



## Rural, regional and remote Australia: a study on mortality

### Fast Facts

- During 2002–04, death rates in regional and remote areas were significantly higher than in major cities.
- The main contributors to higher death rates in regional and remote Australia were the preventable conditions coronary heart disease, motor vehicle traffic accidents, and chronic obstructive pulmonary disease.
- When all causes of death are considered, the relative difference in mortality rates between major cities and regional and remote areas was stable over time.
- Aboriginal and Torres Strait Islander death rates were three times higher than for other Australians living in major cities.

Death rates are a useful indicator of the underlying health status of a population. Australians as a whole enjoy a very high standard of living and long lives. In 2004 the country had one of the lowest overall mortality rates of developed countries. However, given Australia's geographic and demographic diversity, it is useful to look at how mortality rates differ across urban, regional and remote regions.

Over 6 million people—about one-third of the population—live in what is referred to as regional and remote Australia (31% in regional and 3% in remote).

A greater proportion of Aboriginal and Torres Strait Islander people reside in regional and remote areas. Whereas only 1% of the population of major cities are Indigenous, this increases to 2% and 5% in inner and outer regional areas, 12% in remote areas and 45% in very remote areas.

The Australian Institute of Health and Welfare's report: *Rural, regional and remote health: a study of mortality (2nd edition)* explores the following questions:

- Do mortality rates increase with remoteness?
- Do rural and remote regions experience greater disadvantage for particular causes of deaths?
- Does poorer health in more remote areas reflect the influence of remoteness or the generally poorer health of Aboriginal and Torres Strait Islanders?
- Is mortality in inland areas different from that in coastal areas?

## Death rates increase with increasing remoteness

Compared with major cities, death rates in regional areas in the 2002–04 period were 10–15% higher for males and 5–10% higher for females. Death rates for all people in remote and very remote areas were, respectively, 20% and 70% higher than in major cities (Figure 1).

These higher rates equate to about 4,400 excess deaths each year in regional and remote areas.

The high death rate for the total population in very remote areas is likely to reflect the high proportion of the population in these areas who are Indigenous, coupled with the higher rate of mortality for Indigenous Australians overall.

Higher death rates in more remote areas may also reflect higher prevalence of behaviours associated with poorer health (for example smoking or alcohol consumption) as well as any impact of location (for example accessibility and availability of health services).

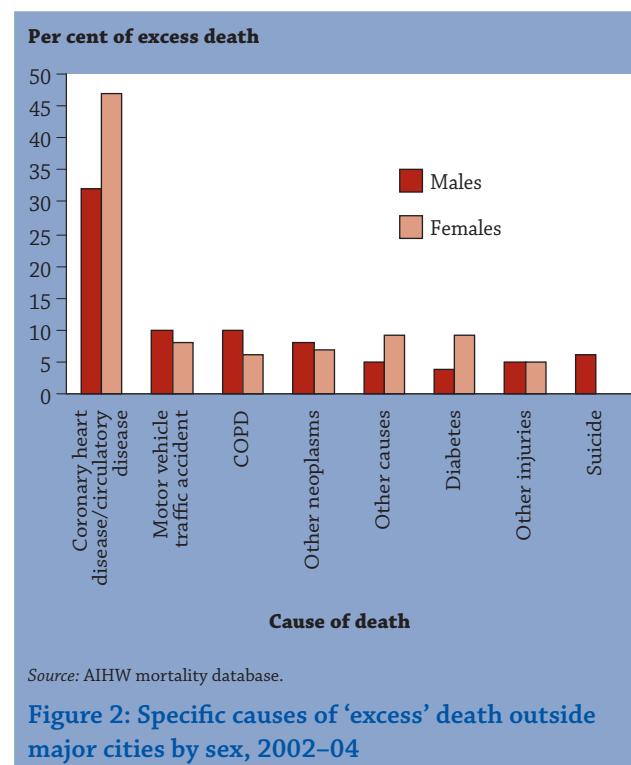
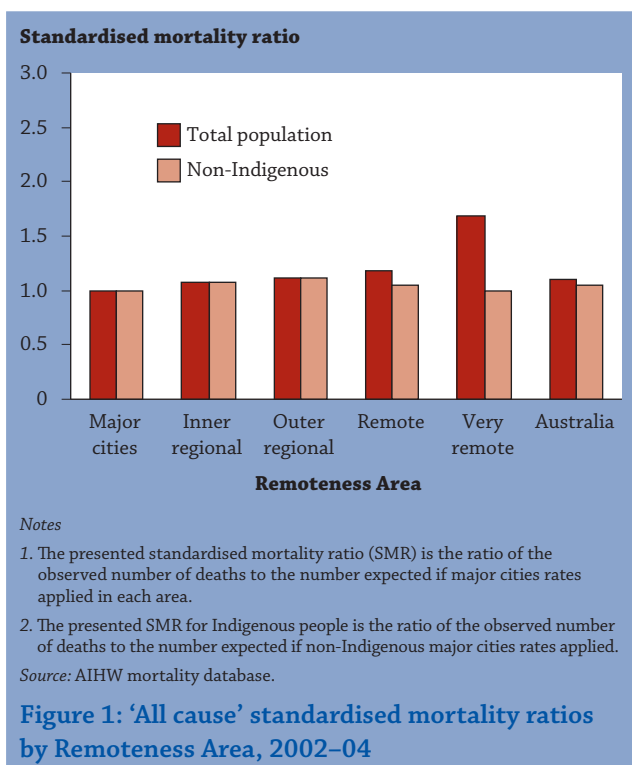
Death rates for older people, particularly living in remote areas, were generally lower than for those in major cities.

## Causes of higher deaths outside major cities

For the 2002–04 period, those causes most responsible for the additional 4,400 regional and remote deaths each year were coronary heart disease and other circulatory disease (37% of these deaths), motor vehicle traffic accidents (9%) and chronic obstructive pulmonary disease (9%) (Figure 2).

As remoteness increased, deaths from circulatory diseases and neoplasms became relatively less common and ‘other’ causes and diabetes became relatively more common.

For younger people (aged less than 65 years), the major causes of elevated death rates were motor vehicle traffic accidents (18%), coronary heart disease (13%), and suicide (9%).



## Higher death rates for Indigenous Australians

In Queensland, Western Australia, South Australia, and the Northern Territory, the four jurisdictions which are considered to most accurately record Indigenous status in mortality data, death rates for Indigenous Australians were over three times higher than those for non-Indigenous Australians who lived in major cities.

Of the excess Indigenous deaths, about 70% occurred in people aged 25–64 years. This is in contrast to non-Indigenous people living in regional and remote areas, where the excess deaths occurred mainly in the older age groups.

For Indigenous males, circulatory disease and injury were the leading contributors to the higher rates of death, and for Indigenous females, circulatory disease, endocrine disease and injury.

## Gap between urban and rural mortality rates unchanging

When all causes of death are considered, the relative difference in mortality rates between major cities and regional and remote areas remained unchanged between the periods 1997–99 and 2002–04. With the exception of injury, this pattern was generally consistent across the broad categories of cause of death. In very remote areas, death rates due to injury increased relative to those in major cities, from 2.4 times as high in 1997–99 to 3.2 times as high in 2002–04.

## Understanding variation in mortality across areas

Using major cities death rates as the benchmark, the difference in mortality rates between major cities and regional and remote areas is described in two ways in this report:

- 1) Were death rates in regional and remote areas higher than expected if major cities death rates had applied everywhere
- 2) Did extra people die in regional and remote areas than would have been expected if major cities rates had applied everywhere (excess deaths).

## What defines rural and remote?

The Australian Standard Geographical Classification Remoteness Areas classification allocates one of five remoteness categories to an area. Areas are classified as major cities, inner regional or outer regional, remote and very remote. When inner regional and outer regional are taken together we use the term regional. When remote and very remote areas are taken together we use the term remote.

## Data improvements needed

Indigenous health is inextricably linked to regional and remote health due to the relatively large Indigenous population in these areas. However, the identification of Indigenous Australian deaths is incomplete; overall, identification is estimated to be no better than 60% for data used in this analysis. Improvements in the identification of Indigenous people in the mortality data collection are crucial to being able to better describe differences in mortality across remoteness.

## About the population health unit

The Population Health unit develops and provides information on the health of the Australian population and priority sub-populations, and covers health inequalities. The unit undertakes specific projects in the areas of rural health and veterans' health. The unit also takes a population health approach to its work in monitoring chronic diseases and associated determinants of health, in management of the National Mortality Database, and in support of the Institute's use of demographic data.

## AIHW rural health publications

### **Rural, regional and remote health: mortality trends 1992–2003**

*Rural health series no. 7*

PUBLISHED 29 MARCH 2006. AIHW CAT. NO. PHE 71; \$24.00

### **Australia's health 2006**

PUBLISHED 21 JUNE 2006. AIHW CAT NO. AUS 73. \$60.00

### **Rural, regional and remote health: indicators of health**

*Rural health series no. 5*

PUBLISHED 13 MAY 2005; AIHW CAT. NO. PHE 59; INTERNET ONLY

### **Rural, regional and remote health, a study on mortality**

*Rural health series no. 2*

PUBLISHED 31 OCTOBER 2003; AIHW CAT. NO. PHE 45; \$40.00

## Web links

### **Australian Institute of Health and Welfare**

<http://www.aihw.gov.au/ruralhealth/index.cfm>



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