

5 Diseases of the circulatory system

Chapter highlights

Diseases of the circulatory system were responsible for about 37% of all deaths, and for about 40% and 25% of excess deaths in regional and remote areas respectively.

About half of the deaths in this chapter outside Major Cities were due to coronary heart disease, with about 25% contributed by cerebrovascular disease and by 'other' diseases of the circulatory system. By contrast, about half of the excess deaths in this chapter are each contributed by coronary heart disease and 'other' diseases of the circulatory system. These each contribute close to 20% of all excess deaths outside Major Cities. As such, these are the most substantial contributors to overall higher rates of death outside Major Cities.

Most of the excess deaths were amongst people aged 75 years and older; however, there were substantial numbers of excess deaths also amongst those aged 45–64 years and 65–74 years.

Circulatory death rates for Indigenous Australians were three times higher than the rates for non-Indigenous Australians in Major Cities.

SMRs were higher in regional areas (1.1 times) and highest in Very Remote areas (1.5 times). For those younger than 65 years, this pattern expanded to 1.2, 1.3, 1.7 and 3.7 in Inner Regional, Outer Regional, Remote and Very Remote areas respectively.

For non-Indigenous people, SMRs were 1.1 in regional and Remote areas and 1.0 in Very Remote areas. For those younger than 65 years, the SMR was 1.2 in regional areas, 1.0 in Remote areas and 1.3 in Very Remote areas.

Death rates are declining in all areas, fastest for males in Very Remote areas.

This chapter discusses mortality due to the broad category of circulatory disease (ICD-10 chapter 9, codes I00–I99).

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 2006b).

The specific circulatory diseases also discussed include:

1. cerebrovascular disease (stroke)
2. ischaemic heart disease (coronary heart disease)
3. other circulatory diseases.

Rates of ischaemic heart disease and cerebrovascular disease are described because they are the most frequent causes of death in this ICD chapter.

On average during the period, diseases of the circulatory system were responsible for 48,922 deaths annually – this is 37% of all deaths. Half (48%) were male; 63% were in Major Cities, 35% in regional and 2% in remote areas.

Overall death rates for Indigenous Australians were three times higher than the rates for non-Indigenous Australians in Major Cities.

In regional areas:

Death rates for males were about 10% higher than in Major Cities.

For 0–64 year olds, death rates in Inner Regional and Outer Regional areas were 15–35% higher than in Major Cities.

The inter-regional pattern for non-Indigenous Australians was similar to that above, although rates for people in Outer Regional areas younger than 65 years were about 20% higher than in Major Cities.

Annually there are 11,647 and 5,331 deaths in Inner Regional and Outer Regional areas; about 50% were male. Annually there were 918 and 565 'excess' deaths in Inner Regional and Outer Regional areas; this is 43% and 36% of all 'excess' deaths in Inner Regional and Outer Regional areas. Over half (57%) of the 'excess' deaths were male. About half the male 'excess' deaths and about two-thirds of the female 'excess' deaths were amongst those aged older than 75 years, with a substantial proportion of the male and female excess aged 45–74 years.

Compared with the previous reporting period (1997–99), there were 521 fewer deaths of males and 186 fewer deaths of females annually in 2002–04.

The 12-year trend (AIHW 2006a) is for decreasing death rates for males and females at about the same rate as in Major Cities.

Between 1997–99 and 2002–04, the number of excess deaths in regional areas decreased (as estimated using 2002–04 Major Cities rates as the standard). For example, in 1997–99 there were 1,714 and 1,352 more deaths of Inner Regional males and females annually than if 2002–04 Major Cities age-specific rates had applied; in 2002–04, this number had decreased to 495 and 423 more deaths than if 2002–04 Major Cities age-specific rates had applied.

Death rates¹⁰ decreased between the previous (1997–99) and the more recent (2002–04) reporting periods.

However, the relative differences¹¹ between Major Cities and regional areas do not appear to have changed substantially.

In remote areas:

Death rates in Remote and Very Remote areas were 1.2 and 1.5 times those in Major Cities.

For 0–64 year olds, death rates in Remote and Very Remote areas were 1.7 and 3.7 times those in Major Cities. This higher rate appears to be entirely a reflection of the relative large numbers of Indigenous Australians in these areas (coupled with overall higher mortality for Indigenous Australians).

Death rates for non-Indigenous Australians from Remote areas were not significantly different from those in Major Cities, while rates for those in Very Remote areas were 1.2 times those in Major Cities.

Annually there are 601 and 292 deaths in Remote and Very Remote areas; about 57% were male. Annually there were 78 and 98 'excess' deaths in Remote and Very Remote areas; this is 28% and 24% of all 'excess' deaths in Remote and Very Remote areas. Over half (59%) of

¹⁰ As expressed by SMRs calculated for both periods using Major Cities age- and sex- specific rates in 2002–04 as the standard.

¹¹ As expressed by SMRs calculated for each period using Major Cities age- and sex-specific rates in each period as the standard.

the 'excess' deaths were male. The excess was mainly concentrated amongst the 45–64 year olds, but with substantial numbers of excess deaths also amongst 25–44 year olds and 65–74 year olds.

Compared with the previous reporting period (1997–99), there were 50 fewer deaths of males and 11 fewer deaths of females annually in 2002–04. The 12-year trend (AIHW 2006a) is for decreasing death rates for males and females at about the same rate as in Major Cities, although for males in Very Remote areas, the decline appears to be faster.

Between 1997–99 and 2002–04, the number of excess deaths in remote areas decreased (as estimated using 2002–04 Major Cities rates as the standard). For example, in 1997–99 there were 189 more deaths of Remote area people annually than if 2002–04 Major Cities age-specific rates had applied; in 2002–04, this number had decreased to 78 more deaths than if 2002–04 Major Cities age-specific rates had applied.

Death rates¹² appeared to decrease between the previous (1997–99) and the more recent (2002–04) reporting periods (for example, SMRs for Remote area people were 1.4 in 1997–99, and became 1.2 in 2002–04, compared with 1.0 for people in Major Cities in 2002–04).

However, the relative differences¹³ between Major Cities and remote areas appear not to have changed or to have increased slightly.

Coronary heart disease contributed about half to two-thirds of the male deaths and excess deaths and about one-third to one half of the female deaths and excess deaths in this chapter.

Table 5.1: Average annual deaths and 'excess' deaths, by type of circulatory disease, 2002–04

Cause of death	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
	Deaths									
Cerebrovascular disease	3,102	1,169	505	56	26	4,955	1,654	683	63	24
Coronary heart disease	8,248	3,289	1,59	196	95	7,700	2,753	1,195	117	54
Other circulatory disease	2,986	1,254	645	89	47	3,874	1,528	706	80	46
Total	14,337	5,712	2,74	340	168	16,529	5,935	2,584	260	124
	Excess deaths									
Cerebrovascular disease	0	40	–8	–4	3	0	6	–23	–7	1
Coronary heart disease	0	283	207	27	28	0	182	93	9	17
Other circulatory disease	0	172	147	28	23	0	236	150	25	27
Total	0	495	346	51	53	0	423	220	27	45

¹² As expressed by SMRs calculated for both periods using Major Cities age- and sex-specific rates in 2002–04 as the standard.

¹³ As expressed by SMRs calculated for each period using Major Cities age- and sex-specific rates in each period as the standard.

Table 5.2: Average annual deaths and 'excess' deaths for persons aged 64 years and under, by type of circulatory disease, 2002-04

Cause of death	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
	Deaths									
Cerebrovascular disease	279	114	57	11	10	197	83	40	8	5
Coronary heart disease	1,451	559	339	59	52	330	141	82	13	22
Other circulatory disease	468	174	106	23	23	248	102	51	13	20
Total	2,199	848	502	93	85	774	326	173	34	47
	Excess deaths									
Cerebrovascular disease	0	19	9	4	6	0	17	9	3	3
Coronary heart disease	0	61	86	21	34	0	28	29	6	19
Other circulatory disease	0	18	27	10	17	0	19	12	8	17
Total	0	98	122	34	57	0	65	49	16	39

Table 5.3: Average annual deaths and 'excess' deaths for non-Indigenous Australians, by type of circulatory disease, 2002-04

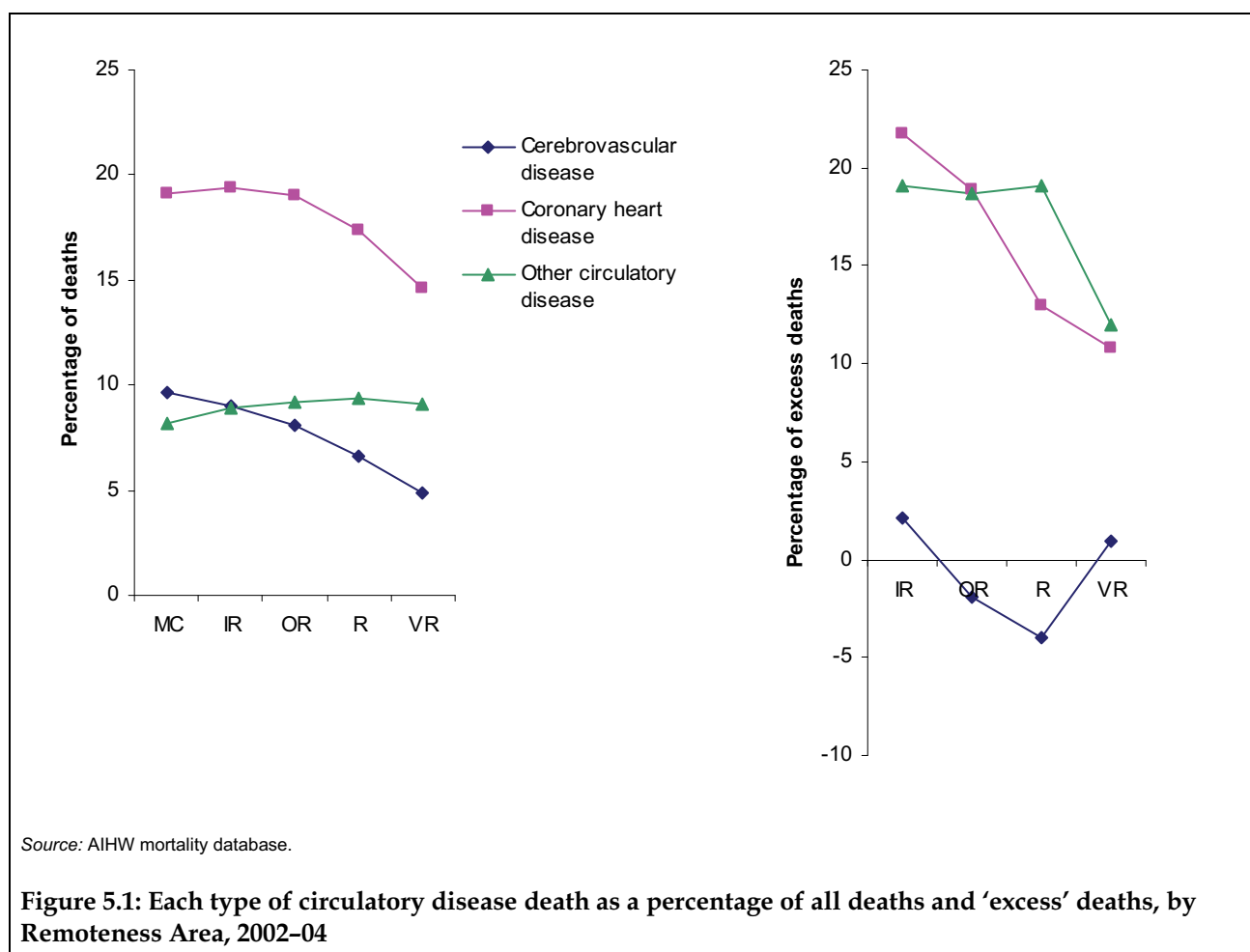
Cause of death	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
	Deaths									
Cerebrovascular disease	3,013	1,135	481	49	15	4,807	1,600	659	54	12
Coronary heart disease	8,002	3,171	1,516	162	42	7,459	2,652	1,141	103	22
Other circulatory disease	2,893	1,216	614	74	21	3,755	1,472	671	69	18
Total	13,908	5,521	2,610	285	78	16,020	5,723	2,471	226	52
	Excess deaths									
Cerebrovascular disease	0	40	-14	-7	-3	0	3	-21	-10	-4
Coronary heart disease	0	259	180	7	-8	0	165	81	3	-4
Other circulatory disease	0	169	136	19	3	0	222	137	18	5
Total	0	468	303	19	-7	0	389	197	11	-3

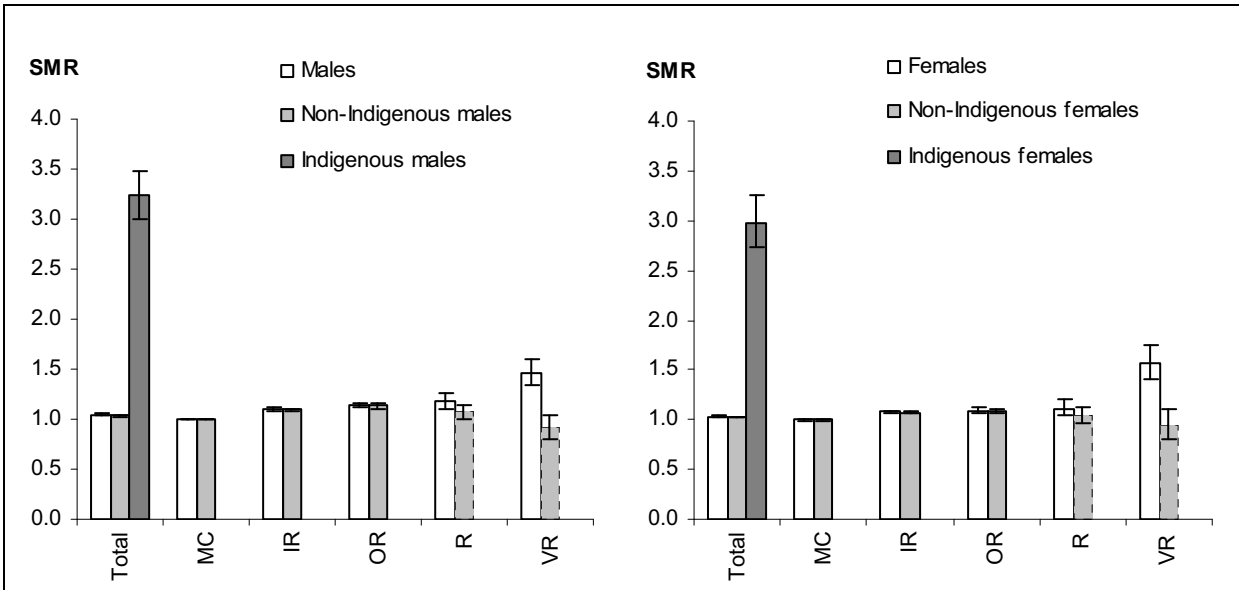
Table 5.4: Average annual deaths and 'excess' deaths for non-Indigenous Australians aged 64 years and under, by type of circulatory disease, 2002-04

Cause of death	Males					Females				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR
	Deaths									
Cerebrovascular disease	266	107	49	7	4	183	78	34	4	1
Coronary heart disease	1,382	526	294	35	15	305	129	65	6	2
Other circulatory disease	445	162	92	15	6	235	92	38	7	2
Total	2,093	795	435	58	25	723	298	138	17	6
	Excess deaths									
Cerebrovascular disease	0	16	4	1	1	0	17	6	0	0
Coronary heart disease	0	54	57	1	2	0	25	17	0	0
Other circulatory disease	0	14	18	4	2	0	14	2	2	1
Total	0	84	79	5	5	0	55	24	2	1

Table 5.5: Average annual deaths and 'excess' deaths of Indigenous Australians in Qld, WA, SA and NT, by type of circulatory disease, 2002-04

Cause of death	Males		Females	
	Total population	0-64 years	Total population	0-64 years
	Deaths			
Cerebrovascular disease	31	16	34	14
Coronary heart disease	147	107	88	48
Other circulatory disease	54	37	58	35
Total	232	160	180	97
	Excess deaths			
Cerebrovascular disease	17	13	17	12
Coronary heart disease	106	94	60	45
Other circulatory disease	38	31	43	32
Total	160	139	120	89



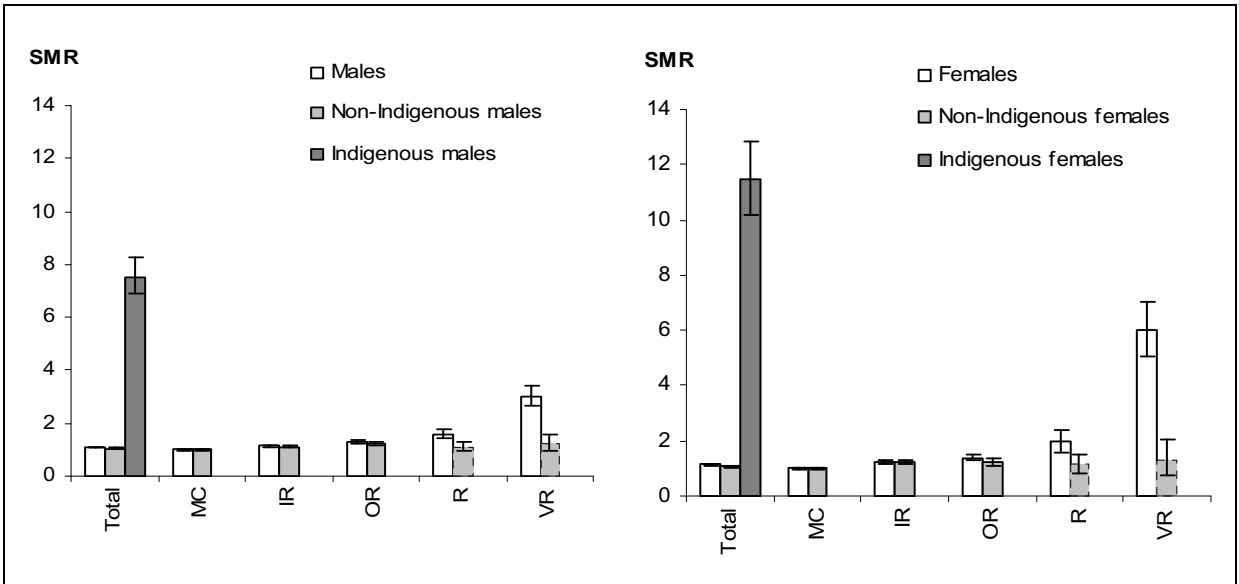


Notes

1. While the figure allows comparison of deaths between areas for each sex, it does not allow comparison between the sexes.
2. The presented SMR is the ratio of the observed number of deaths to the number expected if Major Cities rates applied in each area.
3. SMRs calculated for non-Indigenous Australian persons from Remote and Very Remote areas (dashed) should be treated with caution (see Appendix A).
4. The SMRs for Indigenous Australian persons are for Qld, WA, SA and NT combined (see Appendix A).

Source: AIHW mortality database.

Figure 5.2: Circulatory disease SMRs, by sex, 2002-04



Note: See notes for Figure 5.2.

Figure 5.3: Circulatory disease SMRs for persons aged 64 years and under, by sex, 2002-04

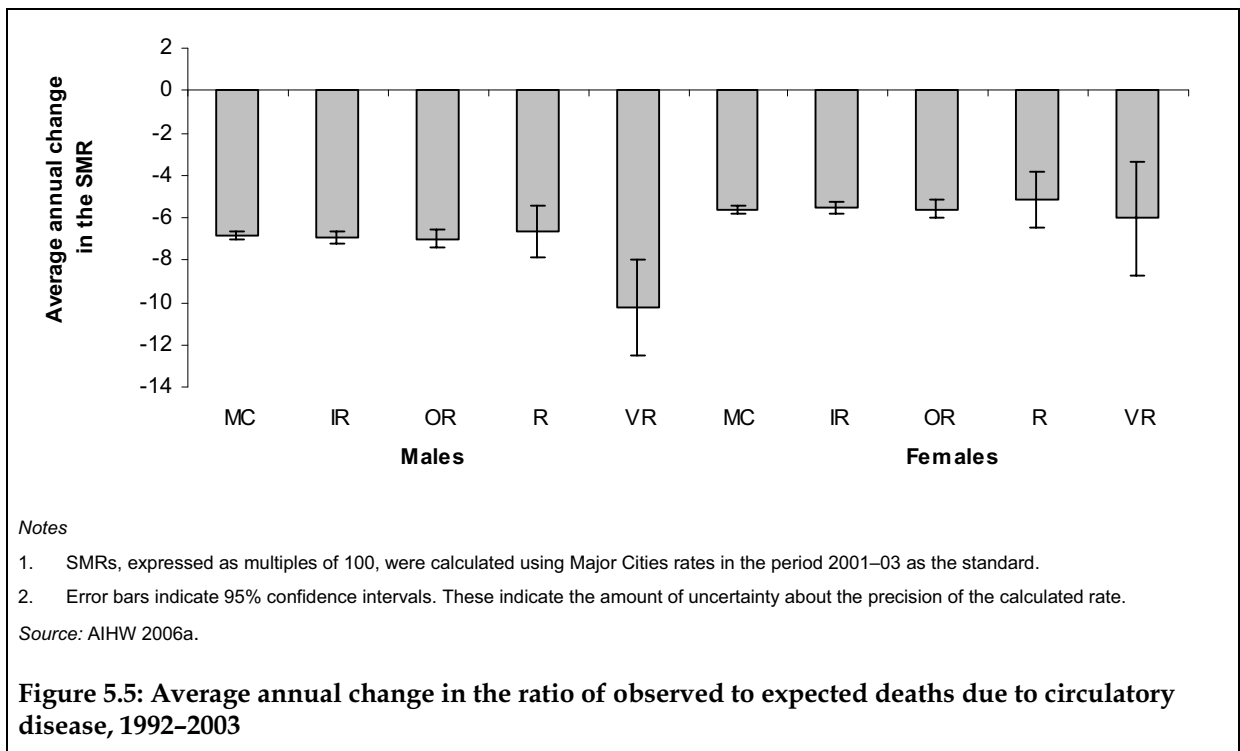
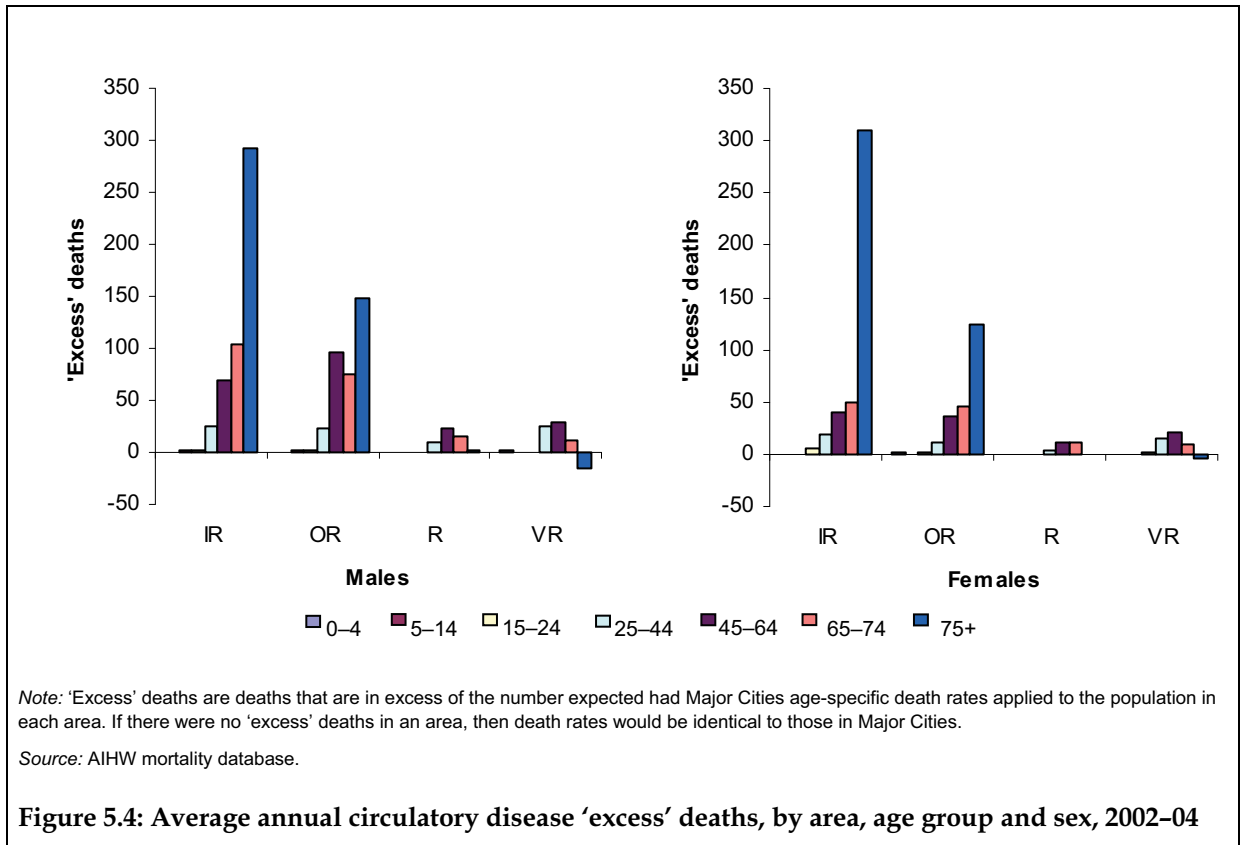


Table 5.6: SMRs, average annual deaths and 'excess' deaths due to diseases of the circulatory system, 2002-04 and 1997-99

	Males						Females						Persons											
	MC		OR		VR		MC		OR		VR		MC		OR		VR							
	Rate	IR	Ratio	R	Ratio	VR	Rate	IR	Ratio	R	Ratio	VR	Rate	IR	Ratio	R	Ratio	VR						
2002-04																								
0-4	3	0.86	1.21	0.96	*6.39	4.57	2	1.17	1.72	0.71	0.97	3	0.97	1.39	0.87	1.39	0.87	1.39	0.97	3	0.97	1.39	0.87	*5.74
5-14	0	2.05	3.02	5.39	*14.77	7.64	1	1.40	0.45	0.00	1.66	0	1.66	1.48	2.15	1.48	2.15	1.48	1.66	0	1.66	1.48	2.15	*10.48
15-24	2	1.34	1.75	2.65	3.94	*21.93	1	*3.05	*3.24	4.77	*1.82	2	*1.82	*2.15	*3.18	*2.15	*3.18	*2.15	*1.82	2	*1.82	*2.15	*3.18	*8.41
25-44	14	*1.31	*1.53	*2.19	*6.87	*11.67	5	*1.57	*1.70	*2.73	*1.38	10	*1.38	*1.58	*2.32	*1.58	*2.32	*1.58	*1.38	10	*1.38	*1.58	*2.32	*8.05
45-64	123	*1.11	*1.29	*1.48	*2.22	*4.42	42	*1.18	*1.34	*1.83	*1.13	82	*1.13	*1.30	*1.56	*1.30	*1.56	*1.30	*1.13	82	*1.13	*1.30	*1.56	*2.68
65-74	628	*1.10	*1.16	*1.24	*1.55	*2.03	307	*1.10	*1.21	*1.43	*1.10	460	*1.10	*1.17	*1.30	*1.17	*1.30	*1.17	*1.10	460	*1.10	*1.17	*1.30	*1.69
75+	3,125	*1.08	*1.10	1.01	*0.75	0.95	3,004	*1.07	*1.06	1.00	3,051	3,051	*1.07	*1.08	1.01	*1.08	1.01	*1.08	*1.07	3,051	*1.07	*1.08	1.01	*0.85
Total	220	*1.09	*1.14	*1.18	*1.46	*1.57	248	*1.08	*1.09	*1.12	*1.09	234	*1.09	*1.12	*1.15	*1.12	*1.15	*1.12	*1.09	234	*1.09	*1.12	*1.15	*1.51
Total <65	38	*1.13	*1.32	*1.59	*3.01	*5.98	13	*1.25	*1.39	*1.96	*1.16	26	*1.16	*1.34	*1.67	*1.34	*1.67	*1.34	*1.16	26	*1.16	*1.34	*1.67	*3.65
1997-99																								
Total	257	*1.08	*1.11	*1.15	*1.54	*1.34	282	*1.04	*1.09	*1.09	*1.06	270	*1.06	*1.10	*1.12	*1.10	*1.12	*1.10	*1.06	270	*1.06	*1.10	*1.12	*1.46
Total <65	45	*1.12	*1.28	*1.65	*3.09	*4.84	16	*1.18	*1.49	*2.01	*1.14	31	*1.14	*1.33	*1.73	*1.33	*1.73	*1.33	*1.14	31	*1.14	*1.33	*1.73	*3.47
Total†	*1.29	*1.40	*1.43	*1.47	*1.97	*1.67	*1.24	*1.29	*1.35	*1.35	*1.34	*1.26	*1.34	*1.39	*1.42	*1.39	*1.42	*1.39	*1.34	*1.26	*1.34	*1.39	*1.42	*1.85
Total <65†	*1.24	*1.40	*1.60	*2.04	*3.85	*6.27	*1.28	*1.51	*1.90	*2.57	*1.43	*1.25	*1.43	*1.67	*2.16	*1.67	*2.16	*1.67	*1.43	*1.25	*1.43	*1.67	*2.16	*4.36

(continued)

Table 5.6 (continued): SMRs, average annual deaths and 'excess' deaths due to diseases of the circulatory system, 2002-04 and 1997-99

	Males				Females				Persons				
	MC	IR	OR	VR	MC	IR	OR	VR	MC	IR	OR	R	VR
Average annual number of excess deaths													
2002-04													
0-4	0	-1	0	1	0	0	1	0	0	0	1	0	2
5-14	0	1	1	1	0	1	0	0	0	2	1	0	1
15-24	0	2	2	1	0	5	2	1	2	7	4	1	3
25-44	0	26	23	25	0	18	11	5	15	44	34	14	40
45-64	0	70	95	29	0	41	35	12	21	111	130	36	49
65-74	0	104	76	12	0	49	46	10	9	153	122	25	22
75+	0	292	148	-16	0	310	124	0	-3	602	273	3	-19
Excess total	0	495	346	53	0	423	220	27	45	918	565	78	98
Deaths total	14,337	5,712	2,747	340	16,529	5,935	2,584	260	124	30,866	11,647	601	292
Excess <65	0	98	122	34	0	65	49	16	39	0	163	51	96
Deaths <65	2,199	848	502	85	774	326	173	34	47	2,973	1,174	127	132
1997-99													
Excess total	0	468	300	46	0	247	226	23	30	0	716	526	70
Excess total†	3,481	1,714	893	117	3,397	1,352	715	73	46	6,878	3,066	1,609	189
Deaths total	15,687	6,027	2,953	363	17,714	5,952	2,753	280	115	33,401	11,980	5,706	644
Excess <65	0	98	122	44	0	53	70	20	33	0	151	192	64
Excess <65†	475	258	208	57	192	116	102	24	35	668	374	310	81
Deaths <65	2,447	907	556	111	887	344	214	40	42	3,334	1,250	771	151

Notes

- The first half of the table reports death rates (as SMRs) for the period 2002-04. The first two rows (shaded) in this section use Major Cities age-and sex-specific rates in 1997-99 as the standard and compare death rates in each of the areas with those in Major Cities in the same year (1997-99). The second two (unshaded) rows (marked with a †) use Major Cities age-and sex-specific rates in 2002-04 as the standard and compare death rates in each of the areas (including Major Cities) in 1997-99 with death rates in Major Cities in 2002-04.
- The second half of the table describes the actual number of deaths and 'excess deaths' that occurred in each population. Shaded rows 1 and 4 have used 1997-99 Major Cities rates of death as the basis for calculating the number of excess deaths. Unshaded rows 2 and 5 (marked with a †) have used 2002-04 Major Cities rates of death as the basis for calculating the number of excess deaths in 1997-99.
- For further explanation, refer to section 2.3.

Table 5.7: SMRs, average annual deaths and 'excess' deaths due to diseases of the circulatory system, for Indigenous Australians and non-Indigenous Australians, 2002-04 and 1997-99

	Males						Females						Persons						
	Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			
	MC	IR	OR	R	VR	Rate	MC	IR	OR	R	VR	Rate	MC	IR	OR	R	VR	Rate	
2002-04																			
0-4	3	0.77	1.06	0.99	6.40	2.37	2	1.33	1.74	0.97	0.00	3.34	2	0.96	1.29	0.99	4.25	*2.71	
5-14	0	2.19	2.13	5.05	15.59	*11.10	0	1.20	0.06	0.00	0.00	*7.94	0	1.61	0.92	2.09	6.39	*9.26	
15-24	2	1.35	1.44	2.82	0.80	*4.51	1	*2.67	2.49	3.26	8.47	*13.46	1	*1.73	*1.73	2.93	2.43	*7.20	
25-44	13	*1.25	*1.27	1.01	1.70	*12.68	5	*1.53	1.25	0.62	0.95	*16.38	9	*1.33	*1.26	0.91	1.53	*13.77	
45-64	118	*1.10	*1.21	1.09	1.11	*6.35	39	*1.17	*1.20	1.23	1.31	*10.35	78	*1.12	*1.21	1.12	1.15	*7.46	
65-74	609	*1.11	*1.15	*1.16	0.98	*2.96	296	*1.10	*1.19	1.21	1.06	*4.37	446	*1.10	*1.16	*1.17	1.00	*3.49	
75+	3,050	*1.08	*1.10	1.04	*0.76	0.87	2,924	*1.06	*1.07	1.02	0.89	1.10	2,973	*1.07	*1.08	1.03	*0.82	0.99	
Total	216	*1.09	*1.13	*1.07	0.91	*3.23	243	*1.07	*1.09	1.05	0.95	*2.98	230	*1.08	*1.11	*1.06	0.93	*3.12	
Total<65	37	*1.12	*1.22	1.09	1.23	*7.54	13	*1.23	*1.22	1.14	1.29	*11.44	25	*1.15	*1.22	1.11	*1.24	*8.65	
1997-99																			
Total	254	*1.09	*1.11	1.04	1.06	*3.23	278	*1.05	*1.09	1.00	0.86	*3.12	266	*1.07	*1.10	1.03	0.98	*3.78	
Total <65	44	*1.12	*1.20	*1.22	*1.28	*8.19	16	*1.17	*1.32	1.26	1.45	*10.78	30	*1.13	*1.23	*1.23	*1.31	*8.95	
Total†	*1.33	*1.48	*1.50	*1.41	*1.43	n.p.	*1.28	*1.38	*1.42	*1.31	1.12	n.p.	*1.31	*1.42	*1.46	*1.37	*1.30	n.p.	
Total<65†	*1.30	*1.51	*1.61	*1.64	*1.70	n.p.	*1.35	*1.65	*1.85	*1.73	*1.95	n.p.	*1.31	*1.54	*1.67	*1.66	*1.75	n.p.	

(continued)

Table 5.7 (continued): SMRs, average annual deaths and 'excess' deaths due to diseases of the circulatory system, for Indigenous Australians and non-Indigenous Australians, 2002-04 and 1997-99

	Males						Females						Persons						
	Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			
	MC	IR	OR	R	VR	Indigenous	MC	IR	OR	R	VR	Indigenous	MC	IR	OR	R	VR	Indigenous	
Average annual number of excess deaths																			
2002-04																			
0-4	0	-1	0	0	1	1	0	1	1	0	0	1	0	0	1	0	1	0	1
5-14	0	1	1	0	0	1	0	0	-1	0	0	1	0	1	0	0	0	0	2
15-24	0	2	1	1	0	2	0	4	1	0	0	3	0	6	2	1	0	5	5
25-44	0	19	10	0	2	51	0	15	3	-1	0	28	0	34	14	-1	2	79	79
45-64	0	63	67	4	2	83	0	35	19	3	1	56	0	98	86	7	3	139	139
65-74	0	104	70	9	0	26	0	48	39	5	0	27	0	152	110	13	0	53	53
75+	0	280	154	6	-12	-5	0	286	133	4	-5	4	0	566	287	10	-16	-1	-1
Excess total	0	468	303	19	-7	160	0	389	197	11	-3	120	0	857	500	30	-10	280	280
Deaths total	13,908	5,521	2,610	285	78	232	16,020	5,723	2,471	226	52	180	29,928	11,245	5,081	511	131	412	412
Excess <65	0	84	79	5	5	138	0	55	24	2	1	89	0	139	103	7	6	227	227
Deaths <65	2,093	795	435	58	25	160	723	298	138	17	6	97	2,816	1,093	572	74	31	257	257
1997-99																			
Excess total	0	491	271	13	6	172	0	298	213	1	-9	129	0	789	484	14	-3	301	301
Excess total†	3,851	1,911	943	90	29	n.p.	3,789	1,604	788	57	6	n.p.	7,640	3,515	1,731	147	35	n.p.	n.p.
Deaths total	15,366	5,932	2,847	309	98	250	17,298	5,862	2,664	241	54	190	32,664	11,794	5,511	550	151	439	439
Excess <65	0	94	82	14	6	150	0	48	43	5	2	86	0	142	125	18	9	237	237
Excess <65†	549	294	188	30	12	n.p.	219	128	82	9	4	n.p.	768	421	270	39	16	n.p.	n.p.
Deaths <65	2,367	874	496	76	30	171	848	325	178	22	8	95	3,215	1,199	674	98	37	267	267

Notes

1. The first half of the table reports death rates (as SMRs) for the period 2002-04. The first two rows (shaded) in this section use Major Cities age-and sex-specific rates in 1997-99 as the standard and compare death rates in each of the areas with those in Major Cities in the same year (1997-99). The second two (unshaded) rows (marked with a †) use Major Cities age-and sex-specific rates in 2002-04 as the standard and compare death rates in each of the areas (including Major Cities) in 1997-99 with death rates in Major Cities in 2002-04.
2. The second half of the table describes the actual number of deaths and 'excess deaths' that occurred in each population. Shaded rows 1 and 4 have used 1997-99 Major Cities rates of death as the basis for calculating the number of excess deaths. Unshaded rows 2 and 5 (marked with a †) have used 2002-04 Major Cities rates of death as the basis for calculating the number of excess deaths in 1997-99.
3. For further explanation, refer to section 2.3.

5.1 Cerebrovascular disease

Highlights

While cerebrovascular disease was responsible for 9% of all deaths, it was responsible for few or none of the excess deaths in regional and remote areas. SMRs for populations in each of the areas are close to 1.0 (that is, there is no clear change in mortality across areas). However, death rates in the oldest age group (75+) in Outer Regional, Remote and Very Remote areas are significantly lower than for counterparts in Major Cities, while rates in younger age groups tend to be greater than 1.0. This suggests migration of the frail aged may be modifying SMRs for all ages in these areas.

Approximately 10% of deaths due to this cause were in those younger than 75 years, although in remote areas a greater proportion (20–40%) of deaths occur at ages younger than this.

For the population younger than 65 years, SMRs were 1.2 in regional areas, rising to 1.6 and 2.6 in Remote and Very Remote areas.

For the non-Indigenous Australian population, SMRs in regional areas were about 1.0, with SMRs in remote areas 0.8. For those younger than 65 years, the SMR in Inner Regional areas was 1.2, with SMRs in other areas not significantly different from 1.0.

Death rates for Indigenous Australians were about double the rates for non-Indigenous Australians in Major Cities.

Cerebrovascular disease (ICD-10 codes I60–I69) includes a group of diseases that affect the arteries supplying blood to the brain. The 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 2004b).

Stroke is the second leading cause of death in Australia, a large contributor to disability, and places a heavy burden on family members and care providers (AIHW 2002). People who have experienced atrial fibrillation or transient ischaemic attack are at greater risk.

On average during the period, cerebrovascular disease was responsible for 12,271 deaths annually – this is 9.2% of all deaths. Two-fifths (40%) were male; 66% were in Major Cities, 33% in regional areas and 1% in remote areas.

Overall cerebrovascular disease death rates for Indigenous Australians were two times higher (and six to seven times higher for those younger than 65 years) than the rates for non-Indigenous Australians in Major Cities.

In regional areas:

Overall, death rates were not significantly different from those in Major Cities. Rates for males in Inner Regional areas were 4% higher than in Major Cities. There tended to be fewer deaths than expected in the older age groups, with the result that death rates for 0–64 year olds were 20% higher for males and 25–30% higher for females than for those in Major Cities.

The inter-regional pattern for non-Indigenous Australians was similar to that above, although the rates in Outer Regional areas were less high than for the total population in those areas.

Annually there are 2,823 and 1,188 deaths in Inner Regional and Outer Regional areas; about 42% were male.

Annually there were 46 'excess' deaths in Inner Regional areas and 32 fewer deaths than expected in Outer Regional areas; this is 2% and -2% of all 'excess' deaths in Inner Regional and Outer Regional areas. Most (87%) of the 'excess' deaths in Inner Regional areas were male, while in Outer Regional areas females were mainly responsible for the lower number of deaths than expected.

There tended to be substantially fewer deaths than expected for the older 75+ age groups, especially for females and people in Outer Regional areas. This reduces the expected number of deaths overall. To illustrate the strength of this effect, death rates for 0-64 year olds were 20-30% higher for this age group compared with Major Cities, and annually there were 36 and 17 more deaths than expected in Inner Regional and Outer Regional areas even though the bulk of stroke deaths occur in people older than 64 years. This appears likely to be an effect of the migration of the frail aged.

Compared with the previous reporting period (1997-99), there were 29 and 48 more deaths of males and females in Inner Regional areas, and 43 and 30 fewer deaths of males and females in Outer Regional areas annually in 2002-04.

The 12-year trend (AIHW 2006a) is for decreasing death rates for males and females (at about the same rate as in Major Cities).

In remote areas:

Death rates in remote areas were not significantly different from those in Major Cities. However, there tended to be fewer deaths in the older age groups than expected, with rates for people younger than 65 years 1.6 and 2.6 times those in Major Cities.

Rates for remote area non-Indigenous Australians were 0.8 times those in Major Cities, while for those younger than 65 years, rates were not significantly different from those in Major Cities. The difference between the total and non-Indigenous Australian populations in these areas reflect the prevalence of Indigenous Australians in these areas coupled with higher rates for Indigenous Australians overall.

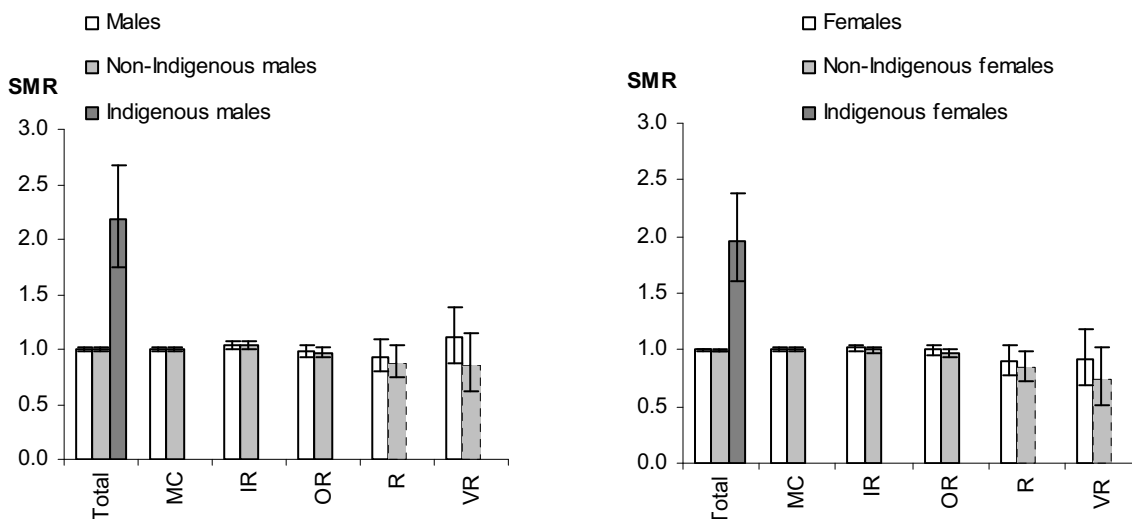
Annually there are 119 and 50 deaths in Remote and Very Remote areas; about 49% were male.

Annually there were 11 fewer and 4 more deaths than expected in Remote and Very Remote areas, this is -4% and 1% of all 'excess' deaths in Remote and Very Remote areas. These apparently positive results are a consequence of low death rates amongst remote area males and females older than 74 years. If analysis is restricted to people younger than 65 years, it is apparent that there were 10 excess deaths of males and 6 excess deaths of females annually in remote areas indicating a death rate 1.5 to 2.5 times that in Major Cities for people younger than 65 years in these areas.

It is likely that a large proportion of these excess deaths are Indigenous Australians, because there are very few excess deaths of non-Indigenous Australians in remote areas.

Compared with the previous reporting period (1997-99), there were 18 fewer deaths of males and 6 fewer deaths of females annually in 2002-04.

The 12-year trend (AIHW 2006a) is for death rates to decrease at the same rate as those in Major Cities, with those for males in Very Remote areas declining at a faster rate than in Major Cities.

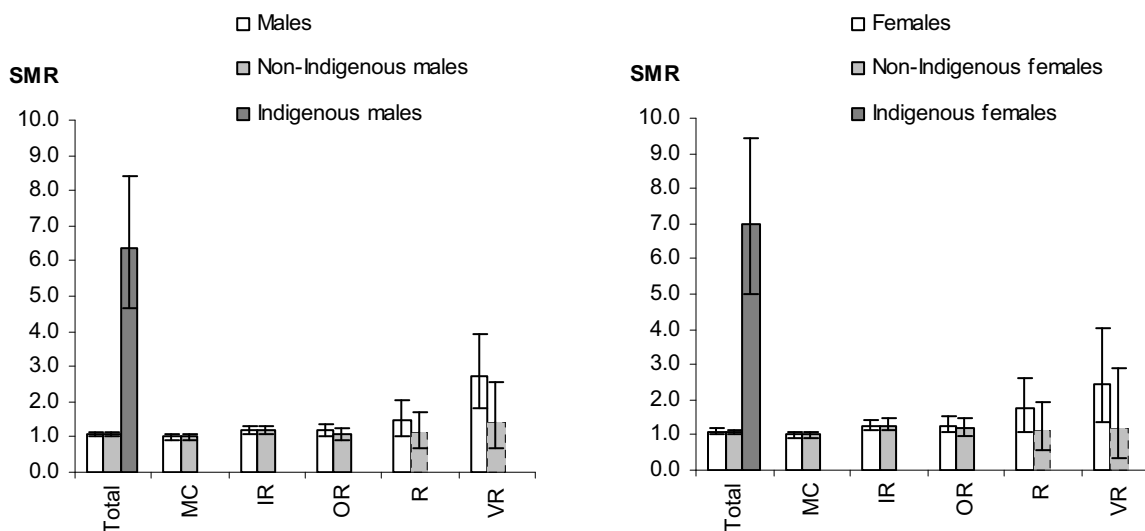


Notes

1. While the figure allows comparison of deaths between areas for each sex, it does not allow comparison between the sexes.
2. The presented SMR is the ratio of the observed number of deaths to the number expected if Major Cities rates applied in each area.
3. SMRs calculated for non-Indigenous persons from Remote and Very Remote areas (dashed) should be treated with caution (see Appendix A).
4. The SMRs for Indigenous Australian persons are for Qld, WA, SA and NT combined (see Appendix A).

Source: AIHW mortality database.

Figure 5.6: Cerebrovascular disease SMRs, by sex, 2002-04



Note: See notes for Figure 5.6.

Figure 5.7: Cerebrovascular disease SMRs for persons aged 64 years and under, by sex, 2002-04

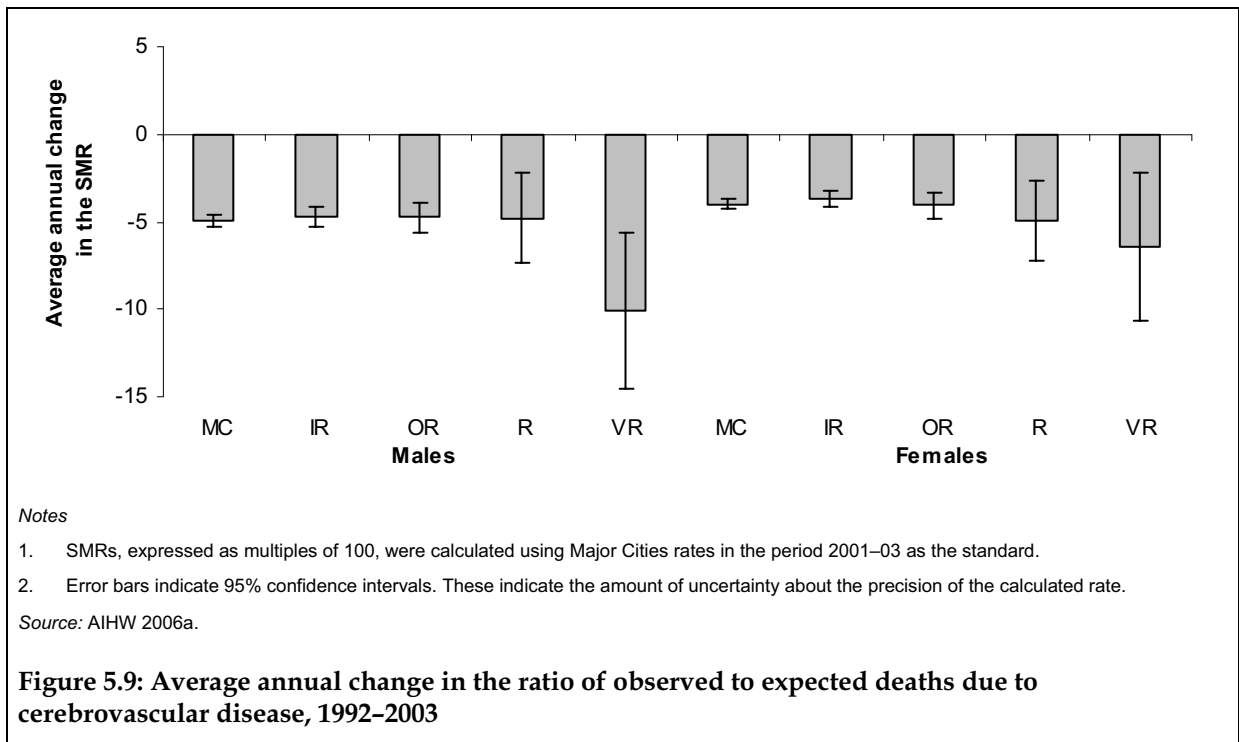
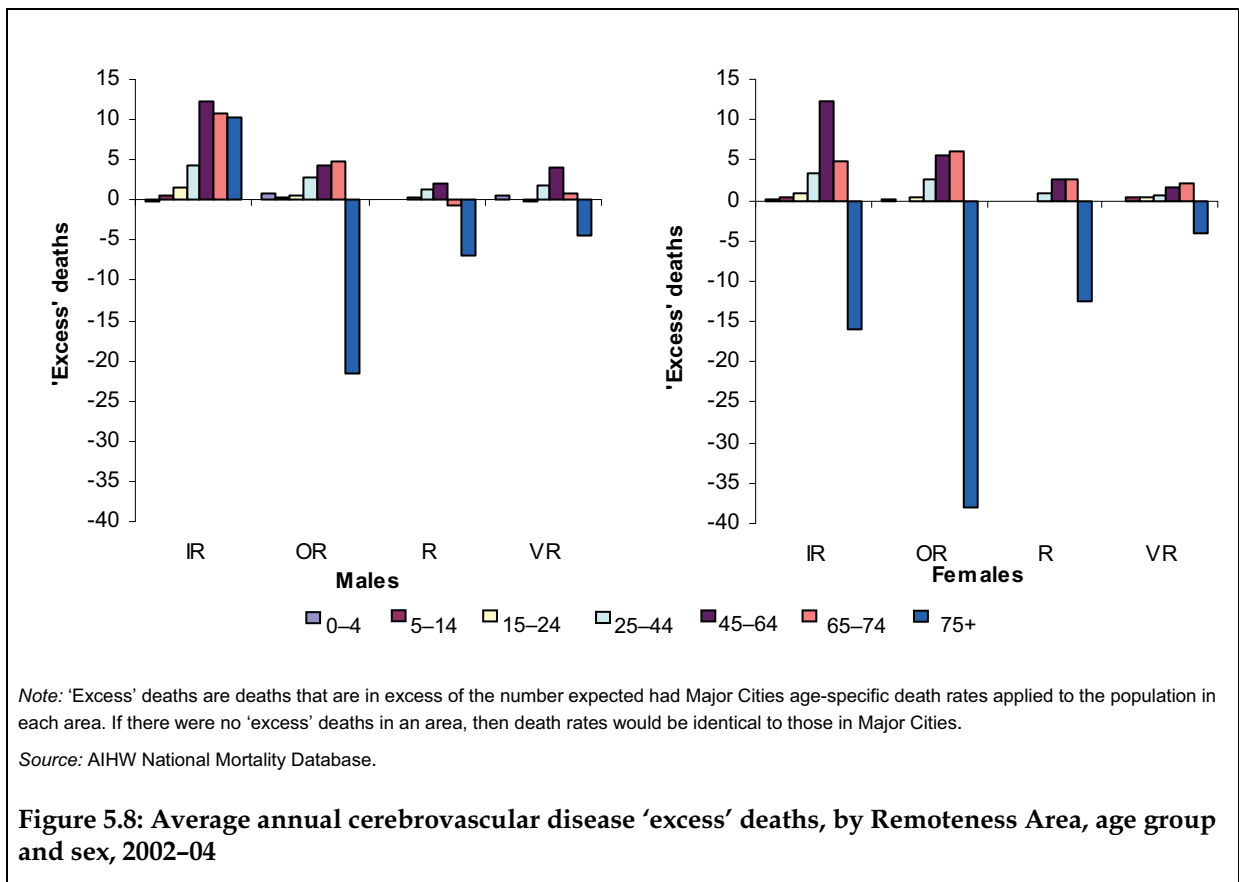


Table 5.8: SMRs, average annual deaths and 'excess' deaths due to cerebrovascular disease, 2002-04 and 1997-99

	Males						Females						Persons								
	MC		OR		VR		MC		OR		VR		MC		IR		OR		VR		
	Rate		Ratio		Ratio		Rate		Ratio		Ratio		Rate		IR		OR		R	VR	
2002-04																					
0-4	0	0.62	3.81	0.11	20.37		0	1.56	3.00	0.00	0.00		0	0.89	3.57	0.08					14.49
5-14	0	3.70	2.51	1.33	0.00		0	2.75	0.00	0.00	27.09		0	3.24	1.29	0.69					12.81
15-24	1	2.01	1.72	2.66	0.10		0	2.45	2.29	0.00	11.15		0	*2.14	1.88	1.98					2.83
25-44	2	*1.44	*1.55	2.26	*4.30		2	1.30	1.47	1.96	2.27		2	*1.37	*1.51	*2.12					*3.34
45-64	15	*1.15	1.10	1.34	*2.35		10	*1.23	1.22	*1.73	2.12		13	*1.18	*1.15	*1.48					*2.27
65-74	110	1.06	1.06	0.94	1.23		78	1.04	1.11	1.41	*1.96		93	1.05	1.08	1.11					1.50
75+	775	1.01	0.94	0.84	0.72		921	0.99	*0.94	*0.79	0.78		864	1.00	*0.94	*0.81					*0.75
Total	48	*1.04	0.98	0.93	1.11		74	1.00	0.97	0.90	1.04		61	1.02	0.97	0.92					1.08
Total <65	5	*1.20	*1.18	*1.47	*2.73		3	*1.26	*1.28	*1.75	*2.43		4	*1.22	*1.22	*1.57					*2.62
1997-99																					
Total	51	1.03	1.05	1.00	*1.61		79	1.01	1.01	0.95	1.06		61	1.02	1.03	0.97					*1.33
Total <65	6	0.99	1.12	1.29	*3.10		4	*1.16	*1.37	*1.94	*3.56		5	1.06	*1.21	*1.52					*3.26
Total†	*1.21	*1.25	*1.27	*1.21	*1.96		*1.17	*1.18	*1.18	1.11	1.24		*1.18	*1.20	*1.22	*1.16					*1.60
Total <65†	*1.28	*1.26	*1.43	*1.65	*4.01		*1.23	*1.43	*1.68	*2.36	*4.39		*1.26	*1.33	*1.52	*1.91					*4.14

(continued)

Table 5.8 (continued): SMRs, average annual deaths and 'excess' deaths due to cerebrovascular disease, 2002-04 and 1997-99

	Males					Females					Persons					
	MC	IR	OR	R	VR	MC	IR	OR	R	VR	MC	IR	OR	R	VR	
Average annual number of excess deaths																
2002-04																
0-4	0	0	1	0	1	0	0	0	0	0	0	0	0	1	0	1
5-14	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0
15-24	0	2	1	0	0	0	1	0	0	0	0	3	1	0	0	0
25-44	0	4	3	1	2	0	3	3	1	1	0	8	5	2	2	2
45-64	0	12	4	2	4	0	12	6	2	2	0	25	10	5	6	6
65-74	0	11	5	-1	1	0	5	6	3	2	0	16	11	2	3	3
75+	0	10	-22	-7	-4	0	-16	-38	-12	-4	0	-6	-60	-19	-9	-9
Excess total	0	40	-8	-4	3	0	6	-23	-7	1	0	46	-32	-11	4	4
Deaths total	3,102	1,169	505	56	26	4,955	1,654	683	63	24	8,057	2,823	1,188	119	50	50
Excess <65	0	19	9	4	6	0	17	9	3	3	0	36	17	7	9	9
Deaths <65	279	114	57	11	10	197	83	40	8	5	476	197	97	19	15	15
1997-99																
Excess total	0	31	24	0	15	0	12	7	-3	1	0	43	31	-4	16	16
Excess total†	540	224	116	11	19	709	243	109	7	5	1,249	467	225	18	24	24
Deaths total	3,126	1,140	548	61	39	4,962	1,606	713	68	25	8,088	2,746	1,261	129	64	64
Excess <65	0	-1	7	3	9	0	11	13	5	6	0	10	20	7	15	15
Excess <65†	72	22	20	5	10	40	24	19	5	6	112	47	39	10	16	16
Deaths <65	332	108	66	12	13	217	82	48	10	8	549	190	113	21	21	21

Notes

- The first half of the table reports death rates (as SMRs) for the period 2002-04. The first two rows (shaded) in this section use Major Cities age-and sex-specific rates in 1997-99 as the standard and compare death rates in each of the areas with those in Major Cities in the same year (1997-99). The second two (unshaded) rows (marked with a †) use Major Cities age-and sex-specific rates in 2002-04 as the standard and compare death rates in each of the areas (including Major Cities) in 1997-99 with death rates in Major Cities in 2002-04.
- The second half of the table describes the actual number of deaths and 'excess deaths' that occurred in each population. Shaded rows 1 and 4 have used 1997-99 Major Cities rates of death as the basis for calculating the number of excess deaths. Unshaded rows 2 and 5 (marked with a †) have used 2002-04 Major Cities rates of death as the basis for calculating the number of excess deaths in 1997-99.
- For further explanation, refer to section 2.3.

Table 5.9: SMRs, average annual deaths and 'excess' deaths due to cerebrovascular disease, for Indigenous Australians and non-Indigenous Australians, 2002-04 and 1997-99

	Males						Females						Persons						
	Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			
	MC	IR	OR	R	VR	Rate	MC	IR	OR	R	VR	Rate	MC	IR	OR	R	VR	Rate	
2002-04																			
0-4	0	0.64	4.15	0.13	*48.24	0.00	0	1.61	0.00	0.00	0.00	11.12	0	0.92	2.95	0.09	*34.54	11.12	
5-14	0	5.25	4.15	2.53	0.00	0.00	0	0.00	0.00	0.00	0.00	*51.13	0	2.14	1.70	1.05	0.00	*51.13	
15-24	1	*2.15	0.99	3.28	0.22	3.89	0	2.49	2.46	0.00	30.79	0.00	*2.25	1.41	2.43	6.57	3.89		
25-44	2	1.36	1.42	1.47	0.11	*9.02	2	1.32	1.45	0.54	0.18	*7.37	2	*1.34	*1.43	1.03	0.14	*8.18	
45-64	15	*1.14	1.02	1.04	1.34	*5.79	9	*1.26	1.15	1.29	1.11	*6.37	12	*1.18	1.07	1.13	1.27	*6.04	
65-74	107	1.07	1.03	0.78	0.68	*3.18	75	1.04	1.08	1.35	1.15	*2.79	90	1.06	1.05	0.99	0.84	*3.00	
75+	756	1.01	0.95	0.86	0.78	0.79	897	0.99	*0.95	*0.78	*0.65	1.09	842	1.00	*0.95	*0.82	*0.71	0.97	
Total	47	*1.04	0.97	0.88	0.85	*2.17	73	1.00	0.97	*0.85	0.73	*1.97	60	1.02	0.97	*0.86	*0.80	*2.06	
Total <65	5	*1.18	1.09	1.12	1.41	*6.34	3	*1.28	1.21	1.12	1.17	*6.98	4	*1.22	1.13	1.12	1.33	*6.62	
1997-99																			
Total	51	*1.03	1.04	0.91	1.18	*2.88	78	1.02	1.01	0.90	*0.70	*2.31	64	*1.03	1.03	0.91	0.94	*2.58	
Total <65	6	0.99	1.08	0.91	1.59	*6.69	4	*1.16	*1.25	1.41	1.39	*7.62	5	1.05	*1.15	1.08	1.53	*7.08	
Total†	*1.25	*1.29	*1.31	1.15	*1.50	n.p.	*1.20	*1.23	*1.22	1.09	0.84	n.p.	*1.22	*1.25	*1.26	*1.12	1.16	n.p.	
Total <65†	*1.39	*1.53	*1.69	1.43	*2.50	n.p.	*1.30	*1.55	*1.67	*1.85	1.80	n.p.	*1.35	*1.54	*1.68	*1.59	*2.26	n.p.	

(continued)

Table 5.9 (continued): SMRs, average annual deaths and 'excess' deaths due to cerebrovascular disease, for Indigenous Australians and non-Indigenous Australians, 2002-04 and 1997-99

	Males						Females						Persons						
	Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			
	MC	IR	OR	R	VR	Indigenous	MC	IR	OR	R	VR	Indigenous	MC	IR	OR	R	VR	Indigenous	
Average annual number of excess deaths																			
2002-04																			
0-4	0	0	1	0	1	0	0	0	0	0	0	0	0	0	1	0	1	0	0
5-14	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1
15-24	0	2	0	0	0	0	0	1	0	0	0	0	0	3	0	0	0	0	0
25-44	0	3	2	0	0	4	0	3	2	0	0	3	0	7	4	0	0	-1	7
45-64	0	11	1	0	1	9	0	13	4	1	0	8	0	24	4	1	1	17	17
65-74	0	12	3	-2	-1	5	0	5	5	2	0	4	0	17	7	0	-1	9	9
75+	0	12	-20	-5	-3	-2	0	-19	-31	-12	-5	1	0	-7	-52	-17	-7	-1	-1
Excess total	0	40	-14	-7	-3	17	0	3	-21	-10	-4	17	0	43	-35	-16	-7	33	33
Deaths total	3,013	1,135	481	49	15	31	4,807	1,600	659	54	12	34	7,819	2,735	1,140	103	27	65	65
Excess <65	0	16	4	1	1	13	0	17	6	0	0	12	0	33	10	1	1	25	25
Deaths <65	266	107	49	7	4	16	183	78	34	4	1	14	449	184	83	12	5	30	30
1997-99																			
Excess total	0	38	22	-5	3	28	0	29	8	-7	-5	22	0	67	30	-12	-2	50	50
Excess total†	610	252	125	7	7	n.p.	807	296	125	5	-2	n.p.	1416	548	250	12	5	n.p.	n.p.
Deaths total	3,065	1,123	532	52	21	43	4,846	1,585	693	60	12	38	7,911	2,708	1,225	112	33	81	81
Excess <65	0	-2	5	-1	2	16	0	11	8	2	1	14	0	9	13	1	2	30	30
Excess <65†	91	36	25	2	3	n.p.	48	28	17	3	1	n.p.	139	64	41	5	4	n.p.	n.p.
Deaths <65	322	104	61	8	5	19	210	79	42	6	2	16	532	183	102	14	7	35	35

Notes

1. The first half of the table reports death rates (as SMRs) for the period 2002-04. The first two rows (shaded) in this section use Major Cities age-and sex-specific rates in 1997-99 as the standard and compare death rates in each of the areas with those in Major Cities in the same year (1997-99). The second two (unshaded) rows (marked with a †) use Major Cities age-and sex-specific rates in 2002-04 as the standard and compare death rates in each of the areas (including Major Cities) in 1997-99 with death rates in Major Cities in 2002-04.
2. The second half of the table describes the actual number of deaths and 'excess deaths' that occurred in each population. Shaded rows 1 and 4 have used 1997-99 Major Cities rates of death as the basis for calculating the number of excess deaths. Unshaded rows 2 and 5 (marked with a †) have used 2002-04 Major Cities rates of death as the basis for calculating the number of excess deaths in 1997-99.
3. For further explanation, refer to section 2.3.

5.2 Coronary heart disease

Highlights

Coronary heart disease was responsible for 19% of all deaths, about 20% of excess deaths in regional areas and about 12% of excess deaths in remote areas.

Death rates for Indigenous Australians were three times higher than the rates for non-Indigenous Australians in Major Cities.

SMRs were about 1.1 in regional areas and 1.2 and 1.5 in Remote and Very Remote areas. In remote areas, there were fewer deaths than expected of people 75 years or older, but more deaths than expected of people younger than this. For people younger than 65 years, SMRs increased with remoteness (being 1.2, 1.4, 1.6 and 3.5 in each of the four areas).

For non-Indigenous Australians, SMRs were still about 1.1 in regional areas, but SMRs in Remote and Very Remote areas were similar to or lower than in Major Cities.

Since 1992, death rates decreased in all areas, and most strongly for males in Very Remote areas.

Coronary heart disease (ischaemic heart disease, ICD-10 codes I20–I25) is the single largest cause of premature death in Australia (AIHW 2002).

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 2004b).

Annually during 2002–04, coronary heart disease was responsible for 25,259 deaths – this was 19.1% of all deaths. Half (53%) were male; 63% were in Major Cities, 35% in regional areas and 2% in remote areas.

Overall coronary heart disease death rates for Indigenous Australians were 3.4 times higher than the rates for non-Indigenous people in Major Cities.

In regional areas:

Death rates were about 10% higher (1.1 times) than in Major Cities.

For 0–64 year olds, death rates were 15% higher in Inner Regional areas and 40% higher in Outer Regional areas than in Major Cities.

The inter-regional pattern for non-Indigenous Australians was similar to that above (although rates in Outer Regional areas were only 25% higher than in Major Cities).

Annually there are 6,042 and 2,792 deaths in Inner Regional and Outer Regional areas; about 55% were male.

Annually there were 464 and 300 ‘excess’ deaths in Inner Regional and Outer Regional areas; this is 22% and 19% of all ‘excess’ deaths in Inner Regional and Outer Regional areas. About two-thirds (64%) of the ‘excess’ were male. About half of the excess was among people aged 75 years and older, the other half among people aged 45–74 years.

Compared with the previous reporting period (1997–99), there were 547 fewer deaths of males and 303 fewer deaths of females annually in 2002–04.

The 12-year trend (AIHW 2006a) is for decreasing death rates (at about the same rate in regional areas as in Major Cities). SMRs (relative to 2002–04 Major Cities) in regional areas were decreasing from about 1.4 in 1997–99 to 1.1 in 2002–04, equivalent to a saving of 2,868 deaths annually in regional areas. Incidentally, this compares with a decline in Major Cities death rates of 1.3 in 1997–99 to 1.0 in 2002–04, with an annual saving in Major Cities of 4,322 deaths annually.

In remote areas:

Death rates in Remote areas were about 15% higher than in Major Cities; death rates in Very Remote areas were about 40% higher than in Major Cities.

For 0–64 year olds, death rates in Remote areas were about 60% higher than in Major Cities, while in Very Remote areas rates for people younger than 65 years were about 3.5 times those in Major Cities. These higher rates appear to be entirely a reflection of the relative large numbers of Indigenous Australians in these areas (coupled with overall higher mortality for Indigenous Australians).

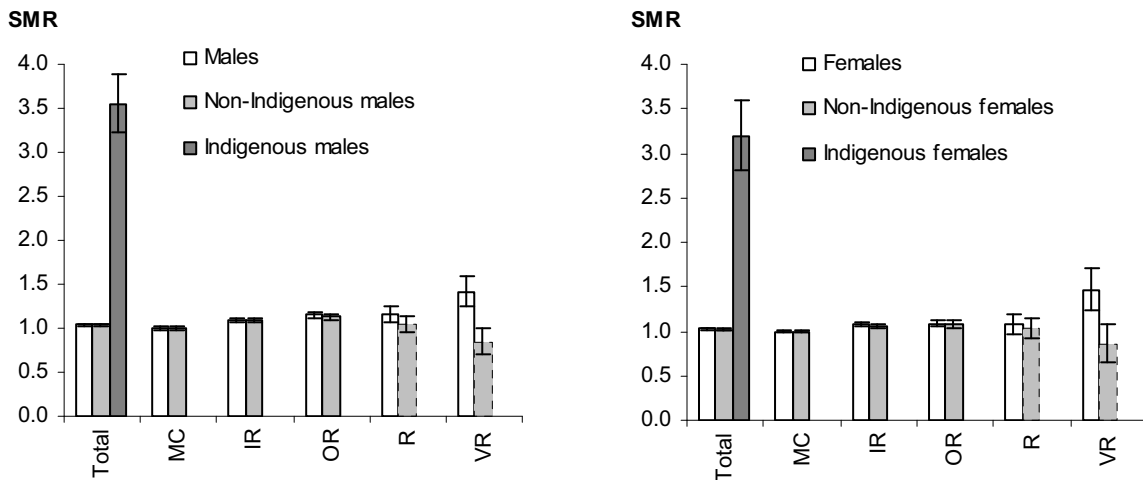
Death rates for remote area non-Indigenous Australians were not significantly different from those in Major Cities.

Annually there are 313 and 149 deaths in Remote and Very Remote areas; about 63% were male.

Annually there were 36 and 45 excess deaths in Remote and Very Remote areas respectively; this is 13% and 11% of all 'excess' deaths in Remote and Very Remote areas. In Remote areas, there were fewer deaths than expected amongst older people, but more than expected amongst 45–64 year olds (yielding 1 'excess' death annually for Remote areas). Almost all of the 9 'excess' deaths in Very Remote areas were males aged 45–64 years.

Compared with the previous reporting period (1997–99), there were 49 fewer deaths of males and 15 fewer deaths of females annually in 2002–04.

The 12-year trend (AIHW 2006a) is for decreasing death rates for males and females. Rates for males in Very Remote areas were slightly faster than for males in other areas. SMRs (relative to 2002–04 Major Cities) in Remote and Very Remote areas respectively, decreased from about 1.5 and 1.8 in 1997–99 to 1.1 and 1.4 in 2002–04, the equivalent to a saving of 194 deaths annually in remote areas.

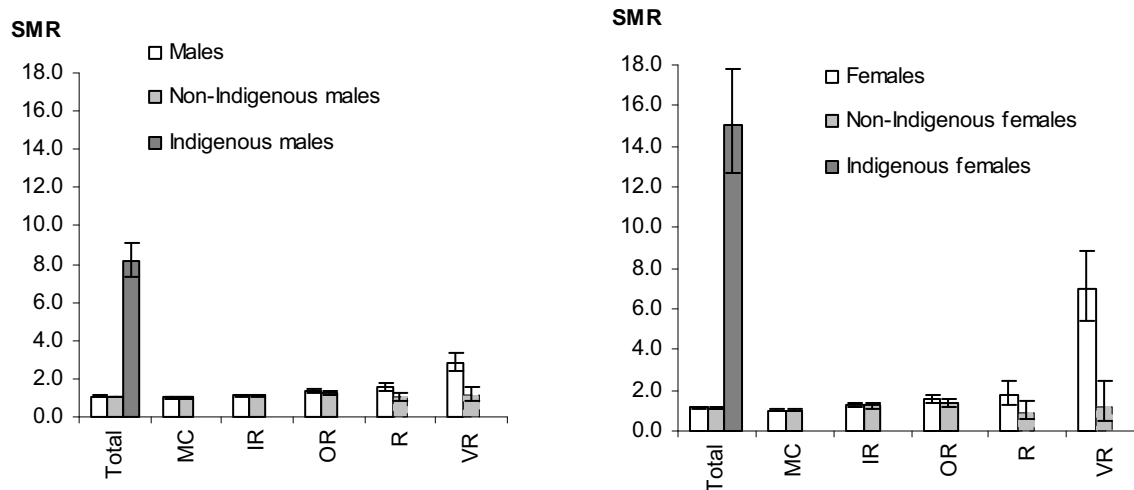


Notes

1. While the figure allows comparison of deaths between areas for each sex, it does not allow comparison between the sexes.
2. The presented SMR is the ratio of the observed number of deaths to the number expected if Major Cities rates applied in each area.
3. SMRs calculated for non-Indigenous Australian persons from Remote and Very Remote areas (dashed) should be treated with caution (see Appendix A).
4. The SMRs for Indigenous Australian persons are for Qld, WA, SA and NT combined (see Appendix A).

Source: AIHW mortality database.

Figure 5.10: Coronary heart disease SMRs, by sex, 2002-04



Note: See notes for Figure 5.10.

Figure 5.11: Coronary heart disease SMRs for persons aged 64 years and under, by sex, 2002-04

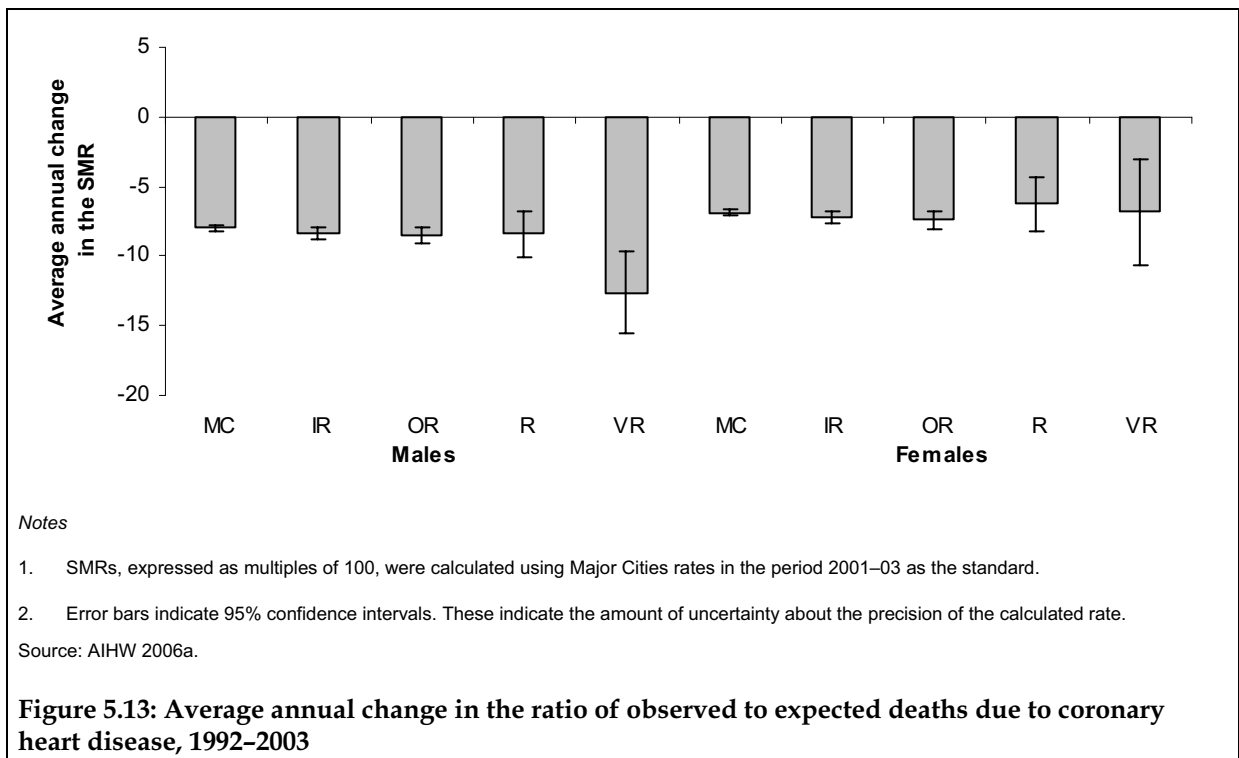
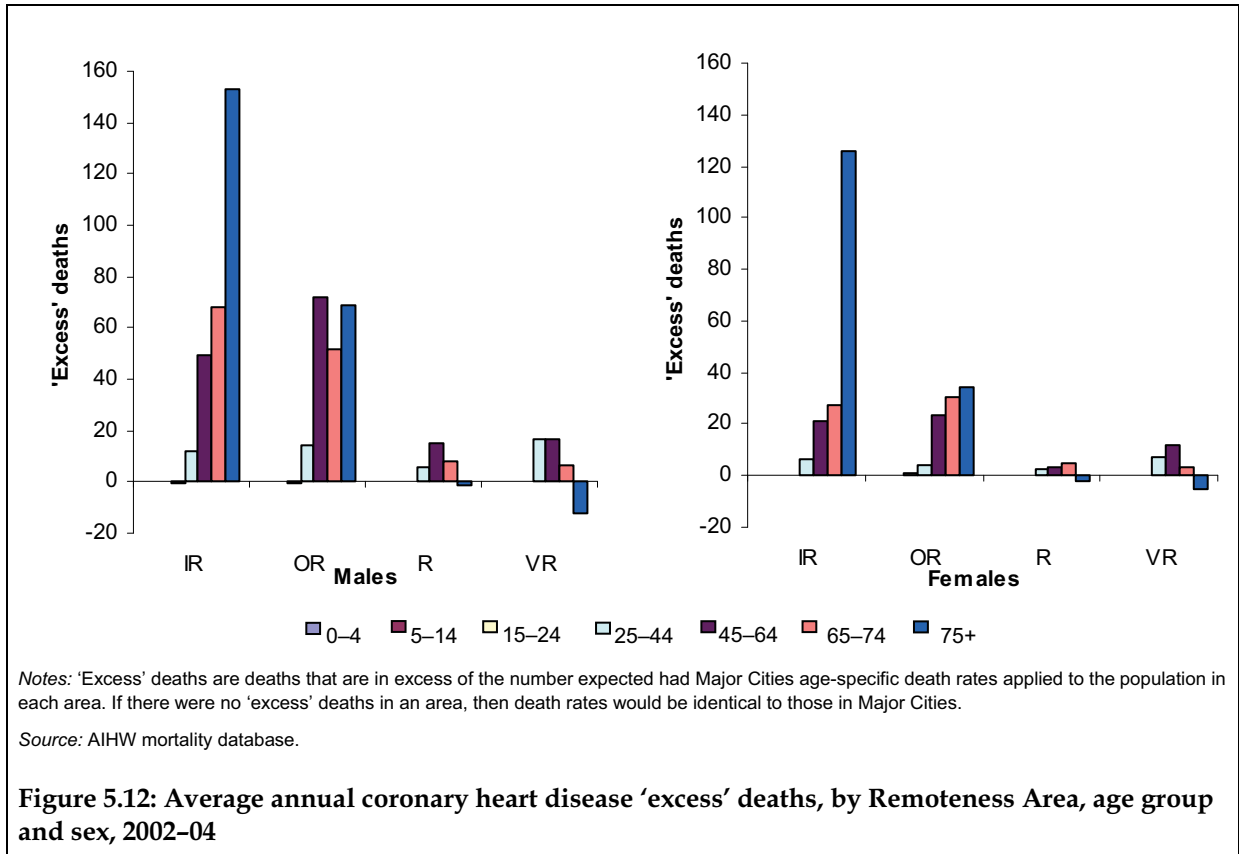


Table 5.10: SMIRs, average annual deaths and 'excess' deaths due to coronary heart disease, 2002-04 and 1997-99

	Males						Females						Persons						
	MC		OR		VR		MC		OR		VR		MC		OR		VR		
	Rate	IR	Ratio	R	Ratio	VR	Rate	IR	Ratio	R	Ratio	VR	Rate	IR	Ratio	R	Ratio	VR	
2002-04																			
0-4	0	0.00	6.00	0.00	0.00	0.00	0	0.00	6.02	0.08	0.08	0.00	0	0.00	6.01	0.04	0.04	0.00	0.00
5-14	0	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0.00
15-24	0	0.75	0.00	0.00	6.70	6.70	0	3.35	8.33	0.00	0.00	0.00	0	1.19	1.34	0.00	0.00	5.69	5.69
25-44	8	*1.26	*1.59	*2.29	*8.24	*8.24	2	*1.68	*1.96	*4.49	*20.26	*20.26	5	*1.33	*1.65	*2.61	*2.61	*9.96	*9.96
45-64	84	*1.11	*1.32	*1.44	*2.02	*2.02	19	*1.21	*1.48	1.46	*5.20	*5.20	52	*1.13	*1.34	*1.44	*1.44	*2.50	*2.50
65-74	396	*1.11	*1.17	*1.21	*1.44	*1.44	152	*1.11	*1.27	*1.43	*1.73	*1.73	269	*1.11	*1.20	*1.26	*1.26	*1.51	*1.51
75+	1,691	*1.08	*1.08	0.99	*0.65	*0.65	1,398	*1.06	1.04	0.98	0.81	0.81	1,512	*1.07	*1.06	0.98	0.98	0.72	0.72
Total	127	*1.09	*1.15	*1.16	*1.42	*1.42	115	*1.07	*1.08	1.08	*1.46	*1.46	121	*1.08	*1.12	*1.13	*1.13	*1.43	*1.43
Total <65	25	*1.12	*1.34	*1.53	*2.83	*2.83	6	*1.25	*1.53	*1.77	*7.00	*7.00	15	*1.15	*1.37	*1.57	*1.57	*3.44	*3.44
1997-99																			
Total	154	*1.10	*1.09	*1.16	*1.52	*1.52	138	*1.04	*1.08	1.06	*1.26	*1.26	137	*1.07	*1.09	*1.12	*1.12	*1.43	*1.43
Total <65	30	*1.13	*1.26	*1.59	*3.01	*3.01	8	*1.25	*1.68	*1.94	*5.50	*5.50	18	*1.16	*1.34	*1.65	*1.65	*3.39	*3.39
Total†	*1.33	*1.47	*1.46	*1.54	*2.01	*2.01	*1.29	*1.35	*1.40	*1.37	*1.65	*1.65	*1.31	*1.41	*1.44	*1.47	*1.47	*1.88	*1.88
Total <65†	*1.30	*1.48	*1.64	*2.07	*3.93	*3.93	*1.37	*1.73	*2.32	*2.67	*7.63	*7.63	*1.31	*1.53	*1.76	*2.16	*2.16	*4.47	*4.47

(continued)

Table 5.10 (continued): SMRs, average annual deaths and 'excess' deaths due to coronary heart disease, 2002-04 and 1997-99

	Males					Females					Persons				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual number of excess deaths															
2002-04															
0-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5-14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-24	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
25-44	0	12	14	6	17	0	6	4	3	7	0	18	18	8	24
45-64	0	50	72	15	16	0	21	23	3	12	0	71	95	18	28
65-74	0	68	52	8	6	0	27	30	5	3	0	95	82	13	10
75+	0	153	69	-1	-12	0	126	34	-2	-6	0	279	103	-3	-18
Excess total	0	283	207	27	28	0	182	93	9	17	0	464	300	36	45
Deaths total	8,248	3,289	1,597	196	95	7,700	2,753	1,195	117	54	15,949	6,042	2,792	313	149
Excess <65	0	61	86	21	34	0	28	29	6	19	0	90	115	26	53
Deaths <65	1,451	559	339	59	52	330	141	82	13	22	1,781	701	421	72	75
1997-99															
Excess total	0	335	152	30	40	0	104	103	7	11	0	439	255	37	51
Excess total†	2,355	1,178	555	78	59	1,967	747	387	36	21	4,322	1,925	943	114	80
Deaths total	9,426	3,679	1,754	223	117	8,683	2,907	1,344	133	53	18,109	6,586	3,098	356	169
Excess <65	0	74	76	27	42	0	34	46	8	17	0	108	122	36	59
Excess <65†	383	204	146	38	47	110	71	64	11	18	493	275	210	49	65
Deaths <65	1,665	628	373	73	63	407	169	113	17	21	2,072	797	486	91	84

Notes

- The first half of the table reports death rates (as SMRs) for the period 2002-04. The first two rows (shaded) in this section use Major Cities age-and sex-specific rates in 1997-99 as the standard and compare death rates in each of the areas with those in Major Cities in the same year (1997-99). The second two (unshaded) rows (marked with a †) use Major Cities age-and sex-specific rates in 2002-04 as the standard and compare death rates in each of the areas (including Major Cities) in 1997-99 with death rates in Major Cities in 2002-04.
- The second half of the table describes the actual number of deaths and 'excess deaths' that occurred in each population. Shaded rows 1 and 4 have used 1997-99 Major Cities rates of death as the basis for calculating the number of excess deaths. Unshaded rows 2 and 5 (marked with a †) have used 2002-04 Major Cities rates of death as the basis for calculating the number of excess deaths in 1997-99.
- For further explanation, refer to section 2.3.

Table 5.11: SMIRs, average annual deaths and 'excess' deaths due to coronary heart disease, for Indigenous Australians and non-Indigenous Australians, 2002-04 and 1997-99

	Males						Females						Persons					
	Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			Non-Indigenous			Indigenous		
	MC	IR	OR	R	VR	Rate	MC	IR	OR	R	VR	Rate	MC	IR	OR	R	VR	Rate
2002-04																		
0-4	0	0.00	6.55	0.00	0.00	0.00	0	0.00	6.55	0.10	0.00	0.00	0	0.00	6.55	0.05	0.00	0.00
5-14	0	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	0.00	0.00	0.00
15-24	0	0.87	0.00	0.00	0.00	*14.48	0	3.42	8.93	0.00	0.00	0.00	0	1.35	1.58	0.00	0.00	*14.48
25-44	7	*1.20	1.21	0.71	1.41	*16.91	1	*1.65	1.35	0.80	1.51	*28.06	4	*1.27	1.23	0.72	1.43	*18.86
45-64	81	*1.11	*1.25	1.06	1.11	*6.23	18	*1.20	*1.33	0.95	1.19	*12.67	49	*1.12	*1.26	1.04	1.12	*7.52
65-74	385	*1.10	*1.17	1.14	0.92	*2.79	146	*1.11	*1.24	1.22	1.10	*4.82	260	*1.11	*1.19	1.16	0.96	*3.43
75+	1,652	*1.08	*1.09	1.02	*0.64	0.83	1,360	*1.05	*1.04	1.01	0.79	1.01	1,474	*1.06	*1.07	1.02	*0.71	0.92
Total	124	*1.09	*1.13	1.04	*0.84	*3.54	113	*1.07	*1.08	1.03	0.86	*3.18	119	*1.08	*1.11	1.04	*0.84	*3.40
Total <65	24	*1.11	*1.24	1.02	1.14	*8.17	5	*1.24	*1.35	0.93	1.22	*15.09	15	*1.14	*1.26	1.01	1.15	*9.52
1997-99																		
Total	153	*1.11	*1.08	1.06	1.07	*3.36	136	*1.04	*1.08	0.99	0.94	*3.23	144	*1.08	*1.08	1.03	1.02	*3.31
Total <65	30	*1.13	*1.16	*1.23	1.26	*8.58	7	*1.24	*1.46	1.35	*1.91	*14.10	19	*1.15	*1.22	*1.25	*1.34	*9.74
Total†	*1.38	*1.56	*1.53	*1.49	*1.48	<i>n.p.</i>	*1.35	*1.46	*1.50	*1.38	*1.30	<i>n.p.</i>	*1.37	*1.51	*1.52	*1.45	*1.42	<i>n.p.</i>
Total <65†	*1.35	*1.55	*1.60	*1.68	*1.71	<i>n.p.</i>	*1.46	*1.97	*2.32	*2.10	*2.90	<i>n.p.</i>	*1.37	*1.62	*1.71	*1.73	*1.85	<i>n.p.</i>

(continued)

Table 5.11 (continued): SMRs, average annual deaths and 'excess' deaths due to coronary heart disease, for Indigenous Australians and non-Indigenous Australians, 2002-04 and 1997-99

	Males						Females						Persons						
	Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			
	MC	IR	OR	R	VR	Indigenous	MC	IR	OR	R	VR	Indigenous	MC	IR	OR	R	VR	Indigenous	
Average annual number of excess deaths																			
2002-04																			
0-4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
5-14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15-24	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	1
25-44	0	8	4	-1	1	37	0	5	1	0	0	14	0	14	6	-1	1	1	51
45-64	0	45	53	2	1	56	0	19	14	0	0	31	0	64	67	1	2	2	87
65-74	0	64	50	5	-1	15	0	27	24	2	0	15	0	91	75	7	-1	30	30
75+	0	141	73	1	-9	-3	0	113	40	1	-4	0	0	254	113	3	-14	-3	-3
Excess total	0	259	180	7	-8	106	0	165	81	3	-4	60	0	423	262	10	-12	166	166
Deaths total	8,002	3,171	1,516	162	42	147	7,459	2,652	1,141	103	22	88	15,461	5,822	2,657	265	64	235	235
Excess <65	0	54	57	1	2	94	0	25	17	0	0	45	0	78	74	0	2	139	139
Deaths <65	1,382	526	294	35	15	107	305	129	65	6	2	48	1,687	655	359	41	18	155	155
1997-99																			
Excess total	0	348	131	11	4	109	0	123	93	-2	-2	66	0	471	224	9	2	175	175
Excess total†	2,564	1,299	583	63	20	n.p.	2,185	898	434	32	6	n.p.	4,749	2,197	1,017	95	26	n.p.	n.p.
Deaths total	9,229	3,619	1,686	191	60	155	8,481	2,858	1,297	116	28	95	17,710	6,477	2,983	307	88	250	250
Excess <65	0	71	46	10	4	102	0	30	29	3	2	47	0	101	75	12	6	148	148
Excess <65†	416	215	123	21	8	n.p.	121	78	52	6	3	n.p.	538	292	175	26	11	n.p.	n.p.
Deaths <65	1,611	604	329	52	20	115	384	158	91	11	4	50	1,994	762	420	62	24	165	165

Notes

1. The first half of the table reports death rates (as SMRs) for the period 2002-04. The first two rows (shaded) in this section use Major Cities age-and sex-specific rates in 1997-99 as the standard and compare death rates in each of the areas with those in Major Cities in the same year (1997-99). The second two (unshaded) rows (marked with a †) use Major Cities age-and sex-specific rates in 2002-04 as the standard and compare death rates in each of the areas (including Major Cities) in 1997-99 with death rates in Major Cities in 2002-04.
2. The second half of the table describes the actual number of deaths and 'excess deaths' that occurred in each population. Shaded rows 1 and 4 have used 1997-99 Major Cities rates of death as the basis for calculating the number of excess deaths. Unshaded rows 2 and 5 (marked with a †) have used 2002-04 Major Cities rates of death as the basis for calculating the number of excess deaths in 1997-99.
3. For further explanation, refer to section 2.3.

5.3 All other diseases of the circulatory system

Highlights

All other diseases of the circulatory system were responsible for 9% of all deaths, about 19% of excess deaths in regional and remote areas and 12% of excess deaths in Very Remote areas.

Death rates for Indigenous Australians were four times higher than the rates for non-Indigenous Australians in Major Cities.

SMRs in the four areas were 1.2, 1.3, 1.5 and 2.2.

For non-Indigenous Australians SMRs in the four areas were 1.2, 1.3, 1.4 and 1.3.

Since 1992, death rates decreased in all areas, although the decrease in Very Remote areas was not statistically significant.

Other circulatory diseases (ICD-10 codes I00–I99, excluding cerebrovascular disease and coronary heart disease) are included because as a group they are responsible for a large number of deaths. Differences in death rates across areas for this range of diseases may suggest further work to identify potential targets for intervention. Specific causes of death included in this diverse group include hypertensive heart disease and hypertensive renal disease, pulmonary heart disease, pericarditis, valve disorders, endocarditis and myocarditis, cardiomyopathy, heart failure, atherosclerosis, aneurysms and other diseases of blood vessels.

On average during the period, all other diseases of the circulatory system were responsible for 11,291 deaths annually – this is 8.5% of all deaths. Just under half (45%) were male; 61% were in Major Cities, 37% in regional areas and 2% in remote areas.

Overall, death rates for Indigenous Australians were 3.6 times higher (and nine times higher for those younger than 65 years) than the rates for non-Indigenous Australians in Major Cities.

In regional areas:

Death rates were 15–30% higher than in Major Cities for all ages and for people aged 0–64 years.

The inter-regional pattern for non-Indigenous Australians was similar to that above.

Annually there are 2,781 and 1,351 deaths in Inner Regional and Outer Regional areas; about 46% were male.

Annually there were 407 and 297 ‘excess’ deaths in Inner Regional and Outer Regional areas, this is 19% and 19% of all ‘excess’ deaths in Inner Regional and Outer Regional areas. About half (45%) of the ‘excess’ were male. The bulk of the excess was among those older than 75 years.

Compared with the previous reporting period (1997–99), there were 40 more deaths of males and 98 more deaths of females annually in 2002–04.

The 12-year trend (AIHW 2006a) is for most death rates to decline at about the same rate as in Major Cities, but with rates for females in Outer Regional areas declining slower than in Major Cities.

In remote areas:

Death rates in Remote and Very Remote areas were 1.5 to 2.2 times those in Major Cities.

Death rates for people aged less than 65 years in Remote and Very Remote areas were 1.3 and 2.0 times those in Major Cities.

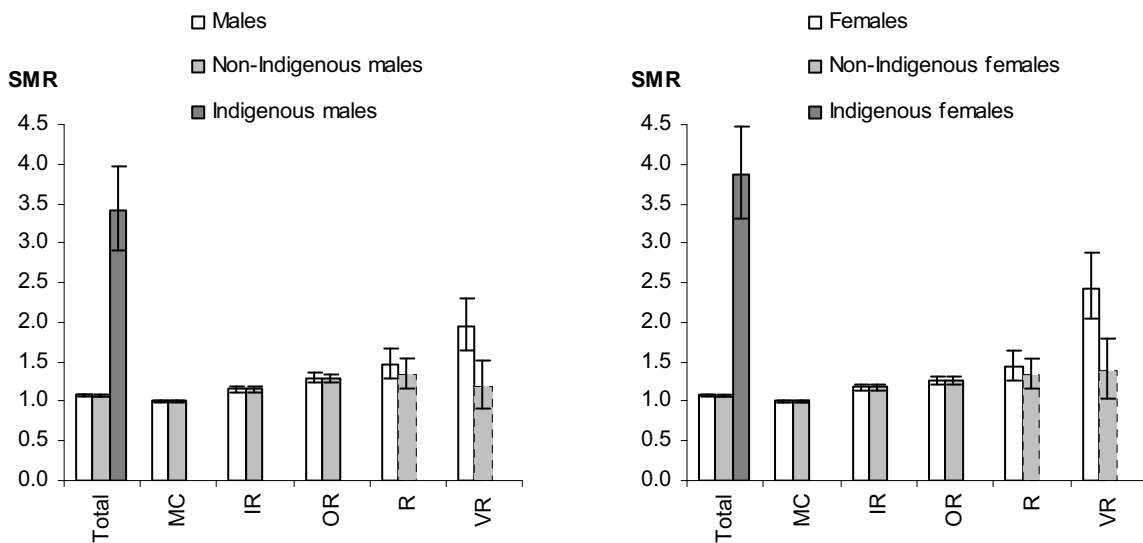
Death rates for non-Indigenous Australians in remote areas were about 1.3 times those in Major Cities.

Annually there are 169 and 93 deaths in Remote and Very Remote areas; about 52% were male.

Annually there were 53 and 50 'excess' deaths in Remote and Very Remote areas; this is 19% and 12% of all 'excess' deaths in Remote and Very Remote areas. Half (50%) of the excess were males. While those older than 75 years were major contributors to the excess deaths, there were very substantial contributions from younger age groups, including those aged 25–44 years in Very Remote areas (who would appear likely to be Indigenous Australians).

Compared with the previous reporting period (1997–99), there were 18 more deaths of males and 10 more deaths of females annually in 2002–04.

The 12-year trend (AIHW 2006a) is for death rates to decline at a pace that is indistinguishable from that in Major Cities.

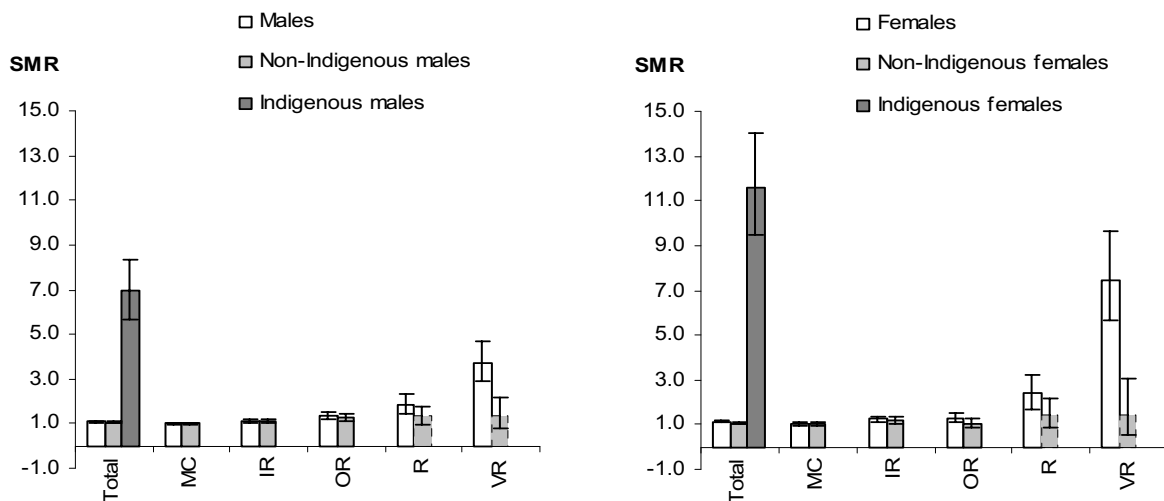


Notes

1. While the figure allows comparison of deaths between areas for each sex, it does not allow comparison between the sexes.
2. The presented SMR is the ratio of the observed number of deaths to the number expected if Major Cities rates applied in each area.
3. SMRs calculated for non-Indigenous Australian persons from Remote and Very Remote areas (dashed) should be treated with caution (see Appendix A).
4. The SMRs for Indigenous Australian persons are for Qld, WA, SA and NT combined (see Appendix A).

Source: AIHW mortality database.

Figure 5.14: All other diseases of the circulatory system SMRs, by sex, 2002-04



Note: See notes for Figure 5.14.

Figure 5.15: All other diseases of the circulatory system SMRs for persons aged 64 years and under, by sex, 2002-04

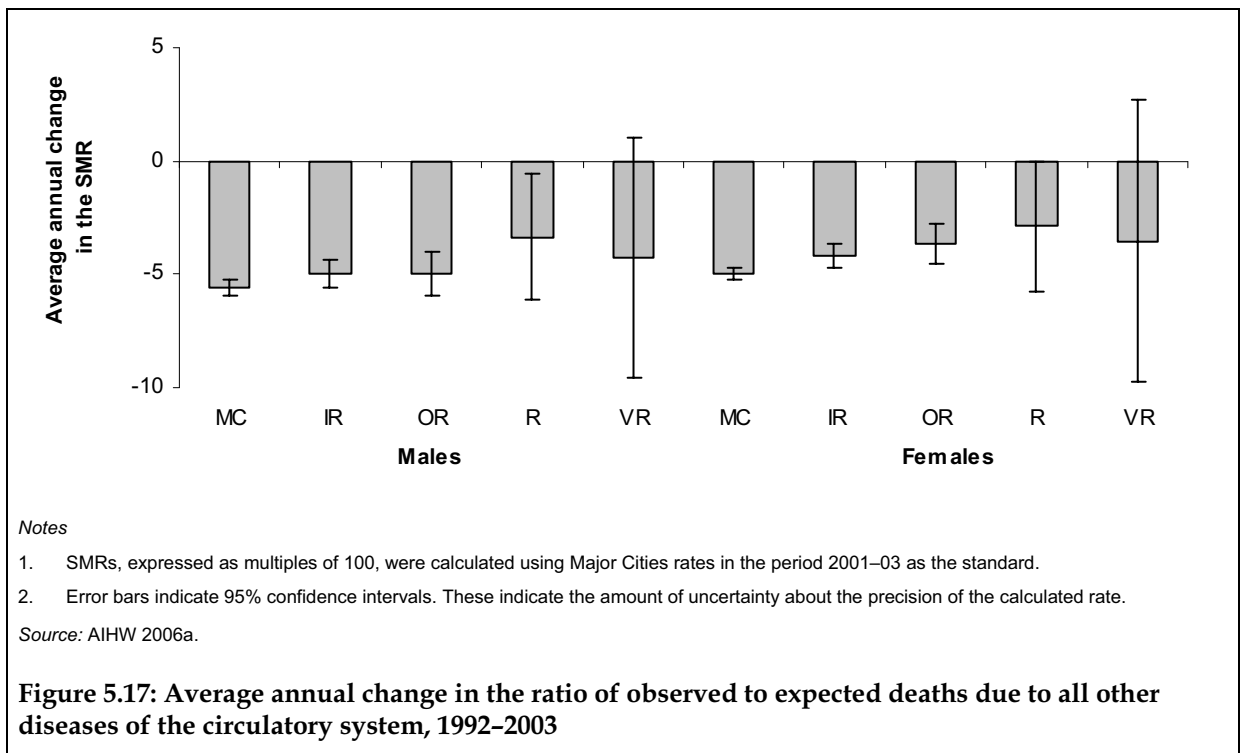
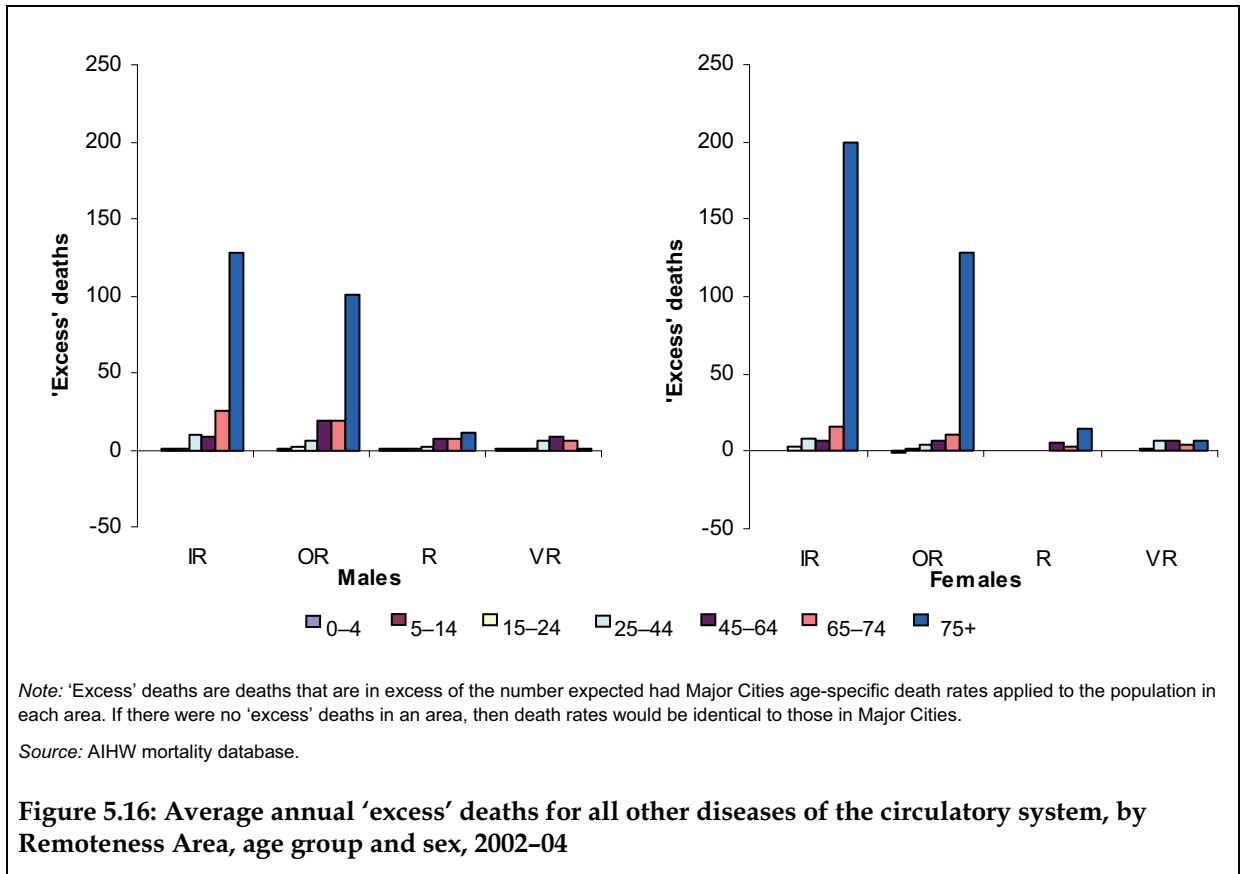


Table 5.12: SMIRs, average annual deaths and 'excess' deaths due to all other diseases of the circulatory system, 2002-04 and 1997-99

	Males						Females						Persons					
	MC	IR	OR	R	VR		MC	IR	OR	R	VR		MC	IR	OR	R	VR	
	Rate		Ratio				Rate		Ratio				Rate		Ratio			
2002-04																		
0-4	3	0.92	0.69	1.11	4.55		2	1.19	1.36	0.82	5.29		2	1.02	0.93	1.01	*4.82	
5-14	0	1.21	3.08	6.64	*19.38		0	1.17	0.53	0.00	4.45		0	1.19	1.48	2.47	9.97	
15-24	1	1.17	*2.27	3.38	5.12		1	*3.30	*3.01	7.61	*29.59		1	*1.81	*2.49	*4.54	*11.78	
25-44	5	*1.36	*1.43	*1.99	*5.53		2	*1.72	*1.70	2.08	*13.63		3	*1.47	*1.51	*2.02	*7.77	
45-64	23	1.07	*1.30	*1.73	*2.86		12	1.11	1.21	*2.48	*5.10		18	1.08	*1.27	*1.96	*3.52	
65-74	122	*1.13	*1.20	*1.63	*2.20		77	*1.13	*1.19	1.44	*2.72		99	1.13	*1.20	*1.57	*2.38	
75+	659	*1.18	*1.31	*1.30	1.04		685	*1.18	*1.28	*1.34	*1.46		675	*1.18	*1.29	*1.32	*1.26	
Total	46	*1.16	*1.30	*1.47	*1.94		58	*1.18	*1.27	*1.45	*2.44		52	*1.17	*1.28	*1.46	*2.16	
Total <65	8	*1.11	*1.34	*1.83	*3.70		4	*1.23	*1.30	*2.38	*7.46		6	*1.15	*1.33	*2.00	*4.82	
1997-99																		
Total	51	*1.09	*1.24	*1.27	*1.54		65	*1.10	*1.20	*1.33	*1.85		55	*1.10	*1.22	*1.30	*1.68	
Total <65	8	*1.17	*1.49	*2.13	*3.37		5	1.09	*1.27	*2.17	*4.92		6	*1.14	*1.42	*2.14	*3.87	
Total†	*1.23	*1.35	*1.52	*1.53	*1.87		*1.22	*1.34	*1.46	*1.61	*2.26		*1.22	*1.34	*1.49	*1.57	*2.04	
Total <65†	1.05	*1.23	*1.57	*2.20	*3.52		*1.19	*1.28	*1.51	*2.60	*6.09		*1.10	*1.25	*1.55	*2.32	*4.24	

(continued)

Table 5.12 (continued): SMRs, average annual deaths and 'excess' deaths due to all other diseases of the circulatory system, 2002-04 and 1997-99

	Males					Females					Persons				
	MC	IR	OR	R	VR	MC	IR	OR	R	VR	MC	IR	OR	R	VR
Average annual number of excess deaths															
2002-04															
0-4	0	0	-1	0	1	0	0	0	0	1	0	0	0	0	1
5-14	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1
15-24	0	1	2	1	1	0	3	1	1	2	0	4	3	1	3
25-44	0	9	6	2	6	0	8	4	1	7	0	18	10	4	13
45-64	0	8	19	7	8	0	7	6	6	7	0	15	25	13	16
65-74	0	26	19	7	5	0	17	10	3	4	0	42	30	10	9
75+	0	129	101	11	1	0	200	128	15	7	0	328	229	25	7
Excess total	0	172	147	28	23	0	236	150	25	27	0	407	297	53	50
Deaths total	2,986	1,254	645	89	47	3,874	1,528	706	80	46	6,860	2,781	1,351	169	93
Excess <65	0	18	27	10	17	0	19	12	8	17	0	37	39	18	34
Deaths <65	468	174	106	23	23	248	102	51	13	20	716	276	158	36	43
1997-99															
Excess total	0	102	124	17	14	0	132	116	20	17	0	233	240	36	31
Excess total†	586	311	222	28	18	721	363	219	30	21	1,307	674	441	58	39
Deaths total	3,135	1,208	651	79	39	4,069	1,439	697	79	37	7,204	2,647	1,348	159	77
Excess <65	0	25	39	14	14	0	7	12	7	11	0	33	50	21	25
Excess <65†	20	32	43	14	14	42	20	18	8	11	62	53	61	23	26
Deaths <65	449	171	117	26	20	263	93	54	13	14	713	263	171	40	34

Notes

1. The first half of the table reports death rates (as SMRs) for the period 2002-04. The first two rows (shaded) in this section use Major Cities age-and sex-specific rates in 1997-99 as the standard and compare death rates in each of the areas with those in Major Cities in the same year (1997-99). The second two (unshaded) rows (marked with a †) use Major Cities age-and sex-specific rates in 2002-04 as the standard and compare death rates in each of the areas (including Major Cities) in 1997-99 with death rates in Major Cities in 2002-04.
2. The second half of the table describes the actual number of deaths and 'excess deaths' that occurred in each population. Shaded rows 1 and 4 have used 1997-99 Major Cities rates of death as the basis for calculating the number of excess deaths. Unshaded rows 2 and 5 (marked with a †) have used 2002-04 Major Cities rates of death as the basis for calculating the number of excess deaths in 1997-99.
3. For further explanation, refer to section 2.3.

Table 5.13: SMRs, average annual deaths and 'excess' deaths due to all other diseases of the circulatory system, for Indigenous Australians and non-Indigenous Australians, 2002-04 and 1997-99

	Males						Females						Persons					
	Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			Non-Indigenous			Indigenous		
	MC	IR	OR	Rate	VR	Ratio	MC	IR	OR	Rate	VR	Ratio	MC	IR	OR	Rate	VR	Ratio
2002-04																		
0-4	3	0.81	0.42	1.15	0.30	1.14	1	1.37	1.66	1.14	0.00	1.15	2	1.00	0.85	2.62	0.20	2.74
5-14	0	1.24	1.63	5.55	18.72	0.00	0	1.44	0.07	0.00	0.00	0.00	0	1.36	0.72	6.59	7.66	*9.95
15-24	1	1.08	2.04	3.32	1.29	5.29	1	*2.66	1.62	5.29	0.00	*22.04	1	1.56	1.91	*22.04	0.99	*10.08
25-44	4	*1.31	1.30	1.36	*2.78	0.55	2	*1.63	0.98	0.55	1.22	*17.05	3	*1.41	1.21	*17.05	*2.39	*10.81
45-64	22	1.06	*1.23	1.24	0.95	1.59	12	1.06	1.05	1.59	1.65	*10.14	17	1.06	*1.17	*10.14	1.14	*8.31
65-74	118	*1.15	*1.20	*1.57	1.40	1.07	75	*1.13	*1.19	1.07	0.88	*5.09	95	*1.14	*1.20	*5.09	1.24	*4.12
75+	643	*1.18	*1.32	*1.28	1.03	*1.37	667	*1.18	*1.28	*1.37	*1.44	1.27	658	*1.18	*1.30	1.27	1.24	1.18
Total	45	*1.16	*1.29	*1.35	1.19	*1.35	57	*1.18	*1.26	*1.35	*1.38	*3.86	51	*1.17	*1.27	*3.86	*1.27	*3.63
Total <65	8	*1.10	*1.24	1.32	1.38	1.43	4	*1.17	1.05	1.43	1.47	*11.58	6	*1.12	*1.18	*11.58	1.41	*8.62
1997-99																		
Total	51	*1.10	*1.23	1.12	0.94	*1.17	64	*1.11	*1.20	*1.17	0.90	*3.91	57	*1.11	*1.21	*3.91	0.92	*3.54
Total <65	8	*1.18	*1.42	*1.44	1.12	1.00	5	1.08	1.15	1.00	0.85	*10.67	6	*1.14	*1.32	*10.67	1.04	*9.14
Total†	*1.28	*1.43	*1.60	*1.45	1.20	*1.47	*1.25	*1.41	*1.51	*1.47	1.13	n.p.	*1.26	*1.42	*1.55	n.p.	1.17	n.p.
Total <65†	*1.10	*1.34	*1.62	*1.63	1.26	1.21	*1.23	*1.33	*1.41	1.21	1.02	n.p.	*1.15	*1.34	*1.55	n.p.	1.19	n.p.

(continued)

Table 5.13 (continued): SMRs, average annual deaths and 'excess' deaths due to all other diseases of the circulatory system, for Indigenous Australians and non-Indigenous Australians, 2002-04 and 1997-99

	Males						Females						Persons						
	Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			Non-Indigenous			Indigenous			
	MC	IR	OR	R	VR	VR	MC	IR	OR	R	VR	VR	MC	IR	OR	R	VR	VR	
Average annual number of excess deaths																			
2002-04																			
0-4	0	-1	-1	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	1
5-14	0	0	0	0	0	0	1	1	-1	0	0	0	1	0	1	0	0	0	2
15-24	0	0	1	0	0	0	1	2	0	0	0	0	3	0	2	2	1	0	4
25-44	0	7	4	1	2	2	10	7	0	0	0	0	12	0	14	4	0	2	22
45-64	0	7	13	2	0	0	18	4	1	2	1	1	17	0	11	15	4	1	35
65-74	0	28	18	6	1	6	6	16	10	0	0	0	8	0	44	28	6	1	14
75+	0	127	101	9	0	0	0	192	125	15	4	4	3	0	319	225	25	5	3
Excess total	0	169	136	19	3	3	38	0	222	137	18	5	43	0	391	273	37	8	81
Deaths total	2,893	1,216	614	74	21	21	54	3,755	1,472	671	69	18	58	6,648	2,688	1,285	143	39	112
Excess <65	0	14	18	4	2	2	31	0	14	2	2	1	32	0	28	20	6	2	63
Deaths <65	445	162	92	15	6	6	37	235	92	38	7	2	35	680	254	130	21	8	72
1997-99																			
Excess total	0	105	117	7	-1	-1	36	0	146	113	9	-1	42	0	251	230	16	-2	78
Excess total†	676	359	236	20	3	3	n.p.	797	410	229	21	2	n.p.	1,473	769	465	41	4	n.p.
Deaths total	3,072	1,189	629	66	17	17	52	3,971	1,420	675	65	13	56	7,043	2,609	1,304	130	30	108
Excess <65	0	25	31	5	1	1	33	0	7	6	0	0	26	0	32	37	5	0	59
Excess <65†	41	42	40	6	1	1	n.p.	48	22	13	1	0	n.p.	89	64	53	7	1	n.p.
Deaths <65	434	165	105	16	5	5	37	254	88	46	5	1	29	689	254	151	22	6	66

Notes

- The first half of the table reports death rates (as SMRs) for the period 2002-04. The first two rows (shaded) in this section use Major Cities age-and sex-specific rates in 1997-99 as the standard and compare death rates in each of the areas with those in Major Cities in the same year (1997-99). The second two (unshaded) rows (marked with a †) use Major Cities age-and sex-specific rates in 2002-04 as the standard and compare death rates in each of the areas (including Major Cities) in 1997-99 with death rates in Major Cities in 2002-04.
- The second half of the table describes the actual number of deaths and 'excess deaths' that occurred in each population. Shaded rows 1 and 4 have used 1997-99 Major Cities rates of death as the basis for calculating the number of excess deaths. Unshaded rows 2 and 5 (marked with a †) have used 2002-04 Major Cities rates of death as the basis for calculating the number of excess deaths in 1997-99.
- For further explanation, refer to section 2.3.