 100,000 population)

Country	Tuberculosis 1993	Tetanus 1994	Pertussis 1994	Measles 1995
Australia	6.1	0.08	31.6	7.3
Canada	6.9	0.01	34.7	7.8
Denmark	7.9	0.00	0.8	0.1
France	16.1	0.06	—	—
Germany	17.5	0.02	—	—
Greece	1.7	0.05	2.3	0.2
Hong Kong	110.4	1.01	0.1	0.5
Ireland	(a)18.0	(b)0.00	(b)24.4	6.5
Israel	8.0	0.00	1.3	0.5
Italy	8.3	0.18	23.4	56.0
Japan	(a)39.4	(b)0.03	0.1	(b)1.6
Netherlands	10.6	0.01	3.5	1.2
New Zealand	10.6	0.06	1.0	(c)0.9
Norway	5.9	(b)0.02	(b)0.4	0.4
Singapore	63.7	0.00	0.1	6.2
Spain	24.2	0.09	12.8	22.2
Sweden	7.2	0.01	150.2	(c)0.0
Switzerland	13.4	0.04	79.3	0.4
UK	11.3	0.01	8.3	13.4
USA	9.5	0.02	1.7	0.1

(a)1992 data. (b) 1993 data. (c) 1994 data.

Sources: AIHW 1996; WHO 1993a, 1996a.

- In 1990, an estimated one-third of all world-wide deaths were caused by infectious and parasitic diseases. In developed countries however, the diseases accounted for only 4% of deaths whilst the proportion in less developed countries was 44% of all deaths. More than 70% of all deaths among children in developing countries were estimated to be caused by infections (WHO 1992b).
- In developed countries, preventable deaths from communicable diseases still occur. Between 1990 and 1996, 17 Australian children died from measles and its complications. In 1994, the only disease preventable by immunisation for which no cases were notified was diphtheria (AIHW 1996).
- Comparisons between countries is complicated by variations in case definitions, methods of diagnosis and case ascertainment. International data for communicable diseases may also include countries which are experiencing epidemics of a particular disease. Sweden is a case in point, with a pertussis (whooping cough) epidemic occurring during 1993–94 (Figure 1). The United Kingdom also reported a large number of pertussis cases in the 1970s and 1980s, due to marked declines in immunisation rates (Figure 3). Italy experienced a measles outbreak in 1995. Australia also experienced a measles outbreak beginning in late 1992 and continuing through 1994.
- Tuberculosis has resurged throughout many parts of the developed and developing world to such an extent that in 1993 the disease was declared a 'global health emergency' by WHO. Reasons include HIV co-infection, increased resistance to drugs and the neglect of control programs (AIHW 1996). Notification rates tend to be higher in Hong Kong, Singapore and Japan (Figure 2).
- Continued monitoring of disease epidemiology, expanded control activity and the maintenance of high immunisation levels are necessary in order to limit and control local epidemics of infectious diseases.

For more information, see:

WHO 1992. Communicable disease epidemiology and control. World Health Stat Q 45: 166–211.

Curran M, Harvey B, Crerar S et al. 1997. Australia's notifiable diseases status, 1996. Comm Dis Intell 21: 281–307.

Congenital malformations

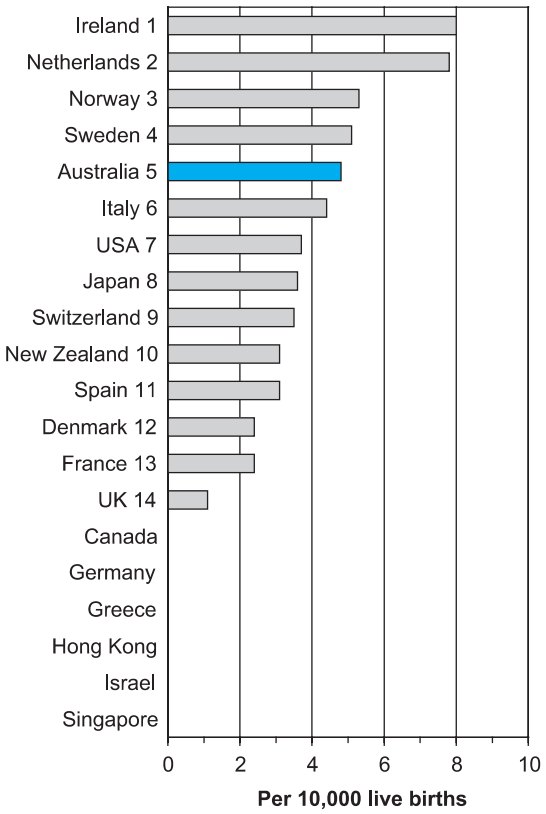

Figure 1: Incidence of spina bifida, 1992

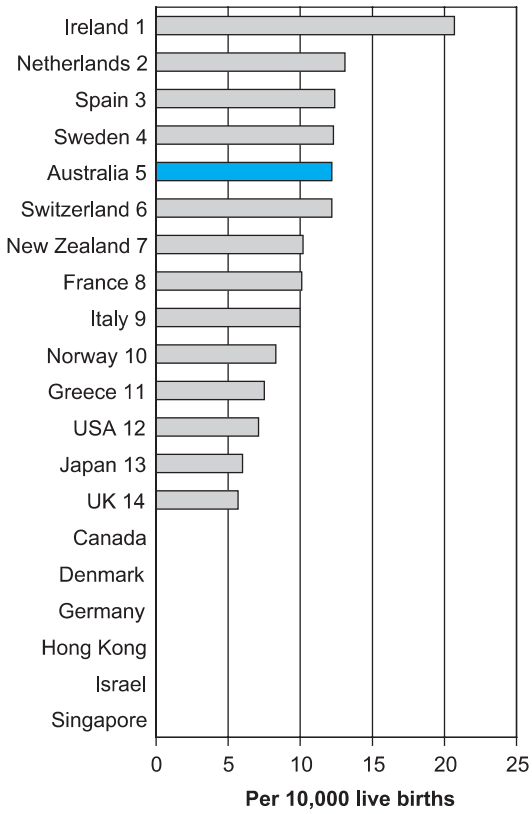

Figure 2: Incidence of Down syndrome, 1992

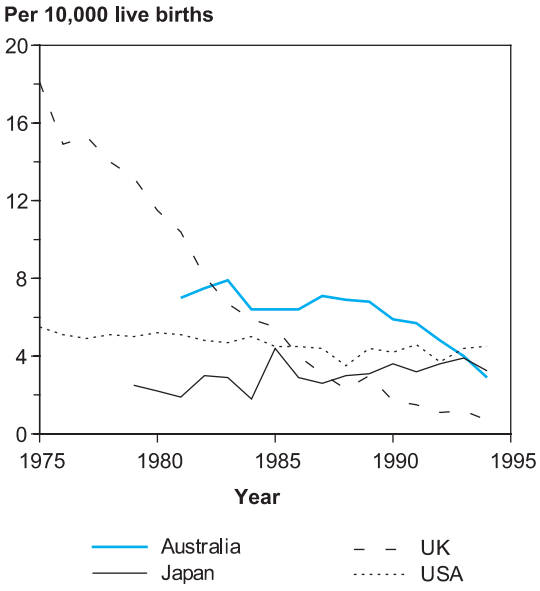

Figure 3: Trends in incidence of spina bifida, 1975 to 1995

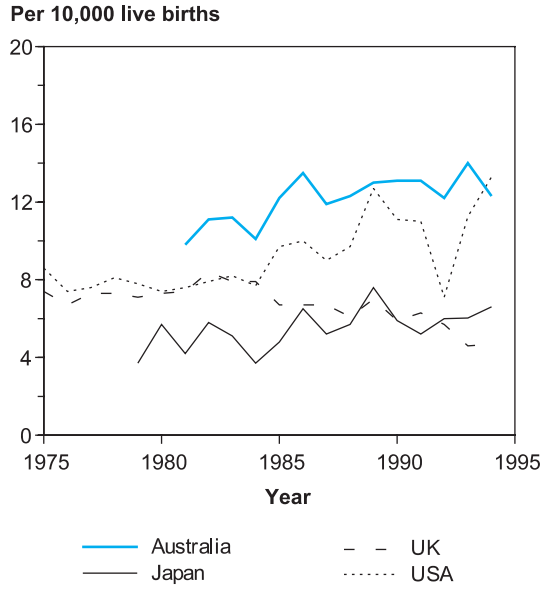

Figure 4: Trends in incidence of Down syndrome, 1975 to 1995

Congenital malformations

Selected congenital malformations (per 10,000 live births)

Country	Spina bifida ICD 741		Hydrocephaly ICD 742.3		Transposition of great vessels, ICD 745.1		Limb reduction ICD 755.2-4		Down syndrome ICD 758.0	
Australia	1994	2.9	1988	3.9	1994	3.8	1994	3.9	1994	12.3
Canada	1988	8.3	1988	5.1	1988	4.6	1988	4.8	1988	13.8
Denmark	1993	3.1	1988	2.4	1993	0.1	1993	7.4	—	—
France	1993	1.0	—	—	1995	3.6	1994	3.5	1994	9.6
Germany	1994	2.8	—	—	—	—	—	—	—	—
Greece	1990	1.6	—	—	1990	0.8	1990	9.1	1992	7.5
Hong Kong	—	—	—	—	—	—	—	—	—	—
Ireland	1994	5.5	—	—	1994	7.2	1994	5.5	1994	22.0
Israel	1988	2.3	1988	2.9	1988	4.0	1988	2.9	1988	10.3
Italy	1993	2.9	1988	4.2	1993	2.9	1994	4.1	1994	12.2
Japan	1994	3.3	1988	5.6	—	—	1993	4.5	1994	6.6
Netherlands	1994	4.7	—	—	1994	7.8	1994	7.3	1994	10.4
New Zealand	1995	2.8	1988	3.6	1991	2.1	1994	1.4	1994	11.5
Norway	1995	5.6	1988	4.8	1995	2.3	1995	7.4	1995	12.2
Singapore	—	—	—	—	—	—	—	—	—	—
Spain	1994	2.9	1988	4.0	1994	1.6	1994	7.3	1994	11.9
Sweden	1992	5.1	1988	2.1	1995	2.1	1992	5.3	1992	12.3
Switzerland	1994	3.3	—	—	1994	4.7	1994	7.2	1994	12.5
UK	1994	0.7	1988	2.0	1994	0.3	1994	2.9	1994	4.7
USA	1994	4.5	1988	5.8	1994	2.5	1994	4.5	1994	13.3

Sources: OECD 1997; The International Clearinghouse for Birth Defects Monitoring Systems 1991.

- Congenital malformations are abnormalities that are recognised at, or are present since, birth. These include conditions which are genetic or caused by environmental factors. Congenital malformations are a significant public health problem since they are relatively common, frequently lead to disabilities and handicaps, and are a major reason for hospitalisation in infancy and childhood.
- In Australia, 1.6% of infants born in 1994 had a major congenital malformation (Lancaster et al. 1997). These malformations include spina bifida, hydrocephaly (a malformation due to obstruction of the cerebrospinal fluid pathways and often accompanied by enlargement of the head), transposition of great vessels (a congenital heart defect), limb reduction defects (characterised by the absence of limb skeletal structures) and Down syndrome.
- Prenatal screening by ultrasound or amniocentesis has increased the likelihood of detecting congenital malformations before birth. Termination of pregnancy following the diagnosis of a congenital malformation is increasing, resulting in a decreased recorded incidence of some malformations.
- The most common indication for terminations include Down syndrome, other chromosomal anomalies, and neural tube defects such as anacephalus and spina bifida. There is an increased risk of malformation for mothers aged 40 years and over.
- In 1992, Australian rates of several important congenital malformations, including spina bifida and Down syndrome, ranked in the top half of rates for developed countries (Figures 1 and 2). Ireland and the Netherlands had higher reported rates, and the United Kingdom had lower reported rates. Rates in different countries, however, are partially determined by the availability, access and use of screening technologies.
- The reported incidence of congenital malformations has increased in Australia since the mid-1980s. This is due in part to increased and improved detection by new birth defect registers in some States and Territories (Abraham, d'Espaignet & Stevenson 1995).

For more information, see:

Lancaster P et al. 1997. Congenital malformations Australia, 1993 and 1994. Sydney: AIHW National Perinatal Statistics Unit.

The International Clearinghouse for Birth Defects Monitoring Systems 1991. Congenital malformations worldwide. Amsterdam: Elsevier.

Dental caries

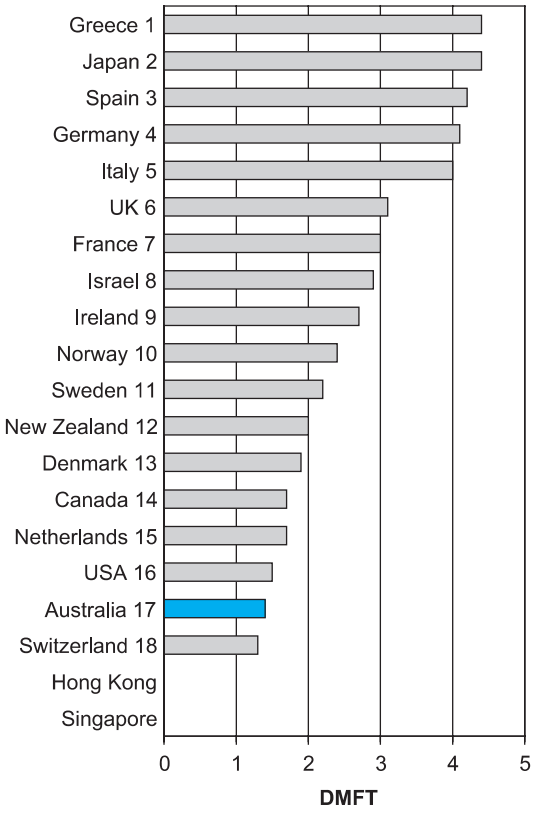

Figure 1: DMFT scores, children aged 12, 1990

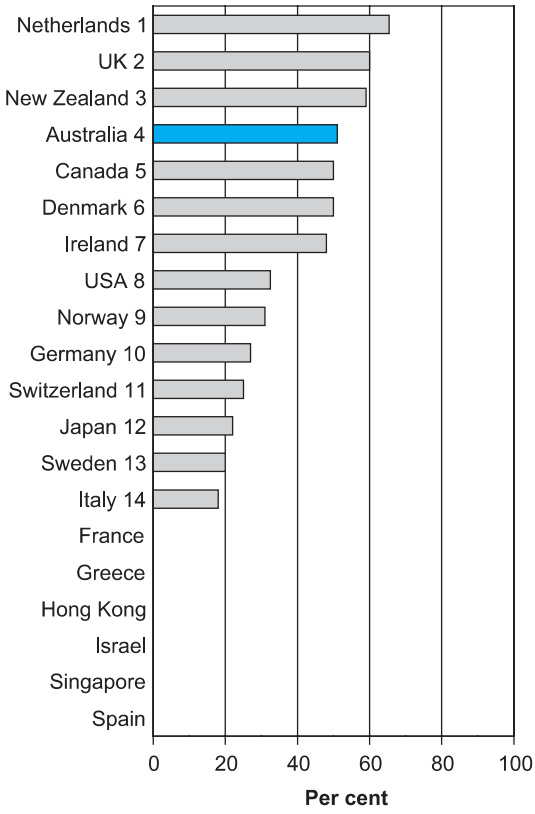

Figure 2: Edentulous population aged 65 years and over, 1990

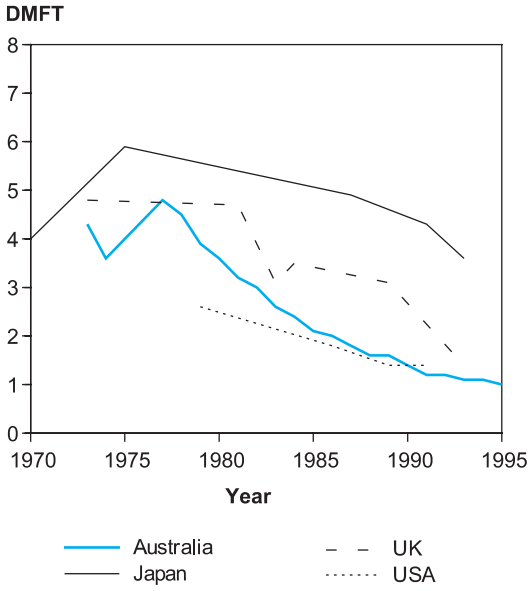

Figure 3: Trends in DMFT scores, children aged 12, 1970 to 1995

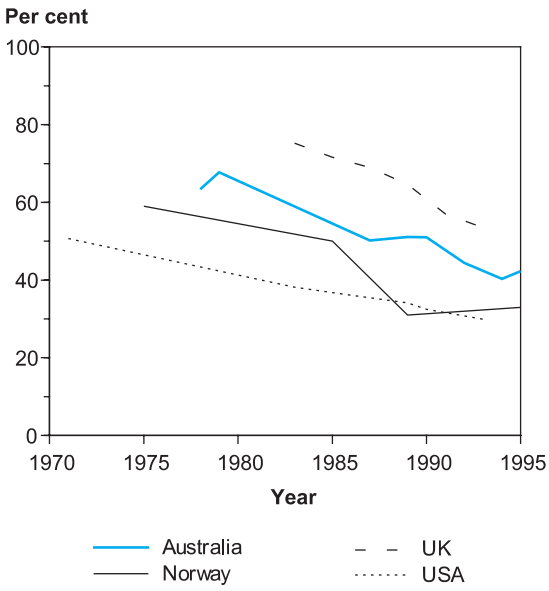

Figure 4: Trends in edentulous population aged 65 years and over, 1970 to 1995

Dental caries

DMFT scores[(a)] at ages 12 and 35–44, and edentulism[(b)] at age 65 and over

Country	DMFT, age 12		DMFT, age 35–44		Edentulism, age 65+	
Australia	1995	1.0	1995–96	13.5	1996	39.1
Canada	1990	1.7	—	—	1990	50.0
Denmark	1996	1.8	1985	22.9	1991	51.0
France	1993	2.1	1994	14.6	—	—
Germany	1995	2.3	1991	16.3	1990	27.0
Greece	1993	1.6	1990	15.8	—	—
Hong Kong	1986	1.5	1991	8.7	—	—
Ireland	1996	1.5	1990	15.4	1990	48.0
Israel	1989	3.0	—	—	—	—
Italy	1996	2.1	1995	12.0	1990	18.0
Japan	1993	3.6	1993	13.7	1992	20.4
Netherlands	1992	0.9	1986	17.4	1995	60.2
New Zealand	1995	1.4	1989	20.9	1989	58.6
Norway	1996	1.8	1990	20.5	1995	33.0
Singapore	1994	1.0	—	—	—	—
Spain	1993	2.3	1993	10.9	—	—
Sweden	1995	1.4	—	—	1989	20.0
Switzerland	1992	1.1	1988	22.3	1990	25.0
UK	1993	1.4	1990	19.0	1993	53.5
USA	1991	1.4	1991	13.6	1993	29.9

(a) Dental caries is measured by the DMFT score—a sum of permanent teeth that are decayed (D), missing (M) or filled due to caries (F). A score of 0–1.1 is considered very low, 2.8–4.4 moderate and 6.6+ very high.
(b) Edentulism is the loss of all natural teeth.

Sources: WHO Oral Health Country Profiles, unpublished; OECD 1998.

- The oral health of both children and adults in most developed countries has improved dramatically over the last several decades. Factors such as changes in diet and declines in sugar consumption, exposure to fluoride and changes in disease management have contributed to these improvements.
- The first controlled addition of fluoride to a public water supply took place in the United States in 1945. Most developed countries now have community water fluoridation, and it continues to be the most effective and socially equitable measure for caries prevention among all ages.
- The introduction of the School Dental Scheme in 1977 saw the beginning of marked improvement in the dental health of Australian children, with declines in average caries experience and an increase in the percentage of children with no dental caries (AIHW 1996). In 1995, the DMFT score for 12-year-old Australian children was 1.0. This was a low score among developed countries (Figures 1 and 3).
- An increasing proportion of Australian adults are retaining their natural teeth, with recent significant falls in both adult DMFT scores and edentulism. However, both DMFT scores and the proportion of the population who are edentulous are comparatively high for Australians (Figures 2 and 4). Edentulism increases with age, with females having a higher prevalence than males. It is expected that the increasing proportions of older persons in future decades will lead to increased demands for dental care among the elderly.
- WHO has set a number of dental health goals for the year 2000. These include: 50% of children aged 5–6 to be caries-free, children aged 12 to have a DMFT score of less than 3, at least 85% of adults aged 18 to retain all their teeth, a 50% reduction in edentulism for persons aged 35–44 and a 25% reduction in edentulism for persons aged 65 and over. Most developed countries are on target to achieve these goals.

For more information, see:

WHO 1994. Oral health. World Health Stat Q 47: 42–94.

Australian Institute of Health and Welfare 1998. Australia's health 1998: the sixth biennial health report of the Australian Institute of Health and Welfare. Canberra: AIHW.

Disability

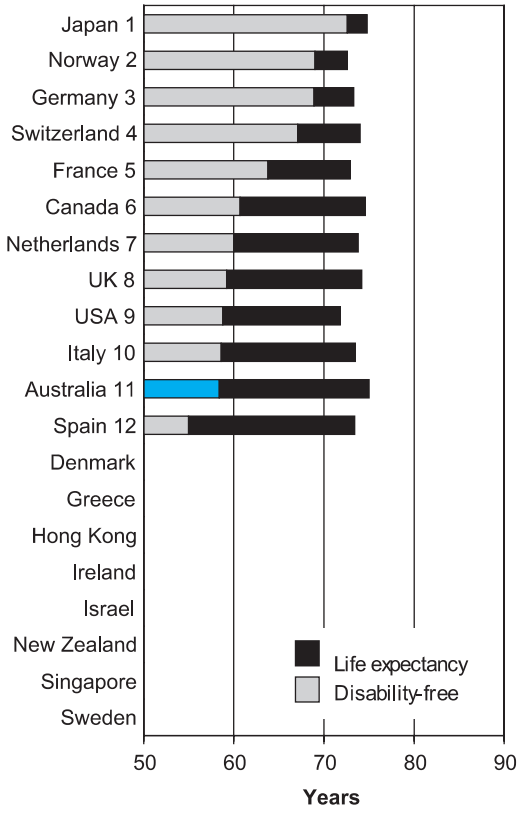

Figure 1: Disability-free life expectancy at birth, men, 1985–1995

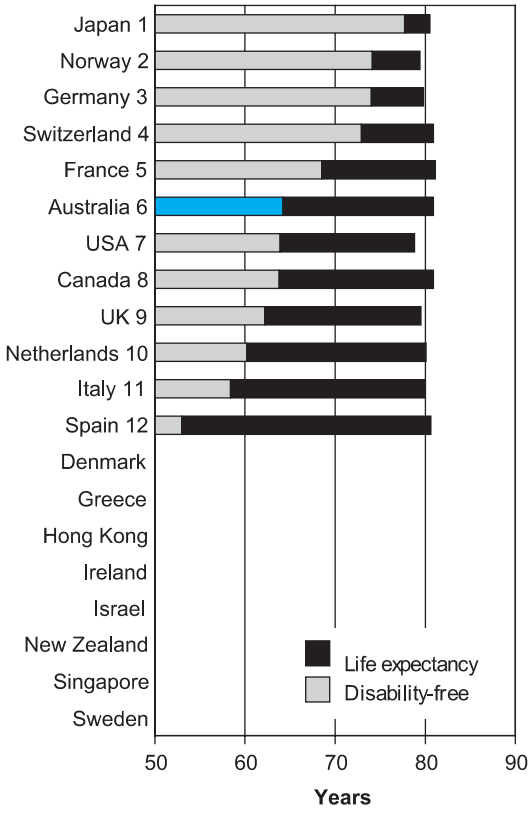

Figure 2: Disability-free life expectancy at birth, women, 1985–1995

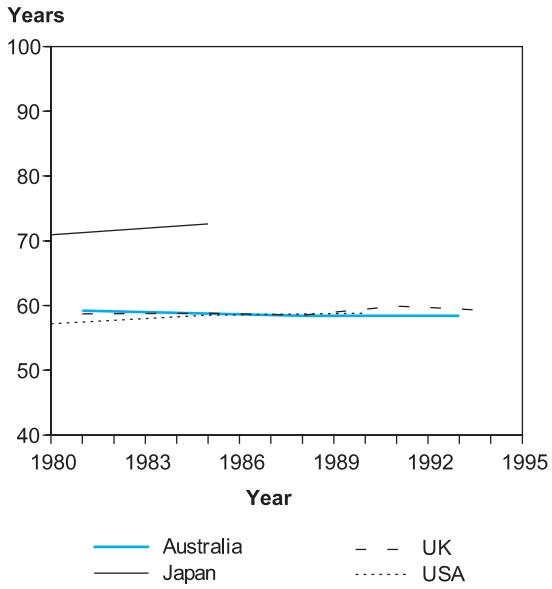

Figure 3: Trends in disability-free life expectancy at birth, men, 1980 to 1995

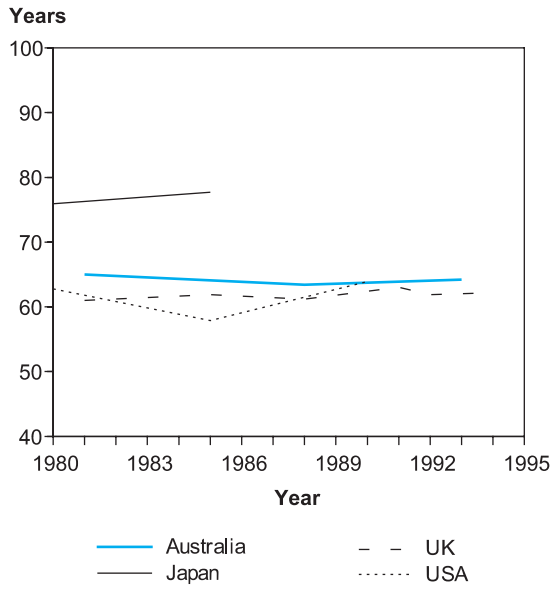

Figure 4: Trends in disability-free life expectancy at birth, women, 1980 to 1995

Disability

Disability-free life expectancy at birth

		Men			Women		
Country	Year	LE[(a)]	DFLE[(b)]	DFLE/LE (%)	LE	DFLE	DFLE/LE (%)
Australia	1993	75.0	58.4	77.9	80.9	64.2	79.4
Canada	1991	74.6	60.7	81.4	80.9	63.8	78.9
Denmark	—	—	—	—	—	—	—
France	1991	72.9	63.8	87.5	81.1	68.5	84.5
Germany	1995	73.3	68.9	94.0	78.8	74.0	92.7
Greece	—	—	—	—	—	—	—
Hong Kong	—	—	—	—	—	—	—
Ireland	—	—	—	—	—	—	—
Israel	—	—	—	—	—	—	—
Italy	1990	73.5	58.6	79.7	80.0	58.4	73.0
Japan	1985	74.8	72.6	97.1	80.5	77.7	96.5
Netherlands	1990	73.8	60.0	81.3	80.1	60.2	75.2
New Zealand	—	—	—	—	—	—	—
Norway	1985	72.6	69.0	95.0	79.4	74.1	93.3
Singapore	—	—	—	—	—	—	—
Spain	1991	73.4	55.0	74.9	80.6	53.0	65.8
Sweden	—	—	—	—	—	—	—
Switzerland	1988–89	74.0	67.1	90.7	80.9	72.9	90.1
UK	1994	74.2	59.2	79.8	79.5	62.2	78.2
USA	1990	71.8	58.8	81.9	78.8	63.9	81.1

(a) Life expectancy.
(b) Disability-free life expectancy.

Sources: OECD 1998; Crimmins, Saito & Ingegneri 1997.

- Quality-of-life indicators are increasingly being used for programme evaluation, monitoring of population health, research and policy analysis. One of these indicators is health expectancy, which incorporates mortality and morbidity information to give a measure of expectation of life in particular health states. A commonly used example is disability-free life expectancy which estimates the expected years of life free of disability for a population.
- In 1993, life expectancy at birth was 75.0 years for Australian males and 80.9 years for Australian females. Disability-free life expectancy in comparison was 58.4 years for males, and 64.2 years for females, on average slightly under 80% of total life expectancy at birth (Figures 1 and 2).
- International comparisons are complicated by different definitions of disability and differing survey methodologies. The standardisation of definitions and methodologies will allow for better international comparisons. Generally, however, male life expectancy at birth includes a greater proportion of disability. Also, increases in life expectancy are being offset by the expected number of years with disability or handicap (Figures 3 and 4).
- The United States has set a goal of increasing the years of healthy life from an estimated value of 62 years in 1980 to 65 years by the year 2000 (US Department of Health and Human Services 1990). The World Health Organization's fourth European 'Health For All' regional target aims for a 10% increase in healthy life expectancy by the year 2000 (US Congress, Office of Technology Assessment 1993). No current targets have been set for Australia.

For more information, see:

Mathers CD & Robine JM 1998. International trends in health expectancies: a review. Australasian Journal on Ageing 17(1) Supplement: 51–55.

Mathers C et al. (eds.) 1994. Advances in health expectancies: proceedings of the 7th meeting of the International Network on Health Expectancy (REVES), Canberra, February 1994. Canberra: AGPS.

Heart attack

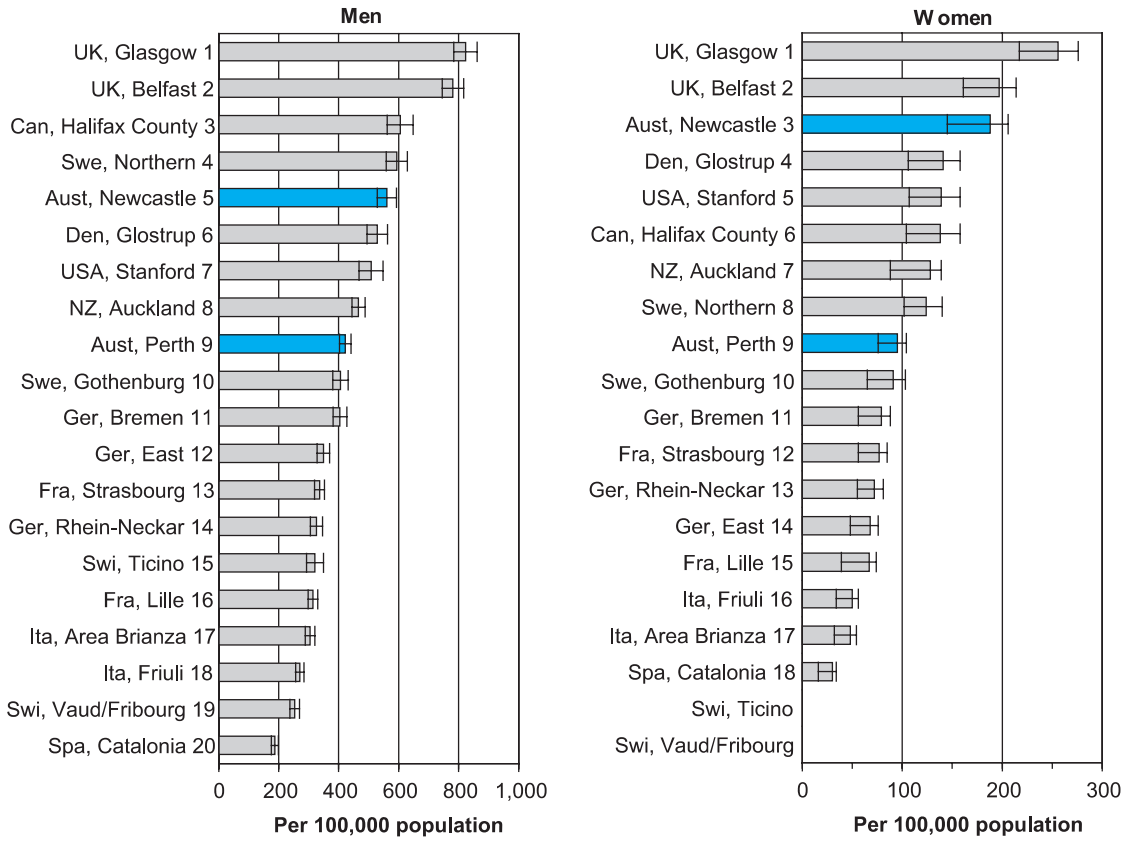

Figure 1: Age-standardised annual event rates with 95% confidence interval, ages 35–64, selected MONICA study populations, 1985–1987

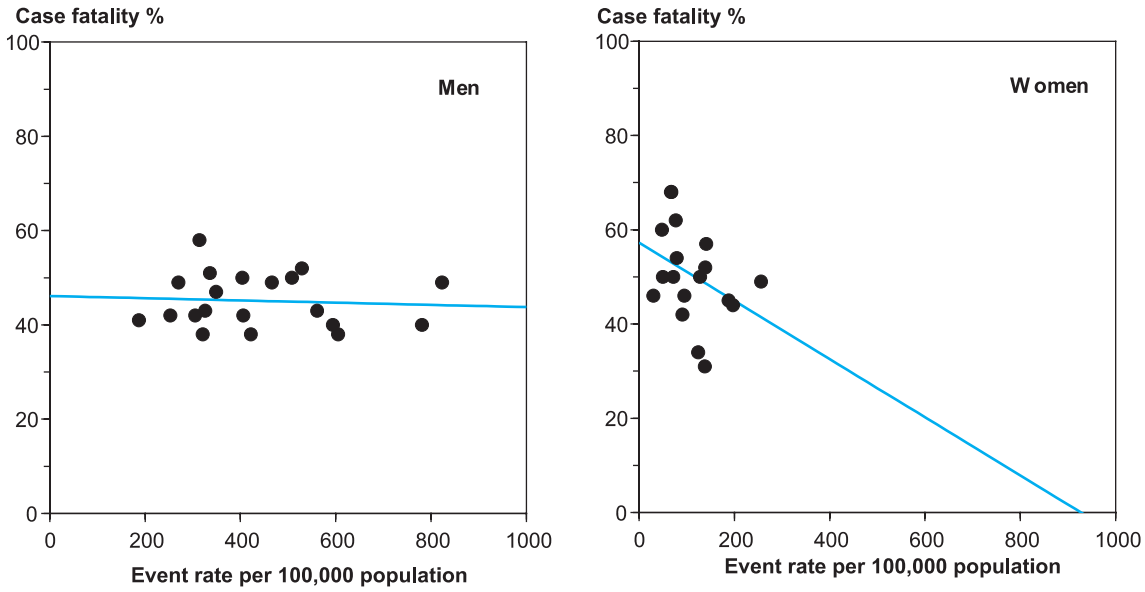

Figure 2: Scatterplot of 28-day case-fatality rates and event rates, selected MONICA study populations, 1985–1987

Heart attack

Coronary events[(a)] and case-fatality, 1985–1987

Region and country	Men aged 35–64		Women aged 35–64	
	Event rate, ±95% CI	% case fatality, ±95% CI	Event rate, ±95% CI	% case fatality, ±95% CI
Australia, Newcastle	561±32	43±3	188±18	45±5
Australia, Perth	422±19	38±2	95±9	46±5
Canada, Halifax County	605±43	38±3	138±20	31±6
Denmark, Glostrup	529±34	52±3	141±17	57±6
France, Lille	314±16	58±3	67±7	68±5
France, Strasbourg	336±17	51±3	77±8	62±5
Germany, Bremen	404±23	50±3	79±9	54±6
Germany, East	349±21	47±3	68±8	68±6
Germany, Rhein-Neckar region	326±20	43±3	72±9	50±6
Italy, Area Brianza	305±16	42±3	48±6	60±6
Italy, Friuli	270±14	49±2	50±6	50±6
New Zealand, Auckland	466±22	49±2	128±11	50±4
Spain, Catalonia	187±12	41±3	30±4	46±8
Sweden, Gothenburg	406±26	42±3	91±12	42±7
Sweden, Northern	594±35	40±3	124±16	34±6
Switzerland, Ticino	321±28	38±4	—	—
Switzerland, Vaud/Fribourg	253±16	42±3	—	—
UK, Belfast	781±36	40±2	197±17	44±4
UK, Glasgow	823±39	49±2	256±20	49±4
USA, Stanford	508±40	50±4	139±19	52±7

(a) Age-standardised to the World Standard Population. Event rates are per 100,000 population.

Sources: WHO MONICA Project Principal Investigators 1994.

- The WHO MONICA project is an international collaborative project aiming to MONItor trends and determinants in CArdiovascular disease over a 10-year period. The MONICA study remains one of the most comprehensive studies yet undertaken for cardiovascular disease and its risk factors, although it is based on regional (and not national) data. The study has produced event (i.e. occurrence) rate and case-fatality (i.e. death) rate data for acute myocardial infarction (or 'heart attack') for a number of study populations, including Newcastle and Perth in Australia.
- In 1985–87, both males and females had higher rates of heart attack in Newcastle than Perth, with rates higher for males than for females in both cities. The Australian sites ranked in the top half of the 20 sites included here for comparison purposes, for both males and females. For males, Newcastle ranked fifth and Perth ninth amongst 20 sites. For females, Newcastle ranked third and Perth ninth (Figure 1). Case-fatality rates in both Newcastle and Perth ranked somewhat lower.
- Although not included here, rates of heart attack among males from Finland were high (824±49 events per 100,000 population in Kuopio Province, 915±62 in North Karelia), and low among males from China (76±9 in Beijing). In Poland, 28-day case-fatality was high for both males (81% in Tarnobrzeg Voivodship, 60% in Warsaw) and females (91% in Tarnobrzeg Voivodship, 63% in Warsaw).
- Among the populations included for comparison, rates of heart attack were high for the United Kingdom and low for Spain and Italy. Case-fatality was high in the two French study populations. Event and case fatality rates were significantly correlated for females ($r=-0.33$, $p<.05$), but not males (Figure 2), suggesting that non-fatal attacks were being missed where event rates were low.

For more information, see:

WHO MONICA Project Principal Investigators 1994. Myocardial infarction and coronary deaths in the World Health Organization MONICA project. Circulation 90: 583–612.

Boyle CA, Dobson AJ 1995. Morbidity from cardiovascular disease in Australia. Canberra: AIHW.

HIV/AIDS

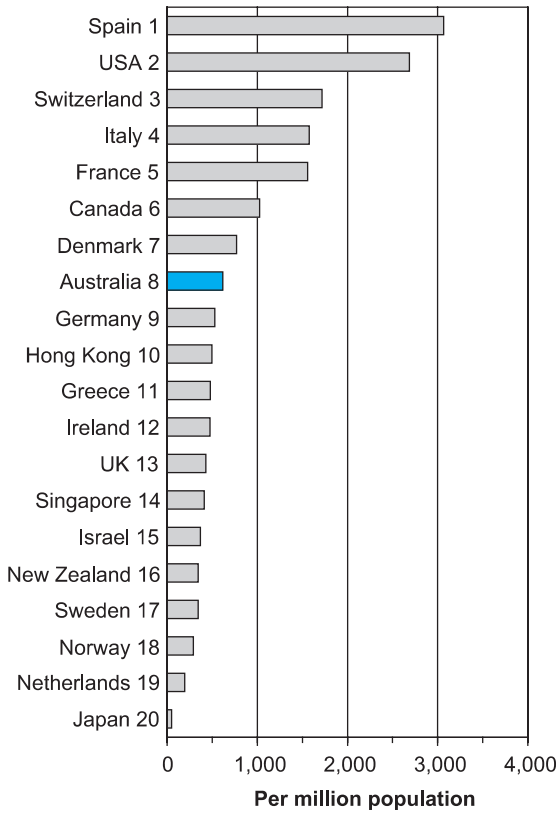

Figure 1: Estimates of adult HIV seroprevalence, end 1994

Figure 2: Cumulative AIDS incidence, 1996

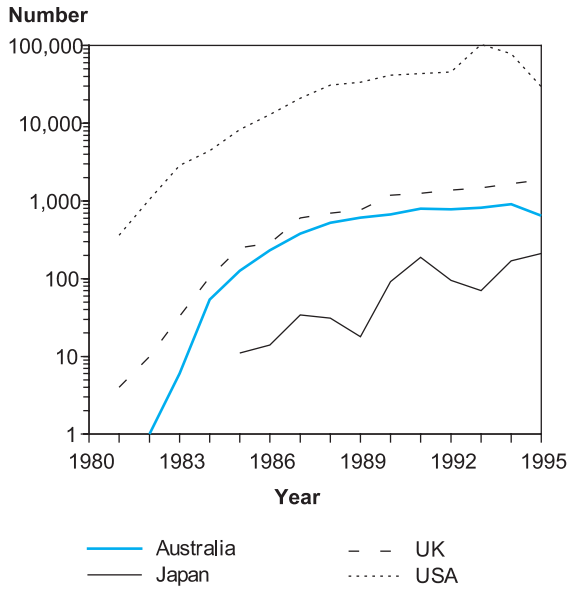

Figure 3: Reported cases of AIDS by year of diagnosis, 1980 to 1995

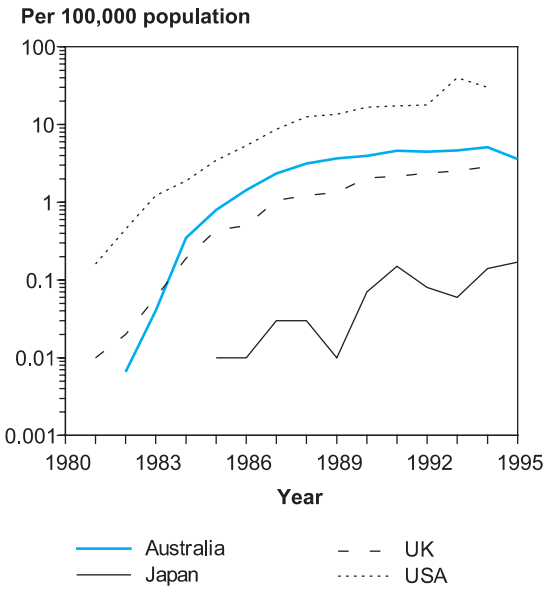

Figure 4: Reported cases of AIDS per 100,000 population, 1980 to 1995

HIV/AIDS

Cumulative HIV prevalence and reported cases of AIDS

Country	HIV prevalence, end 1994	AIDS cases, to 1996	Cumulative AIDS incidence (per million pop.)[(a)]		
			1990	1993	1996
Australia	11,000	6,442	109	245	352
Canada	30,000	13,291	144	268	443
Denmark	4,000	1,866	117	228	359
France	90,000	41,058	171	420	703
Germany	43,000	14,518	62	119	178
Greece	5,000	1,350	29	73	129
Hong Kong	3,000	175	4	14	27
Ireland	1,700	514	41	94	143
Israel	2,000	376	23	44	65
Italy	90,000	33,304	105	295	581
Japan	6,200	1,186	2	4	9
Netherlands	3,000	3,991	85	168	257
New Zealand	1,200	523	48	104	145
Norway	1,250	518	37	74	118
Singapore	1,200	179	6	21	60
Spain	120,000	38,393	136	469	977
Sweden	3,000	1,371	47	94	156
Switzerland	12,000	5,112	191	436	720
UK	25,000	12,565	56	126	214
USA	700,000	513,486	538	1,120	1,936

(a) Cumulative AIDS incidence is the total number of AIDS cases reported to date divided by the current estimate of the mid-year population.

Sources: WHO 1990, 1993b, 1995b, 1996b.

- Human immunodeficiency virus (HIV) infection first emerged as a deadly epidemic in the early 1980s. HIV is a retrovirus precipitating the onset of Acquired Immune Deficiency Syndrome (AIDS). In the 15 years since the first reported AIDS cases, HIV infection has become a global pandemic. Reported AIDS cases worldwide numbered 1.3 million from 193 countries by the end of 1995. Over 5 million persons are estimated to have died from AIDS; an additional 24 million adults are estimated to have already been infected with HIV, with nearly 10,000 new infections occurring each day (Quinn 1996).
- Data on HIV/AIDS are available from disease surveillance programs of individual countries. Data as of 1996 indicate that the United States has the highest cumulative rate of AIDS incidence among developed countries—1,936 notified cases per million population, followed by Spain with 977 cases per million population. Australia ranked in the middle of developed countries with 352 cases per million population. Singapore, Hong Kong and Japan have had the lowest cumulative rates (Figure 2).
- The total number of AIDS cases may not be a direct reflection of the extent of HIV infection in a country, since it is influenced by the proportion of HIV cases actually developing AIDS. This is related to the 'age' of the epidemic in a country, and treatment with drugs such as AZT which may delay the onset of AIDS. Prevalence data, or the number of persons currently living with HIV infection, is a more useful measure (Figure 1).
- Risk factors responsible for the transmission of HIV vary substantially from country to country. Male to male sexual activity has been responsible for most of the cases in the United States and Australia, injecting drug use has caused most of the cases in Italy and Spain, and contaminated blood products are responsible for most of the Japanese cases (NCHECR 1997, US Congress Office of Technology Assessment 1993).
- Public awareness and prevention of HIV/AIDS has been heightened in many developed countries by coordinated programs, including Australia's National HIV/AIDS Strategy.

For more information, see:

Quinn TC 1996. Global burden of the HIV pandemic. Lancet 348: 99–106.

Mental disorders

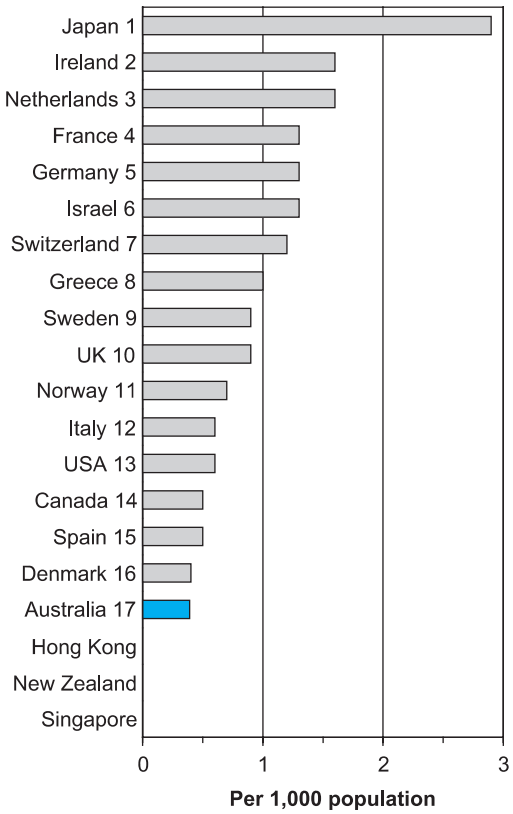

Figure 1: Psychiatric beds, 1995

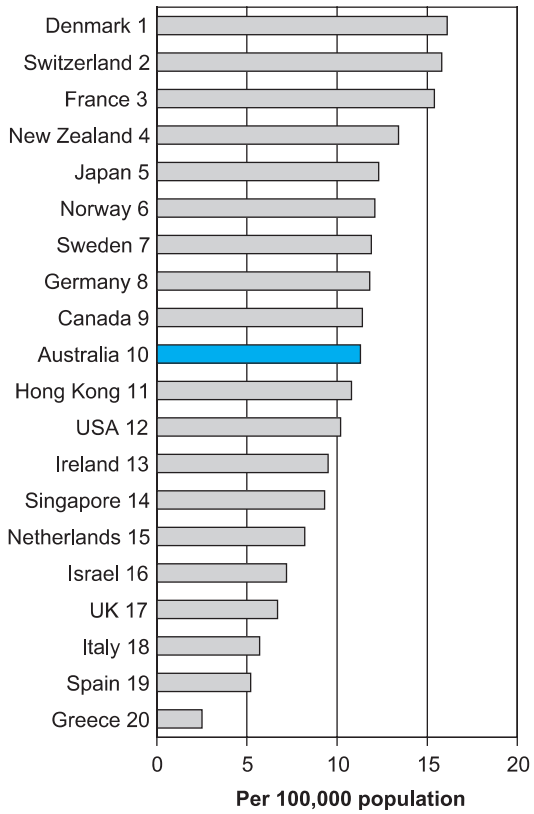

Figure 2: Age-standardised suicide rates, 1992

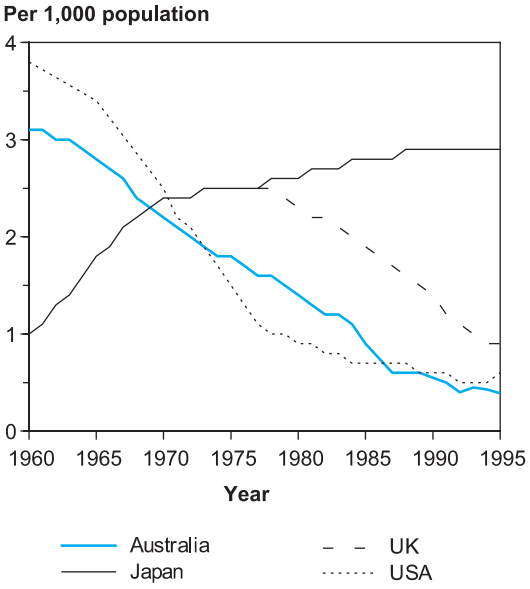

Figure 3: Trends in psychiatric beds, 1960 to 1995

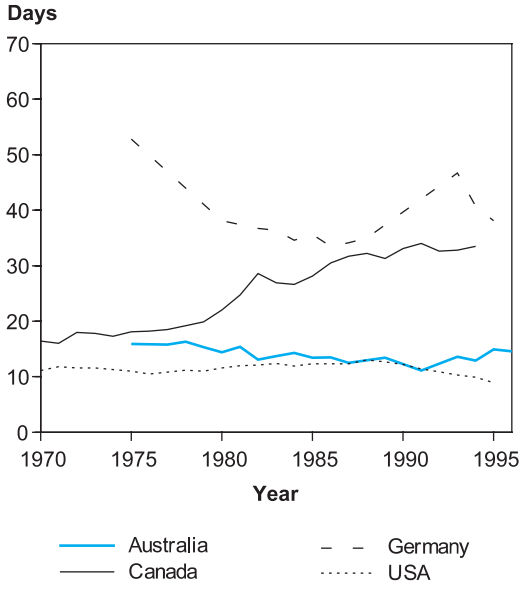

Figure 4: Trends in average length of hospital stay for mental disorders, 1970 to 1996

Mental disorders

Indicators of mental health

Country	Suicide rate, 1992[a]	Self-evaluation 'less than good'[b]		Psychiatric beds, 1995[c] (per 1,000 pop.)	Discharge rate[d] (per 1,000 pop.)		Average stay[d] (days)	
Australia	11.3	1995	17%	0.4	1996–97	11.1	1996–97	14.6
Canada	11.4	1994	51%	0.5	1994	6.1	1994	33.5
Denmark	16.1	1994	20%	0.4	1993	2.9	1993	9.0
France	15.4	1991	27%	1.3	1993	5.2	1996	7.3
Germany	11.8	1995	54%	1.3	1995	9.4	1995	38.1
Greece	2.5	—	—	1.0	1991	3.0	1992	99.0
Hong Kong	10.8	—	—	—	—	—	—	—
Ireland	9.5	—	—	1.6	1996	1.2	1996	10.4
Israel	7.2	—	—	1.3	1994	2.6	1994	141.3
Italy	5.7	1995	38%	0.6	1994	5.6	1994	19.6
Japan	12.3	—	—	2.9	1996	2.8	1996	330.7
Netherlands	8.2	1996	18%	1.6	1991	1.5	1995	31.8
New Zealand	13.4	—	—	—	1996	2.9	1996	32.0
Norway	12.1	1995	8%	0.7	1996	1.7	1996	6.3
Singapore	9.3	—	—	—	—	—	—	—
Spain	5.2	1995	28%	0.5	1994	2.4	1996	27.8
Sweden	11.9	1995	23%	0.9	1996	11.7	1995	21.2
Switzerland	15.8	—	—	1.2	—	—	1993	16.5
UK	6.7	1991	36%	0.9	1993	6.5	1993	86.4
USA	10.2	1995	10%	0.6	1995	7.7	1995	8.9

(a) Per 100,000 population. Age-standardised to the World Standard Population.
(b) Per cent population aged 16 and over.
(c) Type of hospital varies. Most countries, including Australia, count beds both in stand-alone psychiatric hospitals and psychiatric units co-located in public or private hospitals.
(d) Discharge rate and average length of stay for ICD 290–319 Mental disorders. Type of hospital varies between countries, and is mainly public acute; Australian data are for public acute and private hospitals, and exclude psychiatric hospitals.

Sources: WHO 1994, 1995a, 1996d; OECD 1998.

- Few reliable indicators are available for measuring the incidence of mental disorders in a community. The rate of suicide (Figure 2) is often cited as a proxy measure of psychological distress. Hospital data provide information on the treatment of severe mental illness, but cannot be used as incidence measures. Monitoring drug usage for the treatment of psychiatric disorders might also be a relevant indicator.
- Many countries routinely include self-evaluation questions in their health surveys. The distribution of various categorical perceptions of health status provide some insight into the mental health status of a community. It should be noted, however, that survey methodology varies between countries.
- Data regarding psychiatric services indicate that Australia has a low number of psychiatric beds per 1,000 population when compared to other developed countries (Figure 1). This reflects the policy of de-institutionalisation of psychiatric patients which has occurred in Australia since the mid-1980s, in favour of increased service provision in community settings. The fall in the number of beds commenced in the early 1960s, and has been mirrored in the United States and United Kingdom. Japan, on the other hand, is increasing their number of psychiatric beds (Figure 3). The lower bed ratio is accompanied by higher discharge rates and lower average length of stay in public acute and private hospitals.
- One of the goals of the WHO mental health programme has been the development of reliable and cross-culturally applicable diagnostic criteria and instruments for mental health assessment. Newer measures of health, such as the Medical Outcomes Study Short-Form 36 (SF-36) are increasingly being adopted in population surveys of mental health.

For more information, see:

Bland RC 1996. International health and psychiatry. Can J Psychiatry 41: 11–5.

Pillay YG 1992. International comparisons: selected mental health data. Psychol Rep 71: 723–6.