



BENCHMARKING QUEENSLAND MORTALITY RATES AGAINST AUSTRALIA AND ORGANISATION FOR ECONOMIC COOPERATION AND DEVELOPMENT (OECD) COUNTRIES.

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Summary

The key findings are that:

- Queensland had low all cause mortality and ranked third lowest after Japan and Australia.
- In comparison with OECD countries, Queensland was performing well for mortality rates due to cerebrovascular disease and land transport injury¹.
- The largest potential for health gain, based on reducing mortality in Queensland to that of the lowest European country for each condition were, suicide (14,285 person years of life), ischaemic heart disease (10,160 person years of life) and land transport injury (4,746 person years of life).
- Within Australia, Western Australia had the best overall health status and Tasmania the worst. If Queensland mortality was reduced to that of the lowest Australian state the greatest gains would be made for suicide and ischaemic heart disease.
- Although Queensland's relative rank for mortality due to land transport injury was low in comparison with the OECD countries, the mortality gain for this condition based on person years of life lost was high, due to the substantial number of Queensland deaths from land transport injury in younger age groups.
- There is room for continuing improvement for ischaemic heart disease, suicide and malignant melanoma of skin where Queensland had relatively high mortality ranks in comparison with the OECD countries. For example, Queensland ranked 16th out of 28 for ischaemic heart disease; 21st out of 28 for suicide, and 21st out of 22 for malignant melanoma of skin² (Rank 1 is lowest mortality, Rank 28 is highest).

Introduction

Queensland has mortality rates that are comparable with countries that have the lowest rates in the world. Queensland can reasonably, therefore, aim to have population health outcomes equal to the best of the Organisation for Economic Cooperation and Development (OECD) countries. In order to achieve this, it is necessary to identify where the largest potential for Queensland to improve health outcomes resides.

In this report, Queensland mortality rates have been compared to those of OECD countries and the other states of Australia. The potential for health gain, based on reducing mortality to that of the lowest state or country, has been identified for key National Health Priority Area (NHPA) conditions. While differences can not be

attributed entirely to health system investment and approaches, the performance of the best state or country for a particular condition provides a useful benchmark against which Queensland can measure its performance. Comparisons of health outcomes and determinants of health have previously been carried out between Queensland, Australia and the other OECD countries (see Information Circulars No. 30, 33, 36, 45). This report provides an update to the information provided in these previous information circulars. In addition, it incorporates interstate comparisons of mortality rates. Since differences in population structure and genetic factors may contribute to differences in mortality when Queensland rates are compared to those in OECD countries, it is useful to examine rates for other states within Australia to highlight areas where gains are most achievable.

INTERNATIONAL COMPARISONS

In this report Queensland mortality rates have been compared with mortality rates of 28 OECD countries including Australia. The results are presented graphically and described in more detail for each of the key NHPA conditions being considered below. Overall, Japan, Korea, Greece and France have low mortality rates for many chronic conditions. For example, Korea, Japan and France had the lowest mortality rates for ischaemic heart disease, while Greece had the lowest rate for diabetes. Analysis in *Information Circular 36* (Queensland Health, 1995), showed the relationship between mortality rates in OECD countries and lifestyle factors including dietary patterns. The analysis presented in this paper supports the central importance of dietary patterns and the potential for further action in Queensland on nutrition to achieve health outcomes that rival those of Japan, Korea, Greece and France.

Overall, it is clear that Japan enjoys the best health status in the world and it does so with a comparatively modest level of expenditure (7.8% of G.D.P. vs 9.1% for Australia in 2001³). Ultimately, we should perhaps be looking to Japan for lessons about health rather than to European countries. However, initially we have compared Queensland with the best of the European countries as such comparisons are likely to be more readily applicable to Queensland than Japanese findings may be. Table 1 shows the ratio of Queensland rates to the rates for the best of the European countries for major causes of death. To give an indication of the numbers involved, the table also shows the size of the difference in death rates between Queensland and the European country with the lowest rates.

¹ While the term accident is used in coding manuals, the preferred term is injury as the use of the term accident can imply the event is inevitable.

² Only 22 OECD countries (including Queensland) had data on mortality rates for malignant melanoma of the skin.

³ Total current health expenditure as a percentage of GDP.
Data Source: OECD Health Data 2004.

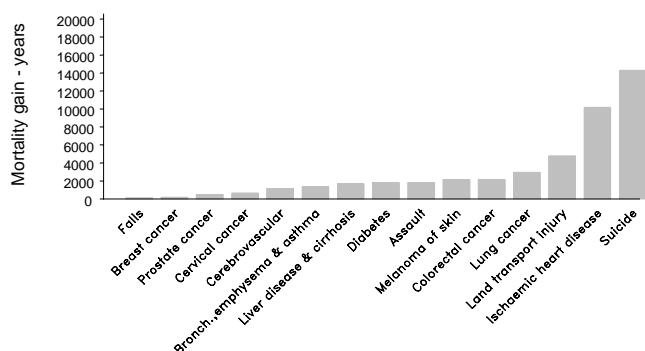
Table 1: Comparison between Queensland and other OECD countries, 2000

Condition	Queensland Rate	Lowest European Country (rate)	difference in death rates between Queensland and lowest European country	Ratio of Queensland to lowest European country
Ischaemic heart disease	117.7	France (47.7)	70.0	2.5
Bronchitis, emphysema & asthma	4.7	Greece (0.7)	4.0	6.7
Cerebrovascular disease	48.4	Switzerland (35.4)	13.0	1.4
Neoplasms of trachea, bronchus & lung	33.3	Portugal (21.7)	11.6	1.5
Land transport injury	9.5	United Kingdom (5.8)	3.7	1.6
Suicide	14.5	Greece (3.1)	11.4	4.7

¹ 2000 death rates per 100,000 standardised to the standard OECD population 1980
Data Source: OECD Health Data 2004

Mortality gains that are possible for each condition in Queensland based on comparison with European OECD countries are shown in Figure 1. Overall, the conditions capable of yielding the greatest mortality gain were suicide, ischaemic heart disease and land transport injury. This is followed by smoking related conditions (lung cancer and bronchitis, asthma and emphysema), cancers that can be prevented by effective screening (colorectal, breast and cervical), injuries (assault), and other conditions which can be influenced by lifestyle (melanoma of skin and diabetes). Comparisons of mortality in Queensland with the lowest European countries, and Queensland mortality gain calculations for all NHPA conditions are detailed in Table A1 (Appendix).

Figure 1: Queensland mortality gain based on comparison with European country with lowest disease specific rate* - persons (2000)



* Queensland mortality gain is the years of life that could be saved annually if the disease specific Queensland mortality rate was reduced to the lowest European country.

Queensland person mortality gain = Total person years of life lost x % excess mortality / (% excess mortality + 100)

Data Source: OECD Health Data 2004

INTERSTATE COMPARISONS

The ACT had the lowest death rates and the Northern Territory the highest. These differences reflect the different demographic composition of the two Territories. For this reason the Territories were excluded from the following analysis. As far as the States were concerned, Western Australia had the best health status and Tasmania the worst. Table 2 below shows the size of the difference in death rates between Queensland and the lowest Australian State for major conditions.

Table 2: Comparison between Queensland and other Australian states (1998-2002)

Condition	QLD Rate ¹	Lowest state (rate)	Difference in death rates ¹ between QLD and lowest state	Ratio of QLD to lowest state	% Excess
Males					
Ischaemic heart disease	160.1	WA (136.7)	23.4	1.2	17.1
Cerebrovascular	55.5	WA (49.5)	6	1.1	12
Total malignant neoplasms	203.3	NSW (196.7)	6.6	1.0	3.4
Suicide	18.9	VIC (14.0)	4.9	1.4	35.0
Chronic bronchitis, emphysema & asthma	6.8	SA (6.6)	0.2	1.0	3.0
Pneumonia & influenza	13	VIC (11.6)	1.4	1.1	12.1
Other injuries ²	19	SA (13.2)	5.8	1.4	43.9
Females					
Ischaemic heart disease	98.8	WA (78.0)	20.8	1.3	26.7
Cerebrovascular	53.9	WA (44.2)	9.7	1.2	21.9
Total malignant neoplasms	119.6	NSW (117.5)	2.1	1.0	1.8
Suicide	4.5	NSW (3.8)	0.7	1.2	18.4
Chronic bronchitis, emphysema & asthma	4.1	SA (3.9)	0.2	1.1	5.1
Pneumonia & influenza	9.9	NSW (8.8)	1.1	1.1	12.5
Other injuries ²	10.6	SA (7.2)	3.4	1.5	47.2

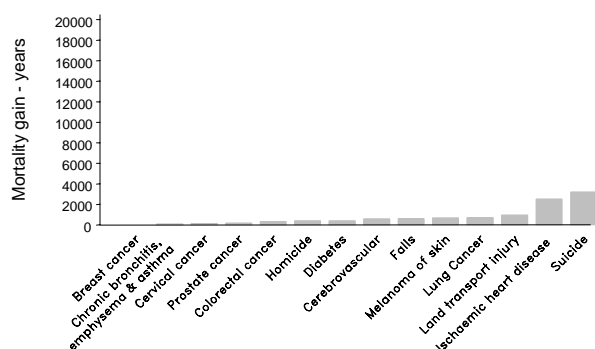
¹ 1998-2002 death rates per 100,000 standardised to the Australian population for 2001

² Injuries excluding transport injury. While it is recognised that injury is the preferred term compared with accidents, the strictly technical name of this condition is 'Other external causes of accidental injury (ICD-10: W00-X59)'

Source: Epidemiology Services Unit, Health Information Branch, Queensland Health 2004

Figure 2 shows the years of life that could be saved if Queensland mortality was reduced to that of the lowest Australian State. The greatest gains would be made for suicide and ischaemic heart disease.

Figure 2: Queensland mortality gain based on comparison with Australian state with lowest disease specific rate* - persons (1998-2000)



* Queensland mortality gain is the years of life that could be saved annually if the disease specific Queensland mortality rate was reduced to the lowest Australian state.

Queensland Person Mortality Gain = Total person years of life lost x % excess mortality / (% excess mortality + 100)

Data Source: OECD Health Data 2004

COMPARISONS FOR KEY NHPA CONDITIONS

The remainder of this report details the comparison of Queensland mortality rates to the other Australian states and OECD countries for key NHPA conditions. Methodological issues related to the analysis are summarised at the end of this report.

Areas where we are doing comparatively better (in comparison with OECD):

All cause mortality

- Queensland had low all cause mortality rates compared with the OECD countries, ranking third lowest. (Figure 3a). However, among the Australian States Queensland was second highest (Figure 3b).
- Japan (474.1 per 100,000 population) had the lowest mortality rate, followed by Australia (544.5), Queensland (547.5) and Switzerland (549.9). The highest mortality rates for all cause were 1009.2 per 100,000 in Hungary and 942.1 per 100,000 in the Slovak Republic.
- The Queensland rate for all cause was only 15 per cent greater than Japan.
- As far as the States were concerned, Western Australia (643 per 100,000) had the best health status, and Tasmania the worst (755). The mortality rate for Queensland⁴ persons due to all causes was 680 per 100,000, well ahead of Tasmania.
- The mortality rate in Queensland was 6% higher than the lowest Australian State.

⁴ The Queensland rates were different for the OECD and interstate analyses. They were for different time periods and were standardised to different populations. This caveat will also apply for the following specific diseases.

Cerebrovascular disease

- Queensland had relatively low mortality rates due to cerebrovascular disease compared with the OECD countries, ranking sixth lowest. (Figure 4a). Among the Australian States Queensland had the third highest rate (Figure 4b).
- Mortality rates were lowest in Switzerland (35.4 per 100,000 population), followed by Canada (37.8), France (39.4), United States (43.2) and Australia (47.4). The highest mortality rates for cerebrovascular disease were 147.3 per 100,000 in Portugal and 136.5 per 100,000 in Hungary.
- Queensland had a mortality rate of 48.4 per 100,000 population, which was 37 per cent greater than Switzerland.
- The percentage of total person years of life lost to cerebrovascular disease was 2.7 per cent of the total for Queensland. It is principally a condition affecting older people, but young people can also be affected and it is a major cause of disability.
- Among the States, Western Australia (54 per 100,000) had the lowest mortality rate due to cerebrovascular disease, while Tasmania had the highest (70).
- The mortality rate for Queensland persons was 66 per 100,000, which was 22% higher than the lowest Australian State.

Areas where the greatest gains are possible (in comparison with OECD):

Suicide

- Queensland (14.5 per 100,000) had high mortality rates for suicide compared with the OECD countries, ranking 21st out of 28 countries (Figure 5a). Among the Australian States Queensland ranked highest (Figure 5b) (see the Methodology section for a discussion of data issues for suicide).
- Greece (3.1 per 100,000) had the lowest rate for suicide, and low rates were also reported for countries with a strong Catholic tradition, including Portugal (4.2), Italy (5.7) and Spain (6.9). In contrast, Hungary had the highest suicide rate (26.8 per 100,000) which was markedly higher than the other countries.
- Within Australia New South Wales (11 per 100,000) had the lowest mortality rate and Queensland (15 per 100,000) the highest.
- The mortality rate in Queensland was 36% higher than the lowest Australian State.
- Thus, there is considerable potential for health gain in Queensland for suicide when both international and interstate results are considered.

Ischaemic heart disease

- In comparison with the OECD countries, Queensland mortality rates for ischaemic heart disease were in the middle range (Figure 6a). Queensland had the highest mortality rates for this disease among the Australian States (Figure 6b).

- The mortality rates for ischaemic heart disease were lowest in Korea (32.0), followed by Japan (33.4) and France (47.7)⁵. The highest mortality rates were 278.5 per 100,000 in the Slovak Republic and 214.8 per 100,000 in Hungary.
- Queensland had a mortality rate of 117.7 per 100,000 population which was 2.5 times greater than the lowest European country (France), indicating considerable room for improvement (Table 1).
- The Monica studies show that 40% of the current deaths and over a third of hospital episodes might be avoided through better use of existing knowledge.
- Among the States, Western Australia (122 per 100,000) had the lowest mortality rate for persons, while Queensland (150 per 100,000) had the highest.
- The mortality rate in Queensland was 23% higher than the lowest Australian State.
- Therefore, there is considerable potential for health gain in Queensland for ischaemic heart disease when both international and interstate results are examined.

Land transport injury

- Queensland had relatively low mortality rates for land transport injury (9.5 per 100,000 population) among the OECD countries, ranking 7th lowest with Germany (Figure 7a). Queensland's rate was equal to that of Australia⁶ when interstate comparisons were made (Figure 7b).
- The countries which had lower rates than Queensland were United Kingdom (5.8 per 100,000 population), Sweden (6.3), Netherlands (7.0), Finland (7.5), Japan (8.5), and Norway (8.6). These countries, with very different urban and rural environments cannot really be compared with Queensland for land transport injury. Thus, Queensland's relative ranking needs to be treated with caution.
- At the other extreme Korea (27.0 per 100,000) had markedly higher mortality rates due to land transport injury than other OECD countries.
- Significantly, while Queensland had low mortality rates for land transport injury compared to other OECD countries, land transport injury would give the third highest mortality gain. There were a substantial number of Queensland deaths from land transport injury in younger age groups, thus yielding a high mortality gain based on person years of life lost (10,734⁷ per years of life; 7.7% of the Queensland total).
- As far as the States were concerned, both New South Wales and Victoria (8 per 100,000) had the lowest mortality rate for persons, while both Western Australia and South Australia (10 per 100,000) had the highest rate.
- Queensland and Tasmania had rates of 9 per 100,000 population which were 12.5% higher than the lowest Australian States.

Lung cancer

- Queensland had reasonably low mortality rates for lung cancer among the OECD countries, ranking 10th lowest (Figure 8a). Among the States, Queensland was third highest (Figure 8b).
- Hungary (58.9 per 100,000 population) had the highest mortality rate for lung cancer – almost three times that of Portugal, which had the lowest rate (21.7). The Queensland rate, in comparison, was 33.3 per 100,000 population.
- Lung cancer is one of the most significant health problems for men. In Queensland, the mortality rate for lung cancer was almost three times higher for males than females. However, lung cancer is increasingly becoming a women's health issue (see Information circular 53, Queensland Health, 2000). Queensland persons ranked in the lower middle range for lung cancer mortality. Queensland males performed comparatively better (ranking 10th out of 28) than Queensland females who ranked 17th out of 28.
- More than 90% of cases of lung cancer are caused by smoking (see Information circular 53, Queensland Health, 2000). Since the early 1980s there has been a decrease in the rates of lung cancer in men associated with declines in the prevalence of smoking in the 1960s (see Information circular 53, Queensland Health, 2000). However, about 23% (see Information circular 64, Queensland Health, 2003) of Queensland males, 14 years or older still smoke, and lung cancer will remain a significant disease among men for many more years.
- The prevalence of smoking in women never reached the peak of that for men (see Information circular 53, Queensland Health, 2000). In the late 1960s and early 1970s up to 30% of women were smoking and the prevalence did not start to decline until the late 1970s (AIHW, 2000). We have not yet seen the effect of this in the rates of lung cancer. About 19% of females aged 14 years or older smoke in Queensland (see Information circular 64, Queensland Health, 2003).
- When the States were considered, South Australia (34.7 per 100,000) had the lowest mortality rate for persons, while Tasmania (44.5 per 100,000) had the highest.
- The Queensland mortality rate was 37.8 per 100,000, and was 9% higher than the lowest Australian State (South Australia).

Colorectal cancer

- Queensland had high mortality rates for colorectal cancer, ranking 20th out of 28 countries. Similar rates were found in Poland, Portugal, Netherlands, Australia and Austria (Figure 9a). Of the States Queensland was equal 2nd lowest with South Australia and Western Australia (Figure 9b).

⁵ Some authors make adjustment for misclassification for ischaemic heart disease for Japan and France.

⁶ For the States, motor vehicle traffic accidents were used, as this was the cause of death presented in the ABS, *Australian Social Trends*, 2004 publication.

⁷ Average yearly person years of life lost for 1998-2002.

- The Queensland mortality rate for persons for colorectal cancer was 21.5 per 100,000. Korea (12.7 per 100,000), Greece (13.4 per 100,000), and Finland (14.3 per 100,000) had the lowest rates, while Hungary (36 per 100,000), the Czech Republic (34.3 per 100,000) and the Slovak Republic (31 per 100,000) had the highest rates.
- Colorectal cancer is the third most frequent cause of cancer death in men, after lung and prostate, and the third most frequent cause of cancer death in women, after lung and breast cancers (Queensland Cancer Registry, 2004). About 6% of males and 4% of females in Queensland will develop colorectal cancer during their lifetime. The risk rises sharply and progressively after the age of 49 years.
- New South Wales (22.8 per 100,000) had the lowest mortality rate for persons, while Tasmania (29.8 per 100,000) had the highest. The Queensland rate was 24.7 per 100,000 population and was 8.3% higher than the lowest Australian State.

Melanoma of skin

- Queensland had the second highest mortality rate for melanoma of skin among the OECD countries (Figure 10a), and was the highest rate among the States (Figure 10b).
- Mortality rates for malignant melanoma of skin were highest in New Zealand (6.1 per 100,000 population), followed by Queensland (5.5) and Australia (4.5). Japan (0.2) and Korea (0.2) had the lowest mortality rates, while Spain (1.3) was the European country with the lowest rate.
- Excessive sun exposure is the primary cause of skin cancer (Queensland Health). In Queensland there is a lifestyle and climate that encourages staying out in the sun for long periods of time while wearing minimal clothing. This is a lifestyle which is at odds with many Queenslanders' fair complexions. As a result, Queensland has the highest incidence of skin cancer in the world.
- Mortality rates for persons among the States were lowest in Victoria and South Australia (6 per 100,000), while Queensland (9 per 100,000) had the highest rate.
- The mortality rate in Queensland was 50% higher than the lowest Australian States.

The best of the OECD countries

Overall Japan, Australia and Switzerland were the countries with the lowest all cause mortality. Japan had the lowest number of deaths per 100,000 population for malignant melanoma of the skin, while Korea had the lowest death rates for female breast cancer, prostate cancer and ischaemic heart disease.

Greece was the European country with the lowest mortality rate for colorectal cancer, female breast cancer, prostate cancer, diabetes, mental disorders, bronchitis, emphysema and asthma, suicide and malignant melanoma of the skin. France had the lowest mortality rates among European countries for ischaemic heart disease and cerebrovascular disease.

CONCLUSION

In comparison with other OECD countries Queensland is performing well for all cause mortality, and for mortality rates due to cerebrovascular disease. For land transport injury Queensland is also performing well relative to the OECD countries. However, there are a substantial number of Queensland deaths from motor vehicle injuries in younger age groups, which means that there is scope for a large mortality gain in this area based on person years of life lost. There is room for continuing improvement for ischaemic heart disease, suicide, colorectal cancer, malignant melanoma of skin and tobacco-related conditions where Queensland has relatively high mortality ranks in comparison with the OECD countries.

When Queensland is compared to the other Australian States the message is similar to that from comparison with the OECD countries. Overall, within Australia the population is more homogenous and so the variation between the States is on a smaller scale. Both sets of comparative analysis show that suicide and ischaemic heart disease are major areas where improvements are possible. Although colorectal cancer mortality rates in Queensland are second lowest among the States, work is still required in this area compared to other OECD countries. This may indicate the need for a national effort, rather than one specific to Queensland.

Many issues in Queensland can be addressed through primary prevention (see the Health Determinants Queensland (HDQ) report for further details).

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Methodology

For the international comparisons most of the mortality data examined in this circular was sourced from OECD Health Data 2004. The exception was malignant melanoma of the skin for which there were no data in the OECD Health Database, so the World Health Organisation (WHO) causes-of-death raw data set was analysed.

The OECD Health Database is based on a breakdown by age and sex for deaths for selected causes in each of the OECD countries provided by the World Health Organisation. Age-standardised death rates per 100,000 population for selected causes are calculated by the OECD Secretariat, using the total OECD population for 1980 as the reference population. The age-standardised death rates are useful for comparing the level of mortality across countries since they take into account the differences in age structure of the populations. Detailed information on the coverage and reliability of the cause-of-death data is regularly published in *World Health Statistics Annuals*.

The data presented in the circular reflect mortality data collected using the Ninth revision of the International Classification of Diseases (ICD-9) and the Tenth revision of ICD (ICD-10). Where possible, 2000 data were used, but since these were not available for all countries, the most recent data were used.

Table A1 shows causes of death by mortality rates for Queensland, the lowest European countries and also, the Queensland potential for mortality gain calculation. Data

for the respective countries including year and ICD versions are detailed in Table A3. The causes of death examined from the *OECD Health Data 2004* with codes according to the Ninth and Tenth revisions of the International Classification of Diseases (ICD) are listed in Table A4.

The majority of data in this publication were reported for persons, rather than separately for males and females. Lung cancer was the exception; results were presented separately for males and females as well as for persons. This was because the Queensland female relative rank was far worse than the relative rank for Queensland males. The OECD data showed that mortality rates for males and females followed similar patterns for most causes, except that male rates were generally of a greater magnitude.

The suicide mortality data has limitations including variations in coding and classification (EURORISC, 1998). Despite the use of a standard classification system, differences in the interpretation of coding procedures may vary. Misclassification of intent is a potential problem. For example, policies for recording a death as a suicide vary between countries. In some countries, a suicide note is required, where as in other countries a decision on intent was made by the coroner. These registration effects may partly explain the observed variations in suicide rates for between-country comparisons. Also, suicide is likely to be widely under-reported in a number of countries where socio-cultural attitudes may prompt an alternative diagnosis on the death certificate (see Information Circular 45, Queensland Health, 1998).

Table A2 shows mortality data for Queensland and the lowest Australian state. It also shows Queensland mortality gain by specific disease, if the Queensland mortality rate was reduced to the lowest Australian state. The source of the interstate data was the ABS Cause of Death File and rates were standardised using the total Australian population for 2001.

Table A1: Causes of death by age-standardised death rate per 100,000 population for Queensland, lowest European country and Queensland mortality gain calculation by specific disease, 2000

Condition	QLDmortality rate	Lowest European country	Lowest European country mortality rate	QLD - Total person years of life lost*	QLD - Potential for mortality gain calculation**
Falls	3.0	Spain	2.6	782.5	104.3
Female Breast cancer	19.2	Spain	18.6	5020.0	156.9
Prostate cancer	29.8	Greece	17.1	1165.0	496.5
Cervical cancer	2.9	Italy	0.8	882.5	639.1
Cerebrovascular	48.4	Switzerland	35.4	4127.5	1108.6
Chronic bronchitis, emphysema and asthma	4.7	Greece	0.7	1602.5	1363.8
Chronic liver disease and cirrhosis	4.0	Iceland	1.0	2197.5	1648.1
Diabetes	13.8	Greece	5.3	2850.0	1755.4
Assault	1.9	Germany, France	0.7	2860.0	1806.3
Melanoma of skin	5.5	Spain	1.3	2790.0	2130.3
Colorectal cancer	21.5	Greece	13.4	5710.0	2151.2
Lung cancer	33.3	Portugal	21.7	8437.5	2939.2
Land transport injury	9.5	United Kingdom	5.8	12185.0	4745.7
Ischaemic heart disease	117.7	France	47.7	17082.5	10159.5
Suicide	14.5	Greece	3.1	18170.0	14285.4

* Based on years of life lost before 75 years.

** Based on years of life lost Queensland would save if mortality in Queensland was reduced to the lowest European country, in relation to each specific disease condition.

Standardised to the OECD population 1980.

Table A2: Causes of death by age-standardised death rate per 100,000 population for Queensland, lowest Australian state and Queensland mortality gain calculation by specific disease, 1998 to 2000

Condition	QLDmortality rate	Lowest Australian state	Lowest rate	QLD - Average yearly person years of life lost*	QLD - Potential for mortality gain calculation**
Breast cancer	10.5	QLD	10.5	4,210.0	-
Chronic bronchitis, emphysema and asthma	5.2	SA	4.9	1,277.0	78.2
Cervical cancer	1.1	VIC	0.9	588.5	143.5
Prostate cancer	12.2	WA	9.9	915.0	171.8
Colorectal cancer	20	NSW	18.6	4,342.5	304.9
Homicide	1.2	VIC	1.0	1,896.5	386.5
Diabetes	12.9	NSW	10.5	2,154.0	401.4
Cerebrovascular	55.2	WA	46.7	3,721.5	574.4
Falls	3.2	SA	1.3	1,074.0	626.6
Melanoma of skin	5.1	SA	3.4	2,102.0	686.8
Lung cancer	31.0	SA	28.1	7,258.5	691.9
Land transport injury	8.1	NSW	7.4	10,733.5	955.0
Ischaemic heart disease	126.7	WA	103.7	13,931.0	2,520.3
Suicide	11.6	VIC	8.9	13,799.5	3,202.1

* Based on years of life lost before 75 years.

** Based on years of life lost Queensland would save if mortality in Queensland was reduced to the lowest Australian state, in relation to each specific disease condition.

Standardised to the Australian population 2001.

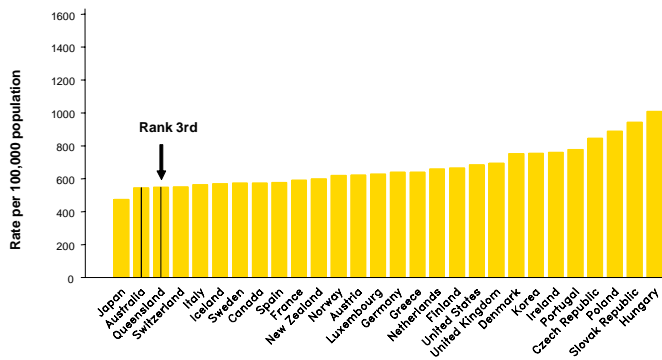
TableA3: Year and ICD revision for data used for each of the OECD countries

Country	ICD-9	ICD-10
Australia		2000
Queensland		2000
Austria	2000	
Canada		2000
Czech Republic		2000
Denmark		1999
Finland		2000
France	1999	
Germany		2000
Greece	1999	
Hungary		2000
Iceland		2000
Ireland	2000	
Italy	2000	
Japan		2000
Korea		2000
Luxembourg		2000
Netherlands		2000
New Zealand		2000
Norway		2000
Poland		2000
Portugal	2000	
Slovak Republic		2000
Spain		2000
Sweeden		2000
Switzerland		2000
Turkey		
United Kingdom	1999	
United States		2000

TableA4: International Classification of Diseases (ICD) codes for selected causes of death: Ninth revision (ICD-9) and Tenth revision (ICD-10)

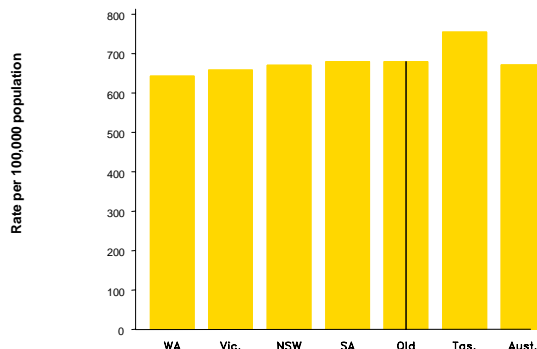
Descriptor	ICD-9	ICD-10
All causes	001-799, E800-E999	A00-R99, V01-Y89
Colorectal cancer	153-154	C18-C21
Malignant neoplasm of trachea, bronchus, lung	162	C33, C34
Malignant neoplasm of female breast	174	C50
Malignant neoplasm of cervix	180	C53
Malignant neoplasm of prostate	185	C61
Malignant melanoma of skin	172	
Diabetes mellitus	250	E10-E14
Ischaemic heart disease	410-414	I20-I25
Cerebrovascular diseases	430-438	I60-I69
Bronchitis, emphysema and asthma	490-493	J40-J43, J45, J46
Motor Vehicle Accidents (ICD-10 = Lands transport accidents)	E810-E819	V01-V89
Accidents falls	E880-E888	W00-W19
Suicides	E950-E959	X60-X84
Homicides	E960-969	X85-Y09

Figure 3a: Age standardised death rate* among OECD countries for persons, 2000 - All causes



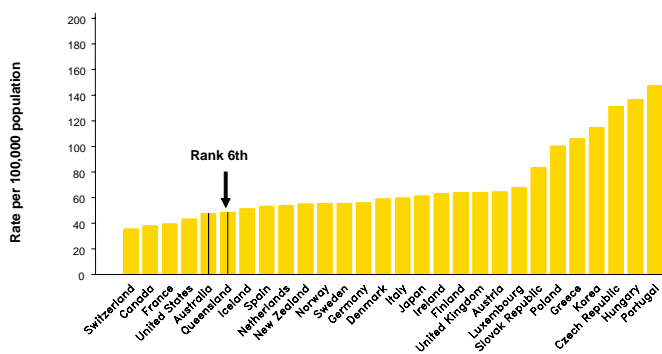
Data Source: OECD Health Data 2004
*Standardised to the total OECD population for 1980

Figure 3b: Mortality due to all causes among persons, 0-85+ years, 2000-2002, by state



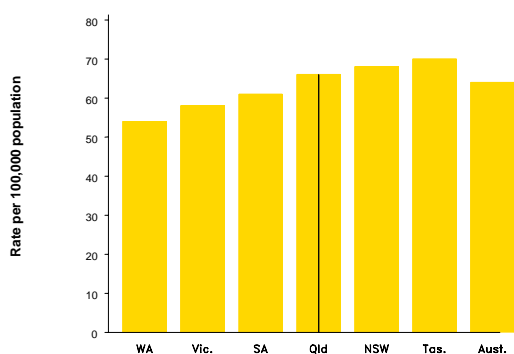
Data Source: Australian Bureau of Statistics, Cause of Death File
Standardised to the 2001 Australian population

Figure 4a: Age standardised death rate* among OECD countries for persons, 2000 - Cerebrovascular disease



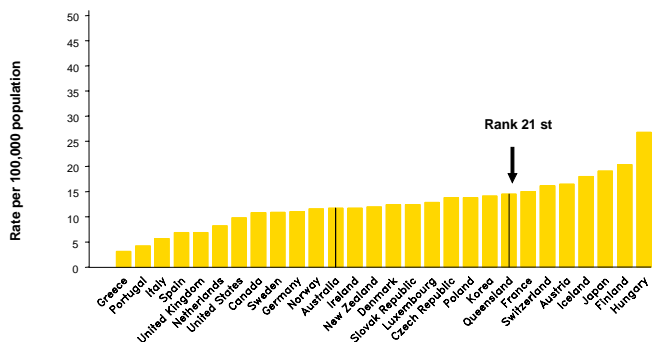
Data Source: OECD Health Data 2004
*Standardised to the total OECD population for 1980

Figure 4b: Mortality due to cerebrovascular disease among persons, 0-85+ years, 2000-2002, by state



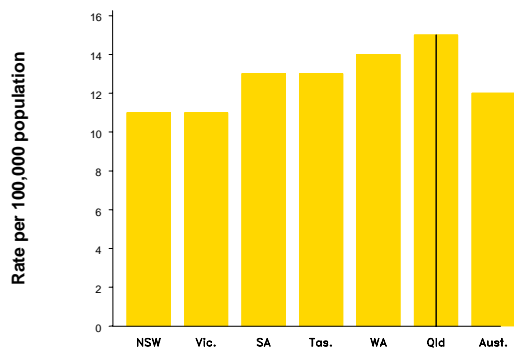
Data Source: Australian Bureau of Statistics, Australian Social Trends 2004, cat. no.4102.0, Canberra
Standardised to the 2001 Australian population

Figure 5a: Age standardised death rate* among OECD countries for persons, 2000 - Suicide and self-inflicted injury



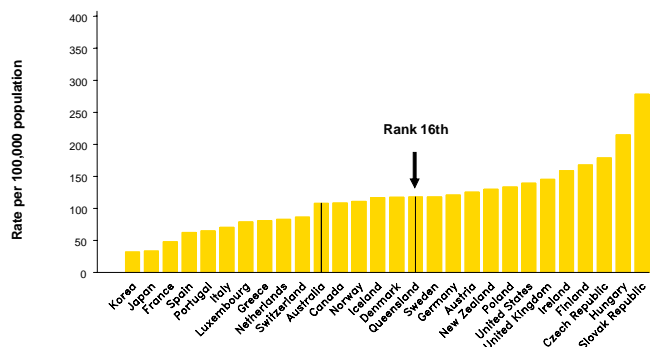
Data Source: OECD Health Data 2004
*Standardised to the total OECD population for 1980

Figure 5b: Mortality due to suicide disease among persons, 0-85+ years, 2000-2002, by state



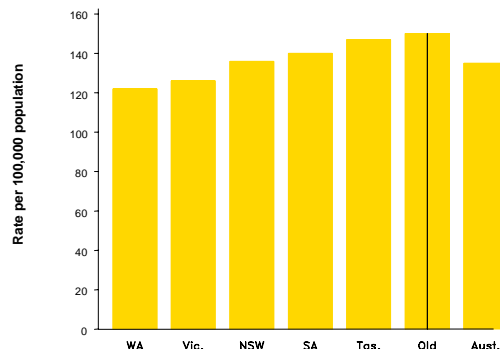
Data Source: Australian Bureau of Statistics, Australian Social Trends 2004, cat. no.4102.0, Canberra
Standardised to the 2001 Australian population

Figure 6a: Age standardised death rate* among OECD countries for persons, 2000 - Ischaemic heart disease



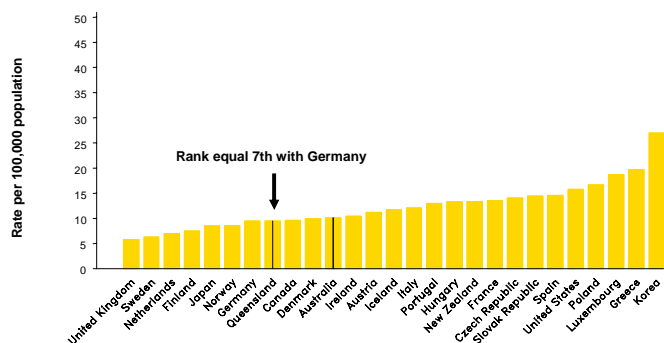
Data Source: OECD Health Data 2004
*Standardised to the total OECD population for 1980

Figure 6b: Mortality due to ischaemic heart disease among persons, 0-85+ years, 2000-2002, by state



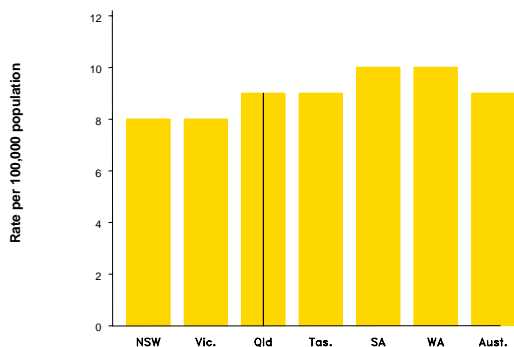
Data Source: Australian Bureau of Statistics, Australian Social Trends 2004, cat. no.4102.0, Canberra
Standardised to the 2001 Australian population

Figure 7a: Age standardised death rate* among OECD countries for persons, 2000 - Land transport injuries



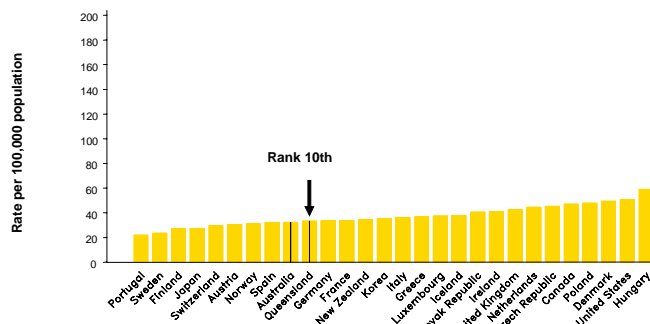
Data Source: OECD Health Data 2004
*Standardised to the total OECD population for 1980

Figure 7b: Mortality due to motor vehicle traffic accident among persons, 0-85+ years, 2000-2002, by state



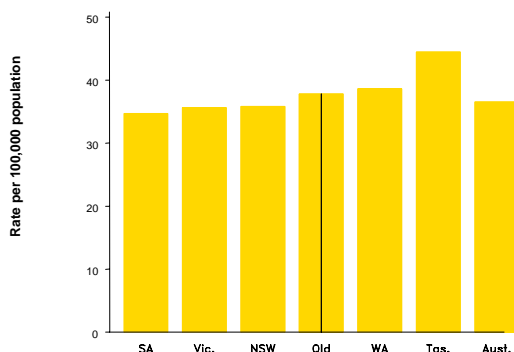
Data Source: Australian Bureau of Statistics, Australian Social Trends 2004, cat. no.4102.0, Canberra
Standardised to the 2001 Australian population

Figure 8a: Age standardised death rate* among OECD countries for persons, 2000 - Malignant neoplasm of trachea, bronchus and lung



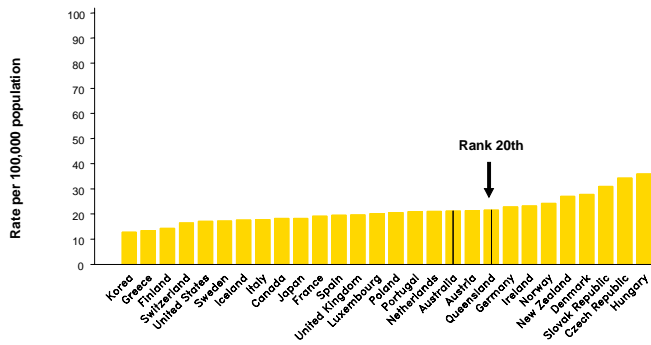
Data Source: OECD Health Data 2004
*Standardised to the total OECD population for 1980

Figure 8b: Mortality due to lung cancer among persons, 0-85+ years, 2000-2002, by state



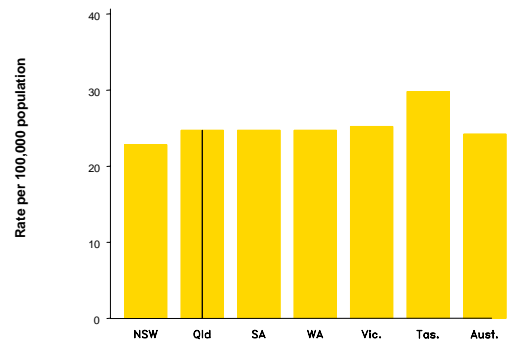
Data Source: Australian Bureau of Statistics, Cause of Death File
Standardised to the 2001 Australian population

Figure 9a: Age standardised death rate* among OECD countries for persons, 2000 - Colorectal cancer



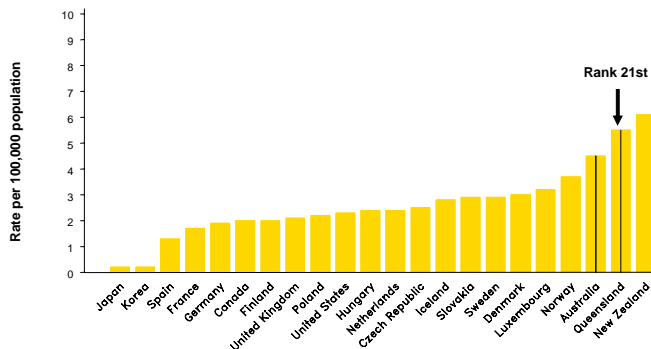
Data Source: OECD Health Data 2004
*Standardised to the total OECD population for 1980

Figure 9b: Mortality due to colorectal cancer among persons, 0-85+ years, 2000-2002, by state



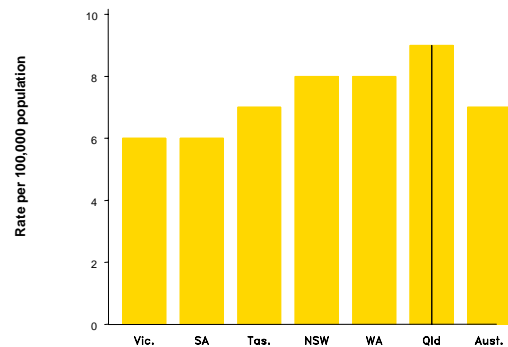
Data Source: Australian Bureau of Statistics, Cause of Death File
Standardised to the 2001 Australian population

Figure 10a: Age standardised death rate* among OECD countries for persons, 2000 - Malignant melanoma of skin



Data Source: OECD Health Data 2004
*Standardised to the total OECD population for 1980

Figure 10b: Mortality due to malignant melanoma of skin among persons, 0-85+ years, 2000-2002, by state



Data Source: Australian Bureau of Statistics, Australian Social Trends 2004, cat. no.4102.0, Canberra
Standardised to the 2001 Australian population