Rural, regional and remote health

Mortality trends 1992–2003

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Rural, regional and remote health

Mortality trends 1992–2003

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Abbreviations

ABS	Australian Bureau of Statistics
AIHW	Australian Institute of Health and Welfare
ARIA	Accessibility/Remoteness Index of Australia
ASGC	Australian Standard Geographical Classification
GIS	Geographic Information Systems
GISCA	National Key Centre for the Social Applications of GIS
ICD-10	International Classification of Diseases, 10th revision
ICD-9	International Classification of Diseases, 9th revision
MVTA	Motor vehicle traffic accidents
NHMRC	National Health and Medical Research Council
p.a.	per annum
SMR	Standardised Mortality Ratio

ASGC Remoteness categories

MC	Major Cities
IR	Inner Regional
OR	Outer Regional
R	Remote
VR	Very Remote

Symbols used in the tables and figures

–	nil or rounded to zero
. .	not applicable
n.a.	not available
n.p.	not published in this report
n.e.d.	not elsewhere described

Introduction

Death rates in Australia are on the decline overall, but there is considerable variation in the magnitude of the decline among the various causes of death (AIHW 2004b, p. 49). This report, the seventh in a series that describes the health status of Australians living in regional and remote areas, builds on a previous report of the Australian Institute of Health and Welfare (AIHW): *Rural, Regional and Remote Health – A Study on Mortality* (AIHW 2003), to examine inter-regional differences in the rate and direction of changes in death rates for each of a number of causes.

The report looks at changes in death rates between 1992 and 2003, comparing the changes that have occurred in each of the Australian Standard Geographical Classification (ASGC) Remoteness areas (see page 6) for each of a range of causes (see Table 1 on page 5), for both males and females. This extends the time series and provides coverage of more specific causes of death than the broad categories presented in the earlier report.

Mortality is only one aspect of the health of a population, but death rates are important indicators of health. Mortality also has the advantage of being easily defined and regularly and reliably collected.

Nevertheless, there are some caveats in its use as an indicator of health. Mortality data:

- may not be accurate for Indigenous people in any region, and are less reliable in some geographical areas than in others. This is because the propensity for Indigenous people to identify as such varies over time and across areas. Identification is considered to be most reliable, overall, in the Northern Territory, South Australia, Western Australia and Queensland, but, in every State and Territory, is likely to be poorer in Major Cities than in the other regions
- does not take into account the possible migration of the 'frail aged' to less remote areas. Frequently, death rates for elderly non-Indigenous people in remote areas appear to be lower than for their counterparts in Major Cities, whereas the reverse may be the case for younger age groups. It is thought that elderly people in poor health may move to less remote areas where they can regularly access health services, leaving behind healthier individuals
- may mask underlying health conditions. For example, deaths where diabetes was the underlying condition have been identified in this report, but this still understates the burden of this disease, because diabetes is a contributing factor for other deaths
- allows for demographic differences between different populations, but not other differences, such as socioeconomic differences, environmental factors or different levels of access to, and quality of, health services
- does not provide direct information about how well people 'feel', their levels of fitness, the prevalence of risk factors such as smoking or the frequency of interventions such as visits to health practitioners.

Another major study in the series, *Rural, Regional and Remote health – Indicators of Health,* has provided a wealth of additional information about the health of populations in Major Cities, Inner and Outer Regional areas, and Remote and Very Remote areas.

The results presented in this and previous reports need to be interpreted in the context of various data quality issues and the statistical methods applied, both of which are described below.

Statistical methods

Because the age and sex profile of the population varies both across geographical regions and over time, age standardisation for males and females has been used in this report to compare death rates across time and between areas.

Age standardisation has been used in this study because:

- the risk of death is usually age-related
- the age structure of the populations in each Remoteness Area is different (and substantially so between remote and other areas)
- the age structure of a population changes with time.

Without age standardisation, comparison of calculated crude rates may simply reflect the different age and sex structures of populations rather than any change in the underlying likelihoods of death over time in each area.

Indirect age-standardised death rates (Standardised Mortality Ratios—SMRs) for each year from 1992 to 2003 were calculated for each of the ASGC Remoteness areas, for both males and females and for each of the causes of death examined. For each cause, these rates have been presented as a graph to provide an easily understood representation of the changes (and year-to-year variability) in the rate of death in each area from year to year.

The slopes of trend lines for describing the change in death rates over time were calculated using weighted least squares. Confidence intervals for the slope were calculated using the standard error of the slope.

The slope in each case is the equivalent of the reduction in the SMR, which has been multiplied by 100 to assist in description and interpretation. For example, if the trend line for the SMR in an area decreased from 166 to 100 between 1992 and 2003, then the decrease would have been 6.0 points per year. Similarly, if the decrease was from 266 to 200, then the average yearly decrease would have been, again, 6.0 points per year. In these two cases the average annual decrease is 6.0 points and the two trend lines would be parallel. Proportionally, the decrease is greater from 166 than it is from 266.

The absolute, rather than relative, size of changes in each area is likely to be more useful in making inter-regional comparisons. For this reason, the change in the death rate in each area has been expressed as the number of points by which the SMR changes each year on average, rather than the percentage change.

The relative contributions of each of the broad causes of death to the overall change in the death rate were calculated using linear regression of the number of 'excess' deaths attributed to each cause, over time, using the method described in Armitage & Berry (1987, pp. 143–150).

Indirect age standardisation

Rates for males and females in each of the years 1992–2003 have been indirectly age standardised to the Major Cities rates in the aggregated three-year period 2001–2003.

Indirect age standardisation, rather than direct age standardisation, has been used to compare the rate of death in each area with that in Major Cities in the period 2001–2003. Indirect rather than direct standardisation has been used to avoid instability due to small numbers of deaths in some of the areas, especially when examining causes of death that are not particularly common.

In general terms, the relative (indirect age-standardised) rates of death in the different areas were calculated by comparing the number of deaths that actually occurred with the number that would have been expected if Major Cities age-specific rates for the period 2001–2003 had applied in each area and in each year. 'Excess' deaths have been expressed as the difference between the number of deaths observed and the number expected (Armitage & Berry 1987, pp. 403–405).

Described in a stepwise manner, the indirect age-standardised method involves the following steps:

- calculation of age- and sex-specific rates for the standard population (for this study, the Major Cities population in 2001–2003)
- calculation of the number of deaths expected to occur if the standard age- and sex-specific rates applied to the population in each area in each year
- comparison of the total number of deaths observed in the population of each area in each year to the number expected (that is, the ratio of observed to expected deaths).

Because the ratio of the observed to expected deaths is exactly the same as the ratio of the indirect age-standardised rates in each area to that in Major Cities, the difference between the mortality in one area and that in Major Cities can be expressed either as:

- one rate is 'so many times as high as another'; or
- there are 'so many times more deaths than expected'.

For example, if 1,500 deaths were observed in an area, and 1,000 were expected, then there were 1.5 times as many deaths as expected, expressed in this report as an SMR of 150. In other words, the adjusted rate of death in the area was 1.5 times that in Major Cities, or, alternatively, death rates were 50% higher than in Major Cities in 2001–2003, or there were 1.5 times as many deaths as expected.

Reporting for Indigenous and non-Indigenous people

A substantial proportion of the higher death rates in regional, and especially remote, areas is a reflection of the relatively large proportion of the population who are Indigenous in those areas. Approximately 1%, 2%, 5%, 13% and 44%, respectively, of the populations of Major Cities, Inner Regional, Outer Regional, Remote and Very Remote areas are Indigenous (AIHW 2005).

On average, Indigenous people experience substantially higher death rates than other Australians, for a number of underlying reasons (ABS & AIHW 2003), and this, coupled with their greater representation in regional and remote areas, can explain a substantial proportion of the higher rate of death outside Major Cities. As a result of the importance of Indigenous health issues, both in its own right and also as a major explanatory variable in accounting for elevated rates outside Major Cities, it would be preferable to describe Indigenous and non-Indigenous mortality separately in each area over time.

Unfortunately, the quality of the data prevents this analysis.

Not only is it likely that identification of Indigenous people in the mortality data collection improves with remoteness (AIHW 2003) but people have become more likely to identify as Indigenous over time (ABS & AIHW 2003). Consequently, any increase in death rates for Indigenous people over time could reflect a greater propensity to identify as Aboriginal or Torres Strait Islander in the mortality data collection, and higher Indigenous death rates outside Major Cities could merely reflect a greater likelihood to identify as such in regional and especially remote areas.

Issues pertaining to cause of death coding

Recording of cause of death in the mortality data collection has evolved over the years.

Before 1999, the 9th Revision of the International Classification of Diseases (ICD-9) was used to code the underlying cause of death. The 10th Revision (ICD-10) was introduced in 1999.

In addition to the change from ICD-9 to ICD-10, there has been a change from manual to automatic coding. In 1997, cause of death, which had been manually coded using ICD-9, started to be automatically coded using ICD-9.

In 1999, automatic ICD-10 coding replaced automatic ICD-9 coding. Mortality data for 1997 and 1998 was then back-coded automatically using ICD-10, resulting in a single break after 1996.

Both these changes (ICD-9 to ICD-10, and manual to automatic) complicate comparisons of death rates over time.

A comparability factor was calculated from a number of deaths in 1997 and 1998 which were coded in both manual ICD-9 and automatic ICD-10. This comparability factor is used to estimate the number of deaths ascribed to each cause before 1997, had automatic ICD-10 coding been used in that period. This adjustment is believed to make time trend analysis more valid for this period.

The ICD-9 and ICD-10 codes and the comparability factors used in this report are listed in Table 1.

The number of deaths due to 'other causes' within each chapter and other causes overall were calculated by subtraction, and so a comparability factor was not calculated.

Table 1: ICD-9 and ICD-10 chapter and cause codes, and comparability factors

Chapter and cause	ICD-9	ICD-10	Comparability factor
Neoplasms	140–239	C00–D48	1.00
Lung cancer	162	C33, C34	0.97
Colorectal cancer	153, 154	C18–C21	0.98
Breast cancer	174, 175	C50	0.98
Cervical cancer	180	C53	0.98
Prostate cancer	185	C61	0.98
Melanoma	172	C43	0.98
'Other' neoplasms	140–239 (excluding above)	C00–D48 (excluding above)	n.a.
Circulatory diseases	390–459	I00–I99	1.00
Coronary heart disease	410–414	I20–I25	1.01
Cerebrovascular disease	430–438	I60–I69	0.97
'Other' circulatory disease	390–459 (excluding above)	I00–I99 (excluding above)	n.a.
Respiratory diseases	460–519	J00–J99	0.91
Pneumonia and influenza	480–487, 514	J10–J18	0.84
Asthma	493	J45–J46	0.75
Chronic obstructive pulmonary disease	491, 492, 496	J41, J42, J43, J44	0.93
'Other' respiratory disease	460–519 (excluding above)	J00–J99 (excluding above)	n.a.
Injury and poisoning	E800–E999	V01–Y98	1.06
Motor vehicle traffic accidents (MVTA)	E810–E819	V02–V04 (.1–.9), V09.2, V12–V14 (.3–.9)	0.95
		V19 (.4–.6), V20–V28 (.3–.9), V29 (.4–.9)	
		V30–V39 (.4–.9), V40–V49 (.4–.9), V50–V59 (.4–.9), V60–V69 (.4–.9)	
		V70–V79 (.4–.9), V80(.3–.5), V81.1, V82.1, V83–V86 (.0–.3), V87 (.0–.8), V89.2	
All other land transport accidents	E800–E829, excluding codes in MVA above	V01.0–V89.9, excluding codes in MVA above	n.a.
Suicide	E950–E959	X60–X84	0.97
Interpersonal violence	E960–E978	X85–Y09	1.02
'Other' injury/poisoning	E800–E999 (excluding those above)	V00–Y98 (excluding those above)	n.a.
Other causes	All codes excluding those above	All codes excluding those above	n.a.
Diabetes	250	E10–E14	0.99
Renal failure	584–586	N17–N19	1.05
'Other' other causes n.e.d.	All other codes	All other codes	n.a.

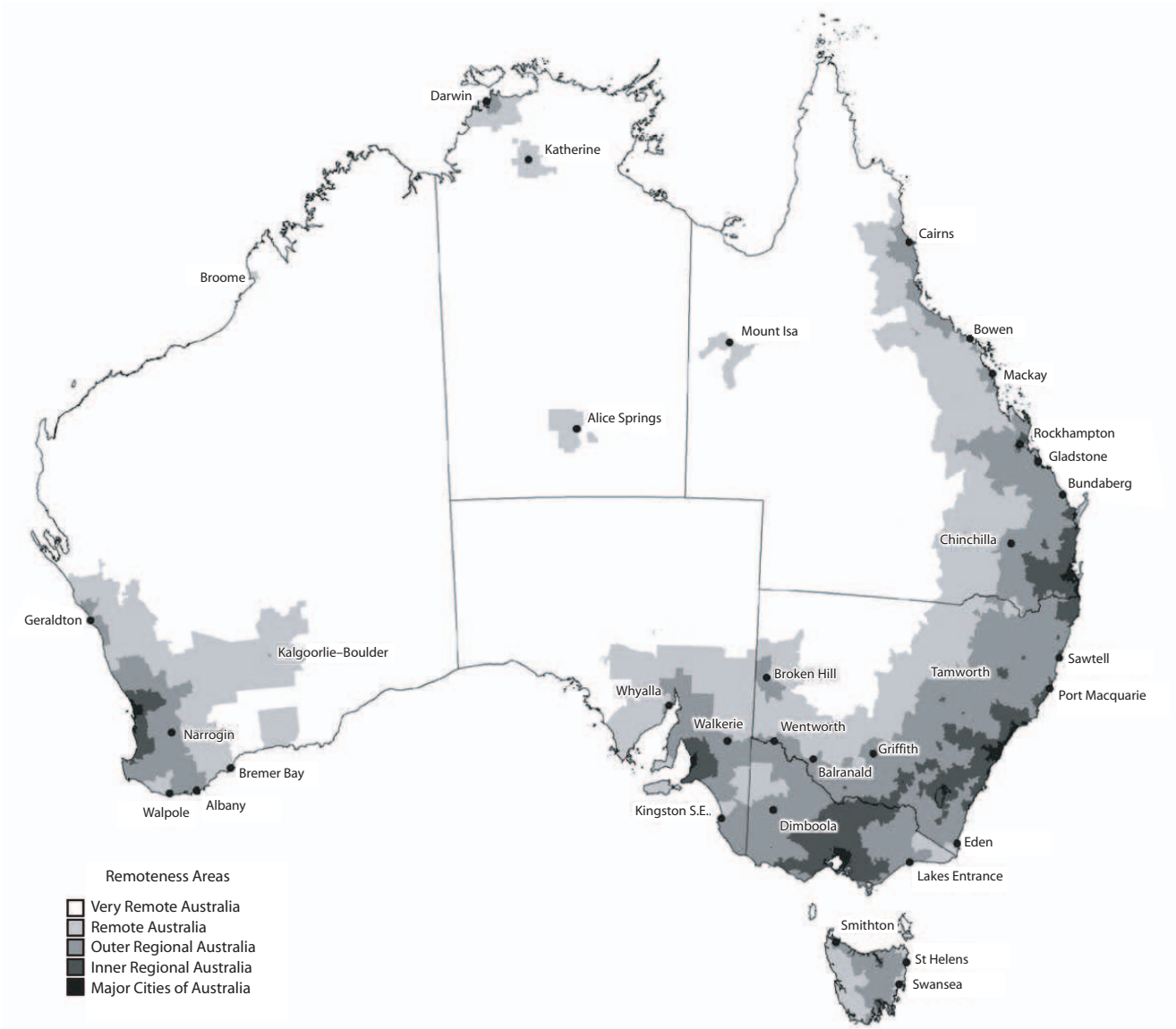
Geographic classification

The Australian Bureau of Statistics (ABS) ASGC Remoteness classification (see Figure 1) was selected in preference to the Accessibility/Remoteness Index of Australia (ARIA) and Rural, Remote and Metropolitan Areas (RRMA) classifications as the geographic basis for reporting for a range of reasons outlined in an earlier report in this series *Rural, Regional and Remote Health: A Guide to Remoteness Classifications* (AIHW 2004a).

The ASGC Remoteness classification was developed by the ABS and was based on ARIA+, which was developed earlier by the National Key Centre for the Social Applications of Geographic Information Systems (GISCA) (ABS 2001).

In figures and tables throughout this report, Major Cities, Inner Regional, Outer Regional, Remote and Very Remote categories have been abbreviated as MC, IR, OR, R and VR.

For more information on the various remoteness classifications please refer to the AIHW publication *Rural, Regional and Remote Health: A Guide to Remoteness Classifications* (AIHW 2004a).



Source: ABS.

Figure 1: ASGC Remoteness areas of Australia

Notes on data presentation

1. Percentages or numbers in tables may not add to 100 or other totals due to rounding.
2. Standardisation has been indirect, using Major Cities rates in 2001–2003 for males and females as the standard. SMRs have been multiplied by 100 to assist in the description and interpretation of the results.
3. In this report, names of specific areas defined by the ASGC have been capitalised (for example, Inner Regional, Remote, Very Remote). Where reference has been made to generic 'regional' or 'remote' areas (respectively, Inner plus Outer Regional areas, Remote plus Very Remote areas), the terms have been left un-capitalised (for example, regional, remote).
4. 'Excess' deaths are calculated by subtracting the expected number of deaths from the number observed. Expected deaths are the number of deaths expected annually if death rates found in Major Cities are applied to the populations living in each of the other areas. 'Excess' deaths provide an indication of the extra burden of mortality in each area.
5. Where there were fewer deaths than expected (in comparison with the Major Cities 'experience'), this report states either (for example) 5 fewer deaths than expected annually, or –5 'excess' deaths annually: both expressions mean the same thing.
6. All statements about rates in this report are based on the ratio of observed to expected deaths. If there are twice as many deaths as expected, then the rate of death can be assumed to be twice that of the Major Cities comparison population.
7. Confidence intervals were calculated at the 95% level and used to identify statistically significant rate changes. Where changes in death rate are statistically significantly different from one another, they are referred to in the text as 'significantly different'; if changes in death rate are not statistically significantly different they are not said to be significantly different.
8. In some situations, differences that just fail to be statistically significant at the 95% level (but the context suggests that real differences exist) have been described as 'apparent' rather than 'significant' differences; alternatively, the difference is stated as being statistically significant at 'a lower level of confidence'.
9. Statistically significant figures are indicated in tables in bold type and with an asterisk.
10. To improve readability, where reference is made to 'Major Cities, Inner Regional, Outer Regional, Remote and Very Remote areas', the term 'the five areas' has been used. Where there is reference to 'Inner Regional, Outer Regional, Remote and Very Remote areas', the term 'the four areas outside Major Cities' has been used.

Summary

Overview

This report describes changes in death rates, for a number of causes, in Major Cities, Inner Regional, Outer Regional, Remote and Very Remote areas, between 1992 and 2003.

Overall, death rates for males and females in Major Cities declined by 4 points p.a. for males and 3 points p.a. for females. The rate of decline in regional and Remote areas was similar (although slightly lower for males in Inner Regional areas). The rate of decline in Very Remote areas (5 points p.a.) was greater than that in Major Cities.

Both the pace and the direction of change in death rates differed between causes.

There are several causes of death identified as being the main contributors to higher death rates in regional and remote areas (AIHW 2003).

The most numerically important four of these causes (in terms of raising regional and remote death rates) are coronary heart disease, 'other' circulatory diseases, chronic obstructive pulmonary disease and motor vehicle traffic accidents. For both sexes, there has been a decrease over time in the rate of death due to these causes (although for women, there has been essentially no change in chronic obstructive pulmonary disease death rates over the period).

For diabetes and suicide, there have not been consistent or substantial decreases, and in a number of areas, there have been increases in the rate of death from these causes.

For the other causes ('other' injuries, and for lung, colorectal and prostate cancers), there have also been decreases in death rates over time. However, for women there was little change in the rate of death from 'other injuries' and there was an increase in the rate of lung cancer death.

Regional differences in the rate of decline for the most influential causes of death

Coronary heart disease: the decline was similar for males in all areas (8 points p.a.), except for Very Remote areas (13 points p.a.), where the decline was significantly faster. For females, the declines were about 7 points p.a. in all areas.

Other circulatory diseases: the declines in most areas were not significantly different from those in Major Cities (6 and 5 points p.a., respectively, for males and females). The rate of decline for females in regional areas was slightly lower (4 points p.a.).

Chronic Obstructive Pulmonary Disease (COPD): rates of decline were about 6 points p.a. for males in all areas. Rates for females in Major Cities declined by about 1 point p.a. The declines for females in regional and remote areas were not significantly different from zero.

Motor Vehicle Traffic Accidents (MVTA): rates of decline for males and females in Major Cities were about 3 and 8 points p.a., respectively. Rates of decline in regional and remote areas were not significantly different from those in Major Cities.

Diabetes: for males in Major Cities there was little change in the rate of death from diabetes while for females in Major Cities there was a decline of about 2 points p.a. Rates in regional

areas increased for males by about 1 point p.a. while rates for females declined by about 1 point p.a. In remote areas, changes were not significant.

Suicide: Suicide death rates for males and females in Major Cities declined, respectively, by a significant and non-significant 1 point p.a. In regional areas, death rates for males remained similar or decreased slightly, while for females from Inner Regional areas rates increased by about 2 points p.a. Rates in Remote areas for both males and females were non-significantly higher, and in Very Remote areas increased by a significant 10 points p.a. for males and a non-significant 7 points p.a. for females.

Other injuries: For males in Major Cities, death rates declined by about 2 points p.a. There were similar declines in Inner Regional and Very Remote areas, and faster declines in Outer Regional (5 points p.a.) and remote (8 points p.a.) areas. For females in all areas, there was no significant change in the death rate.

Colorectal cancer: For males and females in Major Cities, death rates declined by about 3 points and 2.5 points p.a., respectively. Declines in the other areas were not significantly different from these.

Prostate cancer: Death rates for males in Major Cities declined by about 3 points p.a. Declines were similar to these in the other areas.

Lung cancer: In Major Cities, death rates declined for males by about 3 points p.a. and increased for females by about 1 point p.a. In the other areas, rates for males declined at rates that were not significantly different from that in Major Cities. For females in regional areas, rates increased at about the same rate as, or at a slightly greater rate than, those in Major Cities, while in remote areas there was no significant change in the rate of death.

The following section describes these in more detail.

Detailed specific causes summary

Neoplasms

Neoplasm (mainly cancer) death rates in Major Cities declined by about 2.2 points p.a. for males and 1.2 points p.a. for females. Rates of decline in regional areas were lower than in Major Cities (1.5 points p.a. and 0.7 points p.a. for males and females respectively). Rates of decline in remote areas were not significantly different from those in Major Cities.

Lung cancer death rates in Major Cities declined for males by about 3 points p.a. Rates of decline for males in regional and remote areas were similar to, or not significantly different from, the decline in Major Cities.

Lung cancer death rates in Major Cities increased for females by about 1 point p.a. Rates for females from regional areas appeared to increase by about 2 points p.a. There was no clear change in lung cancer rates of death for females in remote areas.

Colorectal cancer death rates in Major Cities declined by about 3 points p.a. for males and 2.5 points p.a. for females. Rates of decline in regional and remote areas were similar to these.

Breast cancer death rates in Major Cities declined for females by about 2.5 points p.a., with rates of decline in regional and remote areas not significantly different from this.

Cervical cancer death rates in Major Cities declined for females by about 7.5 points p.a. Rates of decline in regional and Remote areas were not significantly different from this. The rate of decline in Very Remote areas (about 40 points p.a.) was significantly greater than in Major Cities.

Prostate cancer death rates in Major Cities declined for males by about 3 points p.a., with rates of decline in regional and remote areas not significantly different from this.

Melanoma death rates in Major Cities appeared to decrease slightly, but not significantly. For males, rates in Inner Regional areas appeared to increase by about 2 points p.a., while in Outer Regional and remote areas the increases were not statistically significant. Rate changes were not statistically significant for females in regional areas, while overall rates in remote areas declined by about 8 points p.a.

In Major Cities, death rates for 'other' neoplasms declined by about 1.5 points p.a. for males and 1.0 points p.a. for females. Rates of decline in Inner Regional areas were lower than in Major Cities (0.7 points p.a. and 0.3 points p.a. for males and females respectively). In the other areas, the declines for both sexes were not significantly different from those in Major Cities, with clear decreases for both sexes in Outer Regional areas and for males in remote areas, but with less clear decreases for females in Very Remote areas.

Diseases of the circulatory system

Circulatory disease death rates declined in Major Cities by about 7 points p.a. for males and 6 points p.a. for females. Declines in regional and remote areas were similar to those in Major Cities, except for males in Very Remote areas where the rate of decline (10 points p.a.) was significantly greater than for males in Major Cities.

Death rates due to cerebrovascular disease declined in Major Cities by about 5 points p.a. for males and 4 points p.a. for females. Declines in regional and remote areas were similar to those in Major Cities, except for males in Very Remote areas where the rate of decline (10 points p.a.) was significantly greater than for males in Major Cities.

Death rates due to coronary heart disease declined in Major Cities by about 8 points p.a. for males and 7 points p.a. for females. Declines in regional and remote areas were similar to those in Major Cities, except for males in Very Remote areas where the rate of decline (13 points p.a.) was significantly greater than for males in Major Cities.

Death rates due to 'other' circulatory diseases declined in Major Cities by about 6 points p.a. for males and 5 points p.a. for females. Rates of decline for males in regional and remote areas were similar to those in Major Cities. For females, the rate of decline in regional areas (4 points) was lower than in Major Cities, while death rates for females in remote areas declined at rates indistinguishable from those in Major Cities and regional areas.

Diseases of the respiratory system

Respiratory disease death rates declined in Major Cities by about 2 points p.a. for males and increased by about 1 point p.a. for females.

Respiratory diseases death rates for males declined by about 3 points p.a. in regional and Remote areas. In Very Remote areas they declined by about 13 points p.a.

Respiratory disease death rates for females increased in Inner Regional areas by about 1 point p.a., while they changed little in Outer Regional areas, declined by about 2 points p.a. in Remote areas and by about 11 points p.a. in Very Remote areas.

Pneumonia and influenza death rates increased in Major Cities by about 3 points p.a. for males and by about 4 points p.a. for females. Rates in Inner Regional areas increased similarly, while rates in Outer Regional areas did not appear to change much. In Remote areas rates appeared to decrease by about 2 points p.a., and in Very Remote areas by about 19 points p.a.

Death rates due to asthma declined in Major Cities by about 12 points p.a. for males and 10 points p.a. for females. Rates for regional males appeared to decline faster (about 16 points p.a.) than in Major Cities. Rates of decline for regional females were not significantly different from those in Major Cities. Rates in remote areas also declined; for males, at a rate faster than in Major Cities; for females, at a rate indistinguishable from that in Major Cities.

Death rates due to chronic obstructive pulmonary disease declined in Major Cities by about 6 points p.a. for males and 1 point p.a. for females. Rates of decline for males in regional and remote areas were similar to those in Major Cities. For females in regional and remote areas, there was no significant change in the rate of death between 1992 and 2003.

Death rates due to 'other' respiratory diseases increased in Major Cities by about 3 points p.a. for both males and females. In regional areas, rates increased by about 2 points p.a., except for males in Outer Regional areas where they increased by about 1 point p.a. In remote areas, rates did not increase; they either remained similar or appeared to decrease. Specifically, the apparent decreases for males in Very Remote areas and for females in Remote areas were significantly different from the increases experienced by their counterparts in Major Cities.

Injury and poisoning

Death rates due to injury and poisoning declined in Major Cities by about 2 points p.a. for males and 1 point p.a. for females. Declines in regional and remote areas were similar to (or not significantly different from) those in Major Cities, except in Outer Regional areas where rates for males declined by about 4 points p.a. (significantly faster than in Major Cities).

Death rates due to suicide in Major Cities declined by about 1 point p.a. for males and appeared to decline by about 1 point p.a. for females. In regional areas, the death rate for males appeared to decline slightly, and at a rate that was not significantly different from the decline in Major Cities. In Inner Regional areas, rates at which females died as a result of suicide increased by about 2 points p.a. between 1992 and 2003; in Outer Regional areas there was no apparent change in the female suicide death rate. In Remote areas, there was a non-significant increase in the suicide death rate for both sexes, while in Very Remote areas there was a 10 points p.a. increase in the suicide death rate for males, and an apparent 7 points p.a. increase for females.

Death rates due to interpersonal violence declined in Major Cities by about 3 points p.a. for males and 5 points p.a. for females. For males in regional and remote areas, there was no significant change in the rate of death due to interpersonal violence except in Outer Regional areas, where death rates declined by about 6 points p.a. For females in regional areas, death rates appeared to decline at about the same rate as in Major Cities, while for those in remote areas, death rates declined substantially by about 28 points p.a. over the period 1992–2003.

Death rates due to motor vehicle traffic accidents declined in Major Cities by about 3 points p.a. for males and 8 points p.a. for females. Declines in regional areas were similar to those in Major Cities, while in remote areas rates appeared to decline at a rate not significantly different from those in Major Cities and regional areas.

Because of data constraints, trends for other land transport accidents were calculated for the period 1997–2003 (rather than for 1992–2003). Over this period, death rates in Major Cities declined by about 10 points p.a. for both males and females. Similar declines also appear to have occurred in regional areas. In remote areas, rates for males increased by about 60 points p.a., while for females the rate change was not significantly different from zero (or from the changes evident in Major Cities).

Death rates due to 'other' injuries and poisoning declined in Major Cities by about 2 points p.a. for males and remained essentially unchanged for females. Rates for males in Inner Regional areas declined at about the same rate as in Major Cities, but declined faster in Outer Regional and remote areas (at 5 points and 8 points p.a. respectively). Rates for females in regional and remote areas appeared to decrease overall, but the changes in the individual areas tended to be relatively small and not significantly different from zero.

Other causes

Death rates due to other causes declined in Major Cities by about 2 points p.a. for males and by less than 1 point p.a. for females. Declines for males in regional areas were about 1 point p.a. (less than in Major Cities), while for females from regional areas rates of decline were not significantly different from those in Major Cities. In remote areas, rates of decline tended not to be significantly different from those in Major Cities.

Death rates in Major Cities due to diabetes changed little for males and declined by about 2 points p.a. for females. In regional areas, rates for males increased by about 1 point p.a., while for females they declined by about 1 point p.a. In remote areas, rates did not appear to change during the period.

Death rates in Major Cities due to renal failure increased by about 1 point p.a. for both males and females. There do not appear to have been substantial changes in rates of death due to renal failure in regional or remote areas.

Death rates in Major Cities due to all other causes not elsewhere described declined by about 2.5 points p.a. for males and did not appear to change substantially for females. Rates for males from regional areas declined by about 1 point p.a., while those for females from regional areas declined at less than 1 point p.a. In remote areas, rates did not appear to change during the period.

Overall mortality trends

Reporting here is for all deaths in the period 1992–2003.

For perspective, Table 2 describes the number of deaths in each area in 2003.

Table 2: Number of deaths in 2003

	MC	IR	OR	R	VR	Total
Males	41,892	16,289	8,153	1,046	638	68,018
Females	41,343	14,797	6,572	718	392	63,822

Note: 452 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates in Major Cities declined significantly by 4 points p.a. for males and 3 points p.a. for females (Table 3, Figure 2 and Figure 3). Rates for males in Inner and Outer Regional areas also declined, respectively, at about 3 points p.a. and at about 4 points p.a. (respectively slower than, and similar to, rates of decline in Major Cities). Rates for females in regional areas declined at about the same rate as those in Major Cities (about 3 points p.a.).

Rates in Remote and Very Remote areas also declined: in the former at about the same rate as in Major Cities, and in the latter at a faster rate (5 points p.a.) than in Major Cities (Table 3).

Interpretation of overall mortality trends

Figure 2 shows a decline in the overall death rates in all areas for both sexes; but are death rates in each of the areas converging with, diverging from, or running parallel to, those in Major Cities?

Table 3: Annual change in SMRs, 'all causes', 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–3.7	***–3.3**	–3.6	–4.0	***–5.4**	–2.6	–2.4	–2.5	–2.3	***–5.0**

Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.

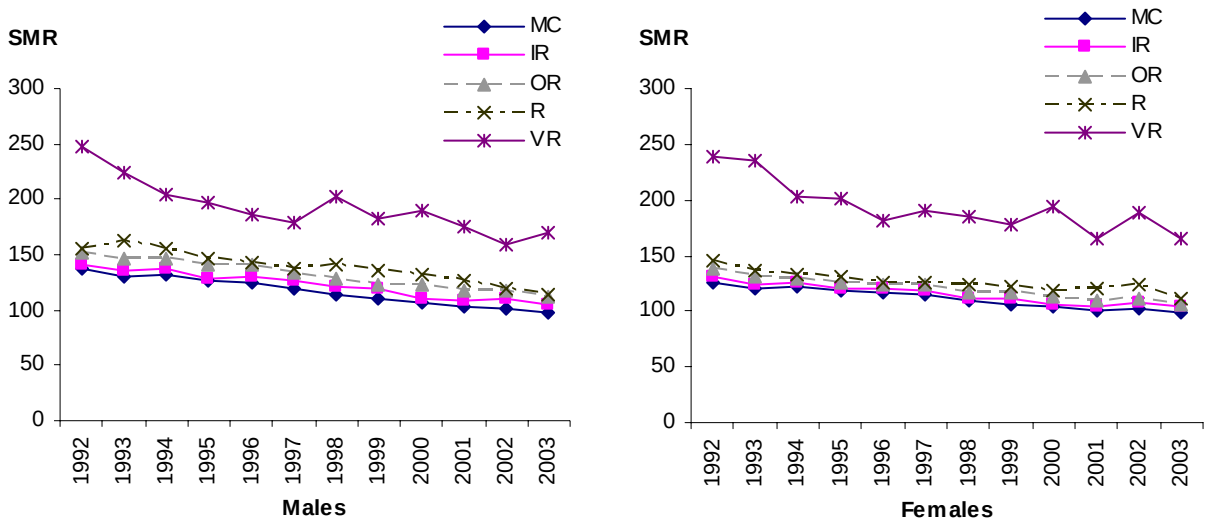
Figure 3 and Table 3 indicate that the SMR for male residents of Major Cities, Inner Regional and Very Remote areas declined by 3.7, 3.3 and 5.4 points on average each year, between 1992 and 2003. In other words, the SMR for males in each of these areas declined, respectively, by about 40, 37 and 60 points over the entire period (assuming a linear trend line).

The trend line estimates the 1992 SMR for males in Major Cities, Inner Regional and Very Remote areas as, respectively, about 140, 144 and 230 (i.e. death rates were about 1.4, 1.44 and 2.3 times those in Major Cities in 2003).

From the trend line, between 1992 and 2003:

- the SMR declined for males most quickly in Very Remote areas, from about 230 to about 170. This is an absolute decline of 60 points, which is 60% of the standard (Major Cities 2001–2003) death rate. This equates to an approximate 26% decline in the death rate (100×(60/230)).
- the SMR declined for males in Major Cities areas, from about 140 to about 100. This is an absolute decline of 40 points, which is 40% of the standard (Major Cities 2001–2003) death rate. This equates to an approximate 29% decline in the death rate (100×(40/140)).
- the SMR declined more slowly for males in Inner Regional areas, from about 144 to about 107. This is an absolute decline of 37 points, which is 37% of the standard (Major Cities 2001–2003) death rate. This equates to an approximate 26% decline in the death rate (100×(37/144)).

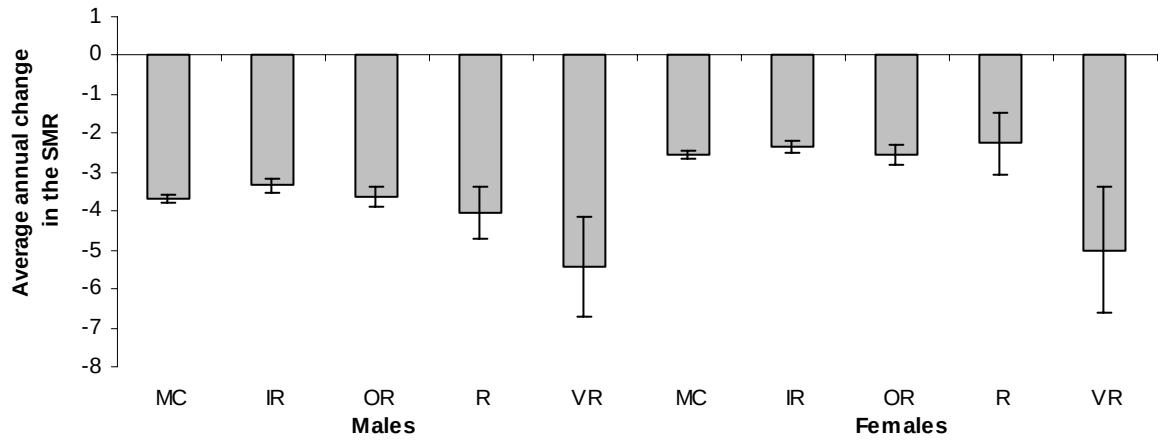
For males, the high death rate in Very Remote areas is dropping more rapidly (at 5.4 points per year) than is the death rate in Major Cities (3.7 points per year); in other words, the death rates in these two areas are slowly converging. Conversely, the slightly elevated death rate in Inner Regional areas is dropping at a slightly slower rate (3.3 points per year) than is the death rate in Major Cities (3.7 points per year); in other words, the death rates in these two areas are very slowly diverging



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 2: Overall trend in SMRs, 'all causes', males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated annual change.

Source: AIHW National Mortality Database.

Figure 3: Annual change in the ratio of observed to expected deaths, 'all causes', 1992–2003

Contribution of major cause groups to the overall decline in mortality

Table 4 and Figure 4 describe the contribution of each broad cause of death to the overall decline in mortality for each Remoteness area between 1992 and 2003.

Declines in the rates of death due to circulatory diseases accounted for most (between 72% and 81%) of the decline in Major Cities and regional areas, although their relative importance was less in remote areas (contributing 66% and 61% of the decline in Remote and Very Remote areas respectively).

Declines in rates of death due to neoplasms made the next largest contribution to the overall decline (contributing between about 15% and 20% to the decline) although this contribution was lower (11%) in both Inner and Outer Regional areas.

Respiratory diseases, injury and 'other causes' made smaller contributions (between 1% and 6% each), except in remote areas where some of these causes made substantial contributions to the overall decline. Specifically, declines in rates of death due to respiratory diseases contributed 7% and 22%, respectively, to the overall decline in Remote and Very Remote areas. Declines in injury mortality contributed 9% to the overall decline in Remote areas (but only 1% in Very Remote areas).

Table 4: Percentage of the decrease in the total number of 'excess' deaths that resulted from changes in mortality of each broad cause, 1992–2003

Broad cause of death	MC	IR	OR	R	VR
Circulatory disease	72	81	76	66	61
Neoplasms	17	11	11	21	16
Respiratory disease	1	3	4	7	22
Injury	4	2	6	9	1
Other causes	6	3	2	–4	0

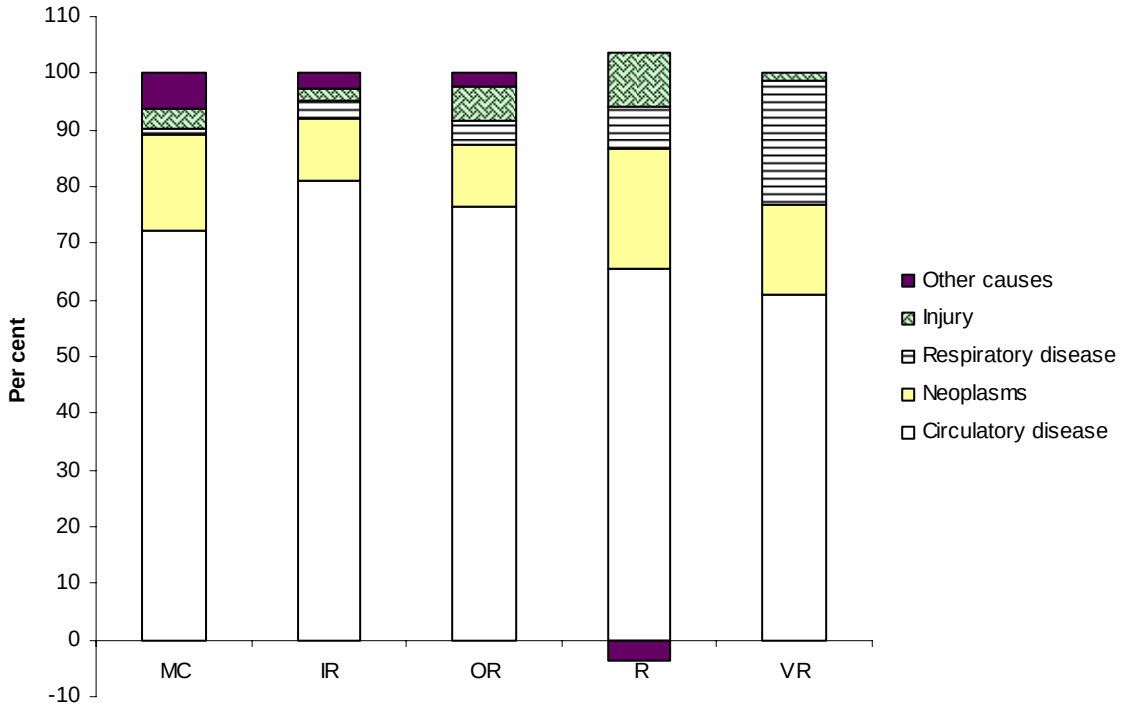
Note: 'Excess' deaths calculated using Major Cities rates in the period 2001–2003 as the standard. The percentage of the decrease attributable to each broad cause was allocated by linear regression of the numbers of 'excess' deaths in each year. Negative numbers indicate increases in the number of excess deaths over time due to that cause.

Source: AIHW National Mortality Database.

The contribution of each broad cause to the overall decline in mortality in each remoteness area was last reported in *Rural, Regional and Remote Health: A Study on Mortality* (AIHW 2003) for the period 1992 to 1999. There are broad similarities between the results reported for that (1992–1999) period and the declines reported for this (1992–2003) period. These similarities relate particularly to the substantial contribution to declines in the overall death rate of changes in rates of death due to circulatory diseases and neoplasms.

Where there have been differences, they have occurred because of changes between 1999 and 2003 in the pace or direction of earlier trends. For example:

- declines in rates of death due to respiratory diseases contributed proportionally less in Major Cities and regional areas in this more recent analysis
- injury death rates appeared to decline in this analysis, making some contribution to the decline in overall death rates, whereas in the previous analysis they had appeared to contribute little to the overall decline.



Note: 'Excess' deaths calculated using Major Cities rates in the period 2001–2003 as the standard. The percentage of the decrease attributable to each broad cause was allocated by linear regression of the numbers of 'excess' deaths in each year.

Source: AIHW National Mortality Database.

Figure 4: Percentage of the decrease in the total number of 'excess' deaths that result from changes in mortality due to each broad cause, 1992–2003

The contribution of 'other' causes in the earlier (1992–1999) period was small in most areas, but substantial in Very Remote areas. In this more recent analysis, the contribution of 'other' causes was comparatively larger in Major Cities and regional areas, and negligible in remote areas.

Another way of illustrating the contribution of each major cause to the overall decline in mortality is by plotting the change in the annual number of 'excess' deaths, for males and females in each area (see figures 5–9).

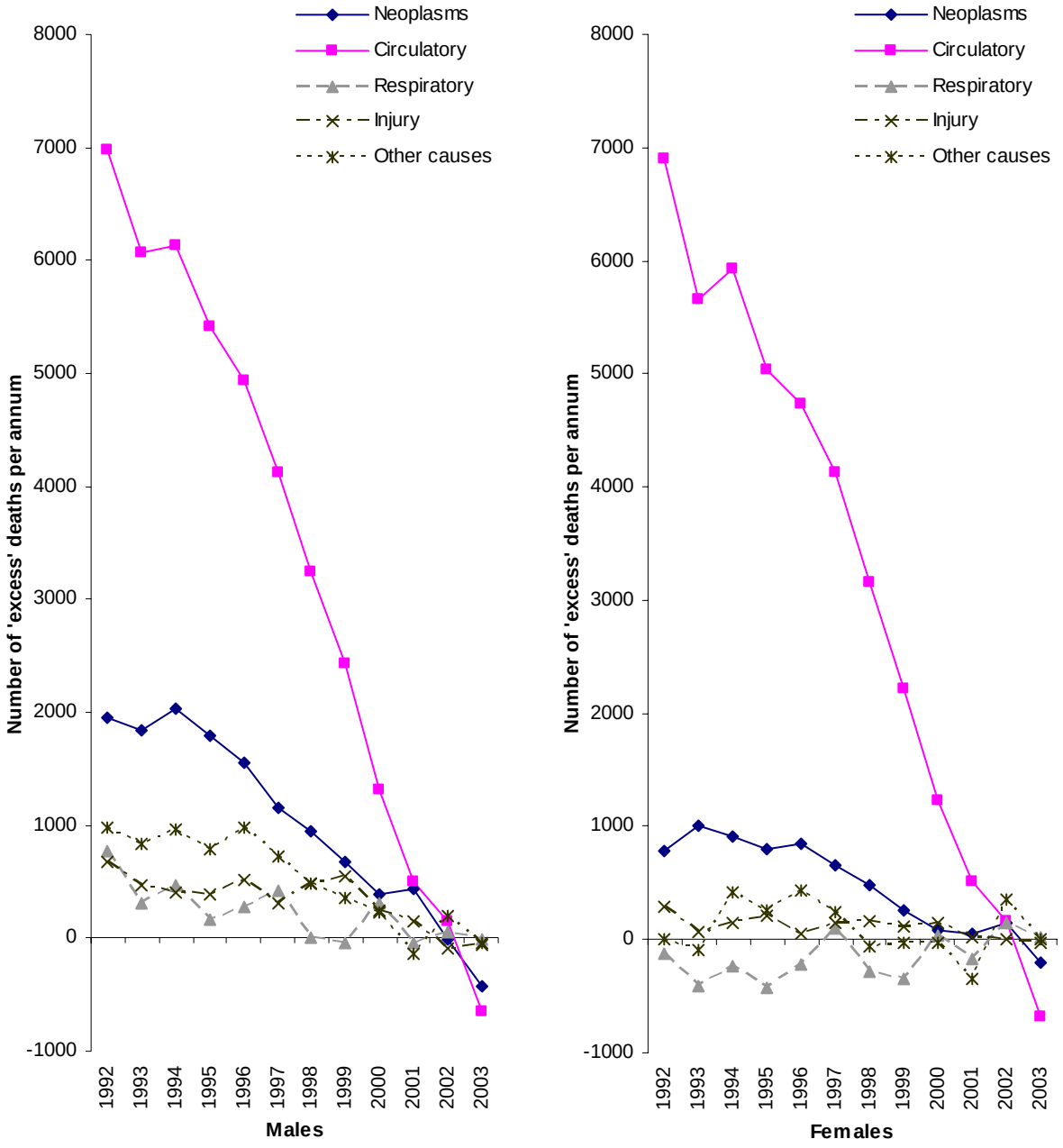
The number of 'excess' deaths is calculated as the number of deaths that occurred in each year, in excess of the number expected if Major Cities age- and sex-specific death rates for the period 2001–2003 applied to the populations in each area in each year. Conversely, if 'excess' deaths were eliminated, death rates in regional and remote areas would be identical to those in Major Cities.

Some of the interesting tendencies that can be identified from these figures include:

- the clear and substantial importance of declines in circulatory disease deaths, and to a lesser extent neoplasm deaths, to the decline in overall mortality
- the tendency for declines in respiratory disease mortality for males not to be reflected in any declines for females, for whom rates remained similar or even increased.

With the rapid decline of circulatory diseases as the main reason for higher death rates in regional and remote areas, and the less rapid decline in the rates of death due to the other causes, the latter have become relatively more important as contributors to the higher death

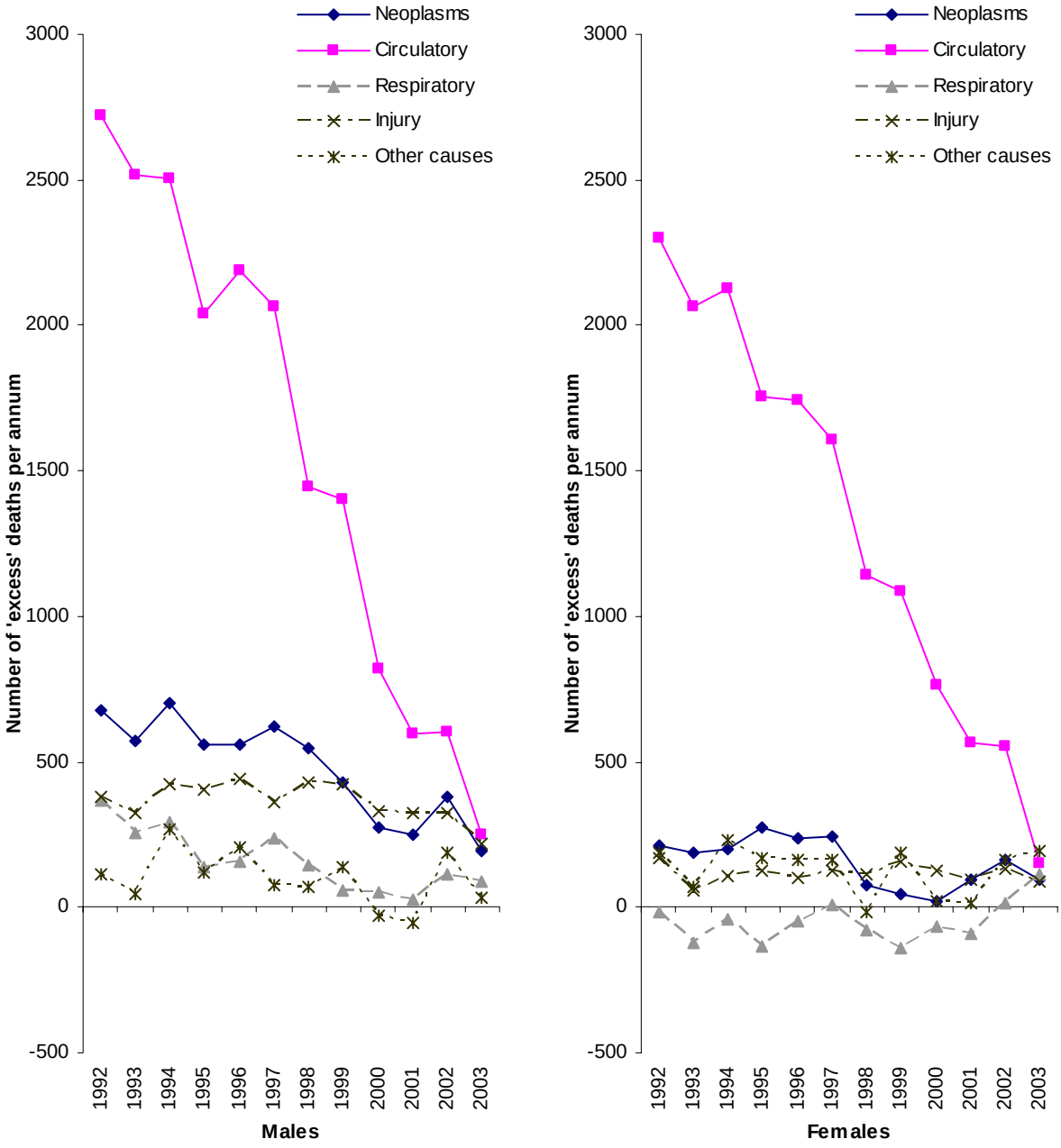
rates in these areas. For example, in these areas, injury has become one of the most important causes of 'excess' death for males, particularly in Very Remote areas; along with 'other' causes, injury is the principal cause of the higher death rates in such areas. In less remote areas, for example in Inner and Outer Regional areas, injury, neoplasms and circulatory diseases appeared, in 2003, to be roughly equally important as contributors to the higher death rates of males.



Note: 'Excess' deaths calculated using Major Cities rates in the period 2001–2003 as the standard.

Source: AIHW National Mortality Database.

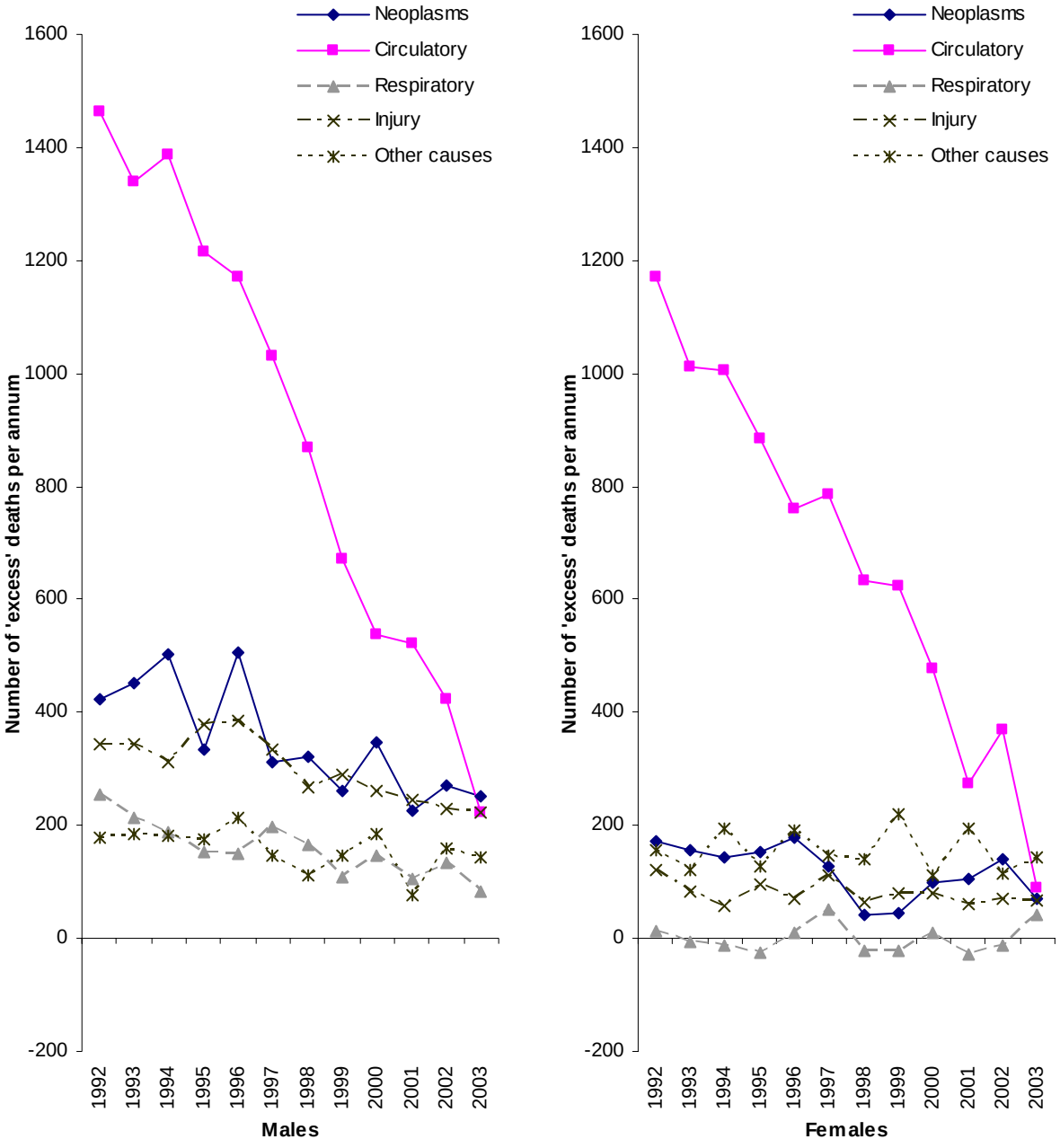
Figure 5: The contribution of each broad cause of death to the overall decline in mortality in Major Cities, as expressed by the annual number of 'excess' deaths attributable to each cause, in each year, 1992–2003



Note: 'Excess' deaths calculated using Major Cities rates in the period 2001–2003 as the standard.

Source: AIHW National Mortality Database.

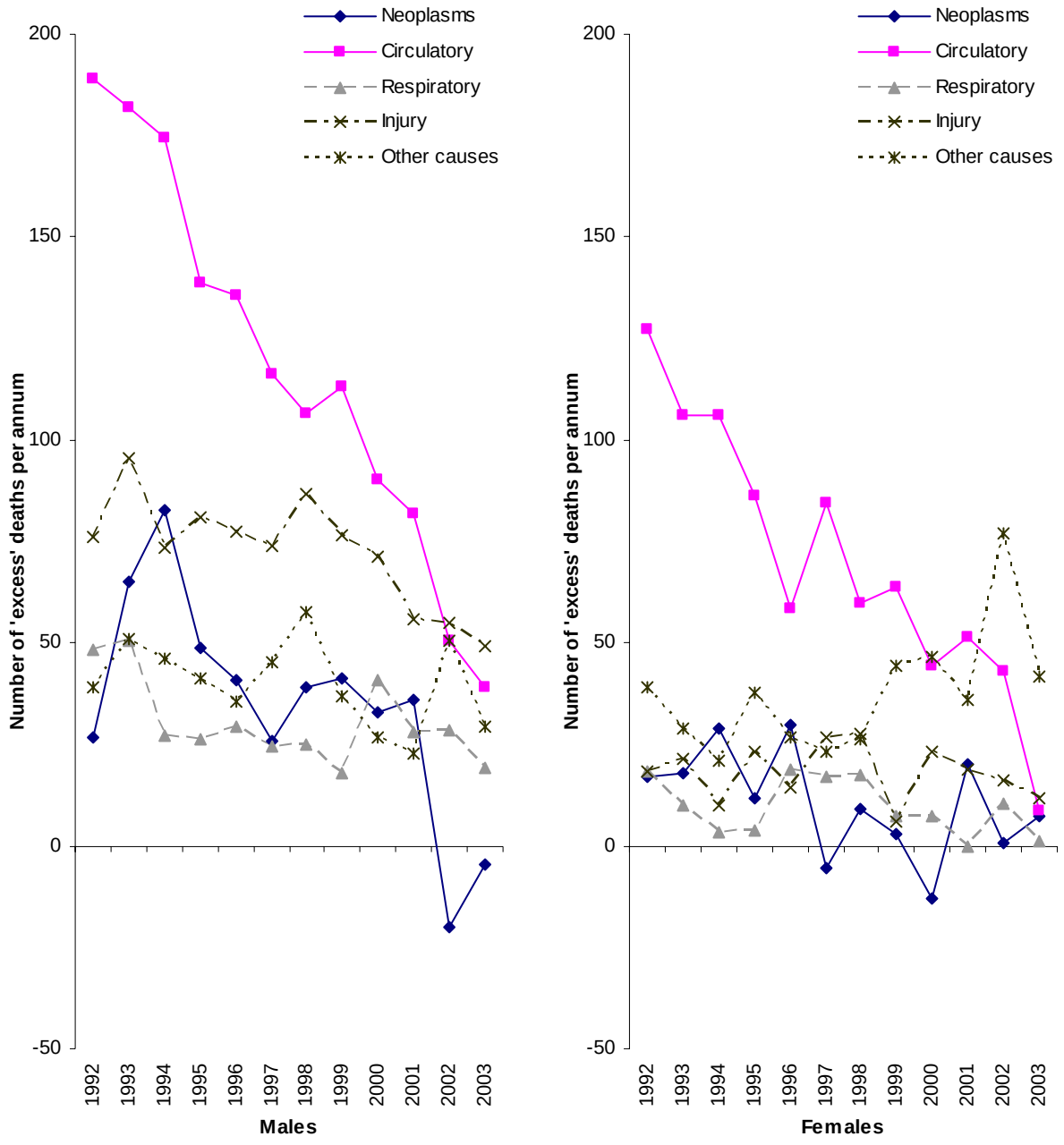
Figure 6: The contribution of each broad cause of death to the overall decline in mortality in Inner Regional areas, as expressed by the annual number of 'excess' deaths attributable to each cause, in each year, 1992–2003



Note: 'Excess' deaths calculated using Major Cities rates in the period 2001–2003 as the standard.

Source: AIHW National Mortality Database.

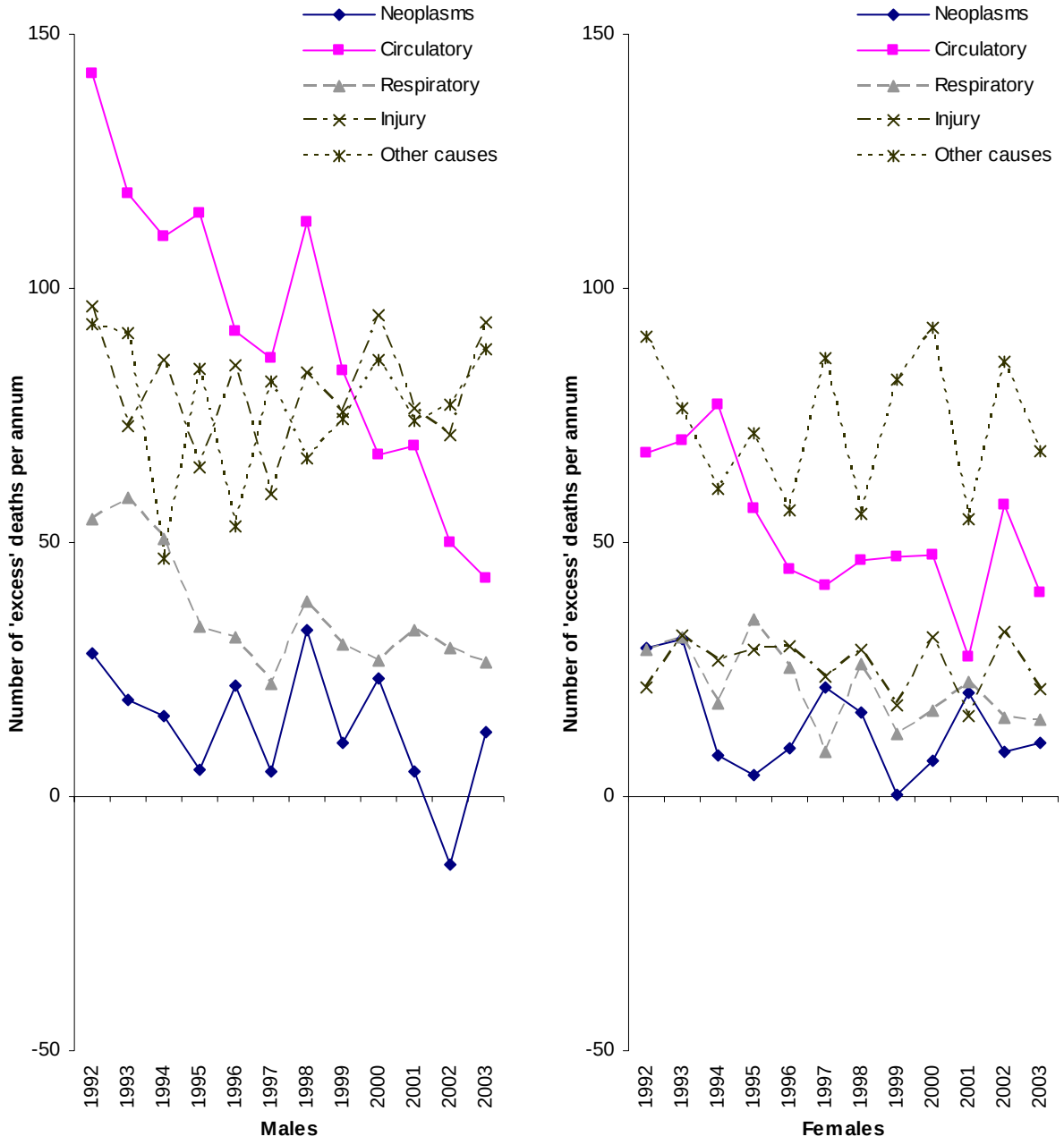
Figure 7: The contribution of each broad cause of death to the overall decline in mortality in Outer Regional areas, as expressed by the annual number of 'excess' deaths attributable to each cause, in each year, 1992–2003



Note: 'Excess' deaths calculated using Major Cities rates in the period 2001–2003 as the standard.

Source: AIHW National Mortality Database.

Figure 8: The contribution of each broad cause of death to the overall decline in mortality in Remote areas, as expressed by the annual number of 'excess' deaths attributable to each cause, in each year, 1992–2003



Note: 'Excess' deaths calculated using Major Cities rates in the period 2001–2003 as the standard.

Source: AIHW National Mortality Database.

Figure 9: The contribution of each broad cause of death to the overall decline in mortality in Very Remote areas, as expressed by the annual number of 'excess' deaths attributable to each cause, in each year, 1992–2003

Neoplasms

All neoplasms

This group includes all cancers and benign neoplasms. This includes, for example, lung, colorectal, breast, cervical and prostate cancers, as well as melanoma, lymphomas and non-malignant neoplasms.

ICD-9 and ICD-10 codes used here are, respectively, 140–239 and C00–D48.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 1.00.

For perspective, Table 5 describes the number of deaths in each area in 2003.

Table 5: Number of deaths due to neoplasms in 2003

	MC	IR	OR	R	VR	Total
Males	13,235	5,202	2,606	292	131	21,466
Females	10,933	3,896	1,749	195	83	16,856

Note: 70 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from these causes in Major Cities declined significantly: by 2.2 points p.a. for males and 1.2 points p.a. for females (Table 6, Figure 10 and Figure 11).

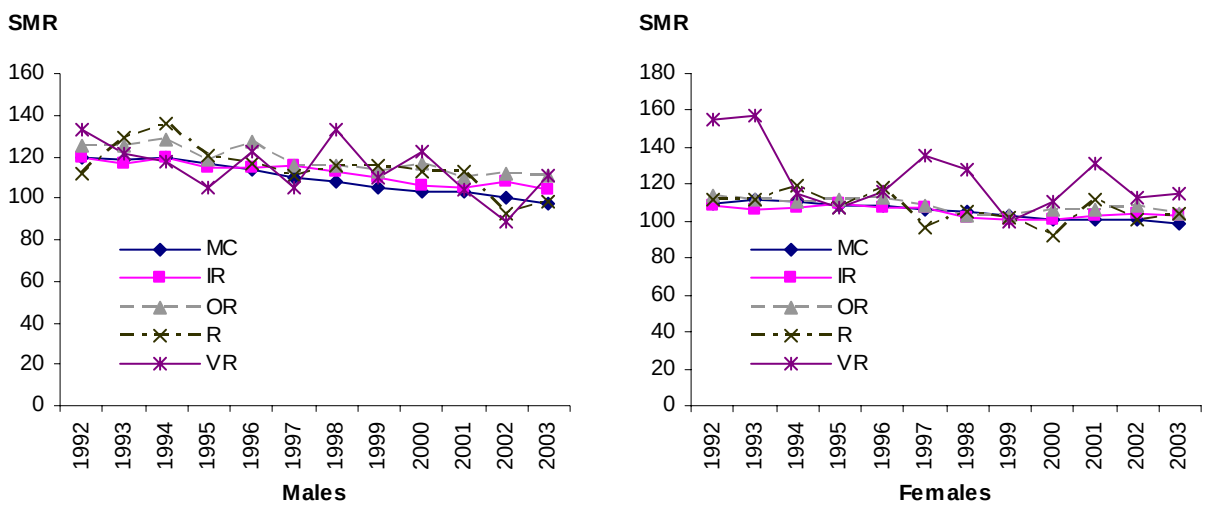
Rates in Inner and Outer Regional areas also declined, but at a lower rate than in Major Cities—at about 1.5 points p.a. for males and 0.7 points p.a. for females (see Table 6).

Rates in remote areas declined for males, and appeared to decline for females, at rates that were not significantly different from those in Major Cities.

Table 6: Annual change in SMRs, neoplasms, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–2.2	***–1.4**	***–1.6**	–2.5	–2.0	–1.2	***–0.6**	–0.8	–1.2	–2.2

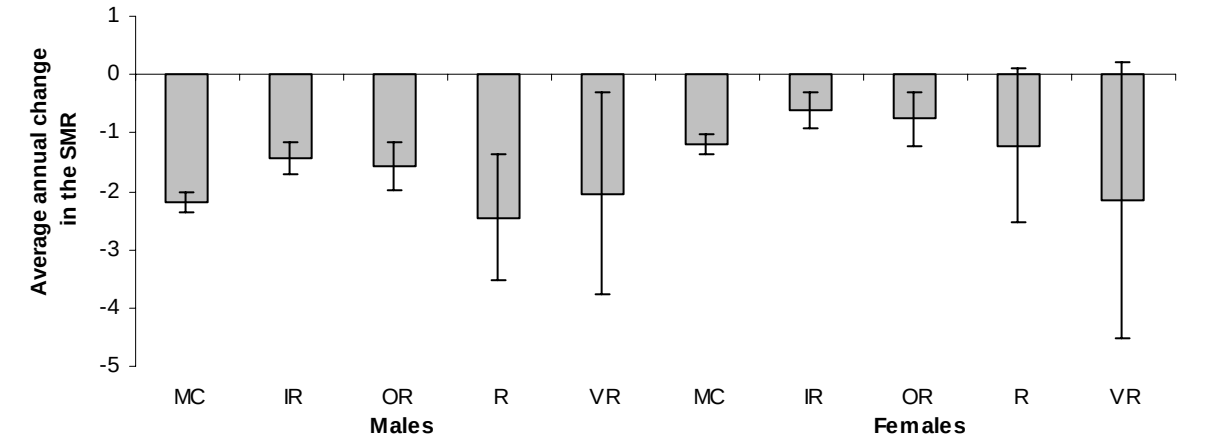
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 10: Trends in SMRs, neoplasms, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 11: Annual change in the ratio of observed to expected deaths due to neoplasms, 1992–2003

Lung cancer

Lung cancer is a chronic disease accounting for about 5% of all deaths in Australia each year. The main risk factors are tobacco smoking and exposure to environmental tobacco smoke, asbestos or radon (AIHW 2002). Prevalence of smoking is known to be higher in regional and remote areas.

ICD-9 and ICD-10 codes used here are, respectively, 162; and C33 and C34.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.97.

For perspective, Table 7 describes the number of deaths in each area in 2003.

Table 7: Number of deaths due to lung cancer in 2003

	MC	IR	OR	R	VR	Total
Males	2,759	1,091	557	60	35	4,502
Females	1,623	555	249	26	10	2,463

Note: 11 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from this cause for males from Major Cities declined significantly by about 3 points p.a., while those for females increased significantly by about 1 point p.a. (Table 8, Figure 12 and Figure 13).

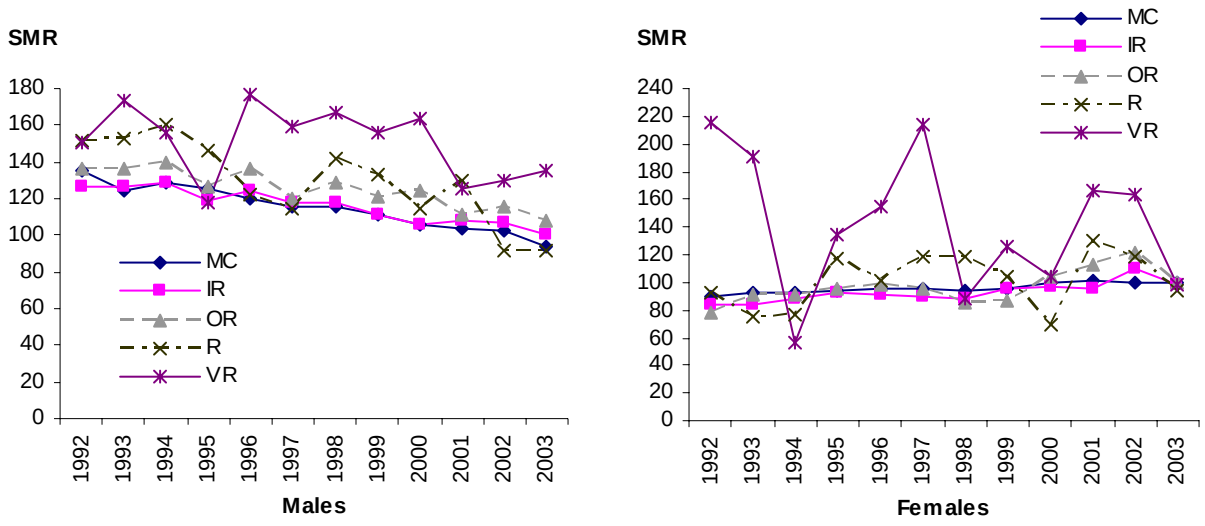
Rates of decrease for males were also about 3 points p.a. in regional areas, and, although relatively small numbers introduced some volatility in Remote and Very Remote areas, at about the same rate as in Major Cities in remote areas generally.

Rates increased for females in regional areas by about 2 points p.a. over the period, but this increase was not significantly different (at the 95% level of confidence) from the 1 point p.a. increase for females living in Major Cities (although the difference would have been considered significant at a slightly lower level of confidence). There was no significant change in rates for females from Remote and Very Remote areas, or for these remote areas when aggregated.

Table 8: Annual change in SMRs, lung cancer, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–3.4	–2.6	–2.6	–5.6	–2.1	0.9	1.7	2.3	1.6	–0.4

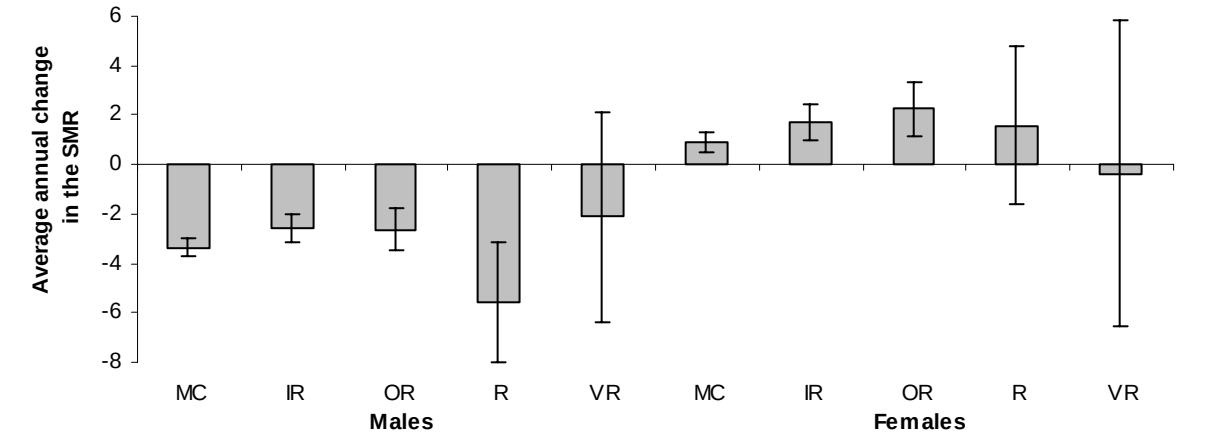
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 12: Trends in SMRs, lung cancer, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 13: Annual change in the ratio of observed to expected deaths due to lung cancer, 1992–2003

Colorectal cancer

Colorectal cancer is a serious form of cancer, but with substantially better survival rates if detected early. Age and having a family history of colorectal cancer are major predisposing factors, while lifestyle factors include diet, physical inactivity and excess weight. Consumption of wholegrain cereal fibres, fruit and vegetables, a reduced fat intake and a moderate calorific intake tend to protect against the disease (AIHW 2002).

ICD-9 and ICD-10 codes used here are, respectively 153 and 154, and C18–C21.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.98.

For perspective, Table 9 describes the number of deaths in each area in 2003.

Table 9: Number of deaths due to colorectal cancer in 2003

	MC	IR	OR	R	VR	Total
Males	1,526	578	275	28	10	2,417
Females	1,307	481	210	22	6	2,026

Note: 4 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from this cause in Major Cities declined significantly by 3 points p.a. for males and 2.5 points p.a. for females (Table 10, Figure 14 and Figure 15).

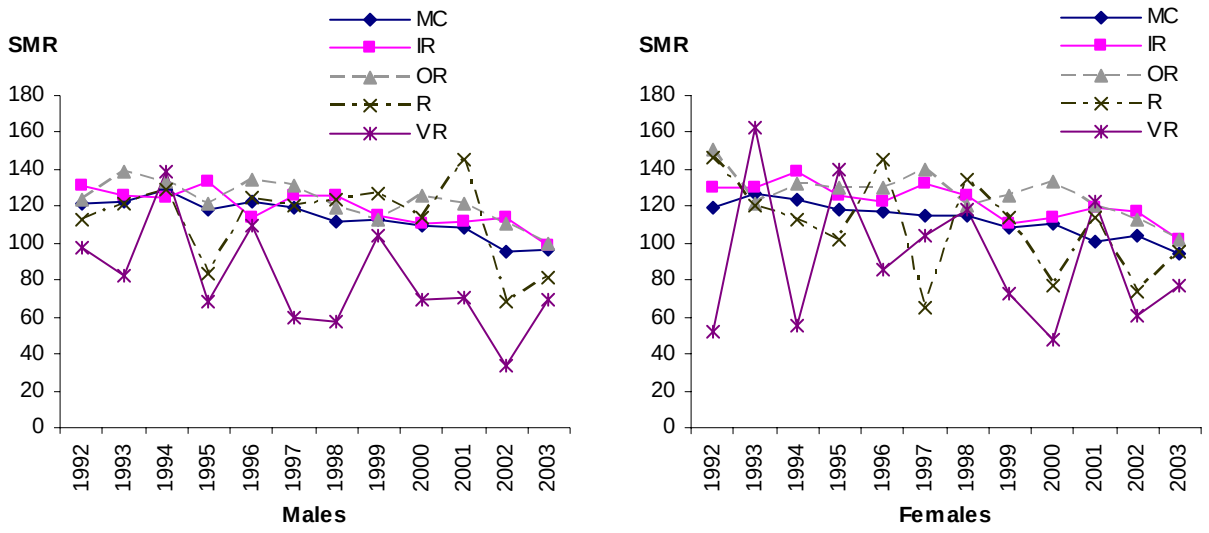
Death rates in regional areas declined for both males and females at a rate similar to those in Major Cities.

The decrease in remote areas was also similar to that in Major Cities, particularly when the decline was calculated for the total remote (aggregated Remote plus Very Remote) area.

Table 10: Annual change in SMRs, colorectal cancer, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–2.8	–2.4	–2.5	–2.9	–4.5	–2.5	–2.4	–2.6	–3.7	–0.8

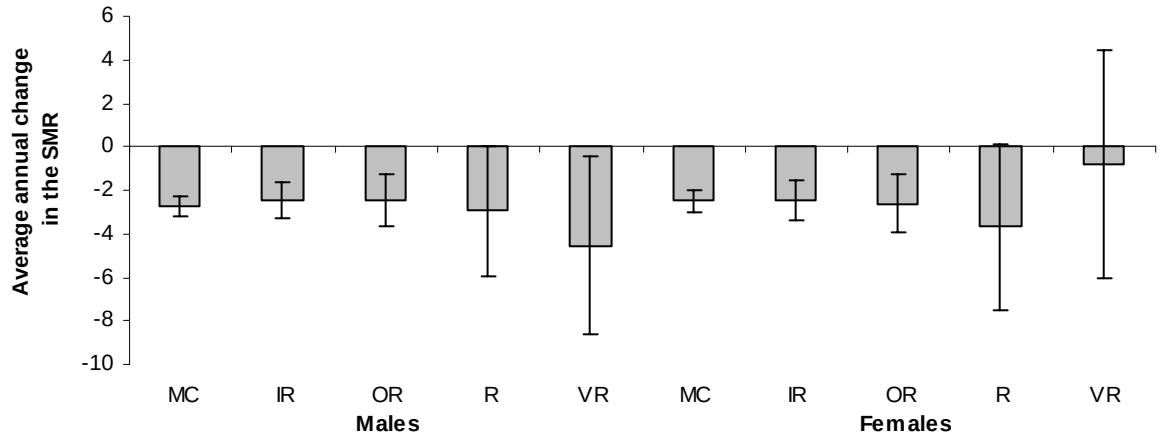
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 14: Trends in SMRs, colorectal cancer, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 15: Annual change in the ratio of observed to expected deaths due to colorectal cancer, 1992–2003

Breast cancer

Breast cancer is the leading cause of cancer death for women. A small number of men die from breast cancer. Females are at greater risk than men, and the overall risk increases with age. Early detection (through self-examination and regular mammograms) enhances treatment options and survival (The Cancer Council NSW 2005a).

ICD-9 and ICD-10 codes used here are, respectively 174 and 175, and C50.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.98.

For perspective, Table 11 describes the number of deaths in each area in 2003.

Table 11: Number of deaths due to breast cancer in 2003

	MC	IR	OR	R	VR	Total
Males	7	<3	<3	<3	<3	9
Females	1,744	616	305	24	16	2,705

Note: 8 records were missing details of geographic location and have been lost from the analysis.

Comparison of rates across time has been restricted to females because of the relatively small number of deaths of males.

Between 1992 and 2003, death rates from this cause for females in Major Cities declined significantly by 2.5 points p.a. (Table 12, Figure 16 and Figure 17).

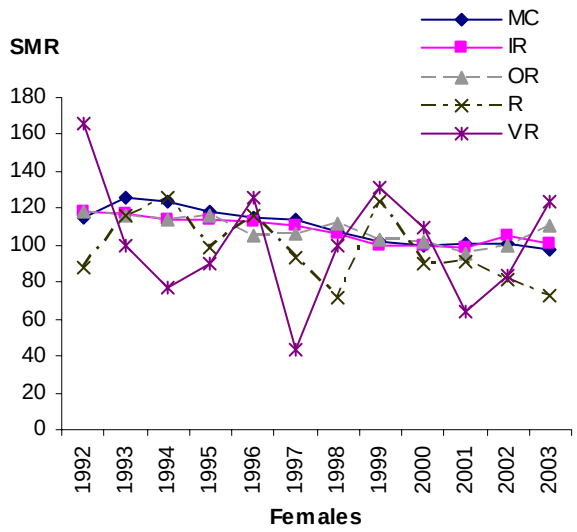
The decline in death rates in regional areas was not significantly different from that in Major Cities. Even when combining data for Inner Regional and Outer Regional areas, the rate of decline of 1.7 points p.a. was not significantly different from that in Major Cities (2.5 points p.a.).

In Remote and Very Remote areas, the decrease was not significantly different from zero points (in other words, it is possible that there has been no change in the rate of death). Even when data for Remote and Very Remote areas are combined, the calculated rate of decline is not significantly different from zero. In other words, at the 95% level of confidence it is uncertain that rates have declined at all; however, it is also unclear whether the rate of decline is significantly different from that in Major Cities.

Table 12: Annual change in SMRs, breast cancer, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	n.p.	n.p.	n.p.	n.p.	n.p.	–2.5	–1.8	–1.5	–2.6	–0.8

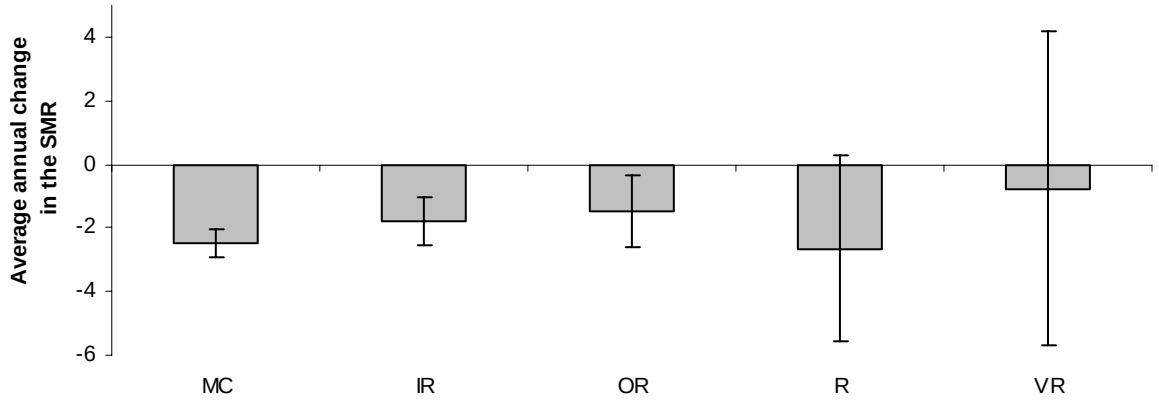
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 16: Trends in SMRs, breast cancer, females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 17: Annual change in the ratio of observed to expected deaths due to breast cancer, females, 1992–2003

Cervical cancer

Cervical cancer is not one of the major forms of cancer, but its significance is enhanced by the fact that its precancerous phase can be detected by Pap smear testing, with a very high rate of success in then preventing onset of the cancer. Personal risk is increased by infection with the human papilloma virus, exposure to several sexual partners and smoking, with the probability of onset increasing with age. The risk of developing cervical cancer is substantially greater for women who are not screened regularly (two-yearly is recommended for 'at risk' age groups). (The Cancer Council NSW 2005b).

ICD-9 and ICD-10 codes used here are, respectively, 180 and C53.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.98.

For perspective, Table 13 describes the number of deaths in each area in 2003.

Table 13: Number of deaths due to cervical cancer in 2003

	MC	IR	OR	R	VR	Total
Males	. .	. .	. .	. .	. .	. .
Females	147	48	37	4	<3	237

Note: 1 record was missing details of geographic location and has been lost from the analysis.

Between 1992 and 2003, death rates from this cause for females in Major Cities declined significantly by 7.5 points p.a. (Table 14, Figure 18 and Figure 19).

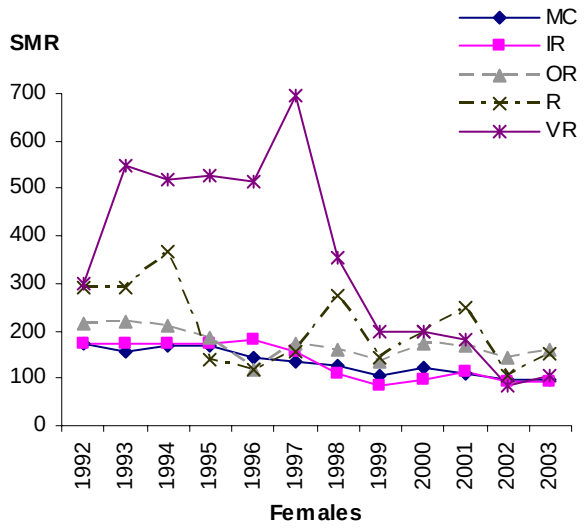
The decline in death rates in regional areas was not significantly different from that in Major Cities.

In Remote areas the decrease was not significantly different from 0 points p.a., while in Very Remote areas, the rate of death due to cervical cancer declined by about 40 points each year (which was also significantly greater than the decline in Major Cities). The overall decline (21 points p.a.) in remote (combined Remote and Very Remote) areas was significantly different from zero, but was not significantly different from the rate of decline (7.5 points p.a.) in Major Cities at the 95% level of confidence (although the difference would be significant at a slightly lower level of confidence).

Table 14: Annual change in SMRs, cervical cancer, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	. .	. .	. .	. .	. .	–7.5	–9.1	–4.6	–9.4	***–40.6**

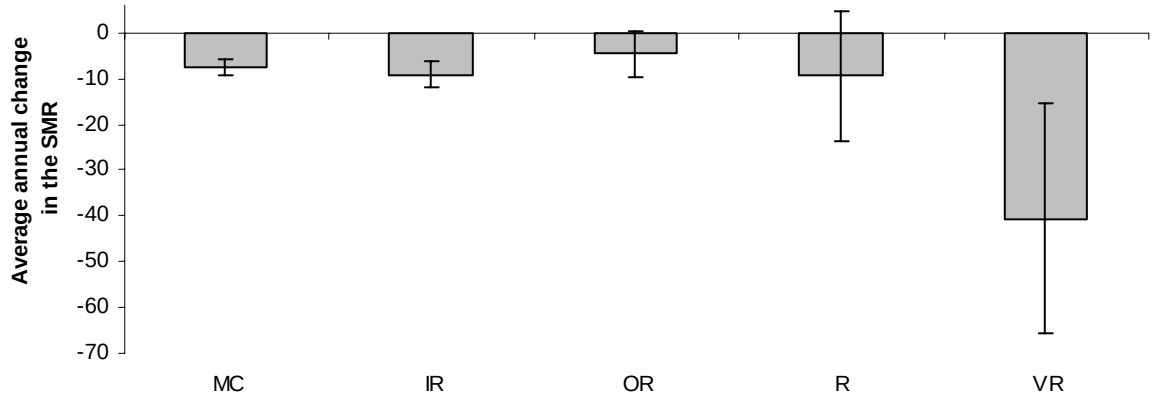
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 18: Trends in SMRs, cervical cancer, females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 19: Annual change in the ratio of observed to expected deaths due to cervical cancer, females, 1992–2003

Prostate cancer

For men, prostate cancer is the second largest cancer-related cause of death after lung cancer. Risk for individuals increases with age and is greater for those with a family history of the disease. It is not currently clear that finding and treating prostate cancer in symptomless men reduces the death rate due to this cause (The Cancer Council NSW 2005c).

ICD-9 and ICD-10 codes used here are, respectively, 185 and C61.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.98.

For perspective, Table 15 describes the number of deaths in each area in 2003.

Table 15: Number of deaths due to prostate cancer in 2003

	MC	IR	OR	R	VR	Total
Males	1,690	745	360	37	9	2,841
Females	. .	. .	. .	. .	. .	. .

Note: 1 record was missing details of geographic location and has been lost from the analysis.

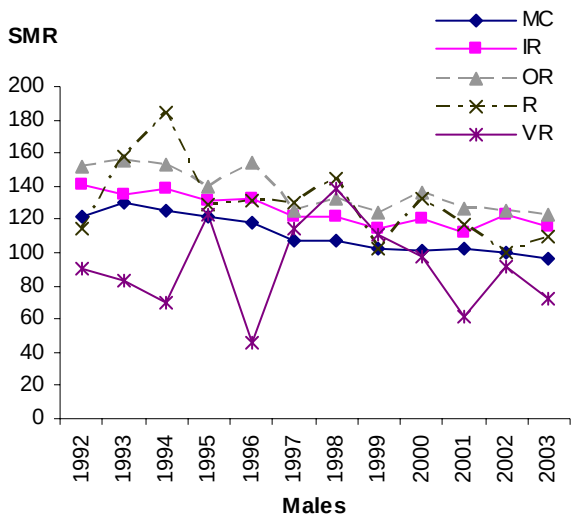
Between 1992 and 2003, death rates from this cause for males in Major Cities declined significantly by 3 points p.a. (Table 16, Figure 20 and Figure 21).

The decline in death rates in regional and Remote areas was not significantly different from that in Major Cities. In Very Remote areas, the rate of death due to prostate cancer did not appear to change.

Table 16: Annual change in SMRs, prostate cancer, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–2.8	–2.3	–3.0	–3.6	–0.1	. .	. .	. .	. .	. .

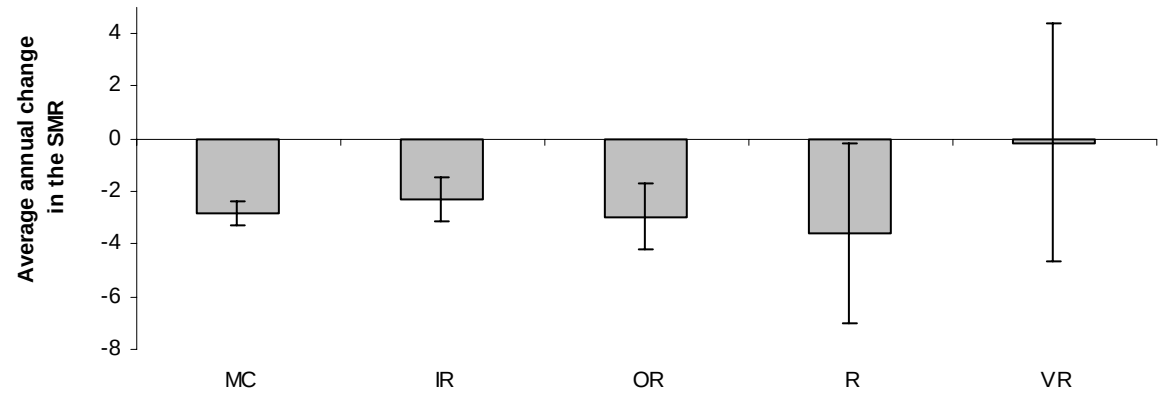
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 20: Trends in SMRs, prostate cancer, males, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 21: Annual change in the ratio of observed to expected deaths due to prostate cancer, males, 1992–2003

Melanoma

Incidence of, and mortality due to, melanoma in Australia is increasing (AIHW & AACR 2004).

The main risk factors for development of melanoma are overexposure to ultraviolet radiation, fair skin and age (The Cancer Council NSW 2005d).

ICD-9 and ICD-10 codes used here are, respectively, 172 and C43.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.98.

For perspective, Table 17 describes the number of deaths in each area in 2003.

Table 17: Number of deaths due to melanoma in 2003

	MC	IR	OR	R	VR	Total
Males	461	186	97	12	<3	758
Females	247	93	30	<3	<3	372

Note: 2 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from this cause for males and females in Major Cities appeared to decrease slightly, but not significantly (Table 18, Figure 22 and Figure 23).

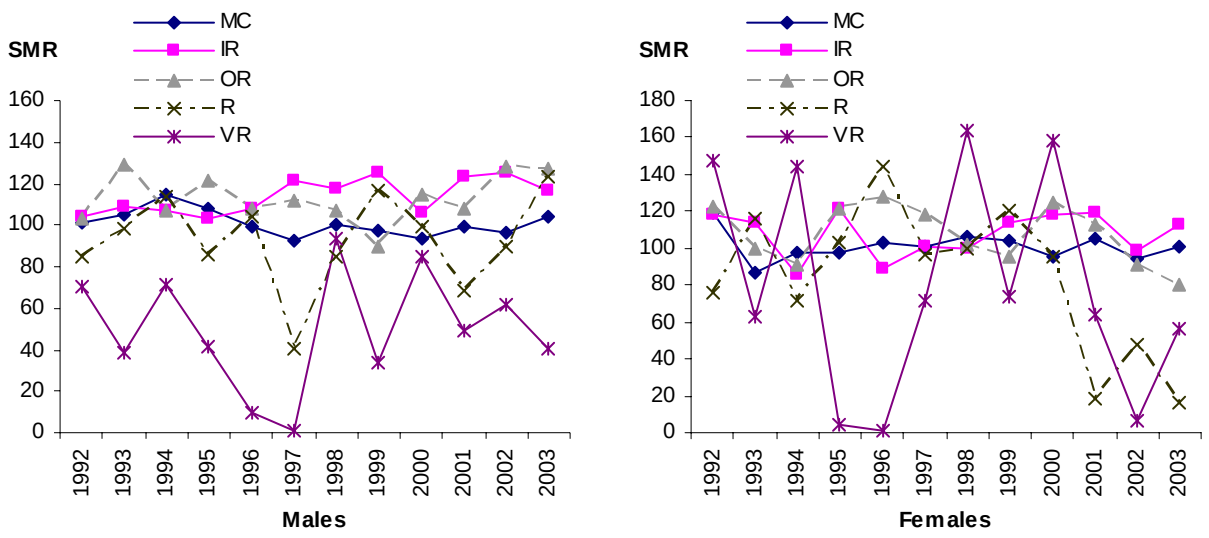
For males in Inner Regional areas, rates appeared to increase by 2 points p.a., while for males in Outer Regional, Remote and Very Remote areas rates appeared to increase slightly, but not significantly.

For females, there was a non-significant increase of 1 point p.a. in Inner Regional areas and a non-significant decrease of 2 points p.a. in Outer Regional areas. Overall in remote areas, rates declined by about 8 points p.a.

Table 18: Annual change in SMRs, melanoma, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–0.7	1.6	0.7	0.6	2.6	–0.1	0.6	–1.9	***–8.7**	1.8

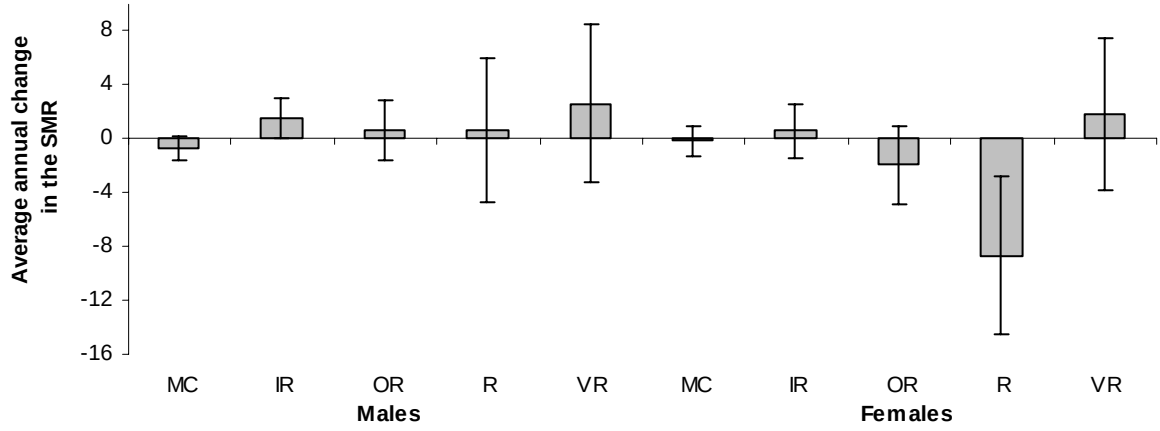
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 22: Trends in SMRs, melanoma, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 23: Annual change in the ratio of observed to expected deaths due to melanoma, 1992–2003

‘Other’ neoplasms

This group includes all cancers and other neoplasms not already described in previous sections (that is, all cancers and other neoplasms except melanoma and lung, colorectal, breast, cervical and prostate cancer).

ICD-9 and ICD-10 codes used here are, respectively, 140–239 and C00–D48 (excluding those specific cancers already described in this report).

Reporting here is for the period 1992–2003. The numbers of observed deaths were calculated by subtraction of the observed number for each of the reported specific neoplasms from the total observed number due to all neoplasms.

For perspective, Table 19 describes the number of deaths in each area in 2003.

Table 19: Number of deaths due to ‘other’ neoplasms in 2003

	MC	IR	OR	R	VR	Total
Males	6,792	2,600	1,316	154	76	10,938
Females	5,866	2,103	919	119	47	9,054

Note: 43 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from these causes for males and females in Major Cities declined, respectively, by 1.5 points and 1.0 point p.a. (Table 20, Figure 24 and Figure 25).

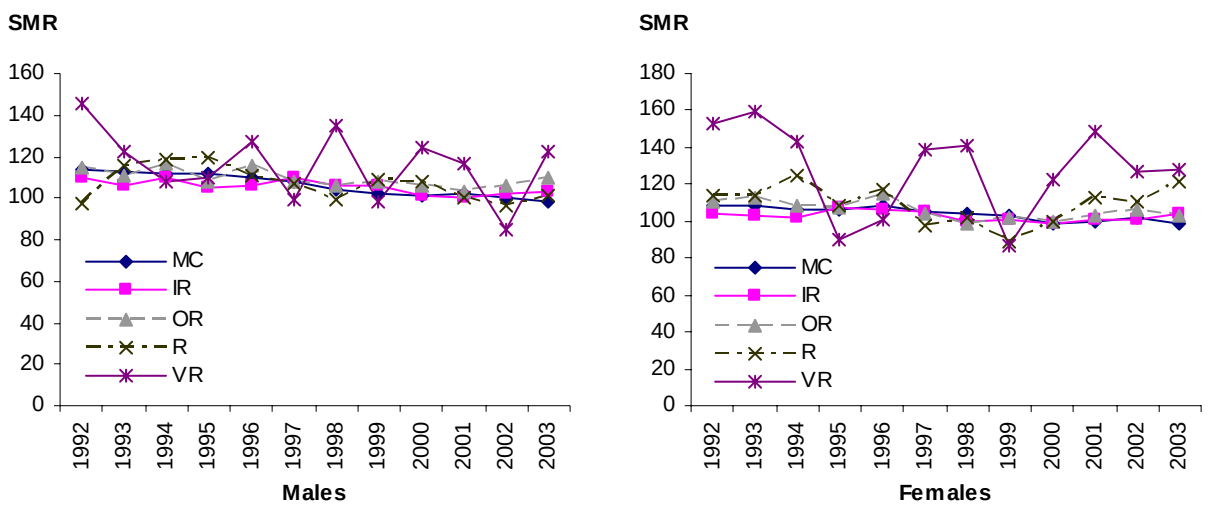
Rates for males and females in Inner Regional areas declined at a lower rate—0.7 points and 0.3 points p.a., respectively.

The decline for males and females in Outer Regional and remote areas was not significantly different from the decline in Major Cities.

Table 20: Annual change in SMRs, ‘other’ neoplasms, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–1.5	***–0.7**	–0.8	–1.1	–1.8	–1.0	***–0.3**	–0.9	–0.4	–0.6

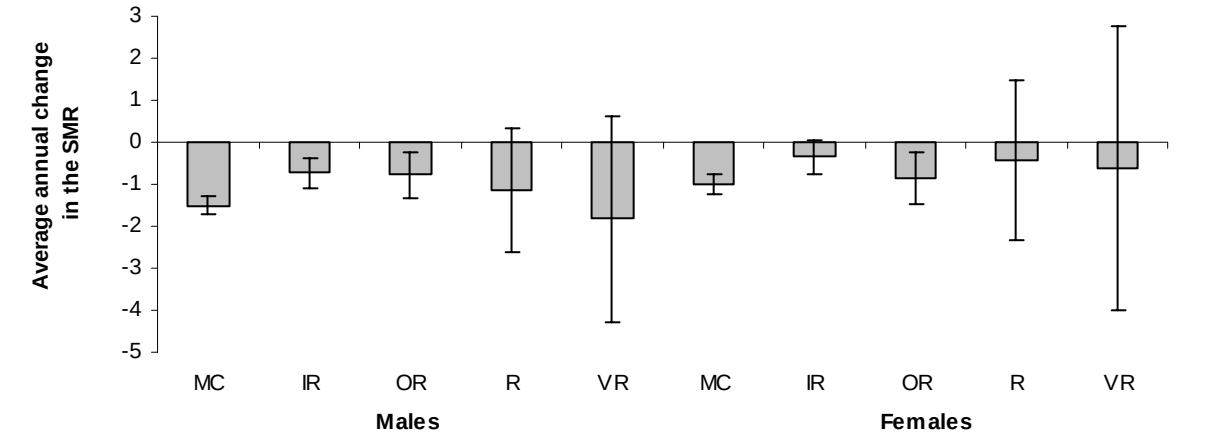
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 24: Trends in SMRs, 'other' neoplasms, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 25: Annual change in the ratio of observed to expected deaths due to 'other' neoplasms, 1992–2003

Circulatory diseases

All circulatory diseases

This group includes all diseases of the heart and circulatory system. It includes coronary heart disease, cerebrovascular disease (including stroke), heart failure, peripheral vascular disease and rheumatic heart disease. Broad contributing causes include tobacco smoking, insufficient physical activity, poor nutrition (including high fat intake), overweight, high blood pressure, high blood cholesterol and diabetes (AIHW 2004b).

ICD-9 and ICD-10 codes used here are, respectively, 390–459 and I00–I99.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 1.00.

For perspective, Table 21 describes the number of deaths in each area in 2003.

Table 21: Number of deaths due to circulatory diseases in 2003

	MC	IR	OR	R	VR	Total
Males	14,342	5,709	2,732	343	161	23,287
Females	16,563	5,900	2,559	252	123	25,397

Note: 151 records were missing details of geographic location and have been lost from the analysis.

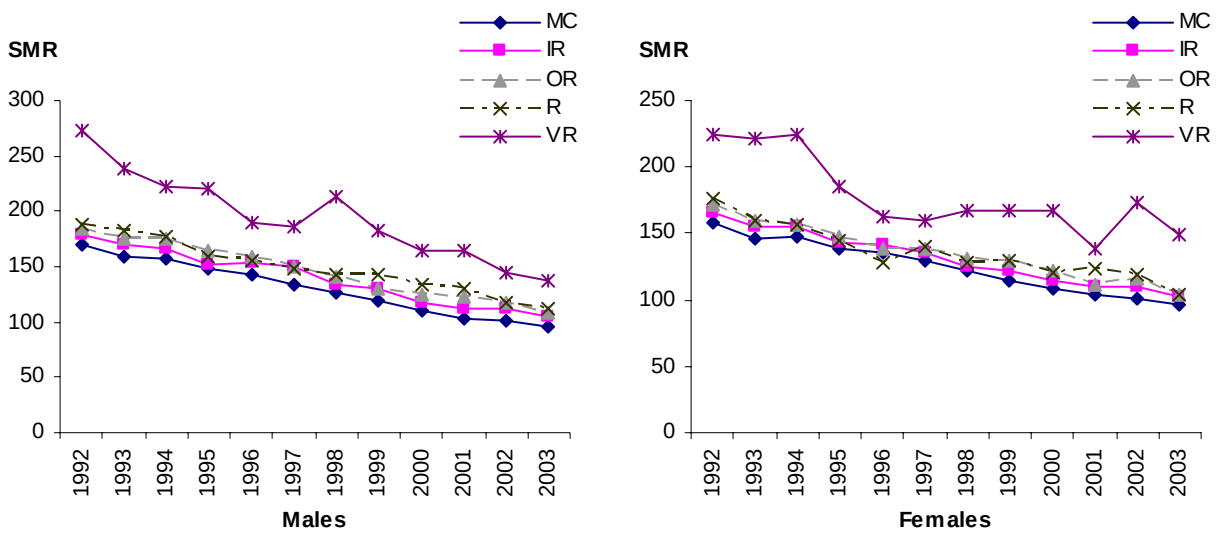
Between 1992 and 2003, death rates from these causes in Major Cities declined significantly by 7 points p.a. for males and 6 points p.a. for females (Table 22, Figure 26 and Figure 27).

Rates of decrease in regional and remote areas for both males and females were similar in almost all cases to rates in Major Cities. The rate of decrease was significantly greater (at 10 points p.a.) for males in Very Remote areas than for those in Major Cities.

Table 22: Annual change in SMRs, circulatory diseases, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–6.9	–6.9	–7.0	–6.6	***–10.3**	–5.6	–5.5	–5.6	–5.1	–6.0

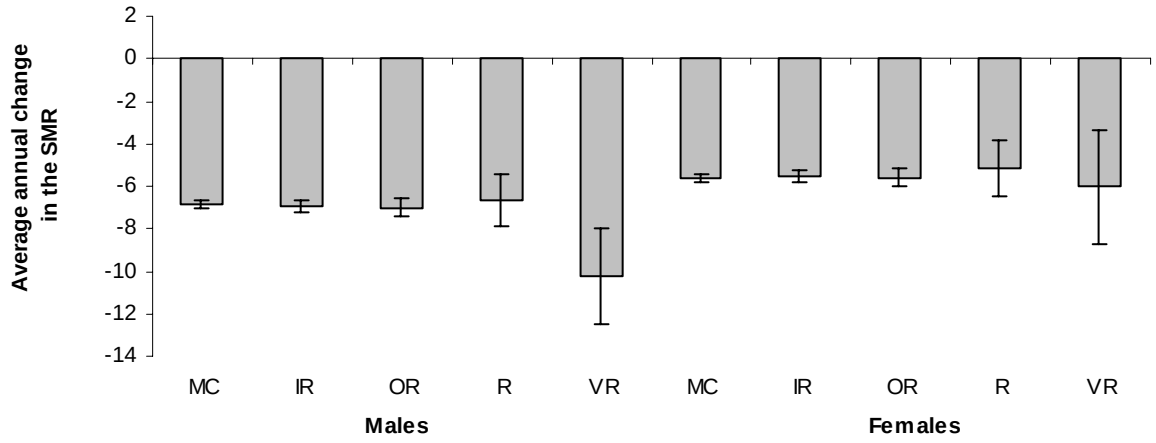
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 26: Trends in SMRs, circulatory diseases, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 27: Annual change in the ratio of observed to expected deaths due to circulatory diseases, 1992–2003

Cerebrovascular disease

Cerebrovascular disease damages parts of the brain when blood vessels to the brain either become blocked or bleed. The resulting damage can then impair movement or communication, or, in more serious cases, result in death. Tobacco smoking, high alcohol consumption, overweight, insufficient physical activity, diabetes and transient ischaemic attack are major risk factors. Contributing biomedical risk factors include high blood pressure and high blood cholesterol (AIHW 2004c).

ICD-9 and ICD-10 codes used here are, respectively, 430–438 and I60–I69.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.97.

For perspective, Table 23 describes the number of deaths in each area in 2003.

Table 23: Number of deaths due to cerebrovascular disease in 2003

	MC	IR	OR	R	VR	Total
Males	3,090	1,139	505	64	23	4,821
Females	4,939	1,678	684	65	27	7,393

Note: 26 records were missing details of geographic location and have been lost from the analysis.

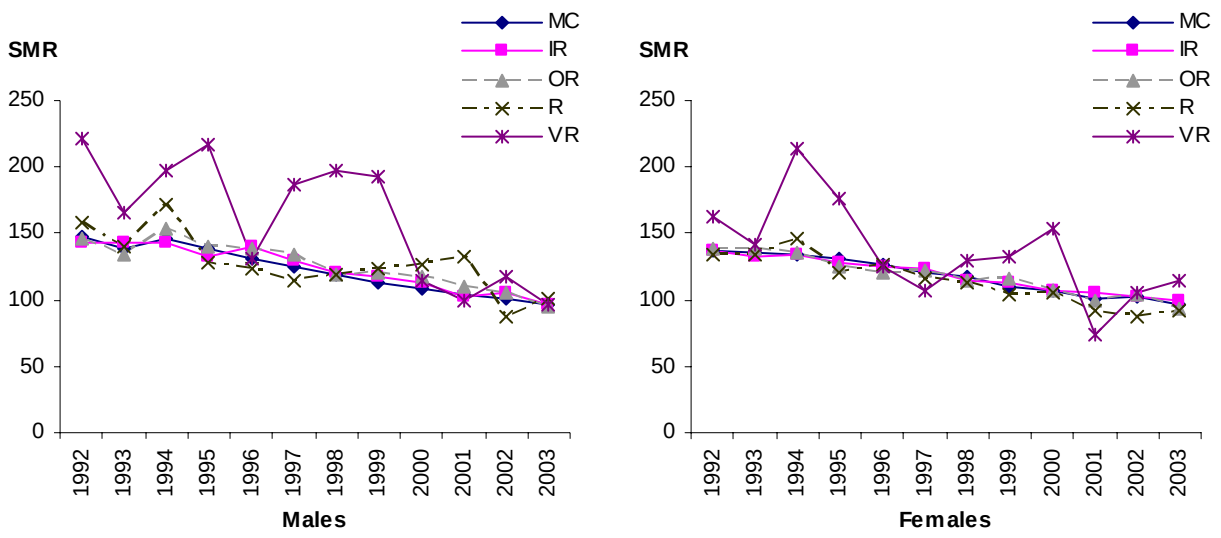
Between 1992 and 2003, death rates from this cause in Major Cities declined significantly by 5 points p.a. for males and 4 points p.a. for females (Table 24, Figure 28 and Figure 29).

Rates in regional and remote areas declined at about the same rate, except in Very Remote areas where rates for males declined by about 10 points p.a.

Table 24: Annual change in SMRs, cerebrovascular disease, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–4.9	–4.7	–4.7	–4.8	***–10.1**	–4.0	–3.7	–4.1	–4.9	–6.4

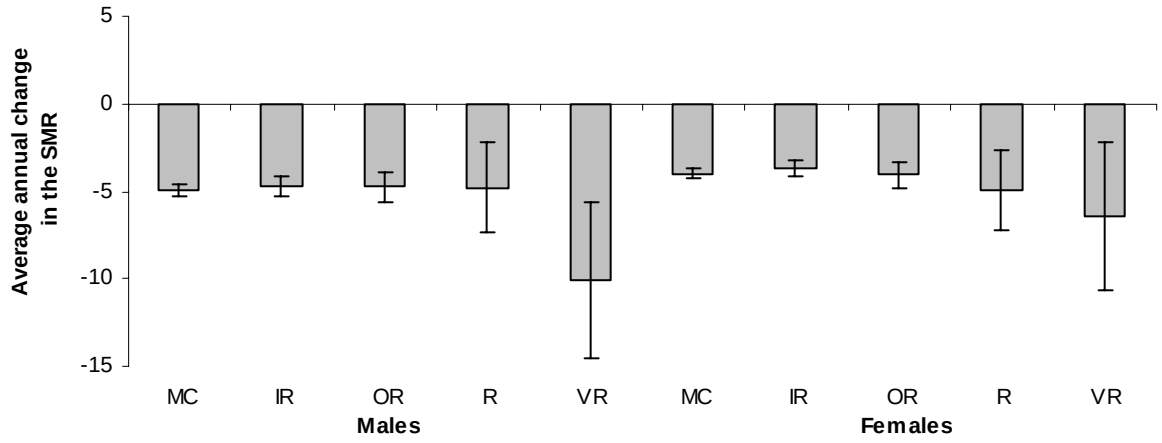
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 28: Trends in SMRs, cerebrovascular disease, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 29: Annual change in the ratio of observed to expected deaths due to cerebrovascular disease, 1992–2003

Coronary heart disease

Coronary heart disease (either as heart attack or as angina) is the largest single cause of premature death in Australia. Heart attack (acute myocardial infarction) occurs when a coronary artery supplying the heart becomes blocked, resulting in the death of heart muscle downstream. Angina is characterised by chest pain associated with insufficient blood flow in the coronary artery; it causes substantial disability and increases the risk of heart attack. Older people and males are at higher risk from the disease. As is the case for stroke, tobacco smoking, overweight, insufficient physical activity, poor nutrition and diabetes are major risk factors. Contributing biomedical risk factors include high blood pressure and high blood cholesterol (AIHW 2004c).

ICD-9 and ICD-10 codes used here are, respectively, 410–414 and I20–I25.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 1.01.

For perspective, Table 25 describes the number of deaths in each area in 2003.

Table 25: Number of deaths due to coronary heart disease in 2003

	MC	IR	OR	R	VR	Total
Males	8,268	3,330	1,576	197	82	13,453
Females	7,781	2,753	1,193	106	50	11,883

Note: 103 records were missing details of geographic location and have been lost from the analysis.

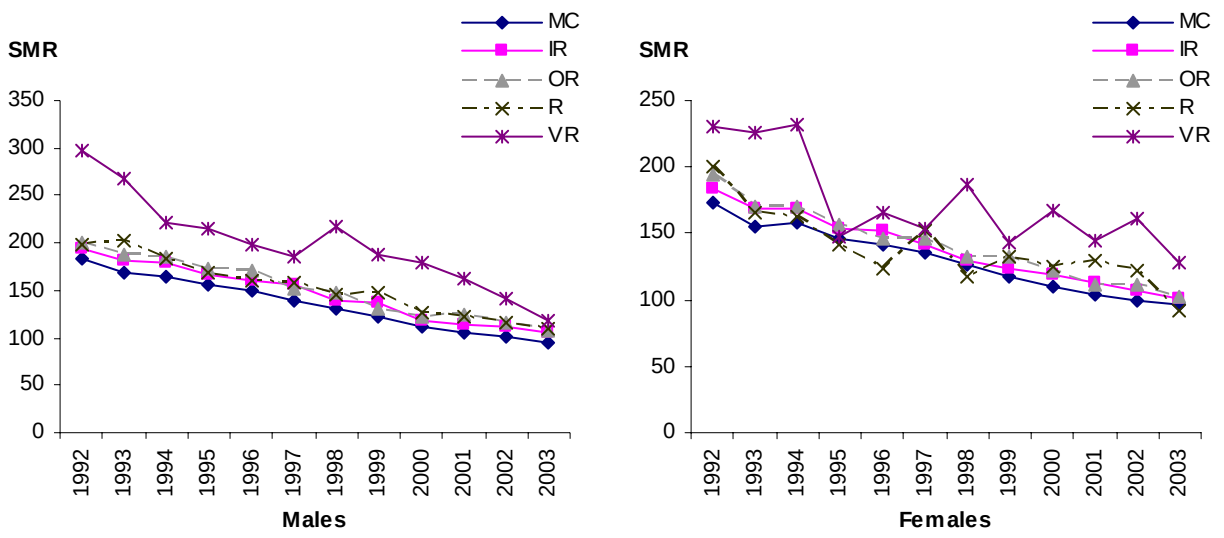
Between 1992 and 2003, death rates from this cause in Major Cities declined significantly by 8 points p.a. for males and 7 points p.a. for females (Table 26, Figure 30 and Figure 31).

Rates in regional and remote areas declined at about the same rate, except in Very Remote areas where rates for males declined by about 13 points p.a.

Table 26: Annual change in SMRs, coronary heart disease, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–7.9	–8.3	–8.5	–8.4	***–12.6**	–6.9	–7.2	–7.4	–6.3	–6.8

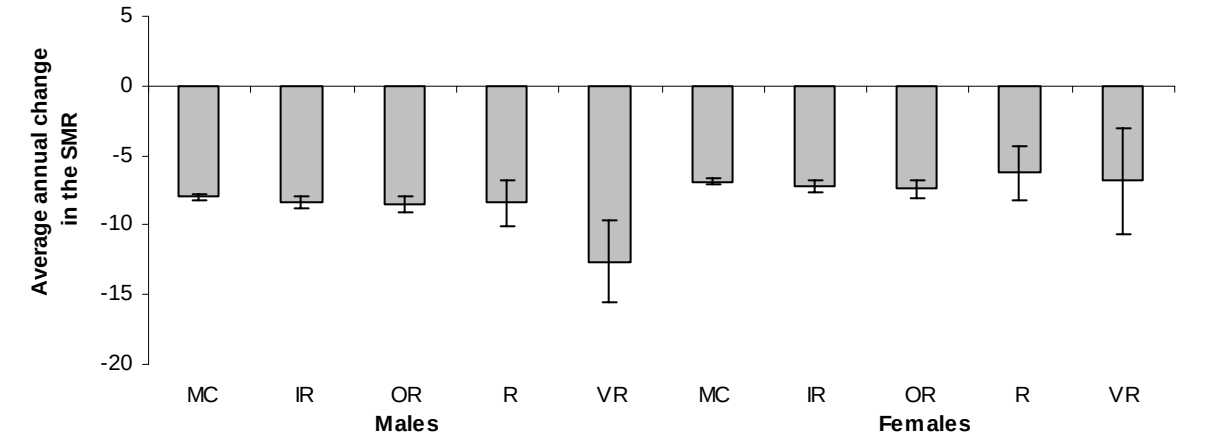
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 30: Trends in SMRs, coronary heart disease, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 31: Annual change in the ratio of observed to expected deaths due to coronary heart disease, 1992–2003

‘Other’ circulatory diseases

This group includes all diseases of the circulatory system not already described in this report.

ICD-9 and ICD-10 codes used here are, respectively, 390–459 and I00–I99 (excluding cerebrovascular disease and coronary heart disease).

Reporting here is for the period 1992–2003. The number of deaths has been calculated as the difference between the number of deaths due to all circulatory diseases and the number due to cerebrovascular disease and coronary heart disease.

For perspective, Table 27 describes the number of deaths in each area in 2003.

Table 27: Number of deaths due to ‘other’ circulatory diseases in 2003

	MC	IR	OR	R	VR	Total
Males	2,983	1,239	651	82	56	5,011
Females	3,842	1,470	682	81	45	6,120

Note: 25 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from these causes in Major Cities declined significantly by 6 points p.a. for males and 5 points p.a. for females (Table 28, Figure 32 and Figure 33).

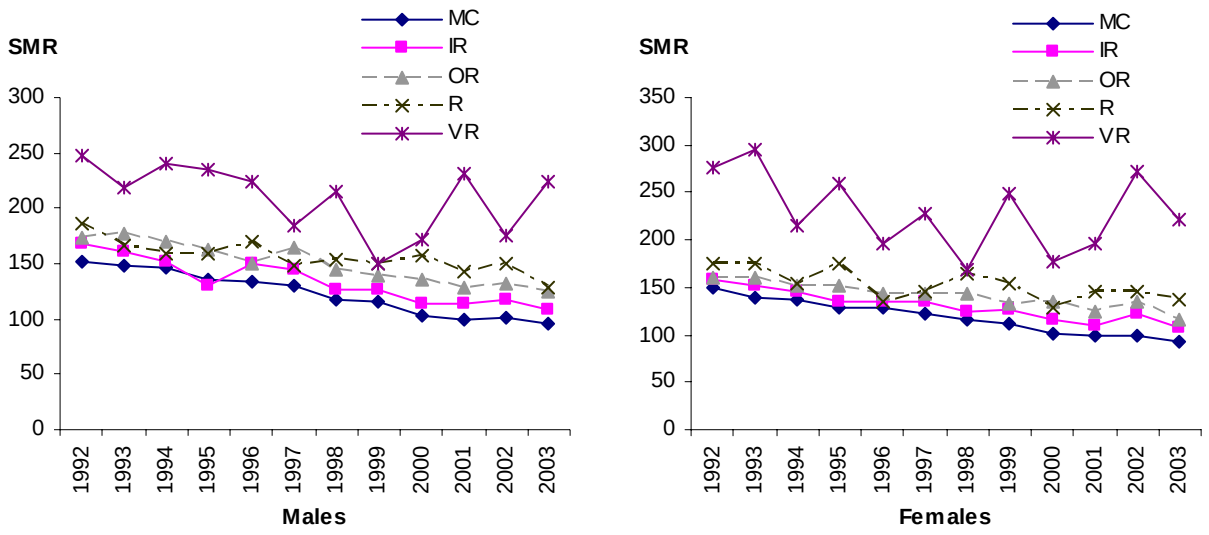
For males from regional and remote areas, the rate at which the death rate declined was not significantly different from that for males from Major Cities.

The decline for females from Inner Regional areas was not significantly different from that in Major Cities; however, the declines for Outer Regional areas (4 points p.a.) and for the combined regional areas generally (4 points p.a.) were significantly less than for Major Cities (5 points p.a.). The decline in Remote and Very Remote areas and for remote areas generally, appeared to be lower, but was not significantly different from that in Major Cities.

Table 28: Annual change in SMRs, ‘other’ circulatory diseases, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–5.6	–5.0	–5.0	–3.3	–4.3	5.0	–4.2	***–3.7**	–2.9	–3.5

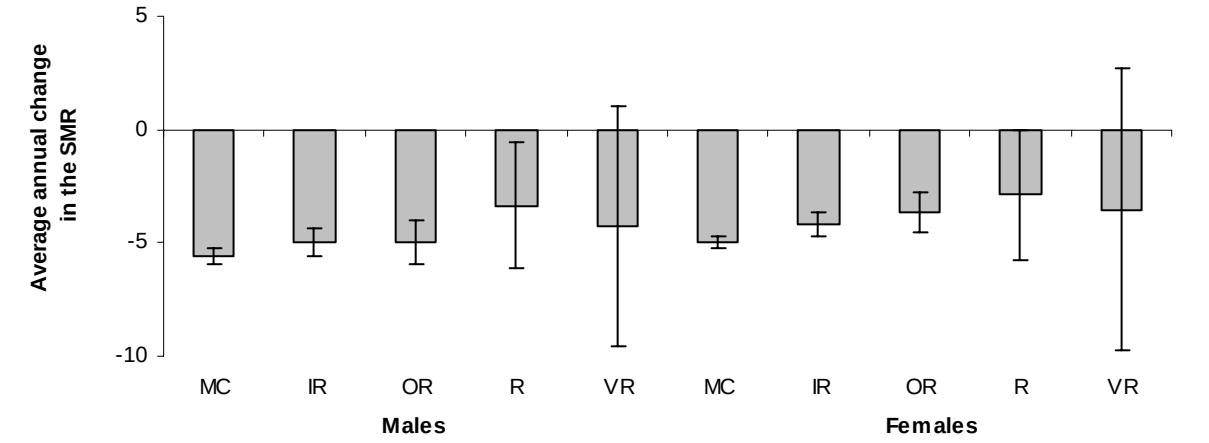
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 32: Trends in SMRs, 'other' circulatory diseases, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 33: Annual change in the ratio of observed to expected deaths due to 'other' circulatory diseases, 1992–2003

Respiratory diseases

All respiratory diseases

This group includes chronic obstructive pulmonary disease, influenza, pneumonia, asthma and all other diseases of the respiratory system.

ICD-9 and ICD-10 codes used here are, respectively, 460–519 and J00–J99.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.91.

For perspective, Table 29 describes the number of deaths in each area in 2003.

Table 29: Number of deaths due to respiratory diseases in 2003

	MC	IR	OR	R	VR	Total
Males	3,838	1,497	726	95	55	6,211
Females	3,662	1,336	571	55	34	5,658

Note: 23 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from these causes in Major Cities declined significantly for males by 2 points p.a. and increased significantly for females by 1 point p.a. (Table 30, Figure 34 and Figure 35).

Death rates for males in regional and Remote areas declined by about 3 points p.a.

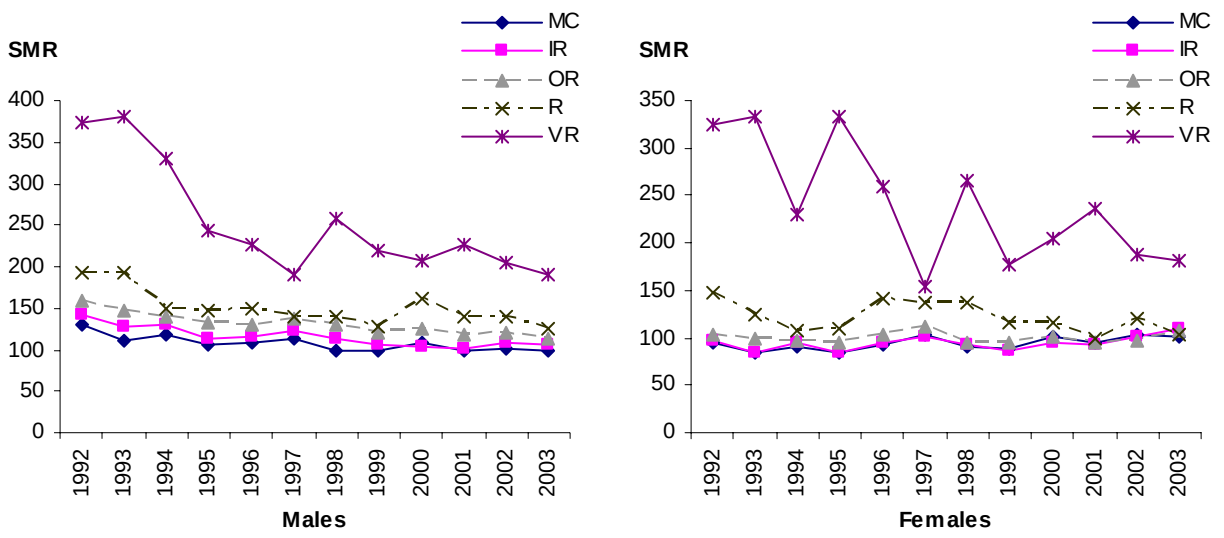
Death rates for females increased by 1 point p.a. in Inner Regional areas, changed little in Outer Regional areas and declined by about 2 points p.a. in Remote areas (which was significantly different from the 1 point p.a. increase experienced in Major Cities).

In Very Remote areas, death rates declined by 13 points p.a. for males and 11 points p.a. for females, significantly different from the changes apparent in Major Cities.

Table 30: Annual change in SMRs, respiratory diseases, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–1.9	–2.7	***–3.2**	–3.9	***–12.6**	1.1	1.0	0.1	***–2.2**	***–10.7**

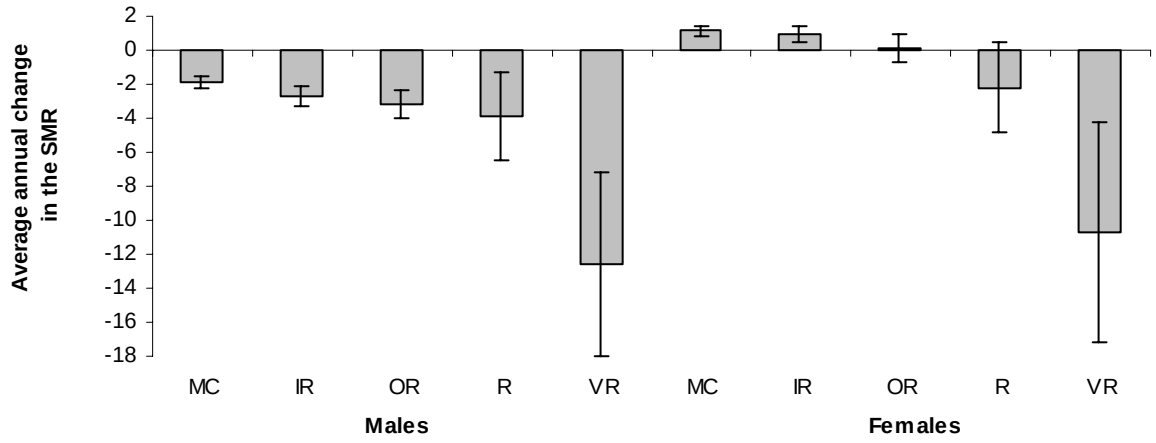
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 34: Trends in SMRs, respiratory diseases, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 35: Annual change in the ratio of observed to expected deaths due to respiratory diseases, 1992–2003

Pneumonia and influenza

Pneumonia is an inflammation or infection of the lungs, sometimes involving influenza. People at greatest risk are those whose immune systems are compromised, those who have chronic cardiovascular or pulmonary disease (for example, influenza), diabetes mellitus, alcohol-related problems, cirrhosis or cerebrospinal fluid leak after trauma or surgery, and those who smoke. Vaccination to protect against the disease is recommended for at-risk individuals (NHMRC 2000).

ICD-9 and ICD-10 codes used here are, respectively, 480–487 and 514; and J10–J18.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.84.

For perspective, Table 31 describes the number of deaths in each area in 2003.

Table 31: Number of deaths due to pneumonia and influenza in 2003

	MC	IR	OR	R	VR	Total
Males	988	376	154	23	15	1,556
Females	1,325	466	192	14	5	2,002

Note: 8 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from this cause in Major Cities increased significantly by 3 points p.a. for males and 4 points p.a. for females (Table 32, Figure 36 and Figure 37).

The rate at which the death rate changed in Inner Regional areas was similar to that in Major Cities, while in Outer Regional areas rates did not change appreciably over time.

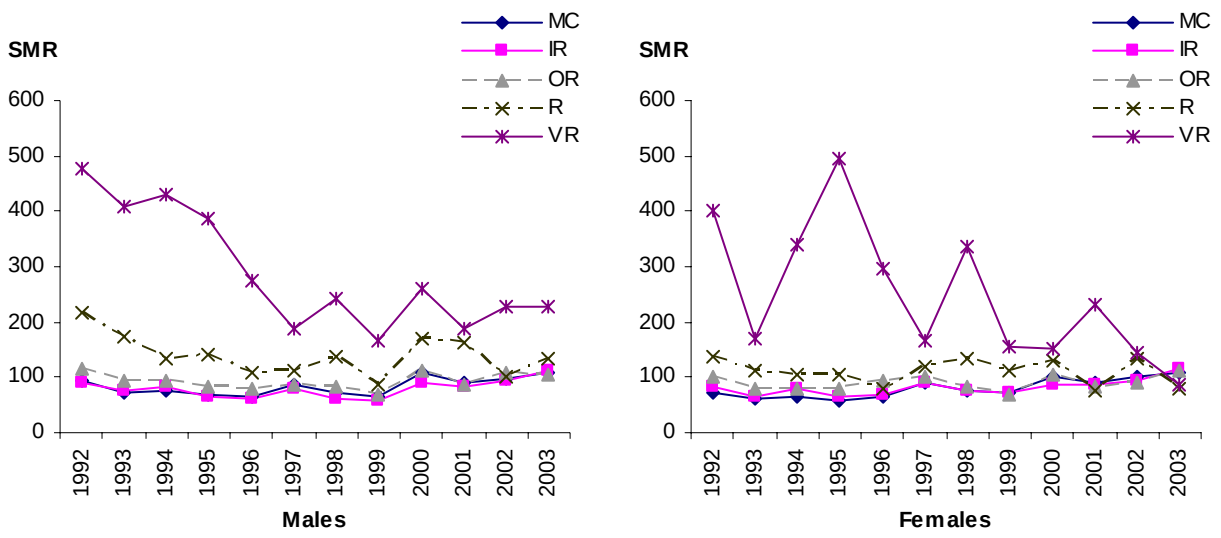
In Remote areas, rates appeared to decrease by about 2–3 points p.a.

Rates in Very Remote areas declined significantly by about 19 points p.a. for both males and females.

Table 32: Annual change in SMRs, pneumonia and influenza, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	2.6	2.1	***0.4**	***–3.4**	***–19.4**	4.1	2.8	***0.9**	***–1.7**	***–19.5**

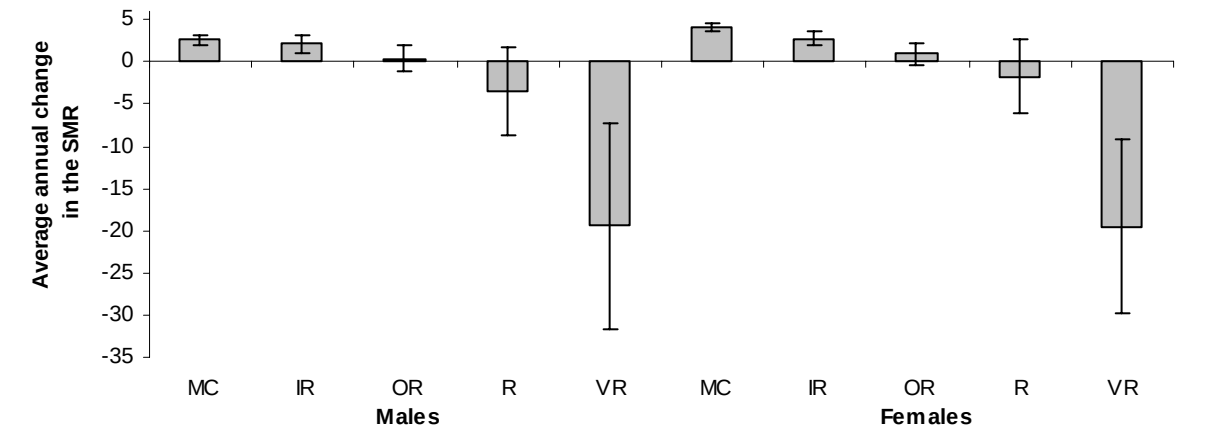
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 36: Trends in SMRs, pneumonia and influenza, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 37: Annual change in the ratio of observed to expected deaths due to pneumonia and influenza, 1992–2003

Asthma

Asthma symptoms can vary from mild and intermittent to chronic and life-threatening. Asthma attacks can be brought on after exposure to environmental irritants (for example, allergens and tobacco smoke), viral infections and exercise. Predisposing factors include family history, age and overweight (AIHW 2002).

ICD-9 and ICD-10 codes used here are, respectively, 493 and J45–J46.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.75.

For perspective, Table 33 describes the number of deaths in each area in 2003.

Table 33: Number of deaths due to asthma in 2003

	MC	IR	OR	R	VR	Total
Males	62	29	15	<3	<3	108
Females	129	50	20	<3	4	204

Note: 2 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from this cause in Major Cities declined significantly by 12 points p.a. for males and 10 points p.a. for females (Table 34, Figure 38 and Figure 39).

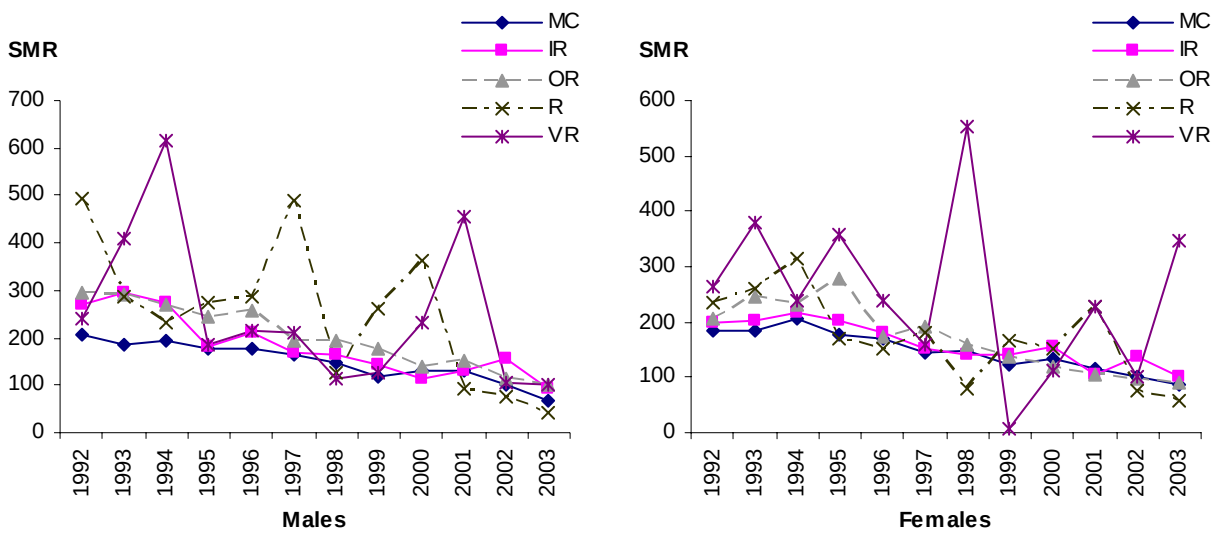
The rate of decrease for males and females in regional areas was not significantly different, at the 95% level of confidence, to that in Major Cities. At a slightly lower level of confidence, rates for males in regional areas declined at a slightly faster rate (16 points p.a.) than those in Major Cities.

Although small numbers in Very Remote areas resulted in wide confidence intervals, overall death rates for males in remote (Remote plus Very Remote) areas declined more rapidly than in Major Cities, while for remote area females, the rate of decline was not significantly different from that for females in Major Cities.

Table 34: Annual change in SMRs, asthma, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–11.8	–15.4	–18.5	***–29.7**	–17.2	–10.1	–10.0	–15.1	–15.9	–21.3

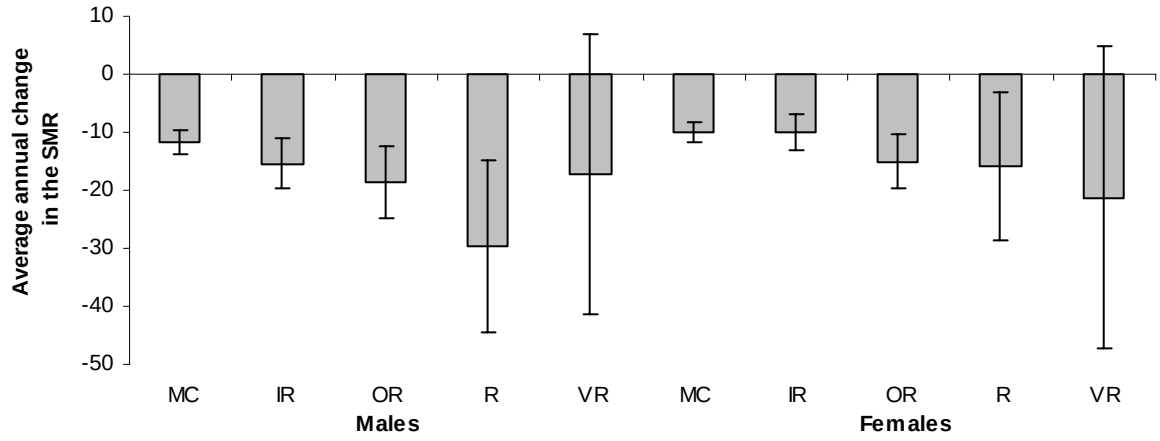
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 38: Trends in SMRs, asthma, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 39: Annual change in the ratio of observed to expected deaths due to asthma, 1992–2003

Chronic obstructive pulmonary disease

Chronic bronchitis and emphysema are the two main forms of chronic obstructive pulmonary disease. The main risk factor for chronic obstructive pulmonary disease is tobacco smoking, with heredity predisposing some people. The disease takes many years to develop and cannot be cured. Symptoms vary, but they typically include breathlessness, a productive cough and wheezing (AIHW 2002).

ICD-9 and ICD-10 codes used here are, respectively, 491, 492 and 496; and J41, J42, J43 and J44.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.93.

For perspective, Table 35 describes the number of deaths in each area in 2003.

Table 35: Number of deaths due to chronic obstructive pulmonary disease in 2003

	MC	IR	OR	R	VR	Total
Males	1,837	810	431	53	26	3,157
Females	1,378	557	233	25	19	2,212

Note: 9 records were missing details of geographic location and have been lost from the analysis.

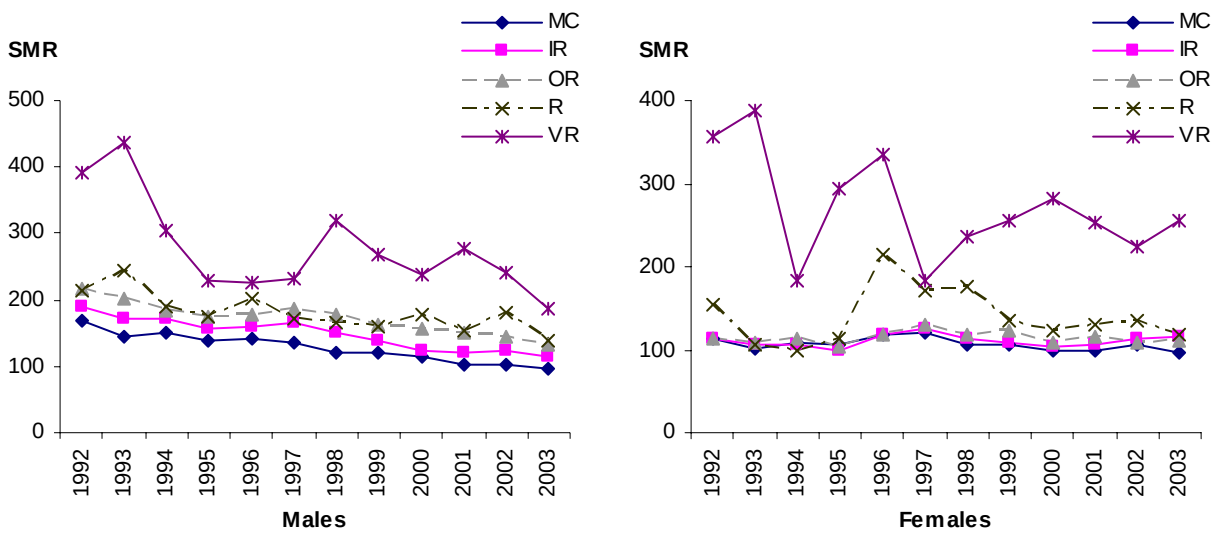
Between 1992 and 2003, death rates from this cause in Major Cities declined significantly by 6 points p.a. for males and by 1 point p.a. for females (Table 36, Figure 40 and Figure 41).

The rate of decrease for males in regional and remote areas was similar to that in Major Cities (i.e. around 6 points p.a.). However, for females in regional and remote areas, there was no significant change in the rate of death between 1992 and 2003.

Table 36: Annual change in SMRs, chronic obstructive pulmonary disease, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–6.0	–6.5	–6.3	–5.8	–11.2	–1.0	0.2	–0.1	0.2	–4.7

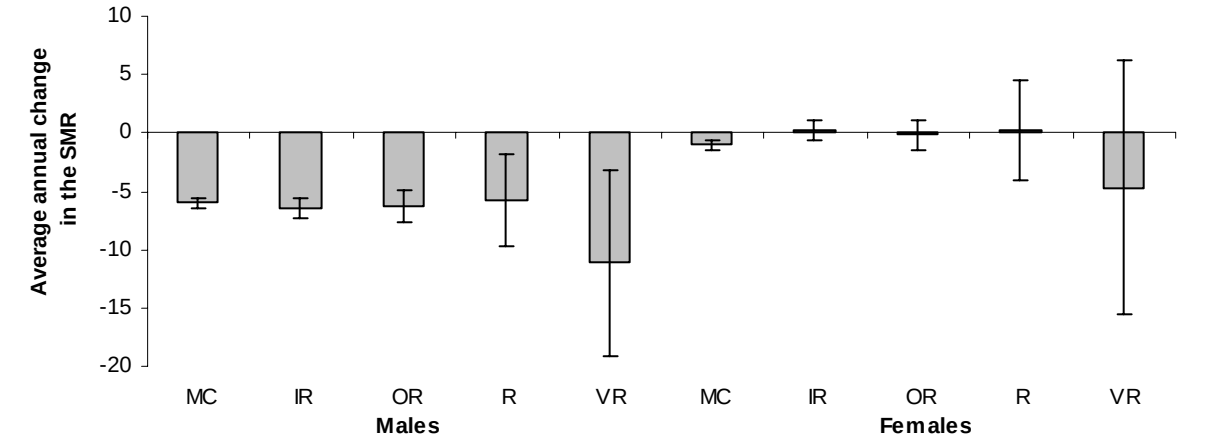
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 40: Trends in SMRs, chronic obstructive pulmonary disease, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 41: Annual change in the ratio of observed to expected deaths due to chronic obstructive pulmonary disease, 1992–2003

‘Other’ respiratory diseases

This group includes all diseases of the respiratory system not already described in this report.

ICD-9 and ICD-10 codes used here are, respectively, 460–519 and J00–J99 (excluding those specific circulatory diseases already described in this report).

Reporting here is for the period 1992–2003. The numbers of observed deaths were calculated by subtraction of the observed number for each of the reported specific causes from the total observed number due to all respiratory diseases.

For perspective, Table 37 describes the number of deaths in each area in 2003.

Table 37: Number of deaths due to ‘other’ respiratory diseases in 2003

	MC	IR	OR	R	VR	Total
Males	951	283	126	18	13	1,391
Females	829	263	126	14	6	1,238

Note: 5 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from these causes in Major Cities increased significantly by 3 points p.a. for both males and females (Table 38, Figure 42 and Figure 43).

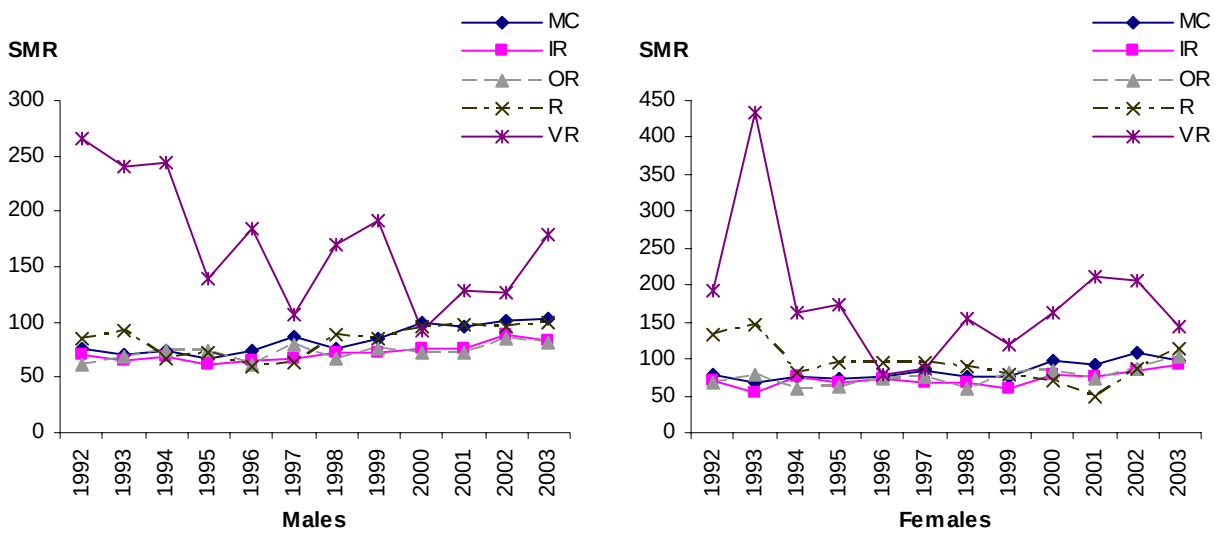
Rates in Inner and Outer Regional areas increased by 2 points p.a., except for males in Outer Regional areas, where they increased by only 1 point p.a.

Rates of change in Remote and Very Remote areas tend to show an inconsistent pattern (Figure 43); however, increases strongly apparent in the other areas tend not to be apparent in remote areas. Analysis of aggregated remote area data indicates that rates of death for both males and females did not change significantly in the period and that the decrease for males from Very Remote areas and for females from Remote areas was significantly different from the increase experienced by their counterparts from Major Cities.

Table 38: Annual change in SMRs, ‘other’ respiratory diseases, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	3.2	1.8	***1.4**	2.5	***–8.3**	2.8	1.9	2.4	***–3.8**	–0.4

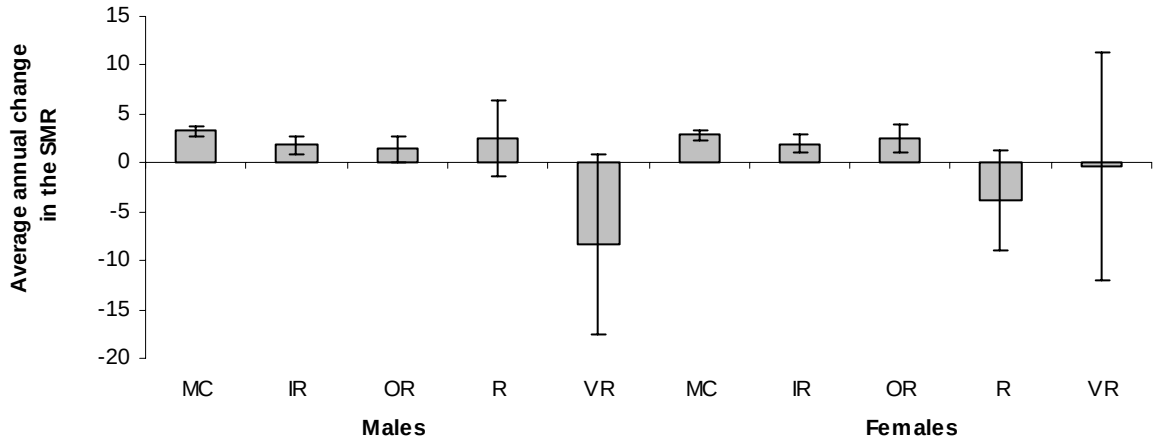
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 42: Trends in SMRs, 'other' respiratory diseases, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 43: Annual change in the ratio of observed to expected deaths due to 'other' respiratory diseases, 1992–2003

Injury and poisoning

All injury and poisoning

This group includes death resulting from all injuries and poisoning (also known as 'external cause of death'). It includes, for example, motor vehicle accidents, suicide, homicide, falls, burns and drowning. It includes 'farm accidents' but frequently such accidents are included under motor vehicle accidents, falls etc, and the denominator population can be hard to define, making calculation of rates difficult.

ICD-9 and ICD-10 codes used here are, respectively, E800–E999 and V01–Y98.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 1.06.

For perspective, Table 39 describes the number of deaths in each area in 2003.

Table 39: Number of deaths due to injury and poisoning in 2003

	MC	IR	OR	R	VR	Total
Males	3,046	1,179	698	125	134	5,182
Females	1,509	577	288	40	34	2,448

Note: 119 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from these causes in Major Cities declined significantly by 2 points p.a. for males and 1 point p.a. for females (Table 40, Figure 44 and Figure 45).

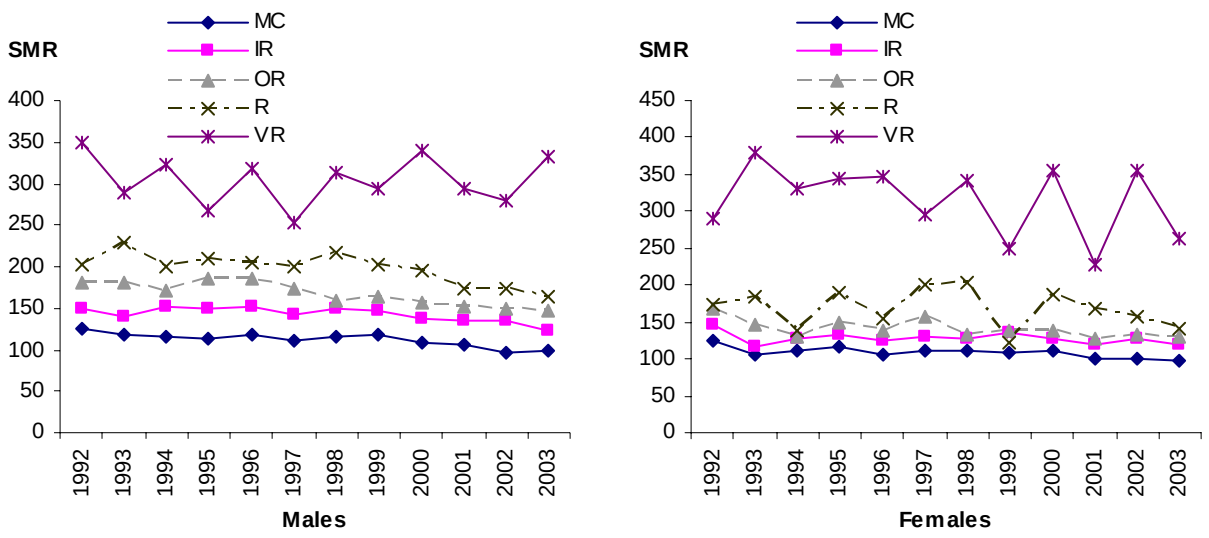
For males in Inner Regional areas and females in Inner and Outer Regional areas, death rates declined at about the same rate as in Major Cities. For males in Outer Regional areas, rates declined at 4 points p.a., significantly faster than in Major Cities.

In remote areas, the rate of decrease was not significantly different from that in Major Cities.

Table 40: Annual change in SMRs, injury and poisoning, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–2.1	–2.0	***–3.6**	–4.1	–0.3	–1.4	–0.9	–2.0	–1.8	–5.7

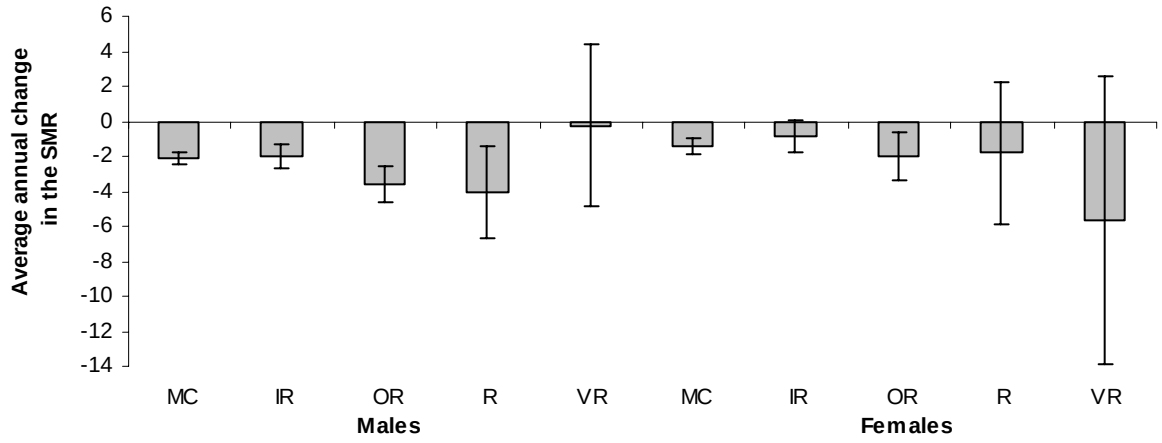
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 44: Trends in SMRs, injury and poisoning, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 45: Annual change in the ratio of observed to expected deaths due to injury and poisoning, 1992–2003

Suicide

Suicide, or intentional death from self-inflicted causes, is a concern because it is largely avoidable and affects people in a wide range of age groups (not just the older age groups). It is sometimes associated with mental illness, such as depression, but there is a range of other reasons why people may decide to take their own lives. It is likely that the incidence of suicide is under-reported, because it is sometimes difficult to know whether a death from injury was intentional or accidental.

Suicide here is defined by the ICD-9 and ICD-10 codes E950–E959 and X60–X84, respectively.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.97.

For perspective, Table 41 describes the number of deaths in each area in 2003.

Table 41: Number of deaths due to suicide in 2003

	MC	IR	OR	R	VR	Total
Males	1,056	394	202	40	29	1,721
Females	330	102	35	4	<3	472

Note: 19 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from this cause in Major Cities declined significantly by 1 point p.a. for males, while for females there was a non-significant decrease of about 1 point p.a. (i.e. there has been negligible change for females) (Table 42, Figure 46 and Figure 47).

For males in Inner and Outer Regional areas there were non-significant decreases in the suicide death rate.

For females from Inner Regional areas, rates increased by 2 points p.a., but were unchanged in Outer Regional areas.

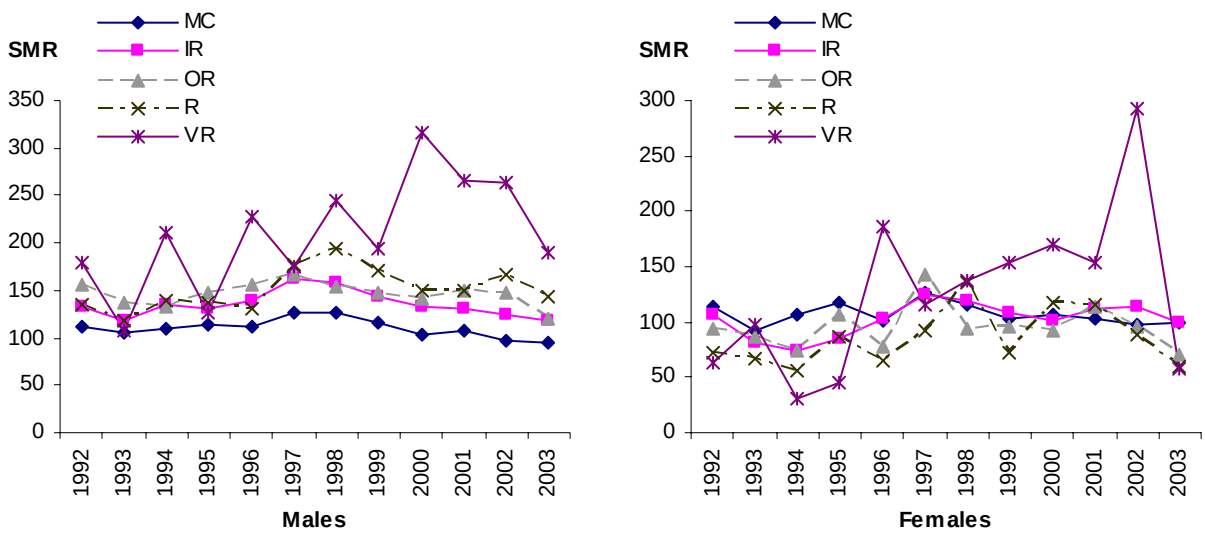
For both males and females, there were non-significant increases in the suicide death rate in Remote areas, while in Very Remote areas there was a significant increase for males of 10 points p.a., and a non-significant increase of about 7 points p.a. for females.

It should be noted that the straight trend line used here simplifies the tendency for rates in Major Cities and regional areas to peak in 1997, and to decrease thereafter. Even so, the general patterns described by the trend lines appear to reflect the overall non-linear pattern.

Table 42: Annual change in SMRs, suicide, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–1.3	–0.5	–1.0	2.8	***10.3**	–0.7	***2.2**	0.0	1.7	7.1

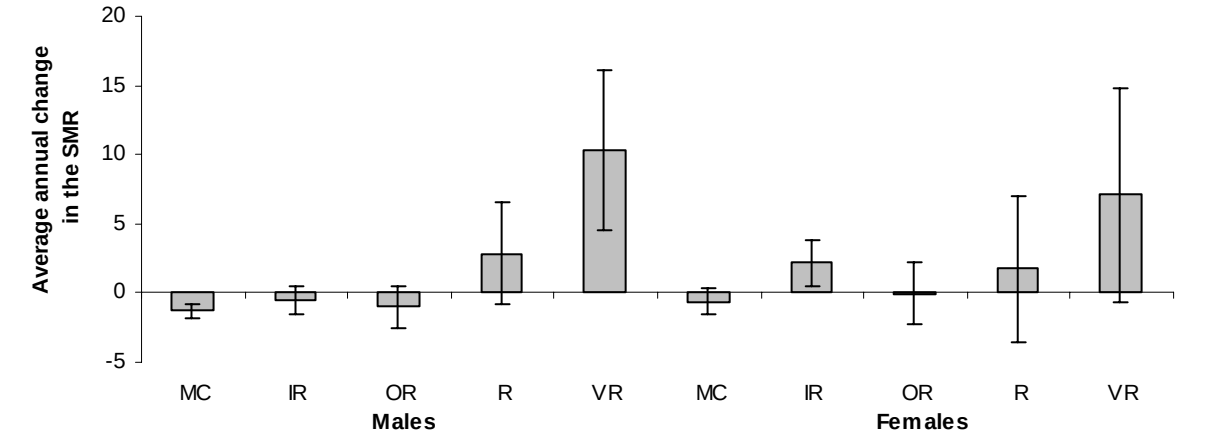
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 46: Trends in SMRs, suicide, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 47: Annual change in the ratio of observed to expected deaths due to suicide, 1992–2003

Interpersonal violence

Interpersonal violence includes the killing of one person by another in an act of homicide (which includes situations in which the intent may, or may not, have been to kill the person).

ICD-9 and ICD-10 codes used here are, respectively, E960–E978 and X85–Y09.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 1.02.

For perspective, Table 43 describes the number of deaths in each area in 2003.

Table 43: Number of deaths due to interpersonal violence in 2003

	MC	IR	OR	R	VR	Total
Males	96	40	21	6	12	175
Females	49	10	13	3	<3	77

Note: 5 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from this cause in Major Cities declined significantly by 3 points p.a. for males and 5.5 points p.a. for females (Table 44, Figure 48 and Figure 49).

For males in regional and remote areas, there was no significant change in the rate of death due to interpersonal violence, except in Outer Regional areas where rates declined by about 6 points p.a.

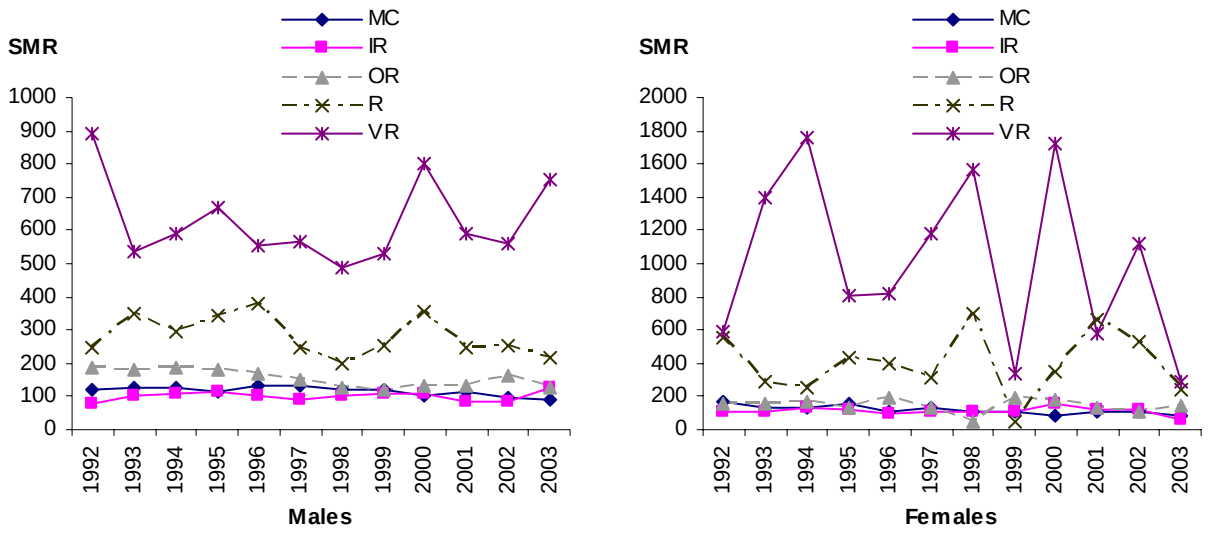
For females in regional areas, the rate of decline was not significantly different from zero, but was also not significantly different from the decline experienced by females from Major Cities.

Death rates declined by about 51 points p.a. for females in Very Remote areas, or by about 28 points p.a. for females from remote areas generally.

Table 44: Annual change in SMRs, interpersonal violence, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–3.2	0.6	–5.6	–6.5	–1.4	–5.5	–2.9	–2.8	–14.7	–50.8

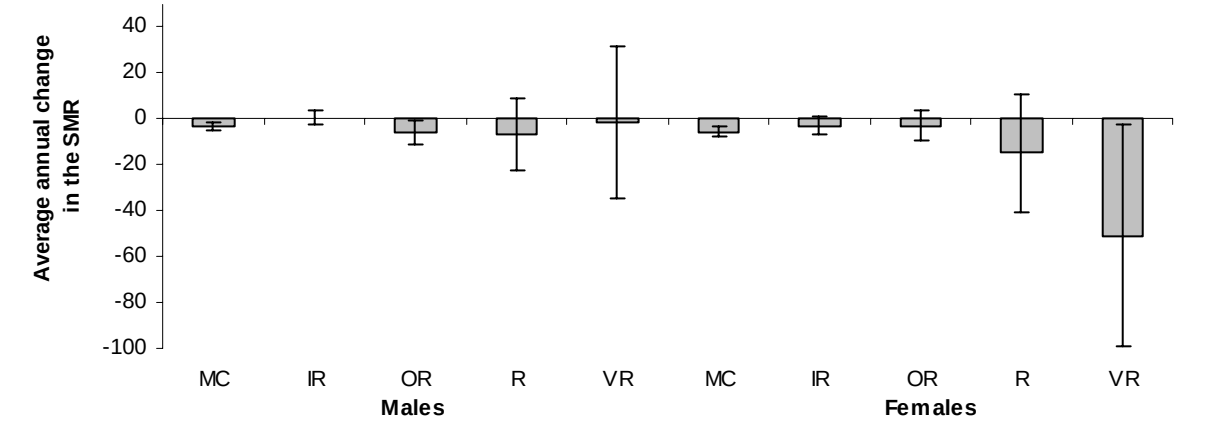
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 48: Trends in SMRs, interpersonal violence, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 49: Annual change in the ratio of observed to expected deaths due to interpersonal violence, 1992–2003

Motor vehicle traffic accidents

Motor vehicle traffic accidents include accidents that occur on public roads and that involve a motor vehicle. For example, a car occupant, pedestrian or cyclist struck by a motor vehicle on a public road would be included, as would a car occupant killed in a collision with a train. However, a car occupant killed in an off-road accident or a cyclist killed after falling off a bicycle are not included. Motor vehicles include motorcycles, cars, vans and utilities, trucks and buses.

The ICD-9 codes used here are E810–E819, but the ICD-10 codes used are too complicated to list here— see page 5, where they are listed in Table 1.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.95.

For perspective, Table 45 describes the number of deaths in each area in 2003.

Table 45: Number of deaths due to motor vehicle traffic accidents in 2003

	MC	IR	OR	R	VR	Total
Males	551	294	179	34	49	1,107
Females	190	127	69	14	14	414

Note: 36 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from these causes in Major Cities declined significantly by 3 points p.a. for males and 8 points p.a. for females (Table 46, Figure 50 and Figure 51).

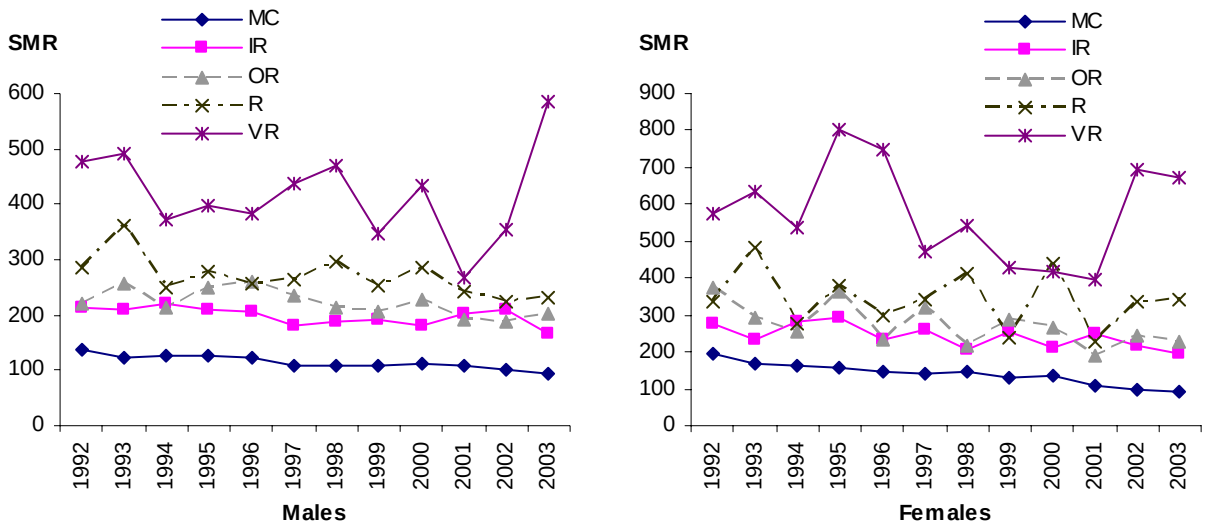
Rates for males and females in Inner and Outer Regional areas also declined, at a rate that was not significantly different from rates in Major Cities (i.e. about 3 points p.a. for males and 8 points p.a. for females).

Rates for males and females in Remote and Very Remote areas appeared to decline also, but the decreases were not significantly different from zero, while also being not significantly different from the decline apparent in Major Cities.

Table 46: Annual change in SMRs, motor vehicle traffic accidents, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–3.2	–3.0	–4.5	–5.9	–5.9	–8.1	–5.8	–9.2	–5.1	–9.9

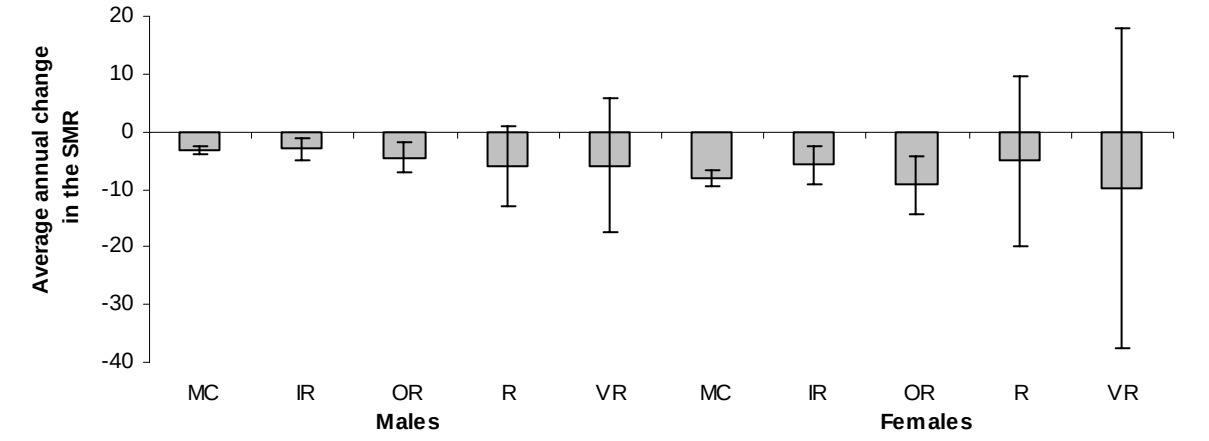
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 50: Trends in SMRs, motor vehicle traffic accidents, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 51: Annual change in the ratio of observed to expected deaths due to motor vehicle traffic accidents, 1992–2003

‘Other’ land transport accidents

This group includes all land transport accidents that were off-road or did not involve a motor vehicle. The most commonly occurring causes included in this group were pedestrians injured by a range of motor vehicles and non-motor vehicles (37%), off-road motorcyclists (14%) and pedal cyclists (4%), occupants of cars involved in non-traffic accidents (11%), drivers or occupants of all-terrain vehicles (5%) and agricultural vehicles (10%), and occupants of trains (3%). Injuries involving ridden animals accounted for about 1% of these deaths.

ICD-10 codes are V01.0–V89.9 but exclude those for motor vehicle traffic accidents (see previous section and Table 1 on page 5).

Reporting here is for 1997–2003 only. Before 1997, coding of deaths used the 9th revision of the International Classification of Diseases (ICD-9). Compatibility for this cause of death between ICD-9 and ICD-10 is very poor, and so reporting has been restricted to the period from 1997 to 2003, using ICD-10 only.

For perspective, Table 47 describes the number of deaths in each area in 2003.

Table 47: Number of deaths due to ‘other’ land transport accidents in 2003

	MC	IR	OR	R	VR	Total
Males	41	30	24	8	6	109
Females	19	8	3	<3	<3	32

Note: 4 records were missing details of geographic location and have been lost from the analysis.

Interpretation is complicated by the fact that the category includes a broad range of causes.

Death rates from these causes have declined significantly over the period in Major Cities, at a rate of about 10 points p.a. for both males and females (Table 48, Figure 52 and Figure 53).

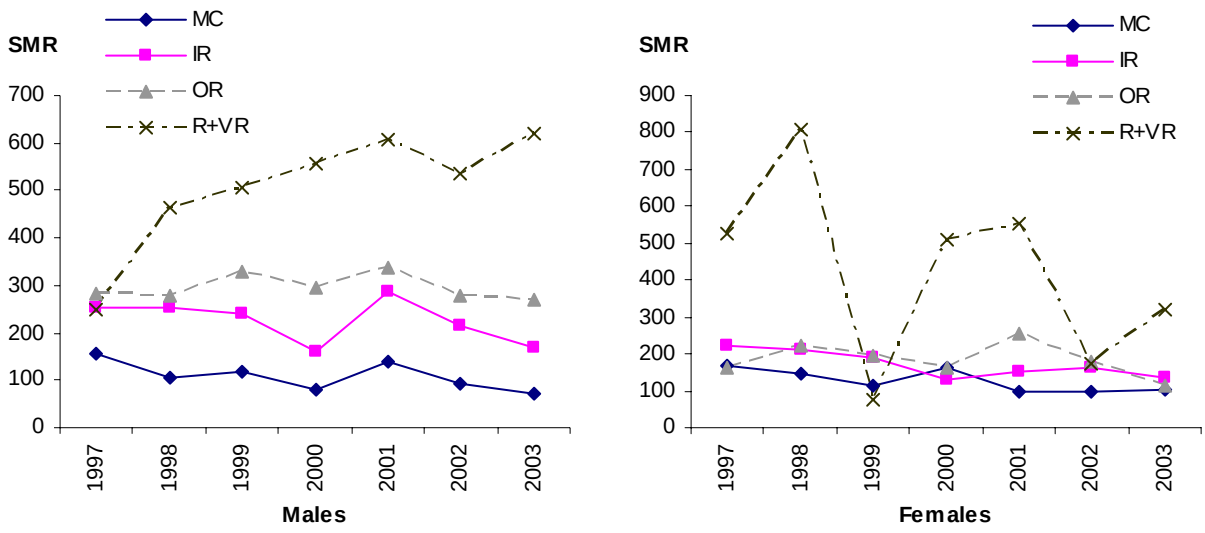
Changes in death rates in Inner and Outer Regional areas were not significantly different from zero however, for both males and females, the apparent change was a decline in death rates of approximately 10 points p.a. (similar to Major Cities), except for males in Outer Regional areas where the apparent decrease appeared smaller (but with wide confidence intervals).

Because of the relatively small numbers of deaths in Remote and Very Remote areas, the data for these areas has been aggregated. In remote areas generally, death rates for males have increased by about 60 points p.a., while those for females appear to have remained unchanged.

Table 48: Annual change in SMRs, ‘other’ land transport accidents, 1997–2003

	Males				Females			
	MC	IR	OR	R+VR	MC	IR	OR	R+VR
Average annual change	–9.4	–11.2	–1.8	***56.8**	–10.8	–13.0	–8.8	1.3

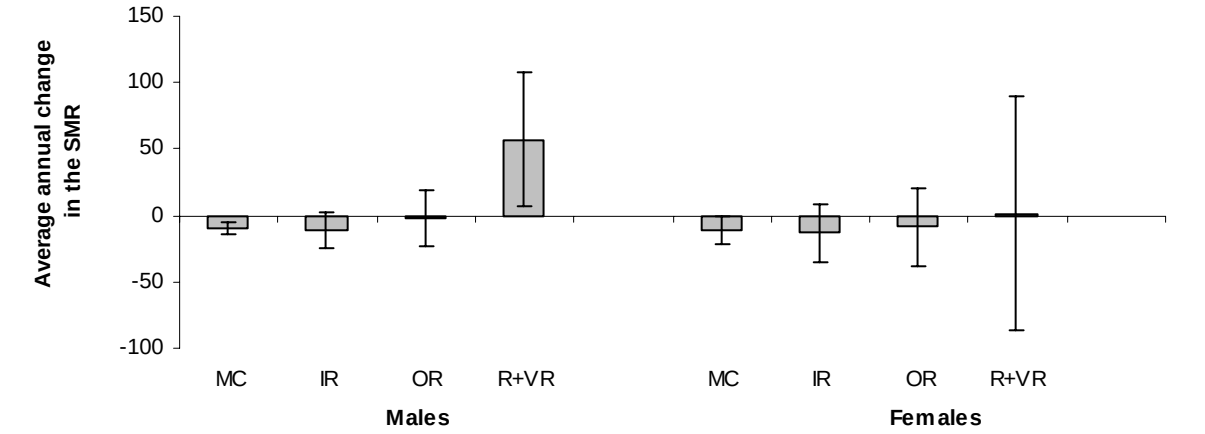
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 52: Trends in SMRs, 'other' land transport accidents, males and females, 1997–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 53: Annual change in the ratio of observed to expected deaths due to 'other' land transport accidents, 1997–2003

‘Other’ injuries and poisoning

This group includes all injuries and poisonings not already described in this report (i.e. not including land transport accidents, suicide or interpersonal violence).

ICD-9 and ICD-10 codes used here are, respectively, E800–E999 and V01–Y98, minus those specific causes of injury-related death described earlier.

Reporting here is for the period 1992–2003. The numbers of observed deaths were calculated by subtraction of the observed number for each of the reported specific causes from the total observed number due to all injury and poisoning.

For perspective, Table 49 describes the number of deaths in each area in 2003.

Table 49: Number of deaths due to ‘other’ injuries and poisoning in 2003

	MC	IR	OR	R	VR	Total
Males	1,302	420	273	37	38	2,070
Females	920	330	169	16	15	1,450

Note: 57 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from these causes in Major Cities declined significantly by 2 points p.a. for males and remained essentially unchanged for females (Table 50, Figure 54 and Figure 55).

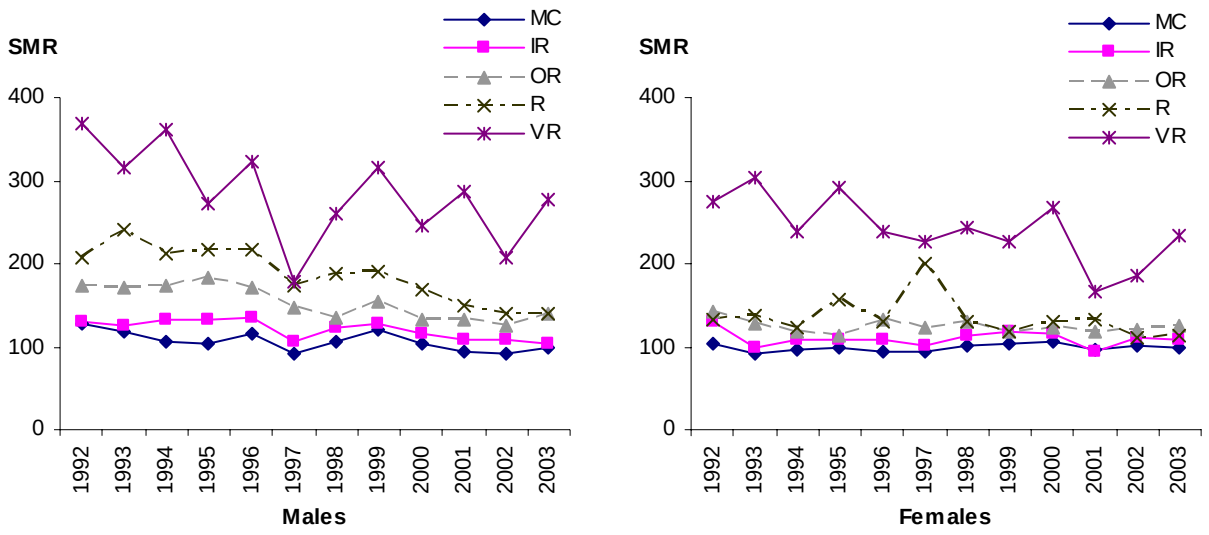
Rates for males in Inner Regional areas declined by about 3 points p.a. (not significantly different from males in Major Cities). Death rates for males from Outer Regional and Remote areas declined, respectively, by 5 points p.a. and 8 points p.a. between 1992 and 2003.

Rates for females in each individual area declined in regional and remote areas, but not at a rate significantly different from zero, and at a rate not significantly different from that in Major Cities (i.e. wide confidence intervals).

Table 50: Annual change in SMRs, ‘other’ injuries and poisoning, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–2.0	–2.6	***–4.9**	***–8.4**	–8.2	0.3	–0.4	–0.7	–2.3	–7.8

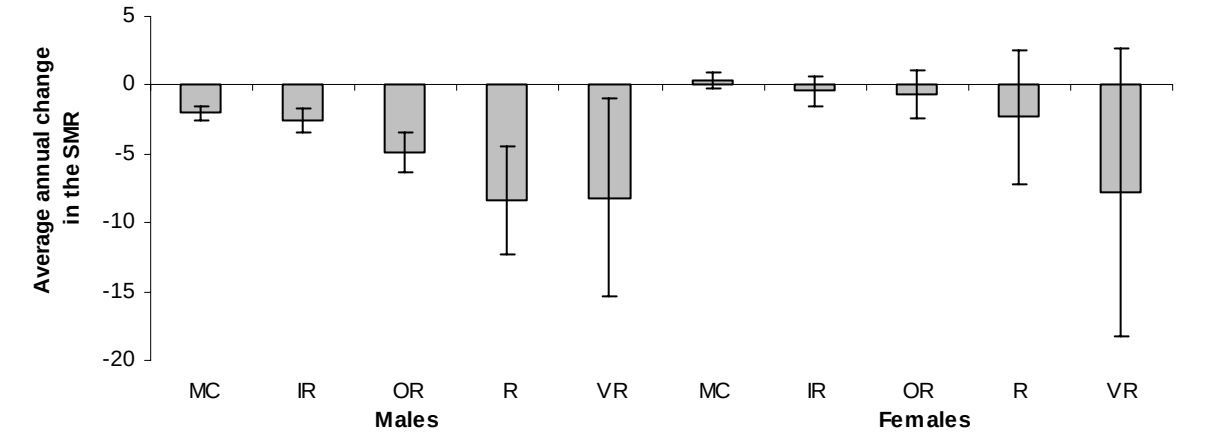
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 54: Trends in SMRs, 'other' injuries and poisoning, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 55: Annual change in the ratio of observed to expected deaths due to 'other' injuries and poisoning, 1992–2003

Other causes

All other causes

This group includes all causes of death other than those due to neoplasms, circulatory diseases, respiratory diseases, and injury and poisoning. It includes diabetes mellitus and renal failure, with all the other causes of death reported as a heterogenous group.

ICD-9 and ICD-10 codes used here are all those not reported elsewhere in this report.

Reporting here is for the period 1992–2003.

For perspective, Table 51 describes the number of deaths in each area in 2003.

Table 51: Number of deaths due to other causes in 2003

	MC	IR	OR	R	VR	Total
Males	7,431	2,702	1,390	191	157	11,871
Females	8,676	3,087	1,405	176	119	13,463

Note: 90 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from these causes in Major Cities declined by 2 points p.a. for males and by less than 1 point p.a. for females (Table 52, Figure 56 and Figure 57).

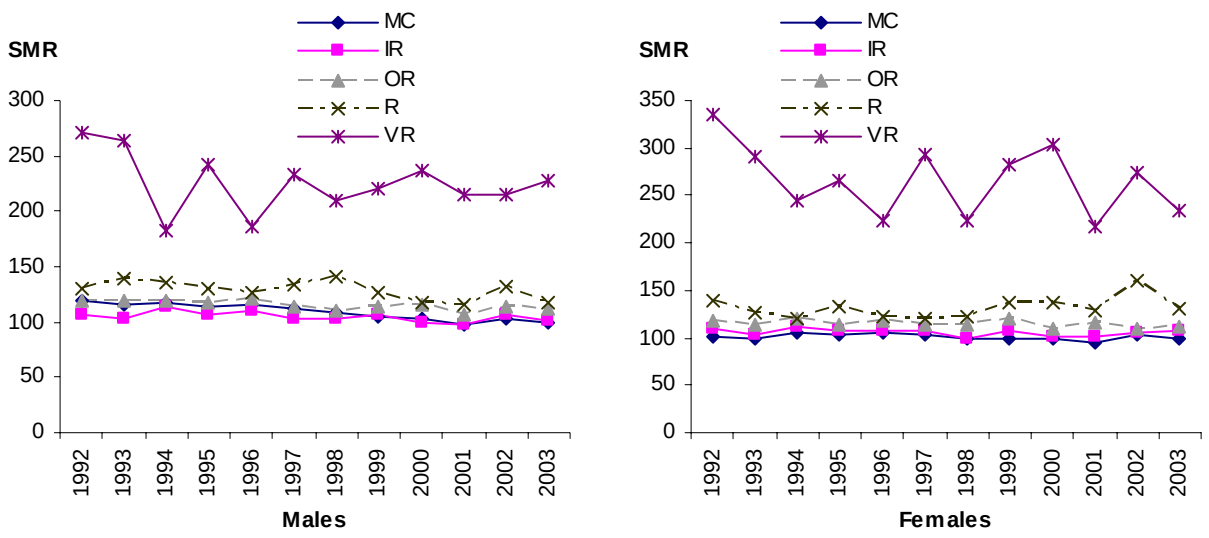
Rates in regional areas declined for males by about 1 point p.a., a significantly lower rate of decline than for those in Major Cities. For females from regional areas, the rate of decline was not significantly different from the rate of decline for females from Major Cities.

In remote areas, declines tended not to be significantly different from those in Major Cities while not being clearly different from zero (i.e. different from no change). However, the rate of decline for males from Remote areas and for females from Very Remote areas was significantly different from zero at a slightly lower level of confidence than the 95% level.

Table 52: Annual change in SMRs, all other causes, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–1.9	***–0.6**	***–0.9**	–1.5	–1.1	–0.3	–0.4	–0.5	1.2	–3.6

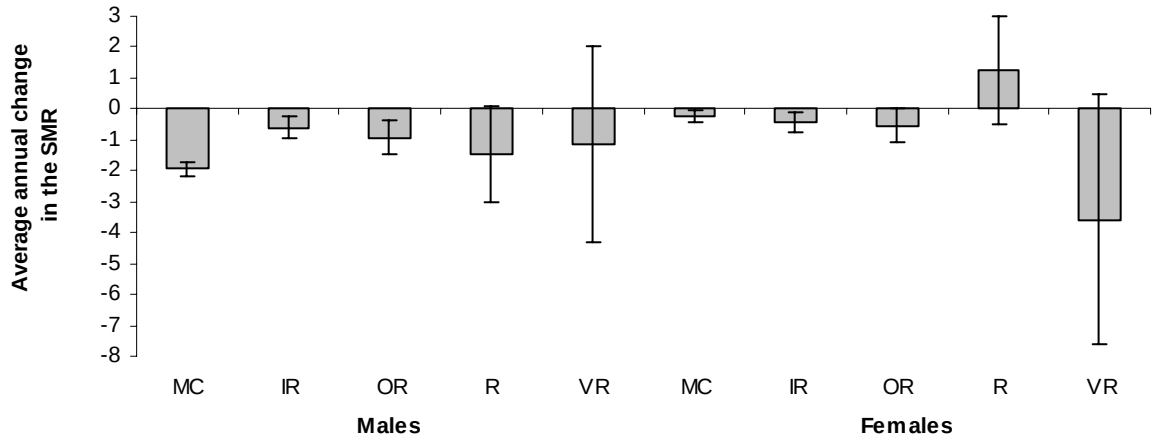
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 56: Trends in SMRs, all other causes, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 57: Annual change in the ratio of observed to expected deaths due to all other causes, 1992–2003

Diabetes

Diabetes mellitus is a major cause of illness and disability in Australia. It is also a leading cause of blindness and lower limb amputations, and can lead to pregnancy-related complications for both the mother and foetus or newborn child. Diabetes is an important risk factor for several other chronic diseases including heart disease, stroke and renal disease (AIHW 2002). Risk factors include genetic factors and obesity, low birth weight, increasing age, physical inactivity and poor diet (AIHW 2002).

ICD-9 and ICD-10 codes used here are, respectively, 250 and E10–E14.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 0.99.

For perspective, Table 53 describes the number of deaths in each area in 2003.

Table 53: Number of deaths due to diabetes in 2003

	MC	IR	OR	R	VR	Total
Males	1,092	402	239	41	29	1,803
Females	958	384	184	32	22	1,580

Note: 6 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from this cause in Major Cities changed little for males and declined by about 2 points p.a. for females (Table 54, Figure 58 and Figure 59).

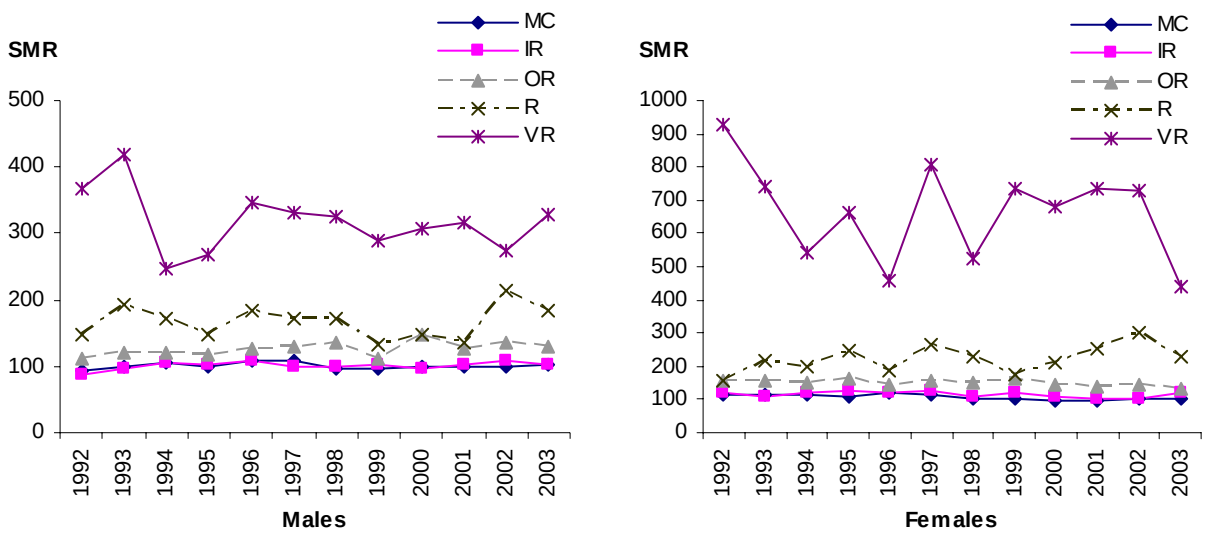
Rates in regional areas increased significantly for males by about 1 point p.a. and declined significantly for females by about 1 point p.a. (although changes in Inner and Outer Regional areas separately did not reach statistical significance).

Rates in remote areas did not appear to change significantly between 1992 and 2003.

Table 54: Annual change in SMRs, diabetes, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–0.1	0.7	1.6	0.5	–2.7	–1.9	–1.0	–1.9	5.5	–11.2

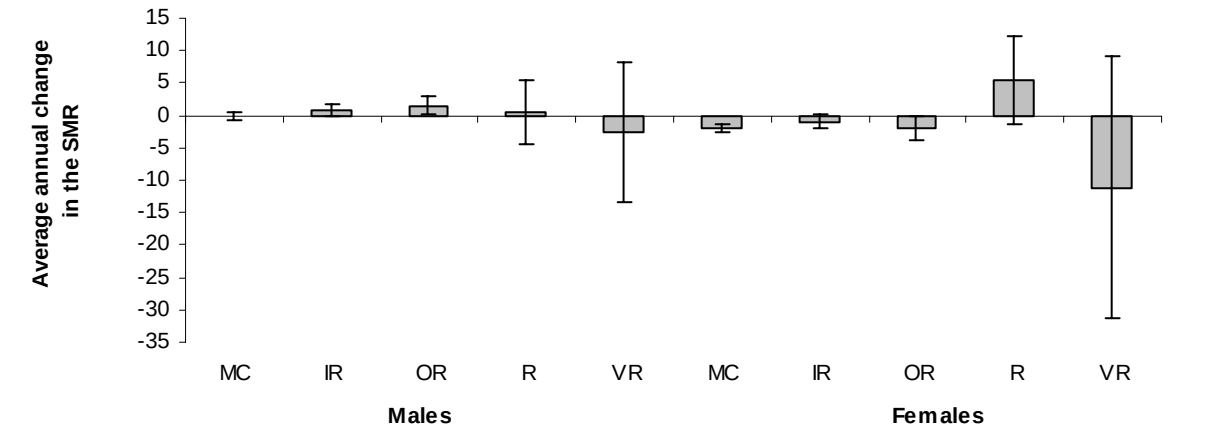
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 58: Trends in SMRs, diabetes, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 59: Annual change in the ratio of observed to expected deaths due to diabetes, 1992–2003

Renal failure

Renal failure has been included because of its importance as a cause of death for Indigenous people. Renal failure can be a result of damage to kidneys caused by high blood pressure, diabetes, infections and long-term use of analgesics (AIHW 2002).

ICD-9 and ICD-10 codes used here are, respectively 584–586 and N17–N19.

Reporting here is for the period 1992–2003. The comparability factor (see page 5) for this cause is 1.05.

For perspective, Table 55 describes the number of deaths in each area in 2003.

Table 55: Number of deaths due to renal failure in 2003

	MC	IR	OR	R	VR	Total
Males	641	209	91	8	11	960
Females	677	227	97	9	13	1,023

Note: 3 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from this cause for males in Major Cities increased by about 1 point p.a. (significantly at a slightly lower level of confidence, but not at the 95% level of confidence) while rates for females in Major Cities increased significantly by about 1 point p.a. (Table 56, Figure 60 and Figure 61).

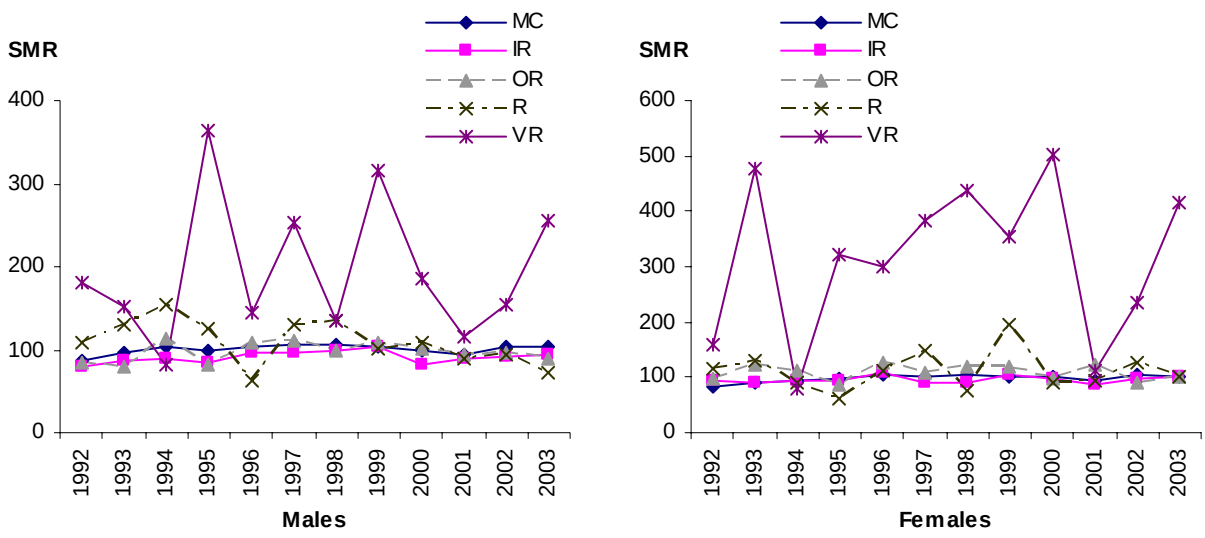
It is not clear whether there have been substantial changes in the rates of death due to renal failure in regional and remote areas, as confidence intervals in all cases overlap those for Major Cities. In other words, it is not clear that rates of change in regional and remote areas have been different from those in Major Cities over the period.

The analysis was also repeated for males and females from the aggregated areas regional (Inner Regional plus Outer Regional) and remote (Remote plus Very Remote); and also for persons (males plus females) from each of the five areas. No significant differences from the changes apparent in Major Cities were discernable.

Table 56: Annual change in SMRs, renal failure, 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	0.6	0.5	0.5	–3.6	3.8	1.1	0.3	–0.6	0.8	8.9

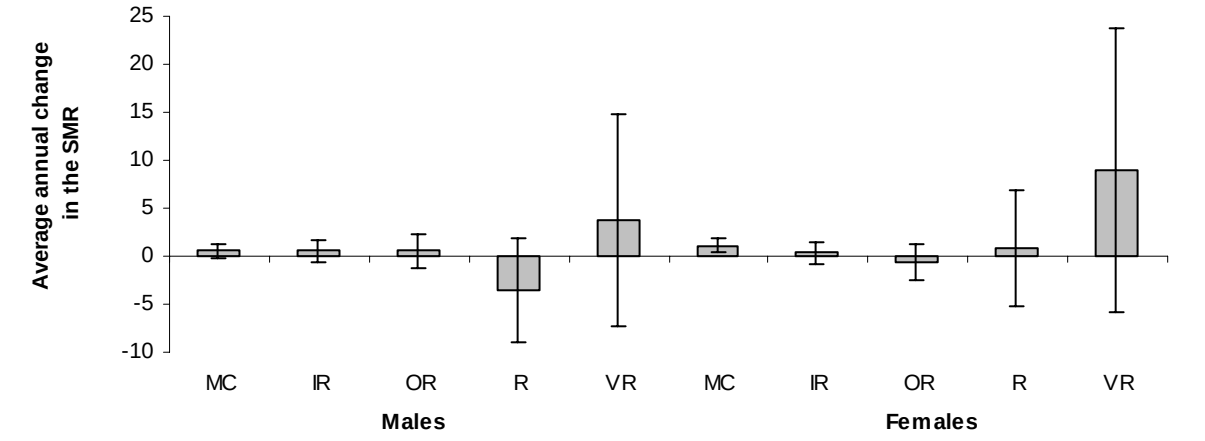
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 60: Trends in SMRs, renal failure, males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 61: Annual change in the ratio of observed to expected deaths due to renal failure, 1992–2003

All other causes not elsewhere described (n.e.d.)

All other causes n.e.d., comprises all causes of death not otherwise described in this report. It excludes deaths due to neoplasms, circulatory diseases, respiratory diseases, injury and poisoning, diabetes and renal failure.

Reporting here is for the period 1992–2003.

For perspective, Table 57 describes the number of deaths in each area in 2003.

Table 57: Number of deaths due to all other causes n.e.d. in 2003

	MC	IR	OR	R	VR	Total
Males	5,698	2,091	1,061	141	117	9,108
Females	7,041	2,475	1,123	134	84	10,857

Note: 84 records were missing details of geographic location and have been lost from the analysis.

Between 1992 and 2003, death rates from these causes for males in Major Cities declined significantly by about 2.5 points p.a. while rates for females in Major Cities changed little (Table 58, Figure 60 and Figure 63).

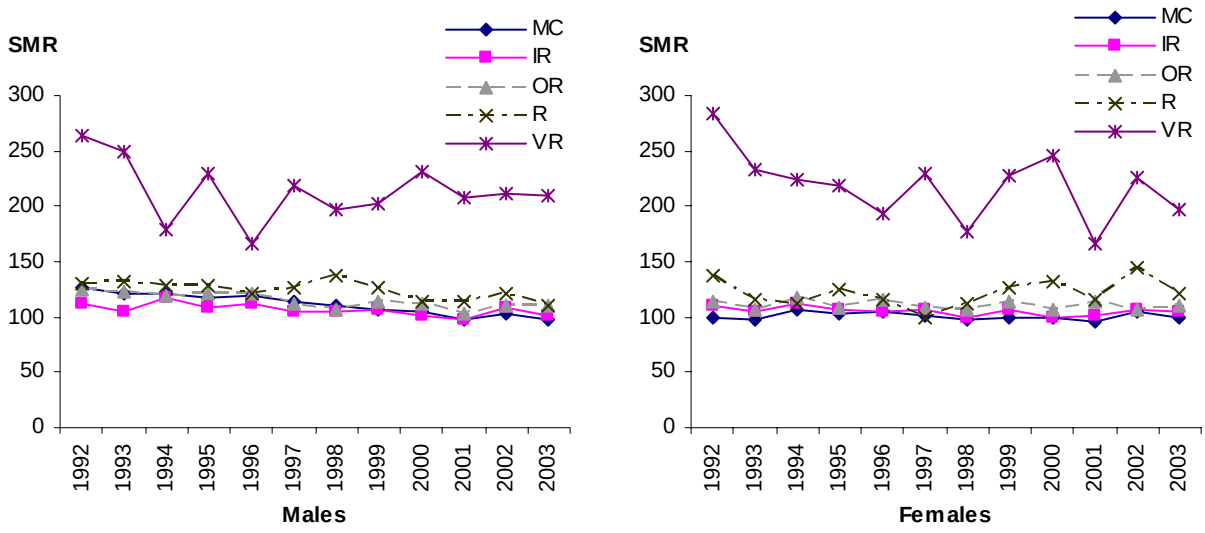
Rates for males in Inner and Outer Regional areas also declined, but at a significantly lower rate (about 1 point p.a.). Rates for females from Inner and Outer Regional areas, respectively, declined by less than 1 point p.a. and changed little.

In remote areas, declines tended not to be significantly different from those in Major Cities while not being clearly different from zero (i.e. different from no change). However, the rate of decline for males from Remote areas and for females from Very Remote areas was significantly different from zero at a slightly lower level of confidence, although not at the 95% level.

Table 58: Annual change in SMRs, all other causes n.e.d., 1992–2003

	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual change	–2.5	***–1.0**	***–1.5**	–1.6	–1.2	–0.1	–0.4	–0.3	0.8	–4.0

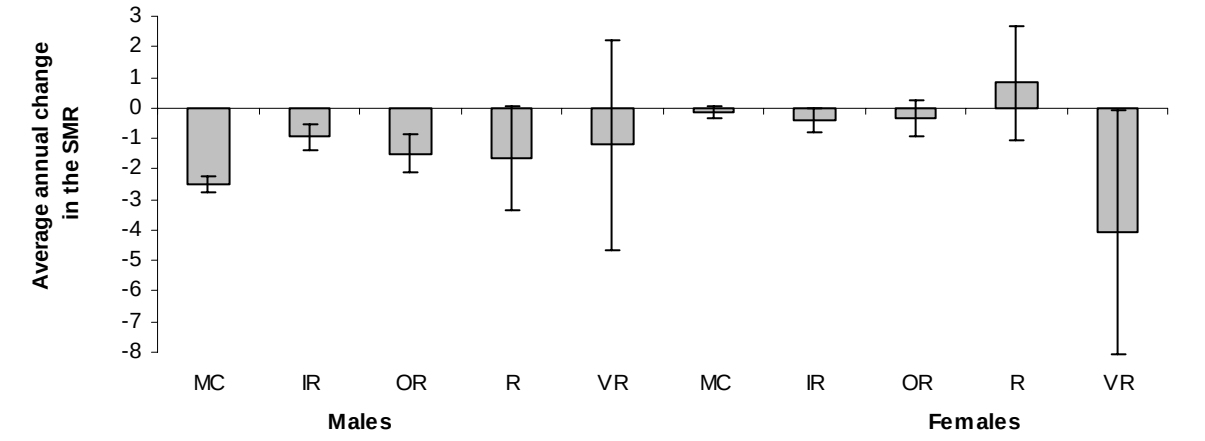
Note: Changes are based on the slope of the curve, calculated using the weighted least squares method. Changes that are significantly different from those in Major Cities are bold and marked with an asterisk. Positive changes signify an increase in mortality; negative changes signify a decrease in mortality.



Note: SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.

Source: AIHW National Mortality Database.

Figure 62: Trends in SMRs, all other causes n.e.d., males and females, 1992–2003



Notes

1. SMRs calculated using Major Cities rates in the period 2001–2003 as the standard, and expressed as multiples of 100.
2. Error bars indicate 95% confidence intervals. These indicate the amount of uncertainty about the precision of the calculated rate.

Source: AIHW National Mortality Database.

Figure 63: Annual change in the ratio of observed to expected deaths due to all other causes n.e.d., 1992–2003

Appendix

Table of SMRs by year, area and cause

Notes to the table

- The statistic used to compare rates of death in each area and between years is the ratio of the number of observed cases to the number expected if 'standard rates' applied in each area and each year.
- The standard for all years is the rate, for males and females, of death in Major Cities for each cause in the period 2001–2003.
- A ratio greater than 1 indicates more deaths than expected (that is, a higher death rate than in Major Cities in 2001–2003). A ratio less than 1 indicates fewer deaths than expected (that is, a lower death rate than in Major Cities in 2001–2003).
- SMRs used in this table have been presented as simple ratios so as to save space. When multiplied by 100, these SMRs are comparable to those used throughout the rest of this report.
- Statistical significance of differences between death rates in different areas or years has not been calculated.
- While the SMRs used in this table allow comparison of death rates between areas and over time, they do not allow comparison between the sexes or between the various causes of death.
- SMRs for 'other' land transport accidents have not been reported for Remote and Very Remote areas; instead, reporting in this table has been for remote areas generally.

Table 59: Standardised Mortality Ratios

	Males					Females					People				
Year	MC	IR	OR	R	VR	MC	IR	OR	R	VR	MC	IR	OR	R	VR
All causes															
1992	1.4	1.4	1.5	1.6	2.5	1.3	1.3	1.4	1.5	2.4	1.3	1.4	1.5	1.5	2.4
1993	1.3	1.3	1.5	1.6	2.2	1.2	1.2	1.3	1.4	2.4	1.3	1.3	1.4	1.5	2.3
1994	1.3	1.4	1.5	1.6	2.0	1.2	1.3	1.3	1.3	2.0	1.3	1.3	1.4	1.5	2.0
1995	1.3	1.3	1.4	1.5	2.0	1.2	1.2	1.3	1.3	2.0	1.2	1.2	1.3	1.4	2.0
1996	1.2	1.3	1.4	1.4	1.9	1.2	1.2	1.2	1.3	1.8	1.2	1.3	1.3	1.4	1.8
1997	1.2	1.3	1.3	1.4	1.8	1.1	1.2	1.2	1.3	1.9	1.2	1.2	1.3	1.3	1.8
1998	1.1	1.2	1.3	1.4	2.0	1.1	1.1	1.2	1.2	1.9	1.1	1.2	1.2	1.3	2.0
1999	1.1	1.2	1.2	1.4	1.8	1.1	1.1	1.2	1.2	1.8	1.1	1.1	1.2	1.3	1.8
2000	1.1	1.1	1.2	1.3	1.9	1.0	1.1	1.1	1.2	1.9	1.1	1.1	1.2	1.3	1.9
2001	1.0	1.1	1.2	1.3	1.8	1.0	1.1	1.1	1.2	1.7	1.0	1.1	1.1	1.2	1.7
2002	1.0	1.1	1.2	1.2	1.6	1.0	1.1	1.1	1.2	1.9	1.0	1.1	1.1	1.2	1.7
2003	1.0	1.1	1.1	1.1	1.7	1.0	1.0	1.1	1.1	1.7	1.0	1.0	1.1	1.1	1.7
Neoplasms															
1992	1.2	1.2	1.2	1.1	1.3	1.1	1.1	1.1	1.1	1.6	1.1	1.1	1.2	1.1	1.4
1993	1.2	1.2	1.3	1.3	1.2	1.1	1.1	1.1	1.1	1.6	1.2	1.1	1.2	1.2	1.4
1994	1.2	1.2	1.3	1.4	1.2	1.1	1.1	1.1	1.2	1.1	1.2	1.1	1.2	1.3	1.2
1995	1.2	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.1
1996	1.1	1.1	1.3	1.2	1.2	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.2	1.2	1.2
1997	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.0	1.4	1.1	1.1	1.1	1.1	1.2
1998	1.1	1.1	1.2	1.2	1.3	1.0	1.0	1.0	1.1	1.3	1.1	1.1	1.1	1.1	1.3
1999	1.1	1.1	1.1	1.2	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.1
2000	1.0	1.1	1.2	1.1	1.2	1.0	1.0	1.1	0.9	1.1	1.0	1.0	1.1	1.0	1.2
2001	1.0	1.1	1.1	1.1	1.0	1.0	1.0	1.1	1.1	1.3	1.0	1.0	1.1	1.1	1.1
2002	1.0	1.1	1.1	0.9	0.9	1.0	1.0	1.1	1.0	1.1	1.0	1.1	1.1	1.0	1.0
2003	1.0	1.0	1.1	1.0	1.1	1.0	1.0	1.0	1.0	1.1	1.0	1.0	1.1	1.0	1.1
Lung cancer															
1992	1.3	1.3	1.4	1.5	1.5	0.9	0.8	0.8	0.9	2.2	1.2	1.1	1.2	1.3	1.7
1993	1.2	1.3	1.4	1.5	1.7	0.9	0.8	0.9	0.8	1.9	1.1	1.1	1.2	1.3	1.8
1994	1.3	1.3	1.4	1.6	1.6	0.9	0.9	0.9	0.8	0.6	1.2	1.1	1.2	1.3	1.3
1995	1.3	1.2	1.3	1.5	1.2	0.9	0.9	1.0	1.2	1.3	1.1	1.1	1.2	1.4	1.2
1996	1.2	1.2	1.4	1.2	1.8	1.0	0.9	1.0	1.0	1.5	1.1	1.1	1.2	1.2	1.7
1997	1.2	1.2	1.2	1.2	1.6	1.0	0.9	1.0	1.2	2.1	1.1	1.1	1.1	1.2	1.7
1998	1.2	1.2	1.3	1.4	1.7	0.9	0.9	0.9	1.2	0.9	1.1	1.1	1.1	1.3	1.4
1999	1.1	1.1	1.2	1.3	1.6	1.0	1.0	0.9	1.0	1.3	1.1	1.1	1.1	1.2	1.5
2000	1.1	1.1	1.2	1.1	1.6	1.0	1.0	1.0	0.7	1.0	1.0	1.0	1.2	1.0	1.5
2001	1.0	1.1	1.1	1.3	1.3	1.0	1.0	1.1	1.3	1.7	1.0	1.0	1.1	1.3	1.4
2002	1.0	1.1	1.2	0.9	1.3	1.0	1.1	1.2	1.2	1.6	1.0	1.1	1.2	1.0	1.4
2003	0.9	1.0	1.1	0.9	1.4	1.0	1.0	1.0	0.9	1.0	1.0	1.0	1.1	0.9	1.2

(continued)

Table 59 (continued): Standardised Mortality Ratios

	Males					Females					People				
Year	MC	IR	OR	R	VR	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Colorectal cancer															
1992	1.2	1.3	1.2	1.1	1.0	1.2	1.3	1.5	1.5	0.5	1.2	1.3	1.4	1.3	0.8
1993	1.2	1.3	1.4	1.2	0.8	1.3	1.3	1.2	1.2	1.6	1.2	1.3	1.3	1.2	1.1
1994	1.3	1.2	1.3	1.3	1.4	1.2	1.4	1.3	1.1	0.6	1.3	1.3	1.3	1.2	1.1
1995	1.2	1.3	1.2	0.8	0.7	1.2	1.3	1.3	1.0	1.4	1.2	1.3	1.3	0.9	1.0
1996	1.2	1.1	1.3	1.2	1.1	1.2	1.2	1.3	1.5	0.9	1.2	1.2	1.3	1.3	1.0
1997	1.2	1.3	1.3	1.2	0.6	1.2	1.3	1.4	0.6	1.0	1.2	1.3	1.3	1.0	0.8
1998	1.1	1.3	1.2	1.2	0.6	1.2	1.3	1.2	1.3	1.2	1.1	1.3	1.2	1.3	0.8
1999	1.1	1.1	1.1	1.3	1.0	1.1	1.1	1.3	1.1	0.7	1.1	1.1	1.2	1.2	0.9
2000	1.1	1.1	1.3	1.1	0.7	1.1	1.1	1.3	0.8	0.5	1.1	1.1	1.3	1.0	0.6
2001	1.1	1.1	1.2	1.5	0.7	1.0	1.2	1.2	1.1	1.2	1.1	1.1	1.2	1.3	0.9
2002	1.0	1.1	1.1	0.7	0.3	1.0	1.2	1.1	0.7	0.6	1.0	1.2	1.1	0.7	0.4
2003	1.0	1.0	1.0	0.8	0.7	0.9	1.0	1.0	1.0	0.8	1.0	1.0	1.0	0.9	0.7
Breast cancer															
1992	n.p.	n.p.	n.p.	n.p.	n.p.	1.2	1.2	1.2	0.9	1.7	1.2	1.2	1.2	0.9	1.7
1993	n.p.	n.p.	n.p.	n.p.	n.p.	1.3	1.2	1.2	1.2	1.0	1.3	1.2	1.2	1.2	1.0
1994	n.p.	n.p.	n.p.	n.p.	n.p.	1.2	1.1	1.1	1.3	0.8	1.2	1.1	1.1	1.3	0.9
1995	n.p.	n.p.	n.p.	n.p.	n.p.	1.2	1.1	1.2	1.0	0.9	1.2	1.1	1.2	1.0	0.9
1996	n.p.	n.p.	n.p.	n.p.	n.p.	1.1	1.1	1.1	1.2	1.3	1.1	1.1	1.1	1.1	1.3
1997	n.p.	n.p.	n.p.	n.p.	n.p.	1.1	1.1	1.1	0.9	0.4	1.1	1.1	1.1	0.9	0.4
1998	n.p.	n.p.	n.p.	n.p.	n.p.	1.1	1.1	1.1	0.7	1.0	1.1	1.1	1.1	0.7	1.1
1999	n.p.	n.p.	n.p.	n.p.	n.p.	1.0	1.0	1.0	1.2	1.3	1.0	1.0	1.0	1.2	1.3
2000	n.p.	n.p.	n.p.	n.p.	n.p.	1.0	1.0	1.0	0.9	1.1	1.0	1.0	1.0	0.9	1.1
2001	n.p.	n.p.	n.p.	n.p.	n.p.	1.0	1.0	1.0	0.9	0.6	1.0	1.0	1.0	0.9	0.6
2002	n.p.	n.p.	n.p.	n.p.	n.p.	1.0	1.0	1.0	0.8	0.8	1.0	1.0	1.0	0.8	0.8
2003	n.p.	n.p.	n.p.	n.p.	n.p.	1.0	1.0	1.1	0.7	1.2	1.0	1.0	1.1	0.7	1.2
Cervical cancer															
1992	..	..	..	..	..	1.7	1.7	2.2	2.9	3.0	1.7	1.7	2.2	2.9	3.0
1993	..	..	..	..	..	1.6	1.7	2.2	2.9	5.5	1.6	1.7	2.2	2.9	5.5
1994	..	..	..	..	..	1.7	1.7	2.1	3.7	5.2	1.7	1.7	2.1	3.7	5.2
1995	..	..	..	..	..	1.7	1.7	1.9	1.4	5.3	1.7	1.7	1.9	1.4	5.3
1996	..	..	..	..	..	1.4	1.8	1.2	1.2	5.1	1.4	1.8	1.2	1.2	5.1
1997	..	..	..	..	..	1.4	1.6	1.7	1.6	7.0	1.4	1.6	1.7	1.6	7.0
1998	..	..	..	..	..	1.3	1.1	1.6	2.7	3.5	1.3	1.1	1.6	2.7	3.5
1999	..	..	..	..	..	1.0	0.8	1.4	1.4	2.0	1.0	0.8	1.4	1.4	2.0
2000	..	..	..	..	..	1.2	1.0	1.7	2.0	2.0	1.2	1.0	1.7	2.0	2.0
2001	..	..	..	..	..	1.1	1.2	1.7	2.5	1.8	1.1	1.2	1.7	2.5	1.8
2002	..	..	..	..	..	0.9	0.9	1.4	1.1	0.9	0.9	0.9	1.4	1.1	0.9
2003	..	..	..	..	..	1.0	0.9	1.6	1.5	1.0	1.0	0.9	1.6	1.5	1.0

(continued)

Table 59 (continued): Standardised Mortality Ratios

	Males					Females					People				
Year	MC	IR	OR	R	VR	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Prostate cancer															
1992	1.2	1.4	1.5	1.1	0.9	..	..	..	..	..	1.2	1.4	1.5	1.1	0.9
1993	1.3	1.3	1.6	1.6	0.8	..	..	..	..	..	1.3	1.3	1.6	1.6	0.8
1994	1.2	1.4	1.5	1.8	0.7	..	..	..	..	..	1.2	1.4	1.5	1.8	0.7
1995	1.2	1.3	1.4	1.3	1.2	..	..	..	..	..	1.2	1.3	1.4	1.3	1.2
1996	1.2	1.3	1.5	1.3	0.5	..	..	..	..	..	1.2	1.3	1.5	1.3	0.5
1997	1.1	1.2	1.3	1.3	1.1	..	..	..	..	..	1.1	1.2	1.3	1.3	1.1
1998	1.1	1.2	1.3	1.4	1.4	..	..	..	..	..	1.1	1.2	1.3	1.4	1.4
1999	1.0	1.1	1.2	1.0	1.1	..	..	..	..	..	1.0	1.1	1.2	1.0	1.1
2000	1.0	1.2	1.4	1.3	1.0	..	..	..	..	..	1.0	1.2	1.4	1.3	1.0
2001	1.0	1.1	1.3	1.2	0.6	..	..	..	..	..	1.0	1.1	1.3	1.2	0.6
2002	1.0	1.2	1.2	1.0	0.9	..	..	..	..	..	1.0	1.2	1.2	1.0	0.9
2003	1.0	1.2	1.2	1.1	0.7	..	..	..	..	..	1.0	1.2	1.2	1.1	0.7
Melanoma															
1992	1.0	1.0	1.0	0.9	0.7	1.2	1.2	1.2	0.8	1.5	1.1	1.1	1.1	0.8	0.9
1993	1.0	1.1	1.3	1.0	0.4	0.9	1.1	1.0	1.2	0.6	1.0	1.1	1.2	1.0	0.5
1994	1.1	1.1	1.1	1.1	0.7	1.0	0.9	0.9	0.7	1.4	1.1	1.0	1.0	1.0	0.9
1995	1.1	1.0	1.2	0.9	0.4	1.0	1.2	1.2	1.0	0.0	1.0	1.1	1.2	0.9	0.3
1996	1.0	1.1	1.1	1.0	0.1	1.0	0.9	1.3	1.4	0.0	1.0	1.0	1.1	1.2	0.1
1997	0.9	1.2	1.1	0.4	0.0	1.0	1.0	1.2	1.0	0.7	1.0	1.1	1.1	0.6	0.2
1998	1.0	1.2	1.1	0.8	0.9	1.1	1.0	1.0	1.0	1.6	1.0	1.1	1.1	0.9	1.1
1999	1.0	1.2	0.9	1.2	0.3	1.0	1.1	1.0	1.2	0.7	1.0	1.2	0.9	1.2	0.5
2000	0.9	1.1	1.1	1.0	0.9	1.0	1.2	1.3	0.9	1.6	0.9	1.1	1.2	1.0	1.1
2001	1.0	1.2	1.1	0.7	0.5	1.1	1.2	1.1	0.2	0.6	1.0	1.2	1.1	0.5	0.5
2002	1.0	1.3	1.3	0.9	0.6	0.9	1.0	0.9	0.5	0.1	1.0	1.2	1.2	0.8	0.5
2003	1.0	1.2	1.3	1.2	0.4	1.0	1.1	0.8	0.2	0.6	1.0	1.2	1.1	0.9	0.5
'Other' neoplasms															
1992	1.1	1.1	1.2	1.0	1.5	1.1	1.0	1.1	1.1	1.5	1.1	1.1	1.1	1.0	1.5
1993	1.1	1.1	1.1	1.2	1.2	1.1	1.0	1.1	1.1	1.6	1.1	1.0	1.1	1.2	1.4
1994	1.1	1.1	1.2	1.2	1.1	1.1	1.0	1.1	1.2	1.4	1.1	1.1	1.1	1.2	1.2
1995	1.1	1.1	1.1	1.2	1.1	1.1	1.1	1.1	1.1	0.9	1.1	1.1	1.1	1.1	1.0
1996	1.1	1.1	1.2	1.1	1.3	1.1	1.1	1.1	1.2	1.0	1.1	1.1	1.2	1.1	1.2
1997	1.1	1.1	1.1	1.1	1.0	1.1	1.0	1.0	1.0	1.4	1.1	1.1	1.1	1.0	1.1
1998	1.0	1.1	1.1	1.0	1.4	1.0	1.0	1.0	1.0	1.4	1.0	1.0	1.0	1.0	1.4
1999	1.0	1.1	1.1	1.1	1.0	1.0	1.0	1.0	0.9	0.9	1.0	1.0	1.1	1.0	0.9
2000	1.0	1.0	1.1	1.1	1.2	1.0	1.0	1.0	1.0	1.2	1.0	1.0	1.0	1.0	1.2
2001	1.0	1.0	1.0	1.0	1.2	1.0	1.0	1.0	1.1	1.5	1.0	1.0	1.0	1.1	1.3
2002	1.0	1.0	1.1	1.0	0.8	1.0	1.0	1.1	1.1	1.3	1.0	1.0	1.1	1.0	1.0
2003	1.0	1.0	1.1	1.0	1.2	1.0	1.0	1.0	1.2	1.3	1.0	1.0	1.1	1.1	1.2

(continued)

Table 59 (continued): Standardised Mortality Ratios

	Males					Females					People				
Year	**MC**	**IR**	**OR**	**R**	**VR**	**MC**	**IR**	**OR**	**R**	**VR**	**MC**	**IR**	**OR**	**R**	**VR**
Circulatory diseases															
1992	1.7	1.8	1.8	1.9	2.7	1.6	1.6	1.7	1.8	2.2	1.6	1.7	1.8	1.8	2.5
1993	1.6	1.7	1.8	1.8	2.4	1.5	1.6	1.6	1.6	2.2	1.5	1.6	1.7	1.7	2.3
1994	1.6	1.7	1.8	1.8	2.2	1.5	1.5	1.6	1.6	2.2	1.5	1.6	1.7	1.7	2.2
1995	1.5	1.5	1.6	1.6	2.2	1.4	1.4	1.5	1.4	1.8	1.4	1.5	1.6	1.5	2.1
1996	1.4	1.5	1.6	1.6	1.9	1.3	1.4	1.4	1.3	1.6	1.4	1.5	1.5	1.4	1.8
1997	1.3	1.5	1.5	1.5	1.9	1.3	1.4	1.4	1.4	1.6	1.3	1.4	1.5	1.4	1.8
1998	1.3	1.3	1.4	1.4	2.1	1.2	1.2	1.3	1.3	1.7	1.2	1.3	1.4	1.4	1.9
1999	1.2	1.3	1.3	1.4	1.8	1.1	1.2	1.3	1.3	1.7	1.2	1.3	1.3	1.4	1.8
2000	1.1	1.2	1.2	1.3	1.6	1.1	1.1	1.2	1.2	1.7	1.1	1.2	1.2	1.3	1.7
2001	1.0	1.1	1.2	1.3	1.7	1.0	1.1	1.1	1.2	1.4	1.0	1.1	1.2	1.3	1.5
2002	1.0	1.1	1.2	1.2	1.4	1.0	1.1	1.2	1.2	1.7	1.0	1.1	1.2	1.2	1.6
2003	1.0	1.0	1.1	1.1	1.4	1.0	1.0	1.0	1.0	1.5	1.0	1.0	1.1	1.1	1.4
Cerebrovascular disease															
1992	1.5	1.4	1.5	1.6	2.2	1.4	1.4	1.4	1.3	1.6	1.4	1.4	1.4	1.4	1.9
1993	1.4	1.4	1.3	1.4	1.6	1.4	1.3	1.4	1.3	1.4	1.4	1.4	1.4	1.4	1.5
1994	1.5	1.4	1.5	1.7	2.0	1.3	1.3	1.4	1.5	2.1	1.4	1.4	1.4	1.6	2.1
1995	1.4	1.3	1.4	1.3	2.2	1.3	1.3	1.3	1.2	1.8	1.3	1.3	1.3	1.2	2.0
1996	1.3	1.4	1.4	1.2	1.3	1.3	1.3	1.2	1.3	1.2	1.3	1.3	1.3	1.3	1.3
1997	1.2	1.3	1.3	1.1	1.9	1.2	1.2	1.2	1.2	1.1	1.2	1.3	1.3	1.1	1.5
1998	1.2	1.2	1.2	1.2	2.0	1.2	1.1	1.1	1.1	1.3	1.2	1.2	1.2	1.2	1.6
1999	1.1	1.2	1.2	1.2	1.9	1.1	1.1	1.2	1.0	1.3	1.1	1.1	1.2	1.1	1.6
2000	1.1	1.1	1.2	1.3	1.2	1.1	1.1	1.1	1.0	1.5	1.1	1.1	1.1	1.1	1.3
2001	1.0	1.0	1.1	1.3	1.0	1.0	1.1	1.0	0.9	0.7	1.0	1.0	1.0	1.1	0.9
2002	1.0	1.1	1.1	0.9	1.2	1.0	1.0	1.0	0.9	1.1	1.0	1.0	1.0	0.9	1.1
2003	1.0	1.0	0.9	1.0	1.0	1.0	1.0	0.9	0.9	1.1	1.0	1.0	0.9	1.0	1.1
Coronary heart disease															
1992	1.8	1.9	2.0	2.0	3.0	1.7	1.8	1.9	2.0	2.3	1.8	1.9	2.0	2.0	2.7
1993	1.7	1.8	1.9	2.0	2.7	1.5	1.7	1.7	1.7	2.3	1.6	1.8	1.8	1.9	2.5
1994	1.6	1.8	1.8	1.8	2.2	1.6	1.7	1.7	1.6	2.3	1.6	1.7	1.8	1.8	2.3
1995	1.6	1.7	1.7	1.7	2.1	1.5	1.5	1.6	1.4	1.5	1.5	1.6	1.7	1.6	1.9
1996	1.5	1.6	1.7	1.6	2.0	1.4	1.5	1.5	1.2	1.7	1.5	1.6	1.6	1.5	1.9
1997	1.4	1.6	1.5	1.6	1.9	1.4	1.4	1.5	1.5	1.5	1.4	1.5	1.5	1.6	1.7
1998	1.3	1.4	1.5	1.5	2.2	1.3	1.3	1.3	1.2	1.9	1.3	1.3	1.4	1.3	2.1
1999	1.2	1.4	1.3	1.5	1.9	1.2	1.2	1.3	1.3	1.4	1.2	1.3	1.3	1.4	1.7
2000	1.1	1.2	1.2	1.3	1.8	1.1	1.2	1.2	1.2	1.7	1.1	1.2	1.2	1.3	1.7
2001	1.0	1.1	1.2	1.2	1.6	1.0	1.1	1.1	1.3	1.4	1.0	1.1	1.2	1.3	1.6
2002	1.0	1.1	1.2	1.2	1.4	1.0	1.1	1.1	1.2	1.6	1.0	1.1	1.1	1.2	1.5
2003	1.0	1.1	1.1	1.1	1.2	1.0	1.0	1.0	0.9	1.3	1.0	1.0	1.1	1.0	1.2

(continued)

Table 59 (continued): Standardised Mortality Ratios

	Males					Females					People				
Year	MC	IR	OR	R	VR	MC	IR	OR	R	VR	MC	IR	OR	R	VR
'Other' circulatory diseases															
1992	1.5	1.7	1.7	1.9	2.5	1.5	1.6	1.6	1.7	2.8	1.5	1.6	1.7	1.8	2.6
1993	1.5	1.6	1.8	1.7	2.2	1.4	1.5	1.6	1.7	3.0	1.4	1.6	1.7	1.7	2.5
1994	1.5	1.5	1.7	1.6	2.4	1.4	1.5	1.5	1.5	2.2	1.4	1.5	1.6	1.6	2.3
1995	1.4	1.3	1.6	1.6	2.4	1.3	1.3	1.5	1.7	2.6	1.3	1.3	1.6	1.7	2.5
1996	1.3	1.5	1.5	1.7	2.2	1.3	1.4	1.4	1.3	2.0	1.3	1.4	1.5	1.5	2.1
1997	1.3	1.5	1.6	1.5	1.8	1.2	1.4	1.4	1.5	2.3	1.3	1.4	1.5	1.5	2.0
1998	1.2	1.3	1.5	1.5	2.2	1.1	1.2	1.4	1.6	1.7	1.2	1.3	1.4	1.6	1.9
1999	1.2	1.3	1.4	1.5	1.5	1.1	1.3	1.3	1.5	2.5	1.1	1.3	1.4	1.5	1.9
2000	1.0	1.1	1.4	1.6	1.7	1.0	1.2	1.3	1.3	1.8	1.0	1.1	1.4	1.4	1.7
2001	1.0	1.1	1.3	1.4	2.3	1.0	1.1	1.2	1.4	2.0	1.0	1.1	1.3	1.4	2.2
2002	1.0	1.2	1.3	1.5	1.7	1.0	1.2	1.3	1.5	2.7	1.0	1.2	1.3	1.5	2.2
2003	1.0	1.1	1.2	1.3	2.2	0.9	1.1	1.2	1.4	2.2	0.9	1.1	1.2	1.3	2.2
Respiratory diseases															
1992	1.3	1.4	1.6	1.9	3.7	1.0	1.0	1.0	1.5	3.3	1.1	1.2	1.3	1.7	3.5
1993	1.1	1.3	1.5	1.9	3.8	0.8	0.9	1.0	1.3	3.3	1.0	1.1	1.3	1.6	3.6
1994	1.2	1.3	1.4	1.5	3.3	0.9	1.0	1.0	1.1	2.3	1.0	1.1	1.2	1.3	2.9
1995	1.1	1.1	1.3	1.5	2.4	0.9	0.9	0.9	1.1	3.3	1.0	1.0	1.1	1.3	2.8
1996	1.1	1.1	1.3	1.5	2.3	0.9	1.0	1.0	1.4	2.6	1.0	1.1	1.2	1.5	2.4
1997	1.1	1.2	1.4	1.4	1.9	1.0	1.0	1.1	1.4	1.5	1.1	1.1	1.3	1.4	1.8
1998	1.0	1.1	1.3	1.4	2.6	0.9	0.9	1.0	1.4	2.7	1.0	1.0	1.1	1.4	2.6
1999	1.0	1.1	1.2	1.3	2.2	0.9	0.9	1.0	1.2	1.8	0.9	1.0	1.1	1.2	2.0
2000	1.1	1.0	1.3	1.6	2.1	1.0	0.9	1.0	1.2	2.0	1.0	1.0	1.1	1.4	2.1
2001	1.0	1.0	1.2	1.4	2.3	1.0	0.9	0.9	1.0	2.4	1.0	1.0	1.1	1.2	2.3
2002	1.0	1.1	1.2	1.4	2.1	1.0	1.0	1.0	1.2	1.9	1.0	1.1	1.1	1.3	2.0
2003	1.0	1.1	1.1	1.3	1.9	1.0	1.1	1.1	1.0	1.8	1.0	1.1	1.1	1.2	1.9
Pneumonia and influenza															
1992	0.9	0.9	1.1	2.2	4.8	0.7	0.8	1.0	1.4	4.0	0.8	0.9	1.1	1.8	4.4
1993	0.7	0.8	0.9	1.7	4.1	0.6	0.6	0.8	1.1	1.7	0.7	0.7	0.8	1.4	3.0
1994	0.8	0.8	1.0	1.3	4.3	0.7	0.8	0.8	1.1	3.4	0.7	0.8	0.9	1.2	3.9
1995	0.7	0.6	0.8	1.4	3.9	0.6	0.6	0.8	1.0	5.0	0.6	0.6	0.8	1.2	4.4
1996	0.7	0.6	0.8	1.1	2.7	0.6	0.7	0.9	0.8	3.0	0.6	0.7	0.9	0.9	2.8
1997	0.9	0.8	0.9	1.1	1.9	0.9	0.9	1.0	1.2	1.7	0.9	0.8	0.9	1.2	1.8
1998	0.7	0.6	0.8	1.4	2.4	0.8	0.8	0.8	1.3	3.4	0.8	0.7	0.8	1.4	2.8
1999	0.6	0.6	0.7	0.9	1.7	0.7	0.7	0.7	1.1	1.5	0.7	0.7	0.7	1.0	1.6
2000	1.1	0.9	1.1	1.7	2.6	1.0	0.9	1.1	1.3	1.5	1.0	0.9	1.1	1.5	2.1
2001	0.9	0.8	0.9	1.6	1.9	0.9	0.9	0.8	0.8	2.3	0.9	0.8	0.8	1.2	2.1
2002	1.0	0.9	1.1	1.0	2.3	1.0	0.9	0.9	1.4	1.5	1.0	0.9	1.0	1.2	1.9
2003	1.1	1.1	1.0	1.3	2.3	1.1	1.2	1.1	0.8	0.9	1.1	1.1	1.1	1.1	1.6

(continued)

Table 59 (continued): Standardised Mortality Ratios

	Males					Females					People				
Year	MC	IR	OR	R	VR	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Asthma															
1992	2.1	2.7	3.0	4.9	2.4	1.8	2.0	2.1	2.4	2.6	1.9	2.3	2.4	3.6	2.5
1993	1.9	2.9	2.9	2.9	4.1	1.8	2.0	2.4	2.6	3.8	1.9	2.4	2.6	2.7	4.0
1994	1.9	2.8	2.7	2.3	6.2	2.0	2.2	2.3	3.1	2.4	2.0	2.4	2.5	2.8	4.3
1995	1.8	1.8	2.4	2.7	1.8	1.8	2.0	2.8	1.7	3.6	1.8	2.0	2.6	2.2	2.7
1996	1.8	2.1	2.6	2.9	2.2	1.7	1.8	1.7	1.5	2.4	1.7	1.9	2.1	2.1	2.3
1997	1.6	1.7	1.9	4.9	2.1	1.4	1.5	1.9	1.8	1.6	1.5	1.6	1.9	3.2	1.9
1998	1.5	1.6	2.0	1.2	1.1	1.5	1.4	1.6	0.8	5.5	1.5	1.5	1.7	1.0	3.4
1999	1.2	1.4	1.8	2.6	1.3	1.2	1.4	1.4	1.7	0.1	1.2	1.4	1.5	2.1	0.6
2000	1.3	1.1	1.4	3.6	2.3	1.3	1.5	1.2	1.5	1.1	1.3	1.4	1.3	2.5	1.7
2001	1.3	1.3	1.5	0.9	4.5	1.1	1.0	1.0	2.3	2.3	1.2	1.1	1.2	1.7	3.4
2002	1.0	1.6	1.2	0.8	1.1	1.0	1.4	1.0	0.8	1.0	1.0	1.4	1.1	0.8	1.0
2003	0.7	0.9	1.0	0.4	1.0	0.9	1.0	0.9	0.6	3.5	0.8	1.0	0.9	0.5	2.3
Chronic obstructive pulmonary disease															
1992	1.7	1.9	2.2	2.1	3.9	1.1	1.1	1.1	1.5	3.6	1.4	1.6	1.7	1.9	3.8
1993	1.4	1.7	2.0	2.4	4.4	1.0	1.1	1.1	1.1	3.9	1.2	1.4	1.6	1.9	4.2
1994	1.5	1.7	1.8	1.9	3.0	1.1	1.1	1.1	1.0	1.8	1.3	1.4	1.6	1.6	2.6
1995	1.4	1.6	1.7	1.8	2.3	1.1	1.0	1.0	1.1	2.9	1.2	1.3	1.5	1.5	2.5
1996	1.4	1.6	1.8	2.0	2.2	1.2	1.2	1.2	2.2	3.3	1.3	1.4	1.5	2.1	2.6
1997	1.4	1.6	1.9	1.7	2.3	1.2	1.2	1.3	1.7	1.8	1.3	1.5	1.6	1.7	2.2
1998	1.2	1.5	1.8	1.7	3.2	1.1	1.1	1.2	1.8	2.4	1.1	1.4	1.5	1.7	2.9
1999	1.2	1.4	1.6	1.6	2.7	1.1	1.1	1.2	1.3	2.6	1.1	1.3	1.5	1.5	2.6
2000	1.1	1.2	1.6	1.8	2.4	1.0	1.0	1.1	1.2	2.8	1.1	1.1	1.4	1.6	2.5
2001	1.0	1.2	1.5	1.5	2.8	1.0	1.0	1.2	1.3	2.5	1.0	1.1	1.4	1.5	2.7
2002	1.0	1.2	1.5	1.8	2.4	1.1	1.1	1.1	1.3	2.2	1.0	1.2	1.3	1.6	2.4
2003	1.0	1.1	1.3	1.4	1.9	1.0	1.1	1.1	1.2	2.5	1.0	1.1	1.2	1.3	2.1
'Other' respiratory diseases															
1992	0.8	0.7	0.6	0.9	2.7	0.8	0.7	0.7	1.3	1.9	0.8	0.7	0.6	1.0	2.4
1993	0.7	0.6	0.7	0.9	2.4	0.7	0.5	0.8	1.5	4.3	0.7	0.6	0.7	1.1	3.2
1994	0.7	0.7	0.7	0.7	2.4	0.7	0.8	0.6	0.8	1.6	0.7	0.7	0.7	0.7	2.1
1995	0.7	0.6	0.7	0.7	1.4	0.7	0.7	0.6	0.9	1.7	0.7	0.6	0.7	0.8	1.5
1996	0.7	0.7	0.6	0.6	1.9	0.8	0.7	0.7	1.0	0.8	0.7	0.7	0.7	0.7	1.4
1997	0.9	0.7	0.8	0.6	1.1	0.9	0.7	0.8	1.0	0.9	0.9	0.7	0.8	0.8	1.0
1998	0.8	0.7	0.7	0.9	1.7	0.8	0.7	0.6	0.9	1.5	0.8	0.7	0.6	0.9	1.6
1999	0.9	0.7	0.8	0.9	1.9	0.8	0.6	0.8	0.8	1.2	0.8	0.7	0.8	0.8	1.6
2000	1.0	0.8	0.7	1.0	0.9	1.0	0.8	0.8	0.7	1.6	1.0	0.8	0.8	0.9	1.2
2001	1.0	0.8	0.7	1.0	1.3	0.9	0.8	0.7	0.5	2.1	0.9	0.8	0.7	0.8	1.6
2002	1.0	0.9	0.9	1.0	1.3	1.1	0.8	0.9	0.9	2.1	1.0	0.9	0.9	0.9	1.6
2003	1.0	0.8	0.8	1.0	1.8	1.0	0.9	1.0	1.1	1.4	1.0	0.9	0.9	1.1	1.7

(continued)

Table 59 (continued): Standardised Mortality Ratios

	Males					Females					People				
Year	MC	IR	OR	R	VR	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Injury and poisoning															
1992	1.3	1.5	1.8	2.0	3.5	1.2	1.5	1.7	1.7	2.9	1.3	1.5	1.8	2.0	3.4
1993	1.2	1.4	1.8	2.3	2.9	1.1	1.2	1.5	1.8	3.8	1.1	1.3	1.7	2.2	3.1
1994	1.1	1.5	1.7	2.0	3.2	1.1	1.3	1.3	1.4	3.3	1.1	1.4	1.6	1.8	3.3
1995	1.1	1.5	1.9	2.1	2.7	1.2	1.3	1.5	1.9	3.4	1.1	1.4	1.8	2.0	2.9
1996	1.2	1.5	1.9	2.0	3.2	1.0	1.3	1.4	1.5	3.5	1.1	1.4	1.7	1.9	3.2
1997	1.1	1.4	1.7	2.0	2.5	1.1	1.3	1.6	2.0	3.0	1.1	1.4	1.7	2.0	2.6
1998	1.2	1.5	1.6	2.2	3.1	1.1	1.3	1.3	2.0	3.4	1.2	1.4	1.5	2.1	3.2
1999	1.2	1.5	1.6	2.0	2.9	1.1	1.4	1.4	1.2	2.5	1.2	1.4	1.6	1.8	2.8
2000	1.1	1.4	1.6	2.0	3.4	1.1	1.3	1.4	1.9	3.6	1.1	1.3	1.5	1.9	3.4
2001	1.0	1.4	1.5	1.7	2.9	1.0	1.2	1.3	1.7	2.3	1.0	1.3	1.4	1.7	2.8
2002	1.0	1.3	1.5	1.7	2.8	1.0	1.3	1.3	1.6	3.6	1.0	1.3	1.4	1.7	3.0
2003	1.0	1.2	1.5	1.6	3.3	1.0	1.2	1.3	1.4	2.6	1.0	1.2	1.4	1.6	3.2
Suicide															
1992	1.1	1.3	1.6	1.4	1.8	1.1	1.1	0.9	0.7	0.6	1.1	1.3	1.4	1.2	1.6
1993	1.1	1.2	1.4	1.2	1.1	0.9	0.8	0.9	0.7	1.0	1.0	1.1	1.3	1.1	1.1
1994	1.1	1.4	1.3	1.4	2.1	1.1	0.7	0.7	0.6	0.3	1.1	1.2	1.2	1.2	1.8
1995	1.1	1.3	1.5	1.4	1.3	1.2	0.9	1.1	0.9	0.4	1.1	1.2	1.4	1.3	1.1
1996	1.1	1.4	1.6	1.3	2.3	1.0	1.0	0.8	0.6	1.9	1.1	1.3	1.4	1.2	2.2
1997	1.3	1.6	1.7	1.8	1.8	1.3	1.2	1.4	0.9	1.2	1.3	1.5	1.6	1.6	1.6
1998	1.3	1.6	1.5	1.9	2.4	1.1	1.2	0.9	1.3	1.4	1.2	1.5	1.4	1.8	2.2
1999	1.2	1.4	1.5	1.7	1.9	1.0	1.1	1.0	0.7	1.5	1.1	1.3	1.4	1.5	1.9
2000	1.0	1.3	1.4	1.5	3.2	1.1	1.0	0.9	1.2	1.7	1.0	1.3	1.3	1.4	2.9
2001	1.1	1.3	1.5	1.5	2.7	1.0	1.1	1.1	1.2	1.5	1.1	1.3	1.4	1.4	2.4
2002	1.0	1.3	1.5	1.7	2.6	1.0	1.1	1.0	0.9	2.9	1.0	1.2	1.4	1.5	2.7
2003	1.0	1.2	1.2	1.4	1.9	1.0	1.0	0.7	0.6	0.6	1.0	1.1	1.1	1.3	1.6
Interpersonal violence															
1992	1.2	0.8	1.8	2.5	8.9	1.7	1.1	1.5	5.5	5.9	1.4	0.9	1.7	3.4	8.0
1993	1.3	1.0	1.8	3.5	5.3	1.3	1.1	1.6	2.9	14.0	1.3	1.0	1.7	3.3	8.1
1994	1.3	1.1	1.9	2.9	5.9	1.3	1.4	1.7	2.6	17.6	1.3	1.2	1.8	2.8	9.6
1995	1.1	1.1	1.8	3.4	6.7	1.6	1.2	1.4	4.3	8.1	1.3	1.2	1.7	3.7	7.1
1996	1.3	1.0	1.7	3.8	5.5	1.1	1.0	1.9	4.0	8.2	1.2	1.0	1.8	3.9	6.4
1997	1.4	0.9	1.5	2.5	5.7	1.4	1.1	1.3	3.1	11.8	1.4	1.0	1.4	2.7	7.6
1998	1.2	1.0	1.3	2.0	4.9	1.1	1.1	0.5	7.0	15.7	1.2	1.0	1.0	3.5	8.2
1999	1.2	1.1	1.2	2.5	5.3	1.1	1.1	1.9	0.5	3.4	1.2	1.1	1.4	1.9	4.7
2000	1.0	1.1	1.3	3.5	8.0	0.9	1.5	1.8	3.5	17.3	1.0	1.2	1.5	3.5	11.0
2001	1.1	0.8	1.3	2.5	5.9	1.1	1.2	1.3	6.6	5.8	1.1	1.0	1.3	3.8	5.9
2002	1.0	0.9	1.6	2.5	5.6	1.1	1.3	1.1	5.3	11.3	1.0	1.0	1.5	3.4	7.3
2003	0.9	1.2	1.3	2.1	7.5	0.8	0.6	1.5	2.5	2.8	0.9	1.0	1.3	2.2	6.0

(continued)

Table 59 (continued): Standardised Mortality Ratios

	Males					Females					People				
Year	**MC**	**IR**	**OR**	**R**	**VR**	**MC**	**IR**	**OR**	**R**	**VR**	**MC**	**IR**	**OR**	**R**	**VR**
Motor vehicle traffic accidents															
1992	1.4	2.1	2.2	2.8	4.8	2.0	2.8	3.7	3.3	5.7	1.5	2.3	2.6	2.9	5.0
1993	1.2	2.1	2.6	3.6	4.9	1.7	2.3	2.9	4.8	6.4	1.3	2.1	2.6	3.9	5.2
1994	1.3	2.2	2.1	2.5	3.7	1.6	2.8	2.5	2.8	5.3	1.3	2.3	2.2	2.5	4.0
1995	1.3	2.1	2.5	2.8	4.0	1.6	2.9	3.6	3.8	8.0	1.3	2.3	2.8	3.0	4.8
1996	1.2	2.1	2.6	2.6	3.8	1.5	2.3	2.3	3.0	7.5	1.3	2.1	2.5	2.7	4.5
1997	1.1	1.8	2.4	2.6	4.4	1.4	2.6	3.2	3.4	4.7	1.2	2.0	2.6	2.8	4.4
1998	1.1	1.9	2.1	3.0	4.7	1.5	2.0	2.2	4.1	5.4	1.2	1.9	2.1	3.2	4.8
1999	1.1	1.9	2.1	2.5	3.5	1.3	2.5	2.8	2.4	4.3	1.1	2.1	2.2	2.5	3.6
2000	1.1	1.8	2.3	2.8	4.3	1.3	2.1	2.6	4.4	4.2	1.2	1.9	2.4	3.2	4.3
2001	1.1	2.0	1.9	2.4	2.7	1.1	2.5	1.9	2.3	4.0	1.1	2.1	1.9	2.4	2.9
2002	1.0	2.1	1.9	2.2	3.6	1.0	2.2	2.4	3.3	6.9	1.0	2.1	2.0	2.5	4.2
2003	0.9	1.7	2.0	2.3	5.8	0.9	2.0	2.3	3.4	6.7	0.9	1.7	2.1	2.6	6.0
'Other' land transport accidents															
1992	n.p.	n.p.	n.p.	n.p.		n.p.	n.p.	n.p.	n.p.		n.p.	n.p.	n.p.	n.p.	
1993	n.p.	n.p.	n.p.	n.p.		n.p.	n.p.	n.p.	n.p.		n.p.	n.p.	n.p.	n.p.	
1994	n.p.	n.p.	n.p.	n.p.		n.p.	n.p.	n.p.	n.p.		n.p.	n.p.	n.p.	n.p.	
1995	n.p.	n.p.	n.p.	n.p.		n.p.	n.p.	n.p.	n.p.		n.p.	n.p.	n.p.	n.p.	
1996	n.p.	n.p.	n.p.	n.p.		n.p.	n.p.	n.p.	n.p.		n.p.	n.p.	n.p.	n.p.	
1997	1.6	2.5	2.8	2.5		1.7	2.2	1.6	5.2		1.6	2.5	2.6	3.0	
1998	1.1	2.5	2.8	4.7		1.5	2.1	2.2	8.1		1.1	2.4	2.7	5.2	
1999	1.2	2.4	3.3	5.0		1.2	1.9	2.0	0.8		1.2	2.3	3.0	4.2	
2000	0.8	1.6	3.0	5.6		1.6	1.3	1.6	5.1		1.0	1.5	2.7	5.5	
2001	1.4	2.9	3.4	6.1		1.0	1.5	2.6	5.5		1.3	2.6	3.2	6.0	
2002	0.9	2.1	2.8	5.4		1.0	1.6	1.8	1.7		0.9	2.0	2.5	4.6	
2003	0.7	1.7	2.7	6.2		1.0	1.4	1.2	3.2		0.8	1.6	2.3	5.6	
'Other' injuries and poisoning															
1992	1.3	1.3	1.7	2.1	3.7	1.0	1.3	1.4	1.3	2.7	1.2	1.3	1.6	1.8	3.4
1993	1.2	1.2	1.7	2.4	3.1	0.9	1.0	1.3	1.4	3.0	1.1	1.1	1.6	2.1	3.1
1994	1.1	1.3	1.7	2.1	3.6	1.0	1.1	1.2	1.2	2.4	1.0	1.2	1.5	1.8	3.3
1995	1.0	1.3	1.8	2.2	2.7	1.0	1.1	1.1	1.6	2.9	1.0	1.2	1.6	2.0	2.8
1996	1.2	1.4	1.7	2.2	3.2	0.9	1.1	1.3	1.3	2.4	1.1	1.2	1.6	1.9	3.0
1997	0.9	1.1	1.5	1.7	1.8	0.9	1.0	1.2	2.0	2.3	0.9	1.0	1.4	1.8	1.9
1998	1.1	1.2	1.3	1.9	2.6	1.0	1.1	1.3	1.3	2.4	1.0	1.2	1.3	1.7	2.6
1999	1.2	1.3	1.5	1.9	3.2	1.0	1.2	1.2	1.2	2.3	1.1	1.2	1.4	1.7	2.9
2000	1.0	1.2	1.3	1.7	2.5	1.1	1.1	1.2	1.3	2.7	1.1	1.2	1.3	1.6	2.5
2001	0.9	1.1	1.3	1.5	2.9	1.0	0.9	1.2	1.3	1.7	1.0	1.0	1.3	1.4	2.5
2002	0.9	1.1	1.2	1.4	2.1	1.0	1.1	1.2	1.1	1.9	0.9	1.1	1.2	1.3	2.0
2003	1.0	1.0	1.4	1.4	2.8	1.0	1.1	1.2	1.1	2.3	1.0	1.1	1.3	1.3	2.6

(continued)

Table 59 (continued): Standardised Mortality Ratios

	Males					Females					People				
Year	MC	IR	OR	R	VR	MC	IR	OR	R	VR	MC	IR	OR	R	VR
All other causes															
1992	1.2	1.1	1.2	1.3	2.7	1.0	1.1	1.2	1.4	3.4	1.1	1.1	1.2	1.3	3.0
1993	1.2	1.0	1.2	1.4	2.6	1.0	1.0	1.1	1.3	2.9	1.1	1.0	1.2	1.3	2.8
1994	1.2	1.1	1.2	1.4	1.8	1.1	1.1	1.2	1.2	2.5	1.1	1.1	1.2	1.3	2.1
1995	1.1	1.1	1.2	1.3	2.4	1.0	1.1	1.1	1.3	2.6	1.1	1.1	1.2	1.3	2.5
1996	1.2	1.1	1.2	1.3	1.9	1.1	1.1	1.2	1.2	2.2	1.1	1.1	1.2	1.2	2.0
1997	1.1	1.0	1.1	1.3	2.3	1.0	1.1	1.1	1.2	2.9	1.1	1.1	1.1	1.3	2.6
1998	1.1	1.0	1.1	1.4	2.1	1.0	1.0	1.1	1.2	2.2	1.0	1.0	1.1	1.3	2.2
1999	1.1	1.1	1.1	1.3	2.2	1.0	1.1	1.2	1.4	2.8	1.0	1.1	1.2	1.3	2.5
2000	1.0	1.0	1.2	1.2	2.4	1.0	1.0	1.1	1.4	3.0	1.0	1.0	1.1	1.3	2.6
2001	1.0	1.0	1.1	1.2	2.2	1.0	1.0	1.2	1.3	2.2	1.0	1.0	1.1	1.2	2.2
2002	1.0	1.1	1.1	1.3	2.2	1.0	1.1	1.1	1.6	2.8	1.0	1.1	1.1	1.4	2.4
2003	1.0	1.0	1.1	1.2	2.3	1.0	1.1	1.1	1.3	2.3	1.0	1.0	1.1	1.2	2.3
Diabetes															
1992	0.9	0.9	1.1	1.5	3.7	1.1	1.2	1.6	1.6	9.3	1.0	1.0	1.3	1.5	5.7
1993	1.0	1.0	1.2	1.9	4.2	1.2	1.1	1.5	2.2	7.4	1.1	1.0	1.4	2.0	5.3
1994	1.1	1.0	1.2	1.7	2.5	1.2	1.2	1.5	2.0	5.4	1.1	1.1	1.3	1.8	3.5
1995	1.0	1.0	1.2	1.5	2.7	1.1	1.2	1.6	2.5	6.6	1.0	1.1	1.4	1.9	4.1
1996	1.1	1.1	1.3	1.8	3.5	1.2	1.2	1.4	1.9	4.6	1.2	1.2	1.3	1.8	3.9
1997	1.1	1.0	1.3	1.7	3.3	1.2	1.3	1.6	2.6	8.0	1.1	1.1	1.4	2.1	5.0
1998	1.0	1.0	1.3	1.7	3.2	1.0	1.1	1.5	2.3	5.2	1.0	1.1	1.4	1.9	4.0
1999	1.0	1.0	1.1	1.3	2.9	1.0	1.2	1.6	1.7	7.4	1.0	1.1	1.3	1.5	4.5
2000	1.0	1.0	1.5	1.5	3.1	1.0	1.1	1.5	2.1	6.8	1.0	1.0	1.5	1.7	4.4
2001	1.0	1.0	1.3	1.4	3.1	1.0	1.0	1.4	2.5	7.3	1.0	1.0	1.3	1.8	4.7
2002	1.0	1.1	1.3	2.1	2.7	1.0	1.1	1.5	3.0	7.3	1.0	1.1	1.4	2.5	4.4
2003	1.0	1.0	1.3	1.8	3.3	1.0	1.2	1.3	2.3	4.4	1.0	1.1	1.3	2.0	3.7
Renal failure															
1992	0.9	0.8	0.8	1.1	1.8	0.8	0.9	1.0	1.2	1.6	0.8	0.9	0.9	1.1	1.7
1993	1.0	0.9	0.8	1.3	1.5	0.9	0.9	1.2	1.3	4.8	0.9	0.9	1.0	1.3	2.9
1994	1.0	0.9	1.1	1.5	0.8	1.0	0.9	1.1	0.9	0.8	1.0	0.9	1.1	1.2	0.8
1995	1.0	0.8	0.8	1.2	3.6	1.0	0.9	0.9	0.6	3.2	1.0	0.9	0.9	0.9	3.5
1996	1.0	1.0	1.1	0.6	1.5	1.0	1.1	1.3	1.1	3.0	1.0	1.0	1.2	0.9	2.1
1997	1.1	1.0	1.1	1.3	2.5	1.0	0.9	1.1	1.5	3.8	1.0	0.9	1.1	1.4	3.1
1998	1.1	1.0	1.0	1.4	1.4	1.1	0.9	1.2	0.8	4.4	1.1	0.9	1.1	1.1	2.6
1999	1.0	1.0	1.1	1.0	3.2	1.0	1.1	1.2	1.9	3.6	1.0	1.0	1.1	1.4	3.3
2000	1.0	0.8	1.0	1.1	1.9	1.0	1.0	1.0	0.9	5.0	1.0	0.9	1.0	1.0	3.2
2001	0.9	0.9	0.9	0.9	1.2	0.9	0.9	1.2	0.9	1.1	0.9	0.9	1.1	0.9	1.1
2002	1.0	0.9	1.0	0.9	1.6	1.1	1.0	0.9	1.3	2.3	1.0	0.9	0.9	1.1	1.9
2003	1.0	0.9	0.9	0.7	2.5	1.0	1.0	1.0	1.0	4.2	1.0	1.0	1.0	0.9	3.2

(continued)

Table 59 (continued): Standardised Mortality Ratios

	Males					Females					People				
Year	MC	IR	OR	R	VR	MC	IR	OR	R	VR	MC	IR	OR	R	VR
All other causes n.e.d.															
1992	1.3	1.1	1.2	1.3	2.6	1.0	1.1	1.1	1.4	2.8	1.1	1.1	1.2	1.3	2.7
1993	1.2	1.0	1.2	1.3	2.5	1.0	1.0	1.1	1.2	2.3	1.1	1.0	1.1	1.2	2.4
1994	1.2	1.2	1.2	1.3	1.8	1.1	1.1	1.2	1.1	2.2	1.1	1.1	1.2	1.2	2.0
1995	1.2	1.1	1.2	1.3	2.3	1.0	1.1	1.1	1.2	2.2	1.1	1.1	1.1	1.3	2.2
1996	1.2	1.1	1.2	1.2	1.7	1.0	1.1	1.2	1.2	1.9	1.1	1.1	1.2	1.2	1.8
1997	1.1	1.1	1.1	1.3	2.2	1.0	1.1	1.1	1.0	2.3	1.1	1.1	1.1	1.1	2.2
1998	1.1	1.0	1.1	1.4	2.0	1.0	1.0	1.1	1.1	1.8	1.0	1.0	1.1	1.3	1.9
1999	1.1	1.1	1.1	1.3	2.0	1.0	1.1	1.1	1.3	2.3	1.0	1.1	1.1	1.3	2.1
2000	1.0	1.0	1.1	1.1	2.3	1.0	1.0	1.1	1.3	2.5	1.0	1.0	1.1	1.2	2.4
2001	1.0	1.0	1.0	1.1	2.1	1.0	1.0	1.1	1.2	1.7	1.0	1.0	1.1	1.1	1.9
2002	1.0	1.1	1.1	1.2	2.1	1.0	1.1	1.1	1.4	2.3	1.0	1.1	1.1	1.3	2.2
2003	1.0	1.0	1.1	1.1	2.1	1.0	1.1	1.1	1.2	2.0	1.0	1.0	1.1	1.2	2.0

Glossary

Age standardisation: A method of removing the influence of age when comparing populations with different age structures. This is usually necessary because the rates of many diseases vary strongly (usually increasing) with age. The age structures of the different populations are converted to the same 'standard' structure, then the disease rates that would have occurred with that structure are calculated and compared. Age standardisation can be achieved by either the direct or indirect methods (see page 2).

ARIA+: An improved continuous measure of accessibility/remoteness, ranging from 0 (most accessible/least remote) to 15 (least accessible/most remote) derived by GISCA.

ASGC (Australian Standard Geographic Classification): An ABS classification which provides a hierarchy of geographic area codes used to classify a wide range of social and economic data. The ASGC 'Main Structure' code to which a Locality is coded has nine digits. It comprises codes representing the top four hierarchical levels of the 'Main Structure':

State/Territory (S/T);

Statistical Division (SD);

Statistical Subdivision (SSD); and

Statistical Local Area (SLA).

In this structure, the SLAs aggregate to form SSDs which in turn aggregate to form SDs; the SDs aggregate to form S/Ts. All levels cover the whole of Australia without gaps or overlaps.

The ASGC also classifies locations according to 'Section of state' and 'Remoteness' (ASGC Remoteness).

Details of the ASGC are available in the publication, *Australian Standard Geographical Classification (ASGC)* (ABS Cat. No. 1216.0).

ASGC Remoteness: A five-level classification of geographic remoteness, based on road distance from service centres, developed by the ABS and based on GISCA's continuous ARIA+ classification.

Confidence interval: A statistical term describing a range (interval) of values within which we can be 'confident' that the true value lies, usually because it has a 95% or higher chance of doing so.

Indigenous (identification): A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander and is accepted as such by the community with which he or she is associated.

Mortality: Death.

SMR (Standardised Mortality Ratio): The ratio of the observed and expected numbers of deaths. The expected number of deaths is calculated as the number that would be expected if age-specific rates from the 'standard' population applied to the population of interest. The standard population is the one with which comparisons are to be made. Refer to Statistical methods section on page 2).

Significant(ly): Statistically significant(ly) at the 95% level of confidence.

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