



## Avoidable mortality in Queensland

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The *Australian and New Zealand Atlas of Avoidable Mortality*<sup>1</sup> defines avoidable mortality as amenable or preventable deaths in a population aged between 0 and 74 years where:

- Amenable deaths are those deaths which should not have occurred given available health care interventions; and
- Preventable deaths are those deaths where the cause is considered to be responsive to the national health policies concerned with prevention rather than to clinical intervention.

For this analysis of avoidable mortality in Queensland for the calendar years 1994 to 2005, the preventable and amenable conditions were those listed in Appendix 1 of the *ANZ Atlas of Avoidable Mortality*<sup>1</sup>. The data were obtained from cause of death and the estimated residential population (ERP) datasets provided by the Australian Bureau of Statistics.

### Overview

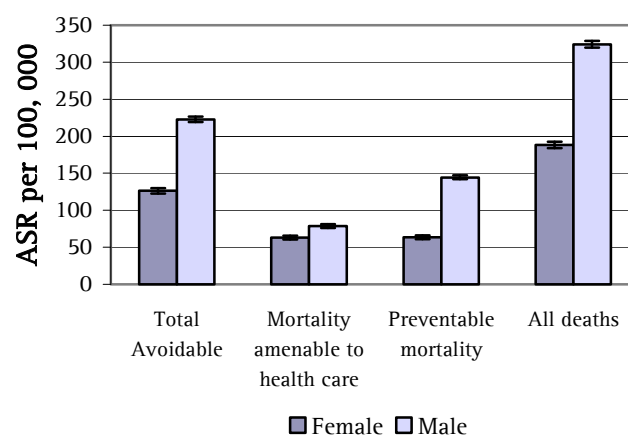
In 2004-2005, the age standardised rate of total avoidable mortality was significantly higher for males than for females in Queensland (Figure 1). Approximately 68.7% and 67.1% of all the deaths of respective male and female Queenslanders aged 0-74 years were avoidable.

The disease group which made the greatest contribution to avoidable mortality in Queensland in 2004-2005 was neoplasms (36.5%), followed by cardiovascular diseases (27.9%), and injuries (7.4%). The top five specific causes of avoidable mortality for both males and females are listed in Table 1. All six specific causes of mortality in Table 1 are also included in the top ten causes of avoidable mortality for Australians who deceased 1997-2001<sup>1</sup>. In both studies, the most common cause of death was ischaemic heart disease. It accounted for 23.7% of male and 14.0% of female avoidable mortality in Queensland in 2004-2005.

### Age group differences

Figure 2 displays age standardised avoidable mortality rates by sex and age group for 2004-2005. The avoidable mortality rate for infants was significantly higher, at the 95% confidence level, than for persons in the 1-14, 15-24, and 25-44 age categories. Birth defects and complications of the perinatal period contributed to more than 90% of the avoidable deaths for infants. The proportion of

Figure 1: Age-standardised rates\* of mortality by sex, 0-74 years, Queensland, 2004-2005



\* Number of deaths per 100,000 of the Queensland population age-standardised to the 2001 Australian ERP.

Table 1: Top 5 causes of avoidable mortality, Queensland, 2004-2005

	Cause of Death	Rates*	Amenable to health care?
Male	Ischaemic heart disease	52.9	Yes
	Lung cancer	30.0	No
	Suicide and self inflicted injuries	18.5	No
	Colorectal cancer	13.7	Yes
	Cerebrovascular diseases	12.0	1/2
Female	Ischaemic heart disease	18.0	Yes
	Breast cancer	16.8	Yes
	Lung cancer	15.0	No
	Colorectal cancer	8.7	Yes
	Cerebrovascular diseases	8.5	1/2

\* Number of deaths per 100,000 of the Queensland population age-standardised to the 2001 Australian ERP

avoidable mortality in the 65-74 year age group was 42.1% of all avoidable mortality. The major causes of death were ischaemic heart disease (25.2%), lung cancer (16.3%), chronic obstructive pulmonary disease (8.9%) and cerebrovascular disease (8.4%).

Injury was the leading cause of avoidable deaths in the younger population. Drowning and road traffic injuries accounted for more than 42% of total avoidable mortality among children aged 1-14 years. For the 15-24 year age group, road traffic injuries, and suicide and self-inflicted injuries accounted for more than 75% of the avoidable mortality. In adults aged 25-44 years, breast cancer (15.2%) was the top specific cause of avoidable mortality for females, but suicide and self-inflicted injury (33.4%) was the top cause of avoidable mortality for males. For males aged 45-64 years, ischaemic heart disease (27.0%), followed by lung cancer (15.1%) were the top causes of avoidable mortality. Breast cancer (20.1%) and lung cancer (14.4%) were top causes of avoidable mortality for females aged 45-64.

### Trends

Nationally, the avoidable mortality rate is declining<sup>1</sup>. This analysis showed a similar trend in Queensland. Between 1994-1995 and 2004-2005, the age standardised rates fell from 259.2 to 174.6 per 100,000. These rates reduced from 343.7 to 222.7 per 100,000 for males and 177.4 to 126.3 per 100,000 for females.

It is worth noting that the all cause age-standardised mortality rates for persons aged 0-74 years dropped from 346.0 per 100,000 in 1994-1995 to 256.2 per 100,000 in 2004-2005. Over the same time period, the rate ratio of avoidable to all cause mortalities fell from 74.9% to 68.1% for 0-74 years.

The avoidable mortality rate due to cardiovascular disease was nearly halved between 1994-1995 and 2004-2005. This reduction, which occurred in both the male and female populations, was the greatest contributor to the overall decrease in avoidable mortality (observed in Figure 3). The mortality rates for neoplasms also fell, driven by the significant decline in the deaths due to lung and breast cancers among males and females, respectively. In fact, the mortality rates for all but one of the specific conditions listed in Table 1 as top causes of avoidable mortality have declined significantly over the past 10 years. The exception is the lung cancer mortality rate among females which appears to have increased in more recent years.

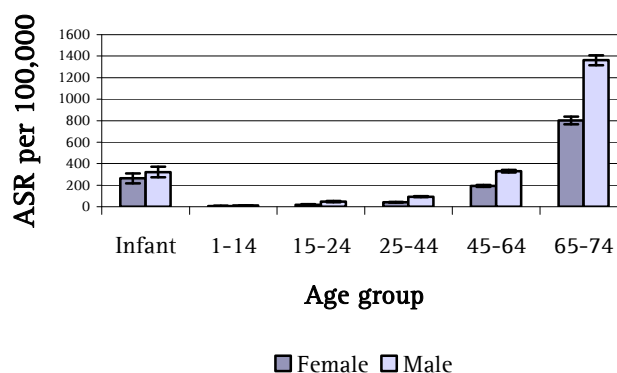
### Conclusion

The results from this analysis show that deaths deemed avoidable are trending downwards in Queensland. Avoidable mortality rates for Queenslanders aged less than 75 years declined by almost one third between 1994-95 and 2004-05. This is an encouraging result, but the plots in Figure 1 indicate that over half the deaths of Queensland residents in 2004-2005 were classified as avoidable. There is still room for improvement.

### Reference:

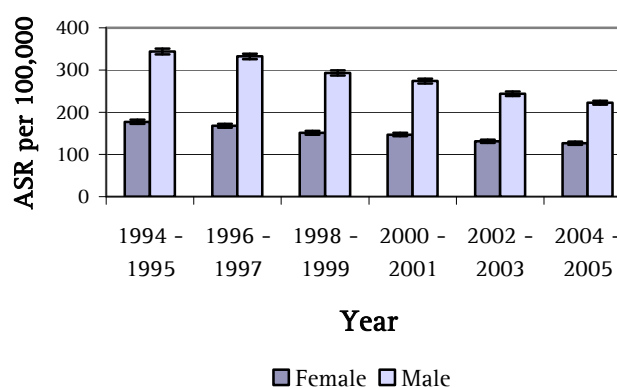
1. Page A, Tobias M, Glover J, Wright C, Hetzel D, Fisher E. (2006) *Australian and New Zealand Atlas of Avoidable Mortality*. Adelaide: PHIDU, University of Adelaide

**Figure 2: Age-standardised rates\*\* of avoidable mortality by sex and age group, Queensland 2004-2005**



\*\* Rates within each age group are age-standardised to the Australian ERP, except for Infant

**Figure 3: Age-standardised rates\* of avoidable mortality by sex, Queensland 1994-2005**



\* Number of deaths 100,000 of the Queensland population age-standardised to the 2001 ERP