

Australian and New Zealand Atlas of Avoidable Mortality

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Executive summary

Introduction

The *Australian and New Zealand Atlas of Avoidable Mortality* aims to illustrate geographic and social variations in avoidable and amenable mortality rates both within and between Australia and New Zealand.

Avoidable and amenable mortality comprises those causes of death that are potentially avoidable at the present time, given available knowledge about social and economic policy impacts, health behaviours, and health care (the latter relating to the subset of amenable causes). We hope that this atlas will promote the use of 'avoidable mortality' as an indicator to assist in monitoring the quality, effectiveness and productivity of the Australian and New Zealand health systems in the 21st century.

Overall, almost three quarters of all deaths at ages 0 to 74 years in Australia and New Zealand for the period 1997 to 2001 were considered to be avoidable: 71.5% in Australia and 74.4% in New Zealand. In Australia, 40.2% of these avoidable deaths are considered to be amenable to health care. In New Zealand, the proportion is higher, at 43.2%. Total mortality at 0 to 74 years accounted for 41.5% of deaths at all ages in Australia, and 43.7% in New Zealand.

Australia

A higher proportion of male deaths (73.0%) were from conditions considered to be avoidable, compared to female deaths (68.9%): the avoidable male deaths accounted for almost two thirds (64.8%) of total avoidable mortality.

On average, in each year over the period from 1997 to 2001, approximately 665,000 years of life were lost (YLL) from deaths from avoidable conditions. Males aged 0 to 74 years accounted for a larger share (approximately 435,000 YLL per annum), compared with females (approximately 231,000).

Almost half (46.6%) of avoidable mortality at ages 0 to 74 years occurred in the 65 to 74 year age group. The 45 to 64 and 25 to 44 year age groups accounted for 33.9% and 12.8% of avoidable mortality, respectively, with the age groups below 25 years contributing 6.7%.

The highest rates of avoidable mortality in the major condition groups were for cancers, responsible for 32.8% of avoidable mortality and cardiovascular diseases (31.6% of avoidable mortality). Together, these two major condition groups were responsible for over 60% of avoidable mortality at ages 0 to 74 years.

Of the avoidable mortality conditions, ischaemic heart disease ranked the highest (23.0% of avoidable mortality), with lung cancer responsible for 11.2% of avoidable mortality. These were followed by colorectal cancer (6.9%), cerebrovascular diseases (6.6%) and suicide and self inflicted injuries (6.5%).

In the states/ territories, avoidable mortality rates were the highest in Northern Territory, with rates in the states at a notably lower level, and the lowest rate in the Australian Capital Territory. Death rates from avoidable mortality were higher in the rest of state/ territory areas than in the capital cities, except in Tasmania. In the Northern Territory, the rates in the rest of territory areas were twice that for Darwin, with the rates in the rest of state areas in all other states between 10% to 25% higher than in the capital cities, apart from in Tasmania (approximately 9% lower).

Rates of avoidable mortality were approximately 80% higher in the most disadvantaged areas compared to the least disadvantaged areas. There was also a clear socioeconomic gradient in rates for all causes of avoidable mortality and for most conditions examined.

From 1997 to 2001, there were 46,958 excess deaths from avoidable mortality (estimated on the basis that the numbers of avoidable deaths in all socioeconomic groups equalled that of the least disadvantaged group).

The Indigenous rate of deaths from avoidable causes was 3.7 times the rate for the non-Indigenous population. Similarly, the Indigenous rate of death for causes amenable to health care was over 3.8 times the non-Indigenous rate. Ischaemic heart disease was the highest ranked cause of avoidable death for the Indigenous population (21.1%), with diabetes accounting for 10.6% of Indigenous deaths from avoidable causes.

From 1987 to 2001 there was a reduction in the proportion of avoidable deaths for those aged 0 to 74 years, falling from 77.4% of all deaths at these ages in 1987, to 70.6% in 2001. Over one quarter (28.7%) of all deaths at ages 0 to 74 in 2001 were considered to have been amenable to health care, compared to one third (33.3%) in 1987. Of the major avoidable mortality conditions, the rate of ischaemic heart disease fell by 60.0% over the fifteen year period, with the rate of cerebrovascular diseases declining by over 50%.

New Zealand

The proportion of male (74.8%) and female (73.7%) deaths considered to be avoidable were similar. However, male deaths accounted for almost two thirds (61.2%) of total avoidable mortality.

On average, in each year over the period from 1997 to 2001, approximately 151,000 years of life were lost (YLL) from deaths from avoidable conditions. Males aged 0 to 74 years accounted for a larger share (approximately 93,000 YLL per annum), compared with females (approximately 58,000).

Almost half (46.1%) of avoidable mortality at ages 0 to 74 years occurred in the 65 to 74 year age group. The 45 to 64 and 25 to 44 year age groups accounted for 35.0% and 11.1% of avoidable mortality, respectively, with the age groups below 25 years contributing 7.9%.

The highest rates of avoidable mortality at the major condition group level were for cardiovascular diseases, with 35.0% of total avoidable mortality, and for cancers (31.8%). These two major condition groups were responsible for over two thirds (66.8%) of mortality from avoidable causes at ages 0 to 74 years.

Of the avoidable mortality conditions, ischaemic heart disease ranked the highest (24.9% of avoidable mortality), with lung cancer responsible for 10.3% of avoidable mortality. These were followed by colorectal cancer (7.2%), cerebrovascular diseases (6.9%) and suicide and self inflicted injuries (5.9%).

Total avoidable mortality varied considerably by District Health Board, with the highest rate almost one and a half times the average New Zealand rate and the lowest rate 20% below the national average.

The rates of avoidable mortality in the most deprived areas were approximately 2.3 times the rates in the least deprived areas. There were clear gradients in rates of avoidable mortality by deprivation of area for the total population and for both males and females.

From 1997 to 2001, there were 14,015 excess deaths from avoidable mortality (estimated on the basis that the numbers of avoidable deaths in all socioeconomic groups equalled that of the least deprived group).

The Māori rate of deaths from avoidable causes was approximately two and a half times the rate for the European/ others population, with the rate for Pacific peoples approximately twice the rate for the European/ others. Similarly, the rates of amenable mortality for Māori and Pacific peoples were over twice the rates for the European/ others.

From 1981 to 2001 there was a reduction in the proportion of avoidable deaths for those aged 0 to 74 years, falling from 79.2% of all deaths at these ages in 1981, to 74.3% in 2001. Of all deaths at these ages in 2001, almost one third (31.9%) were considered to be amenable to health care, again lower than in 1981 (36.0%). Of the major avoidable mortality conditions, the rate of ischaemic heart disease fell by 61.8% over the twenty year period, with the rate of cerebrovascular diseases declining by 57.6%. Over this period there were increases in the rates of suicide and self inflicted injuries (41.0%) and diabetes (8.6%).

Glossary/ symbols used

ASR

ASR refers to age standardised rates – the rates in this atlas are per 100,000 population. For further information, refer to Chapter 2, *Methods*.

CC

Capital cities, Australia

ICD-9

International Classification of Diseases, Ninth Revision [WHO]

ICD-10

International Statistical Classification of Diseases and Related Health Problems, Tenth Revision [WHO]

ICD-10-AM

International Statistical Classification of Diseases and Related Health Problems, Tenth Revision, Australian Modification

MUC

'Other' major urban centres, Australia, excluding the capital cities – for further information, refer to Chapter 2, *Methods*

ROS

'Rest of state/ territory' areas, Australia, excluding the capital cities and other major urban centres

RR

Rate ratio – for further information, refer to Chapter 2, *Methods*

Statistical significance

* Statistically significant, at the 5% confidence level

** Statistically significant, at the 1% confidence level

YLL

Years of life lost – for further information, refer to Chapter 2, *Methods*

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