1 Introduction

Australians as a whole enjoy a very high standard of living. By most summary measures of social wellbeing, Australia compares well, even against other developed countries such as the United States, Canada, Japan and the United Kingdom. For example, we are highly educated (in 1996, we ranked highly among OECD countries on the basis of the percentage of the population holding a degree); we have high employment (in 1999 our labour force participation was on a par with most OECD countries and our unemployment rate was lower than those of Italy, France, Greece and Canada) and we are healthy (in 1999 we had one of the lowest infant mortality rates among OECD countries and an average life expectancy at birth which compared well with other OECD countries) (ABS 2001a). Measures of the health of a population reflect other aspects of social wellbeing, including socioeconomic status: they are all linked.

Summary measures of an entire population rarely tell the whole story, however. In most countries, various groups within the population fare relatively better than average and others relatively worse in at least some aspects, and this is true of Australia. For example, our Indigenous population is not so well off as the rest of the population in almost all important areas of social concern (Table 1.1): their participation in education and levels of educational attainment fall far short of the rest of the population; their labour force participation is lower and their unemployment rate higher; and their infant mortality rate is much higher and life expectancy much lower than the rest of the population (ABS 1999; ABS 2001c). Other measures of their health paint much the same picture.

Table 1.1: Comparison of selected characteristics of Indigenous and non-Indigenous people

Characteristic	Indigenous	Non-Indigenous
Percentage of 15–64-year-olds unemployed (1996)	23%	9%
Percentage older than 15 years who were still attending school or had left school aged 17 years or older (1996)	27%	41%
Percentage older than 15 years possessing Bachelors degree or higher (1996)	2%	11%
Median weekly income		
Males older than 15 years (1996)	$189	$415
Females older than 15 years (1996)	$190	$224
Own or purchasing own home	31%	71%

Source: ABS 1999.

It is also true that, on average, people living in more inaccessible regions of Australia are disadvantaged with regard to educational and employment opportunities, income (Garnaut et al. 2001; Bray 2000), access to goods and services and in some areas access to what most of us regard as basic necessities, such as clean water and fresh food (ABS 1990, PHS 2001). These disadvantages are reflected in their overall less favourable indicators of social wellbeing, including indicators of health. This report aims to assess the mortality of people living in regional and remote Australia and compare with those living in major population centres.

In Australia, about two-thirds of all people live in the major cities. The remainder live in what are loosely referred to as regional and remote areas (see page 29). Regional and remote

areas are not all located in so-called 'outback' Australia, and they are not all as subject to the above aspects of disadvantage as some might assume: many are in coastal regions and some are in regions where there is a major industry such as wine production, farming, mining or tourism—but they are all some distance away from major population centres. Measures of health status and other social indicators relating to rural and remote areas need to be interpreted with this in mind.

1.1 Characteristics of rural and remote populations

Rural and remote populations share some common demographic characteristics that differ from those of cities. They tend to have larger families, but lower proportions of people aged 15–34 years or 65 years and over; they have fewer one-parent families; they are less likely to pay rent and more likely to live in houses (rather than flats or apartments); they are more likely to own a car; more likely to have both partners of a marriage in the labour force; and those who are working are more likely to be employers (ABS 1998).

Any study that attempts to determine the effect of distance on the health of a population must take these differences into account. One way of adjusting for different age profiles in the various populations is the use of age standardisation. How this technique is applied in this study is explained in 'Age standardisation' on page 26. In addition, particular attention needs to be paid to the population aged 65 years and over, given their higher death rates, incidence of disease and the relatively low proportion of people living in remote areas who are in that age group. Why this is a feature of remote areas, and how it is handled in the analyses, are discussed in full in Chapter 2.

Another characteristic that is common among rural and remote populations is their relatively high proportions of Indigenous people compared to capital cities and major metropolitan cities—the more remote the region, the higher is this proportion. This means that the further away a region is from a major population centre, the greater is the impact of Indigenous wellbeing on overall measures of wellbeing in that area.

Ideally, a study on health differentials across different regions should examine the effects of distance on the Indigenous and non-Indigenous populations separately, although doing so presents a number of challenges. These include: the extent to which Indigenous people are correctly identified, both within the total population and on other records such as death certificates and hospital admissions; the very small size of the Indigenous population in total; and the usual address of itinerant members of that population. These limitations are also discussed in more detail later in Chapter 2.

At present these challenges regarding Indigenous data have not been met to a degree that gives confidence in drawing definite conclusions. This report therefore largely restricts analysis of health status differentials by geographical area to the non-Indigenous and total populations living there. At first glance, it might seem that this approach would be subject to the same limitations—how can a poorly identified population be 'subtracted' from the total population to form a group that can be analysed with any confidence? The solution to this paradox is two-fold. Firstly, in large population centres, where Indigenous identification is the least reliable, the proportion of Indigenous people is so very small (less than 1% of the population) that they have an insignificant effect on any overall measures of social wellbeing of either the total population or the non-Indigenous component. Secondly, in populations outside of the cities, it is thought that identification is much more reliable (and the more remote, the more reliable the identification), so that the Indigenous and non-Indigenous

components can be distinguished from each other. The reasons why this is thought to be so, and the extent to which identification varies across geographic regions, are discussed in the section on Indigenous identification in Chapter 2 (see page 21).

Because of the importance of the issue of Indigenous health, primarily as a result of the poor health outcomes associated with social conditions and elevated risk factors, it is important for this report to also describe the overall health of Indigenous people (even if it is not possible to report for each region).

This study uses a number of different sets of assumptions about the variation in Indigenous identification (Models 1, 2, 3 and 4) to test the robustness of calculating non-Indigenous death rates. These are also discussed in Chapter 2 (see page 22). While Model 1 appears implausible, the assumptions made in Models 2, 3 and 4 appear plausible, with Model 4 a linear average of the other two, being perhaps the simplest and most conservative model. If the assumptions made under Model 4 are correct, then the rates for non-Indigenous people described in this report underestimate the true rates by 0–1% in Major Cities, Inner Regional and Outer Regional areas, and by 4–7% in remote areas. However, until the accuracy of identification is actually measured or estimated in each area, the degree of error will remain unclear and interpretation of analyses based on this approach should be treated with caution.

In the discussion so far, the terms 'regional' and 'remote' have been used loosely. In order to study the effects of distance on wellbeing, however, the populations under analysis need to be defined more precisely. This is done in Chapter 2 (see page 29).

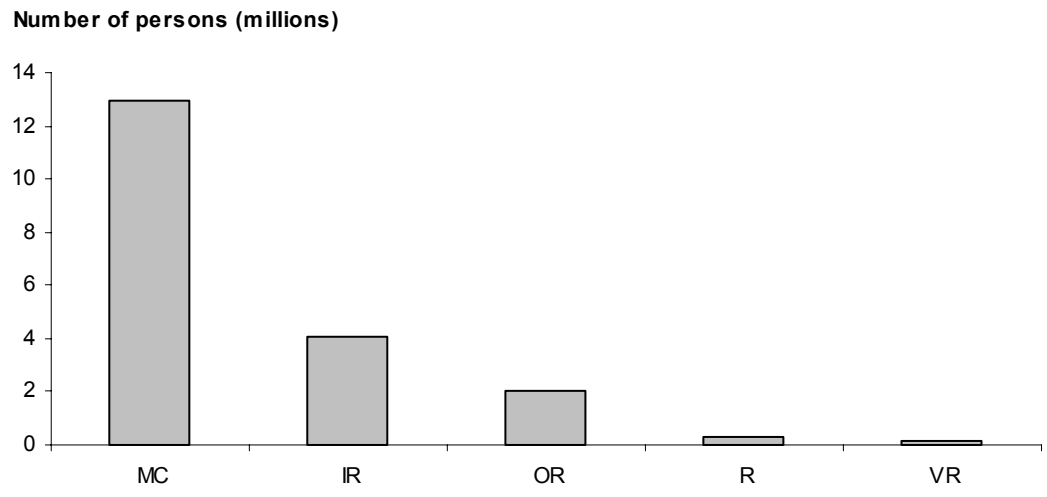
Demography

Australians are one of the most urbanised populations in the world, with about 70% of people living in capital or major industrial cities. Of the remainder, about 45% live in regional cities or large country or coastal towns and surrounding agricultural areas, about 45% live in small country or coastal towns and their surrounding agricultural areas, and about 10% live in remote areas (AIHW 2002b).

Non-metropolitan areas include not only inland agricultural and remote areas, but also coastal areas. In fact, of the people who live outside the major cities, but not in remote areas, just under 50% live within 80 km of the coast (Garnaut et al. 2001).

The ASGC Remoteness structure has been used in this description of regional and remote demography. Additional demographic data is provided in Appendix E.

In 2001, the majority (66%) of the Australian population lived in Major Cities. Of the remainder, 21% and 10% lived in Inner and Outer Regional areas, while 2% and 1% lived in Remote and Very Remote areas (Figure 1.1, Table 1.2).



Source: AIHW population database, based on SLA resident population estimates compiled by ABS.

Figure 1.1: Population distribution in Australia, by ASGC Remoteness area, 2001

Table 1.2: Indigenous and total populations within each ASGC Remoteness area, 2001

		MC	IR	OR	R	VR	Total
Population				**('000)**			
Indigenous	Male	68	46	52	20	41	227
	Female	71	46	54	20	40	231
	Persons	138	93	106	40	81	458
Total	Male	6,344	1,995	1,025	172	95	9,631
	Female	6,527	2,030	989	153	83	9,783
	Persons	12,871	4,026	2,014	324	179	19,413
				(per cent)			
Indigenous							
% of regional population		1	2	5	12	45	2
% of national Indigenous population		30	20	23	9	18	100
Total population							
% of national population		66	21	10	2	1	100

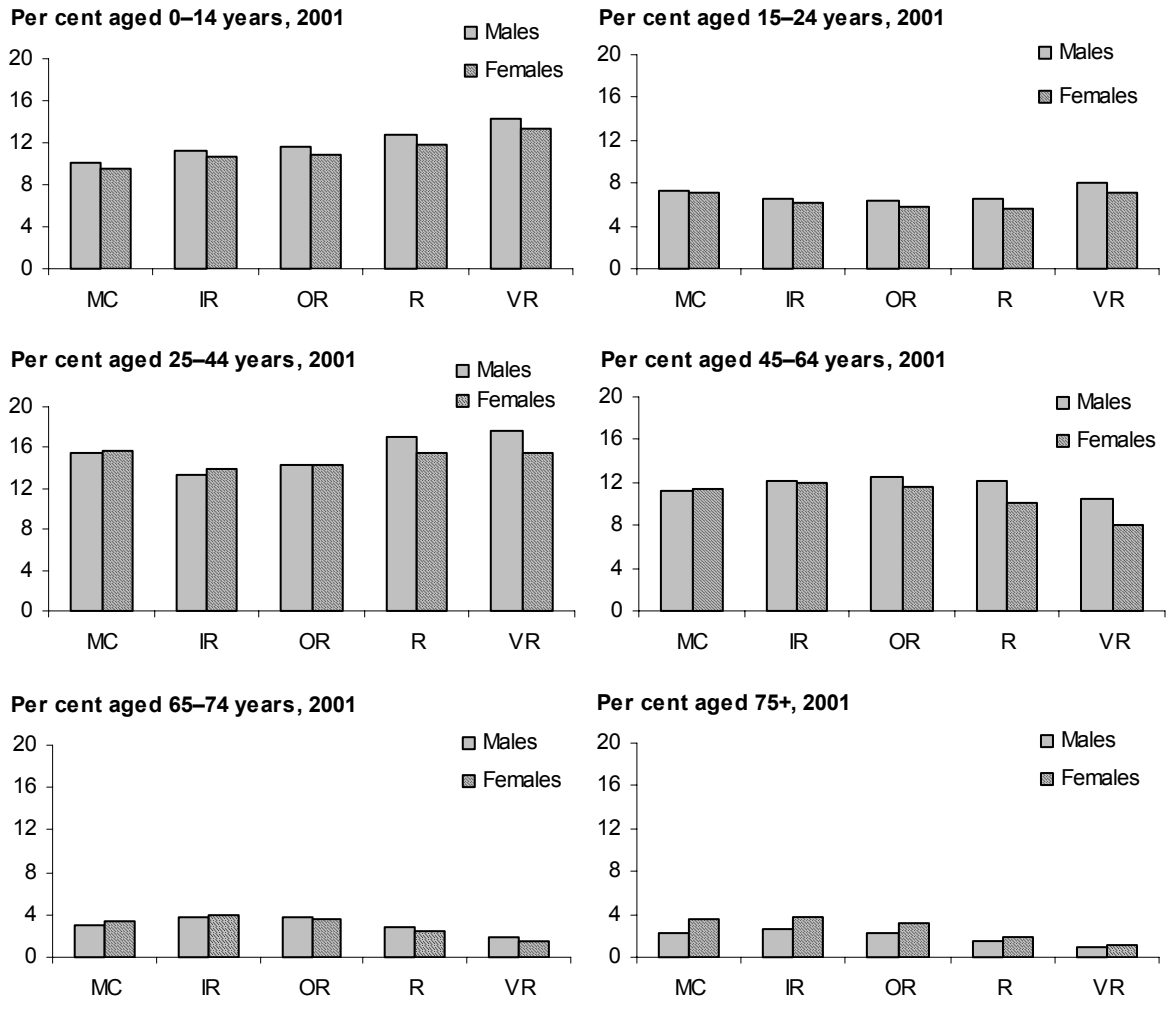
Source: AIHW population database, based on SLA resident population estimates compiled by ABS.

The population of regional areas is smaller than that in Major Cities, but still substantial; the population in remote areas is very small in comparison.

The percentage of the population who are Indigenous varies substantially with remoteness; 1% of the population in Major Cities are Indigenous, 2–5% are Indigenous in regional areas, rising to 12% in Remote areas and 45% in Very Remote areas (Table 1.2).

As well as these differences, there are substantial differences in the age and sex structure of the populations (Figures 1.2 and 1.3). In the Australian population, there are slightly more males than females; only in older age does the situation change as females outlive their male counterparts. However, in Remote (and especially Very Remote) areas, the number of males

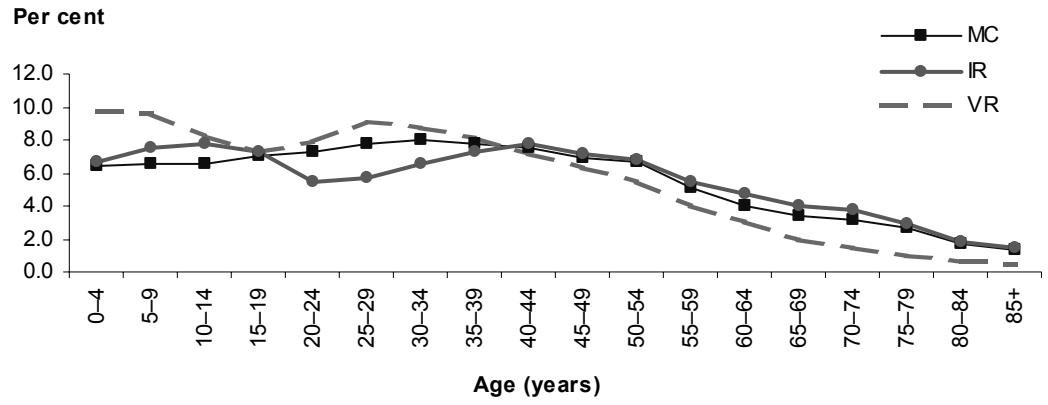
is substantially greater than the number of females (Table 1.3), with the numbers of males and females tending to become similar in old age (Figure 1.2).



Note: Percentage for males and females for each graph should add to 100.

Source: AIHW population database based on SLA resident estimates compiled by ABS.

Figure 1.2: Age distribution, by ASGC Remoteness area, 2001



Source: AIHW population database, based on SLA resident population estimates compiled by ABS.

Figure 1.3: Age distribution for persons living in Major Cities, Inner Regional and Very Remote areas, 2001

In remote areas, there are proportionally more children, people aged 15–24 years and to a lesser extent people aged 25–44 years, than there are in Major Cities. There are proportionally fewer people older than 44 years, and substantially fewer people older than 65 years in Remote areas.

In regional areas the proportion of people in each age group is similar to that in Major Cities, with the exception that there are proportionally more children, but fewer people aged 25–44 years.

Table 1.3: Male to female population ratio, by ASGC Remoteness area, 2001

	MC	IR	OR	R	VR	Total
			(number)			
Non-Indigenous	0.97	0.98	1.04	1.14	1.28	0.98
Indigenous	0.96	1.00	0.98	1.01	1.01	0.99
Total persons	0.97	0.98	1.04	1.12	1.15	0.98

Source: AIHW population database, based on SLA resident population estimates compiled by ABS.