### 3 Health status

Many determinants including social, economic, environmental and lifestyle factors contribute to the health of a population. Several other factors associated with living in rural and remote Australia indirectly affect health status. These include ethnicity, employment, the industry base of rural communities, demographic factors such as ageing populations, geography, climate, access to information and attitudes to health, illness and disability (Fragar et al. 1997). The effect of these factors varies within and between metropolitan, rural and remote communities and may contribute to differences in the prevalence of diseases, and rates of hospitalisation and mortality. This chapter focuses on direct measures of health status such as rates of mortality and morbidity. Differentials between metropolitan, rural and remote communities for these indicators provide a baseline for monitoring the health status of these communities.

With Australia's Indigenous population continuing to experience much poorer health than the general Australian population, it is important to quantify the impact of the health status of the Indigenous population on health differences between metropolitan, rural and remote Australians. This impact is largely determined by the proportion of Indigenous people in the population of each RRMA category. In this chapter, mortality data is used to show that as a consequence of low proportions of Indigenous people in the metropolitan and rural zones, the health of the Indigenous population has little impact on metropolitan/rural differentials, but impacts markedly on the remote zone health status. The Indigenous population forms only 1% of the metropolitan zone population and 3% of the rural zone population, but this proportion increases to 13% in 'remote centres' and 26% in 'other remote areas'.

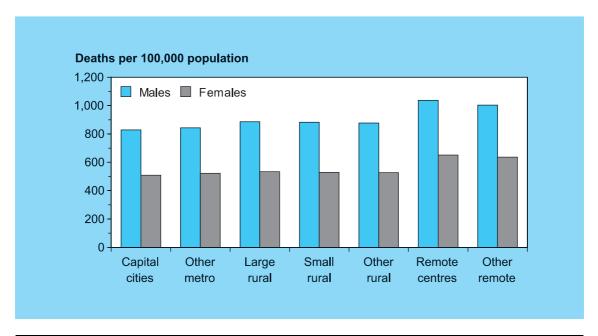
Several types of health information are routinely used as indicators of the health of populations. Mortality rates for a range of causes of death including injury, diabetes, cardiovascular disease and cancers represent one set of indicators of health status. Other indicators include hospital separation rates for diseases and chronic conditions, cancer incidence rates, and preventive measures such as immunisation, dental visits, breast examinations and Pap smear tests.

The mortality data used in this report is held in the AIHW National Mortality Database, which contains the cause of death information according to the ninth revision of the International Classification of Diseases (ICD-9). Only principal cause of death is coded in death statistics up to 1996. From 1997 onwards, multiple causes of death will be available for analysis. This is important for diseases such as diabetes where the identification of co-morbidities as the principal cause of death masks the contribution of diabetes.

Hospital separations are used as a substitute for morbidity. For diseases where hospitalisation is part of the usual treatment, hospital separations data may be preferable to self-reported measures of morbidity because they accord with diagnostic information that is coded using the International Classification of Diseases, 9th Revision, Clinical Modifications (ICD-9-CM). Hospital separations refer to an episode of care which can be a total hospital stay (from admission to discharge, transfer or death), or a portion of a hospital stay that ends in a change of care (AIHW 1998a). For each episode of care, patients are assigned a principal diagnosis which is usually a disease, injury or poisoning but may also be a specific treatment of an already diagnosed disease (AIHW 1998a).

Cancer incidence data are from the AIHW National Cancer Registry Database. Registration of cancer cases is required by law in all States and Territories of Australia. The data are collected by cancer registries which compile clinical and demographic information about people with newly detected cancer. This information comes from hospitals, pathologists, radiation oncologists, cancer treatment centres, and nursing homes. Cancer registries combine information from these sources. The AIHW maintains a national collection of cancer data in the National Cancer Statistics Clearing House.

### Total death rate 1992-96



	Metropolitan			Rural			Remote	
Sex	Capital cities	Other	Large centres	Small centres	Other	Centres	Other	Total
Males	828	843	886	883	877	1,037	1,003	849
Females	509	522	534	529	527	651	636	518

Note: Age-standardised to the Australian population at 30 June 1991.

Source: Estimates based on data derived from the AIHW population database.

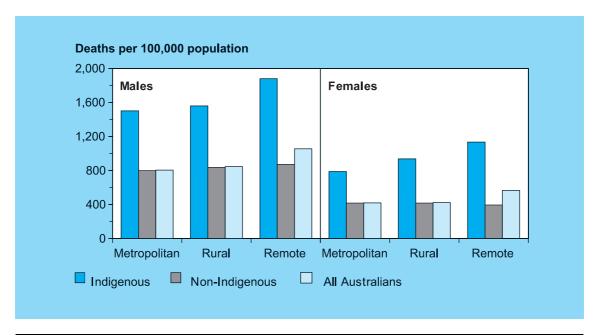
### **Mortality**

- The total death rate is the most frequently used indicator of the health and wellbeing of a population. For the 1992–96 period, the number of deaths per 100,000 population was 849 for males and 518 for females. These rates reflect the continuing sharp reduction in death rates which has occurred in recent years (AIHW 1998a).
- Death rates in 'capital cities' were lower than those in rural and remote zones for both males and females. The male death rate in 'capital cities' was 6% lower than the rate in 'large rural centres' and 20% less than the rate in 'remote centres'. For females, 'capital cities' experienced death rates 5% lower than 'large rural centres' and 22% lower than 'remote centres'.
- Despite marked differences in death rates between the metropolitan, rural and remote zones, the death rates for each RRMA category within each of the three zones were similar for both males and females.
- Female death rates in the 1992–96 period were consistently around 40% lower than male death rates in all regions.
- Indigenous death rates for the 1992-96 period were consistently around twice the rate of the non-Indigenous population for all RRMA categories and for both sexes.

### For more information, see:

Australian Institute of Health and Welfare 1998. Australia's health 1998: the sixth biennial health report of the Australian Institute of Health and Welfare. Canberra: AIHW.

## Impact of the Indigenous population on the total death rate for all Australians, 1992–96



Population group	Metropolitan	Rural	Remote	Total
Males				
Indigenous	1,500.4	1,559.0*	1,879.2*	1,739.6
Non-Indigenous	0.008	836.9	873.5	811.0
All Australians	804.6	845.8	1,055.1*	830.5
Females				
Indigenous	983.9	1,170.2*	1,418.2*	1,273.9
Non-Indigenous	520.7	521.3	494.5	520.3
All Australians	524.4	528.1	708.5*	535.0

<sup>\*</sup> Significantly different from 'capital cities' at the 5% level.

- 1. Based on data for South Australia, Western Australia and the Northern Territory.
- 2. Age-standardised to the Australian population at 30 June 1991.

Source: AIHW National Mortality Database.

### Indigenous mortality

- A pattern of increasing death rates with increasing remoteness is also seen in mortality rates for the Indigenous population. Reliable Indigenous mortality data for 1992–96 are available only for three States and Territories, South Australia, Western Australia and the Northern Territory. Because of the small number of Indigenous deaths, the seven category RRMA classification has been collapsed into metropolitan, rural and remote zones.
- Despite the large differences between the Indigenous and non-Indigenous death rates across all RRMA categories, the impact of the differences is negligible in the metropolitan and rural zones because of the low proportion of the total population which is Indigenous in these zones. The graph shows the small difference that Indigenous death rates make to death rates for 'All Australians' in these zones. Indigenous people comprise 1% of the total population living in the metropolitan zone and 3% in the rural zone.

- In the remote zone where the Indigenous population forms a higher proportion of the population (21%), the higher death rates of Indigenous people have a substantial impact, resulting in higher rates for the total population compared with those in the metropolitan and rural zones.
- The pattern discussed above of higher Indigenous death rates not affecting metropolitan/rural differentials but influencing remote zone differentials reflects the low proportion of Indigenous people living in metropolitan and rural zones, and the higher proportion living in the remote zone. It shows that the lower health status of Indigenous people has little impact on differences between metropolitan and rural zones, but does have an impact on remote zone differentials.
- Mortality data for South Australia, Western Australia, and the Northern Territory over the period 1992–96 support the results of an earlier study (Anderson et. al 1996) showing large differences between the Indigenous and non-Indigenous death rates for both sexes.
   The total Indigenous death rates are more than double that for the non-Indigenous population for both males and females, though the gap is larger for females.
- Indigenous death rates are higher for males than for females across all regions, with the differences ranging from 33% in the rural and remote zones to 52% in the metropolitan zone.

- There is a strong association between increasing remoteness and the total death rate for Indigenous females. Those living in the rural zone experience death rates 19% higher than those living in the metropolitan zone, while those living in the remote zone experience rates more than 40% higher than in the metropolitan zone.
- For Indigenous males, the association between the total death rate and increasing remoteness is less pronounced than for females, although the rates for the rural and remote zones are markedly higher than the rate for the metropolitan zone.
- Among the non-Indigenous population, there is also a pattern of higher death rates in the rural and remote zones for males, but not for females, who have similar rates over the three zones. For non-Indigenous males, the death rates for 1992–96 were 5% higher in the rural zone and 9% higher in the remote zone, compared with the rate for those living in the metropolitan zone.

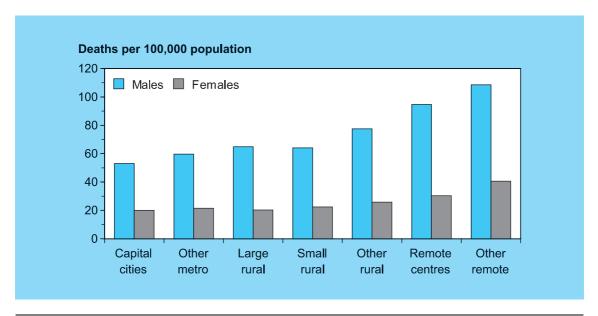
#### For more information, see:

Anderson P, Bhatia K & Cunningham J 1996. Occasional paper: mortality of Indigenous Australians. ABS Cat. No. 3315.0, AIHW Cat. No. IHW 1. Canberra: AGPS.

Australian Bureau of Statistics 1997. Deaths Australia, 1996. ABS Cat. No. 3302.0. Canberra: AGPS.

Australian Bureau of Statistics 1997. Causes of death Australia, 1996. ABS Cat. No. 3303.0. Canberra: AGPS.

### Death rates for all causes of injury, 1992–96



	Metropo	Metropolitan		Rural			Remote	
Sex	Capital cities	Other	Large centres	Small centres	Other	Centres	Other	Total
Males	53.0	59.7	*64.8	*64.1	77.5	*94.6	*108.5	59.5
Females	20.0	21.5	20.3	22.3	*25.8	30.3	*40.6	21.4

<sup>\*</sup> Significantly different from 'capital cities' at the 5% level.

### Notes

- 1. Age-standardised to the Australian population at 30 June 1991.
- Causes of injury are classified according to the ICD-9 external cause codes E899 to E999. Codes relating to
  medical misadventure, complications of care etc. (external cause codes E870 to E879 and E930 to E949) have
  been omitted from this table.

Source: AIHW National Mortality Database.

### **Deaths from injury**

- Injury is one of the major contributors to premature mortality in Australia, and was responsible for 7,469 deaths in 1996. The major causes of death from injury in rural and remote zones are suicide and motor vehicle accidents (ABS 1997a).
- Accidents with farm or mining equipment along with road transport-related deaths make work-related injuries a major cause of premature death in rural and remote zones. A survey of work-related injury (Harrison et al. 1989) found that the death rate was highest for hazardous occupations such as mining, transport and farm work. These occupations had the highest rate of workplace traffic deaths and the highest rate of fatal injury sustained travelling to and from work. Vehicle occupants make up the majority of deaths at the sites of road traffic accidents.
- Injury patterns vary with age (DHFS & AIHW 1998a). In early childhood, drowning causes most injury-related deaths. Young adults are the most frequent victims of self-harm and motor vehicle accidents. For the elderly, falls are the most common cause of death. Total injury death rates are highest for young adults and the elderly (DHFS & AIHW 1998a).
- Death rates from all causes of injury are more than twice as high in 'other remote areas' compared with 'capital cities'. Overall, the rates increase with increasing remoteness, suggesting that those living in rural and remote zones are at greater risk of death from injury than are those living in the metropolitan zone.

### All causes of injury

- Males are at greater risk of death from injury compared with females. This is evident from the death rate from injury for males which is almost three times the rate for females from the same RRMA category, a pattern which is consistent across all categories.
- Injury deaths for Indigenous males decreased at a rate of 2.3% per year from 1986 to 1994 (Anderson et al. 1996). The decreased death rate for Indigenous males was largely a result of declines in mortality due to road traffic accidents and homicides. As seen previously, the death rates for remote zone males are still higher than for those in rural and metropolitan zones, suggesting that Indigenous mortality from injury has not declined to rates approximating those of non-Indigenous males.

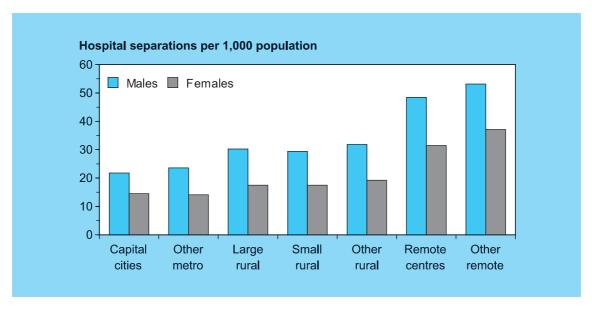
#### For more information, see:

Australian Bureau of Statistics 1997. Causes of death Australia, 1996. ABS Cat. No. 3303.0. Canberra: AGPS.

Anderson P, Bhatia K & Cunningham J 1996. Occasional paper: mortality of Indigenous Australians. ABS Cat. No. 3315.0, AIHW Cat. No. IHW 1. Canberra: AGPS.

Harrison JE, Frommer MS, Ruck EA & Blyth FM 1989. Death as a result of work-related injury in Australia, 1982–1984. Med J Aust 150: 118–125.

## Hospital separation rates for all causes of injury, 1995–96



Sex	Metropo	Metropolitan		Rural			Remote	
	Capital cities	Other	Large centres	Small centres	Other	Centres	Other	Total
Males	21.8	*23.6	*30.2	*29.4	*31.8	*48.5	*53.2	25.2
Females	14.5	14.1	*17.5	*17.5	*19.3	*31.5	*37.1	16.0

<sup>\*</sup> Significantly different from 'capital cities' at the 5% level.

#### Notes

- 1. Records with length of stay greater than 364 days were omitted from the analysis.
- 2. Causes of injury are classified according to the ICD-9 external cause codes E899 to E999. Codes relating to medical misadventure, complications of care etc. (external cause codes E870 to E879 and E930 to E949) are not included here.
- 3. Age-standardised to the Australian population at 30 June 1991.

Source: AIHW National Morbidity Database.

### Hospitalisation for all causes of injury

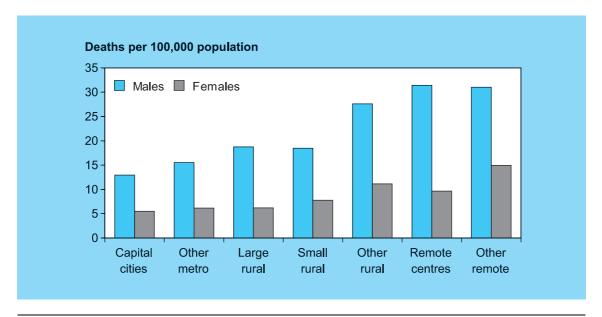
- Injury is one of the leading causes of hospitalisation in Australia, accounting for 377,955 hospital separations in 1995–96 (DHFS & AIHW 1998a). For every injury-related death, at least 40 episodes of hospitalisation are estimated to occur.
- Young males (aged 15-24) and aged people (aged 65 and above) have the highest rates of hospitalisation due to external injury (DHFS & AIHW 1998a).
- In the metropolitan and rural zones, males are hospitalised for injury almost twice as often as females. However, this male/female difference is less in the remote zone, though the male rate of hospitalisation due to injury is still substantially higher than the female rate.
- For males, injury hospital separation rates in 'large rural centres' and 'remote centres' are respectively 39% and 145% higher than in 'capital cities'. The rates for males living in 'other metropolitan centres', as well as all rural and remote zones are significantly higher than the rates for males from 'capital cities'. The rates for females are also significantly higher in rural and remote zones compared with rates in 'capital cities'. The rates for females in the remote zone are more than twice as high as the rates in the metropolitan zone.
- The ratio of male to female injury death rates is higher than the ratio of male to female hospital separation rates. This suggests that males become involved in more severe accidents that result in death more often than

### All causes of injury

do females. Additionally, males in the remote zone die from motor vehicle accidents at almost three times the rate of males in capital cities. The higher death rates in the remote zone may reflect a number of differences in traffic conditions in this zone, including road conditions, distances travelled and driver behaviour.

### For more information, see:

### Death rates for road vehicle accidents, 1992–96



Sex	Metropolitan		Rural			Remote			
	Capital cities	Other	Large centres	Small centres	Other	Centres	Other	Total	
Males	13.0	15.5	*18.7	*18.5	*27.6	*31.4	*31.0	16.2	
Females	5.5	6.2	6.2	7.8	*11.2	9.7	*15.0	6.6	

<sup>\*</sup> Significantly different from 'capital cities' at the 5% level.

Note: Age-standardised to the Australian population at 30 June 1991.

Source: AIHW National Mortality Database.

### Deaths from road vehicle accidents

- People living in rural and remote zones are exposed more to the hazards associated with long-distance, high-speed road travel on unsurfaced roads than those living in the metropolitan zone (AIHW & DHFS 1997). This, combined with the remoteness of the location of the accidents, which delays medical treatment, may result in more fatalities than if the accidents occurred in the metropolitan zone.
- In 1995, 1,420 males and 638 females died in traffic accidents. The death rates from road vehicle accidents for young adult males (aged 15 to 24) are almost three times that of the general population (DHFS & AIHW 1998a).
- The rate of fatal traffic accidents increases with increasing rurality and remoteness for males. Males from the remote zone die in traffic accidents at almost three times the rate of males from the metropolitan zone. Males from all zones are more than twice as likely to have a fatal vehicle accident compared with females from their corresponding zone.

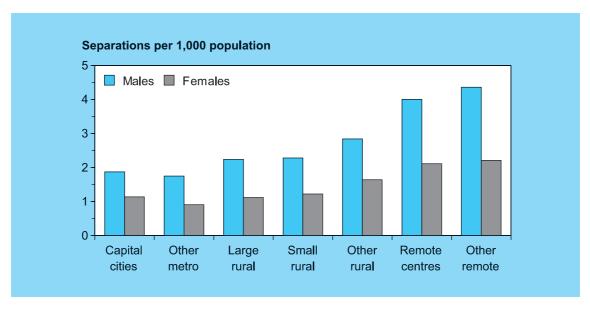
• The rate of fatal traffic accidents increases with increasing rurality for females also, though not to the same extent as for males. Females from the remote zone are involved in fatal accidents at over twice the rate for females from the metropolitan zone.

#### For more information, see:

Australian Institute of Health and Welfare & Commonwealth Department of Health and Family Services 1997. First report on National Health Priority Areas 1996. AIHW Cat. No. PHE 1. Canberra: AIHW & DHFS.

Commonwealth Department of Health and Family Services & Australian Institute of Health and Welfare 1998. National Health Priority Areas report. Injury prevention and control 1997. AIHW Cat. No. PHE 3. Canberra: DHFS & AIHW.

## Hospital separation rates for road vehicle accidents, 1995–96



Sex	Metropo	Metropolitan		Rural			Remote	
	Capital cities	Other	Large centres	Small centres	Other	Centres	Other	Total
Males	1.9	1.8	*2.2	*2.3	*2.8	*4.0	*4.4	2.1
Females	1.1	0.9	1.1	1.2	*1.6	*2.1	*2.2	1.2

<sup>\*</sup> Significantly different from 'capital cities' at the 5% level.

#### Notes

- 1. Records with length of stay greater than 364 days were omitted from the analysis.
- 2. Causes of road injury are classified according to the ICD-9 external cause codes E810 to E819 and E826 to E829. Source: AIHW National Morbidity Database.

### Hospitalisation due to road vehicle accidents

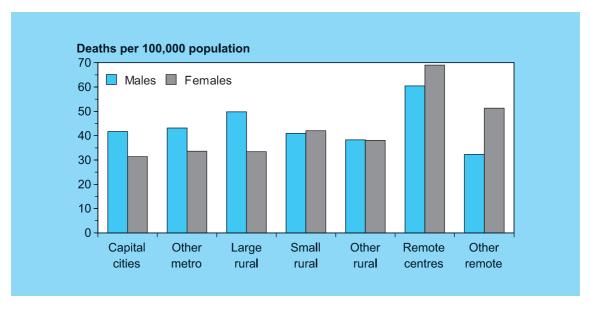
- There has been a slight increase in road injury over the past few years but police reports show that the accident rate is decreasing (O'Connor 1996). Males are more likely to be involved in fatal accidents than are females. Males aged 15–24 are most at risk from motor vehicle accidents and account for 20% of hospitalisations from this cause.
- Intake of alcohol above moderate levels is often associated with road traffic accidents. Drinking alcohol above moderate levels can result in poor coordination and judgement which can lead to traffic accidents (AIHW 1998a).
- Hospital separation rates due to road injury show a strong association with rurality. The rates are highest in the remote zone and 'other rural areas'. There is little difference between small and large 'rural centres' but the rates of

- road injury for males from all rural and remote zones are significantly higher than the rates for males in 'capital cities'. Similar to road accident mortality, 'other rural areas' have higher rates of hospitalisation compared with large and small 'rural centres'.
- Factors similar to those involved in mortality from road traffic accidents, such as road quality and alcohol consumption, also contribute to increased hospitalisation from road traffic accidents in rural and remote zones compared with the metropolitan zone.

### For more information, see:

O'Connor P J 1996. Road injury Australia: crashes resulting in hospitalisation. Adelaide: AIHW National Injury Surveillance Unit.

## Death rates for falls among people aged 65 years and over, 1992–96



Sex	Metropolitan		Rural			Remote			
	Capital cities	Other	Large centres	Small centres	Other	Centres	Other	Total	
Males	41.7	43.2	49.8	40.9	38.3	60.5	32.3	41.7	
Females	31.4	33.6	33.4	42.1	38.1	69.1	51.3	33.6	

### Notes:

- 1. Age-standardised to the Australian population at 30 June 1991.
- 2. None of the rates is significant from 'capital cities' at the 5% level.

Source: AIHW National Mortality Database.

### **Deaths from falls**

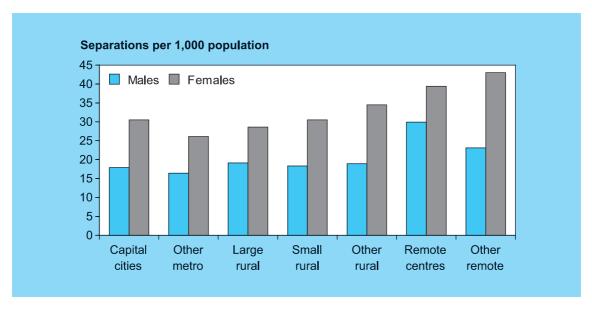
- Falls are a leading cause of injury in people over the age of 65 years. Hip fractures are the main injury associated with falls in this age group. The main risk factors include disability, medication, chronic disease and environmental hazards (Graham-Clarke et al. 1998).
- Most deaths from external causes in the over 65 years age group are related to the aftereffects of falls. Mortality resulting from falls increases with age from 15% of deaths from external causes in people 65-69 years to 75% of deaths from external causes in those aged 85 years and over.
- The death rate from falls is highest for both males and females in 'remote centres'.
   Females living in 'remote centres' have over twice the death rate from falls compared with those living in the metropolitan zone.

- However, none of the death rates is significantly different from the rates for 'capital cities' at the 5% significance level.
- Males over 65 years have a higher death rate from falls compared with females in the metropolitan zone and 'large rural centres'. However, the picture is reversed in 'small rural centres' and the remote zone where females have the higher death rates. Overall, males have a 25% higher death rate from falls than do females.

### For more information, see:

Graham-Clarke P, Fisher J & Elkington J 1998. Preventing injuries from falls in older people. Sydney: National Centre for Health Promotion, Sydney University & NSW Health Department.

## Hospital separation rates for falls among people aged 65 years and over, 1995–96



Sex	Metropo	Metropolitan		Rural			Remote	
	Capital cities	Other	Large centres	Small centres	Other	Centres	Other	Total
Males	17.9	16.4	*19.1	*18.3	*18.9	*29.9	*23.1	18.2
Females	30.5	*26.1	28.6	30.5	*34.5	*39.4	*43.0	30.7

<sup>\*</sup> Significantly different from 'capital cities' at the 5% level.

#### Notes

- 1. Records with length of stay greater than 364 days were eliminated from the analysis.
- 2. Causes of injury are classified according to the ICD-9 external cause codes E880 to E888. Source: AIHW National Morbidity Database.

### Hospitalisation due to falls

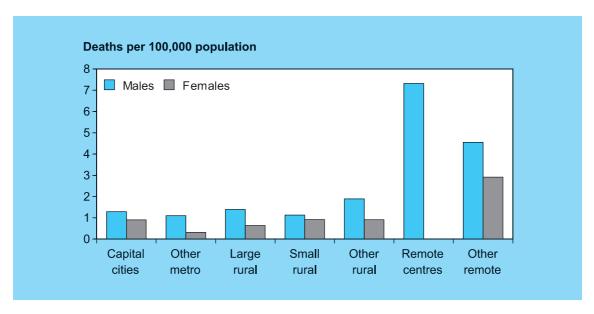
- Hospitalisation as a result of a fall is common in people over the age of 65 years. Fractures are the most common injury resulting from falls, with hip fractures the most serious in terms of mortality and functional impairment (Fildes 1994). Aged people are at risk of falls due to disability, medication and environmental hazards. Those living in rural and remote zones often live without direct access to the amenities taken for granted in urban zones such as plumbing, clean water and control over extremes in temperature. They may also live in greater social isolation than their metropolitan counterparts. These living conditions may expose aged people to more environmental risks that lead to falls.
- The rate of hospitalisation due to falls is similar for those living in metropolitan and rural zones. However, the rates are substantially higher for those in the remote zone.

 Males have a lower rate of hospitalisation from falls than do females for all RRMA categories. Across RRMA categories, the rates for male hospitalisation are around 60% of the corresponding rates for females. Osteoporosis in post-menopausal females greatly increases the risk of fracture and complications from falls (DHFS & AIHW 1998a).

### For more information, see:

Fildes B 1994. Injury prevention among the elderly. Victorian Health Promotion Foundation Monograph Series. Melbourne: VicHealth.

## Death rates for burns among people aged 55 years and over, 1992–96



Sex	Metropolitan		Rural			Remote		
	Capital cities	Other	Large centres	Small centres	Other	Centres	Other	Total
Males	1.3	1.1	1.4	1.1	1.9	7.3	4.6	1.4
Females	0.9	0.3	0.6	0.9	0.9	0.0	2.9	0.9

### Notes

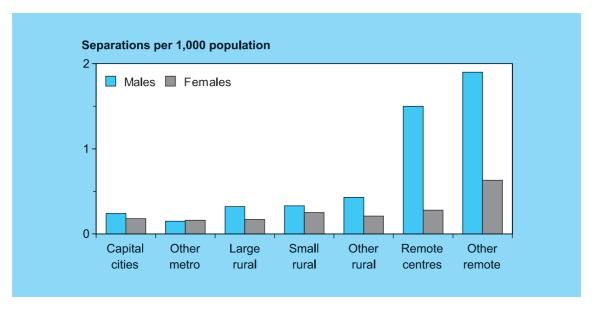
- 1. Age-standardised to the Australian population at 30 June 1991.
- 2. None of the rates is significantly different from 'capital cities' at the 5% level. Source: AIHW National Mortality Database.

### **Deaths from burns**

- Deaths from burns account for a small percentage (2%) of deaths from external injury. Older people and small children are most likely to be the victims of burns (DHFS & AIHW 1998a).
- The death rates from burns are similar for males from metropolitan and rural zones, but are substantially higher in the remote zone. Similarly, females in 'other remote areas' have three times the death rate due to burns compared to females from any other zone. However, these rates represent very small numbers of people and are not significantly different from 'capital cities' at the 5% level.
- Males have a higher death rate from burns compared to females. The rate of death for males from burns in 'remote centres' is more than five times that of males from 'capital cities' and is a striking contrast to the lack of females dying from burns in this area.

### For more information, see:

# Hospital separation rates from fire, burns and scalds among people aged 55 years and over, 1995–96



Sex	Metropo	Metropolitan		Rural			Remote	
	Capital cities	Other	Large centres	Small centres	Other	Centres	Other	Total
Males	0.24	*0.15	*0.32	*0.33	*0.43	*1.50	*1.94	0.31
Females	0.18	0.16	0.17	*0.25	0.21	0.28	*0.63	0.19

<sup>\*</sup> Significantly different from 'capital cities' at the 5% level.

#### Notes

- 1. Records with length of stay greater than 364 days were eliminated from the analysis.
- 2. Causes of injury are classified according to the ICD-9 external cause codes E890 to E899, E924.0, E924.8 and E924.9.

Source: AIHW National Morbidity Database.

### Hospitalisation due to burns

- Although burns are responsible for only 2% of deaths from external causes, burn victims often require prolonged hospitalisation.
   Caring for burn victims can be a substantial burden on the community.
- The hospital separation rate due to burns among males in 'other remote areas' is almost eight times the rate in 'capital cities'. The hospital separation rate due to burns among females in 'other remote areas' is three-and-ahalf times the rate in 'capital cities'. Both males and females living in the rural zone are
- hospitalised for burns at around one-and-ahalf times the corresponding rates in 'capital cities'.
- Males are more likely to be hospitalised as a result of their burns than females, with the difference between the sexes greatest in the remote zone. The hospital separation rate due to burns among males in 'capital cities' is 35% higher than the corresponding rate for females. In contrast, females in 'remote centres' have five times the male hospitalisation rate from burns.

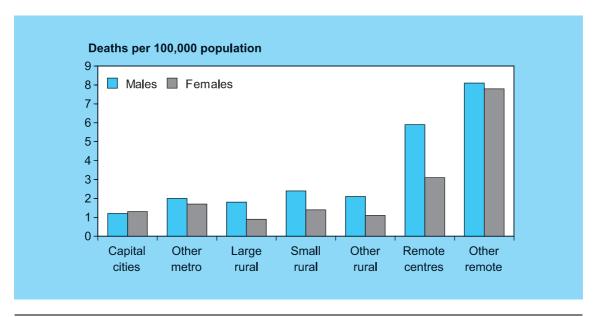
### **Burns**

 Aged Aboriginal and Torres Strait Islander people have been reported to have high rates of hospitalisation from fire burns (ABS & AIHW 1997). The high proportion of Indigenous people in the remote zone may account for the differential in hospitalisation rates due to burns.

### For more information, see:

Moller J, Dolinis J & Cripps R 1996. Aboriginal and Torres Strait Islander peoples injury-related hospitalisations 1991/92. A comparative overview. Adelaide: AIHW National Injury Surveillance Unit. Australian Bureau of Statistics & Australian Institute of Health and Welfare 1997. The health and welfare of Australia's Aboriginal and Torres Straits Islander peoples. ABS Cat. No. 4704.0, AIHW Cat. No. IHW 2. Canberra: AGPS.

### Homicide rates, 1992–96



Sex	Metropolitan		Rural			Remote			
	Capital cities	Other	Large centres	Small centres	Other	Centres	Other	Total	
Males	1.2	2.0	1.8	2.4	2.1	5.9	*8.1	2.3	
Females	1.3	1.7	0.9	1.4	1.1	3.1	*7.8	1.4	

<sup>\*</sup> Significantly different from 'capital cities' at the 5% level.

Note: Age-standardised to the Australian population at 30 June 1991.

Source: AIHW National Mortality Database.

### Deaths from interpersonal violence

- Interpersonal violence covers a range of injury types including homicide, sexual assault, assault and domestic violence (DHFS & AIHW 1998a).
- Death from homicide may be an indication of the level of violence in a community. However, homicide deaths are not distributed evenly across all parts of the community. Young people and Indigenous people have the highest rate of deaths from homicide (Anderson et al. 1996).
- The homicide rate in the remote zone is much greater than in all other zones for both males and females. In 'other remote areas' the homicide rate is six to seven times that of the metropolitan zone. This is largely explained by the higher death rates from interpersonal violence in the Indigenous community (Anderson et al. 1996).

• There is little variation between the homicide rates in rural and metropolitan zones for both males and females.

### For more information, see:

Anderson P, Bhatia K & Cunningham J 1996. Occasional paper: mortality of Indigenous Australians. ABS Cat. No. 3315.0, AIHW Cat. No. IHW 1. Canberra: AGPS.

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