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Trends in injury deaths, Australia

1999–00 to 2011–12

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Abbreviations

ABS	Australian Bureau of Statistics
AIC	Australian Institute of Criminology
AIHW	Australian Institute of Health and Welfare
ARIA	Accessibility/Remoteness Index of Australia
ASGC	Australian Standard Geographical Classification
ASGS	Australian Statistical Geography Standard
BITRE	Bureau of Infrastructure, Transport and Regional Economics
CODURF	cause of death unit record file
ICD-10	International Classification of Diseases, 10th revision
IRSD	Index of Relative Socio-economic Disadvantage
MCoD	multiple cause of death
NCIS	National Coronial Information System
NMD	AIHW National Mortality Database
NPHP	National Public Health Partnership
RLSS	Royal Life Saving Society
SEIFA	Socio-Economic Indexes for Areas
SLA	statistical local area
UCoD	underlying cause of death
WHO	World Health Organization

Symbols

..	not applicable
F	Final CODURF
n.e.c.	not elsewhere classified
n.p.	not published
P	Preliminary CODURF
p	probability
R	Revised CODURF

Summary

This report describes trends in the occurrence of injury deaths in Australia from 1 July 1999 to 30 June 2012 and provides a summary of injury deaths in 2011–12. The information is based on all causes of death recorded on death certificates.

Injury deaths in 2011–12

Injury was recorded as a cause of 11,192 deaths in 2011–12 in Australia, corresponding to an age-standardised rate of 46 deaths per 100,000 population (males 61, females 31).

Rates were highest in the oldest age group: 186 and 170 per 100,000 for men and women aged 65 and older. Rates for males were much higher than for females except in the oldest and youngest groups. At ages 15–24, the rates for male and females were 41 and 16 per 100,000 respectively.

The age-standardised injury death rate for residents of the Northern Territory, 92 deaths per 100,000 population, was about twice the national rate. The age-standardised injury death rate tended to increase with increasing remoteness of place of residence. The rate for residents of *Remote* areas (76 deaths per 100,000) was 1.9 times the rate for residents of *Major cities* (41 per 100,000). The age-standardised rate of injury death increased with socioeconomic disadvantage. The rate for residents of the *Most disadvantaged* areas was 1.5 times the rate for residents of the *Most advantaged* areas.

The 2 main causes of injury deaths in 2011–12 were unintentional falls (35%, 3,903 deaths) and suicide (22%, 2,496 deaths). Over 94% (3,682) of fall-related injury deaths were at ages 65 and older. There were more than 3 times as many male suicides (1,904) as female (592).

Trends in injury deaths

The age-standardised rate of injury deaths decreased from 55.4 deaths per 100,000 in 1999–00 to 47.2 deaths per 100,000 in 2004–05 and changed little after that. The number of injury deaths varied, but was around 10,000 per year during this period.

Rates of injury deaths declined from 1999–00 to 2009–10, by an average of 4.0% per year for transport injury and 3.4% for homicide. Drowning rates declined by an average of 4.8% per year to 2007–08 then rose. Rates of poisoning deaths involving pharmaceuticals fell sharply to 2001–02, then rose to 2009–10, while rates of poisoning deaths involving other substances declined by 6.8% per year until 2004–05 before rising again. Rates of suicide deaths declined to 2004–05 and remained relatively steady thereafter.

Analysis of changes in rates over time for some causes of injury was complicated, due to changes in the way that causes have been recorded and classified over recent years.

Trends in injury deaths of Indigenous Australians

Age-standardised injury death rates for Aboriginal and Torres Strait Islander people fluctuated, but showed a general, although not statistically significant, decline over the period from 2001–02 to 2011–12. Rates for Aboriginal and Torres Strait Islander people were generally at least twice as high as rates for non-Indigenous Australians over this period.

1 Introduction

This report presents trends in the number of injury-related deaths in Australia from 1 July 1999 to 30 June 2012, in terms of year of death. It also provides a summary of injury mortality in 2011–12. A similar report presenting data on hospitalised injury for the period from 1999–00 to 2010–11 has previously been published by the AIHW (AIHW: Pointer 2013).

Most injuries occur in settings such as car crashes, inter-personal violence, sporting and recreational activities, and work. Injury deaths that occurred in these types of community settings are the focus of this report.

Injury is the subject of 3 national prevention plans: the National Injury Prevention and Safety Promotion Plan: 2004–2014 (NPHP 2004c), National Falls Prevention for Older People Plan: 2004 Onwards (NPHP 2004b) and the National Aboriginal and Torres Strait Islander Safety Promotion Strategy (NPHP 2004a) .

1.1 Structure of this report

The topics covered in the report are:

- an overview of injury deaths in 2011–12
- trends in injury deaths and death rates, overall and for the deaths involving major external causes of injury.

Chapter 2 presents the overview of injury deaths in Australia, including time series information.

Chapters 3 to 11 present analyses for each major external cause of injury-related deaths.

Appendix A provides summary information on the AIHW National Mortality Database (NMD), other data sources used in the report and includes notes on the presentation of data, the population estimates used to calculate population rates and analysis methods. Additional information on data sources, validity and methods and the effects of changes made to the recording and classification of cause of death information has previously been reported for the period from 1999 to 2010 (AIHW: Harrison & Henley 2015).

Appendix B provides tables of counts of deaths and rates that are presented in figures in the body of the report.

Appendix C presents additional summary statistics for transport-related deaths in 2011–12, which involved motor vehicle traffic.

1.2 Chapter structure

In this report, chapters are structured to answer a common set of questions, which include:

- What data are reported?
- How many injury deaths were there in 2011–12?
- How have injury deaths changed over time?
- How have injury deaths varied by age and sex?
- How have injury deaths varied by place of usual residence?
- How have injury deaths of Aboriginal and Torres Strait Islander people changed over time?

Generally, summary tables and figures are placed immediately below the related commentary. Tables and figures in the chapter are accompanied by footnotes referring readers to statistical tables in Appendix B.

1.3 Methods

What data were reported?

The main source for the injury deaths data reported here are from the AIHW National Mortality Database (NMD). The NMD comprises cause of death unit record file (CODURF) data, which are provided the AIHW by the Registries of Births, Deaths and Marriages and the National Coronial Information System (NCIS) and coded by the Australian Bureau of Statistics (ABS). Underlying cause of death (UCoD) and multiple cause of death (MCoD) information for deaths reported here were coded by the ABS according to the *International Statistical Classification of Diseases and Related health Problems, 10th Revision (ICD–10)*. Other data sources were used to obtain supplementary information for some external causes of injury death. These are specified where they are used.

How were data presented?

Data are reported according to the year in which each death occurred. This date is more directly relevant to the subject of the report than the alternative, date of death registration, and is also less susceptible to fluctuation because of variation in time from death to registration. Years are the periods ending on 30 June.

The ABS now makes 3 releases of the deaths registered in each calendar year, *Preliminary*, *Revised* and *Final*. The cause codes assigned to injury deaths can change between releases. This is discussed further in Appendix A. When analysis was undertaken for this report, *Final* release data were available for none of the deaths that occurred in 2011–12 and for only 46% of those in 2010–11. However, data for about 99.9% of the injury deaths that occurred in earlier years was *Final*, or predated the introduction of the multiple release system.

This difference between the most recent 2 years of death and all earlier years is made plain in the report by presenting rates for the years based on essentially entirely final data as lines and data for the 2 most recent years with markers.

Analyses provide information on:

- age
- sex
- external cause of injury
- remoteness of the person's area of usual residence
- Indigenous status.

In tables and charts, unless stated otherwise:

- The age is as at the date of death.
- Deaths for which table variables, such as age and sex, were not reported are included in totals.
- Rates are age-standardised.

Further information is provided in Appendix A.

Which deaths were included?

Deaths were regarded as being due to injury and poisoning and included in this report if they met the following selection criteria:

- death occurred on 1 July 1999 to 30 June 2012 and had been registered by 31 December 2012, and
- the UCoD was an external cause code in the range V01–Y36, or
- at least 1 MCoD was an external cause code in the range V01–Y36 and at least 1 other MCoD was a code for injury (S00–T75 or T79).

The codes are from the WHO International Classification of Diseases, 10th revision (WHO 2015). The code range V01–Y36 includes all unintentional (accidental) deaths, intentional self-harm (suicide), homicide and deaths where intent remained undetermined. It also includes traumatic injuries (such as fractures and lacerations), burns, poisoning and toxic effects of substances and certain other effects of external causes, such as drowning, asphyxiation, effects of radiation, heat, pressure, deprivation and maltreatment.

Details on selection criteria for each topic are given at the start of each chapter.

Important terms regarding the data used in this report are summarised in Boxes 1.1 and 1.2 and the Glossary.

Box 1.1: Key terms and concepts

An **external cause** is the environmental event, circumstance or condition that was the cause of injury or poisoning. A **multiple cause of death** (MCoD) is a code representing a disease, condition or external cause recorded on the death certificate. For injury deaths, the **underlying cause of death** (UCoD) is a code representing the external cause of the injury that initiated the train of morbid events leading directly to a person's death (according to information available to the coder), and the injuries sustained as a result of the external cause are recorded as multiple causes of death.

The diseases or conditions recorded on the death certificate consist of: the cause that led directly to the death; the underlying cause of death and the causes of death that contributed to the death but were not related to the underlying cause.

Coding is according to the 10th revision of the International Classification of Diseases (ICD-10) (WHO 2015), which includes a chapter for injury and another for external causes of injuries and other conditions. Rules that form part of the ICD determine which cause should be coded as the UCoD.

Box 1.2: Aboriginal and Torres Strait Islander reporting

Indigenous status data are considered to be of sufficient quality for statistical reporting for the period from 2001–02 for the following 5 jurisdictions: Queensland, South Australia, Western Australia, the Northern Territory and New South Wales. Hence, in this report, data related to Aboriginal and Torres Strait Islander peoples are only shown from 2001–02 onwards. Appendix A provides further information.

2 Overview of injury deaths

This chapter provides a brief overview of injury deaths in 2011–12 and trends from 1999–00 to 2011–12. The selection criteria given in Section 1.3 were applied.

2.1 What is the profile of injury deaths in 2011–12?

Injury was recorded as a cause of 11,192 deaths in 2011–12 in Australia, which is 7.6% of deaths due to all causes (Table 2.1). In 8,728 (5,675 males; 3,053 females) of these deaths (5.9% of deaths due to all causes; 78% of all injury deaths) the UCoD code assigned to the death was from the 'External causes' chapter of ICD-10.

Table 2.1: Key indicators for injury deaths, Australia, 2011–12

Indicator	Males	Females	Persons
Injury deaths	6,806	4,386	11,192
Crude rate (deaths/100,000 population)	60.7	38.8	49.5
Age-standardised rate (deaths/100,000 population)	61.2	30.6	45.5

Source: AIHW National Mortality Database.

Age and sex

Almost 40% of male injury deaths and almost two-thirds of female cases occurred at ages 65 and older. Fewer than 2% of deaths were at ages younger than 15 (Table 2.2).

Population-based rates in 2011–12 were highest for men and women aged 65+. Rates for males were higher than for females in every age group, especially at ages 15–24 (Table B23).

Table 2.2: Injury deaths, by age and sex, Australia, 2011–12

Age group	Males		Females		Persons	
	Number	%	Number	%	Number	%
0–4	51	0.7	50	1.1	101	0.9
5–14	65	1.0	42	1.0	107	1.0
15–24	640	9.4	236	5.4	876	7.8
25–44	1,813	26.6	548	12.5	2,361	21.1
45–64	1,540	22.6	615	14.0	2,155	19.3
65+	2,697	39.6	2,895	66.0	5,592	50.0
Total	6,806	100	4,386	100	11,192	100

Source: AIHW National Mortality Database.

State and territory of usual residence

Residents of the Northern Territory had the highest age-standardised injury mortality rate, 92.1 deaths per 100,000 population, which was just over double the national rate (Table 2.3). Most of the other jurisdictions recorded rates over or close to the national rate, with residents of Victoria recording the lowest rate of 38.5 deaths per 100,000 population.

Table 2.3: Injury deaths, by state or territory of usual residence, Australia, 2011–12

Indicators	State and territory of usual residence							
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Deaths	3,541	2,416	2,450	1,309	844	300	161	171
Per cent	31.6	21.6	21.9	11.7	7.5	2.7	1.4	1.5
Age-standardised rate (deaths per 100,000 population)	43.1	38.5	52.6	53.8	43.1	50.3	45.6	92.1

Source: AIHW National Mortality Database.

Remoteness of usual residence

The number and rate of injury-related deaths varied with remoteness of usual residence (Table 2.4). Age-standardised rate of injury death tended to increase with increasing remoteness. The rate for residents of the *Remote* areas (75.6 deaths per 100,000 population) was 1.9 times the rate for residents of the *Major cities* areas (40.7 per 100,000 population).

Table 2.4: Injury deaths, by remoteness of usual residence, Australia, 2011–12

Indicators	Remoteness of usual residence ^(a)					Total ^(b)
	Major cities	Inner regional	Outer regional	Remote	Very remote	
Deaths	7,050	2,411	1,252	213	151	11,077
Per cent	63.6	21.8	11.3	1.9	1.4	100
Age-standardised rate (deaths per 100,000 population)	40.7	51.9	58.5	72.8	75.6	n.p.

(a) Derived using the ASGS classification.

(b) Excludes 115 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Socioeconomic status

The number and rate of injury-related deaths varied with the socioeconomic status of the person's area of usual residence (Table 2.5). The age-standardised rate of injury death increased with socioeconomic disadvantage. The rate for residents of the *Most disadvantaged* areas (54.4 deaths per 100,000 population) was 1.5 times the rate for residents of the *Most advantaged* areas (36.0 per 100,000 population).

Table 2.5: Injury deaths, by socioeconomic status, Australia, 2011–12

Indicators	SEIFA quintiles				
	Most disadvantaged	Second most disadvantaged	Middle	Second most advantaged	Most advantaged
Deaths	2,682	2,522	2,254	1,863	1,751
Per cent	24.0	22.5	20.1	16.6	15.6
Age-standardised rate (deaths per 100,000 population)	54.4	50.0	46.0	39.0	36.0

Note: Excludes 120 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Aboriginal and Torres Strait Islander people

The age-standardised injury death rate for Aboriginal and Torres Strait Islander people was twice the rate for non-Indigenous Australians (Table 2.6).

Table 2.6: Key indicators for injury deaths, Indigenous Australians and non-Indigenous Australians, Australia^(a), 2011–12

Indicator	Indigenous Australians			Non-Indigenous Australians		
	Males	Females	Persons	Males	Females	Persons
Deaths	265	134	399	4,751	3,034	7,785
Age-standardised rate (deaths per 100,000 population)	118.7	61.4	89.1	61.5	30.3	45.4
Rate ratio ^(b)	1.9	2.0	2.0	..	..	..
Rate difference ^(c)	57.2	31.1	43.7	..	..	..

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Rate ratios are the standardised rates for Indigenous males, females and persons divided by the the standardised rates for non-Indigenous males, females and persons.

(c) Rate differences are the standardised rates for Indigenous males, females and persons minus the standardised rates for non-Indigenous males, females and persons.

Source: AIHW National Mortality Database.

There were marked differences between Aboriginal and Torres Strait Islander people and non-Indigenous Australians in terms of the proportions of injury deaths occurring in each age group (Table 2.7). For Aboriginal and Torres Strait Islander people, over 40% of injury deaths occurred for those aged 25–44 for both men and women, compared with 26% and 12% for non-Indigenous Australian men and women. Conversely, the proportions of injury deaths of Aboriginal and Torres Strait Islander men and women aged 65 and older were much lower than equivalent proportions for non-Indigenous Australians.

Table 2.7: Injury deaths, by age and sex, Indigenous Australians and non-Indigenous Australians, Australia^(a), 2011–12

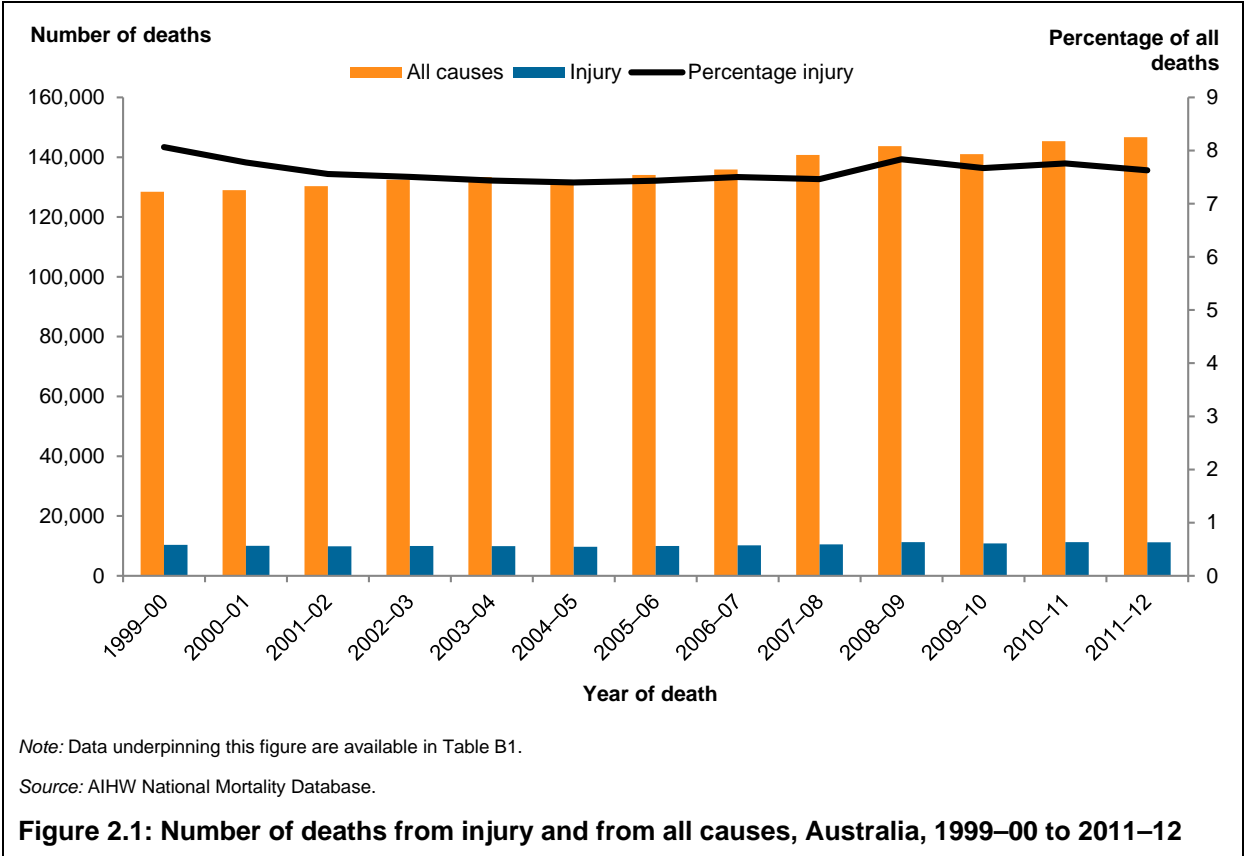
	Indigenous Australians		Non-Indigenous Australians	
	Number	%	Number	%
Males				
0–4	6	2.3	36	0.8
5–14	9	3.4	37	0.8
15–24	75	28.3	398	8.4
25–44	115	43.4	1,226	25.8
45–64	45	17.0	1,110	23.4
65+	15	5.7	1,944	40.9
Total	265	100	4,751	100
Females				
0–4	9	6.7	34	1.1
5–14	5	3.7	29	1.0
15–24	27	20.1	140	4.6
25–44	57	42.5	353	11.6
45–64	24	17.9	427	14.1
65+	12	9.0	2,051	67.6
Total	134	100	3,034	100

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

Source: AIHW National Mortality Database.

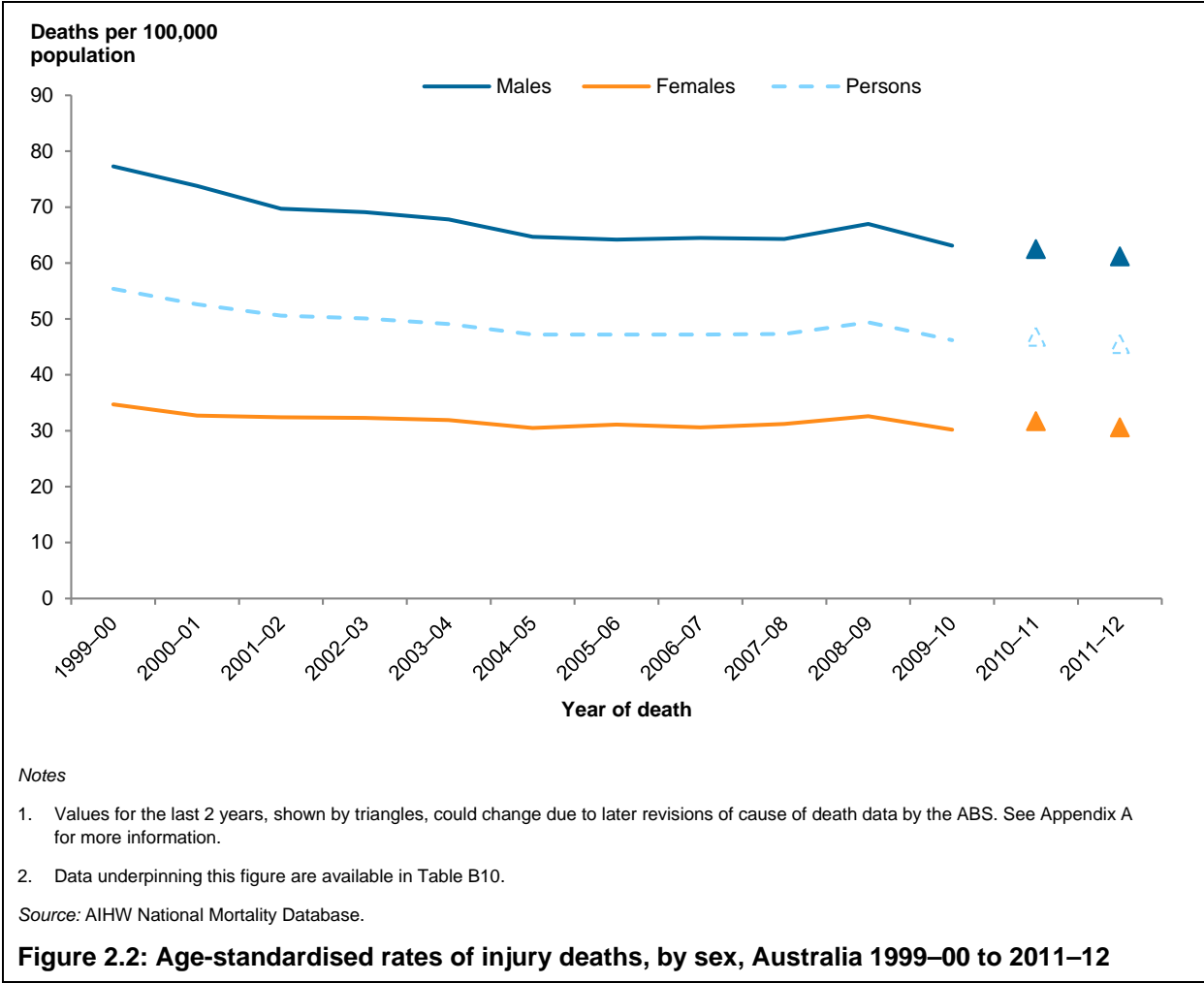
2.2 How have injury deaths changed over time?

During the period reported, injury deaths have comprised a fairly constant proportion of all deaths in Australia, ranging from 7.4% to 8.1% (Figure 2.1).



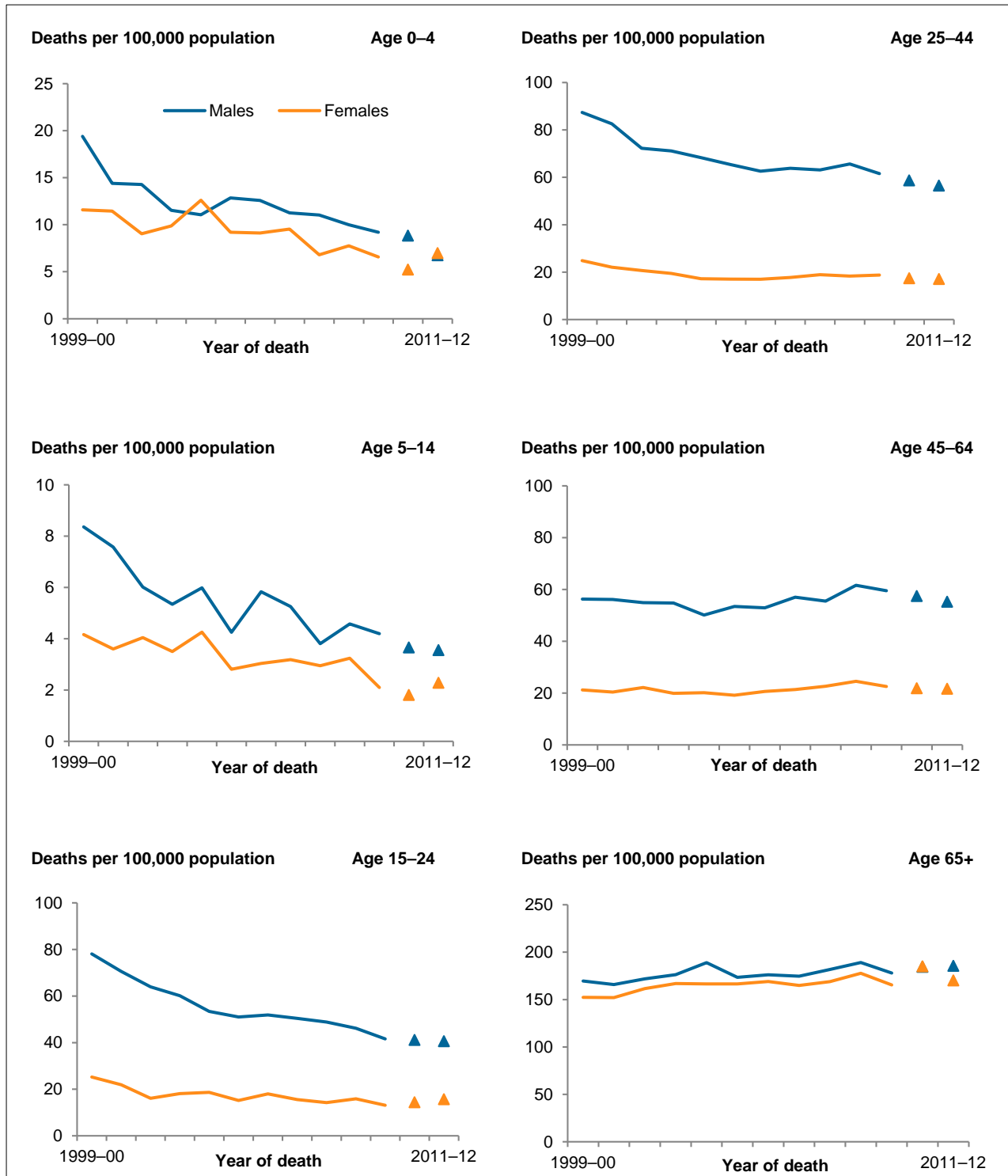
2.3 How have injury deaths varied by age and sex over time?

Age-standardised rates of injury deaths decreased from 55.4 to 47.2 per 100,000 population between 1999–00 and 2004–05, with little change in more recent years. Rates for both males and females also tended to decline from the start of the reported period until 2004–05 and remained relatively steady thereafter (Figure 2.2). In 1999–00, rates for males and females were 77.3 and 34.7 per 100,000 population, respectively. Age-standardised rates for males were consistently more than double the rates for females.



Changes over time in injury death rates, by age as well as by sex, are shown in Figure 2.3. In nearly all instances, age-specific rates for males were higher than equivalent rates for females, though differences were relatively small for the youngest and oldest age groups.

A downward trend in rates was seen for both males and females in the younger age groups, while trends in rates for males and females aged 45–64 remained relatively steady over the period and rates rose for the oldest group. The rates in 2010–11 for males and females in the oldest group were very similar, and the symbols overlap.



Notes

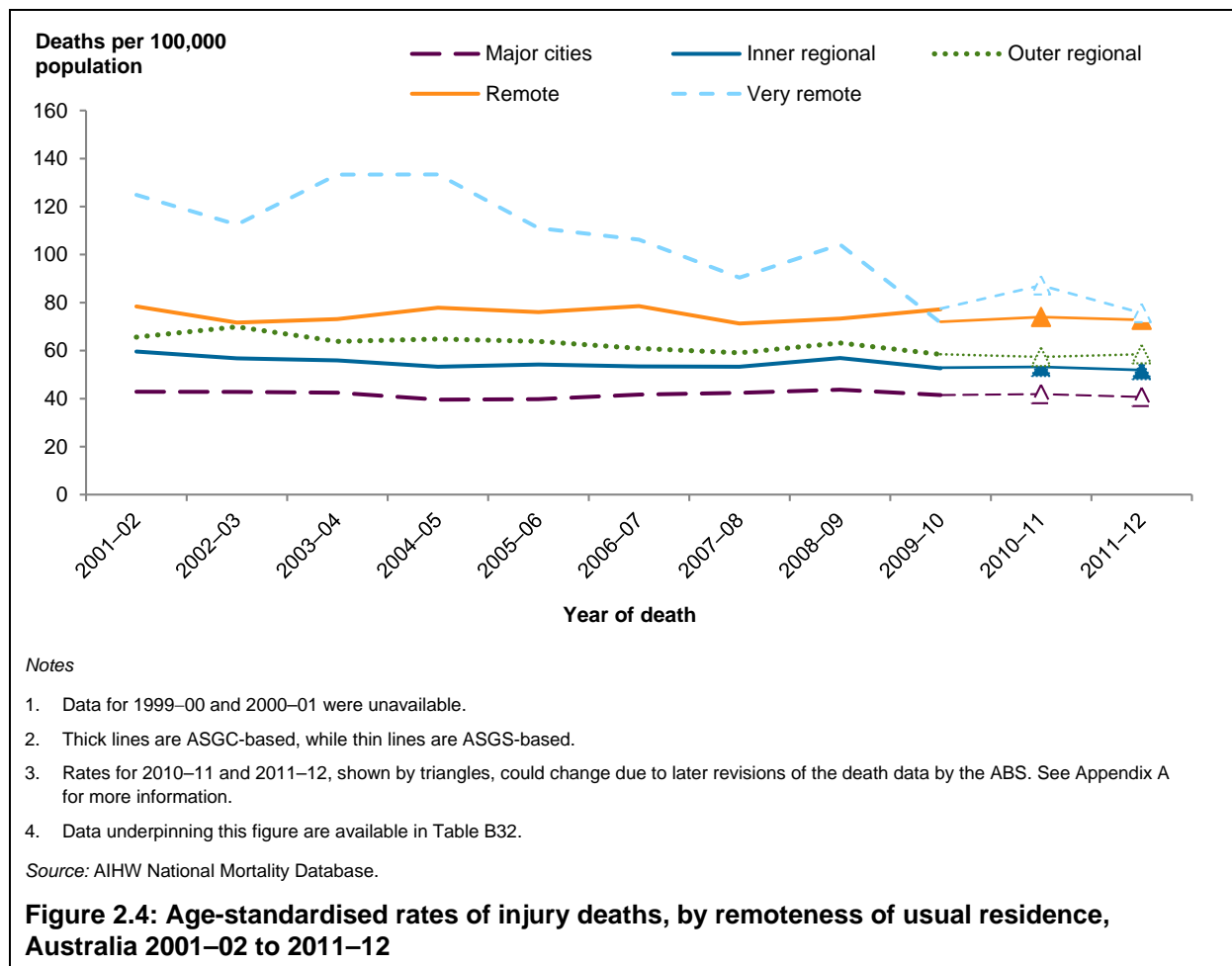
1. Data for period 1999-00 to 2009-10, represented by lines, are final. Those for the last 2 years, represented by triangles, are subject to revision. See Appendix A for further information.
2. Data underpinning this figure are available in Table B23.

Source: AIHW National Mortality Database.

Figure 2.3: Age-specific rates of injury deaths, by age and sex, Australia 1999-00 to 2011-12

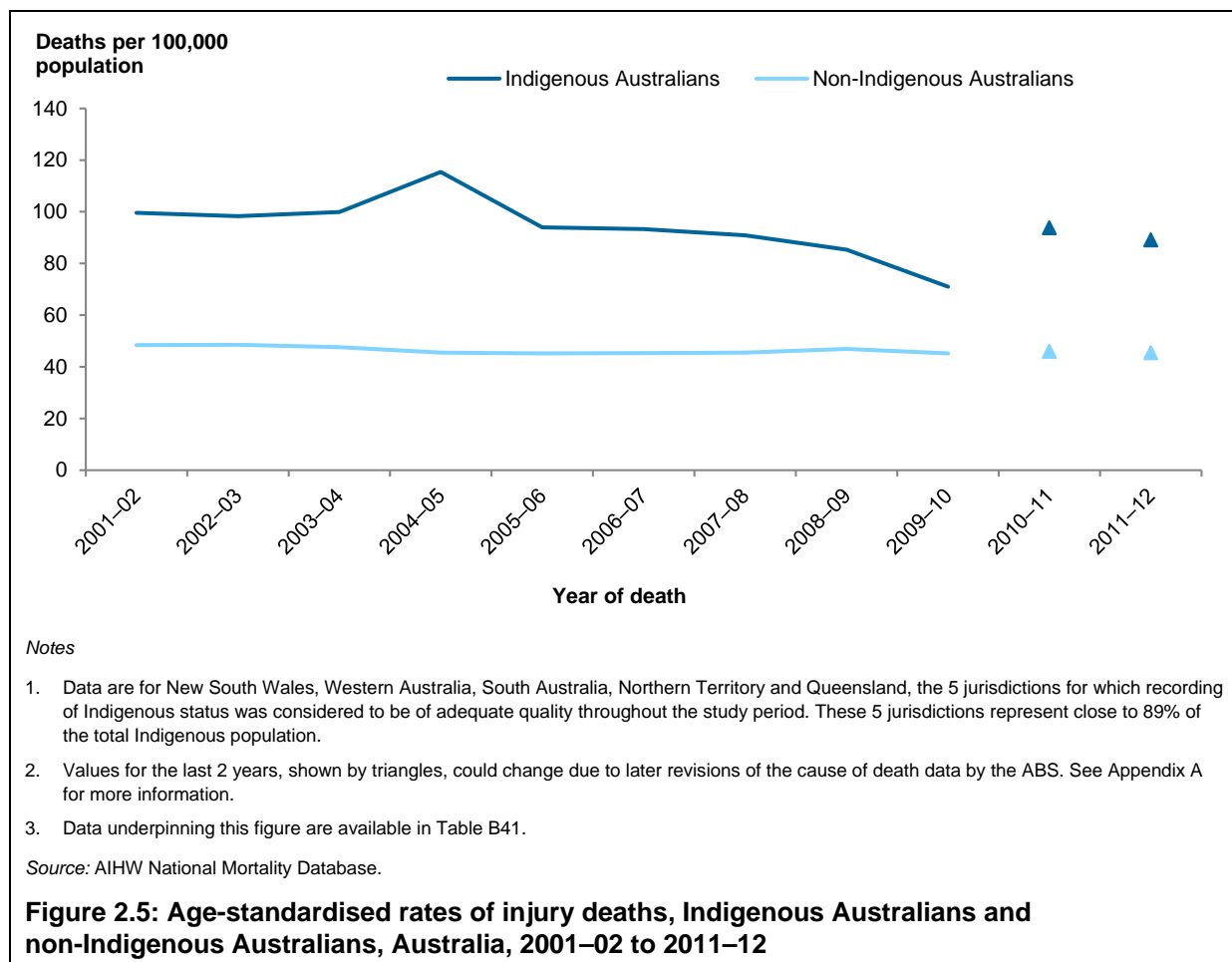
2.4 How has injury varied by remoteness of usual residence over time?

Rates of injury deaths rose with remoteness of place of usual residence and were higher for residents of *Very remote* areas than for residents of other remoteness areas (Figure 2.4). There was a downward trend in rates for residents of *Very remote* areas while rates for the residents of the other 4 remoteness areas remained relatively steady over time.



2.5 How have injury deaths of Aboriginal and Torres Strait Islander people changed over time?

Age-standardised rates for Aboriginal and Torres Strait Islander people were generally at least twice as high as rates for non-Indigenous Australians during the period from 2001-02 to 2011-12 (Figure 2.5). Rates for Aboriginal and Torres Strait Islander people, which fluctuated over the period, declined by an average of 3.3% per year over the period from 1999-00 to 2009-10, in contrast to rates for non-Indigenous Australians, which remained relatively steady.



2.6 How have the causes of injury mortality varied over time?

Changes in the age-standardised rates of injury for major external causes over the period from 1999-00 to 2009-10 are summarised in Table 2.8. The estimated rates for 2010-11 and 2011-12 were not used when estimating trends because they are subject to revision. More information on trends in each of the causes of injury listed in the table is available in subsequent chapters of this report.

Rates of injury deaths declined from 1999-00 to 2009-10, by 4.0% per year for transport injury and 3.4% for homicide. Drowning rates declined by an average of 4.8% per year to 2007-08 then rose. Rates of poisoning deaths involving pharmaceuticals fell sharply to 2001-02, then rose to 2009-10, while rates of poisoning deaths involving other substances declined by 6.8% per year until 2004-05 before rising again. Rates of fall injury deaths and thermal injury deaths did not show a marked trend, despite a large peak in thermal injury deaths in 2008-09. Rates of suicide deaths declined to 2004-05 and remained relatively steady thereafter.

Table 2.8: Trends in age-standardised rates of external cause groups for injury deaths, Australia 1999–00 to 2009–10

External cause	Trend	Percentage change per year ^(a)	Percentage of all injury deaths 2011–12	Comments
Unintentional injuries				
Transport crashes	↓	-4.0 ^(b)	13.7	
Drowning	~ ^(c)	-4.8 (1999–00 to 2007–08)	2.3	Rise 2007–08 to 2009–10
Poisoning, pharmaceuticals	~ ^(c)		9.1	Fluctuated
Poisoning, other substances	~ ^(c)	-6.8 (1999–00 to 2004–05)	3.5	Fluctuated
Falls	↔ ^(d)		34.9	
Smoke, fire, heat and hot substances	~ ^(c)		1.0	Large peak in 2008–09
Intentional injuries				
Intentional self-harm (suicide)	↔ ^(d)		22.3	Decline to 2004–05
Homicide	↓	-3.4 ^(b)	2.2	

(a) Average annual change for the period 1999–00 to 2009–10 unless another period is specified.

(b) Supplementary sources of data give similar rates of decline.

(c) Direction of trends varied during the study period.

(d) Average percentage change per year did not differ significantly from zero ($p \geq 0.05$).

Source: AIHW National Mortality Database.

3 Transport crashes

This chapter provides a brief overview of all transport-related injury deaths in 2011–12 that are identifiable in the NMD, a summary of unintentional (accidental) deaths due to transport-related injury in that year and trends in deaths due to unintentional transport-related injury to 2011–12.

Summary statistics for unintentional transport injury deaths in 2011–12 that involved motor vehicle traffic are provided in Appendix C.

3.1 What methods were used?

The criteria given in Section 1.3 were applied and the NMD records that included the following ICD-10 codes were included in this chapter:

- the UCoD was Transport accident (V01–V99), or
- the MCoDs included codes for Transport accident (V01–V99) and for Injury (S00–T75 or T79).

Suicide and homicide deaths (UCoD X60–Y09) were excluded. The concepts underlying the abbreviations used here are defined in the Glossary.

Relevant terms and information regarding the data used in this chapter are summarised in Boxes 1.1, 1.2 and 3.1. Further information on methods is provided in Appendix A.

Box 3.1: External causes of unintentional transport injury deaths

The **Transport accidents** (V01–V99) section of Chapter XX External causes of morbidity and mortality of ICD-10 includes the following 12 groups:

- Pedestrian injured in transport accident (V01–V09)
- Pedal cyclist injured in transport accident (V10–V19)
- Motorcycle rider injured in transport accident (V20–V29)
- Occupant of three-wheeled motor vehicle injured in transport accident (V30–V39)
- Car occupant injured in transport accident (V40–V49)
- Occupant of pick-up truck or van injured in transport accident (V50–V59)
- Occupant of heavy transport vehicle injured in transport accident (V60–V69)
- Bus occupant injured in transport accident (V70–V79)
- Other land transport accidents (V80–V89)
- Water transport accidents (V90–V94)
- Air and space transport accidents (V95–V97)
- Other and unspecified transport accidents (V98–V99).

3.2 Overview of transport injury deaths

Although most transport injury deaths are unintentional, some are found to be suicides or homicides. The NMD data on injury deaths in 2011–12 available for use in this report include 14 deaths involving the crashing of a motor vehicle where intent remained undetermined (intent might be determined for some or all of these deaths in the *Final* release ABS data). Those deaths are also not included in most of this chapter.

Table 3.1 summarises all of the transport-related injury deaths in 2011–12 that can be identified by means of the ICD-coded injury death data that are in-scope for this report. Unintentional transport injury deaths, the subject of this chapter, accounted for almost 98% of all transport injury deaths in 2011–12.

The remainder of this chapter is limited to unintentional transport injury.

Table 3.1: All identifiable transport injury deaths in 2011–12

Number of deaths in 2011–12	Percentage of all transport-related injury deaths in 2011–12	ICD-10 codes	Terminology in this report	Coverage in this report
1,534	97.7	UCoD V01–V99; or MCoD V01–V99 and S00–T75, T79	Unintentional transport injury	Transport crashes (Chapter 3)
20	1.3	UCoD X82; or MCoD X82 and S00–T75, T79	Intentional self-harm by crashing of motor vehicle	Suicide (Chapter 10)
2	0.1	UCoD Y03; or MCoD Y03 and S00–T75, T79	Assault by crashing of motor vehicle	Homicide (Chapter 11)
14	0.9	UCoD Y32; or MCoD Y32 and S00–T75, T79	Crashing of motor vehicle, undetermined intent	Undetermined intent (Chapter 2)
1,570	100		Total transport-related deaths	

Source: AIHW National Mortality Database.

Almost 94% (1,436) of deaths due to unintentional transport injury involved land transport (Table 3.2). Of these, almost 87% (1,247) involved accidents occurring in an on-road setting.

Table 3.2: Unintentional transport injury deaths by setting, Australia, 2011–12

Indicator	Land transport			
	On-road deaths	Off-road deaths	Unspecified ^(a)	Other ^(b)
Deaths	1,247	147	42	98
Percentage of all unintentional transport injury deaths	81.3	9.6	2.7	6.4
Age-standardised rate (deaths per 100,000 population)	5.4	0.6	0.2	0.4

(a) Land transport deaths unspecified as whether occurring in an on-road or off-road setting.

(b) Includes water, air and space transport-related deaths.

3.3 How many deaths due to unintentional transport injury were there in 2011–12?

Transport injuries accounted for 1,534 unintentional injury deaths in Australia during 2011–12 (Table 3.3). This was about 14% of all injury deaths in this period. In 2011–12, unintentional transport injury deaths were nearly 3 times as common for males as for females.

Table 3.3: Key indicators for unintentional transport injury deaths, Australia, 2011–12

Indicator	Males	Females	Persons
Deaths	1,126	408	1,534
Percentage of all injury deaths	16.5	9.3	13.7
Crude rate (deaths per 100,000 population)	10.0	3.6	6.8
Age-standardised rate (deaths per 100,000 population)	10.0	3.5	6.7

Source: AIHW National Mortality Database.

Age and sex

Almost one-third of all transport injury deaths occurred at ages 25–44 (31%) and one-fifth at ages 15–24 (20%; Table 3.4). These proportions are much higher than for the same age groups for all injury deaths combined (Table 2.3). The proportion of transport injury deaths occurring at ages 25–44 was higher for men (34%) than for women (24%). Population-based rates in 2011–12 were highest for males aged 15–24 (14.2 per 100,000 population) and men aged 65+ (15.6 per 100,000 population). With the exception of children aged 0–4, rates for males were higher than for females at every age (Table B24).

Table 3.4: Unintentional transport injury deaths, by age and sex, Australia, 2011–12

Age group	Males		Females		Persons	
	Number	%	Number	%	Number	%
0–4	17	1.5	21	5.1	38	2.5
5–14	32	2.8	13	3.2	45	2.9
15–24	223	19.8	87	21.3	310	20.2
25–44	383	34.0	98	24.0	481	31.4
45–64	245	21.8	92	22.5	337	22.0
65+	226	20.1	97	23.8	323	21.1
Total	1,126	100	408	100	1,534	100

Source: AIHW National Mortality Database.

State and territory of usual residence

The age-standardised rate for transport-related injury deaths during 2011–12 for residents of the Northern Territory was more than 3 times the national rate of 6.7 deaths per 100,000 population (Table 3.5). Most other jurisdictions recorded rates either moderately above or below the national rate.

Table 3.5: Unintentional transport injury deaths, by state and territory of usual residence, Australia, 2011–12

Indicators	State and territory of usual residence							
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Deaths	442	314	362	216	110	22	16	52
Per cent	28.8	20.5	23.6	14.1	7.2	1.4	1.0	3.4
Age-standardised rate (deaths per 100,000 population)	5.9	5.4	8.0	8.9	6.4	4.1	4.1	21.9

Source: AIHW National Mortality Database.

Remoteness of usual residence

The rate of transport-related injury deaths increased with greater remoteness of usual residence (Table 3.6). The rate of transport-related injury deaths for residents of *Very remote* areas was 5.8 times the rate for residents of *Major cities*.

Table 3.6: Unintentional transport injury deaths, by remoteness of usual residence, Australia, 2011–12

Indicators	Remoteness of usual residence ^(a)					
	Major cities	Inner regional	Outer regional	Remote	Very remote	Total ^(b)
Deaths	717	404	266	55	51	1,494
Per cent	48.0	27.0	17.8	3.7	3.4	100
Age-standardised rate (deaths per 100,000 population)	4.4	9.9	13.6	17.5	25.3	n.p.

(a) Derived using the ASGS classification.

(b) Excludes 40 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Socioeconomic status

The number and rate of unintentional transport injury-related deaths varied with the socioeconomic status of the area of the person's usual place of residence (Table 3.7). The age-standardised rate of injury death increased with socioeconomic disadvantage. The rate for residents of the *Most disadvantaged* areas (9.1 deaths per 100,000 population) was 2.4 times the rate for residents of the *Most advantaged* areas (3.8 per 100,000 population).

Table 3.7: Unintentional transport injury deaths, by socioeconomic status, Australia, 2011–12

Indicators	SEIFA quintiles				
	Most disadvantaged	Second most disadvantaged	Middle	Second most advantaged	Most advantaged
Deaths	414	369	300	232	175
Per cent	27.0	24.1	19.6	15.1	11.4
Age-standardised rate (deaths per 100,000 population)	9.1	8.1	6.5	5.1	3.8

Note: Excludes 44 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Aboriginal and Torres Strait Islander people

The age-standardised unintentional transport injury death rate for Aboriginal and Torres Strait Islander people was 2.7 times the rate for non-Indigenous Australians (Table 3.8).

Table 3.8: Key indicators for unintentional transport injury deaths, Indigenous Australians and non-Indigenous Australians, Australia^(a), 2011–12

Indicator	Indigenous Australians			Non-Indigenous Australians		
	Males	Females	Persons	Males	Females	Persons
Deaths	63	32	95	789	273	1,062
Age-standardised rate (deaths per 100,000 population)	25.2	12	18.3	10.1	3.4	6.7
Rate ratio ^(b)	2.5	3.5	2.7	..	..	..
Rate difference ^(c)	15.1	8.6	11.6	..	..	..

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Rate ratios are standardised rate for Indigenous males, females and persons/standardised rate for non-Indigenous males, females and persons.

(c) Rate differences are standardised rate for Indigenous males, females and persons minus standardised rate for non-Indigenous males, females and persons.

Source: AIHW National Mortality Database.

There were marked differences between Aboriginal and Torres Strait Islander people and non-Indigenous Australians in terms of the proportions of unintentional transport injury deaths occurring in each age group (Table 3.9). For Aboriginal and Torres Strait Islander people, a much higher proportion of deaths occurred at ages 24 and under when compared with non-Indigenous Australians. Conversely, the proportions of injury deaths of Aboriginal and Torres Strait Islander men aged 45–64 and Aboriginal and Torres Strait Islander men and women aged 65 and older were much lower than equivalent proportions for non-Indigenous Australians.

Table 3.9: Unintentional transport-related injury deaths, by age and sex, Indigenous Australians and non-Indigenous Australians, Australia^(a), 2011–12

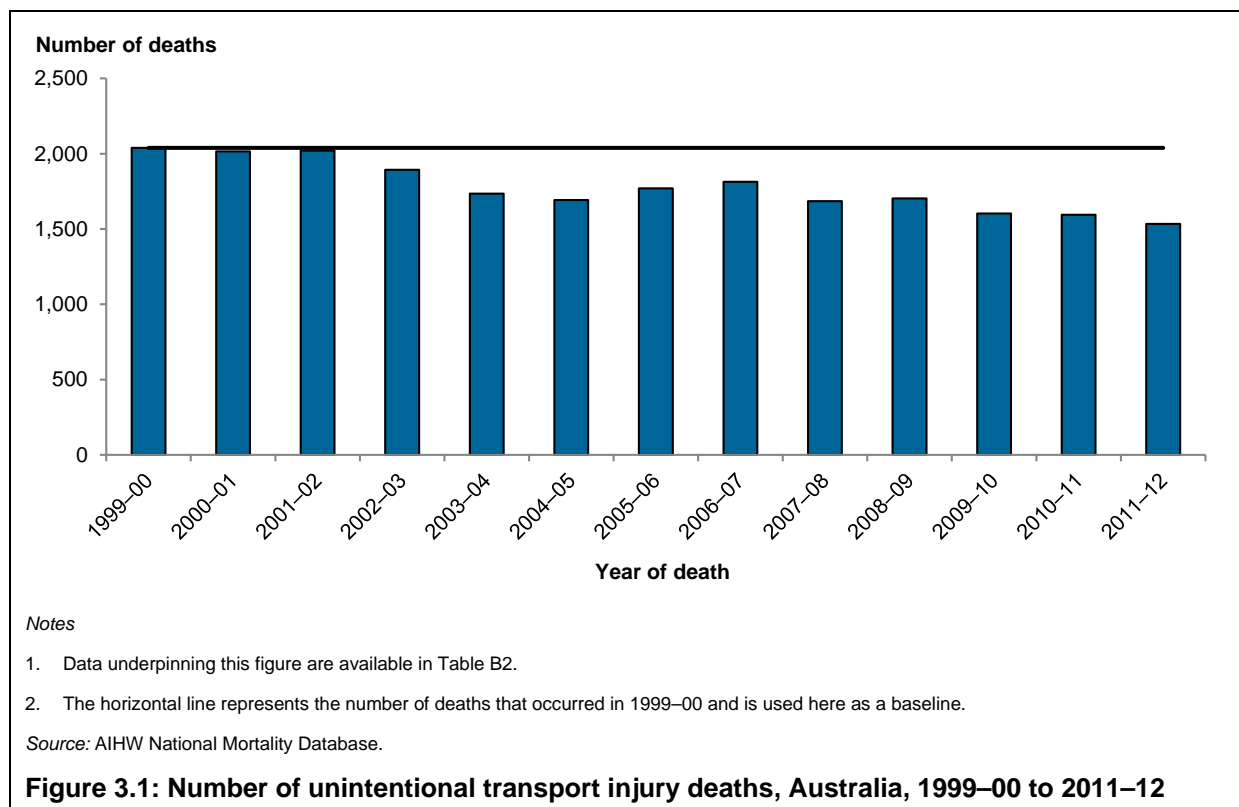
	Indigenous Australians		Non-Indigenous Australians	
	Number	%	Number	%
Males				
0–4	3	4.8	10	1.3
5–14	5	7.9	18	2.3
15–24	19	30.2	144	18.3
25–44	27	42.9	272	34.5
45–64	5	7.9	180	22.8
65+	4	6.3	165	20.9
Total	63	100	789	100
Females				
0–4	5	15.6	13	4.8
5–14	0	0.0	10	3.7
15–24	8	25.0	55	20.1
25–44	11	34.4	66	24.2
45–64	7	21.9	61	22.3
65+	1	3.1	68	24.9
Total	32	100	273	100

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

Source: AIHW National Mortality Database.

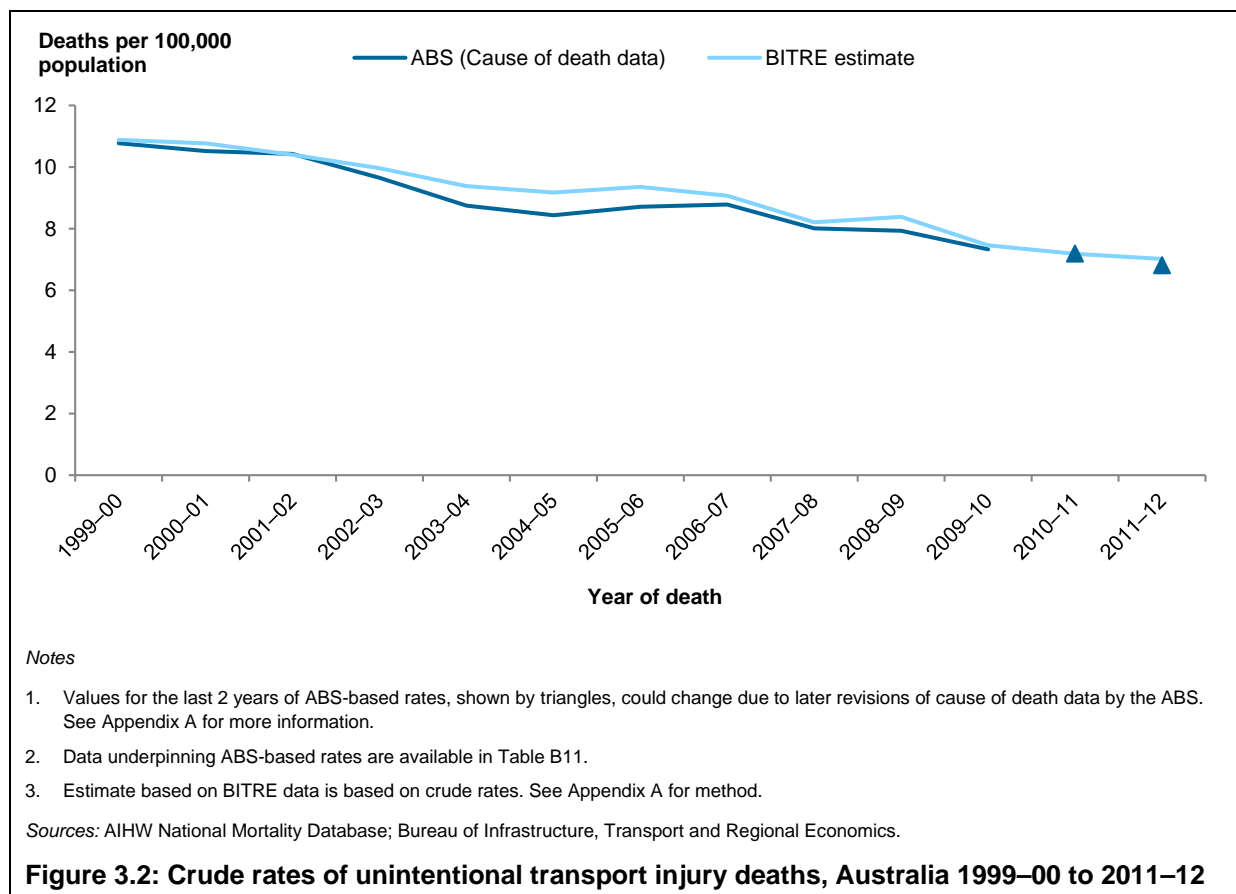
3.4 How have unintentional transport injury deaths changed over time?

Figure 3.1 compares the number of transport injury deaths occurring each year, with the baseline number of deaths in 1999–00 (2,039). From 2002–03, the annual numbers of transport injury deaths have been lower than the baseline period. The largest difference was in 2011–12 when there were 505 fewer deaths (1,534 in total) of transport injury deaths. However, the data for the last 2 years are subject to review and possible revision.



Crude rates of deaths from transport crashes decreased from 10.8 deaths per 100,000 population in 1999-00 to 6.8 in 2011-12 (Figure 3.2). NMD data indicate an average rate of decrease of 4.0% per year between 1999-00 and 2009-10. This decrease and the pattern of variation with time should be treated with caution due to issues related to data processing during this period (see Appendix A). Supplementary estimates, based on road death data from the Bureau of Transport and Regional Economics (BITRE), indicate an average rate of decrease of 3.7% per year between 1999-00 and 2009-10, with less fluctuation of trend in the mid-2000s.

Crude rates were calculated for NMD data to allow better comparability with the crude rates that were available using BITRE data. There was little difference between crude and adjusted rates for the NMD data.



3.5 How have unintentional transport injury deaths varied by age and sex?

Age-standardised rates of transport-related injury deaths decreased over time for both males and females (Figure 3.3). For males, rates decreased by an average of 3.7% per year over the period from 1999–00 to 2009–10, while for females, rates decreased by an average of 4.4% per year over the same period. Rates were consistently about 3 times as high for males as for females.

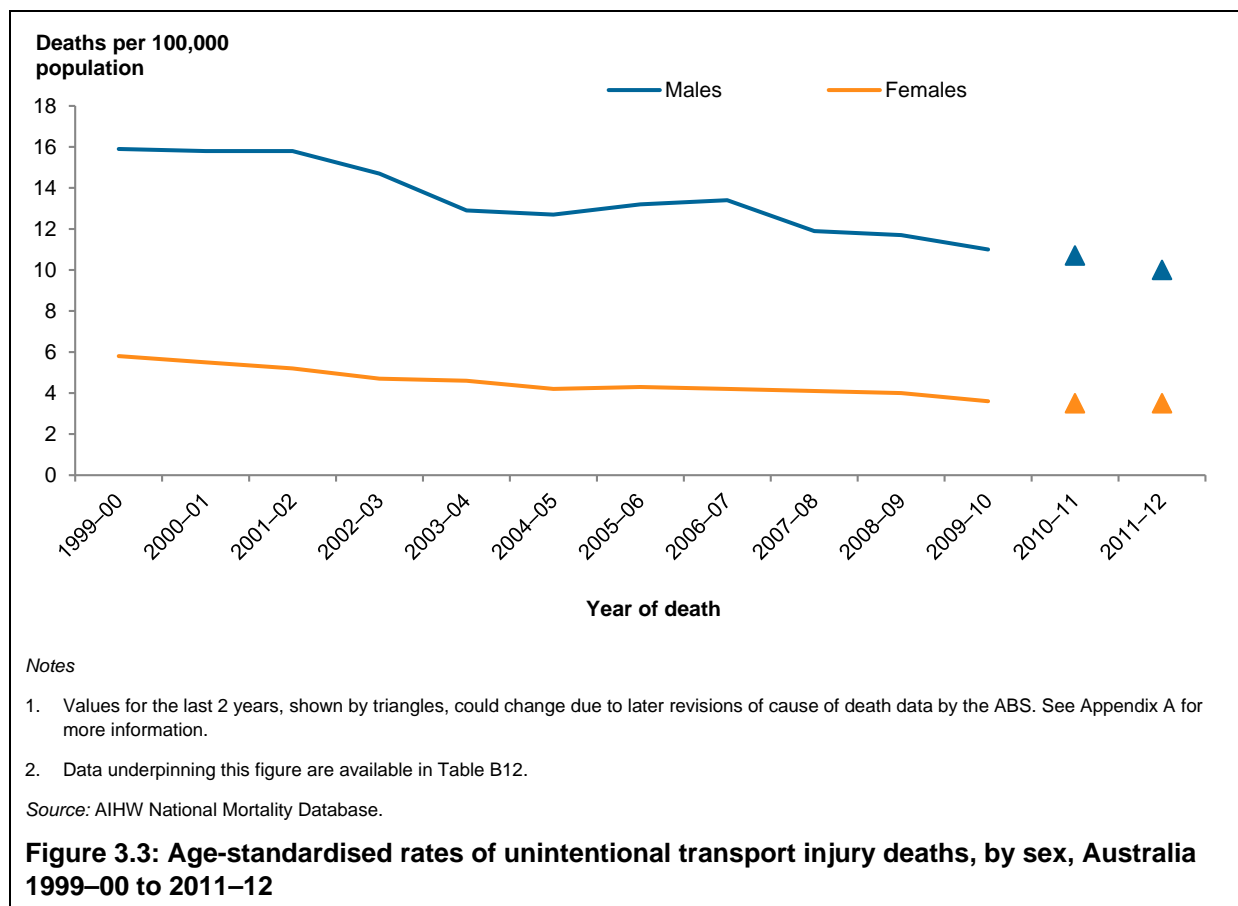
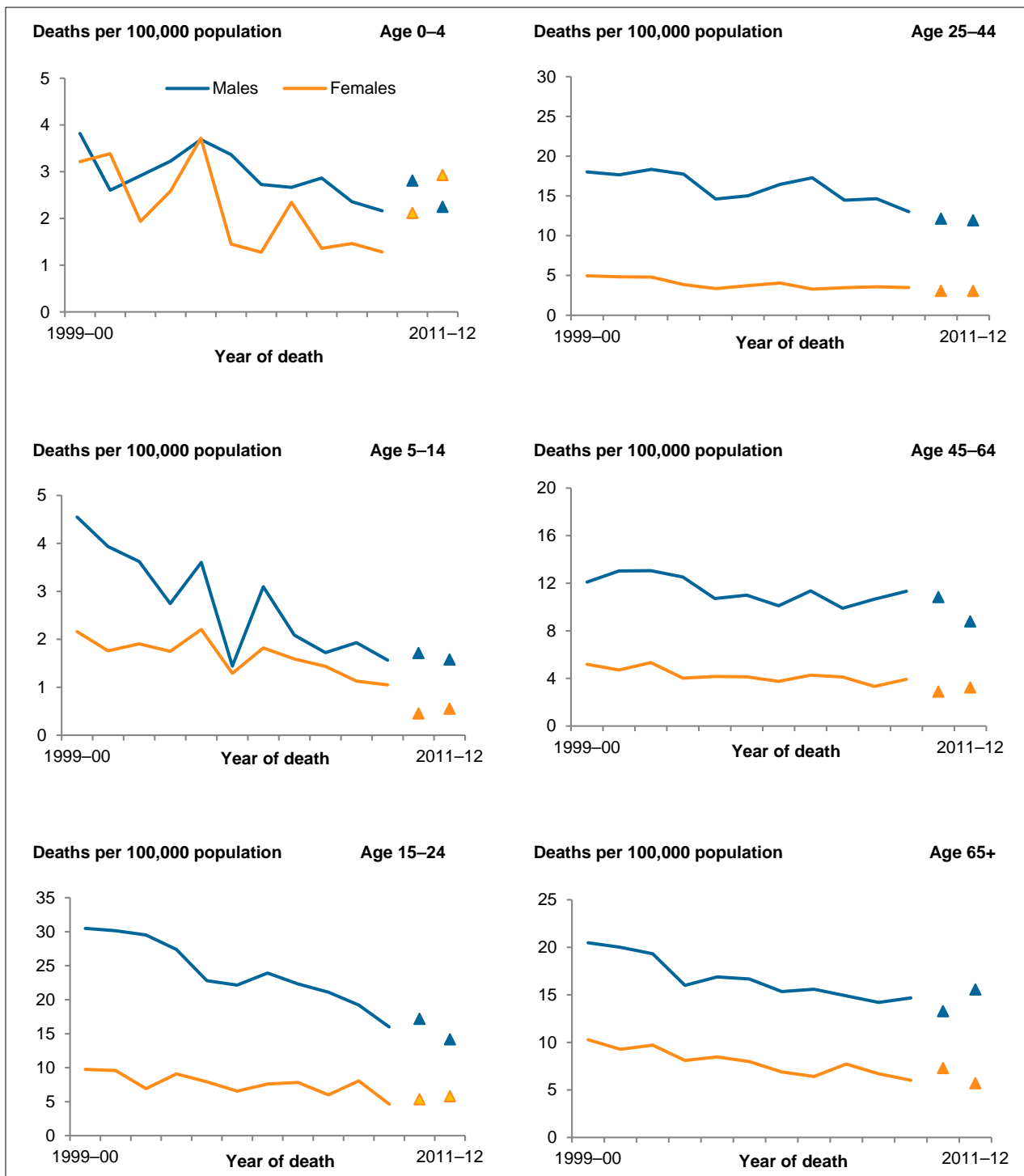


Figure 3.4 shows the changes in rates of transport-related injury deaths over time by age and sex. Age-specific rates for males were higher than for females across all age groups for all years, except in a couple of years for young children aged 0–4, where numbers of deaths were low. The differences in rates between males and females was most marked at ages 25–44, where rates for males were consistently over 4 times as high as for females. Rates generally tended to decline over time, though with fluctuations, for both males and females. The least decline occurred for age group 45–64.



Notes

1. Data for period 1999-00 to 2009-10, represented by lines, are final. Those for the last 2 years, represented by triangles, are subject to revision. See Appendix A for further information.
2. Data underpinning this figure are available in Table B24.

Source: AIHW National Mortality Database.

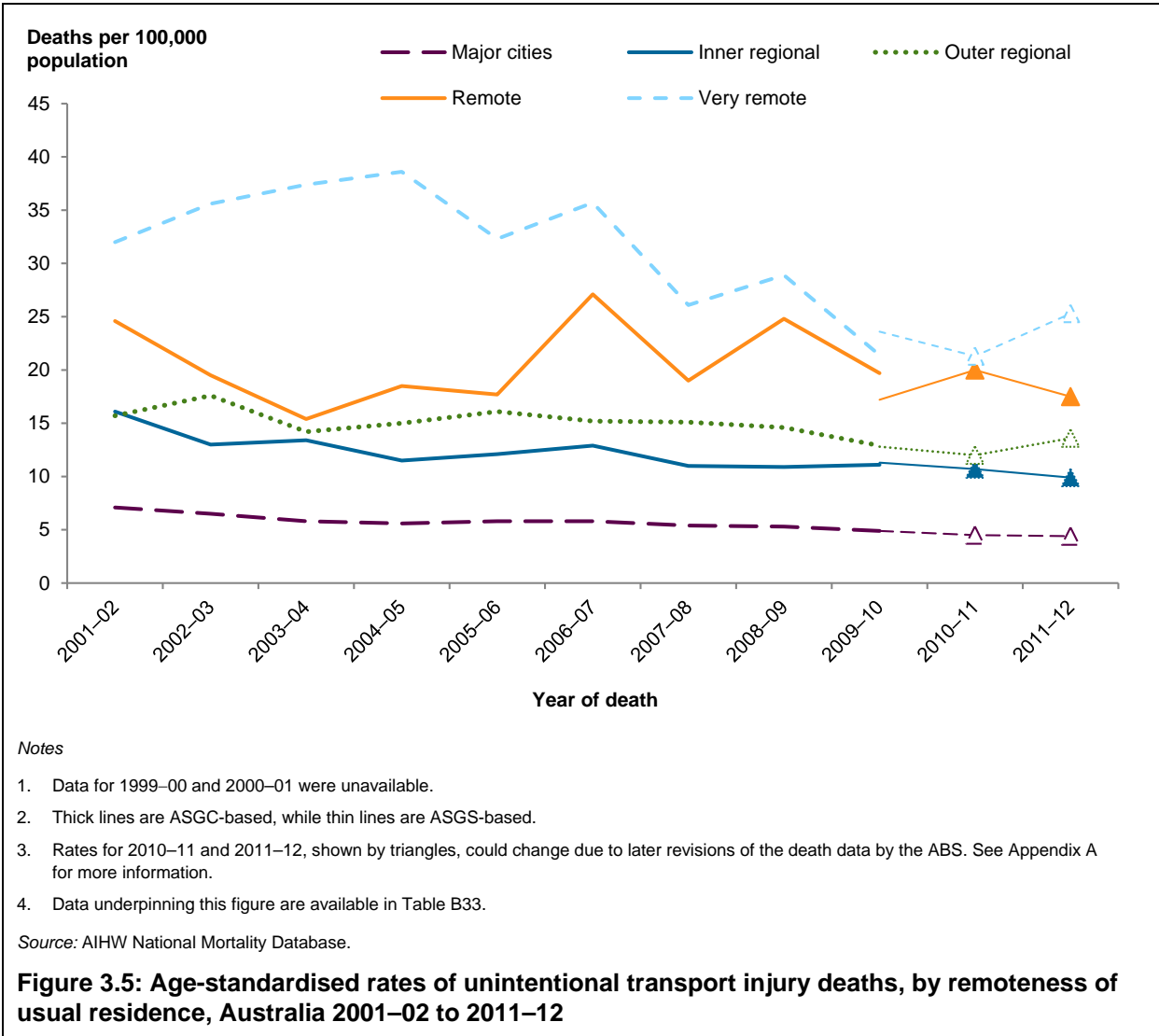
Figure 3.4: Age-specific rates of unintentional transport injury deaths, by age and sex, Australia 1999-00 to 2011-12

3.6 How have unintentional transport injury deaths varied by remoteness?

Rates of transport injury deaths were consistently higher over time for residents of *Very remote* areas compared with residents of all other remoteness areas (Figure 3.5). Rates for residents of *Very remote* areas varied from 4.3 times as high in 2001–02 to almost 7 times as high in 2004–05 as rates for residents of *Major cities*.

The fluctuation in rate of injury deaths in the *Very remote* and *Remote* areas of Australia partly reflects the small population and number of incidents occurring each year.

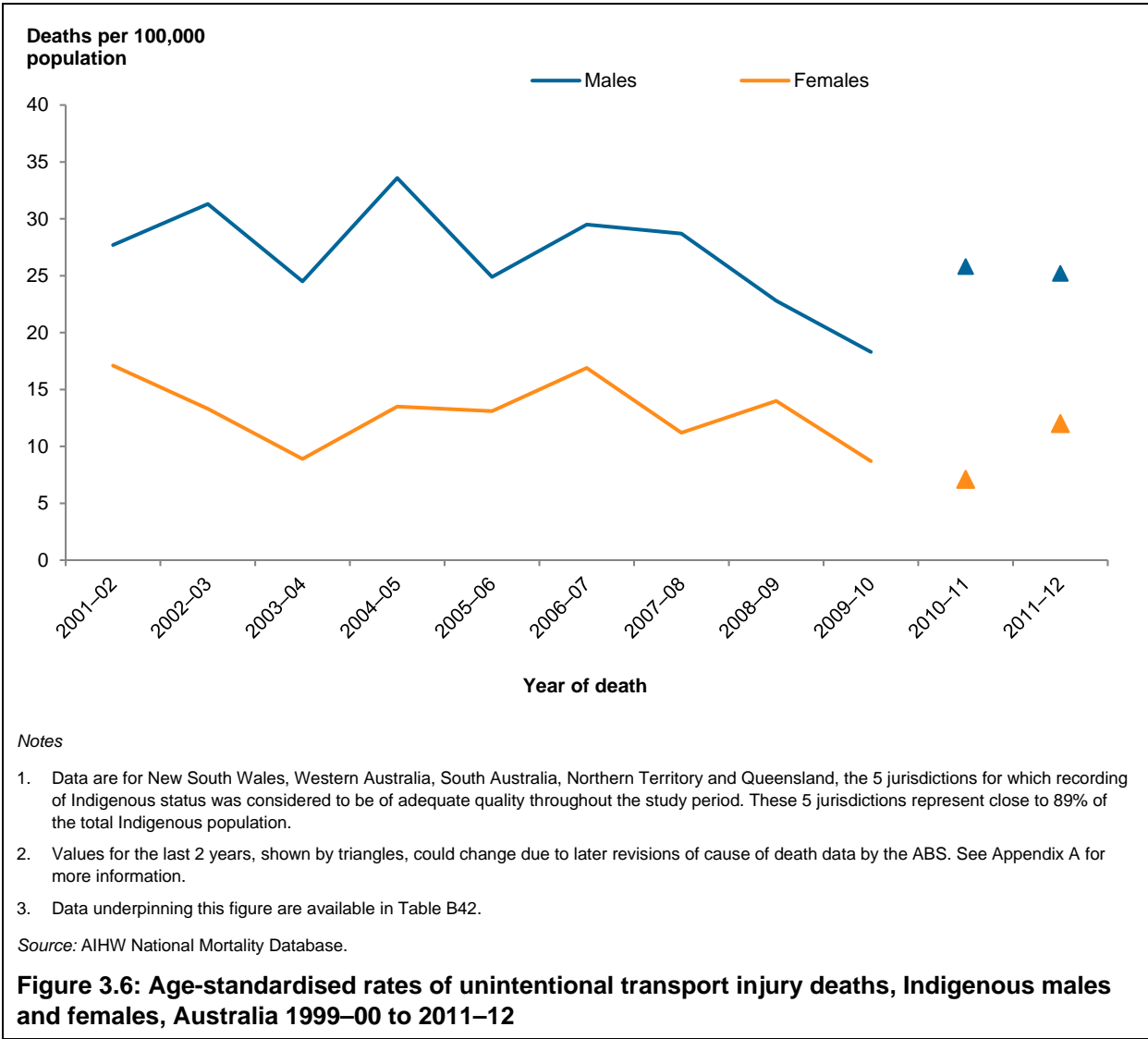
For the *Remote* areas, the ASGC-based rates were higher than the ASGS-based rates, while for *Very remote* areas, the ASGS-based rates were higher.



3.7 How have unintentional transport injury deaths of Aboriginal and Torres Strait Islander people changed over time?

Age-standardised rates for both Aboriginal and Torres Strait Islander males and females showed non-significant downward trends over the period from 1999–00 to 2009–10 (Figure 3.6). Rates for males were higher than rates for females across the entire period, ranging from 1.6 times as high in 2001–02 to 3.6 times as high in 2010–11.

Note that the rates in the last 2 years are subject to revision.



4 Drowning

This chapter provides a summary of all drowning deaths in 2011–12 that are identifiable in the deaths data, a summary of unintentional drowning deaths in that year and a description of trends in unintentional drowning deaths from 1999–00 to 2011–12.

4.1 What methods were used?

The criteria given in Section 1.3 were applied and the records that included the following ICD-10 codes were included in this chapter:

- the UCoD was Accidental drowning and submersion (W65–W74), or
- the MCoDs included codes for Accidental drowning and submersion (W65–W74) and for Injury (S00–T75 or T79), or
- the MCoDs included codes for Drowning and non-fatal submersion (T75.1) and for an Unintentional external cause of injury (V01–X59).

Suicide and homicide deaths (UCoD X60–Y09) were excluded. The concepts underlying the abbreviations used here are defined in the Glossary.

Relevant terms and information regarding the data used in this chapter are summarised in Boxes 1.1, 1.2 and 4.1. Further information on methods is provided in Appendix A.

Box 4.1: External causes of drowning and submersion injury

The **Accidental drowning and submersion** (W65–W74) section of Chapter XX External causes of morbidity and mortality of ICD-10 contains the following groups:

- Drowning and submersion while in bath-tub (W65)
- Drowning and submersion following fall into bath-tub (W66)
- Drowning and submersion while in swimming-pool (W67)
- Drowning and submersion following fall into swimming-pool (W68)
- Drowning and submersion while in natural water (W69)
- Drowning and submersion following fall into natural water (W70)
- Other specified drowning and submersion (W73)
- Unspecified drowning and submersion (W74).

4.2 Overview of total drowning

Drowning occurs in many circumstances, and deaths are assigned codes from several parts of the ICD. Table 4.1 summarises all of the drowning deaths in 2011–12 that can be identified by means of the ICD-coded cause of death data.

Unintentional drowning deaths, the subject of this chapter, accounted for just over three-quarters (76%) of all drowning deaths in 2011–12 (Table 4.1). Those reported as due to *Intentional self-harm by drowning and submersion*, *Assault by drowning and submersion* and *Drowning and submersion, undetermined intent* are not included elsewhere in this chapter.

Table 4.1: All identifiable drowning deaths in 2011–12

Number of deaths in 2011–12	Percentage of all drowning deaths in 2011–12	ICD-10 codes	Terminology in this report	Coverage in this report
263	78.0	UCoD W65–W74; or MCoD S00–T75, T79 and W65–W74; or MCoD T75.1 and V01–X59	Unintentional drowning ^(a)	Drowning (Chapter 4)
57	16.9	MCoD X60–X84 and MCoD T75.1	Intentional self-harm by drowning and submersion	Suicide (Chapter 10)
2	0.6	MCoD X85–Y09 and MCoD T75.1	Assault by drowning and submersion	Homicide (Chapter 11)
15	4.5	MCoD Y10–Y34 and MCoD T75.1	Drowning and submersion, undetermined intent	Undetermined intent (Chapter 2)
337	100		Total drowning deaths	

(a) Includes deaths that meet the inclusion criteria for 'Chapter 3 Transport crashes' in which drowning occurred.

Source: AIHW National Mortality Database.

4.3 How many unintentional drowning deaths were there in 2011–12?

Unintentional drowning deaths numbered 263 in Australia in 2011–12 (Table 4.2). This was 2.3% of all injury deaths in this period. About 4.3 times as many males as females drowned in 2011–12.

Table 4.2: Key indicators for unintentional drowning deaths, Australia, 2011–12

Indicator	Males	Females	Persons
Deaths	213	50	263
Percentage of all injury deaths	3.1	1.1	2.3
Crude rate (deaths per 100,000 population)	1.9	0.4	1.2
Age-standardised rate (deaths per 100,000 population)	1.9	0.4	1.1

Source: AIHW National Mortality Database.

Drowning tends to occur at younger ages than injury from most other causes: 56% of drowning deaths occurred at ages younger than 45 (compared with 31% of all injury deaths) and 7% occurred at ages 0–4 (compared with 1% of all injury deaths).

Table 4.3: Unintentional drowning deaths, by age and sex, Australia, 2011–12

Age group	Males		Females		Persons	
	Number	%	Number	%	Number	%
0–4	13	6.1	6	12.0	19	7.2
5–14	13	6.1	1	2.0	14	5.3
15–24	42	19.7	2	4.0	44	16.7
25–44	56	26.3	14	28.0	70	26.6
45–64	46	21.6	16	32.0	62	23.6
65+	43	20.2	11	22.0	54	20.5
Total	213	100	50	100	263	100

Source: AIHW National Mortality Database.

The age-standardised rate for drowning deaths during 2011–12 for residents of the Northern Territory and Tasmania were 3.4 and 2.3 times that of the national rate, respectively (Table 4.4). Most other jurisdictions recorded rates moderately above or moderately below the national rate, with residents of Victoria recording the lowest rate of 0.7. These observations must be treated with some caution because relatively small counts in the Northern Territory and the other less populated jurisdictions can cause rates to fluctuate markedly from year to year.

Table 4.4: Unintentional drowning deaths, by state and territory of usual residence, Australia, 2011–12

Indicators	State and territory of usual residence							
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Deaths	85	41	66	32	14	13	4	8
Per cent	32.3	15.6	25.1	12.2	5.3	4.9	1.5	3.0
Age-standardised rate (deaths per 100,000 population)	1.1	0.7	1.5	1.3	0.8	2.5	0.9	3.7

Source: AIHW National Mortality Database.

The age-standardised rate of drowning deaths increased with increasing remoteness, with the rate of drowning deaths among residents of *Very remote* areas was almost 5 times the rate for residents of *Major cities* (Table 4.5). These observations should be treated with some caution due to the small counts in *Remote* and *Very Remote* areas.

Table 4.5: Unintentional drowning deaths, by remoteness of usual residence, Australia, 2011–12

Indicators	Remoteness of usual residence ^(a)					
	Major cities	Inner regional	Outer regional	Remote	Very remote	Total ^(b)
Deaths	123	61	37	6	8	235
Per cent	52.3	26.0	15.7	2.6	3.4	100
Age-standardised rate (deaths per 100,000 population)	0.8	1.5	1.8	2.4	3.9	n.p.

(a) Derived using the ASGS classification.

(b) Excludes 28 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Socioeconomic status

The age-standardised rate of injury death was noticeably higher for residents of the *Most disadvantaged* areas when compared with residents of the other 4 SEIFA quintiles, for which rates were broadly similar. The rate for residents of the *Most disadvantaged* areas (1.6 deaths per 100,000 population) was twice the rate for residents of the *Most advantaged* areas (0.8 per 100,000 population).

Table 4.6: Unintentional drowning deaths, by socioeconomic status, Australia, 2011–12

Indicators	SEIFA quintiles				
	Most disadvantaged	Second most disadvantaged	Middle	Second most advantaged	Most advantaged
Deaths	73	48	44	35	35
Per cent	27.8	18.3	16.7	13.3	13.3
Age-standardised rate (deaths per 100,000 population)	1.6	1.0	1.0	0.8	0.8

Note: Excludes 28 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Aboriginal and Torres Strait Islander people

The age-standardised unintentional drowning death rate for Aboriginal and Torres Strait Islander people was 2.3 times the rate for non-Indigenous Australians (Table 4.7). This observation must be treated with some caution due the small counts involved.

Table 4.7: Key indicators for unintentional drowning deaths, Indigenous Australians and non-Indigenous Australians, Australia^(a), 2011–12

Indicator	Indigenous Australians			Non-Indigenous Australians		
	Males	Females	Persons	Males	Females	Persons
Deaths	9	2	11	151	35	186
Age-standardised rate (deaths per 100,000 population)	5.8	n.p.	2.7	1.9	0.4	1.2
Rate ratio ^(b)	3.1	1.0	2.3	..	..	..
Rate difference ^(c)	3.9	0.0	1.5	..	..	..

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Rate ratios are standardised rate for Indigenous males, females and persons/standardised rate for non-Indigenous males, females and persons.

(c) Rate differences are standardised rate for Indigenous males, females and persons minus standardised rate for non-Indigenous males, females and persons.

Source: AIHW National Mortality Database.

Circumstances of the drownings

Drowning in natural bodies of water

A total of 137 (52%) deaths were the result of drowning while in a natural body of water, such as a lake, river or the open sea. The majority of deaths in this group involved males ($n = 117$, 85%). In 95 (69%) drowning deaths involving natural bodies of water, the person drowned while in the water, while in the remaining 42 (31%), drowning occurred after the person fell into a body of natural water.

Drowning in bathtub

A total of 19 (7%) of the drowning deaths occurred in a bathtub. Six involved children aged 0–4. In most instances the person drowned while in a bathtub, while in a small number of instances the person drowned after a fall into the bathtub.

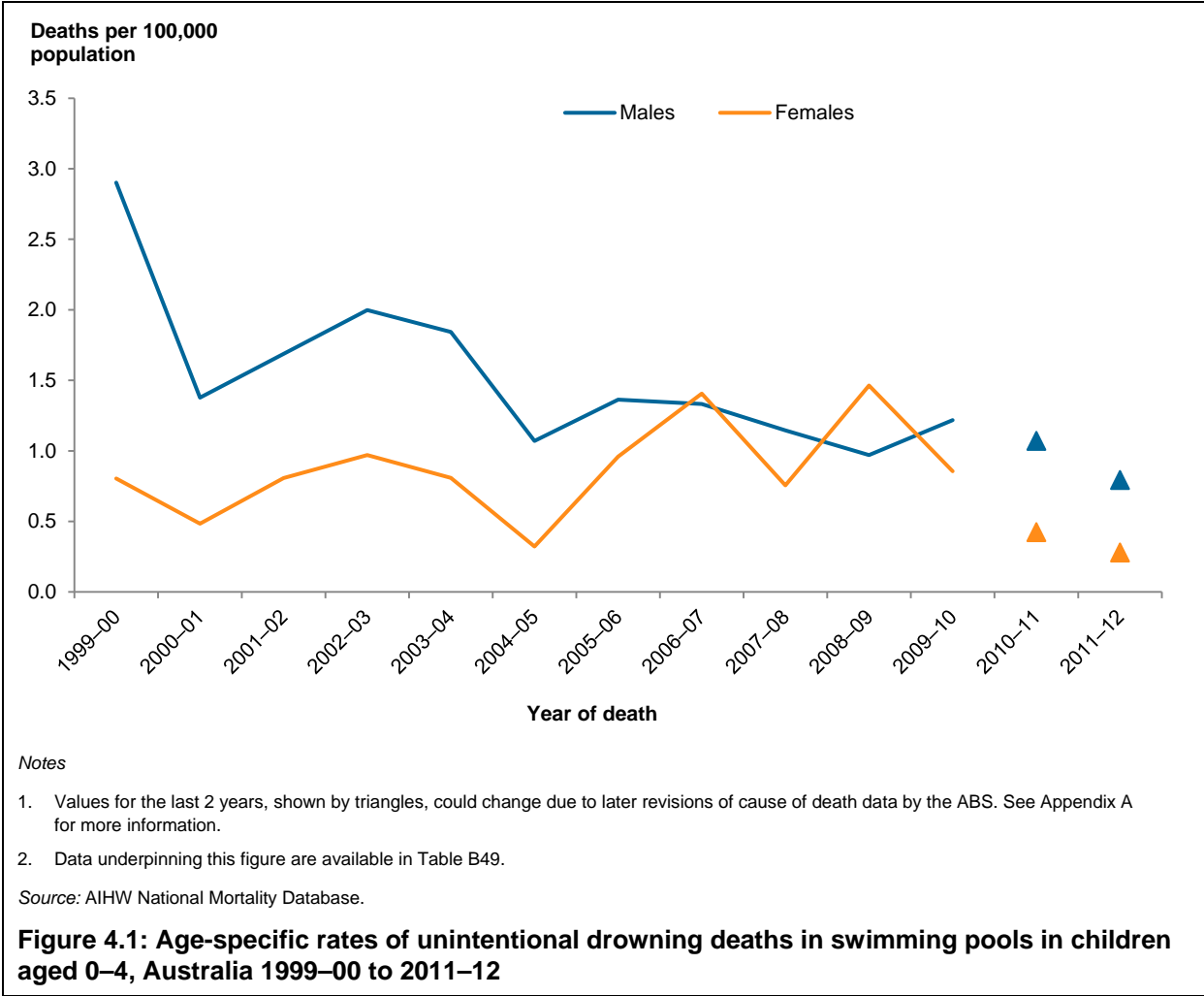
Transport-related drowning

A total of 51 (19%) unintentional drowning deaths were related to transport and so are included in Chapter 3. In 31 of these deaths (61%), drowning was caused by an accident to watercraft (for example, overturning or sinking boat, falling or jumping from a burning ship, and so forth). In another 10 (20%) deaths, the drowning was related to water-transport, but did not result from an accident to watercraft (for example, fall from ship, fall overboard).

Drowning in swimming pools

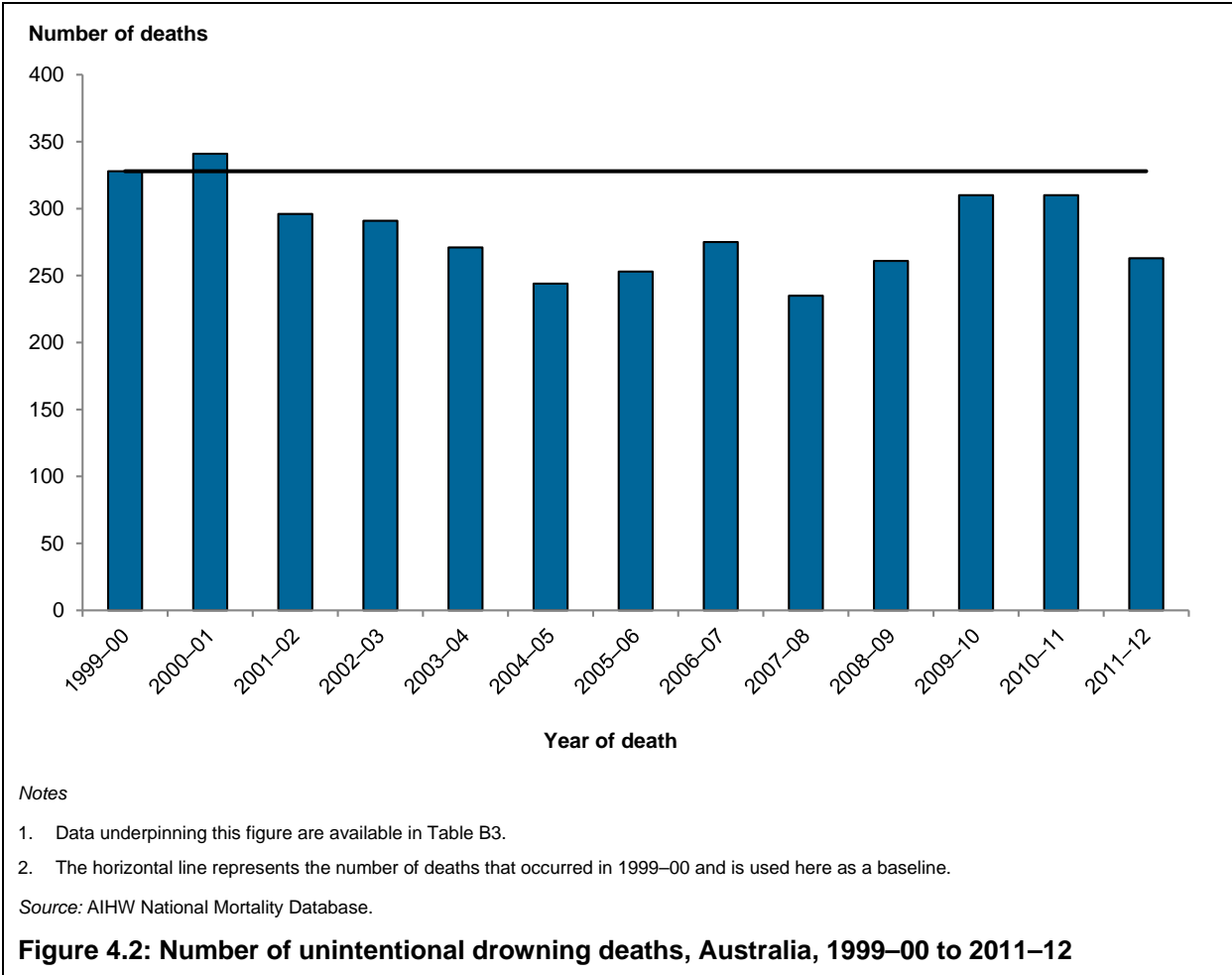
In 20 (8%) deaths, the drowning occurred in a swimming pool. A total of 8 (40%) of these deaths involved children aged under 5. Across all ages, male drowning deaths were more frequent ($n = 14$, 70%) than female ($n = 6$, 30%). In half of deaths (10), the deceased person was already in the swimming pool, while for the other half of the deaths (10), drowning occurred after the person fell into the pool.

Drowning in swimming pools has been a major cause of death for young children in Australia for several decades and the subject of specific preventative efforts. Age-standardised rates of swimming pool drowning for boys and girls aged 0–4 fluctuated over the period due to small case numbers (Figure 4.1). In 2011–12 the rate of death by drowning in a swimming pool for children aged 0–4 was 0.5 per 100,000 population.



4.4 How have unintentional drowning deaths changed over time?

Figure 4.2 compares the number of unintentional drowning deaths occurring in each year, with the baseline number of deaths in 1999–00 (328). The number of drowning deaths has been lower than the baseline in every year except 2000–01. The largest difference was in 2007–08, when there were 93 fewer drowning deaths than in 1999–00.

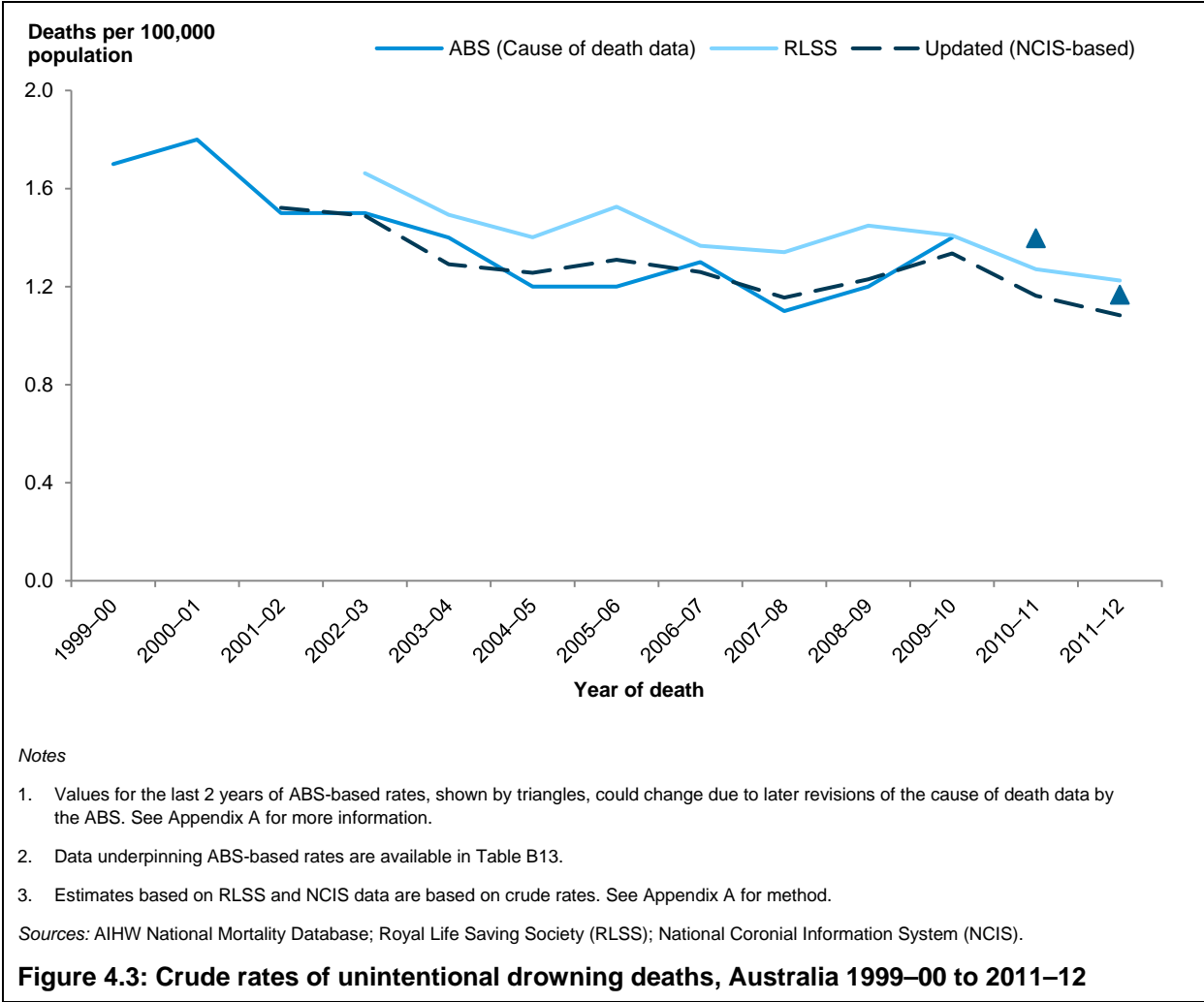


Crude rates of drowning deaths decreased from 1.7 deaths per 100,000 population in 1999–00 to 1.1 in 2007–08 (Figure 4.3). This decrease represented an average decline of 4.8% per year over this period. Rates rose again between 2007–08 and 2009–10 before dropping back to 1.2 by 2011–12. However, it should be noted that rates for 2010–11 and 2011–12 are subject to review and revision.

Estimates based on NMD data are supplemented here by rates based on 2 other sources of data. Data based on annual drowning reports published by the Royal Life Saving Society (RLSS) indicate an average rate of decrease of 4.2% per year between 2002–03 and 2007–08 and a rate of decrease of 3.4% per year between 2002–03 and 2011–12. Estimates based on NCIS data as at June 2015, indicate an average annual decrease was 4.4% per year between 2001–02 (the first full year for which national NCIS data were available) and 2007–08 and a rate of decrease of 3.4% per year between 2001–02 and 2011–12.

It should be noted that differences in case definitions and methods between sources, particularly between the NMD and the RLSS, are such that identical rates should not be expected. Further information on the method used to produce the supplementary estimates is provided in Appendix A.

Crude rates were calculated for NMD data to allow better comparability with the RLSS and NCIS-based estimates and because there was little difference between crude and adjusted rates for the NMD data.



4.5 How have unintentional drowning deaths varied by age and sex?

During the period of interest, age-standardised rates of drowning deaths decreased over time for males, but remained relatively steady for females (Figure 4.4). For males, rates decreased from 2.7 per 100,000 population in 1999–00 to 1.8 per 100,000 population in 2004–05 and fluctuated around 2 per 100,000 thereafter. Rates were consistently 3 to 5 times as high for males than for females.

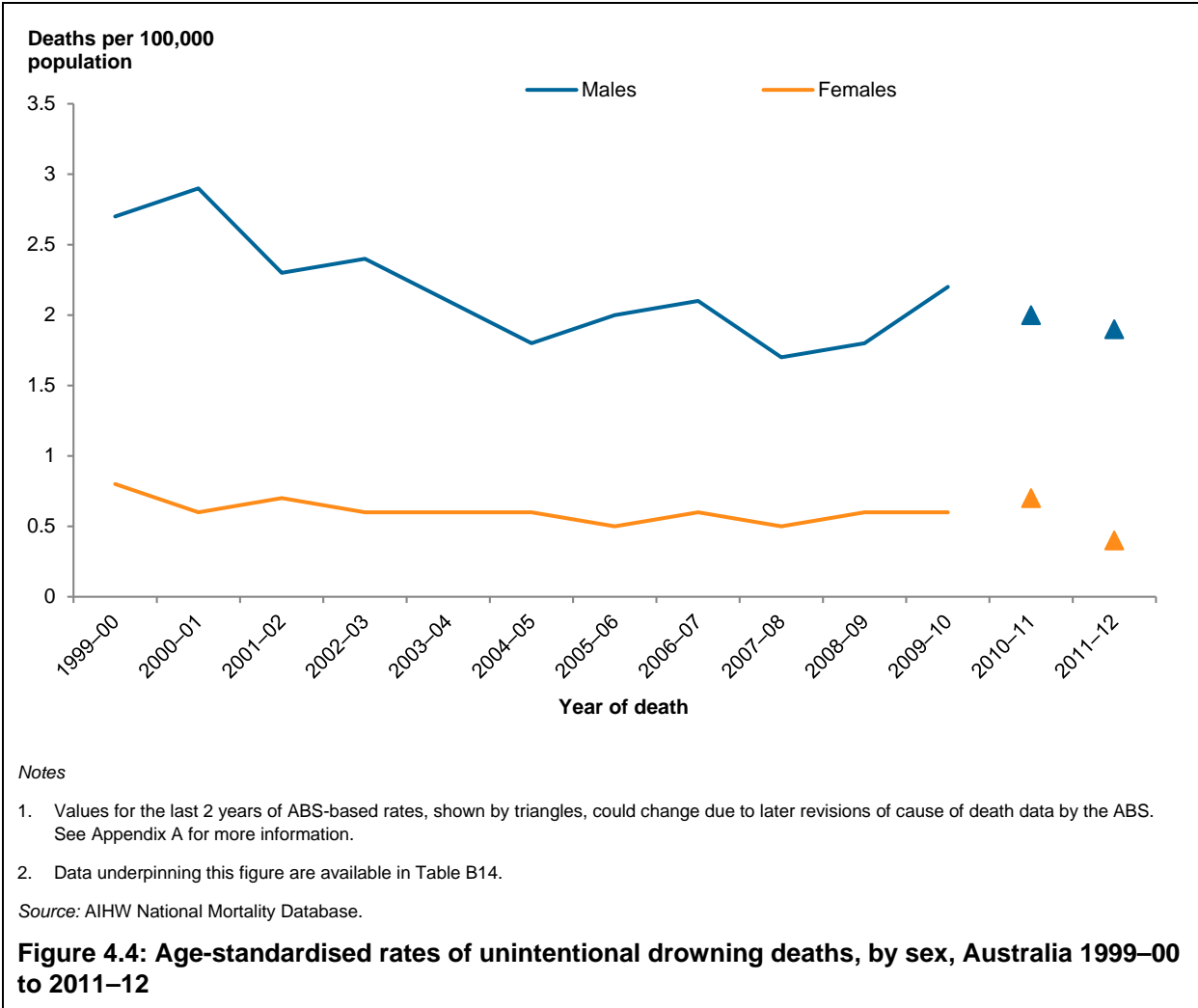
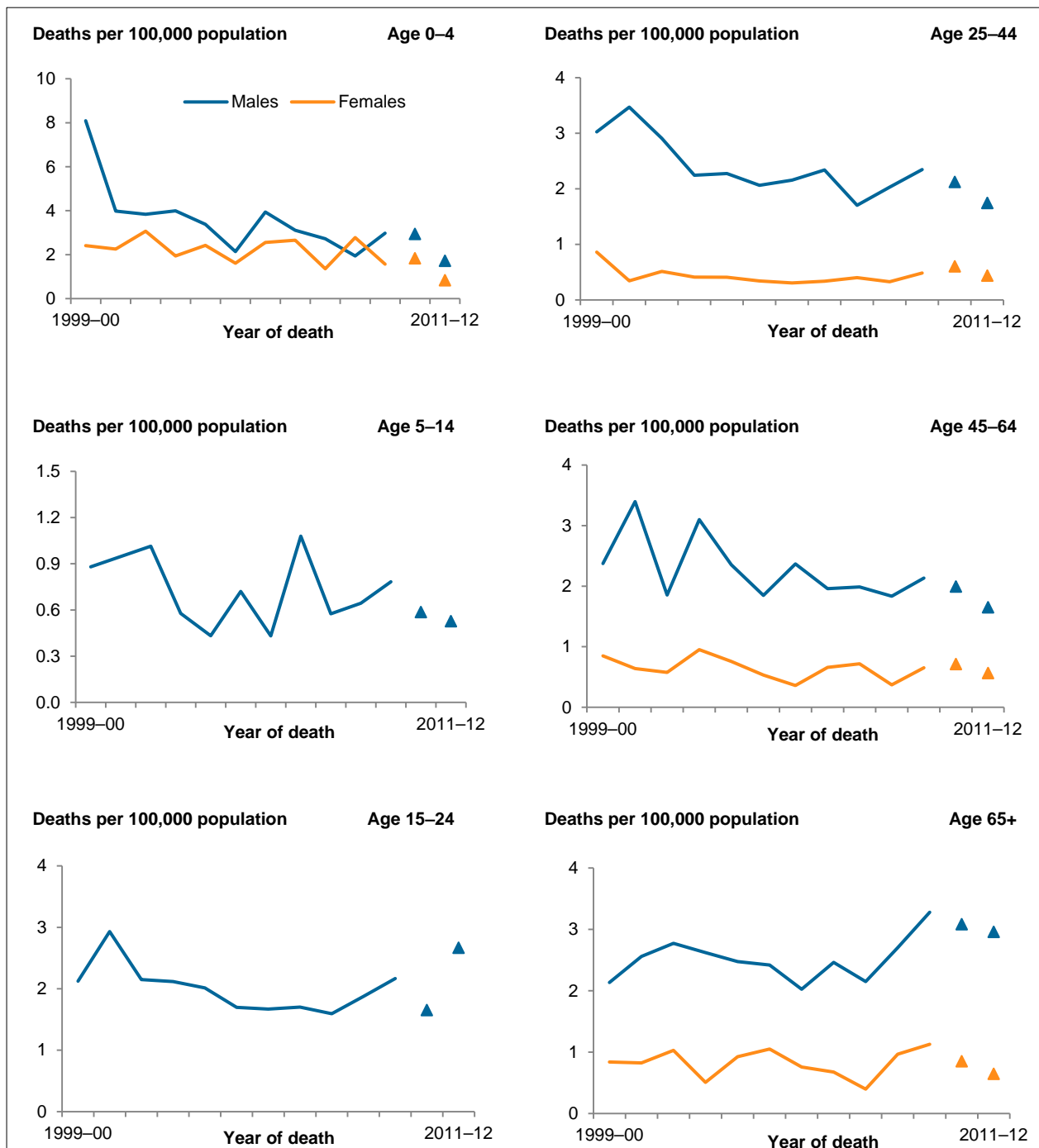


Figure 4.5 shows the changes in drowning death rates over time by age and sex. Age-standardised rates for males were higher than for females across all age groups for all years, except in 1 year for young children aged 0–4, where case numbers are low. The differences in rates between males and females was most marked for those aged 25–44, where rates for males were over 4 times as high as for females. For males, rates declined early in the period in most age groups, but showed little change later in the period. Rates for females tended to remain relatively steady throughout the period in all age groups. (Rates for females are not shown for those aged 5–14 and 15–24 due to small numbers of deaths.)



Notes

1. Data for period 1999-00 to 2009-10, represented by lines, are final. Those for the last 2 years, represented by triangles, are subject to revision. See Appendix A for further information.
2. Data underpinning this figure are available in Table B25.
3. Rates for females aged 5-14 and 15-24 are not shown due to small numbers.

Source: AIHW National Mortality Database.

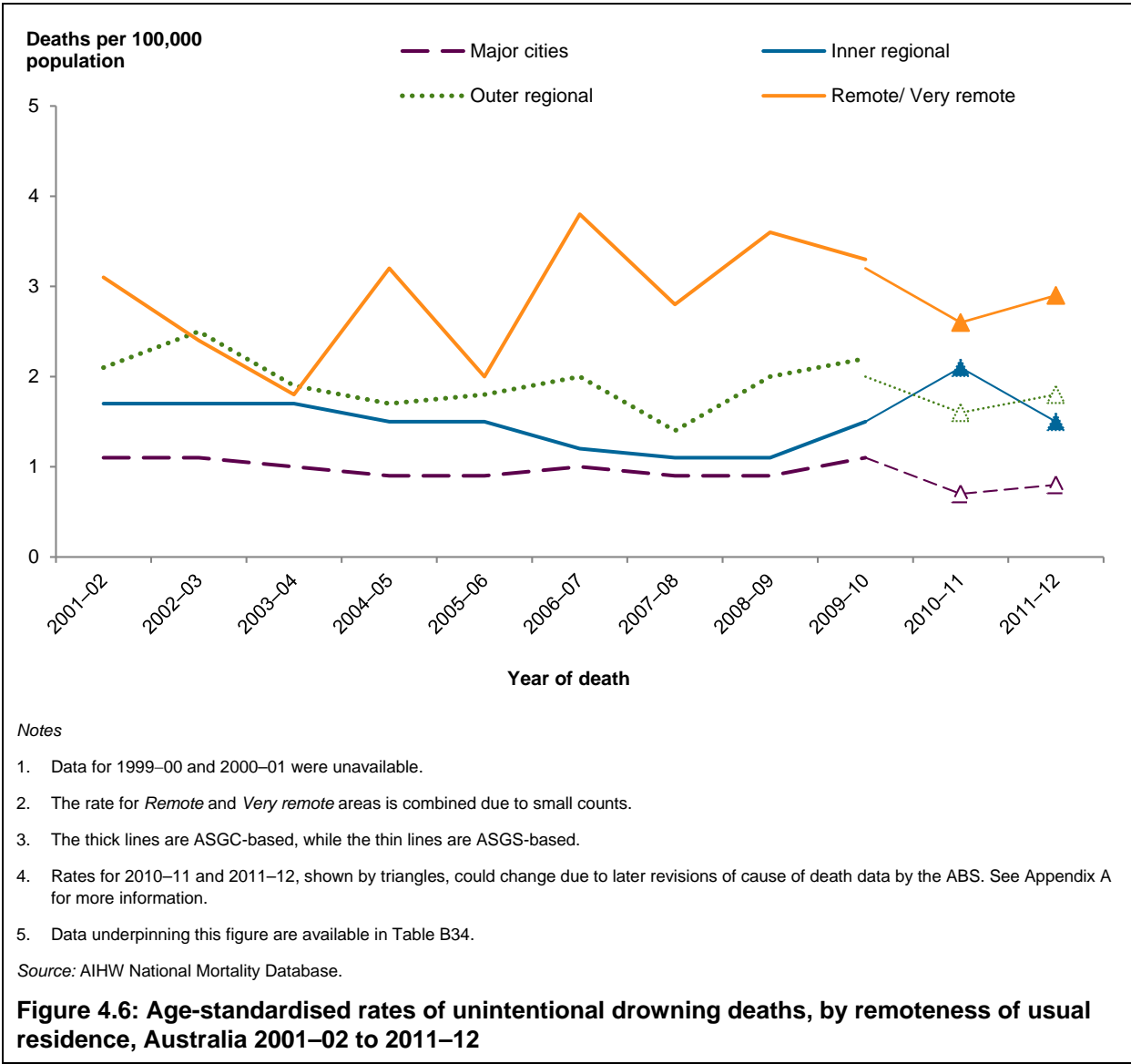
Figure 4.5: Age-specific rates of unintentional drowning deaths, by age and sex, Australia 1999-00 to 2011-12

4.6 How have unintentional drowning deaths varied by remoteness?

The *Remote* and *Very remote* areas are combined here due to small numbers of deaths. Rates of drowning deaths for residents of the combined *Remote* areas were high compared with rates for residents of less remote areas in the later part of the period (Figure 4.6). The rate ratio for residents of combined *Remote* areas compared with residents of *Major cities* varied from 1.8 times as high in 2003–04 to 4 times as high in 2008–09.

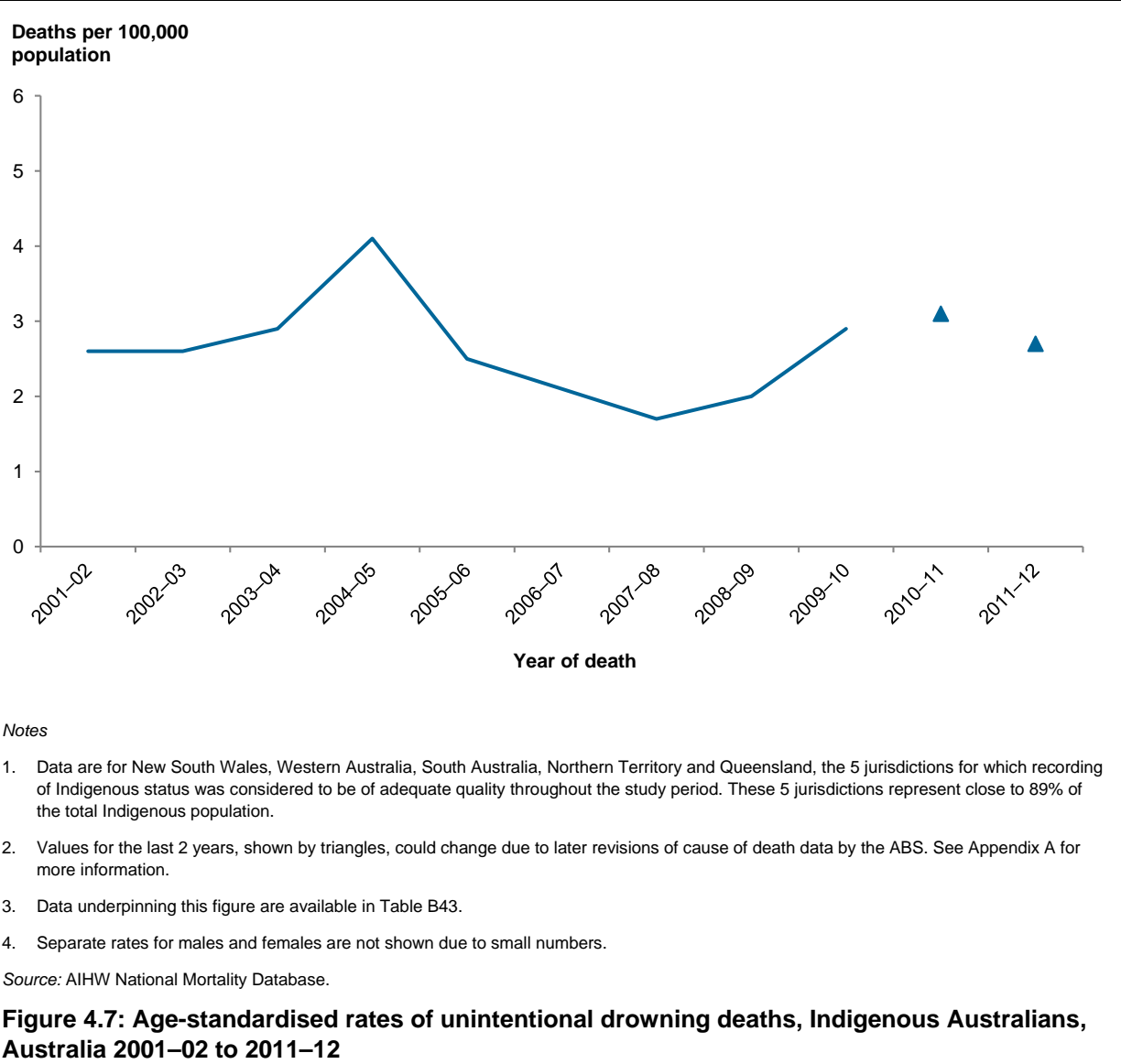
The fluctuation in the rate of drowning deaths in the combined *Remote* areas of Australia is partly a reflection of the small population and number of deaths occurring each year.

For the *Outer Regional* areas, the ASGC-based rates were higher than the ASGS-based rates, while for combined *Remote* areas, the ASGS-based rates were higher.



4.7 How have unintentional drowning deaths of Aboriginal and Torres Strait Islander people changed over time?

Age-standardised rates of drowning for Aboriginal and Torres Strait Islander people fluctuated markedly from year to year for the period from 1999–00 to 2011–12, at least partly due to small numbers of deaths (from 10 to 20 deaths per year) (Figure 4.7). Overall, there was little evidence of an overall change in rates over that period.



5 Poisoning, pharmaceuticals

This chapter provides a summary of all poisoning deaths involving pharmaceuticals in 2011–12 that are identifiable in the deaths data, a summary of unintentional poisoning deaths involving pharmaceuticals in that year and a description of trends in unintentional poisoning deaths involving pharmaceuticals from 1999–00 to 2011–12.

5.1 What methods were used?

The criteria given in Section 1.3 were applied and the records that included the following ICD-10 codes were included in this chapter:

- the UCoD was Unintentional poisoning by pharmaceuticals (X40–X44), or
- the MCoDs include codes for Unintentional poisoning by pharmaceuticals (X40–X44) and for Injury (S00–T75 or T79), or
- the MCoDs include codes for the Toxic effects of pharmaceuticals (T36–T50) and for an Unintended external cause of injury (V01–X59).

Suicide and homicide deaths (UCoD X60–Y09) were excluded. The concepts underlying the abbreviations used here are defined in the Glossary.

Relevant terms and information regarding the data used in this chapter are summarised in Boxes 1.1, 1.2 and 5.1. Further information on methods is provided in Appendix A.

Box 5.1: External causes of poisoning by pharmaceuticals

Accidental poisoning by and exposure to noxious substances (X40–X49) is the subject of a section of Chapter XX External causes of morbidity and mortality of ICD-10. The first 5 categories in this section refer to poisoning by and exposure to drugs, medicaments and biological substances (X40–X44):

- Accidental poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics (X40)
- Accidental poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified (X41)
- Accidental poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified (X42)
- Accidental poisoning by and exposure to other drugs acting on the autonomic nervous system (X43)
- Accidental poisoning by and exposure to other and unspecified drugs, medicaments and biological substances (X44).

5.2 Overview of total poisoning by pharmaceuticals

In 2011–12, unintentional poisoning deaths involving pharmaceuticals accounted for 66% of all poisoning by pharmaceuticals deaths (Table 5.1). Those reported as *Intentional self-harm by pharmaceutical poisoning*, *Assault by pharmaceutical poisoning* and *Pharmaceutical poisoning, undetermined intent* are not included in this chapter.

Table 5.1: All identifiable poisoning deaths involving pharmaceuticals in 2011–12

Number of deaths in 2011–12	Percentage of all poisoning by pharmaceuticals deaths in 2011–12	ICD-10 codes	Terminology in this report	Coverage in this report
1,023	66.5	UCoD X40–X44; or MCoD X40–X44 and S00–T75, T79; or MCoD V01–X59 and T36–T50.	Unintentional poisoning by pharmaceuticals	Poisoning, pharmaceuticals (Chapter 5)
388	25.2	UCoD X60–X64; or MCoD X60–X64 and S00–T75, T79	Intentional self-harm by pharmaceutical poisoning	Suicide (Chapter 10)
1	0.1	UCoD X85; or MCoD X85 and S00–T75, T79	Assault by pharmaceutical poisoning	Homicide (Chapter 11)
127	8.3	UCoD Y10–Y14; or MCoD Y10–Y14 and S00–T75, T79	Pharmaceutical poisoning, undetermined intent	Undetermined intent (Chapter 2)
1,539	100		Total deaths involving poisoning by pharmaceuticals	

Source: AIHW National Mortality Database.

5.3 How many unintentional poisoning deaths involving pharmaceuticals were there in 2011–12?

Unintentional poisoning by pharmaceuticals accounted for 1,023 injury deaths in Australia during 2011–12 (Table 5.2). This was 9.1% of all injury deaths for this period. Unintentional poisoning deaths involving pharmaceuticals were over twice as numerous for males as females in 2011–12.

Table 5.2: Key indicators for unintentional poisoning deaths involving pharmaceuticals, Australia, 2011–12

Indicator	Males	Females	Persons
Deaths	699	324	1,023
Percentage of all injury deaths	10.3	7.4	9.1
Crude rate (deaths per 100,000 population)	6.2	2.9	4.5
Age-standardised rate (deaths per 100,000 population)	6.4	2.8	4.6

Source: AIHW National Mortality Database.

Persons aged 25–44 and 45–64 accounted for 51% and 33% of all unintentional poisoning deaths involving pharmaceuticals, respectively (Table 5.3). In comparison, 21% and 19% of all injury deaths were at these ages.

The proportions of deaths within age groups were broadly similar for both males and females.

Table 5.3: Unintentional poisoning deaths involving pharmaceuticals, by age and sex, Australia, 2011–12

Age group	Males		Females		Persons	
	Number	%	Number	%	Number	%
0–4	0	0.0	1	0.3	1	0.1
5–14	0	0.0	0	0.0	0	0.0
15–24	41	5.9	21	6.5	62	6.1
25–44	402	57.5	123	38.0	525	51.3
45–64	209	29.9	133	41.0	342	33.4
65+	47	6.7	46	14.2	93	9.1
Total	699	100	324	100	1,023	100

Source: AIHW National Mortality Database.

The age-standardised rates for unintentional poisoning deaths involving pharmaceuticals during 2011–12 were highest for residents of the Northern Territory and Queensland, which recorded rates of 5.9 and 5.6 deaths per 100,000 population, respectively (Table 5.4). Residents of Tasmania recorded the lowest rate of all jurisdictions of 2.8 deaths per 100,000 population.

Table 5.4: Unintentional poisoning deaths involving pharmaceuticals, by state and territory of usual residence, Australia, 2011–12

Indicators	State and territory of usual residence							
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Deaths	364	176	249	116	80	14	11	13
Per cent	35.6	17.2	24.3	11.3	7.8	1.4	1.1	1.3
Age-standardised rate (deaths per 100,000 population)	5.0	3.1	5.6	4.9	4.9	2.8	3.0	5.9

Source: AIHW National Mortality Database.

The age-standardised rate of unintentional poisoning deaths involving pharmaceuticals during 2011–12 tended to decrease with the degree of remoteness of usual residence (Table 5.5). However, due to small case numbers in the *Remote* and *Very remote* area, this result should be treated with caution.

Table 5.5: Unintentional poisoning deaths involving pharmaceuticals, by remoteness of usual residence, Australia, 2011–12

Indicators	Remoteness of usual residence ^(a)					Total ^(b)
	Major cities	Inner regional	Outer regional	Remote	Very remote	
Deaths	743	180	76	10	5	1,014
Per cent	73.3	17.8	7.5	1.0	0.5	100
Age-standardised rate (deaths per 100,000 population)	4.6	4.8	4.0	3.3	2.3	n.p.

(a) Derived using the ASGS classification.

(b) Excludes 9 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Socioeconomic status

The number and rate of unintentional poisoning deaths involving pharmaceuticals varied with the socioeconomic status of the person's usual place of residence (Table 5.6). The age-standardised death rate increased with socioeconomic disadvantage. The rate for residents of the *Most disadvantaged* areas (6.2 deaths per 100,000 population) was more than twice the rate for residents of the *Most advantaged* areas (3.0 per 100,000 population).

Table 5.6: Unintentional poisoning deaths involving pharmaceuticals, by socioeconomic status, Australia, 2011–12

Indicators	SEIFA quintiles				
	Most disadvantaged	Second most disadvantaged	Middle	Second most advantaged	Most advantaged
Deaths	264	243	199	171	137
Per cent	25.8	23.8	19.5	16.7	13.4
Age-standardised rate (deaths per 100,000 population)	6.2	5.6	4.4	3.7	3.0

Note: Excludes 9 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Aboriginal and Torres Strait Islander people

The age-standardised rate for unintentional poisoning deaths involving pharmaceuticals for Aboriginal and Torres Strait Islander people was 2.2 times the rate for non-Indigenous Australians (Table 5.7).

Table 5.7: Key indicators for unintentional poisoning deaths involving pharmaceuticals, Indigenous Australians and non-Indigenous Australians, Australia^(a), 2011–12

Indicator	Indigenous Australians			Non-Indigenous Australians		
	Males	Females	Persons	Males	Females	Persons
Deaths	28	23	51	511	232	743
Age-standardised rate (deaths per 100,000 population)	11.4	9.6	10.5	6.7	2.9	4.8
Rate ratio ^(b)	1.7	3.3	2.2	..	..	..
Rate difference ^(c)	4.7	6.7	5.7	..	..	..

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Rate ratios are standardised rate for Indigenous males, females and persons/standardised rate for non-Indigenous males, females and persons.

(c) Rate differences are standardised rate for Indigenous males, females and persons minus standardised rate for non-Indigenous males, females and persons.

Source: AIHW National Mortality Database.

Types of pharmaceuticals

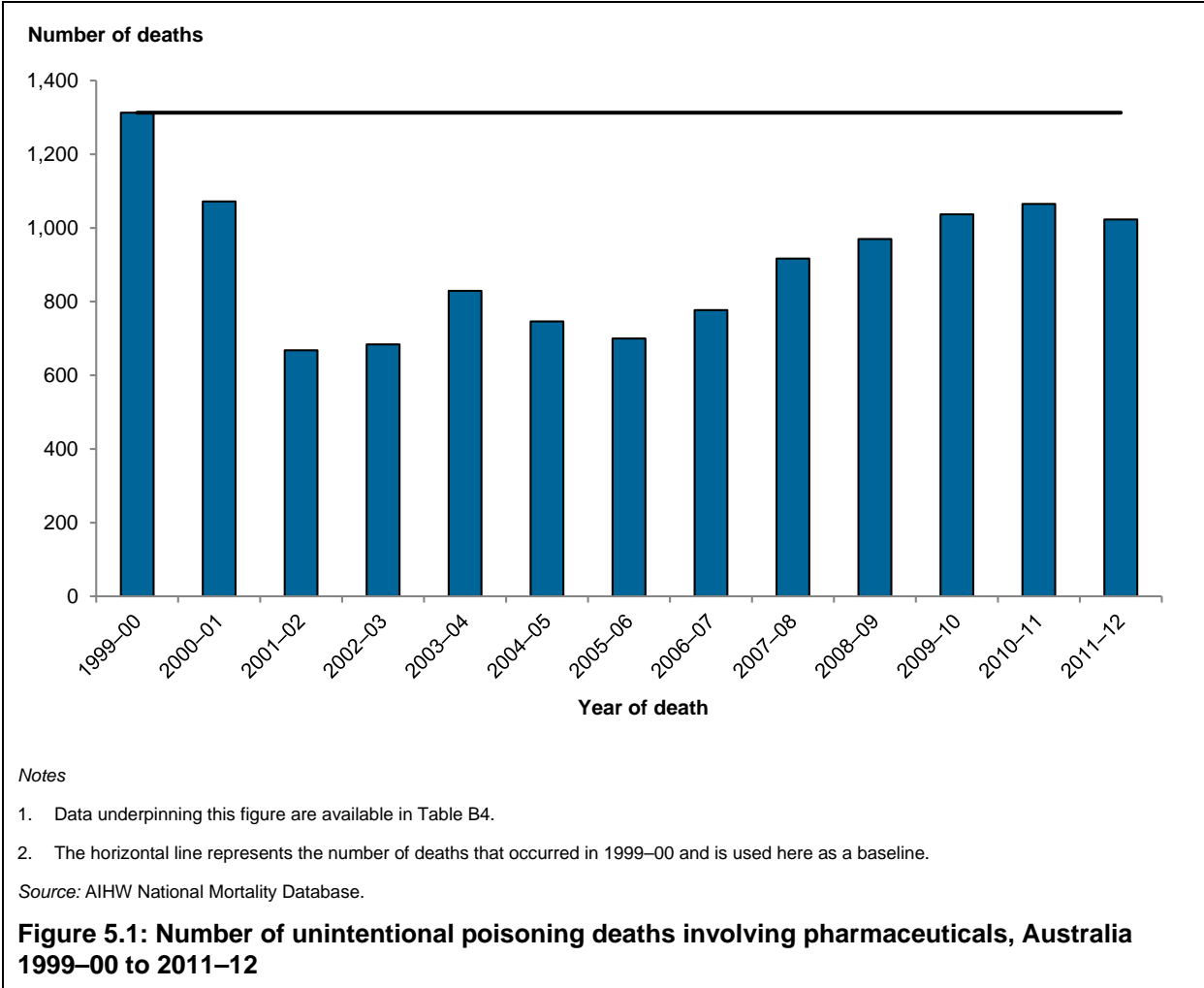
Almost than 71% ($n = 725$) of the deaths were due to *Poisoning by narcotics and psychodysleptics [hallucinogens]* (526 males, 199 females). Of these deaths, 23% ($n = 167$) were poisoning by heroin, 40% ($n = 288$) were poisoning by other opioids and 23% ($n = 168$) were poisoning by methadone. More than 60% ($n = 437$) of these deaths were in the age range 30–49.

Just over 39% ($n = 403$) of the deaths were due to *Poisoning by antiepileptic, sedative-hypnotic and antiparkinsonism drugs* (263 males, 140 females). Of these, 96% ($n = 388$) were due to poisoning by benzodiazepines. Just over 70% ($n = 283$) of these deaths were in the age range 30–54.

Just over 30% ($n = 311$) of the deaths were *Poisoning by psychotropic drugs, not elsewhere classified* (192 males, 119 females). Of these, 53% ($n = 166$) were poisoning by antidepressants. Almost 77% ($n = 254$) of these deaths were in the age range 25–54.

5.4 How have unintentional poisoning deaths involving pharmaceuticals changed over time?

Figure 5.1 compares the number of unintentional poisoning by pharmaceuticals deaths occurring each year with the baseline number of deaths (1,313) in 1999–00. The number of unintentional poisoning by pharmaceuticals deaths has been lower than the baseline period in all subsequent years. The largest difference occurred in 2001–02 when there were 645 fewer deaths (668 in total) involving unintentional poisoning by pharmaceuticals. The large drop between 1999–00 and 2001–02 is the tail-end of the epidemic of heroin deaths that peaked in the late 1990s and most likely ended due to a reduction in the supply of opiate narcotics, chiefly heroin) (Degenhardt et al. 2006).



5.5 How have unintentional poisoning deaths involving pharmaceuticals varied by age and sex?

Age-standardised rates for unintentional poisoning deaths involving pharmaceuticals decreased markedly between 1999–00 and 2001–02, from 6.9 to 3.4 deaths per 100,000 population (Figure 5.2). Rates were steady between 2001–02 and 2009–10.

Rates for males also decreased markedly between 1999–00 and 2001–02, from 9.7 deaths per 100,000 population to 4.5 deaths, while rates for females also declined during this period, from 4.0 deaths per 100,000 population in 1999–00 to 2.4 deaths in 2001–02. Rates for males rose steadily from 4.5 to 6.7 deaths per 100,000 between 2005–06 and 2009–10 and were steady thereafter, while rates for females were relatively steady for the period subsequent to 2001–02. Rates for males were consistently more than double those for females.

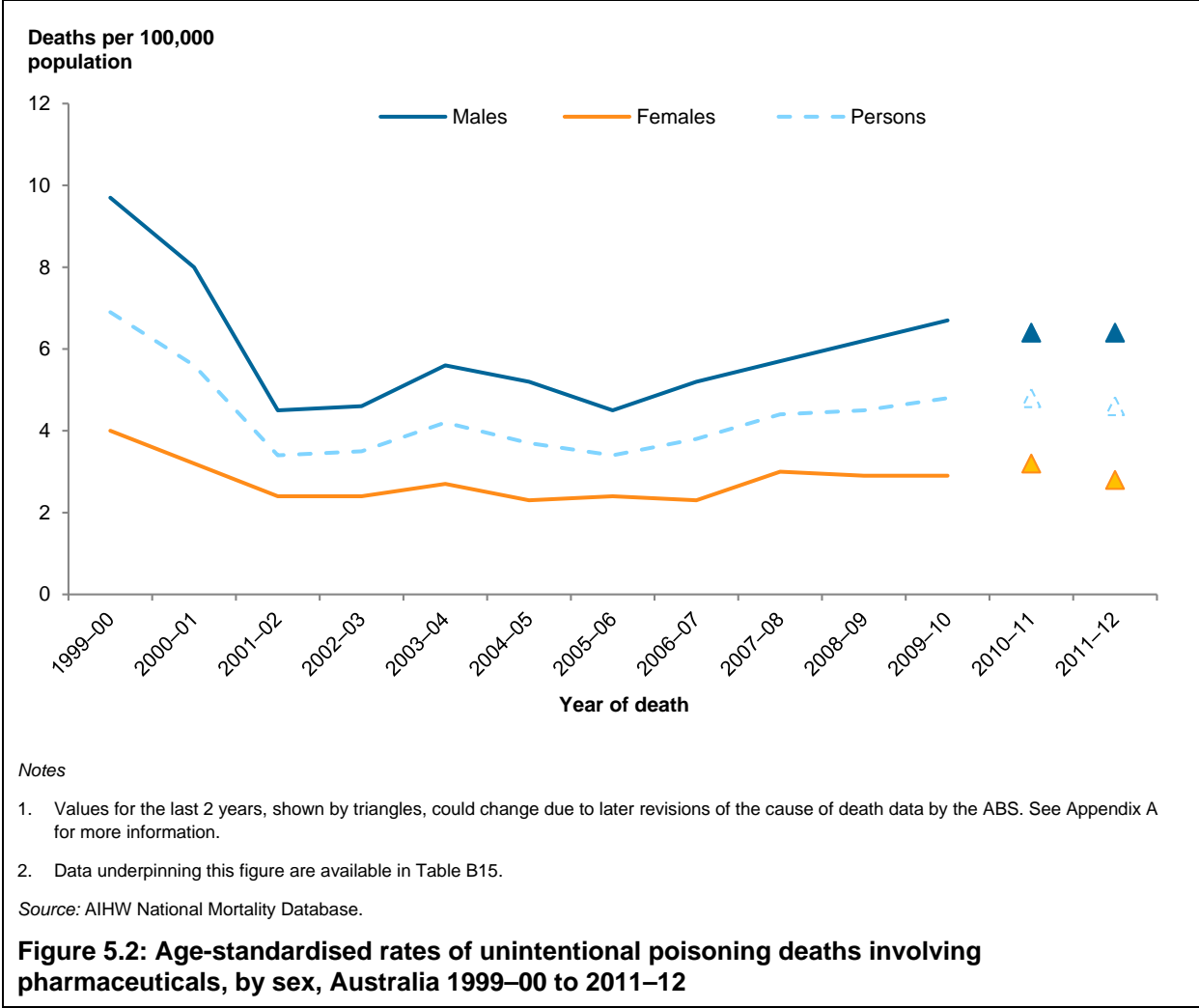
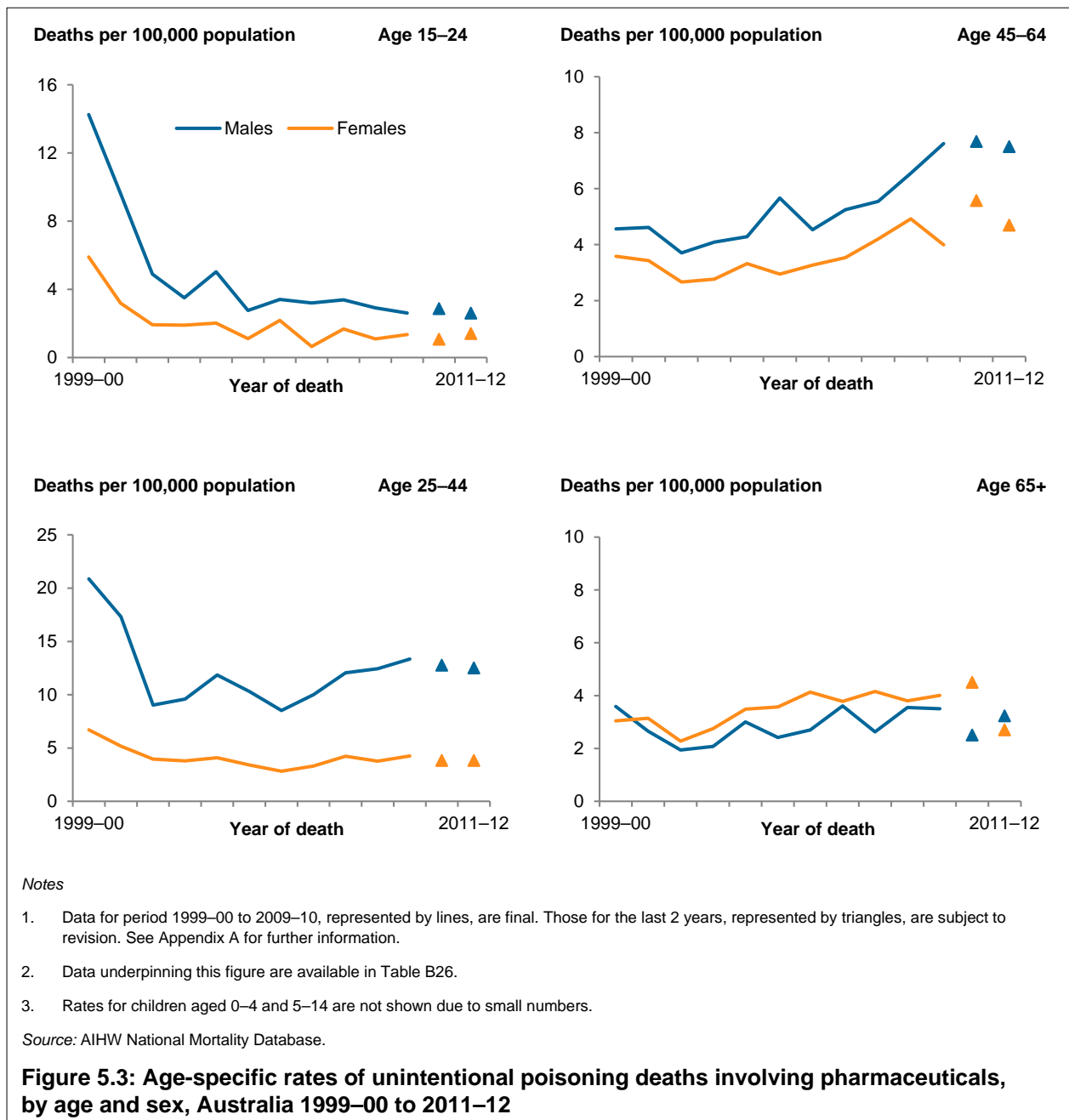


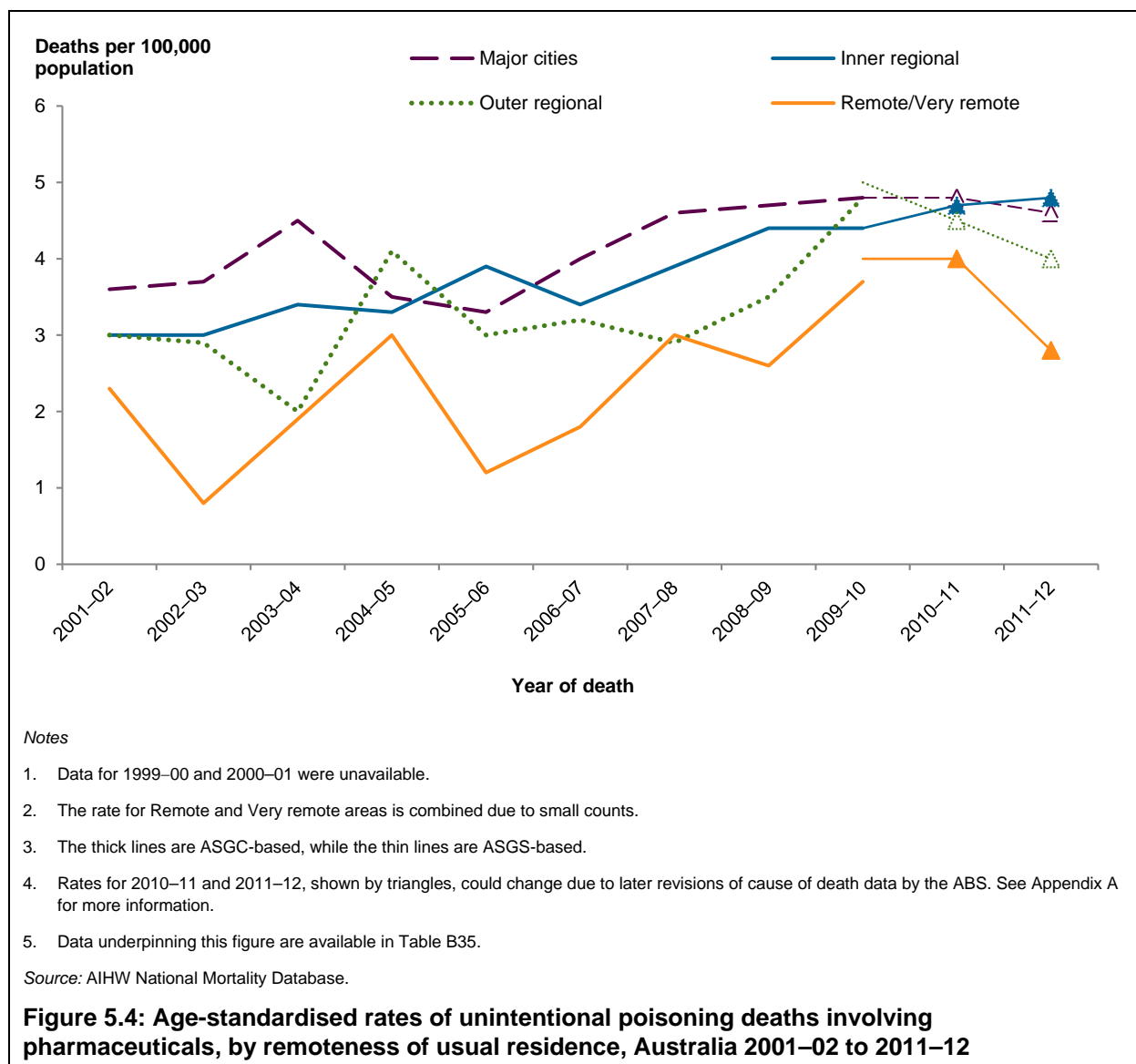
Figure 5.3 shows the changes in death rates over time by age and sex. Age-standardised rates for males were higher than for females for the first 3 of the age groups shown. For the fourth age group, 65 years and older, the rates for men were about the same as for women. There were marked decreases in rates for males aged 15–24 and 25–44 in the first 2 years of the period. Decreases in this period were also seen for females in these age groups, although less marked than for males. In contrast, rates for both men and women aged 45–64 tended to increase over the period.



5.6 How have unintentional poisoning deaths involving pharmaceuticals varied by remoteness?

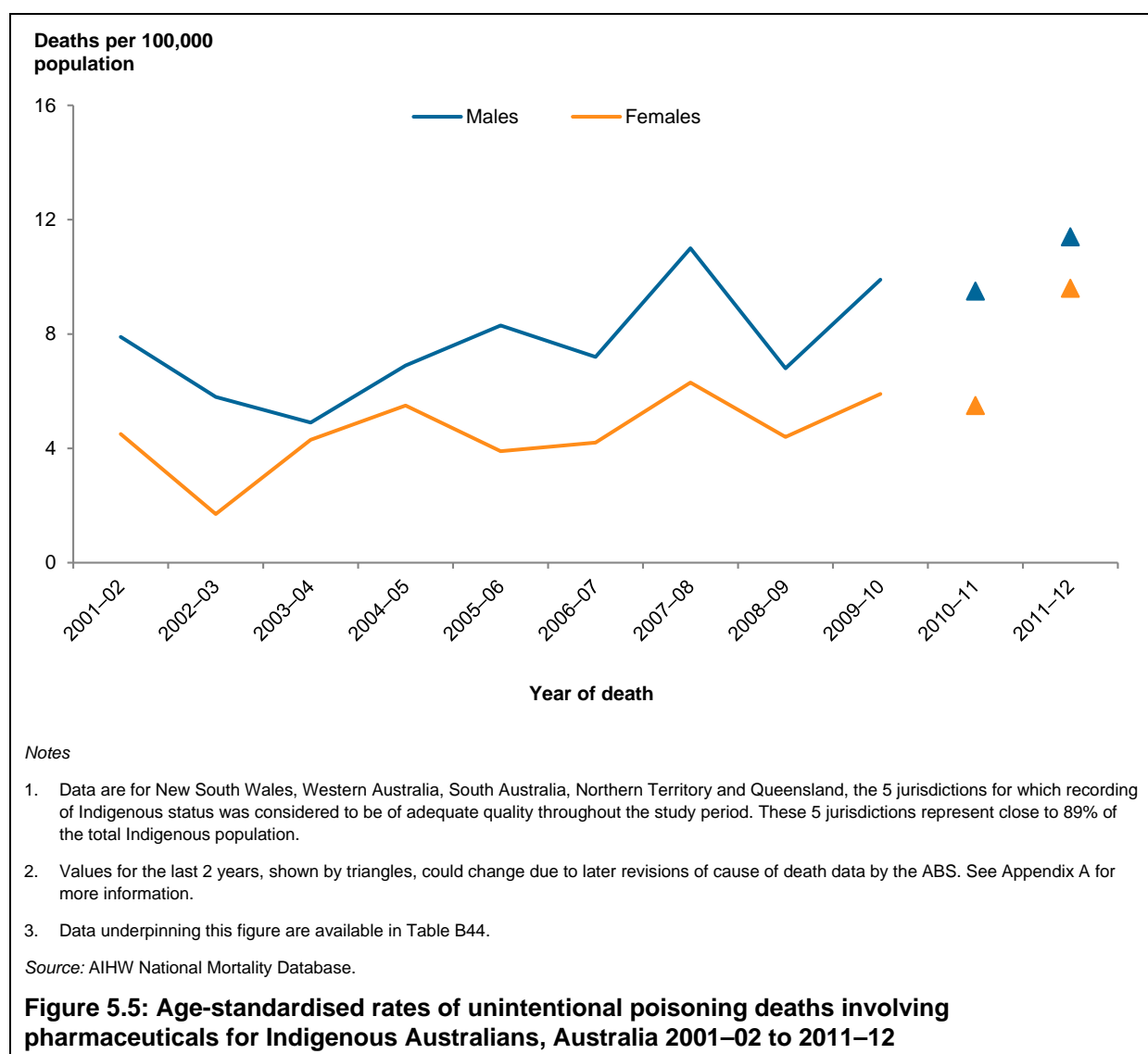
Rates of unintentional poisoning deaths involving pharmaceuticals were broadly similar across all remoteness areas over the period from 2001–02 to 2011–12 (Figure 5.4). Rates for residents of *Remote* areas, combined, tended to be lower than for residents of less remote areas than rates for residents of the less remote areas. However, numbers of deaths in the *Remote* areas (combined here due to small case numbers) were relatively small and rates are sensitive to small changes in counts.

For the *Outer regional* and *Remote/Very remote* areas, the ASGS-based rates were higher than the ASGC-based rates.



5.7 How have unintentional poisoning deaths involving pharmaceuticals of Aboriginal and Torres Strait Islander people changed over time?

Age-standardised rates of unintentional poisoning deaths involving pharmaceuticals for Aboriginal and Torres Strait Islander males and females tended to increase over the period from 2001–02 to 2011–12 (Figure 5.5). Rates for males varied between 1.1 and 3.4 times as high as rates for females over this period.



6 Poisoning, other substances

This chapter provides a summary of all poisoning deaths involving substances other than pharmaceuticals in 2011–12 that are identifiable in the deaths data, a statistical summary of unintentional poisoning deaths involving substances other than pharmaceuticals in that year and a description of trends in unintentional poisoning deaths involving substances other than pharmaceuticals from 1999–00 to 2011–12.

6.1 What methods were used?

The criteria given in Section 1.3 were applied and the records that included the following ICD-10 codes were included in this chapter:

- the UCoD was Unintentional poisoning by substances other than pharmaceuticals (X45–X49), or
- the MCoDs included codes for Unintentional poisoning by substances other than pharmaceuticals (X45–X49) and for Injury (S00–T75 or T79), or
- the MCoDs included codes for the Toxic effects of substances other than pharmaceuticals (T51–T65) and for External causes of unintentional injury (V01–X59).

Suicide and homicide deaths (UCoD X60–Y09) were excluded. The concepts underlying the abbreviations used here are defined in the Glossary.

Relevant terms and information regarding the data used in this chapter are summarised in Boxes 1.1, 1.2 and 6.1. Further information on methods is provided in Appendix A.

Box 6.1: External causes of poisoning by other substances

Accidental poisoning by and exposure to noxious substances (X40–X49) is the subject of a section of Chapter XX External causes of morbidity and mortality of ICD-10. The second 5 of categories in this section refer to poisoning by and exposure to drugs, medicaments and biological substances (X45–X49):

- Accidental poisoning by and exposure to alcohol (X45)
- Accidental poisoning by and exposure to organic solvents and halogenated hydrocarbons and their vapours (X46)
- Accidental poisoning by and exposure to other gases and vapours (X47)
- Accidental poisoning by and exposure to pesticides (X48)
- Accidental poisoning by and exposure to other and unspecified chemicals and noxious substances (X49).

6.2 Overview of total poisoning deaths involving other substances

Unintentional cases accounted for 59% of all poisoning deaths involving other substances in 2011–12 (Table 6.1). Another 38% of the deaths were by intentional self-harm; they and deaths due to assault or with undetermined intent are not included in the remainder of this chapter.

Table 6.1: All identifiable poisoning deaths involving other substances in 2011–12

Number of deaths in 2011–12	Percentage of all poisoning, other substances deaths in 2011–12	ICD-10 codes	Terminology in this report	Coverage in this report
397	59.3	UCoD X45–X49; or MCoD X45–X49 and S00–T75, T79 or MCoD T51–T65 and V01–X59	Unintentional poisoning by other substances	Poisoning, other substances (Chapter 6)
255	38.1	UCoD X65–X69; or MCoD X65–X69 and S00–T75, T79	Intentional self-harm, poisoning by other substances	Suicide (Chapter 10)
1	0.1	UCoD X86–X90; or: MCoD X86–X90 and S00–T75, T79	Assault, poisoning by other substances	Homicide (Chapter 11)
16	2.4	UCoD Y15–Y19; or MCoD Y15–Y19 and S00–T75, T79	Poisoning by other substances, undetermined intent	Undetermined intent (Chapter 2)
669	100		Total deaths involving poisoning by other substances	

Source: AIHW National Mortality Database.

6.3 How many unintentional poisoning deaths involving other substances were there in 2011–12?

Unintentional poisoning deaths involving other substances accounted for 397 injury deaths in Australia during 2011–12 (Table 6.2). This was 3.5% of all injury deaths for this period. Just on 2.6 times as many male deaths as female deaths in 2011–12 involved unintentional poisoning by other substances.

Table 6.2: Key indicators for unintentional poisoning deaths involving other substances, Australia, 2011–12

Indicator	Males	Females	Persons
Deaths	287	110	397
Percentage of all injury deaths	4.2	2.5	3.5
Crude rate (deaths per 100,000 population)	2.6	1.0	1.8
Age-standardised rate (deaths per 100,000 population)	2.6	0.9	1.7

Source: AIHW National Mortality Database.

Persons aged 25–64 accounted for 77% of all unintentional poisoning deaths involving other substances (Table 6.3). By contrast, just 40% of all injury deaths were at these ages. The proportion of deaths was higher for men than for women in those aged 25–44, but higher for women in the 2 oldest age groups.

Table 6.3: Unintentional poisoning deaths involving other substances by age, Australia, 2011–12

Age group	Males		Females		Persons	
	Number	%	Number	%	Number	%
0–4	1	0.3	0	0.0	1	0.3
5–14	2	0.7	2	1.8	4	1.0
15–24	26	9.1	5	4.5	31	7.8
25–44	138	48.1	33	30.0	171	43.1
45–64	92	32.1	43	39.1	135	34.0
65+	28	9.8	27	24.5	55	13.9
Total	287	100	110	100	397	100

Source: AIHW National Mortality Database.

The age-standardised rate for unintentional poisoning deaths involving other substances during 2011–12 was highest for residents of the Northern Territory, which recorded a rate of 10.4 deaths per 100,000 population, over 6 times the national rate of 1.7 deaths per 100,000 population (Table 6.4). Victoria and the Australian Capital Territory recorded the lowest rates of all jurisdictions of 1.1 deaths per 100,000 population.

Table 6.4: Unintentional poisoning deaths involving other substances, by state and territory of usual residence, Australia, 2011–12

Indicators	State and territory of usual residence							
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Deaths	126	65	88	40	39	9	4	26
Per cent	31.7	16.4	22.2	10.1	9.8	2.3	1.0	6.5
Age-standardised rate (deaths per 100,000 population)	1.7	1.1	1.9	1.7	2.3	1.9	1.1	10.4

Source: AIHW National Mortality Database.

The rate of unintentional poisoning deaths involving other substances tended to increase with remoteness of usual residence (Table 6.5). The rate for residents of *Remote* areas was 3.5 times the rate for residents of *Major cities*. Numbers were low for both remote areas.

Table 6.5: Unintentional poisoning deaths involving other substances, by remoteness of usual residence, Australia, 2011–12

Indicators	Remoteness of usual residence ^(a)					Total ^(b)
	Major cities	Inner regional	Outer regional	Remote	Very remote	
Deaths	259	64	36	8	18	386
Per cent	67.1	16.6	9.3	2.1	4.7	100
Age-standardised rate (deaths per 100,000 population)	1.6	1.6	1.8	2.6	8.3	n.p.

(a) Derived using the ASGS classification.

(b) Excludes 11 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Socioeconomic status

The number and rate of unintentional poisoning deaths involving other substances increased with the level of socioeconomic disadvantage of the person's usual place of residence (Table 6.6). The rate for residents of the *Most disadvantaged* areas (2.6 deaths per 100,000 population) was more than twice the rate for residents of the *Most advantaged* areas (1.1 per 100,000 population).

Table 6.6: Unintentional poisoning deaths involving other substances, by socioeconomic status, Australia, 2011–12

Indicators	SEIFA quintiles				
	Most disadvantaged	Second most disadvantaged	Middle	Second most advantaged	Most advantaged
Deaths	111	85	76	60	54
Per cent	28.0	21.4	19.1	15.1	13.6
Age-standardised rate (deaths per 100,000 population)	2.6	1.9	1.7	1.3	1.1

Note: Excludes 11 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Aboriginal and Torres Strait Islander people

The age-standardised rate for unintentional poisoning deaths involving other substances for Aboriginal and Torres Strait Islander people was 4.7 times the rate for non-Indigenous Australians (Table 6.7).

Table 6.7: Key indicators for unintentional poisoning deaths involving other substances, Indigenous Australians and non-Indigenous Australians, Australia^(a), 2011–12

Indicator	Indigenous Australians			Non-Indigenous Australians		
	Males	Females	Persons	Males	Females	Persons
Deaths	31	9	40	192	73	265
Age-standardised rate (deaths per 100,000 population)	12.4	3.3	7.7	2.5	0.9	1.7
Rate ratio ^(b)	5.0	3.7	4.5	..	..	..
Rate difference ^(c)	9.9	2.4	6.0	..	..	..

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Rate ratios are standardised rate for Indigenous males, females and persons/standardised rate for non-Indigenous males, females and persons.

(c) Rate differences are standardised rate for Indigenous males, females and persons minus standardised rate for non-Indigenous males, females and persons.

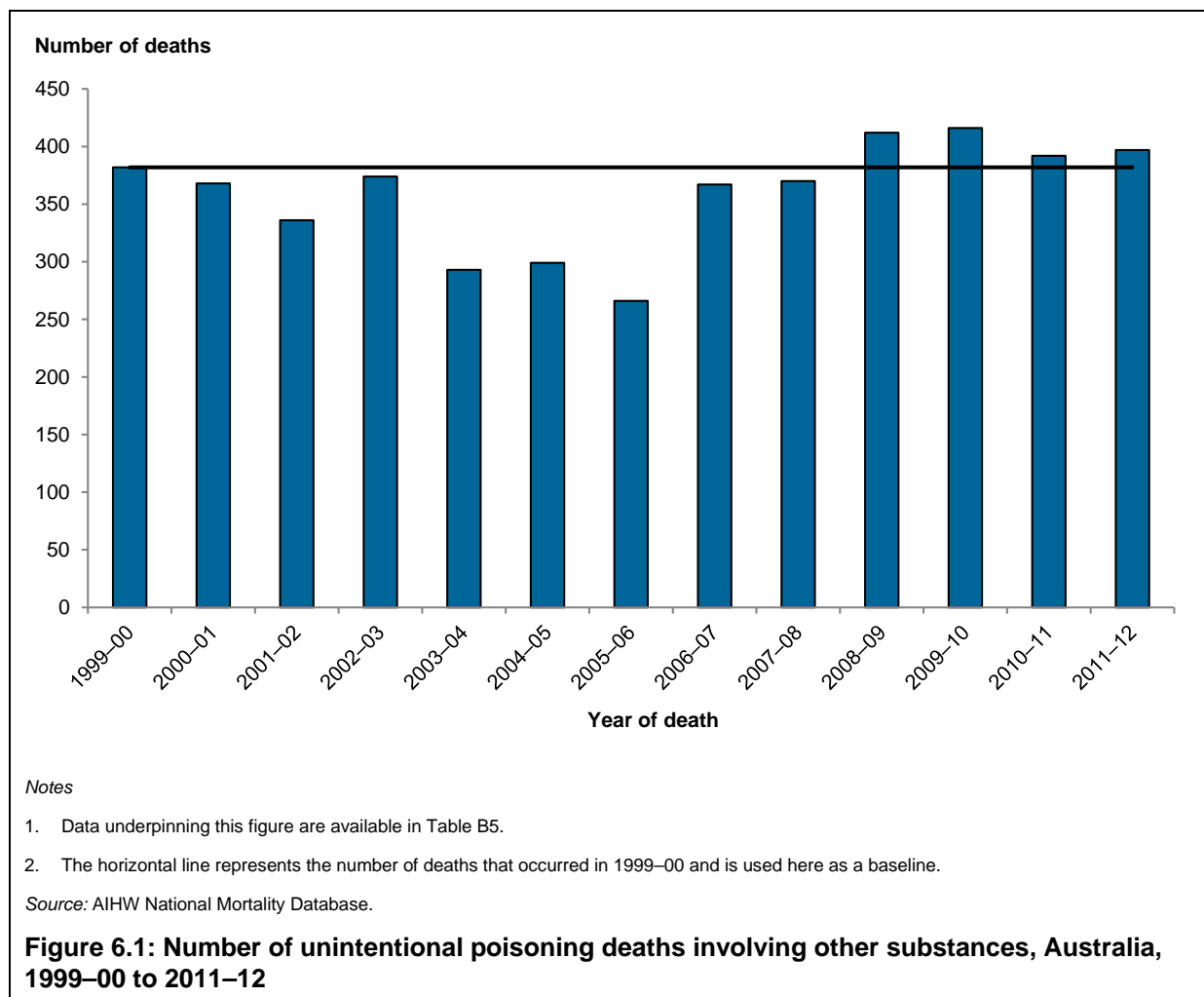
Source: AIHW National Mortality Database.

Types of pharmaceuticals

In 2011–12, more than 80% ($n = 319$) of the deaths included in this chapter were caused by *Toxic effect of alcohol* (235 males, 84 females). Just over 60% ($n = 193$) of these deaths were in the age range 25–49. Just over 10% ($n = 40$) of the deaths were caused by *Toxic effect of other gases, fumes and vapours* (31 males, 9 females), while 3% ($n = 12$) of the deaths were caused by *Toxic effect of carbon monoxide*.

6.4 How have unintentional poisoning deaths involving other substances changed over time?

Figure 6.1 compares the number of unintentional poisoning deaths involving other substances occurring each year with the baseline number of deaths (382) in 1999–00. The number of deaths was lower than the baseline in every year up until 2008–09, after which the number of deaths annually have been greater than the baseline number. The largest difference occurred in 2005–06 when there were 116 fewer deaths.



6.5 How have unintentional poisoning deaths involving other substances varied by age and sex?

Age-standardised rates of unintentional poisoning deaths involving other substances fluctuated over much of the period of interest ranging from 2.0 deaths per 100,000 in 1999-00 to 1.3 deaths per 100,000 in 2005-06 (Figure 6.2). Rates were generally higher towards the latter part of the period. Rates were consistently 3 to 4 times as high for males as for females.

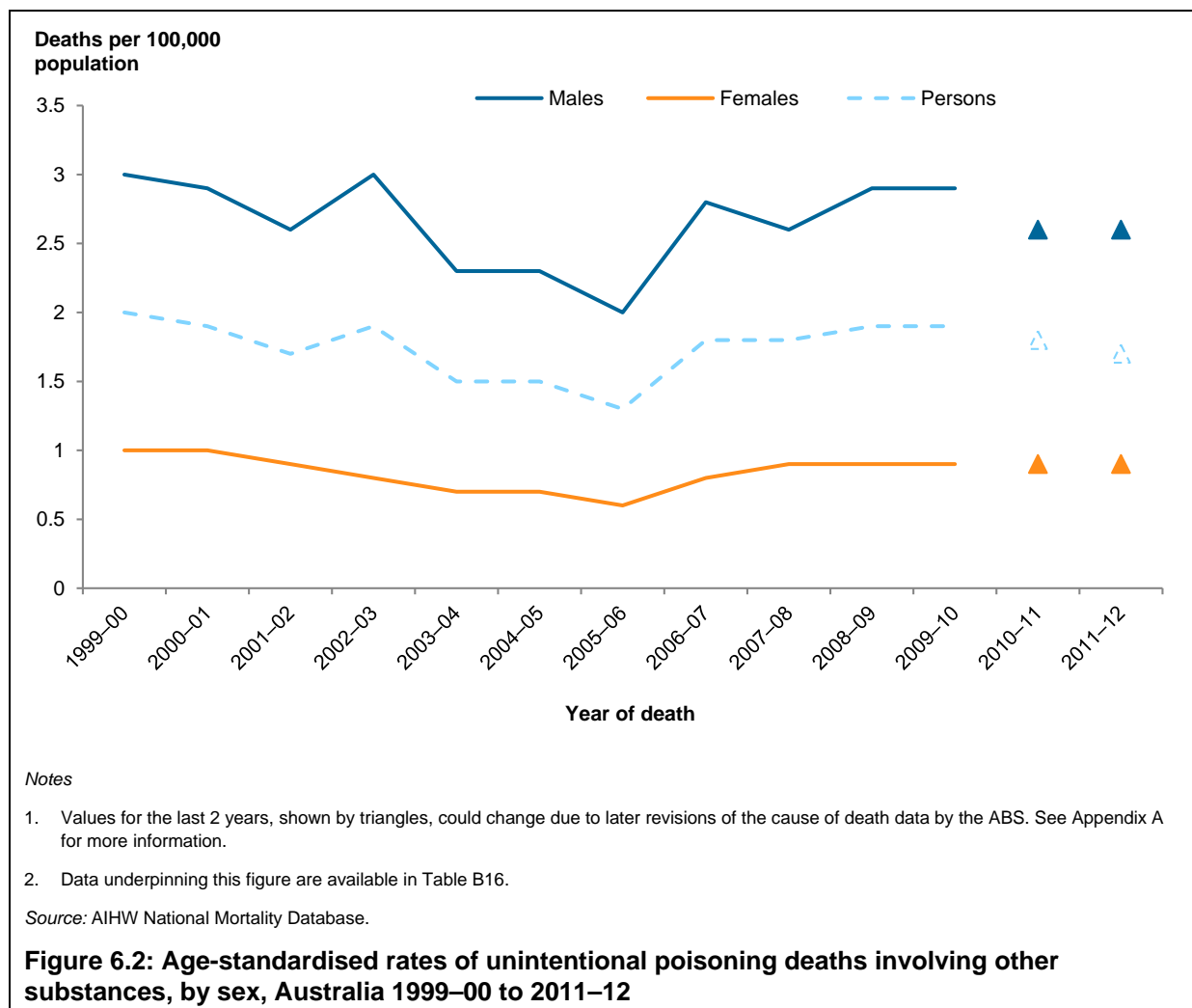
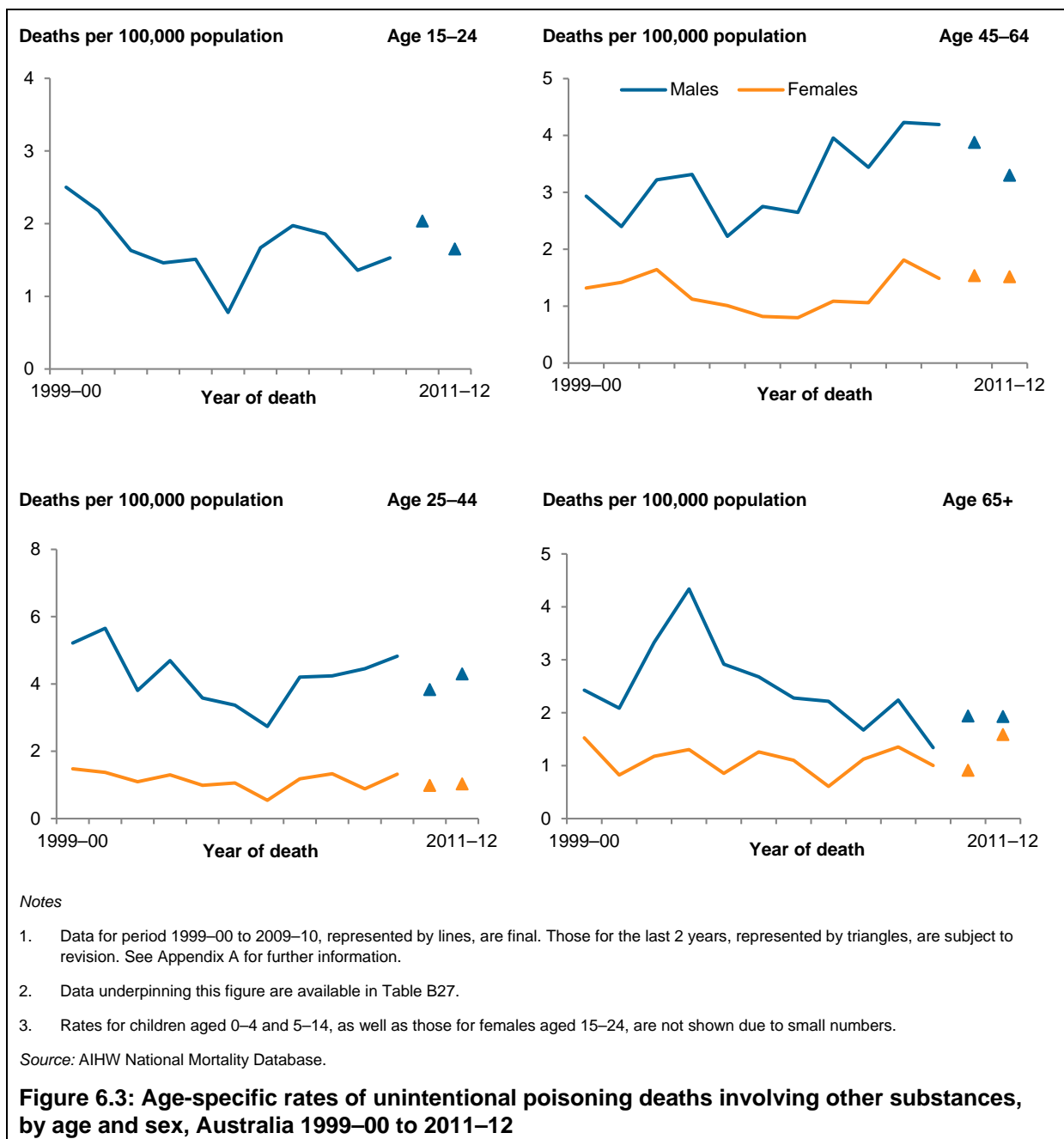


Figure 6.3 shows the changes in rates of unintentional poisoning deaths involving other substances over time by age and sex. Age-standardised rates for males were markedly higher than for females across all age groups for all years. (Rates for females aged 15–24, and for both sexes at younger ages, are not shown due to small numbers of deaths.) Rates for those aged 15–24 and 25–44 followed a similar pattern to the all-ages trends, declining towards the middle of the decade before increasing. Rates for men aged 45–64 trended upwards overall, while rates for men aged 65 and older trended downwards after a peak in 2002–03. Rates for women in the 2 oldest age groups remained relatively steady.

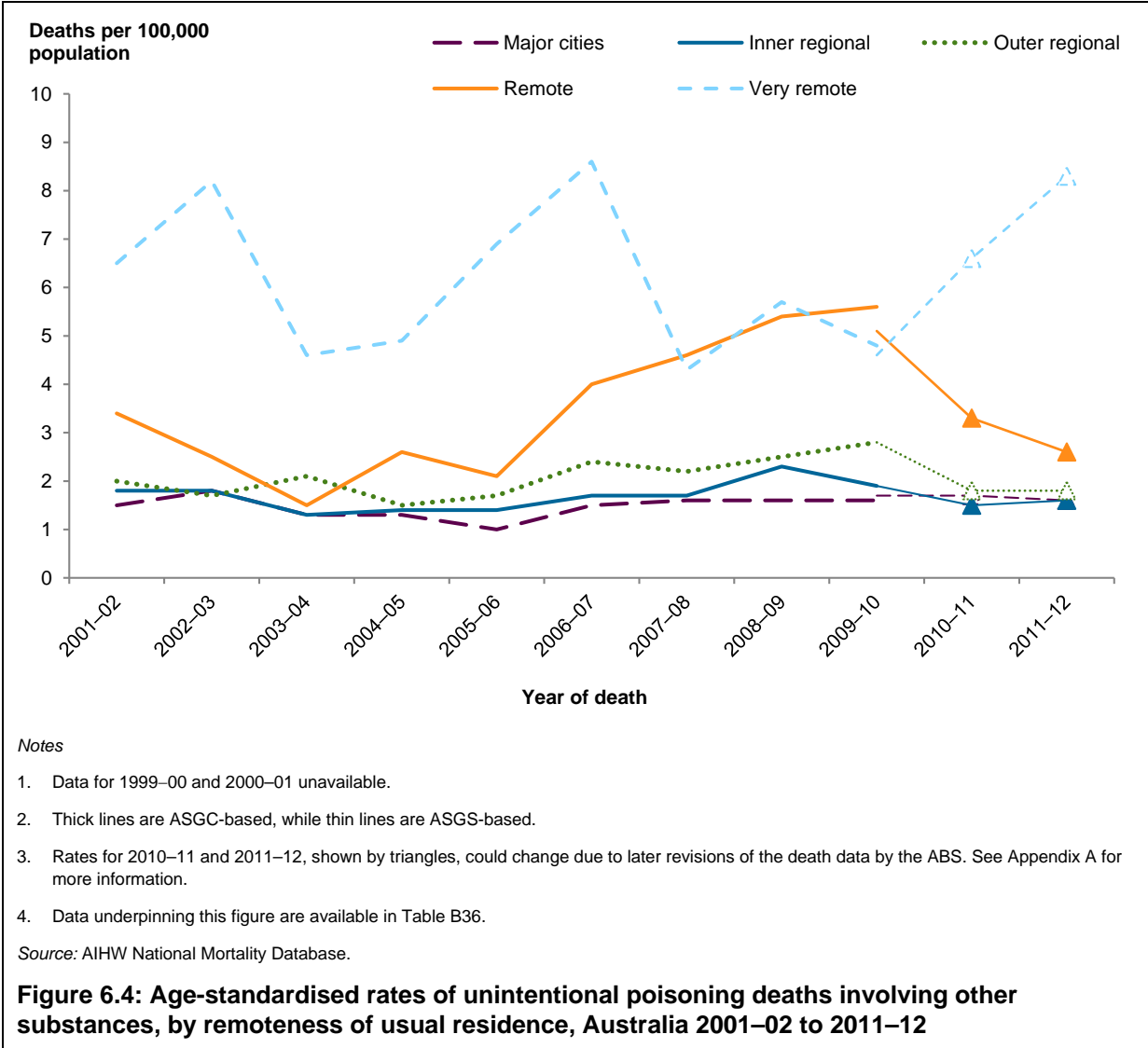


6.6 How have unintentional poisoning deaths involving other substances varied by remoteness?

Rates of unintentional poisoning deaths involving other substances were generally higher for residents of *Very remote* areas than for residents of other remoteness areas (Figure 6.4). Rates for residents of the 3 least remote areas were generally similar and varied little over time.

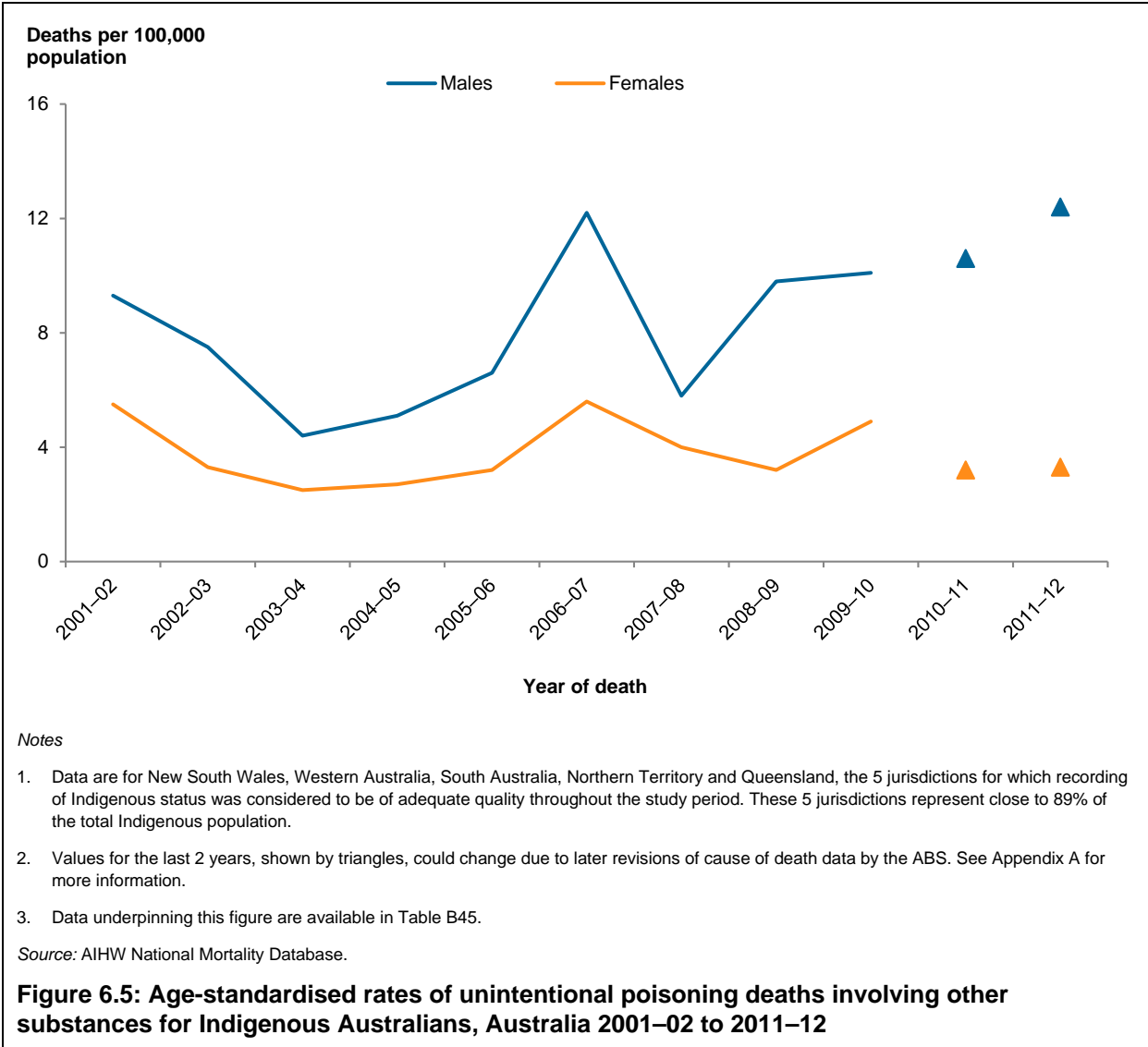
The rate ratio for residents of *Very remote* areas compared to residents of *Major cities* varied from 2.5 times as high in 2011–12 to almost 7 times as high in 2005–06. The fluctuation in rate of injury deaths in the *Very remote* areas is partly a reflection of the small population and number of deaths occurring each year.

For the *Remote* areas, the ASGC-based rates were higher than the ASGS-based rates.



6.7 How have unintentional poisoning deaths involving other substances of Aboriginal and Torres Strait Islander people changed over time?

Age-standardised rates for Aboriginal and Torres Strait Islander males and females fluctuated markedly from year to year for the period from 1999–00 to 2011–12 (Figure 6.5). Overall, there was little evidence of a change in rates over this period for either males or females.



7 Falls

This chapter provides a summary of all fall injury deaths in 2011–12 that are identifiable in the deaths data, a statistical summary of unintentional fall injury deaths in that year and a description of trends in unintentional fall injury deaths from 1999–00 to 2011–12.

7.1 What methods were used?

The criteria given in Section 1.3 were applied and the records that included the following ICD-10 codes were included in this chapter:

- the UCoD was an Unintentional fall (W00–W19), or
- the UCoD was coded as Exposure to unspecified factor (X59) and the MCoDs included a code for a Fracture, or
- the MCoDs included codes for an Unintentional fall (W00–W19) and for Injury (S00–T75 or T79), or
- MCoDs included codes for Exposure to unspecified factor (X59) and for a fracture.

The codes for fractures are S02, S12, S22, S32, S42, S52, S62, S72, S82, S92, T02, T08, T10, T12 and T14.2.

These criteria are the same as in previous reports (Henley & Harrison 2009, AIHW: Henley & Harrison 2015). Deaths with UCoD X59 and a fracture code as MCoD have been included routinely when reporting fall injury mortality because of indications that most involve falls (Kreisfeld & Harrison 2005). The 2 criteria that use an X59 code in combination with a fracture code accounted for 41% (1,599) of fall injury deaths reported for 2011–12. For almost 98% of deaths covered by these criteria, the person was aged 65 and older and for over two-thirds (67%) the person was aged 85 and older. Almost three-quarters of these deaths (73%) included a fracture of femur as a MCoD.

It is possible that some of the deaths included using the X59 code in combination with a fracture code criteria may not be fall-related. However, the inclusion of these 2 criteria provides a more accurate estimate of fall injury deaths than if they were excluded. For further background, see the sections on falls in previous reports (AIHW: Harrison & Henley 2015, AIHW: Henley & Harrison 2015).

Suicide and homicide deaths (UCoD X60–Y09) were excluded. The concepts underlying the abbreviations used here are defined in the Glossary. Relevant terms and information regarding the data used in this chapter are summarised in Boxes 1.1 and 7.1. Further information on methods is provided in Appendix A and a previously published report covering the period from 1999 to 2010 (AIHW: Harrison & Henley 2015).

Box 7.1: External causes of falls

The **Falls (W00–W19)** section of Chapter XX External causes of morbidity and mortality of ICD-10 includes:

- Fall on same level involving ice and snow (W00)
- Fall on same level from slipping, tripping and stumbling (W01)
- Fall involving ice-skates, skis, roller-skates or skateboards (W02)
- Other fall on same level due to collision with, or pushing by, another person (W03)
- Fall while being carried or supported by other persons (W04)
- Fall involving wheelchair (W05)
- Fall involving bed (W06)
- Fall involving chair (W07)
- Fall involving other furniture (W08)
- Fall involving playground equipment (W09)
- Fall on and from stairs and steps (W10)
- Fall on and from ladder (W11)
- Fall on and from scaffolding (W12)
- Fall from, out of or through building or structure (W13)
- Fall from tree (W14)
- Fall from cliff (W15)
- Diving or jumping into water causing injury other than drowning or submersion (W16)
- Other fall from one level to another (W17)
- Other fall on same level (W18)
- Unspecified fall (W19).

7.2 Overview of fall injury deaths

Unintentional fall injury deaths accounted for 96% of all fall injury deaths in 2011–12 (Table 7.1). Falls attributed to intentional self-harm, assault and those where intent is undetermined are not included elsewhere in this chapter.

Table 7.1: Deaths involving falls, 2011–12

Number of deaths in 2011–12	Percentage of all fall-related deaths in 2011–12	ICD-10 codes	Terminology in this report	Coverage in this report
3,903	95.6	UCoD W00–W19; or UCoD X59 and MCoD fracture; or MCoD W00–W19 and S00–T75, T79; or MCoD X59 and fracture ^(a)	Unintentional falls ^(b)	Falls (Chapter 7)
107	2.6	UCoD X80	Intentional self-harm involving fall	Suicide (Chapter 10)
1	0.0	UCoD Y01	Assault involving fall	Homicide (Chapter 11)
10	0.2	UCoD Y30	Undetermined intent involving fall	(Chapter 2)
5	0.1	UCoD V80.0	Fall from animal or animal-drawn vehicle	Transport crashes (Chapter 3)
2	0.0	UCoD V81.5 or V81.6	Fall in or from railway train	Transport crashes (Chapter 3)
56	1.4	UCoD W66, W68 or W70	Drowning following fall into bath-tub, swimming pool or natural water	Drowning (Chapter 4)
4,084	100%		Total fall injury deaths	

(a) The 4 criteria include 1,822, 577, 483 and 1,072 deaths respectively (51 deaths met more than 1 of the criteria).

Source: AIHW National Mortality Database.

7.3 How many unintentional fall injury deaths were there in 2011–12?

Unintentional falls were involved in 3,903 injury deaths in Australia during 2011–12 (Table 7.2). This was 51% of all female injury deaths and over 24% of all male injury deaths for this period. In 2011–12, unintentional fall injury deaths for females were close to 1.3 times the number of deaths for males, although the age-standardised rate was higher for males.

Table 7.2: Key indicators for unintentional fall injury deaths, Australia, 2011–12

Indicator	Males	Females	Persons
Deaths	1,665	2,238	3,903
Percentage of all injury deaths	24.5	51.0	34.9
Crude rate (deaths per 100,000 population)	14.8	19.8	17.3
Age-standardised rate (deaths per 100,000 population)	15.4	13.1	14.1

Source: AIHW National Mortality Database.

Persons aged 65 and older accounted for over 94% of unintentional fall injury deaths (Table 7.3).

Table 7.3: Unintentional fall injury deaths by age, Australia, 2011–12

Age group	Males		Females		Persons	
	Number	%	Number	%	Number	%
0–4	1	0.1	0	0.0	1	0.0
5–14	2	0.1	0	0.0	2	0.1
15–24	15	0.9	1	0.0	16	0.4
25–44	17	1.0	4	0.2	21	0.5
45–64	126	7.6	55	2.5	181	4.6
65+	1,504	90.3	2,178	97.3	3,682	94.3
Total	1,665	100	2,238	100	3,903	100

Source: AIHW National Mortality Database.

During 2011–12, the age-standardised rate of unintentional fall injury deaths for residents of the Northern Territory and the Australian Capital Territory (Table 7.4) were more than 1.5 times the national rate of 14.1 deaths per 100,000 population. Most other jurisdictions recorded rates either moderately above or moderately below the national rate, with residents of South Australia recording the lowest rate of 11.4 deaths per 100,000 population.

Table 7.4: Unintentional fall injury deaths, by state and territory of usual residence, Australia, 2011–12

Indicators	State and territory of usual residence							
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Deaths	1,256	923	797	435	290	113	72	17
Per cent	32.2	23.6	20.4	11.1	7.4	2.9	1.8	0.4
Age-standardised rate (deaths per 100,000 population)	13.2	13.0	16.3	17.8	11.4	15.9	21.4	22.0

Source: AIHW National Mortality Database.

Age-standardised rates tended to increase with remoteness of usual residence, although the rate for residents of *Very remote* areas, which can fluctuate markedly due to small case counts, was less than half the rate for residents of *Major cities* (Table 7.5).

Table 7.5: Unintentional fall injury deaths, by remoteness of usual residence, Australia, 2011–12

Indicators	Remoteness of usual residence ^(a)					
	Major cities	Inner regional	Outer regional	Remote	Very remote	Total ^(b)
Deaths	2,594	849	400	39	10	3,892
Per cent	66.6	21.8	10.3	1.0	0.3	100
Age-standardised rate (deaths per 100,000 population)	13.6	14.6	16.3	16.3	6.3	n.p.

(a) Derived using the ASGS classification.

(b) Excludes 11 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Socioeconomic status

The rate of unintentional fall injury deaths did not vary markedly with the socioeconomic status of the person's usual area of residence (Table 7.6).

Table 7.6: Unintentional fall injury deaths, by socioeconomic status, Australia, 2011–12

Indicators	SEIFA quintiles				
	Most disadvantaged	Second most disadvantaged	Middle	Second most advantaged	Most advantaged
Deaths	877	855	786	651	722
Per cent	22.5	21.9	20.1	16.7	18.5
Age-standardised rate (deaths per 100,000 population)	14.8	14.1	14.4	13.0	14.0

Note: Excludes 12 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Aboriginal and Torres Strait Islander people

The age-standardised rate for unintentional fall injury deaths of Aboriginal and Torres Strait Islander people was similar to the rate for non-Indigenous Australians (Table 7.7).

Table 7.7: Key indicators for unintentional fall injury deaths, Indigenous Australians and non-Indigenous Australians, Australia^(a), 2011–12

Indicator	Indigenous Australians			Non-Indigenous Australians		
	Males	Females	Persons	Males	Females	Persons
Deaths	15	10	25	1,194	1,548	2,742
Age-standardised rate (deaths per 100,000 population)	13.1	12.4	13.2	15.7	12.9	14.2
Rate ratio ^(b)	0.8	1.0	0.9	..	..	..
Rate difference ^(c)	2.6	0.5	1.0	..	..	..

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

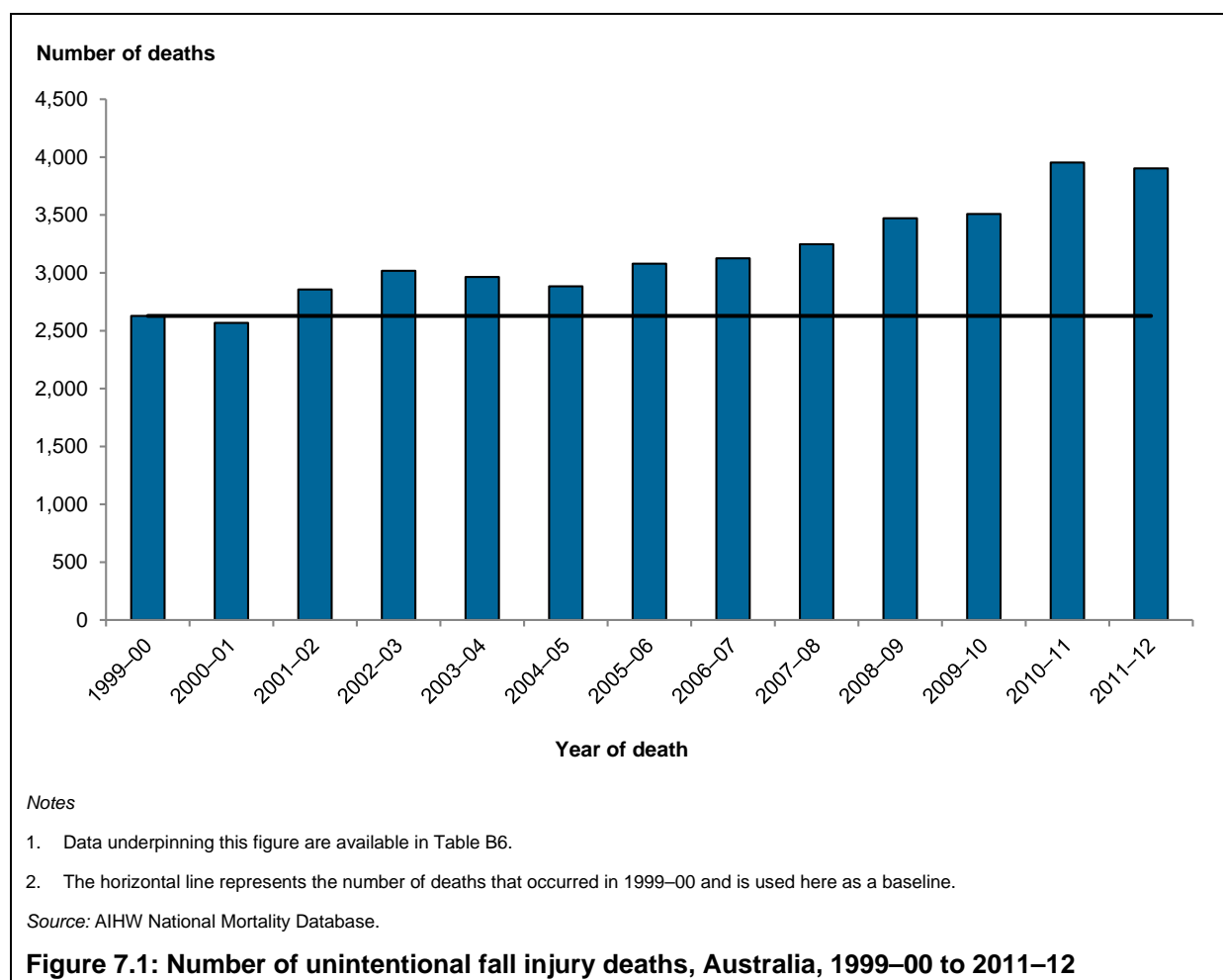
(b) Rate ratios are standardised rate for Indigenous males, females and persons/standardised rate for non-Indigenous males, females and persons.

(c) Rate differences are standardised rate for Indigenous males, females and persons minus standardised rate for non-Indigenous males, females and persons.

Source: AIHW National Mortality Database.

7.4 How have unintentional fall injury deaths changed over time?

Figure 7.1 compares the number of unintentional fall injury deaths occurring each year with the baseline number of deaths (2,628) in 1999–00. In every year except 2000–01, the number of fall-related injury deaths was higher than in the baseline year. The largest difference occurred in 2010–11 when there were 1,325 more unintentional fall injury deaths (3,953 in total).



7.5 How have unintentional fall injury deaths varied by age and sex?

Over the period of interest, age-standardised rates for unintentional fall injury deaths remained relatively steady (Figure 7.2). Rates fluctuated a little for both males and females over this period, but with no apparent trend. Rates for males were consistently 15%–20% higher than rates for females.

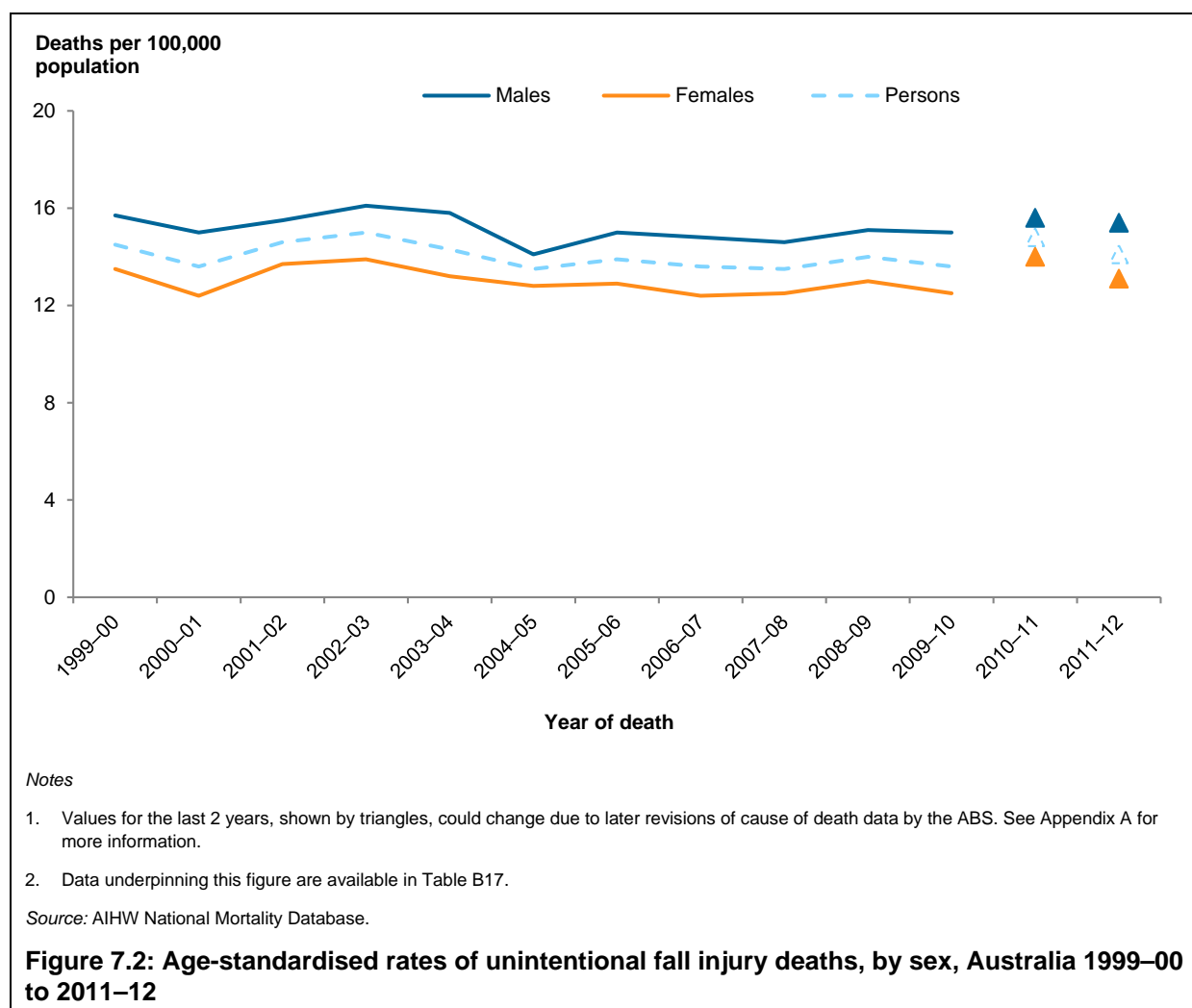
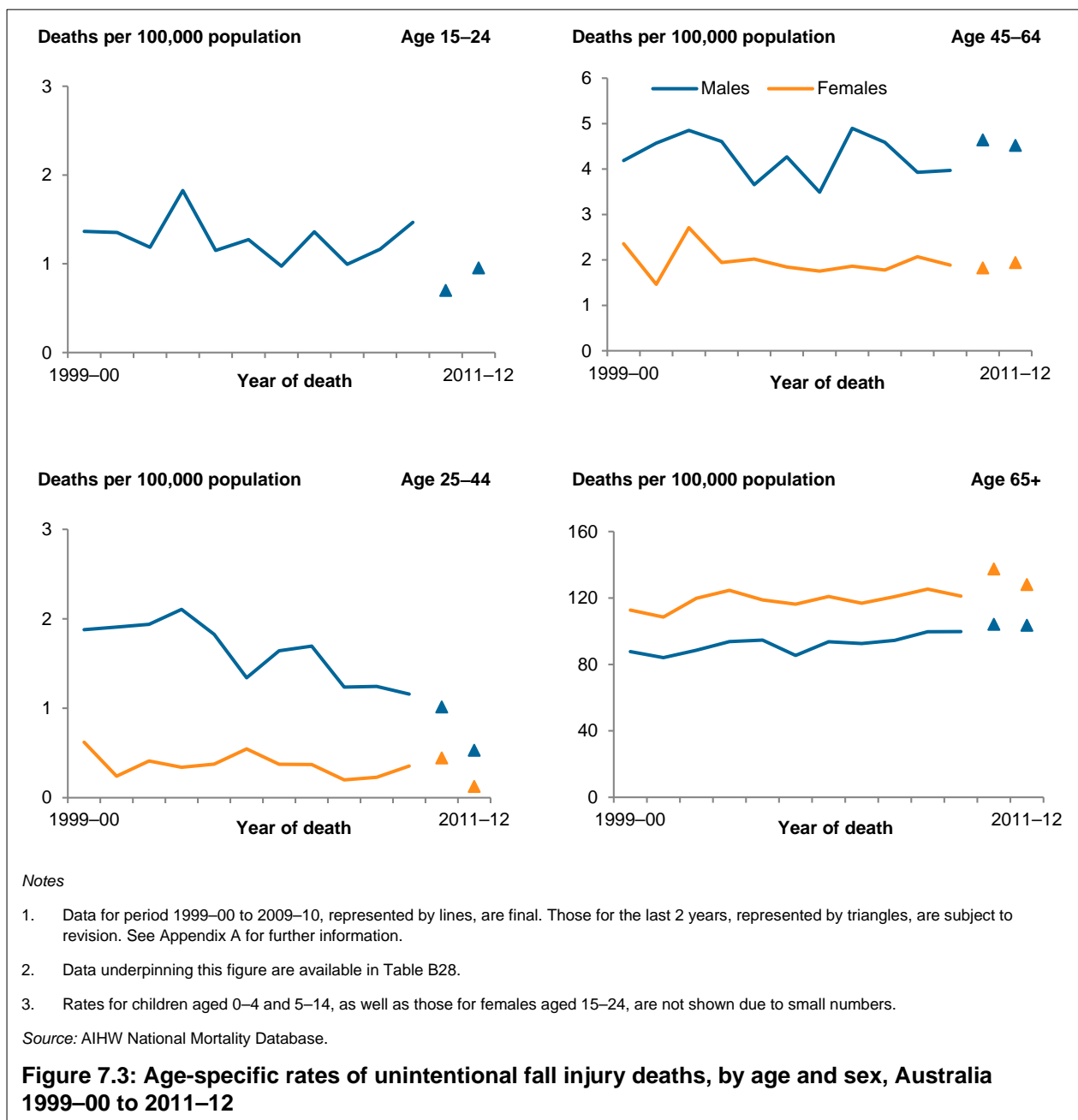


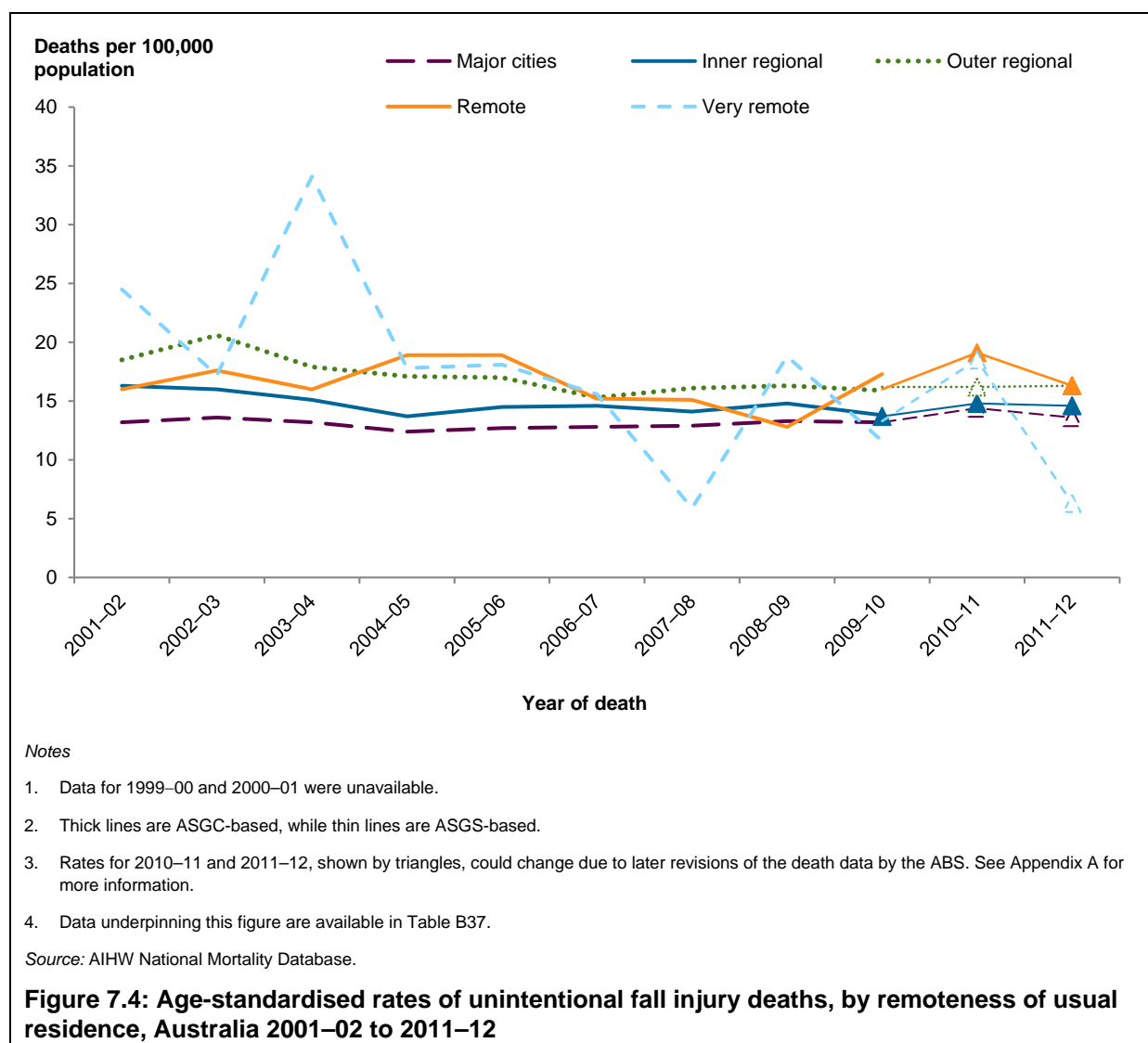
Figure 7.3 shows the changes in fall injury death rates over time by age and sex. Age-specific rates for males were higher than for females for those aged 15–24, 25–44 and 45–64, while for those aged 65 and older, rates for women were higher. Rates for males and females in most age groups remained relatively steady over time, apart from men aged 25–44 where there was a distinct downward trend over time.



7.6 How have unintentional fall injury deaths varied by remoteness?

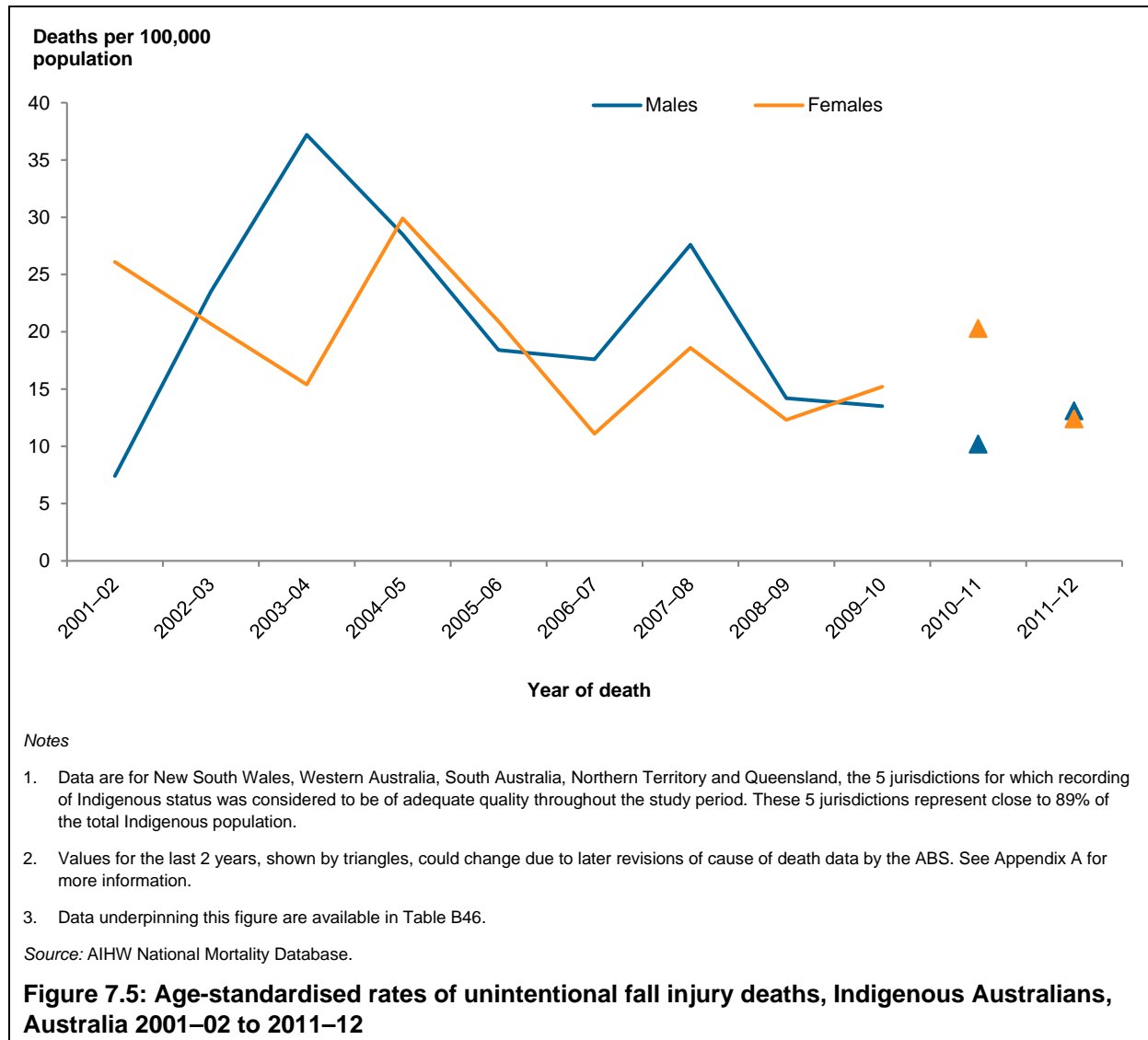
Rates of unintentional fall injury death were generally more similar for residents of all remoteness areas (Figure 7.4) than is the case for other external causes. The fluctuation in rate for residents of the *Very remote* region partly reflects the small population and number of deaths occurring each year.

For the *Remote* areas, the ASGC-based rate was higher than the ASGS-based rates, while for *Very remote* areas, the ASGS-based rates were higher.



7.7 How have unintentional fall injury deaths of Aboriginal and Torres Strait Islander people changed over time?

Age-standardised rates of unintentional fall injury for both male and female Aboriginal and Torres Strait Islanders fluctuated markedly over the period from 2001–02 to 2011–12 (Figure 7.5). Changes in rates over time need to be treated with caution due to the low numbers of deaths.



8 Thermal injury

The focus of this chapter is injury deaths related to exposure to smoke, fire and flames or contact with heat and hot substances. For brevity, the injuries resulting from these types of exposures are referred to here as thermal injuries.

The chapter provides a summary of all thermal injury deaths in 2011–12 that are identifiable in the deaths data, a statistical summary of unintentional thermal injury deaths in that year and a description of trends in unintentional thermal injury deaths from 1999–00 to 2011–12.

8.1 What methods were used?

The criteria given in Section 1.3 were applied and the records that included the following ICD-10 codes were included in this chapter:

- the UCoD was coded as Exposure to smoke, fire and flames or Contact with heat and hot substances (X00–X19), or
- the MCoDs included codes for Exposure to smoke, fire and flames or Contact with heat and hot substances (X00–X19) and for Injury (S00–T75 or T79), or
- the MCoDs included codes for Burns (T20–T31) and for External causes of unintentional injury (V01–X59).

Suicide and homicide deaths (UCoD X60–Y09) were excluded. The concepts underlying the abbreviations used here are defined in the Glossary.

Relevant terms and information regarding the data used in this chapter are summarised in Boxes 1.1, 1.2 and 8.1. Further information on methods is provided in Appendix A.

Box 8.1: External causes of injury due to exposure to smoke, fire, heat and hot substances

The sections of Chapter XX External causes of morbidity and mortality of ICD-10 concerning unintentional Exposure to smoke, fire and flames (X00–X09) and unintentional Contact with heat and hot substances (X10–X19) include:

- Exposure to smoke, fire and flames (X00–X09)
- Exposure to uncontrolled fire in building or structure (X00)
- Exposure to uncontrolled fire, not in building or structure (X01)
- Exposure to controlled fire in building or structure (X02)
- Exposure to controlled fire, not in building or structure (X03)
- Exposure to ignition of highly flammable material (X04)
- Exposure to ignition or melting of nightwear (X05)
- Exposure to ignition or melting of other clothing and apparel (X06)
- Exposure to other specified smoke, fire and flames (X07)
- Exposure to unspecified smoke, fire and flames (X09)

(continued)

Box 8.1 (continued): External causes of exposure to smoke, fire, heat and hot substances injury

- Contact with heat and hot substances (X10–X19)
- Contact with hot drinks, food, fats and cooking oils (X10)
- Contact with hot tap-water (X11)
- Contact with other hot fluids (X12)
- Contact with steam and hot vapours (X13)
- Contact with hot air and gases (X14)
- Contact with hot household appliances (X15)
- Contact with hot heating appliances, radiators and pipes (X16)
- Contact with hot engines, machinery and tools (X17)
- Contact with other hot metals (X18)
- Contact with other and unspecified heat and hot substances (X19).

8.2 How many unintentional thermal injury deaths were there in 2011–12?

Unintentional thermal injuries accounted for 116 injury deaths in Australia during 2011–12 (Table 8.1). This was 1% of all injury deaths for this period. About twice as many males as females were fatally injured due to this type of injury in 2011–12.

Table 8.1: Key indicators for unintentional thermal injury deaths, Australia, 2011–12

Indicator	Males	Females	Persons
Deaths	77	39	116
Percentage of all injury deaths	1.1	0.9	1.0
Crude rate (deaths per 100,000 population)	0.7	0.3	0.5
Age-standardised rate (deaths per 100,000 population)	0.7	0.3	0.5

Source: AIHW National Mortality Database.

Persons aged 65 and older accounted for almost 38% of all unintentional thermal injury deaths in 2011–12 (Table 8.2). The proportion of male and female deaths was broadly similar across all age groups.

Table 8.2: Unintentional thermal injury deaths, Australia, 2011–12

Age group	Males		Females		Persons	
	Number	%	Number	%	Number	%
0–4	2	2.6	1	2.6	3	2.6
5–14	2	2.6	7	17.9	9	7.8
15–24	12	15.6	2	5.1	14	12.1
25–44	16	20.8	4	10.3	20	17.2
45–64	17	22.1	9	23.1	26	22.4
65+	28	36.4	16	41.0	44	37.9
Total	77	100	39	100	116	100

Source: AIHW National Mortality Database.

During 2011–12, the age-standardised rate for unintentional thermal injury deaths for residents of Queensland was 1.6 times as high as the national rate of 0.5 deaths per 100,000 population (Table 8.3). Most other jurisdictions recorded rates similar to or below the national rate, with the Australian Capital Territory reporting no deaths for this cause.

Table 8.3: Unintentional thermal injury deaths, by state and territory of usual residence, Australia, 2011–12

Indicators	State and territory of usual residence							
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Deaths	41	24	35	6	6	1	0	3
Per cent	35.3	20.7	30.2	5.2	5.2	0.9	0.0	2.6
Age-standardised rate (deaths per 100,000 population)	0.5	0.4	0.8	0.2	0.3	n.p.	0	n.p.

Source: AIHW National Mortality Database.

There was a tendency for rates to increase with remoteness, although rates for *Remote* and *Very remote* areas could not be meaningfully interpreted due to low case counts (Table 8.4).

Table 8.4: Unintentional thermal injury deaths, by remoteness of usual residence, Australia, 2011–12

Indicators	Remoteness of usual residence ^(a)					
	Major cities	Inner regional	Outer regional	Remote	Very remote	Total ^(b)
Deaths	68	23	17	3	1	112
Per cent	60.7	20.5	15.2	2.7	0.9	100
Age-standardised rate (deaths per 100,000 population)	0.4	0.5	0.8	n.p.	n.p.	n.p.

(a) Derived using the ASGS classification.

(b) Excludes 4 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Socioeconomic status

The number and rate of unintentional thermal injury deaths varied with the socioeconomic status of the person's area of usual residence (Table 8.5). The age-standardised death rate increased with socioeconomic disadvantage. Comparison of rates between SEIFA quintiles should be treated with some caution due to the relatively small numbers of deaths involved.

Table 8.5: Unintentional thermal injury deaths, by socioeconomic status, Australia, 2011–12

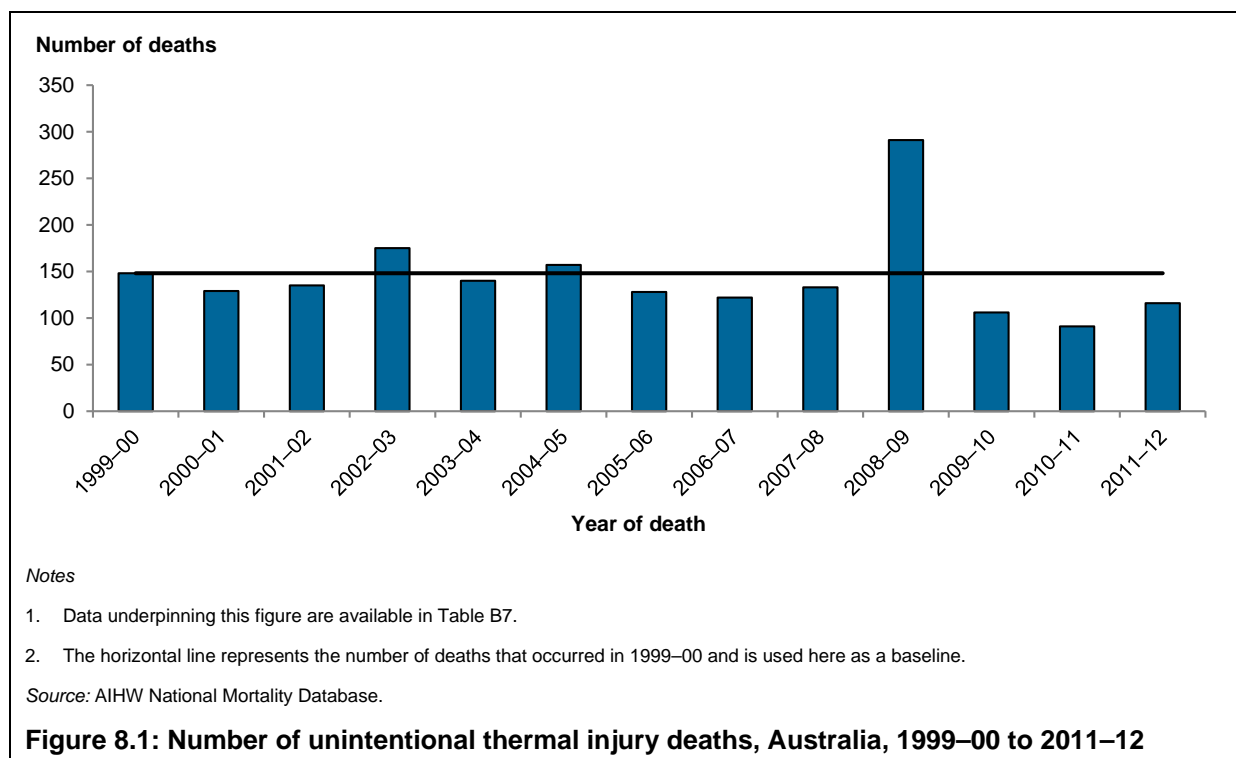
Indicators	SEIFA quintiles				
	Most disadvantaged	Second most disadvantaged	Middle	Second most advantaged	Most advantaged
Deaths	43	30	16	16	7
Per cent	37.1	25.9	13.8	13.8	6.0
Age-standardised rate (deaths per 100,000 population)	0.9	0.6	0.3	0.3	0.1

Note: Excludes 4 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

8.3 How have unintentional thermal injury deaths changed over time?

Figure 8.1 compares the number of thermal injury deaths occurring each year with the baseline number of deaths (148) in 1999–00. The number of deaths has been lower than in the baseline period for every later year except 2002–03, 2004–05 and 2008–09. The spike in 2008–09 reflects the large number of deaths in February 2009, due to bushfires in Victoria.



8.4 How have unintentional thermal injury deaths varied by age and sex?

Age-standardised rates of thermal injury deaths fluctuated, but tended to decrease from 0.8 deaths per 100,000 population in 1999–00 to 0.6 in 2007–08, representing an average decrease of 3.1% per year over this period (Figure 8.2).

Despite some fluctuations, rates of for both males and females also tended to decrease over the period from 1999–00 to 2007–08. As indicated in Section 8.3, the spike in rates in 2008–09 reflects the 2009 Victorian bushfires. Rates for males were consistently more than double those for females.

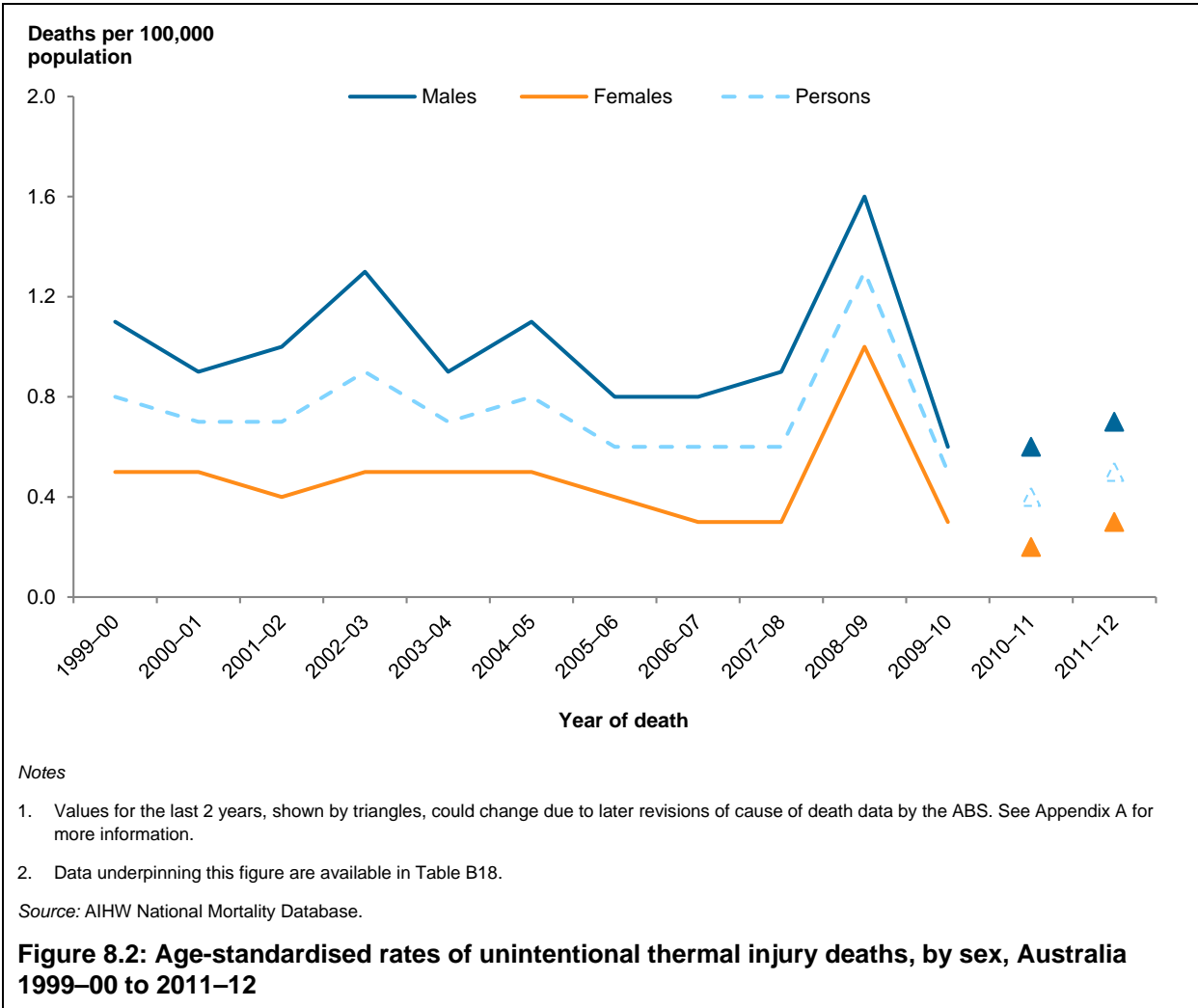
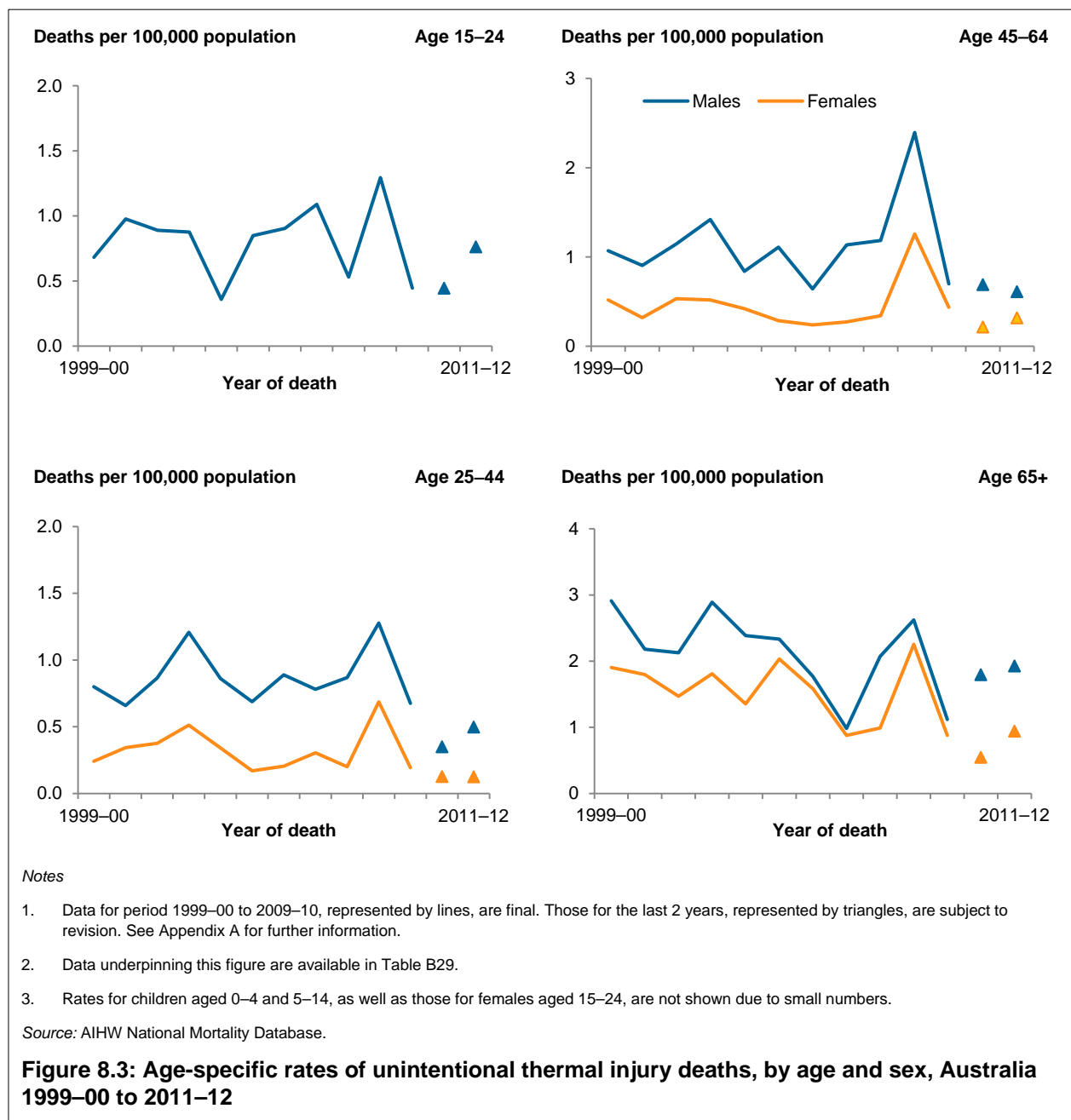


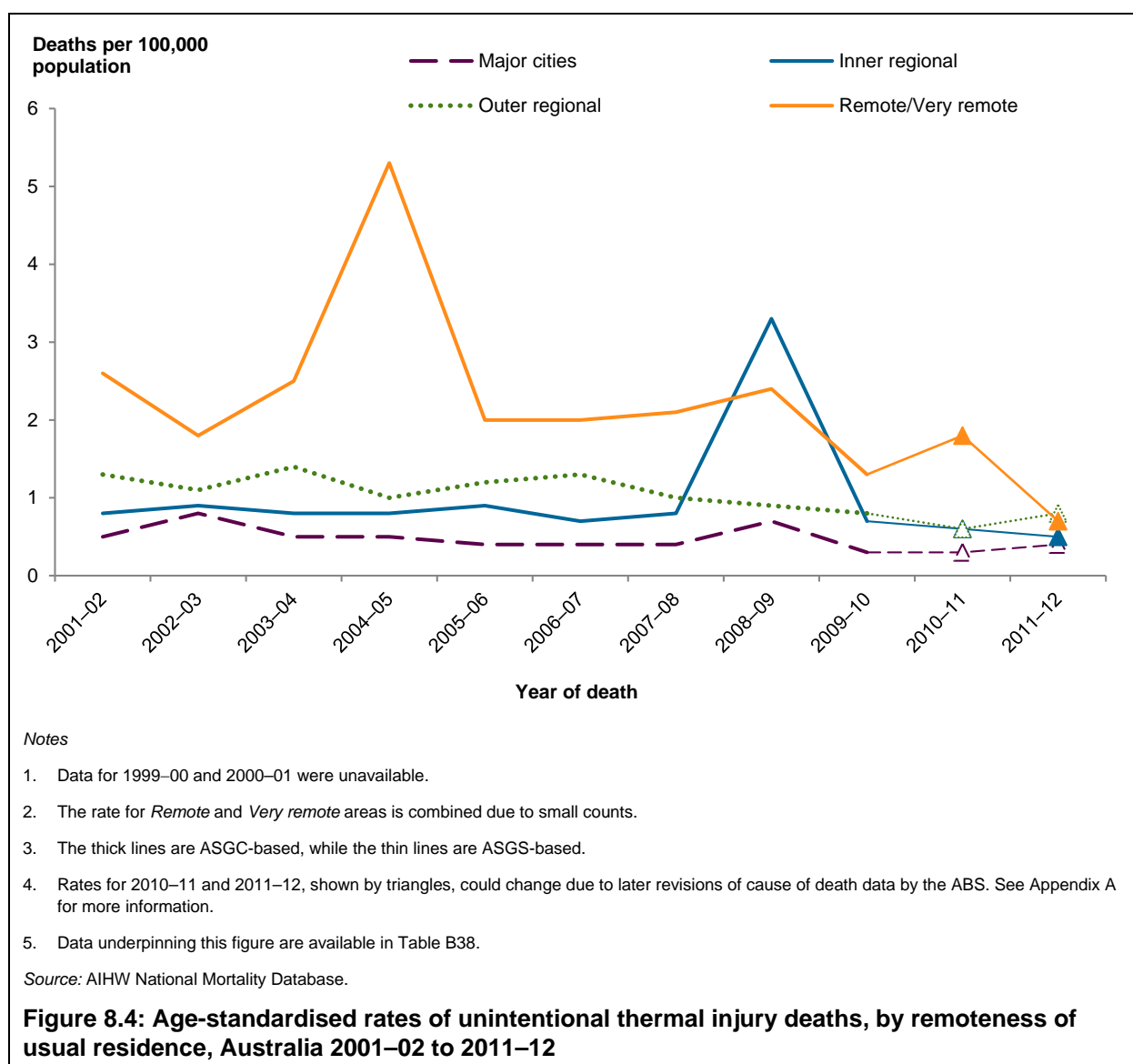
Figure 8.3 shows the changes in thermal injury death rates over time by age and sex. Age-specific rates for males were higher than for females at all ages and in all years. The peak in rates in 2008–09 due to the 2009 Victorian bushfires was most prominent in persons aged 45–64. The difference in rates between males and females was most marked at ages 25–44. Small numbers of deaths contribute to fluctuation of rates and necessitated suppression of some series.



8.5 How have unintentional thermal injury deaths varied by remoteness?

Rates of thermal injury deaths were consistently higher for residents of *Remote* and *Very remote* areas combined compared with residents of all other remoteness areas (Figure 8.4). Notably, the rates for all remoteness zones were similar for 2011–12.

The fluctuation in rate of injury deaths in the combined *Remote* areas of Australia is partly a reflection of the small population and number of incidents occurring each year. However, it also reflects the pattern of deaths due to bushfires: the number varies greatly between years. The peak in the combined *Remote* series in 2004–05 includes the deaths that occurred in the Eyre Peninsula fire in January 2005, while the peak in the *Inner regional* series in 2008–09 includes deaths that occurred in the Victorian bushfires in February 2009.



9 Other unintentional injury

This chapter provides a brief overview of deaths in 2011–12 that involved types of unintentional injury not covered in Chapters 3 to 8 of this report. Trends are not presented overall because it includes deaths due to a diverse range of specific causes. Trends of some types of death included in this chapter were affected markedly by changes in methods of processing mortality data that occurred during the period, which is demonstrated by presenting trends for certain causes. Further information for the period from 1999 to 2010 has previously been reported (AIHW: Harrison & Henley 2015).

9.1 What methods were used?

The criteria given in Section 1.3 were applied and the records that included the following ICD-10 codes were included in this chapter:

- the UCoD was a code from the ranges of unintentional external causes of injury that do not form part of the inclusion criteria for other chapters, or
- the MCoDs included codes from these ranges of external causes of injury and at least 1 code for Injury (S00–T75 or T79).

The ranges of external causes of injury treated as inclusion criteria for this chapter are *Exposure to inanimate mechanical forces (W20–W49)*, *Exposure to animate mechanical forces (W50–W64)*, *Other accidental threats to breathing (W75–W84)*, *Exposure to electric current, radiation and extreme ambient air temperature and pressure (W85–W99)*, *Contact with venomous animals and plants (X20–X29)*, *Exposure to forces of nature (X30–X39)*, *Overexertion, travel and privation (X50–X57)* and *Accidental exposure to other and unspecified factors (X58–X59)*. All deaths with UCoD = X59 (*Exposure to unspecified factor*) in conjunction with fracture codes are included in Chapter 7 Falls and not in this chapter.

Suicide and homicide deaths (UCoD X60–Y09) were excluded. The concepts underlying the abbreviations used here are defined in the Glossary.

9.2 How many other unintentional injury deaths were there in 2011–12?

Other unintentional injury accounted for 1,415 injury deaths in Australia during 2011–12 (Table 9.1). This was just under 13% of all injury deaths for this period. There were 1.5 times as many males as females fatally injured due to this type of injury in 2011–12.

Table 9.1: Key indicators for other unintentional injury deaths, Australia, 2011–12

Indicator	Males	Females	Persons
Deaths	852	563	1,415
Percentage of all injury deaths	12.5	12.8	12.6
Crude rate (deaths per 100,000 population)	7.6	5.0	6.3
Age-standardised rate (deaths per 100,000 population)	7.6	3.8	5.5

Source: AIHW National Mortality Database.

9.3 Overview

Table 9.2 shows the mechanisms that were responsible for deaths included in this chapter, with numbers and proportions of deaths in 2011–12.

The most common mechanism was *Inhalation and ingestion of gastric contents, food or other objects causing obstruction of the respiratory tract* (W78–W80), which was a cause for 65% (923) of all deaths in this chapter. Of these 923 deaths, 716 were certified by a doctor and 207 were certified by a coroner. Deaths were heavily concentrated in older age groups with 715 (77%) of deaths involving this mechanism being persons aged 65 and older.

Table 9.2: Major mechanisms of deaths included in the other unintentional injury category, Australia, 2011–12

ICD-10 codes	Mechanism	Count ^(a)	%
W20–W22	Struck against or struck by object	28	2.0
W23	Caught, crushed, jammed or pinched in or between objects	15	1.1
W24	Contact with lifting and transmission devices, n.e.c.	4	0.3
W25–W26	Contact with sharp object (includes sharp glass, knife, sword or dagger)	4	0.3
W27–W31	Contact with tools or machinery (includes non-powered or powered hand tools, agricultural machinery, powered lawnmower)	7	0.5
W32–W34	Unintentional discharge of firearms	5	0.4
W35–W40	Unintentional explosions (includes explosion and rupture of boiler, gas cylinder, pressurised tyre, pipe, hose, firework, and other materials)	8	0.6
W41–W43	Exposure to high-pressure jet, noise or vibration	1	0.1
W44–W45	Foreign body entering into or through eye or natural orifice, or through skin	5	0.4
W49	Exposure to other and unspecified inanimate mechanical forces	1	0.1
W50–W52	Struck by or against another person, or crushed, pushed or stepped on by crowd of people	11	0.8
W53–W59	Bitten, struck, stung, crushed or contact with mammals, marine animals, insects or reptiles	20	1.4
W64	Exposure to other and unspecified animate mechanical forces	2	0.1
W75–W77	Unintentional hanging, suffocation and strangling	31	2.2
W78–W80	Inhalation and ingestion of gastric contents, food or other objects causing obstruction of the respiratory tract	923	65.2
W81–W84	Other threats to breathing (includes trapped in a low oxygen environment, asphyxiation, aspiration and suffocation, n.e.c.)	23	1.6
W85–W87	Electrocution	15	1.1
W92–W99	Exposure to environmental factors (includes heat or cold of man-made origin and exposure to high and low air pressure)	2	0.1

(continued)

Table 9.2 (continued): Major mechanisms of deaths included in the other unintentional injury category, Australia 2011–12

ICD-10 codes	Mechanism	Count ^(a)	%
X20–X29	Contact with venomous animals and plants	3	0.2
X30–X39	Exposure to forces of nature (includes natural heat or cold, lightning, earthquake, flood, avalanche or landslide)	64	4.5
X50–X57	Overexertion, travel and privation	4	0.3
X58–X59 ^(b)	Exposure to other or unspecified factors	241	17.0
Total		1,415	

(a) The total count of the individual mechanisms exceeds the total number of deaths because some deaths have been assigned more than 1 external cause code, resulting in death being counted in more than 1 category.

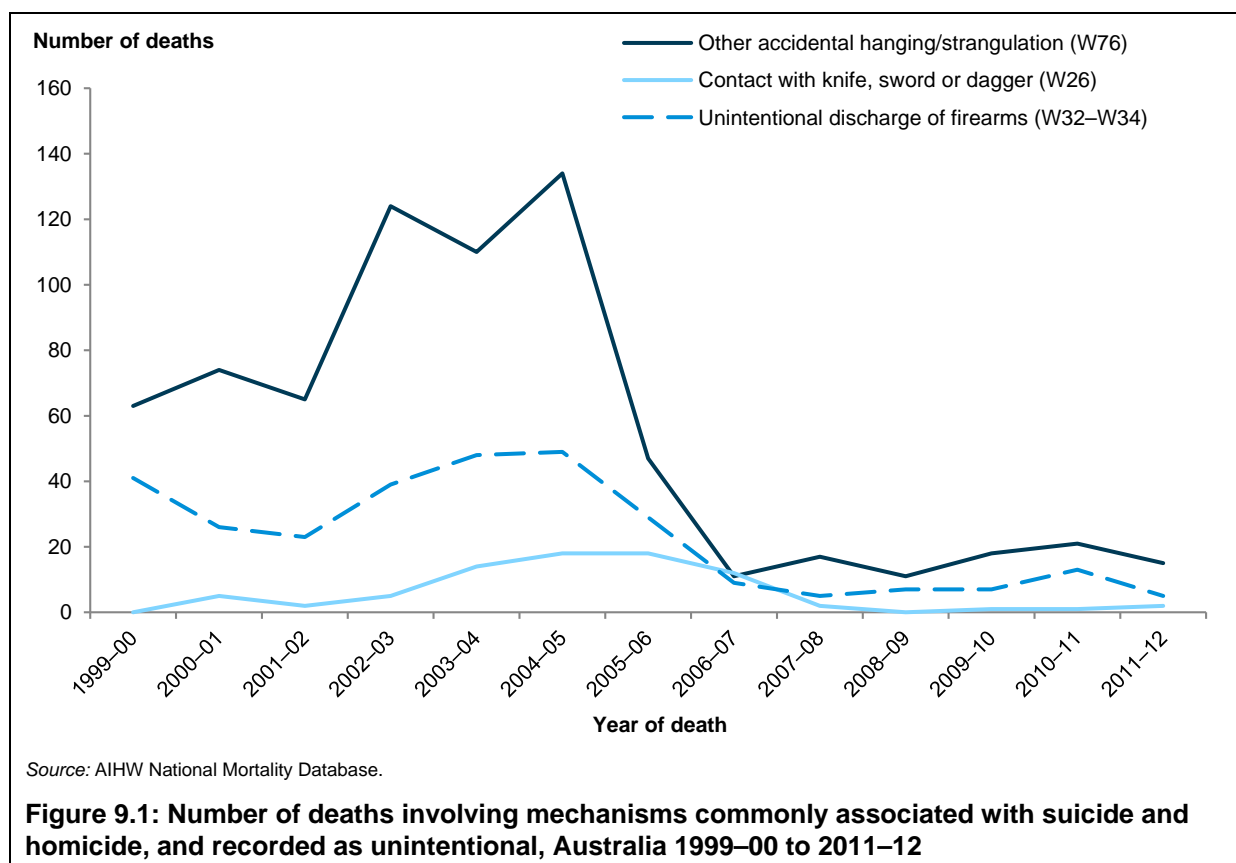
(b) Excludes X59 accompanied by MCoD for fracture (these deaths are included in Chapter 7).

Source: AIHW National Mortality Database.

9.4 Trends for selected mechanisms of injury

Classification of some of the types of deaths included in this chapter varied markedly with the changes in processing of deaths data that occurred in the period covered by this report (see Appendix A). Trends in numbers of deaths involving 3 mechanisms of injury demonstrate this (Figure 9.1). The code ranges charted include deaths by mechanisms that are common in suicide and homicide: hanging, stabbing and shooting. For all 3 mechanisms, there was an increase in numbers of deaths coded as ‘unintentional’ early in the decade followed by a sharp drop after 2004–05. The revised processing method applies to all deaths with year of death 2005–06 or later and, in that period, few injury deaths with these mechanisms were recorded as being unintentional.

Deaths registered in 2006 provide the most direct indication of the effect of the changes in processing. The first release was processed before introduction of the changes and the second release (used when preparing Figure 9.1) was processed after introduction of the changes. The numbers of deaths coded to the 3 ranges shown in Figure 9.1 in the first and second release of 2006 data were *W76 Other accidental hanging and strangulation*: 179 and 16; *W26 Contact with knife, sword or dagger*: 58 and 27; and *W32–W34 Unintentional discharge of firearms*: 56 and 11.



Firearm-related deaths

There were 301 unintentional firearm-related deaths in the period from 1999–00 to 2011–12, of which only 25 (8.3%) were of females (Table B50). In the period before the introduction of the ABS's revision process (1999–00 to 2004–05), there was an average of about 38 deaths annually, while in the post revision introduction period (2006–07 to 2011–12) there was an average of about 8 deaths annually (all males), suggesting that post-introduction, firearm-related deaths were more likely to be assigned as an intentional cause of death.

10 Suicide deaths

This chapter provides a brief overview of suicide deaths in 2011–12 and trends in deaths from this cause to 2011–12. Trends in suicide have been the subject of much attention and the recognition of problems resulting in under-identification was the main reason for the introduction during the period of changes in methods for processing causes of death during the period covered by this report (see Appendix A and AIHW: Harrison & Henley 2015).

10.1 What methods were used?

The criteria given in Section 1.3 were applied and the records that included the following ICD-10 codes were included in this chapter:

- the UCoD was Intentional self-harm (X60–X84), or
- the MCoDs included codes for Intentional self-harm and for Injury (S00–T75 or T79).

Few deaths were included by the second criterion (about 4 per year on average). The concepts underlying the abbreviations used here are defined in the Glossary.

The title of ICD-10 code-block X60–X84 is *Intentional self-harm*. Deaths coded to this range are commonly referred to as ‘suicide’, a practice followed here, although the scope of inclusion of the code block includes *purposely self-inflicted poisoning or injury*, and *suicide (attempted)*. That is, it could include deaths due to intentional self-harm where a fatal outcome was not intended.

An investigation of suicide statistics in Australia, which focused on deaths in 2005, demonstrated use of data from the NCIS to complement data from the ABS cause of death collection (Henley & Harrison 2009). A similar method has been used here to supplement the ABS data (see Appendix A). This is particularly important for deaths registered in 2005 and earlier, because the new methods (introduced by the ABS largely because of problems with the identification and coding of suicide) have not been applied to deaths registered before 2006. ABS estimates of suicide for the period since the introduction of the revised methods are close to the values obtained by means of the supplementary method (see Section 10.3).

Relevant terms and information regarding the data used in this chapter are summarised in Boxes 1.1, 1.2 and 10.1.

Box 10.1: External causes of intentional self-harm (suicide)

The **Intentional self-harm** (X60–X84) section of Chapter XX External causes of morbidity and mortality of ICD-10 includes the following categories:

- Intentional self-poisoning by and exposure to nonopioid analgesics, antipyretics and antirheumatics (X60)
- Intentional self-poisoning by and exposure to antiepileptic, sedative-hypnotic, antiparkinsonism and psychotropic drugs, not elsewhere classified (X61)
- Intentional self-poisoning by and exposure to narcotics and psychodysleptics [hallucinogens], not elsewhere classified (X62)

(continued)

Box 10.1 (continued): External causes of intentional self-harm (suicide)

- Intentional self-poisoning by and exposure to other drugs acting on the autonomic nervous system (X63)
- Intentional self-poisoning by and exposure to other and unspecified drugs, medicaments and biological substances (X64)
- Intentional self-poisoning by and exposure to alcohol (X65)
- Intentional self-poisoning by and exposure to organic solvents and halogenated hydrocarbons and their vapours (X66)
- Intentional self-poisoning by and exposure to other gases and vapours (X67)
- Intentional self-poisoning by and exposure to pesticides (X68)
- Intentional self-poisoning by and exposure to other and unspecified chemicals and noxious substances (X69)
- Intentional self-harm by hanging, strangulation and suffocation (X70)
- Intentional self-harm by drowning and submersion (X71)
- Intentional self-harm by handgun discharge (X72)
- Intentional self-harm by rifle, shotgun and larger firearm discharge (X73)
- Intentional self-harm by other and unspecified firearm discharge (X74)
- Intentional self-harm by explosive material (X75)
- Intentional self-harm by smoke, fire and flames (X76)
- Intentional self-harm by steam, hot vapours and hot objects (X77)
- Intentional self-harm by sharp object (X78)
- Intentional self-harm by blunt object (X79)
- Intentional self-harm by jumping from a high place (X80)
- Intentional self-harm by jumping or lying before moving object (X81)
- Intentional self-harm by crashing of motor vehicle (X82)
- Intentional self-harm by other specified means (X83)
- Intentional self-harm by unspecified means (X84).

10.2 How many suicides were there in 2011–12?

Suicides accounted for 2,496 injury deaths in Australia during 2011–12, which is just over 22% of all injury deaths in this period (Table 10.1). There were 3.2 times as many suicide deaths of males as of females in 2011–12.

Table 10.1: Key indicators for intentional-self harm (suicide) deaths, Australia, 2011–12

Indicator	Males	Females	Persons
Deaths	1,904	592	2,496
Percentage of all injury deaths	28.0	13.5	22.3
Crude rate (deaths per 100,000 population)	17.0	5.2	11.1
Age-standardised rate (deaths per 100,000 population)	16.9	5.2	10.9

Source: AIHW National Mortality Database.

Persons aged 25–44 and 45–64 accounted for 71% of all suicide deaths (Table 10.2). In contrast, 40% of injury deaths from all causes were in this age range. Similar proportions of male and female suicide deaths occurred in each age group.

Table 10.2: Intentional self-harm (suicide) deaths, by age and sex, Australia, 2011–12

Age group	Males		Females		Persons	
	Number	%	Number	%	Number	%
5–14 ^(a)	6	0.3	9	1.5	15	0.6
15–24	244	12.8	98	16.6	342	13.7
25–44	720	37.8	221	37.3	941	37.7
45–64	638	33.5	186	31.4	824	33.0
65+	296	15.5	78	13.2	374	15.0
Total	1,904	100	592	100	2,496	100

(a) There were no reported deaths of persons aged younger than 10.

Source: AIHW National Mortality Database.

The age-standardised rate for suicides during 2011–12 for residents of the Northern Territory was more than 1.8 times the national rate of 10.9 deaths per 100,000 population (Table 10.3). Rates for residents of other jurisdictions varied by up to 40% from the national rate. It has been shown for an earlier period that timing of processing of intentional self-harm deaths differed between jurisdictions (Henley & Harrison 2009). The data for deaths in 2011–12 are subject to review and revision and so final jurisdiction-specific rates might differ from those shown here.

Table 10.3: Intentional self-harm (suicide) deaths, by state and territory of usual residence, Australia, 2011–12

Indicators	State and territory of usual residence							
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Deaths	664	519	614	343	198	81	29	48
Per cent	26.6	20.8	24.6	13.7	7.9	3.2	1.2	1.9
Age-standardised rate (deaths per 100,000 population)	9.0	9.1	13.6	14.0	11.7	15.3	8.0	19.9

Source: AIHW National Mortality Database.

Age-standardised suicide rates tended to rise with remoteness of usual residence (Table 10.4). The rate for residents of *Very remote* areas was more than 1.7 times the rate for residents of *Major cities*.

Table 10.4: Intentional self-harm (suicide) deaths, by remoteness of usual residence, Australia, 2011–12

Indicators	Remoteness of usual residence ^(a)					Total ^(b)
	Major cities	Inner regional	Outer regional	Remote	Very remote	
Deaths	1,572	520	263	66	53	2,475
Per cent	63.5	21.0	10.6	2.7	2.1	100
Age-standardised rate (deaths per 100,000 population)	9.7	12.8	13.3	22.0	24.9	n.p.

(a) Derived using the ASGS classification.

(b) Excludes 21 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Socioeconomic status

The number and rate of suicides varied with the socioeconomic status of the person's usual area of residence (Table 10.5). The age-standardised rate of suicide increased with socioeconomic disadvantage. The rate for residents of the *Most disadvantaged* areas (12.7 deaths per 100,000 population) was more than 1.5 times the rate for residents of the *Most advantaged* areas (8.2 per 100,000 population).

Table 10.5: Intentional self-harm (suicide) deaths, by socioeconomic status, Australia, 2011–12

Indicators	SEIFA quintiles				
	Most disadvantaged	Second most disadvantaged	Middle	Second most advantaged	Most advantaged
Deaths	562	565	516	452	380
Per cent	22.5	22.6	20.7	18.1	15.2
Age-standardised rate (deaths per 100,000 population)	12.7	12.4	11.3	9.8	8.2

Note: Excludes 21 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Aboriginal and Torres Strait Islander people

The age-standardised suicide rate for Aboriginal and Torres Strait Islander people was almost twice the rate for non-Indigenous Australians (Table 10.6).

Table 10.6: Key indicators for intentional self-harm (suicide) deaths, Indigenous Australians and non-Indigenous Australians, Australia^(a), 2011–12

Indicator	Indigenous Australians			Non-Indigenous Australians		
	Males	Females	Persons	Males	Females	Persons
Deaths	87	35	122	1,310	399	1,709
Age-standardised rate (deaths per 100,000 population)	28.6	11.9	20.1	16.8	5.0	10.8
Rate ratio ^(b)	1.7	2.4	1.9	..	..	..
Rate difference ^(c)	11.8	6.9	9.3	..	..	..

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Rate ratios are standardised rate for Indigenous males, females and persons/standardised rate for non-Indigenous males, females and persons.

(c) Rate differences are standardised rate for Indigenous males, females and persons minus standardised rate for non-Indigenous males, females and persons.

Source: AIHW National Mortality Database.

There were marked differences between Aboriginal and Torres Strait Islander people and non-Indigenous Australians in terms of the proportions of suicides occurring in each age group (Table 10.7). For Aboriginal and Torres Strait Islander people, over 86% of suicides occurred for those aged 15–44, compared with 48% for non-Indigenous Australians. Conversely, there were no suicide deaths of Aboriginal and Torres Strait Islander men and women aged 65 and older compared with 14% of suicide deaths of non-Indigenous Australians in this age group.

Table 10.7: Intentional self-harm (suicide) deaths, by age and sex, Indigenous Australians and non-Indigenous Australians, Australia^(a), 2011–12

	Indigenous Australians		Non-Indigenous Australians	
	Number	%	Number	%
Males				
0–4	0	0.0	0	0.0
5–14	1	1.1	5	0.4
15–24	40	46.0	138	10.5
25–44	37	42.5	486	37.1
45–64	9	10.3	461	35.2
65+	0	0.0	220	16.8
Total	87	100	1,310	100
Females				
0–4	0	0.0	0	0.0
5–14	2	5.7	3	0.8
15–24	11	31.4	56	14.0
25–44	17	48.6	147	36.8
45–64	5	14.3	136	34.1
65+	0	0.0	57	14.3
Total	35	100	399	100

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

Source: AIHW National Mortality Database.

Mechanisms of suicide

The most frequently recorded mechanism of suicide was hanging, strangulation and suffocation, which accounted for 55% (1,379) of deaths (Table 10.8). This method accounted for 57% (1,090) of male suicide deaths and 49% (289) of female suicide deaths in 2011–12. The proportion of male and female suicides involving this mechanism were 43% and 37%, respectively, in 1999–2000 and proportions for both sexes have tended to rise since this then.

The second most frequently recorded type of suicide method was poisoning, which accounted for 23% (542) of suicides in 2011–12. Poisoning was the method used by females in 34% of deaths compared with 20% of male deaths. The use of firearms for suicide was much more prominent among males (8.5%; 162 deaths) than among females (1.0%; 6 deaths).

Table 10.8: Mechanism of intentional self-harm (suicide) deaths, Australia 2011–12

Mechanism of suicide	Males		Females		Persons	
	Count	%	Count	%	Count	%
Hanging, strangulation and suffocation	1,090	57.2	289	48.8	1,379	55.2
Poisoning	375	19.7	201	34.0	576	23.1
Jumping from a high place, or lying before a moving object	138	7.2	55	9.3	193	7.7
Firearms	162	8.5	6	1.0	168	6.7
Cutting, piercing	53	2.8	13	2.2	66	2.6
Drowning and submersion	30	1.6	17	2.9	47	1.9
Smoke, fire and flames, and hot substances	20	1.1	4	0.7	24	1.0
Crashing of motor vehicle	16	0.8	4	0.7	20	0.8
Other specified mechanisms	13	0.7	1	0.2	14	0.6
Unspecified mechanisms	7	0.4	2	0.3	9	0.4
Total suicides	1,904	100	592	100	2,496	100

Source: AIHW National Mortality Database.

Table 10.9 lists the type of poisoning agent coded for suicide deaths that involved poisoning by drugs or the toxic effects of another type of substance. The most common poisoning agent was Carbon monoxide, which was mentioned in more than one-third of suicide deaths that mentioned poisoning (197 deaths). In relation to drugs, medicaments and biological substances, the most common poisoning agents leading to death were *Antiepileptic, sedative-hypnotic and antiparkinsonism drugs* (185 deaths), *Narcotics and psychodysleptics [hallucinogens]* (149 deaths) and *Psychotropic drugs, n.e.c.* (140 deaths).

Table 10.9: Poisoning-related self-harm (suicide) deaths by type of poisoning agent, Australia 2011–12

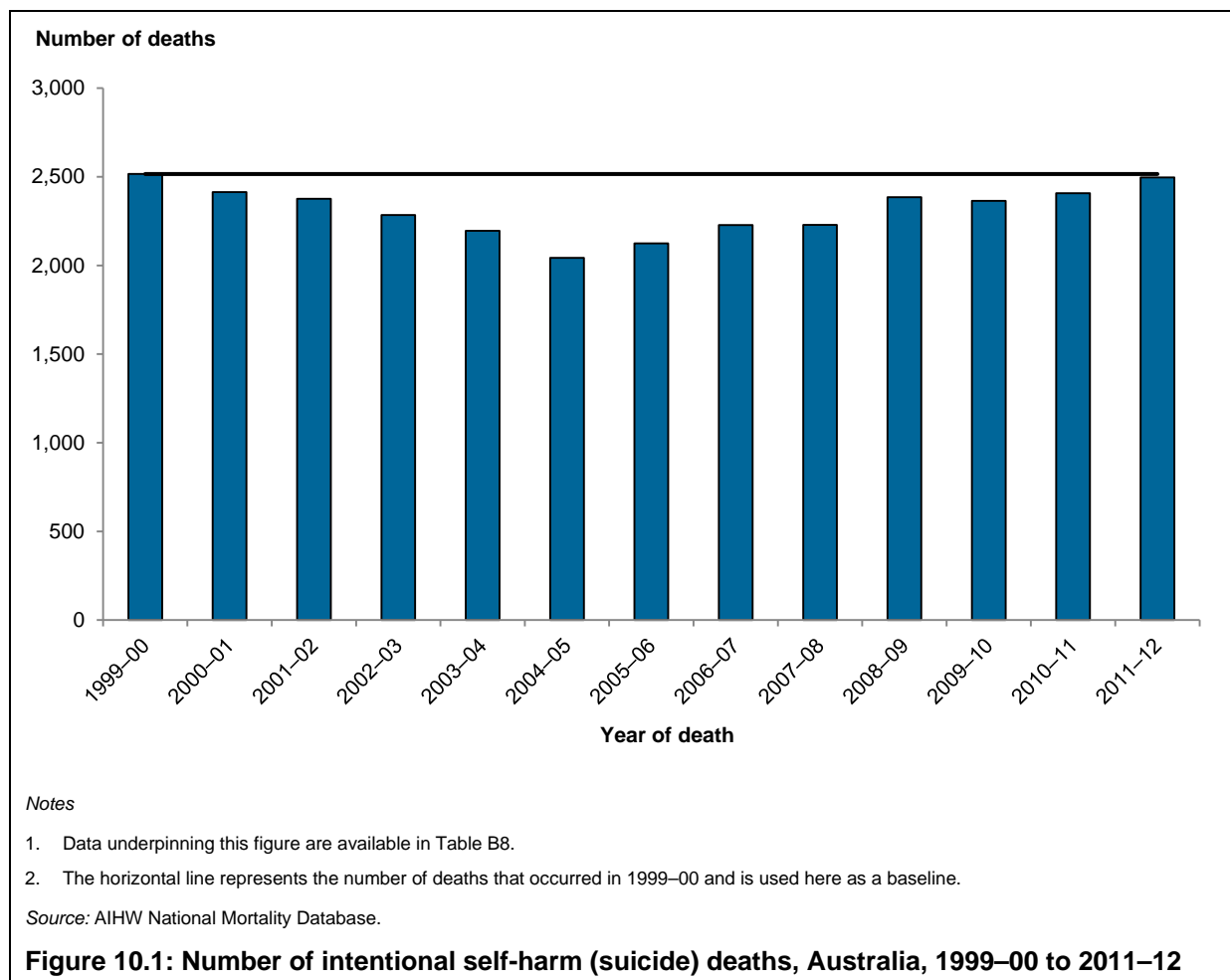
Poisoning agent	No. of deaths	%
Drugs, medicaments and biological substances		
Antiepileptic, sedative-hypnotic and antiparkinsonism drugs	185	32.1
Narcotics and psychodysleptics [hallucinogens]	149	25.9
Psychotropic drugs, n.e.c.	140	24.3
Nonopioid analgesics, antipyretics and antirheumatics	49	8.5
Hormones and their synthetic substitutes and antagonists, n.e.c.	16	2.8
Diuretics and other and other and unspecified drugs, medicaments and biological substances	15	2.6
Primarily systemic and haematological agents, n.e.c.	13	2.3
Other and unspecified drugs, medicaments and biological agents	26	4.5
Substances chiefly non medicinal as to source		
Carbon monoxide	197	34.2
Alcohol	71	12.3
Other gases, fumes and vapours	12	2.1
Pesticides	10	1.7
Other and unspecified substances	15	2.6
Total number of poisoning suicide deaths	576	

Note: The number of suicide deaths with cause codes for the specified types of substance. More than 1 type of substance was reported for some suicide deaths and so the numbers of suicide deaths including codes for the specified types of agent add to more than the total number of suicide deaths involving poisoning ($n = 576$) and the agent-specific proportions add to more than 100%.

Source: AIHW National Mortality Database.

10.3 How have suicides changed over time?

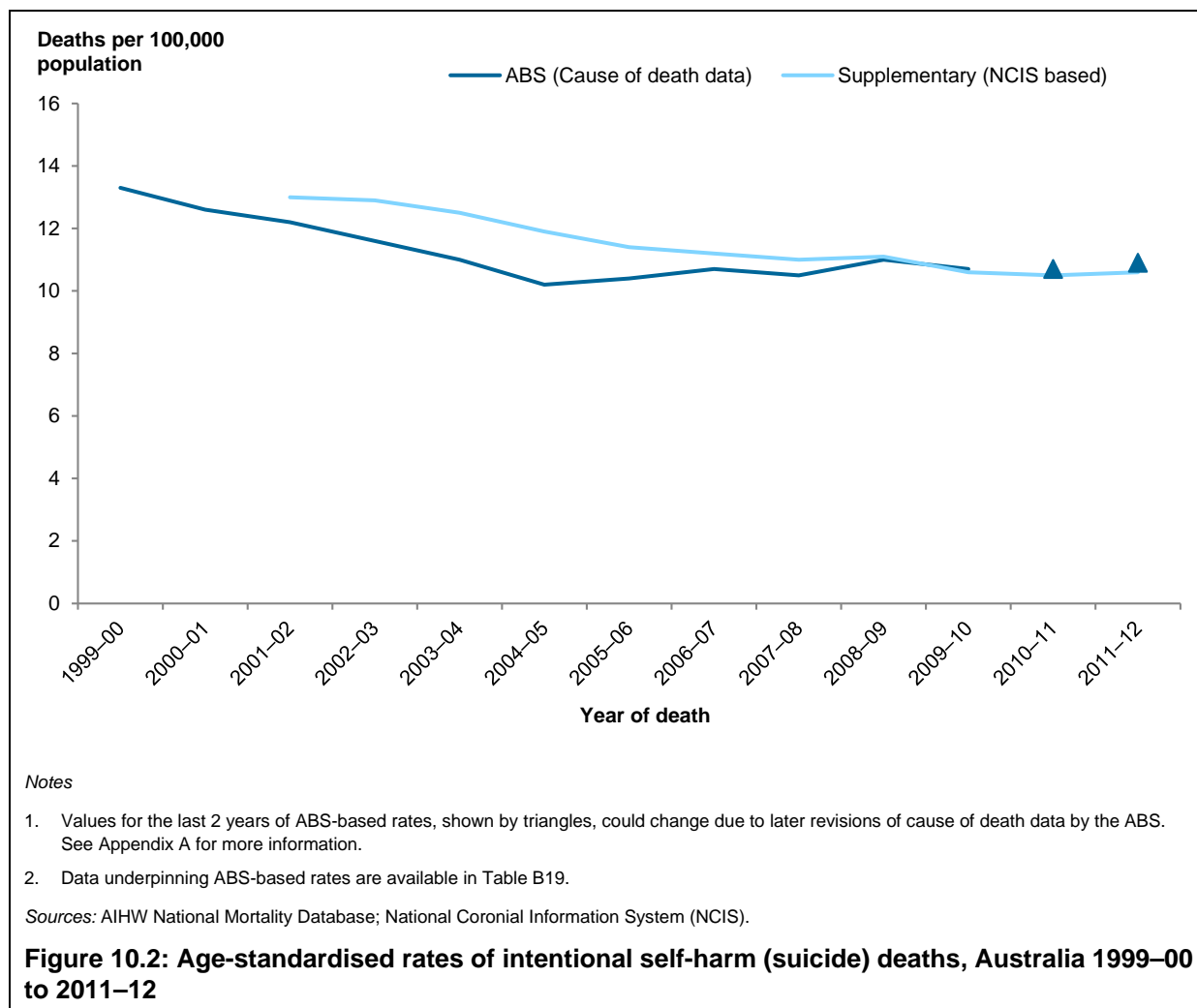
Figure 10.1 compares the number of suicide deaths occurring each year with the baseline number of deaths (2,516) in 1999–00. For every later year, the reported number of suicide deaths has been lower than in 1999–00. The largest difference occurred in 2004–05 when there were 473 fewer suicide deaths than in 1999–00. This apparent trend in counts should be interpreted in the light of the following discussion of rates based on supplementary data from the NCIS.



Age-standardised rates of suicide decreased from 13.3 per 100,000 population in 1999-00 to 10.2 in 2004-05 and remained relative steady thereafter (Figure 10.2).

Supplementary estimates, based on NCIS data as at June 2015, indicate a more constant downward trend in age-standardised rates, rather than the steeper downward trend followed by an upward trend according to the NMD data (Figure 10.2).

Further information on the method used to produce the supplementary estimates is provided in Appendix A. Note that for recent years, when the ABS's revised methods were in use, the supplementary estimates are close to those based on the NMD data. The difference between the 2 series for earlier years (before introduction of the ABS's revised methods) is consistent with earlier work (AIHW: Henley & Harrison 2009, Harrison et al. 2009). A previous report of suicide deaths in 2004-05, based on NCIS data as in 2008, gave a case count for that year ($n = 2,341$; Henley & Harrison 2009), which is similar to the number underlying the supplementary rate for 2004-05, shown in Figure 10.2 ($n = 2,381$). Further information on the effects of changes in methods on estimates of suicide for the period from 1999 to 2010 has previously been reported (AIHW: Harrison and Henley 2015).



Firearm-related suicides

There were 2,472 firearm-related suicides in the period from 1999–00 to 2011–12, of which 135 (5.5%) were of females (Figure B49). In the period following the introduction of the ABS’s revisions process (that is, 2006–07 onwards), the number of annual firearm-related suicides were more likely to be higher than the number of suicides that would have been recorded using the pre-revisions processes. The reasons for these higher numbers are detailed in Appendix A of this report and have previously been reported for the period from 1999 to 2010 (AIHW: Harrison & Henley 2015). Long-term trends for firearm-related suicides have previously been reported (AIHW: Harrison & Henley 2014).

10.4 How have suicides varied by age and sex?

During the period of interest, age-standardised rates of suicides decreased over time for males, while rates for females remained relatively steady (Figure 10.3). Rates for males decreased from 21.5 per 100,000 population in 1999–00 to 16.4 per 100,000 population in 2004–05 and remained relatively steady thereafter. Rates were consistently 3 to 4 times as high for males as for females.

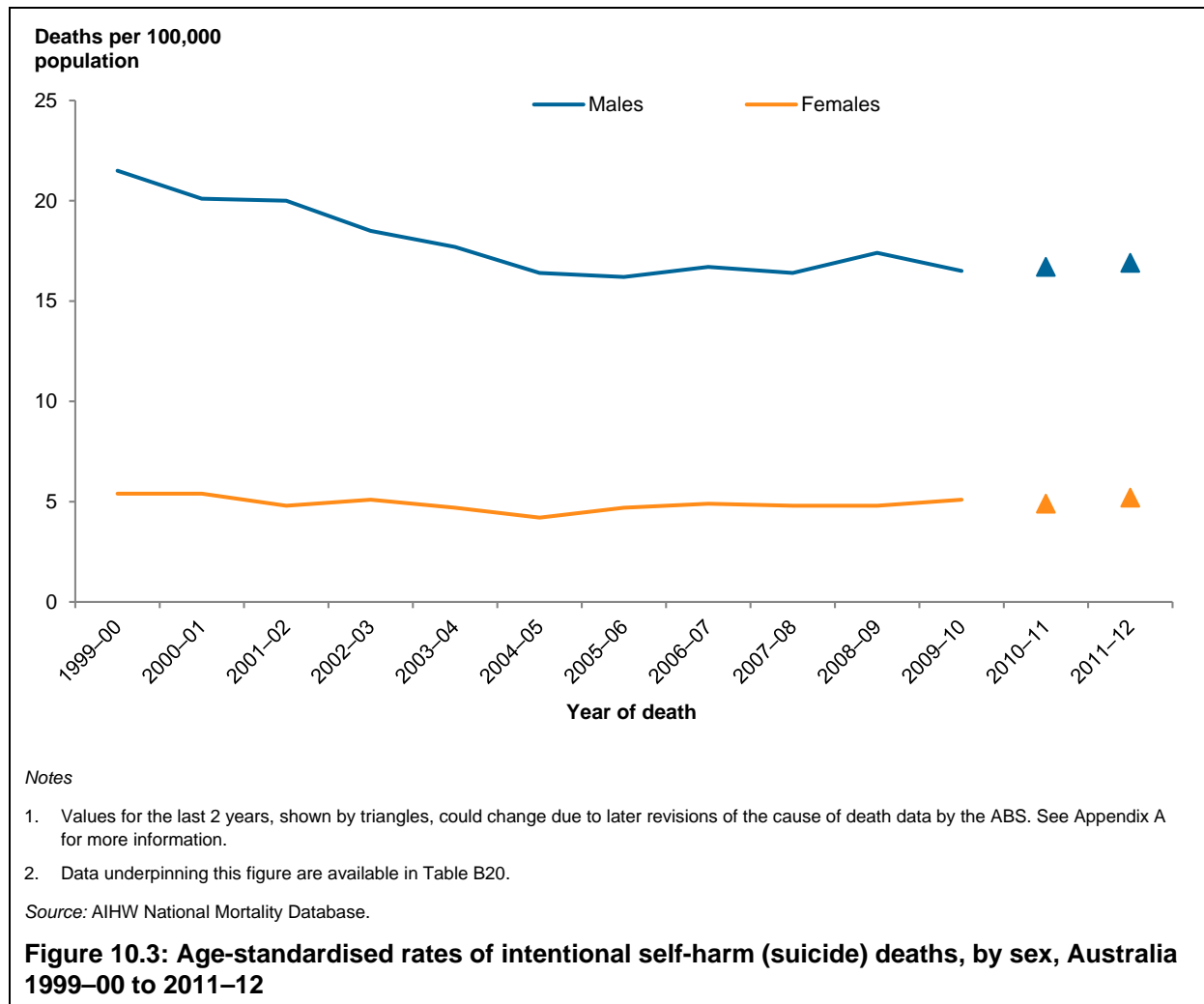
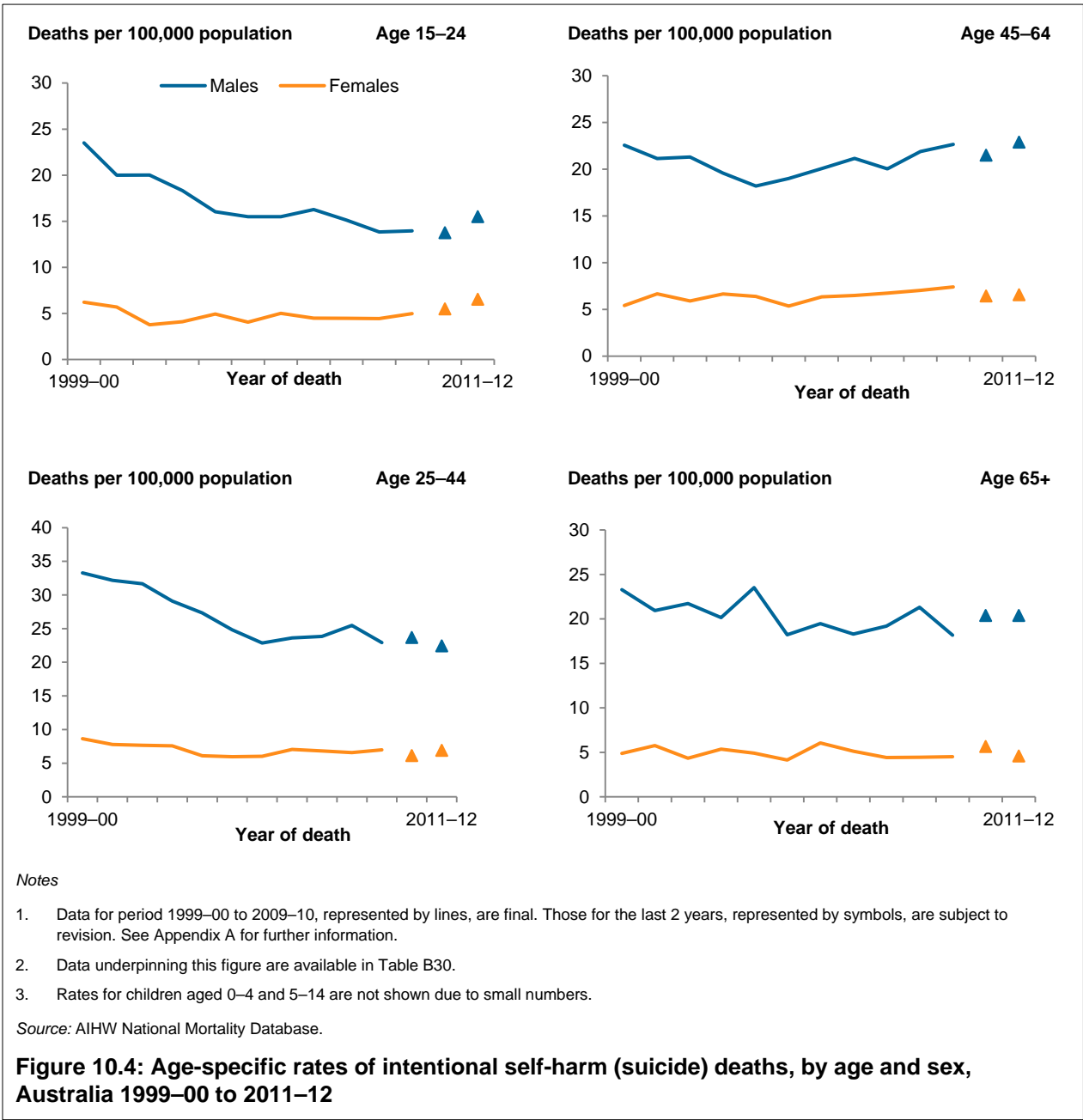


Figure 10.4 shows the changes in suicide rates over time by age and sex. Age-standardised rates for males were markedly higher than for females across all age groups for all years. Rates for males aged 15–24 and 25–44 declined markedly in the first half of the period of interest, while rates for females were relatively steady across all age groups.

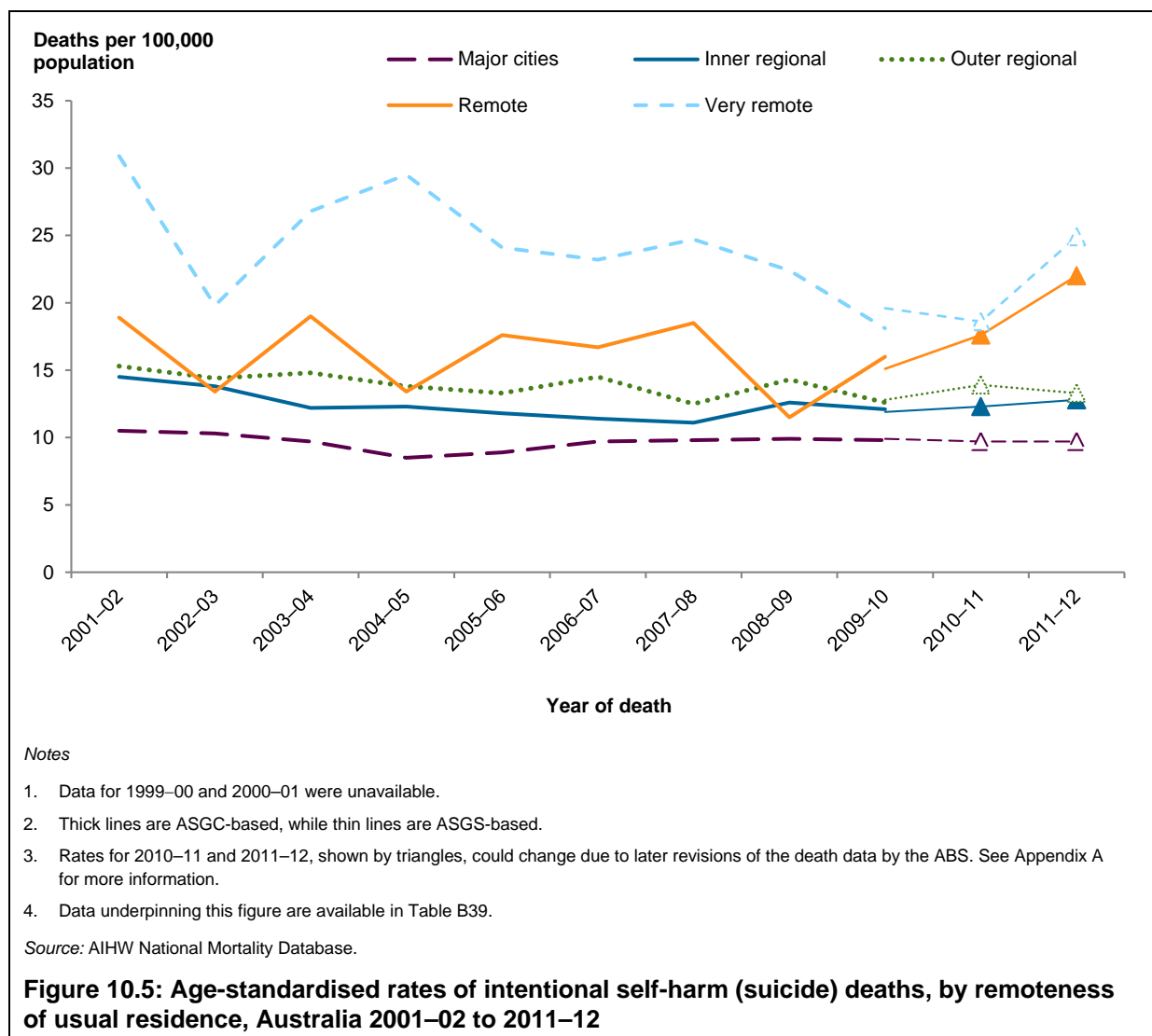


10.5 How have suicides varied by remoteness?

Rates of death due to suicide were consistently higher for residents of *Very remote* areas compared with residents of all other remoteness areas (Figure 10.5). The rate ratio for residents of *Very remote* areas compared with residents of *Major cities* varied from 1.8 times as high in 2009–10 to 3.2 times as high in 2004–05.

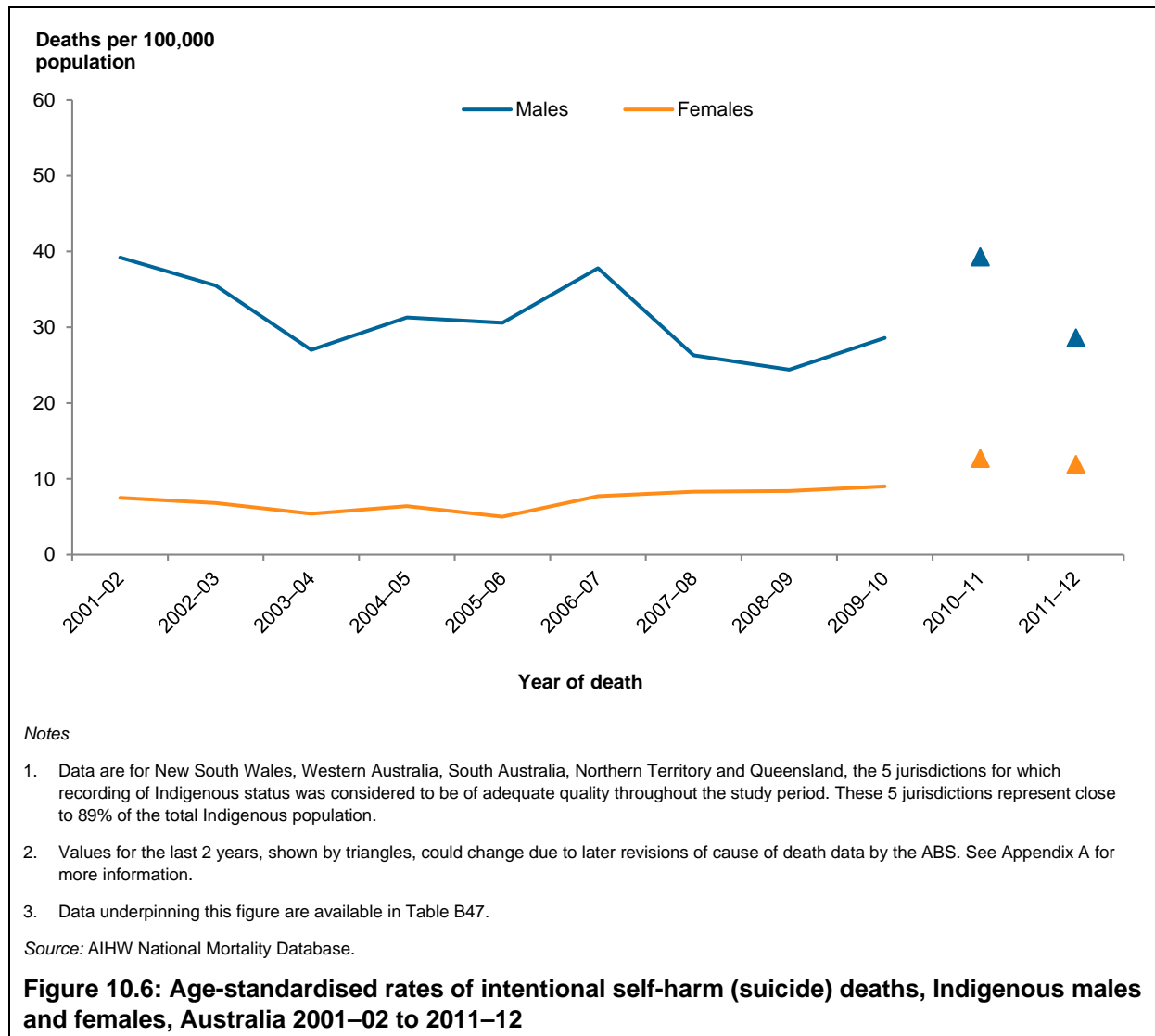
The fluctuation in the rates of suicide deaths in the *Very remote* and *Remote* areas of Australia is partly a reflection of the small population and number of deaths occurring each year.

For *Very remote* areas, the ASGS-based rate was higher than the ASGC-based rate.



10.6 How have suicides by Aboriginal and Torres Strait Islander people changed over time?

Age-standardised rates for Aboriginal and Torres Strait Islander males fluctuated, with weak indications of a downward trend, while rates for females showed a gradual upward trend over the period from 1999–00 to 2011–12 (Figure 10.6). Rates for males were higher than rates for females across the entire period, ranging from 2.4 times as high in 2007–08 to 6.1 times as high in 2005–06.



11 Homicide deaths

This chapter provides a brief overview of homicide deaths in 2011–12 and trends in relation to these for the period from 1999–00 to 2011–12. Variation in counts for this cause of death must be interpreted with caution for the reasons described in Section 11.3, Appendix A and as previously reported for the period from 1999 to 2010 (AIHW: Harrison & Henley 2015).

11.1 What methods were used?

The criteria given in Section 1.3 were applied and the records that included the following ICD-10 codes were included in this chapter:

- the UCoD was Assault (X85–Y09); or Legal intervention and operations of war (Y35, Y36), or
- the MCoDs included any of these codes and a code for Injury (S00–T75 or T79).

About 4 deaths per year, on average, were included based on the second criterion. Similar numbers of deaths due to legal intervention were also included. Very few deaths were attributed to operations of war, reflecting the practice that deaths overseas of members of Australian armed forces are not normally registered in Australia (AIHW: Harrison & Henley 2015). The concepts underlying the abbreviations used here are defined in the Glossary.

Relevant terms and information regarding the data used in this chapter are summarised in Boxes 1.1, 1.2 and 11.1.

Box 11.1: External causes of assault (homicide) injury

The sections of Chapter XX External causes of morbidity and mortality of ICD-10 on Assault (X85–Y09) and Legal intervention and operations of war (Y35–Y36) include the following categories:

Assault (X85–Y09)

- Assault by drugs, medicaments and biological substances (X85)
- Assault by corrosive substance (X86)
- Assault by pesticides (X87)
- Assault by gases and vapours (X88)
- Assault by other specified chemicals and noxious substances (X89)
- Assault by unspecified chemical or noxious substance (X90)
- Assault by hanging, strangulation and suffocation (X91)
- Assault by drowning and submersion (X92)
- Assault by handgun discharge (X93)
- Assault by other and unspecified firearm discharge (X95)
- Assault by explosive material (X96)
- Assault by smoke, fire and flames (X97)

(continued)

Box 11.1 (continued): External causes of assault (homicide) injury

- Assault by steam, hot vapours and hot objects (X98)
- Assault by sharp object (X99)
- Assault by blunt object (Y00)
- Assault by pushing from high place (Y01)
- Assault by pushing or placing victim before moving object (Y02)
- Assault by crashing of motor vehicle (Y03)
- Assault by bodily force (Y04)
- Sexual assault by bodily force (Y05)
- Neglect and abandonment (Y06)
- Other maltreatment syndromes (Y07)
- Assault by other specified means (Y08)
- Assault by unspecified means (Y09)

Legal intervention and operations of war (Y35–Y36)

- Legal intervention (Y35)
- Operations of war (Y36).

11.2 How many homicides were there in 2011–12?

Homicides accounted for 249 injury deaths in Australia during 2011–12 (Table 11.1). This was over 2% of all injury deaths for this period. There were more than twice as many homicide deaths of males as of females in 2011–12.

Table 11.1: Key indicators for assault (homicide) deaths, Australia, 2011–12

Indicator	Males	Females	Persons
Deaths	171	78	249
Percentage of all injury deaths	2.5	1.8	2.2
Crude rate (deaths per 100,000 population)	1.5	0.7	1.1
Age-standardised rate (deaths per 100,000 population)	1.5	0.7	1.1

Source: AIHW National Mortality Database.

Deaths of persons aged 25–44 accounted for 40% of homicides during 2011–12 (Table 11.2). In contrast, 21% of all injury deaths occurred in this age range. Compared with males, a smaller proportion of female homicide deaths were at ages 25–44 and a larger proportion were at ages 65 and older.

Table 11.2: Assault (homicide) deaths, by age and sex, Australia, 2011–12

Age group	Males		Females		Persons	
	Number	%	Number	%	Number	%
0–4	5	2.9	2	2.6	7	2.8
5–14	4	2.3	6	7.7	10	4.0
15–24	28	16.4	8	10.3	36	14.5
25–44	76	44.4	24	30.8	100	40.2
45–64	43	25.1	18	23.1	61	24.5
65+	15	8.8	20	25.6	35	14.1
Total	171	100	78	100	249	100

Source: AIHW National Mortality Database.

The age-standardised rate of homicide deaths during 2011–12 for residents of the Northern Territory was 6.2 times the national rate of 1.1 deaths per 100,000 population (Table 11.3). Rates for residents of other jurisdictions were generally close to the national rate.

Table 11.3: Assault (homicide) deaths, by state and territory of usual residence, Australia, 2011–12

Indicators	State and territory of usual residence							
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Deaths	69	48	50	38	20	5	4	15
Per cent	27.7	19.3	20.1	15.3	8.0	2.0	1.6	6.0
Age-standardised rate (deaths per 100,000 population)	0.9	0.9	1.1	1.6	1.2	1.1	1.1	6.8

Source: AIHW National Mortality Database.

The age-standardised rates of homicide for residents of *Remote* and *Very remote* areas were about 3 to 4 times the rate for residents of *Major cities* (Table 11.4).

Table 11.4: Assault (homicide) deaths, by remoteness of usual residence, Australia, 2011–12

Indicators	Remoteness of usual residence ^(a)					
	Major cities	Inner regional	Outer regional	Remote	Very remote	Total ^(b)
Deaths	161	32	30	13	8	244
Per cent	66.0	13.1	12.3	5.3	3.3	100
Age-standardised rate (deaths per 100,000 population)	1.0	0.8	1.4	4.2	3.5	n.p.

(a) Derived using the ASGS classification.

(b) Excludes 5 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Socioeconomic status

The number and rate of homicides varied with the socioeconomic status of the person's usual area of residence (Table 11.5). The age-standardised rate of homicide increased with socioeconomic disadvantage. The rate for residents of the *Most disadvantaged* areas (1.7 deaths per 100,000 population) was 3.4 times the rate for residents of the *Most advantaged* areas (0.5 per 100,000 population).

Table 11.5: Assault (homicide) deaths, by socioeconomic status, Australia, 2011–12

Indicators	SEIFA quintiles				
	Most disadvantaged	Second most disadvantaged	Middle	Second most advantaged	Most advantaged
Deaths	73	51	53	43	24
Per cent	29.3	20.5	21.3	17.3	9.6
Age-standardised rate (deaths per 100,000 population)	1.7	1.2	1.2	0.9	0.5

Note: Excludes 5 deaths where usual place of residence was not available.

Source: AIHW National Mortality Database.

Aboriginal and Torres Strait Islander people

The age-standardised homicide rate for Aboriginal and Torres Strait Islander people was over 6 times the rate for non-Indigenous Australians (Table 11.6).

Table 11.6: Key indicators for assault (homicide) deaths, Indigenous Australians and non-Indigenous Australians, Australia^(a), 2011–12

Indicator	Indigenous Australians			Non-Indigenous Australians		
	Males	Females	Persons	Males	Females	Persons
Deaths	25	10	35	101	54	155
Age-standardised rate (deaths per 100,000 population)	9.6	3.1	6.3	1.3	0.6	1.0
Rate ratio ^(b)	7.4	5.2	6.3	..	..	..
Rate difference ^(c)	8.3	2.5	5.3	..	..	..

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Rate ratios are standardised rate for Indigenous males, females and persons/standardised rate for non-Indigenous males, females and persons.

(c) Rate differences are standardised rate for Indigenous males, females and persons minus standardised rate for non-Indigenous males, females and persons.

Source: AIHW National Mortality Database.

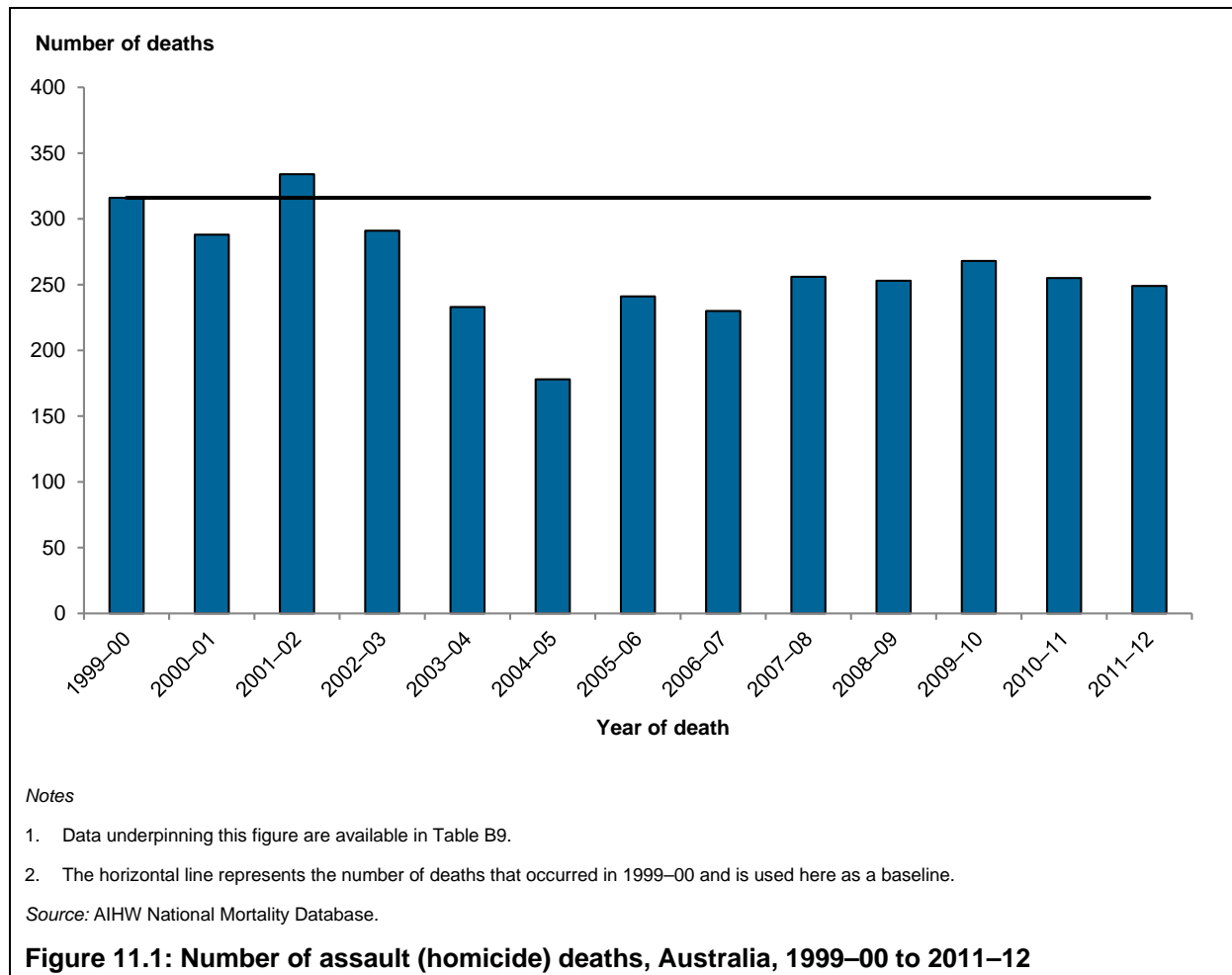
Mechanism of assault

Of the 171 male deaths due to assault that occurred in 2011–12, 37% (64) involved *Assault by a sharp object*, 19% (32) involved *Assault by firearms* and 16% (27) involved *Assault by bodily force*.

For the 78 female deaths due to assault, *Assault by a sharp object* accounted for 31% (24), while 23% (18) involved *Assault by blunt object* and 10% (8) involved *Assault by firearms*.

11.3 How have homicides changed over time?

Figure 11.1 compares the number of homicide deaths occurring each year with the baseline number of deaths (316) in 1999–00. For every year except 2001–02, the number of homicide deaths has been lower than in the baseline year. The largest difference occurred in 2004–05 when there were 138 fewer homicide deaths (178 in total). This should be interpreted in light of the following comparisons with supplementary sources.

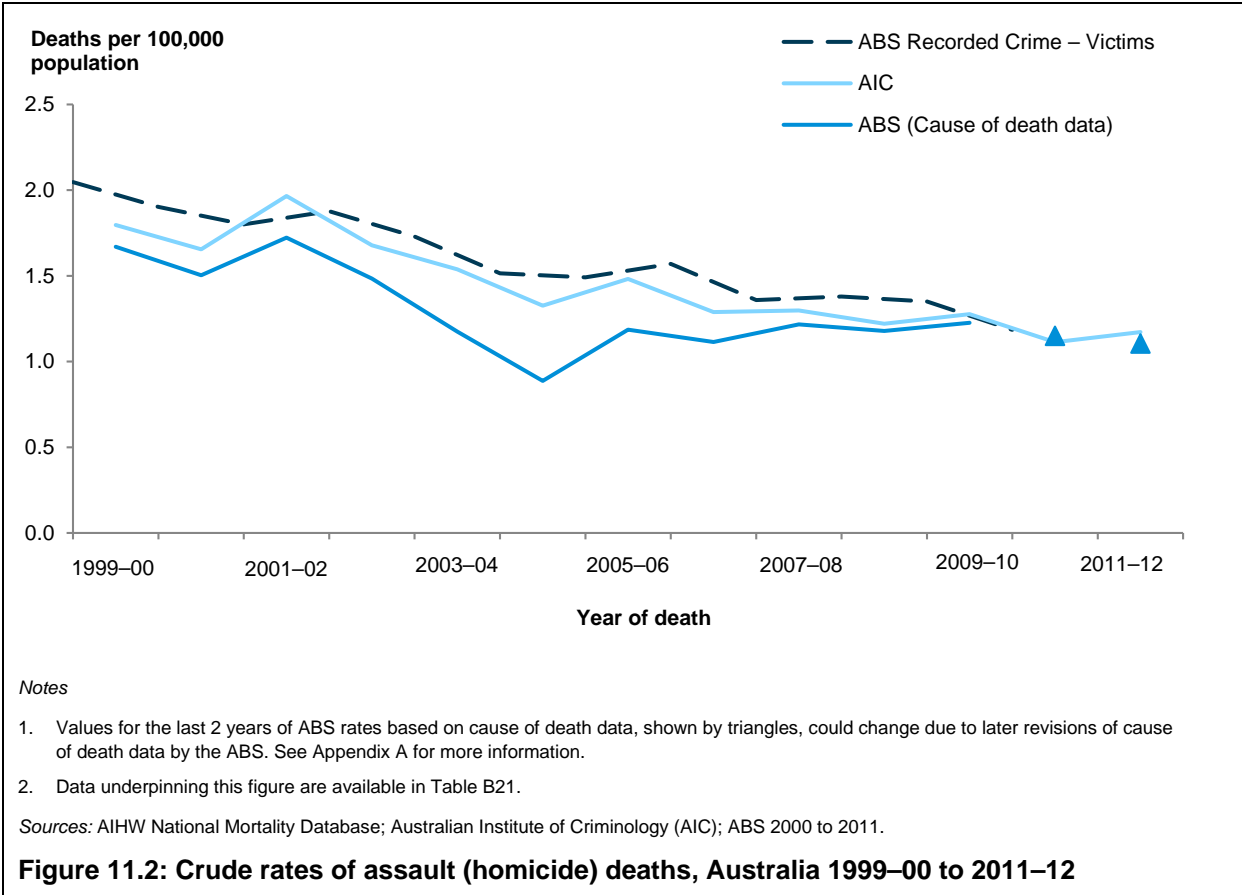


Crude rates of homicide based on the NMD data decreased from 1.7 per 100,000 population in 2000–01 to 0.9 in 2004–05 before tending to rise in subsequent years (Figure 11.2). Rates based on these data decreased by an average of 10.6% per year from 1999–00 to 2004–05 and by an average rate of 3.4% per year from 1999–00 to 2009–10.

These changes need to be treated with caution due to issues outlined in Appendix A. This has been previously reported, focusing on homicides in 2004–05 (AIHW: Henley & Harrison 2009). Estimates based on the NMD data are supplemented here by rates based on 2 other sources of data. Australian Institute of Criminology (AIC) homicide data indicate an average rate of decrease of 5.9% per year between 1999–00 and 2004–05 and of 3.3% per year between 1999–00 and 2009–10. Data on *Homicide and related offences* from the ABS's *Recorded crime—victims, Australia* publication series (ABS 2000 to 2011) indicated an average rate of decrease of 4.9% per year over a similar period, 1999 to 2010. It should be noted that differences in case definitions and methods between the sources are such that identical rates should not be expected. The main reason for using the supplementary

sources is to assess whether the dip in ABS homicide counts (deepest in 2004–05) is evident in other sources. The crime victimisation series shows a nearly linear downward trend with small fluctuations. The AIC homicide series shows a little more fluctuation than the crime victimisation series, with a small dip in 2004–05. Neither supplementary series shows a dip as large as that evident in the NMD data. All 3 series provide similar estimates for 2009–10, the latest year for which NMD data were essentially final at the time of writing.

Crude rates were calculated for NMD data to allow better comparability with the ABS *Recorded crime* and AIC-based estimates, which could not be age-adjusted. There was little difference between crude and adjusted rates for the NMD data.



Firearm-related homicides

There were 482 firearm-related homicides in the period from 1999–00 to 2011–12, of which 133 (28%) were of females (Figure B49). In the period following the introduction of the ABS’s revisions process (that is, 2006–07 onwards), the number of annual firearms-related deaths were more likely to be higher than the number of deaths that would have been recorded using the pre-revisions processes. The reasons for these higher numbers are detailed in Appendix A of this report and have previously been reported for the period from 1999 to 2010 (AIHW: Harrison & Henley 2015).

11.4 How have homicides varied by age and sex?

Age-standardised rates of homicides for males were consistently about double the rates for females (Figure 11.3). See Section 11.3 for cautionary notes on trends. Rates for both males and females declined between 1999–00 and 2004–05 and were relatively steady thereafter.

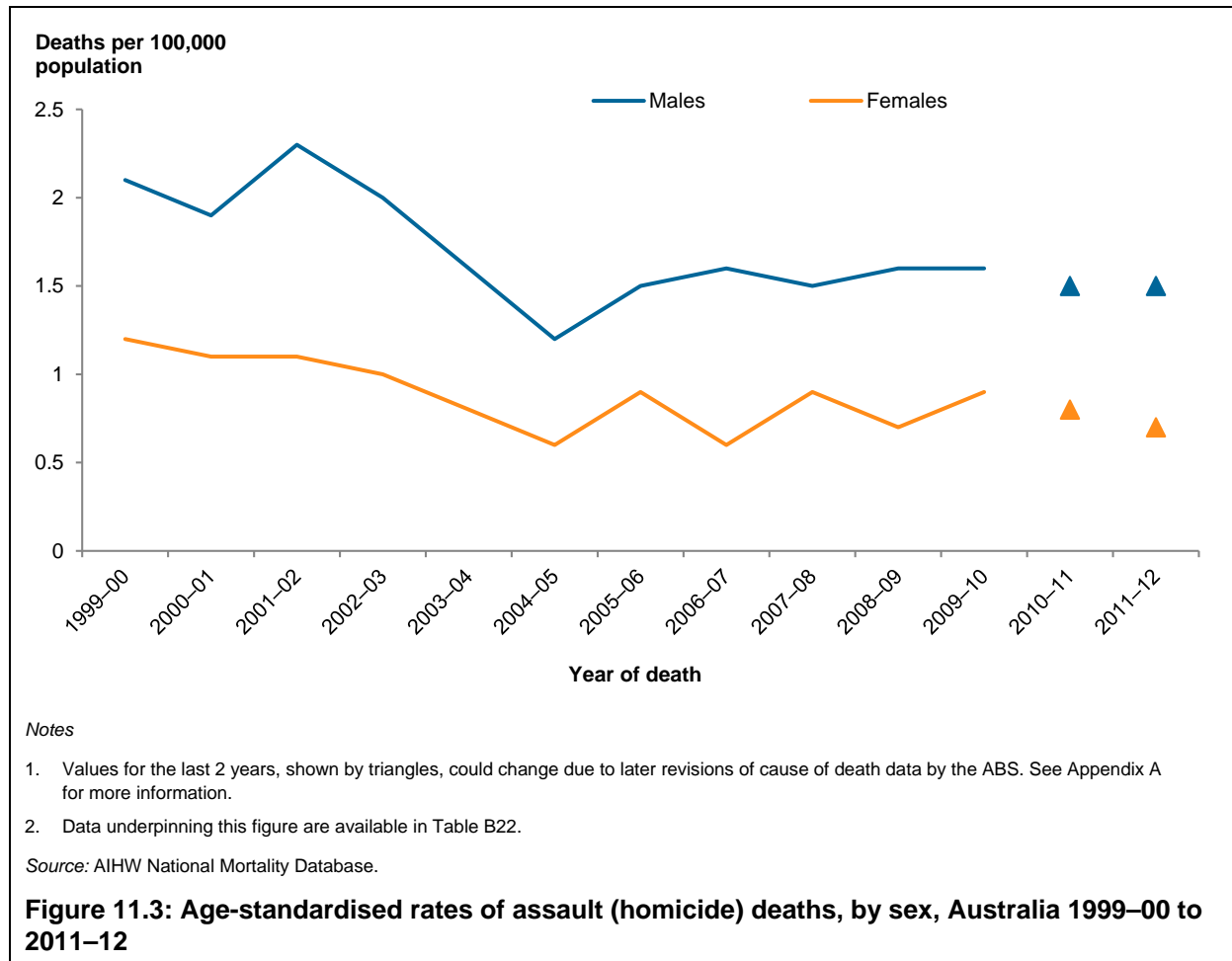
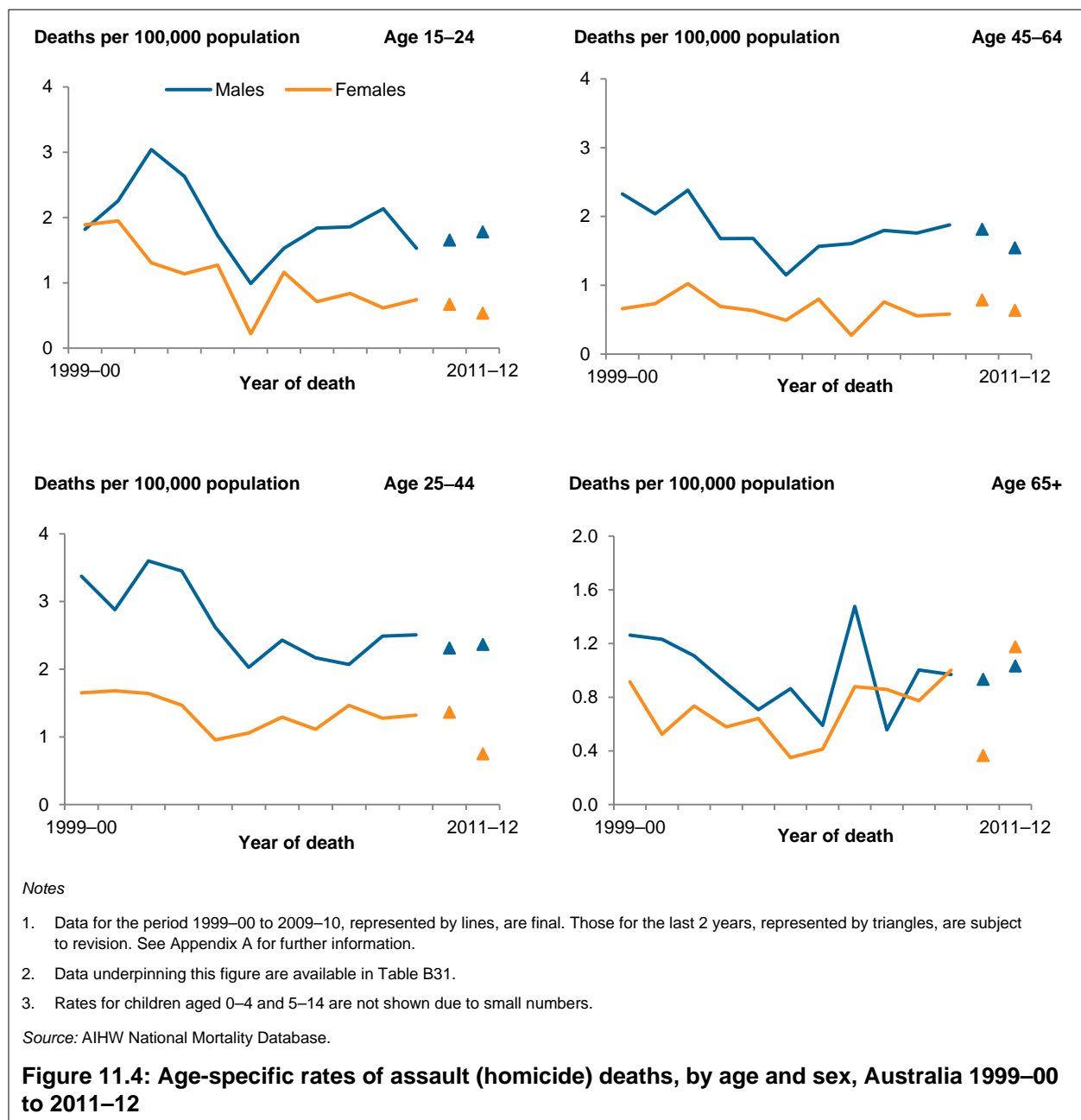


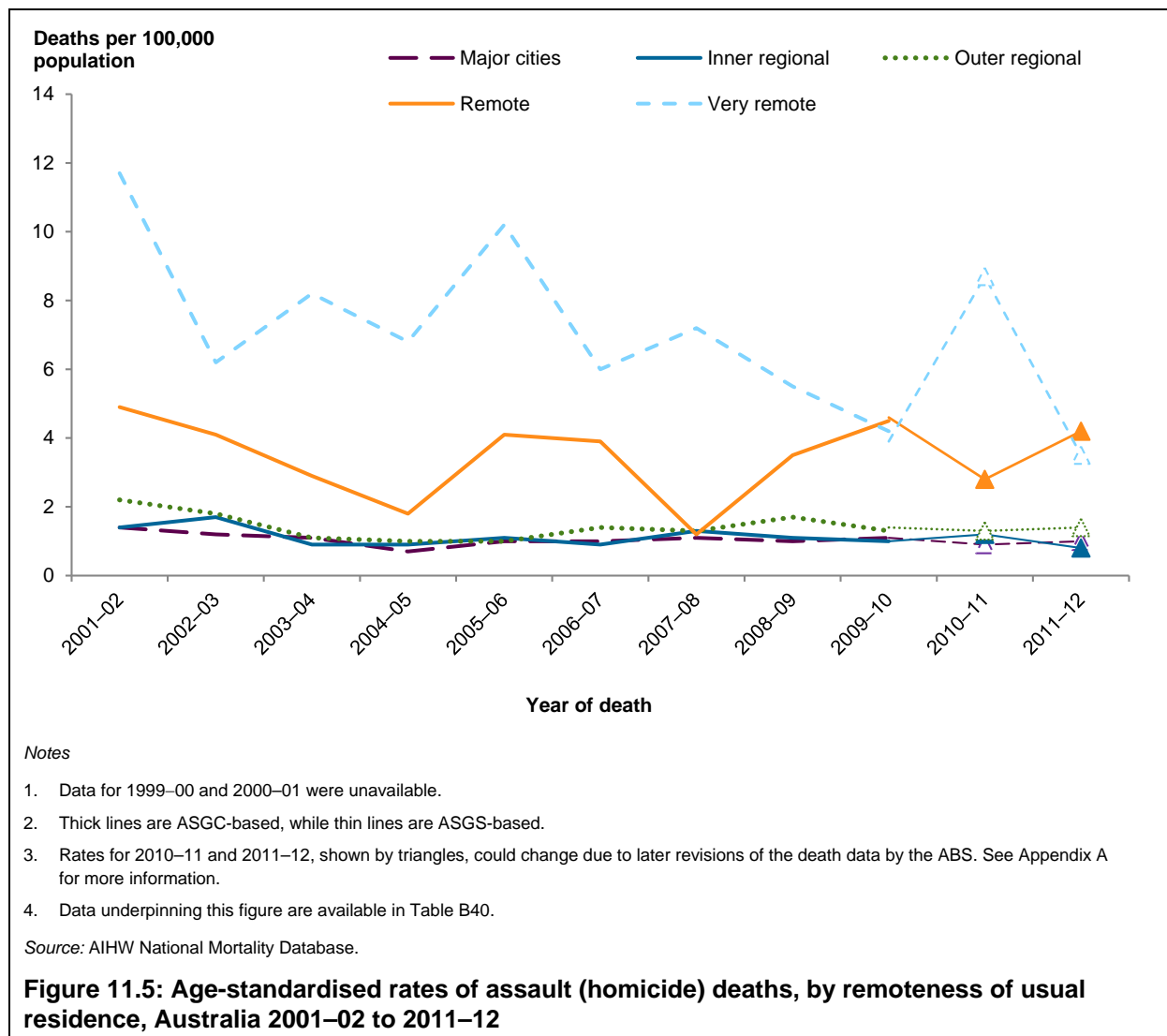
Figure 11.4 shows the changes in homicide rates over time by age and sex. Age-standardised rates for males were higher than for females across all age groups for almost all years. Many of the rates by age, sex and year are based on small numbers of deaths, and this contributes to the large fluctuations.



11.5 How have homicides varied by remoteness?

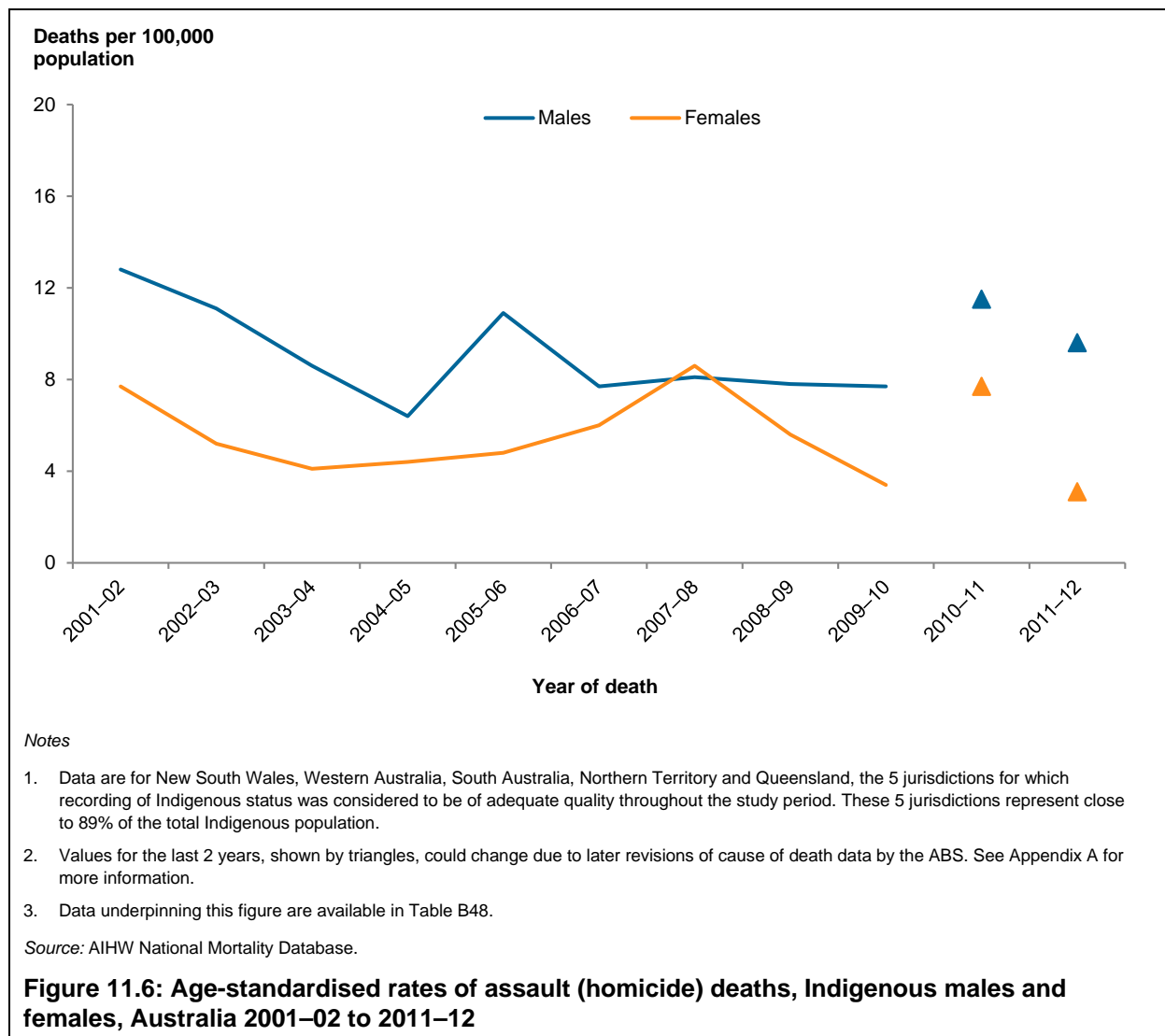
Rates of homicide death were consistently higher for residents of *Very remote* areas compared with all other remoteness areas (Figure 11.5). Rates were also elevated for residents of *Remote* areas in most years, while homicide rates for residents of the 3 least remote areas differed very little.

The year-to-year fluctuation of rates for residents of the *Very remote* and *Remote* areas of Australia is at least partly a reflection of the small population and number of incidents occurring each year.



11.6 How have homicides of Aboriginal and Torres Strait Islander people changed over time?

Age-standardised rates for both Indigenous males and females fluctuated markedly from year to year, partly due to relatively low numbers of deaths (Figure 11.6). Rates for males were generally at least 1.5 times as high as those for females, although in 2007–08, rates for females were slightly higher.



Appendix A: Data issues

This appendix provides information on the data used in the report and on issues relevant to interpreting the data. Further information on Australian injury mortality data for the period from 1999 to 2010 has previously been reported (AIHW: Harrison and Henley 2015).

Fatal injury data

Most data in this report on fatal injuries are from the AIHW National Mortality Database (NMD). The NMD comprises CODURF data, which are provided to the AIHW by the Registries of Births, Deaths and Marriages and the National Coronial Information System (NCIS) and coded by the ABS. Data are presented according to the financial year in which each death occurred, rather than year of registration or ABS reference year. There are 3 main reasons why the data are presented in this manner. Firstly, presenting data by year of occurrence provides a more meaningful interpretation of data in comparison with presenting data by year of registration where cases can be registered at a time significantly later (in some cases years) than when death actually occurred. Secondly, reporting by financial year is in line with the National Injury Surveillance Unit's policy of publishing reports based on morbidity data and finally, because data from the NMD are provided by calendar year of registration, the vast majority deaths that occurred in the first 6 months of the calendar year, but were not registered until the last 6 months of the calendar year will be included in the financial year of occurrence data.

Records that meet the following criteria were included in this report:

- death occurred on 1 July 1999 to 30 June 2012 and had been registered by 31 December 2012, and
- the UCoD was an external cause code in the range V01–Y36, or
- at least 1 MCoD was an external cause code in the range V01–Y36 and at least 1 other MCoD was a code for injury (S00–T75 or T79).

The codes are from the WHO International statistical classification of diseases and related health problems, 10th revision (WHO 2015). The external cause codes are from Chapter XX *External causes of morbidity and mortality* and the injury codes are from Chapter XIX *Injury, poisoning and certain other consequences of external causes*.

Box A1: Multiple causes of death (MCoD)

Box 1.1 provided standard definitions of the terms underlying cause of death (UCoD) and multiple causes of death (MCoD). MCoDs relate to the causes of death that contributed to death but were not related to the underlying cause. For example, an elderly person may fall and fracture their hip. This person's advanced age, frailty and perhaps other comorbid conditions may limit their capacity to tolerate injury, leading to death. In this instance, this record would most likely be assigned an UCoD of an external cause code for fall (W00–W19) and a MCoD code for hip injury (S72). In another example, an elderly person might suffer a heart attack that results in a fall and subsequently a hip fracture. As with the first example, a combination of factors may lead to death. In this instance, this record would most likely be assigned an UCoD code for acute myocardial infarction (I21) and a MCoD of an external cause code for fall (W00–W19) and a MCoD code for hip injury (S72). Both of these cases would be included in this report because the first example meets the second of the criteria listed in this section, while second example meets the third criterion.

Supplementary data sources

For some external causes of injury, trends in age-standardised rates over time calculated using MDB mortality data have been compared with trends in rates calculated using supplementary sources of mortality data. These comparisons were made for external causes shown in previous work to have been significantly affected by problems relating to cause of death classification (see 'Coding of deaths data').

Transport-related injury

Rates for deaths due to unintentional transport-related injury calculated using MDB mortality data were compared with rates calculated using data from the website of the road statistics section of the Bureau of Infrastructure, Transport and Regional Economics (BITRE) at <bitre.gov.au/publications/ongoing/road_deaths_australia_monthly_bulletins.aspx>. This website provides data on road deaths, but not total transport injury. The number of transport deaths for each financial year was estimated by multiplying the recorded number of road deaths by a factor obtained by dividing the number of transport deaths in the MDB data by the number of deaths occurring in traffic (on-road) deaths in the MDB data for each data year.

Drowning

Rates for deaths involving unintentional drowning were compared with rates calculated using data extracted online from the NCIS at <www.ncis.org.au> as at June 2015 as well as rates calculated using data extracted from national drowning reports published by the Royal Life Saving Society of Australia, which were available at <www.royallifesaving.com.au/facts-and-figures/research-and-reports/drowning-reports>.

All data extracted from the NCIS website were downloaded via Excel spreadsheets and read into Stata for analysis. Duplicate records (that is, records with matching NCIS numbers) were removed prior to performing analyses. Criteria for selecting drowning-related deaths are given in Table A1.

Table A1: Inclusion and exclusion criteria for drowning-related cases extracted from the NCIS website

Criteria for inclusion	Criteria for exclusion
(Case Type at Notification or Case Type at Completion) = Death due to External Cause(s) and Mechanism Level 2 = Drowning/near drowning.	Case Type at Completion = Death due to Natural Cause(s) or Intent at Completion = Intentional self-harm, Assault, Legal intervention, Operations of war, civil conflict and acts of terrorism or Complications of medical or surgical care.

Suicide

Rates for deaths due to suicides calculated using MDB mortality data were compared with rates calculated using data extracted online from the NCIS at <www.ncis.org.au> as at June 2015. All data extracted from the NCIS website were downloaded via Excel spreadsheets and read into Stata for analysis. Duplicate records (that is, records with matching NCIS numbers) were removed before performing analyses. Criteria for selecting suicides are given in Table A2.

Table A2: Inclusion and exclusion criteria for suicide cases extracted from the NCIS website

Criteria for inclusion	Criteria for exclusion
(Case Type at Notification or Case Type at Completion) = Death due to External Cause(s) and (Intent at Notification or Intent at Completion) = Intentional self-harm or Activity code Level 2 = Self-inflicted harm.	Case Type at Completion = Death due to Natural Cause(s) or Intent at Completion = Unintentional, Assault, Legal intervention, Operations of war, civil conflict and acts of terrorism or Complications of medical or surgical care.

Homicide

Rates for deaths due to homicides calculated using MDB mortality data were compared with rates calculated using case data extracted from the Australian Institute of Criminology (AIC) National Homicide Monitoring Program annual reports available at <http://www.aic.gov.au/crime_types/violence/homicide.html> and from reports of the ABS series *Recorded Crime—Victims* (ABS cat. no. 4510.0) available at <<http://www.abs.gov.au>>.

Coding of deaths data

The coded cause of death information on the CODURFs result from a process in which the ABS obtains data from state and territory death registers, which, in turn, obtain information from the doctor or coroner who certifies each death, and from a relative or other person who knew the deceased person. The ABS codes causes of death according to the 10th revision of the International Classification of Diseases (ICD-10).

If a death was due to an injury, the ICD-10 requires coding of the ‘external cause’ of the injury, such as a car crash of a particular type. Most injury deaths are certified by a coroner. For these deaths, the ABS seeks additional information required to code external causes from the NCIS, a national electronic repository of data on coroner cases.

Some injury deaths, and most deaths from other causes, are certified by a medical practitioner. In these instances, ABS coders rely on information about causes of death that was entered onto the medical certificate of death and transferred to the ABS via the state

or territory Registrar of Births, Deaths and Marriages. Of the deaths included in this report, fall injury death is the type that is most commonly certified by a doctor.

The result of this process is a record in an annual ABS mortality data file that summarises characteristics of the person who died (for example, age, sex and Indigenous status) and characteristics of his or her death (for example, causes, date, place at which the person usually lived).

Certain aspects of the method used by the ABS have differed according to the registration year of deaths during the period covered by this report. The reasons for making the changes and their nature have been reported by the ABS (ABS 2009a). The changes are described here because of their potential to affect injury death statistics, including those in this report.

Deaths registered to the end of 2005

Each death was assessed only once by an ABS officer, within about 1 year after the end of the year in which it was registered. For most injury deaths, coronial investigation had ended and information was available through the NCIS by the ABS's cut-off date. For some injury deaths, however, information was lacking in the NCIS when the death was assessed by an ABS officer. This could occur if a coroner was still investigating the death, or if information about it had not been entered into the NCIS. As with all deaths, the ABS applied ICD rules when selecting cause codes for these deaths. However, the agency came to the conclusion that the assignment of cause codes was problematic. The cause code assigned sometimes differed importantly from the cause code that would have been assigned had the data in NCIS been complete when the ABS ceased coding an annual set of data in order to finalise the file for reporting and release. Deaths due to suicide and homicide were most affected because the records for these causes tended to take longer than others to be finalised in the NCIS. A study focused on suicide deaths in 2004 estimated that ABS data for the same period underestimated suicide by 16%, plus an uncertain further proportion due to deaths that had Open status in the NCIS, or had not been entered into the NCIS, when the study was conducted (Harrison et al. 2009). A study of injury deaths that occurred in the year to 30 June 2005 found that other external causes were also affected; it was concluded that deaths in that year due to transport accidents were under-enumerated in the ABS cause of death data (Henley & Harrison 2009).

Deaths registered in 2006

The initial version of this set of records, released in 2008, was affected in much the same way as the file of deaths registered in 2005. The ABS made a second release of this file in 2012, coded on the basis of information that was in the NCIS by 2011 (that is, up to 3 years after the cut-off date for the initial release), and applied certain other changes, as described in the next section (ABS 2012a). The second release file of 2006 registrations was used for this report.

Deaths registered in 2007 to 2012

The ABS introduced several changes in response to the problems outlined earlier in this Section, which have been applied to deaths registered in 2007 and subsequent years (ABS 2009a). The most important aspect of the changes was to make 3 releases of the data concerning deaths registered in each calendar year: *Preliminary* (released a little over 1 year after the end of the registration year), *Revised* (1 year after that) and *Final* (2 years after *Preliminary*). Information that appears in the NCIS too late to be used by the ABS for 1 release can inform later releases, with the result that cause codes for some coroner-certified deaths change between releases. In this report, we used *Final* release data for deaths

registered in 2009 and 2010, *Revised* release data for deaths registered in 2011 and *Preliminary* release data for deaths registered in 2012, which were the latest data available when analysis was undertaken. Also introduced when processing deaths registered in 2007 were changes to coding practice, the most notable being use of the ICD-10 Undetermined intent categories for certain deaths for which information in the NCIS might change or become more complete later (ABS 2009a).

Further changes were implemented by the ABS for deaths registered in 2008 and later. For both open and closed coroner cases, more time has been spent investigating part II of the Medical Certificate of Death when information in part I is not sufficient to allow assignment of a specific UCoD code. Also, increased resources have been used and more time spent investigating coroners' reports to identify specific causes of death. This involved making increased use of police reports, toxicology reports, autopsy reports and coroners findings for both open and closed cases to minimise the use of non-specific causes and intents (ABS 2010a, 2011a, 2012a).

Due to the multiple release process, future reports based on later releases of cause of death data might show different results to those presented in this report. Of the cases included in this report and that have dates of death in 2009–10 or earlier, much fewer than 1% were based on *Preliminary* or *Revised* CODURF releases. Hence, the ABS revision process will have no more than a very small effect on the data for years of death up to and including 2009–10. In contrast, all of the cases reported that have year of death 2011–12, and 54% of those with year of death 2010–11, were based on *Preliminary* or *Revised* CODURF releases. Re-analysis of deaths data for those periods when *Final* CODURF releases are available can be expected to produce different results. In particular, some of the deaths assigned cause codes from the Undetermined intent block of ICD-10 are likely to be re-coded by the ABS to more specific categories because, with the passage of time between the ABS processing cut-off date for earlier releases and the cut-off date for the *Final* release, additional and more final information will have become available in the NCIS.

Appendix D compares counts for *Preliminary*, *Revised* and *Final* releases of CODURF data for all injury deaths and a number of external causes of injury. For reference years 1999 to 2005, only a single release of data was available. For reference year 2006, an *Initial* and *Final* release of data were available, while for reference years 2007 to 2011, all 3 releases of data were available. The reference year is most commonly determined by the year in which the death is registered and when the registration data are received by the ABS. In some instances, the reference year may include deaths registered in years before the reference year, but not received by the ABS until the reference year or the first quarter of the subsequent year. For a more detailed definition of reference year, refer to the 'Explanatory notes' of the ABS's *2013 Causes of Death* report (ABS 2015).

Further information on effects of the matters discussed in this section on estimates of injury mortality for the period from 1999 to 2010 has previously been reported (AIHW: Harrison & Henley 2015).

Indigenous status data

Although the identification of Indigenous Australians in deaths data is incomplete in all state and territory registration systems, 5 jurisdictions (New South Wales, Queensland, Western Australia, South Australia and the Northern Territory) have been assessed by the ABS and AIHW as having adequate identification from at least 2001 onwards (AIHW 2014). Hence, trends data in this report in relation to Indigenous Australians are presented from 2001–02 to 2011–12. Mortality data for these 5 jurisdictions should not be assumed to represent the

experience in other jurisdictions. Data for these 5 jurisdictions over-represent Indigenous populations in less urbanised and more remote locations.

Data coverage

The extent of under-identification of Indigenous deaths in death registrations was estimated in the ABS Census Data Enhancement Indigenous Mortality Quality Study, by linking 2011 census data with deaths registered from 10 August 2011 to 27 September 2012 (ABS 2013c). Indigenous status as recorded in the 2 collections was compared and identification rates were calculated by comparing the number of deaths according to death registrations with the expected number of Indigenous deaths as determined by the census. Identification rates and their reciprocals are shown in Table A3. Identification rates were less than 1.0, indicating under-identification of Indigenous deaths in death registrations, for New South Wales, Queensland, Western Australia and the group that includes the other jurisdictions (notably in the present context, South Australia and Victoria). The opposite is seen for the Northern Territory, indicating an over-representation of Indigenous deaths in death registrations relative to the census.

Table A3: Indigenous deaths identification rates, by state and territory, Australia, 2011–2012

State or territory	Identification rate ^(a)	Adjustment factor ^(b)
New South Wales	0.70	1.42
Queensland	0.80	1.24
Western Australia	0.88	1.14
Northern Territory	1.04	0.96
Other states/territories	0.40	2.49
Australia ^(c)	0.72	1.39

(a) Calculated by dividing the number of Indigenous deaths according to death registrations by the expected number of deaths as determined by the census.

(b) Calculated as the reciprocal of the identification rate.

(c) Includes all states and territories.

Note: Deaths registered 10 August 2011 to 27 September 2012.

Source: ABS 2013c.

The ABS continues to work with state and territory registrars of Births, Deaths and Marriages and other stakeholders to improve the level of identification of Indigenous deaths in each jurisdiction (ABS 2009b, 2013b; AIHW 2011).

Adjustment of injury deaths

Indigenous injury deaths in this report have not been adjusted for under-identification using the available adjustment factors described earlier for 2 main reasons:

1. The coverage estimates are for deaths from all causes. Injury deaths differ from most deaths in the way data are collected, which might affect Indigenous identification: most deaths are certified by a doctor, while the great majority of injury deaths are reported by police to a coroner.

2. Comparable adjustment factors are not available for years before 2010–12 due to differences in the methodology used. This report covers Indigenous deaths in the period 2001–02 to 2011–12, during which coverage of Indigenous deaths is likely to have varied.

Late and revised registration of Indigenous deaths

Incomplete and potentially varying completeness of Indigenous identification for registered deaths is not the only reason for variation in the number of Indigenous deaths registered.

Unusual fluctuation in the initially reported number of deaths of Aboriginal and Torres Strait Islander people in Western Australia after the 2006 data year prompted investigation by the ABS and the Western Australian Registry of Births, Deaths and Marriages. This revealed a system error that led to some non-Indigenous deaths being recorded as Aboriginal and/or Torres Strait Islander deaths in 2007 and 2008 and perhaps also in 2009 (ABS 2011b). The Western Australia data used for this report have been corrected by the ABS.

The ABS has reported that a substantial rise in the number of Indigenous deaths registered in Queensland in 2010 was due to the late registration of certain deaths that occurred in earlier years (ABS 2011b). The ABS has recommended that statistical reporting should be undertaken in a way that avoids giving the false impression that Indigenous mortality rose in 2010. The special method recommended by the ABS is not required for this report, because data are reported here by year of death, not year of death registration. The late-registered deaths were included in the unit record files used for the present report.

Population data and the calculation of rates

General population

Rates were calculated using as the denominator the estimated resident population (ERP) as at 31 December in the relevant year (for example, 31 December 2006 for 2006–07 data). Where possible, the final release of ERPs was used.

Indigenous population

Rates of injury death of Aboriginal and Torres Strait Islander people are provided in this report for the period from 2001–02 to 2011–12, using data from 5 jurisdictions (New South Wales, Queensland, Western Australia, South Australia and the Northern Territory). Data were selected on the basis of place of usual residence. Restriction of inclusion by jurisdiction reflects assessments of the quality of identification of indigenous status in death registration systems. The assessments are subject to review and some recent AIHW reports include NSW data from 1999 onwards (AIHW 2014).

For non-Indigenous Australians, population denominators were derived by subtracting the Aboriginal and Torres Strait Islander population from the total Australian estimated resident population (of the states and territories eligible for inclusion) as at 31 December of the relevant year. Current standard practice in AIHW reports is to omit cases where Indigenous status was not-stated or unknown.

Rates and change in rates

Directly age-standardised rates were calculated using the Australian population in 2001 as the standard (ABS 2002). Estimated trends in age-standardised rates were reported as average annual percentage changes obtained using negative binomial regression modelling,

performed in Stata. Age-standardised rates could not be calculated using data from some supplementary sources. In these instances, crude rates were calculated using the supplementary and NMD data, for the sake of comparability.

Quantifying variability

The data presented in this report are subject to 2 types of statistical error, non-random and random. (A third type of statistical error, sampling error, does not apply here because none of the data sources used involved probability sampling.)

Non-random error

Some amount of non-random error is to be expected in administrative data collections such as the NMD, on which this report relies. For example, non-random error could occur if the approach to assigning cause codes to deaths were to differ systematically between jurisdictions or over time. Systems are in place to encourage uniform data collection and coding, and scrutiny of data during analysis includes checking for patterns that might reflect non-random error. Nevertheless, some non-random error remains. Identified or suspected non-random errors large enough to materially affect findings are mentioned in other reports (see 'Coding of deaths data').

Random error

The values presented in the report are subject to random error, or variation. Variation is relatively large when the case count is small (especially if less than about 10).

Some of the topics for which results are reported compare groups that vary widely in case count, largely due to differences in population size (for example, the population of NSW is more than 30 times as large as the NT population and the population of the *Major Cities* remoteness area is nearly 90 times that of the *Very Remote* area). In this situation, year-to-year changes in counts or rates for the smaller-population groups may be subject to large random variation. There is potential to misinterpret such fluctuations as meaningful rises or falls in occurrence.

Classification of remoteness area

Remoteness area in this report refers to the place of usual residence of the person who died. The remoteness areas for years 1999–00 to 2009–10 were specified according to the ABS Australian Standard Geographical Classification (ASGC), while remoteness areas for years 2009–10 to 2011–12 were specified according to the ABS Australian Statistical Geography Standard (ASGS). Where trends in age-standardised rates according to the remoteness area of the person's usual place of residence are charted within this report, the rate for 2009–10 is shown based on both the ASGC and ASGS classifications. Mention is made in the text where any difference between the ASGC-based and ASGS-based rates for 2009–10 is large.

Australian Standard Geographical Classification (ASGC)

Australia can be divided into several regions based on their distance from urban centres. This is considered to determine the range and types of services available. In this report, remoteness area refers to the place of usual residence of the deceased person, assigned on the basis of the reported statistical local area (SLA) of residence.

Remoteness categories were defined in a manner based on the Accessibility/Remoteness Index of Australia (ARIA). According to this method, remoteness is an index applicable to any point in Australia, based on road distance from urban centres of 5 sizes. The reported areas are defined as the following ranges of the index:

- *Major cities* (for example, Sydney, Geelong, Gold Coast), ARIA index 0 to 0.2
- *Inner regional* (for example, Hobart, Ballarat, Coffs Harbour), ARIA index >0.2 and ≤2.4
- *Outer regional* (for example, Darwin, Cairns, Coonabarabran), ARIA index >2.4 and ≤5.92
- *Remote* (for example, Alice Springs, Broome, Strahan), ARIA index of >5.92 and ≤10.53
- *Very remote* (for example, Coober Pedy, Longreach, Exmouth), ARIA index >10.53.

Most SLAs lie entirely within 1 of the 5 areas. If this was so for all SLAs, then each record could simply be assigned to the area in which its SLA lies. However, some SLAs overlap 2 or more of the areas. Records with these SLAs were assigned to remoteness areas in proportion to the area-specific distribution of the resident population of the SLA according to the 2006 census. Each record in the set having a particular SLA code was randomly assigned to 1 or other of the remoteness areas present in it, in proportion to the resident population of that SLA.

Australian Statistical Geography Standard (ASGS)

The ASGS is a hierarchical classification system of geographical regions and consists of a number of interrelated structures. The ASGS brings all the regions for which the ABS publishes statistics within a single framework and has been used by the ABS for the collection and dissemination of geographically classified statistics from 1 July 2011. It provides a common framework of statistical geography and enables the production of statistics that are comparable and can be spatially integrated.

Australian Statistical Geography Standard (ASGS) Volume 1—Main Structure and Greater Capital City Statistical Areas (ABS 2010b), is the first in a series of volumes that details the various structures and regions of the ASGS. Its purpose is to outline the conceptual basis of the regions of the Main Structure and the Greater Capital City Statistical Areas and their relationship to each other. This product contains several elements including the ASGS manual, maps, codes and names and the digital boundaries current for the ASGS Edition 2011 (date of effect 1 July 2011). The digital boundaries for Volume 1 of the ASGS are the spatial units for the main structure and the Greater Capital City Statistical Areas. These spatial units are:

- Mesh Blocks (MB)
- Statistical Area Level 1 (SA1)
- Statistical Area Level 2 (SA2)
- Statistical Area Level 3 (SA3)
- Statistical Area Level 4 (SA4)
- Greater Capital City Statistical Areas (GCCSA)
- State and Territory (S/T).

Each case is allocated to 1 of 5 remoteness areas on the basis of the deceased person's place of usual residence according to Statistical Area Level 2 (SA2). Most SA2s lie entirely within 1 of the 5 areas. If this was so for all SA2s, then each record could simply be assigned to the area in which its SA2 lies. However, some SA2s overlap 2 or more of the areas. Records with these SA2s were assigned to remoteness areas in proportion to the

area-specific distribution of the resident population of the SA2 according to the 2011 census. For hospitalisations, each record in the set having a particular SA2 code was assigned to 1 or other of the areas probabilistically, in proportion to the resident population of that SA2. The resulting values are integers. A SA2 to remoteness area map can be found at the ABS website (ABS 2012b).

Socioeconomic status

Data on SES groups are defined using the ABS's Socio-Economic Indexes For Areas 2011— SEIFA 2011 (ABS 2013a).

The SEIFA 2011 data are generated by the ABS using a combination of 2011 Census data such as income, education, health problems/disability, access to internet, occupation/unemployment, wealth and living conditions, dwellings without motor vehicles, rent paid, mortgage repayments and dwelling size. Composite scores are averaged across all people living in areas and defined for areas based on the Census collection districts. However, they are also compiled for higher levels of aggregation. The SEIFAs are described in detail on the ABS website <www.abs.gov.au>.

The SEIFA Index of Relative Socio-Economic Disadvantage (IRSD) is one of the ABS's SEIFA indexes. The relative disadvantage scores indicate the collective SES of the people living in an area, with reference to the situation and standards applying in the wider community at a given point in time. A relatively disadvantaged area is likely to have a high proportion of relatively disadvantaged people. However, such an area is also likely to contain people who are not disadvantaged, as well as people who are relatively advantaged.

Separation rates by SES were generated by the AIHW using the IRSD scores for the SA2 of usual residence of the patient reported or derived for each separation. The '1—Lowest' group represents the areas containing the 20% of the national population with the most disadvantage, and the '5—Highest' group represents the areas containing the 20% of the national population with the least disadvantage. These SES groups do not necessarily represent 20% of the population in each state or territory. Disaggregation by SES group is based on the area of usual residence of the patient, not the location of the hospital.

The following labels for each socioeconomic group have been used throughout this report:

Label	Socioeconomic status group
1—Lowest	Most disadvantaged
2	Second most disadvantaged
3	Middle
4	Second least disadvantaged
5—Highest	Least disadvantaged.

Suppression of small cell values

Small cell counts have not been suppressed in line with recent changes to AIHW policy in relation to mortality data. However, age-standardised rates based on cell counts of 3 or less have been suppressed because these rates are subject to high year-to-year variability and may be easily misinterpreted.

Confidentiality and reliability of data

The AIHW operates under a strict privacy regime that has its basis in Section 29 of the *Australian Institute of Health and Welfare Act 1987* (the AIHW Act) and the *Privacy Act 1988* (the Privacy Act).

Section 29 of the AIHW Act requires that confidentiality of data relating to persons (living and deceased) and organisations be maintained. The Privacy Act governs confidentiality of information about living individuals.

As well as the protection offered by AIHW Act and the Privacy Act, personal information held by the AIHW is covered by a range of other Commonwealth, state and territory legislation.

The AIHW is committed to reporting that maximises the value of information released for users, while being statistically reliable and meeting legislative requirements. To ensure the confidentiality of its data, the AIHW has a range of policies, protocols and processes in place—the AIHW policy on reporting to manage confidentiality and reliability (the AIHW Confidentiality Policy) is an important example, because it deals with how data should be reported to ensure confidentiality.

AIHW Confidentiality Policy, a summary

The AIHW Confidentiality Policy contains 7 guidelines to assist those working with data to apply it to their outputs.

Guideline 1

It is AIHW policy that if the data being considered have already been released publicly at the granularity AIHW intends to release, further confidentialisation is not required.

Guideline 2

Cells in tables where the value of the cell is the same as a row/column/wafer total (that is, all other cells in the row, column or wafer are zero) generally lead to disclosure of an additional attribute. It is AIHW policy that these cells need to be confidentialised unless the attribute that would be disclosed is deemed to be non-sensitive in the context of the data being published.

Guideline 3

It is AIHW policy that data on organisations must be confidentialised if 1 organisation contributes more than 85% of the total, or 2 organisations more than 90%, unless the attribute that would be disclosed is deemed to be non-sensitive in the context of the data being published or the organisation(s) have given consent to release.

Guideline 4

It is AIHW policy that guidelines 2 and 3 need to be applied so as to ensure that attribute confidentiality is maintained within tables and across tables within the same release. That is, when assessing whether a cell needs to be confidentialised, consideration needs to be given as to whether there are other cells in that table, or other tables in the release, that may require consequential confidentialisation.

Guideline 5

Rates, averages and other statistics based on denominators of less than 100 are usually not reliable and it is AIHW policy that they should generally not be reported.

Guideline 6

It is AIHW policy that if data suppliers or clients require additional suppression rules be applied to an AIHW release in order to manage confidentiality or reliability, then these should be applied. Where such additional rules are applied, they should be described in the release, and it should be noted that this approach is required by the data supplier.

Guideline 7

It is AIHW policy that, if a client wishes to be provided with data output (for example, tables) at a more detailed level than any of the above guidelines would allow, then they may apply to be provided output against which some or all of the above guidelines are not applied. Provision of this more detailed output would be subject to the client signing a confidentiality undertaking and agreeing that any publication of information (including in online data cubes) based on output released to them will comply with this policy.

Appendix B: Additional tables

Table B1: Number of injury deaths as a percentage of all causes of mortality, 1999–00 to 2011–12

Year of death	All causes	Injuries (number)	Injuries (%)
1999–00	128,436	10,361	8.1
2000–01	128,964	10,028	7.8
2001–02	130,326	9,851	7.6
2002–03	132,466	9,942	7.5
2003–04	133,356	9,916	7.4
2004–05	131,381	9,723	7.4
2005–06	134,081	9,966	7.4
2006–07	135,888	10,197	7.5
2007–08	140,746	10,506	7.5
2008–09	143,726	11,263	7.8
2009–10	141,019	10,819	7.7
2010–11	145,363	11,277	7.8
2011–12	146,717	11,192	7.6

Source: AIHW National Mortality Database.

Table B2: Change in number of unintentional transport injury deaths from 1999–00 baseline, 1999–00 to 2011–12

Year of death	Count	Change from 1999–00
1999–00	2,039	–
2000–01	2,015	24
2001–02	2,021	18
2002–03	1,893	146
2003–04	1,735	304
2004–05	1,692	347
2005–06	1,770	269
2006–07	1,813	226
2007–08	1,685	354
2008–09	1,703	336
2009–10	1,603	436
2010–11	1,595	444
2011–12	1,534	505

Source: AIHW National Mortality Database.

Table B3: Change in number of unintentional drowning deaths from 1999–00 baseline, 1999–00 to 2011–12

Year of death	Count	Change from 1999–00 ^(a)
1999–00	328	–
2000–01	341	(13)
2001–02	296	32
2002–03	291	37
2003–04	271	57
2004–05	244	84
2005–06	253	75
2006–07	275	53
2007–08	235	93
2008–09	261	67
2009–10	310	18
2010–11	310	18
2011–12	263	65

(a) Brackets indicate differences in counts where the total number of deaths is greater than the baseline year.

Source: AIHW National Mortality Database.

Table B4: Change in number of unintentional poisoning by pharmaceuticals deaths from 1999–00 baseline, 1999–00 to 2011–12

Year of death	Count	Change from 1999–00
1999–00	1,313	–
2000–01	1,072	241
2001–02	668	645
2002–03	684	629
2003–04	829	484
2004–05	746	567
2005–06	700	613
2006–07	777	536
2007–08	917	396
2008–09	970	343
2009–10	1,037	276
2010–11	1,065	248
2011–12	1,023	290

Source: AIHW National Mortality Database.

Table B5: Change in number of unintentional poisoning by other substances deaths from 1999–00 baseline, 1999–00 to 2011–12

Year of death	Count	Change from 1999–00 ^(a)
1999–00	382	–
2000–01	368	14
2001–02	336	46
2002–03	374	8
2003–04	293	89
2004–05	299	83
2005–06	266	116
2006–07	367	15
2007–08	370	12
2008–09	412	(30)
2009–10	416	(34)
2010–11	392	(10)
2011–12	397	(15)

(a) Brackets indicate differences in counts where the total number of deaths is greater than the baseline year.

Source: AIHW National Mortality Database.

Table B6: Change in number of unintentional fall injury deaths from 1999–00 baseline, 1999–00 to 2011–12

Year of death	Count	Change from 1999–00 ^(a)
1999–00	2,628	–
2000–01	2,568	60
2001–02	2,856	(228)
2002–03	3,018	(390)
2003–04	2,964	(336)
2004–05	2,884	(256)
2005–06	3,080	(452)
2006–07	3,126	(498)
2007–08	3,248	(620)
2008–09	3,472	(844)
2009–10	3,509	(881)
2010–11	3,953	(1,325)
2011–12	3,903	(1,275)

(a) Brackets indicate differences in counts where the total number of deaths is greater than the baseline year.

Source: AIHW National Mortality Database.

Table B7: Change in number of unintentional thermal injury deaths from 1999–00 baseline, 1999–00 to 2011–12

Year of death	Count	Change from 1999–00 ^(a)
1999–00	148	–
2000–01	129	19
2001–02	135	13
2002–03	175	(27)
2003–04	140	8
2004–05	157	-9
2005–06	128	20
2006–07	122	26
2007–08	133	15
2008–09	291	(143)
2009–10	106	42
2010–11	91	57
2011–12	116	32

(a) Brackets indicate differences in counts where the total number of deaths is greater than the baseline year.

Source: AIHW National Mortality Database.

Table B8: Change in number of intentional self-harm (suicide) deaths from 1999–00 baseline, 1999–00 to 2011–12

Year of death	Count	Change from 1999–00
1999–00	2,516	–
2000–01	2,414	102
2001–02	2,376	140
2002–03	2,284	232
2003–04	2,195	321
2004–05	2,043	473
2005–06	2,124	392
2006–07	2,228	288
2007–08	2,229	287
2008–09	2,385	131
2009–10	2,364	152
2010–11	2,407	109
2011–12	2,496	20

Source: AIHW National Mortality Database.

Table B9: Change in number of assault deaths (homicide) from 1999–00 baseline, 1999–00 to 2011–12

Year of death	Count	Change from 1999–00 ^(a)
1999–00	316	–
2000–01	288	28
2001–02	334	(18)
2002–03	291	25
2003–04	233	83
2004–05	178	138
2005–06	241	75
2006–07	230	86
2007–08	256	60
2008–09	253	63
2009–10	268	48
2010–11	255	61
2011–12	249	67

(a) Brackets indicate differences in counts where the total number of deaths is greater than the baseline year.

Source: AIHW National Mortality Database.

Table B10: Counts and age-standardised rates for total injury deaths (all causes), by sex, Australia 1999–00 to 2011–12

Year of death	Males		Females		Persons	
	Count	Rate ^(a)	Count	Rate ^(a)	Count	Rate ^(a)
1999–00	6,740	77.3	3,621	34.7	10,361	55.4
2000–01	6,506	73.8	3,522	32.7	10,028	52.6
2001–02	6,231	69.7	3,620	32.4	9,851	50.6
2002–03	6,258	69.1	3,684	32.3	9,942	50.1
2003–04	6,210	67.8	3,706	31.9	9,916	49.1
2004–05	6,076	64.7	3,647	30.5	9,723	47.2
2005–06	6,148	64.2	3,818	31.1	9,966	47.2
2006–07	6,357	64.5	3,840	30.6	10,197	47.2
2007–08	6,491	64.3	4,015	31.2	10,506	47.3
2008–09	6,950	67.0	4,313	32.6	11,263	49.4
2009–10	6,703	63.1	4,116	30.2	10,819	46.2
2010–11	6,788	62.5	4,489	31.7	11,277	46.8
2011–12	6,806	61.2	4,386	30.6	11,192	45.5

(a) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B11: Counts and crude rates of unintentional transport injury deaths injury, by sex, Australia 1999–00 to 2011–12

Year of death	ABS		BITRE estimate	
	Count	Rate ^(a)	Count	Rate ^(a)
1999–00	2,039	10.8	2,060	10.9
2000–01	2,015	10.5	2,063	10.8
2001–02	2,021	10.4	2,016	10.4
2002–03	1,893	9.7	1,954	10.0
2003–04	1,735	8.8	1,860	9.4
2004–05	1,692	8.4	1,840	9.2
2005–06	1,770	8.7	1,900	9.4
2006–07	1,813	8.8	1,872	9.1
2007–08	1,685	8.0	1,727	8.2
2008–09	1,703	7.9	1,800	8.4
2009–10	1,603	7.3	1,631	7.5
2010–11	1,595	7.2	1,594	7.2
2011–12	1,534	6.8	1,581	7.0

(a) Deaths per 100,000 population.

Sources: AIHW National Mortality Database; Bureau of Infrastructure, Transport and Regional Economics (BITRE).

Table B12: Counts and age-standardised rates of unintentional transport injury deaths injury, by sex, Australia 1999–00 to 2011–12

Year of death	Males		Females	
	Count	Rate ^(a)	Count	Rate ^(a)
1999–00	1,478	15.9	561	5.8
2000–01	1,480	15.8	535	5.5
2001–02	1,502	15.8	519	5.2
2002–03	1,416	14.7	477	4.7
2003–04	1,261	12.9	474	4.6
2004–05	1,253	12.7	439	4.2
2005–06	1,320	13.2	450	4.3
2006–07	1,365	13.4	448	4.2
2007–08	1,241	11.9	444	4.1
2008–09	1,257	11.7	446	4.0
2009–10	1,199	11.0	404	3.6
2010–11	1,192	10.7	403	3.5
2011–12	1,126	10.0	408	3.5

(a) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B13: Counts and crude rates for unintentional drowning deaths, Australia 1999–00 to 2011–12

Year of death	ABS		RLSS		NCIS	
	Count	Rate ^(a)	Count	Rate ^(a)	Count	Rate ^(a)
1999–00	328	1.7	–	–	–	–
2000–01	341	1.8	–	–	–	–
2001–02	296	1.5	–	–	295	1.5
2002–03	291	1.5	326	1.7	292	1.5
2003–04	271	1.4	296	1.5	256	1.3
2004–05	244	1.2	281	1.4	252	1.2
2005–06	253	1.2	310	1.5	266	1.3
2006–07	275	1.3	282	1.4	260	1.3
2007–08	235	1.1	282	1.3	243	1.1
2008–09	261	1.2	311	1.4	264	1.2
2009–10	310	1.4	308	1.4	292	1.3
2010–11	310	1.4	282	1.3	258	1.1
2011–12	263	1.2	276	1.2	244	1.1

(a) Deaths per 100,000 population.

Sources: AIHW National Mortality Database, Royal life Saving Society (RLSS); National Coronial Information System (NCIS).

Table B14: Counts and age-standardised rates for unintentional drowning deaths, by sex, Australia 1999–00 to 2011–12

Year of death	Males		Females	
	Count	Rate ^(a)	Count	Rate ^(a)
1999–00	253	2.7	75	0.8
2000–01	280	2.9	61	0.6
2001–02	224	2.3	72	0.7
2002–03	229	2.4	62	0.6
2003–04	206	2.1	65	0.6
2004–05	181	1.8	63	0.6
2005–06	202	2.0	51	0.5
2006–07	210	2.1	65	0.6
2007–08	181	1.7	54	0.5
2008–09	198	1.8	63	0.6
2009–10	242	2.2	68	0.6
2010–11	227	2.0	83	0.7
2011–12	213	1.9	50	0.4

(a) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B15: Age-standardised rates for unintentional poisoning by pharmaceuticals deaths, by sex, Australia 1999–00 to 2011–12

Year of death	Males		Females		Persons	
	Count	Rate ^(a)	Count	Rate ^(a)	Count	Rate ^(a)
1999–00	925	9.7	388	4.0	1,313	6.9
2000–01	760	8.0	312	3.2	1,072	5.6
2001–02	434	4.5	234	2.4	668	3.4
2002–03	444	4.6	240	2.4	684	3.5
2003–04	550	5.6	279	2.7	829	4.2
2004–05	508	5.2	238	2.3	746	3.7
2005–06	444	4.5	256	2.4	700	3.4
2006–07	523	5.2	254	2.3	777	3.8
2007–08	590	5.7	327	3.0	917	4.4
2008–09	646	6.2	324	2.9	970	4.5
2009–10	710	6.7	327	2.9	1,037	4.8
2010–11	697	6.4	368	3.2	1,065	4.8
2011–12	699	6.4	324	2.8	1,023	4.6

(a) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B16: Age-standardised rates for unintentional poisoning by other substances deaths, by sex, Australia 1999–00 to 2011–12

Year of death	Males		Females		Persons	
	Count	Rate ^(a)	Count	Rate ^(a)	Count	Rate ^(a)
1999–00	281	3.0	101	1.0	382	2.0
2000–01	274	2.9	94	1.0	368	1.9
2001–02	243	2.6	93	0.9	336	1.7
2002–03	288	3.0	86	0.8	374	1.9
2003–04	218	2.3	75	0.7	293	1.5
2004–05	222	2.3	77	0.7	299	1.5
2005–06	202	2.0	64	0.6	266	1.3
2006–07	286	2.8	81	0.8	367	1.8
2007–08	271	2.6	99	0.9	370	1.8
2008–09	307	2.9	105	0.9	412	1.9
2009–10	315	2.9	101	0.9	416	1.9
2010–11	290	2.6	102	0.9	392	0.9
2011–12	287	2.6	110	0.9	397	0.9

(a) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B17: Age-standardised rates for unintentional fall injury deaths, by sex, Australia 1999–00 to 2011–12

Year of death	Males		Females		Persons	
	Count	Rate ^(a)	Count	Rate ^(a)	Count	Rate ^(a)
1999–00	1,070	15.7	1,558	13.5	2,628	14.5
2000–01	1,067	15.0	1,501	12.4	2,568	13.6
2001–02	1,147	15.5	1,709	13.7	2,856	14.6
2002–03	1,233	16.1	1,785	13.9	3,018	15.0
2003–04	1,228	15.8	1,736	13.2	2,964	14.3
2004–05	1,152	14.1	1,732	12.8	2,884	13.5
2005–06	1,266	15.0	1,814	12.9	3,080	13.9
2006–07	1,330	14.8	1,796	12.4	3,126	13.6
2007–08	1,360	14.6	1,888	12.5	3,248	13.5
2008–09	1,455	15.1	2,017	13.0	3,472	14.0
2009–10	1,509	15.0	2,000	12.5	3,509	13.6
2010–11	1,625	15.6	2,328	14.0	3,953	14.0
2011–12	1,665	15.4	2,238	13.1	3,903	13.1

(a) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B18: Age-standardised rates for unintentional thermal injury deaths, by sex, Australia 1999–00 to 2011–12

Year of death	Males		Females		Persons	
	Count	Rate ^(a)	Count	Rate ^(a)	Count	Rate ^(a)
1999–00	95	1.1	53	0.5	148	0.8
2000–01	83	0.9	46	0.5	129	0.7
2001–02	89	1.0	46	0.4	135	0.7
2002–03	118	1.3	57	0.5	175	0.9
2003–04	85	0.9	55	0.5	140	0.7
2004–05	104	1.1	53	0.5	157	0.8
2005–06	80	0.8	48	0.4	128	0.6
2006–07	87	0.8	35	0.3	122	0.6
2007–08	96	0.9	37	0.3	133	0.6
2008–09	174	1.6	117	1.0	291	1.3
2009–10	69	0.6	37	0.3	106	0.5
2010–11	66	0.6	25	0.2	91	0.4
2011–12	77	0.7	39	0.3	116	0.5

(a) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B19: Counts and age-standardised rates for intentional self-harm (suicide) deaths, by sex, Australia 1999–00 to 2011–12

Year of death	ABS		NCIS	
	Count	Rate ^(a)	Count	Rate ^(a)
1999–00	2,516	13.3	–	–
2000–01	2,414	12.6	–	–
2001–02	2,376	12.2	2,529	13.0
2002–03	2,284	11.6	2,535	12.9
2003–04	2,195	11.0	2,477	12.5
2004–05	2,043	10.2	2,392	11.9
2005–06	2,124	10.4	2,348	11.4
2006–07	2,228	10.7	2,340	11.2
2007–08	2,229	10.5	2,328	11.0
2008–09	2,385	11.0	2,419	11.1
2009–10	2,364	10.7	2,346	10.6
2010–11	2,407	10.7	2,351	10.5
2011–12	2,496	10.9	2,436	10.6

(a) Deaths per 100,000 population.

Sources: AIHW National Mortality Database; National Coronial Information System (NCIS).

Table B20: Age-standardised rates for intentional self-harm (suicide), by sex, Australia 1999–00 to 2011–12

Year of death	Males		Females	
	Count	Rate ^(a)	Count	Rate ^(a)
1999–00	2,001	21.5	515	5.4
2000–01	1,890	20.1	524	5.4
2001–02	1,904	20.0	472	4.8
2002–03	1,778	18.5	506	5.1
2003–04	1,724	17.7	471	4.7
2004–05	1,619	16.4	424	4.2
2005–06	1,631	16.2	493	4.7
2006–07	1,709	16.7	519	4.9
2007–08	1,712	16.4	517	4.8
2008–09	1,856	17.4	529	4.8
2009–10	1,795	16.5	569	5.1
2010–11	1,850	16.7	557	4.9
2011–12	1,904	16.9	592	5.2

(a) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B21: Counts and crude rates for assault (homicide) deaths by selected data sources, Australia 1999–00 to 2011–12

Year of death	ABS (Cause of death)		AIC		Year of death	ABS (Recorded crime)	
	Count	Rate ^(a)	Count	Rate ^(a)		Count	Rate ^(a)
1999–00	316	1.7	340	1.8	1999	385	2.0
2000–01	288	1.5	317	1.7	2000	362	1.9
2001–02	334	1.7	381	2.0	2001	347	1.8
2002–03	291	1.5	329	1.7	2002	366	1.9
2003–04	233	1.2	305	1.5	2003	341	1.7
2004–05	178	0.9	266	1.3	2004	302	1.5
2005–06	241	1.2	301	1.5	2005	301	1.5
2006–07	230	1.1	266	1.3	2006	321	1.6
2007–08	256	1.2	273	1.3	2007	283	1.4
2008–09	253	1.2	262	1.2	2008	293	1.4
2009–10	268	1.2	279	1.3	2009	293	1.4
2010–11	255	1.1	247	1.1	2010	261	1.2
2011–12	249	1.1	264	1.2	2011	276	1.2

(a) Deaths per 100,000 population.

Sources: AIHW National Mortality Database; Australian Institute of Criminology (AIC); ABS 2000 to 2011.

Table B22: Age-standardised rates for assault (homicide), by sex, Australia 1999–00 to 2011–12

Year of death	Males		Females	
	Count	Rate ^(a)	Count	Rate ^(a)
1999–00	205	2.1	111	1.2
2000–01	182	1.9	106	1.1
2001–02	226	2.3	108	1.1
2002–03	197	2.0	94	1.0
2003–04	155	1.6	78	0.8
2004–05	121	1.2	57	0.6
2005–06	152	1.5	89	0.9
2006–07	162	1.6	68	0.6
2007–08	160	1.5	96	0.9
2008–09	175	1.6	78	0.7
2009–10	173	1.6	95	0.9
2010–11	168	1.5	87	0.8
2011–12	171	1.5	78	0.7

(a) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B23: Age-specific rates of injury deaths (all causes), by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Males														
1999–00	127	19.4	114	8.4	1,030	78.1	2,513	87.4	1,209	56.3	1,747	169.5	6,740	77.3
2000–01	94	14.4	104	7.6	939	70.6	2,379	82.5	1,240	56.1	1,750	165.8	6,506	73.8
2001–02	93	14.3	83	6.0	863	64.0	2,088	72.3	1,245	54.9	1,859	171.8	6,231	69.7
2002–03	75	11.5	74	5.3	824	60.2	2,061	71.1	1,273	54.8	1,951	176.3	6,258	69.1
2003–04	72	11.1	83	6.0	743	53.4	1,982	68.3	1,193	50.1	2,137	188.9	6,210	67.8
2004–05	84	12.8	59	4.3	721	51.0	1,902	65.4	1,302	53.5	2,008	173.4	6,076	64.7
2005–06	83	12.6	81	5.8	746	51.9	1,830	62.6	1,319	52.9	2,089	176.1	6,148	64.2
2006–07	76	11.3	73	5.3	741	50.4	1,883	63.8	1,455	57.0	2,129	174.7	6,357	64.5
2007–08	77	11.0	53	3.8	736	48.8	1,891	63.1	1,452	55.5	2,282	181.7	6,491	64.3
2008–09	72	10.0	64	4.6	714	46.2	2,005	65.7	1,646	61.6	2,449	189.0	6,950	67.0
2009–10	68	9.2	59	4.2	653	41.6	1,915	61.6	1,618	59.5	2,390	178.1	6,703	64.3
2010–11	66	8.8	66	4.7	647	41.2	1,853	58.7	1,585	57.5	2,571	184.5	6,788	62.5
2011–12	51	6.7	65	4.5	640	40.7	1,813	56.5	1,540	55.3	2,697	185.7	6,806	61.2

(continued)

Table B23 (continued): Age-specific rates of injury deaths (all causes), by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Females														
1999–00	72	11.6	54	4.2	321	25.3	723	24.9	451	21.3	2,000	152.4	3,621	34.7
2000–01	71	11.4	47	3.6	281	21.9	644	22.1	446	20.4	2,033	152.1	3,522	32.7
2001–02	56	9.0	53	4.0	209	16.1	605	20.7	499	22.2	2,198	161.6	3,620	32.4
2002–03	61	9.9	46	3.5	239	18.1	570	19.5	461	19.9	2,307	166.9	3,684	32.3
2003–04	78	12.6	56	4.3	250	18.7	505	17.2	479	20.1	2,338	166.5	3,706	31.9
2004–05	57	9.2	37	2.8	206	15.2	501	17.1	469	19.2	2,377	166.5	3,647	30.5
2005–06	57	9.1	40	3.0	248	18.0	500	17.0	518	20.7	2,455	169.1	3,818	31.1
2006–07	61	9.5	42	3.2	218	15.5	526	17.7	550	21.4	2,443	164.9	3,840	30.6
2007–08	45	6.8	39	3.0	204	14.2	569	18.9	598	22.6	2,560	169.0	4,015	31.2
2008–09	53	7.8	43	3.2	232	15.9	561	18.4	664	24.6	2,760	177.8	4,313	32.6
2009–10	46	6.6	28	2.1	195	13.1	583	18.8	622	22.6	2,642	165.5	4,116	30.2
2010–11	37	5.2	34	2.5	215	14.4	549	17.4	612	21.9	3,042	185.0	4,489	31.7
2011–12	50	7.0	42	3.1	236	15.7	548	17.1	615	21.7	2,895	170.3	4,386	30.6

Source: AIHW National Mortality Database.

Table B24: Age-specific rates of unintentional transport injury deaths, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Males														
1999–00	25	3.8	62	4.5	402	30.5	518	18.0	260	12.1	211	20.5	1,478	15.9
2000–01	17	2.6	54	3.9	401	30.1	509	17.7	288	13.0	211	20.0	1,480	15.8
2001–02	19	2.9	50	3.6	398	29.5	530	18.3	296	13.1	209	19.3	1,502	15.8
2002–03	21	3.2	38	2.7	375	27.4	514	17.7	291	12.5	177	16.0	1,416	14.7
2003–04	24	3.7	50	3.6	317	22.8	424	14.6	255	10.7	191	16.9	1,261	12.9
2004–05	22	3.4	20	1.4	313	22.1	437	15.0	268	11.0	193	16.7	1,253	12.7
2005–06	18	2.7	43	3.1	344	23.9	481	16.5	252	10.1	182	15.3	1,320	13.2
2006–07	18	2.7	29	2.1	328	22.3	510	17.3	290	11.4	190	15.6	1,365	13.4
2007–08	20	2.9	24	1.7	318	21.1	433	14.5	259	9.9	187	14.9	1,241	11.9
2008–09	17	2.4	27	1.9	297	19.2	447	14.6	285	10.7	184	14.2	1,257	11.7
2009–10	16	2.2	22	1.6	251	16.0	405	13.0	308	11.3	197	14.7	1,199	11.0
2010–11	21	2.8	34	2.4	270	17.2	383	12.1	299	10.8	185	13.3	1,192	10.7
2011–12	17	2.2	32	2.2	223	14.2	383	11.9	245	8.8	226	15.6	1,126	10.0

(continued)

Table B24 (continued): Age-specific rates of unintentional transport injury deaths, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Females														
1999–00	20	3.2	28	2.2	124	9.8	144	5.0	110	5.2	135	10.3	561	5.8
2000–01	21	3.4	23	1.8	123	9.6	141	4.8	103	4.7	124	9.3	535	5.5
2001–02	12	1.9	25	1.9	90	6.9	140	4.8	120	5.3	132	9.7	519	5.2
2002–03	16	2.6	23	1.8	120	9.1	113	3.9	93	4.0	112	8.1	477	4.7
2003–04	23	3.7	29	2.2	106	7.9	98	3.3	99	4.2	119	8.5	474	4.6
2004–05	9	1.5	17	1.3	89	6.6	109	3.7	101	4.1	114	8.0	439	4.2
2005–06	8	1.3	24	1.8	105	7.6	119	4.0	94	3.7	100	6.9	450	4.3
2006–07	15	2.3	21	1.6	110	7.8	97	3.3	110	4.3	95	6.4	448	4.2
2007–08	9	1.4	19	1.4	86	6.0	104	3.5	109	4.1	117	7.7	444	4.1
2008–09	10	1.5	15	1.1	118	8.1	109	3.6	90	3.3	104	6.7	446	4.0
2009–10	9	1.3	14	1.1	69	4.6	108	3.5	108	3.9	96	6.0	404	3.6
2010–11	15	2.1	11	0.8	80	5.4	96	3.0	81	2.9	120	7.3	403	3.5
2011–12	21	2.9	13	1.0	87	5.8	98	3.1	92	3.2	97	5.7	408	3.5

Source: AIHW National Mortality Database.

Table B25: Age-specific rates of unintentional drowning injury deaths, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Males														
1999–00	53	8.1	12	0.9	28	2.1	87	3.0	51	2.4	22	2.1	253	2.7
2000–01	26	4.0	13	0.9	39	2.9	100	3.5	75	3.4	27	2.6	280	2.9
2001–02	25	3.8	14	1.0	29	2.2	84	2.9	42	1.9	30	2.8	224	2.3
2002–03	26	4.0	8	0.6	29	2.1	65	2.2	72	3.1	29	2.6	229	2.4
2003–04	22	3.4	6	0.4	28	2.0	66	2.3	56	2.4	28	2.5	206	2.1
2004–05	14	2.1	10	0.7	24	1.7	60	2.1	45	1.8	28	2.4	181	1.8
2005–06	26	3.9	6	0.4	24	1.7	63	2.2	59	2.4	24	2.0	202	2.0
2006–07	21	3.1	15	1.1	25	1.7	69	2.3	50	2.0	30	2.5	210	2.1
2007–08	19	2.7	8	0.6	24	1.6	51	1.7	52	2.0	27	2.2	181	1.7
2008–09	14	1.9	9	0.6	29	1.9	62	2.0	49	1.8	35	2.7	198	1.8
2009–10	22	3.0	11	0.8	34	2.2	73	2.3	58	2.1	44	3.3	242	2.2
2010–11	22	2.9	14	1.0	26	1.7	67	2.1	55	2.0	43	3.1	227	2.0
2011–12	13	1.7	13	0.9	42	2.7	56	1.7	46	1.7	43	3.0	213	1.9

(continued)

Table B25 (continued): Age-specific rates of unintentional drowning injury deaths, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Females														
1999–00	15	2.4	2	0.2	4	0.3	25	0.9	18	0.8	11	0.8	75	0.8
2000–01	14	2.3	2	0.2	10	0.8	10	0.3	14	0.6	11	0.8	61	0.6
2001–02	19	3.1	6	0.5	5	0.4	15	0.5	13	0.6	14	1.0	72	0.7
2002–03	12	1.9	5	0.4	4	0.3	12	0.4	22	1.0	7	0.5	62	0.6
2003–04	15	2.4	5	0.4	2	0.1	12	0.4	18	0.8	13	0.9	65	0.6
2004–05	10	1.6	6	0.5	9	0.7	10	0.3	13	0.5	15	1.1	63	0.6
2005–06	16	2.6	4	0.3	2	0.1	9	0.3	9	0.4	11	0.8	51	0.5
2006–07	17	2.7	8	0.6	3	0.2	10	0.3	17	0.7	10	0.7	65	0.6
2007–08	9	1.4	3	0.2	5	0.3	12	0.4	19	0.7	6	0.4	54	0.5
2008–09	19	2.8	5	0.4	4	0.3	10	0.3	10	0.4	15	1.0	63	0.6
2009–10	11	1.6	4	0.3	2	0.1	15	0.5	18	0.7	18	1.1	68	0.6
2010–11	13	1.8	8	0.6	9	0.6	19	0.6	20	0.7	14	0.9	83	0.7
2011–12	6	0.8	1	0.1	2	0.1	14	0.4	16	0.6	11	0.6	50	0.4

Source: AIHW National Mortality Database.

Table B26: Age-specific rates of unintentional poisoning deaths involving pharmaceuticals, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Males														
1999–00	1	0.2	1	0.1	188	14.3	600	20.9	98	4.6	37	3.6	925	9.7
2000–01	2	0.3	1	0.1	128	9.6	499	17.3	102	4.6	28	2.7	760	8.0
2001–02	1	0.2	1	0.1	66	4.9	261	9.0	84	3.7	21	1.9	434	4.5
2002–03	0	0.0	0	0.0	48	3.5	278	9.6	95	4.1	23	2.1	444	4.6
2003–04	0	0.0	0	0.0	70	5.0	344	11.9	102	4.3	34	3.0	550	5.6
2004–05	3	0.5	0	0.0	39	2.8	300	10.3	138	5.7	28	2.4	508	5.2
2005–06	1	0.2	0	0.0	49	3.4	249	8.5	113	4.5	32	2.7	444	4.5
2006–07	1	0.1	2	0.1	47	3.2	295	10.0	134	5.2	44	3.6	523	5.2
2007–08	0	0.0	0	0.0	51	3.4	361	12.1	145	5.5	33	2.6	590	5.7
2008–09	0	0.0	0	0.0	45	2.9	380	12.4	175	6.5	46	3.6	646	6.2
2009–10	0	0.0	0	0.0	41	2.6	415	13.3	207	7.6	47	3.5	710	6.7
2010–11	0	0.0	2	0.1	45	2.9	403	12.8	212	7.7	35	2.5	697	6.4
2011–12	0	0.0	0	0.0	41	2.6	402	12.5	209	7.5	47	3.2	699	6.4

(continued)

Table B26 (continued): Age-specific rates of unintentional poisoning deaths involving pharmaceuticals, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Females														
1999–00	1	0.2	1	0.1	75	5.9	195	6.7	76	3.6	40	3.0	388	4.0
2000–01	2	0.3	1	0.1	41	3.2	151	5.2	75	3.4	42	3.1	312	3.2
2001–02	0	0.0	2	0.2	25	1.9	116	4.0	60	2.7	31	2.3	234	2.4
2002–03	2	0.3	0	0.0	25	1.9	111	3.8	64	2.8	38	2.8	240	2.4
2003–04	4	0.6	0	0.0	27	2.0	120	4.1	79	3.3	49	3.5	279	2.7
2004–05	0	0.0	0	0.0	15	1.1	100	3.4	72	2.9	51	3.6	238	2.3
2005–06	0	0.0	1	0.1	30	2.2	83	2.8	82	3.3	60	4.1	256	2.4
2006–07	0	0.0	0	0.0	9	0.6	98	3.3	91	3.5	56	3.8	254	2.3
2007–08	1	0.2	1	0.1	24	1.7	127	4.2	111	4.2	63	4.2	327	3.0
2008–09	0	0.0	1	0.1	16	1.1	115	3.8	133	4.9	59	3.8	324	2.9
2009–10	1	0.1	0	0.0	20	1.3	132	4.2	110	4.0	64	4.0	327	2.9
2010–11	0	0.0	1	0.1	16	1.1	121	3.8	156	5.6	74	4.5	368	3.2
2011–12	1	0.1	0	0	21	1.4	123	3.8	133	4.7	46	2.7	324	2.8

Source: AIHW National Mortality Database.

Table B27: Age-specific rates of unintentional poisoning deaths involving other substances, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Males														
1999–00	4	0.6	6	0.4	33	2.5	150	5.2	63	2.9	25	2.4	281	3.0
2000–01	4	0.6	3	0.2	29	2.2	163	5.7	53	2.4	22	2.1	274	2.9
2001–02	1	0.2	1	0.1	22	1.6	110	3.8	73	3.2	36	3.3	243	2.6
2002–03	2	0.3	5	0.4	20	1.5	136	4.7	77	3.3	48	4.3	288	3.0
2003–04	5	0.8	2	0.1	21	1.5	104	3.6	53	2.2	33	2.9	218	2.3
2004–05	11	1.7	4	0.3	11	0.8	98	3.4	67	2.8	31	2.7	222	2.3
2005–06	2	0.3	3	0.2	24	1.7	80	2.7	66	2.6	27	2.3	202	2.0
2006–07	1	0.1	4	0.3	29	2.0	124	4.2	101	4.0	27	2.2	286	2.8
2007–08	2	0.3	3	0.2	28	1.9	127	4.2	90	3.4	21	1.7	271	2.6
2008–09	5	0.7	3	0.2	21	1.4	136	4.5	113	4.2	29	2.2	307	2.9
2009–10	6	0.8	3	0.2	24	1.5	150	4.8	114	4.2	18	1.3	315	2.9
2010–11	1	0.1	2	0.1	32	2.0	121	3.8	107	3.9	27	1.9	290	2.6
2011–12	1	0.1	2	0.1	26	1.7	138	4.3	92	3.3	28	1.9	287	2.6

(continued)

Table B27 (continued): Age-specific rates of unintentional poisoning deaths involving other substances, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Females														
1999–00	3	0.5	0	0.0	7	0.6	43	1.5	28	1.3	20	1.5	101	1.0
2000–01	5	0.8	1	0.1	6	0.5	40	1.4	31	1.4	11	0.8	94	1.0
2001–02	0	0.0	1	0.1	7	0.5	32	1.1	37	1.6	16	1.2	93	0.9
2002–03	0	0.0	0	0.0	4	0.3	38	1.3	26	1.1	18	1.3	86	0.8
2003–04	2	0.3	5	0.4	3	0.2	29	1.0	24	1.0	12	0.9	75	0.7
2004–05	4	0.6	2	0.2	2	0.1	31	1.1	20	0.8	18	1.3	77	0.7
2005–06	1	0.2	1	0.1	10	0.7	16	0.5	20	0.8	16	1.1	64	0.6
2006–07	2	0.3	2	0.2	5	0.4	35	1.2	28	1.1	9	0.6	81	0.8
2007–08	5	0.8	2	0.2	7	0.5	40	1.3	28	1.1	17	1.1	99	0.9
2008–09	2	0.3	1	0.1	5	0.3	27	0.9	49	1.8	21	1.4	105	0.9
2009–10	0	0.0	0	0.0	3	0.2	41	1.3	41	1.5	16	1.0	101	0.9
2010–11	4	0.6	1	0.1	8	0.5	31	1.0	43	1.5	15	0.9	102	0.9
2011–12	0	0.0	2	0.1	5	0.3	33	1.0	43	1.5	27	1.6	110	0.9

Source: AIHW National Mortality Database.

Table B28: Age-specific rates of unintentional fall injury deaths, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Males														
1999–00	1	0.2	3	0.2	18	1.4	54	1.9	90	4.2	904	87.7	1,070	15.7
2000–01	2	0.3	4	0.3	18	1.4	55	1.9	101	4.6	887	84.1	1,067	15.0
2001–02	7	1.1	0	0.0	16	1.2	56	1.9	110	4.9	958	88.5	1,147	15.5
2002–03	1	0.2	2	0.1	25	1.8	61	2.1	107	4.6	1,037	93.7	1,233	16.1
2003–04	0	0.0	1	0.1	16	1.2	53	1.8	87	3.7	1,071	94.7	1,228	15.8
2004–05	1	0.2	1	0.1	18	1.3	39	1.3	104	4.3	989	85.4	1,152	14.1
2005–06	3	0.5	3	0.2	14	1.0	48	1.6	87	3.5	1,111	93.7	1,266	15.0
2006–07	4	0.6	2	0.1	20	1.4	50	1.7	125	4.9	1,129	92.6	1,330	14.8
2007–08	1	0.1	1	0.1	15	1.0	37	1.2	120	4.6	1,186	94.4	1,360	14.6
2008–09	1	0.1	2	0.1	18	1.2	38	1.2	105	3.9	1,291	99.7	1,455	15.1
2009–10	3	0.4	0	0.0	23	1.5	36	1.2	108	4.0	1,339	99.8	1,509	15.0
2010–11	3	0.4	0	0.0	11	0.7	32	1.0	128	4.6	1,451	104.1	1,625	15.6
2011–12	1	0.1	2	0.1	15	1.0	17	0.5	126	4.5	1,504	103.5	1,665	15.4

(continued)

Table B28 (continued): Age-specific rates of unintentional fall injury deaths, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Females														
1999–00	5	0.8	2	0.2	3	0.2	18	0.6	50	2.4	1,480	112.8	1,558	13.5
2000–01	2	0.3	4	0.3	6	0.5	7	0.2	32	1.5	1,450	108.5	1,501	12.4
2001–02	2	0.3	1	0.1	3	0.2	12	0.4	61	2.7	1,630	119.8	1,709	13.7
2002–03	2	0.3	3	0.2	3	0.2	10	0.3	45	1.9	1,722	124.6	1,785	13.9
2003–04	3	0.5	1	0.1	5	0.4	11	0.4	48	2.0	1,668	118.8	1,736	13.2
2004–05	2	0.3	3	0.2	6	0.4	16	0.5	45	1.8	1,660	116.3	1,732	12.8
2005–06	1	0.2	0	0.0	2	0.1	11	0.4	44	1.8	1,756	120.9	1,814	12.9
2006–07	2	0.3	0	0.0	4	0.3	11	0.4	48	1.9	1,731	116.9	1,796	12.4
2007–08	1	0.2	1	0.1	2	0.1	6	0.2	47	1.8	1,831	120.8	1,888	12.5
2008–09	0	0.0	1	0.1	7	0.5	7	0.2	56	2.1	1,946	125.4	2,017	13.0
2009–10	2	0.3	0	0.0	1	0.1	11	0.4	52	1.9	1,934	121.1	2,000	12.5
2010–11	0	0.0	0	0.0	2	0.1	14	0.4	51	1.8	2,261	137.5	2,328	14.0
2011–12	0	0.0	0	0.0	1	0.1	4	0.1	55	1.9	2,178	128.1	2,238	13.1

Source: AIHW National Mortality Database.

Table B29: Age-specific rates of unintentional thermal deaths, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Males														
1999–00	7	1.1	3	0.2	9	0.7	23	0.8	23	1.1	30	2.9	95	1.1
2000–01	6	0.9	2	0.1	13	1.0	19	0.7	20	0.9	23	2.2	83	0.9
2001–02	1	0.2	2	0.1	12	0.9	25	0.9	26	1.1	23	2.1	89	1.0
2002–03	1	0.2	5	0.4	12	0.9	35	1.2	33	1.4	32	2.9	118	1.3
2003–04	4	0.6	4	0.3	5	0.4	25	0.9	20	0.8	27	2.4	85	0.9
2004–05	13	2.0	5	0.4	12	0.8	20	0.7	27	1.1	27	2.3	104	1.1
2005–06	0	0.0	4	0.3	13	0.9	26	0.9	16	0.6	21	1.8	80	0.8
2006–07	2	0.3	5	0.4	16	1.1	23	0.8	29	1.1	12	1.0	87	0.8
2007–08	3	0.4	2	0.1	8	0.5	26	0.9	31	1.2	26	2.1	96	0.9
2008–09	7	1.0	10	0.7	20	1.3	39	1.3	64	2.4	34	2.6	174	1.6
2009–10	4	0.5	3	0.2	7	0.4	21	0.7	19	0.7	15	1.1	69	0.6
2010–11	2	0.3	2	0.1	7	0.4	11	0.3	19	0.7	25	1.8	66	0.6
2011–12	2	0.3	2	0.1	12	0.8	16	0.5	17	0.6	28	1.9	77	0.7

(continued)

Table B29 (continued): Age-specific rates of unintentional thermal deaths, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Females														
1999–00	4	0.6	3	0.2	3	0.2	7	0.2	11	0.5	25	1.9	53	0.5
2000–01	4	0.6	0	0.0	1	0.1	10	0.3	7	0.3	24	1.8	46	0.5
2001–02	0	0.0	1	0.1	2	0.2	11	0.4	12	0.5	20	1.5	46	0.4
2002–03	1	0.2	0	0.0	4	0.3	15	0.5	12	0.5	25	1.8	57	0.5
2003–04	7	1.1	6	0.5	3	0.2	10	0.3	10	0.4	19	1.4	55	0.5
2004–05	7	1.1	3	0.2	2	0.1	5	0.2	7	0.3	29	2.0	53	0.5
2005–06	0	0.0	2	0.2	11	0.8	6	0.2	6	0.2	23	1.6	48	0.4
2006–07	2	0.3	1	0.1	3	0.2	9	0.3	7	0.3	13	0.9	35	0.3
2007–08	4	0.6	1	0.1	2	0.1	6	0.2	9	0.3	15	1.0	37	0.3
2008–09	8	1.2	6	0.5	13	0.9	21	0.7	34	1.3	35	2.3	117	1.0
2009–10	1	0.1	0	0.0	4	0.3	6	0.2	12	0.4	14	0.9	37	0.3
2010–11	3	0.4	2	0.1	1	0.1	4	0.1	6	0.2	9	0.5	25	0.2
2011–12	1	0.1	7	0.5	2	0.1	4	0.1	9	0.3	16	0.9	39	0.3

Source: AIHW National Mortality Database.

Table B30: Age-specific rates of intentional self-harm (suicide) deaths, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Males														
1999–00	0	0.0	9	0.7	310	23.5	957	33.3	485	22.6	240	23.3	2,001	21.5
2000–01	0	0.0	9	0.7	266	20.0	927	32.2	467	21.1	221	20.9	1,890	20.1
2001–02	0	0.0	1	0.1	270	20.0	915	31.7	483	21.3	235	21.7	1,904	20.0
2002–03	0	0.0	6	0.4	251	18.3	843	29.1	455	19.6	223	20.2	1,778	18.5
2003–04	0	0.0	9	0.6	223	16.0	793	27.3	433	18.2	266	23.5	1,724	17.7
2004–05	0	0.0	4	0.3	219	15.5	722	24.8	463	19.0	211	18.2	1,619	16.4
2005–06	0	0.0	9	0.6	223	15.5	668	22.9	500	20.1	231	19.5	1,631	16.2
2006–07	0	0.0	10	0.7	239	16.3	697	23.6	540	21.2	223	18.3	1,709	16.7
2007–08	0	0.0	5	0.4	228	15.1	714	23.8	524	20.0	241	19.2	1,712	16.4
2008–09	0	0.0	3	0.2	214	13.8	778	25.5	585	21.9	276	21.3	1,856	17.4
2009–10	0	0.0	3	0.2	219	14.0	713	22.9	616	22.7	244	18.2	1,795	16.5
2010–11	0	0.0	10	0.7	216	13.7	747	23.7	593	21.5	284	20.4	1,850	16.7
2011–12	0	0.0	6	0.4	244	15.5	720	22.4	638	22.9	296	20.4	1,904	16.9

(continued)

Table B30 (continued): Age-specific rates of intentional self-harm (suicide) deaths, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Females														
1999–00	0	0.0	6	0.5	79	6.2	251	8.6	115	5.4	64	4.9	515	5.4
2000–01	0	0.0	1	0.1	73	5.7	227	7.8	146	6.7	77	5.8	524	5.4
2001–02	0	0.0	7	0.5	49	3.8	224	7.7	133	5.9	59	4.3	472	4.8
2002–03	0	0.0	2	0.2	54	4.1	222	7.6	154	6.7	74	5.4	506	5.1
2003–04	0	0.0	5	0.4	66	4.9	179	6.1	152	6.4	69	4.9	471	4.7
2004–05	0	0.0	4	0.3	55	4.1	175	6.0	131	5.4	59	4.1	424	4.2
2005–06	0	0.0	0	0.0	69	5.0	177	6.0	159	6.3	88	6.1	493	4.7
2006–07	0	0.0	4	0.3	63	4.5	209	7.1	167	6.5	76	5.1	519	4.9
2007–08	0	0.0	3	0.2	64	4.5	205	6.8	178	6.7	67	4.4	517	4.8
2008–09	0	0.0	4	0.3	65	4.4	201	6.6	190	7.0	69	4.4	529	4.8
2009–10	0	0.0	2	0.2	74	5.0	217	7.0	204	7.4	72	4.5	569	5.1
2010–11	0	0.0	9	0.7	82	5.5	193	6.1	180	6.4	93	5.7	557	4.9
2011–12	0	0.0	9	0.7	98	6.5	221	6.9	186	6.6	78	4.6	592	5.2

Source: AIHW National Mortality Database.

Table B31: Age-specific rates of assault (homicide) deaths, by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Males														
1999–00	13	2.0	8	0.6	24	1.8	97	3.4	50	2.3	13	1.3	205	2.1
2000–01	8	1.2	3	0.2	30	2.3	83	2.9	45	2.0	13	1.2	182	1.9
2001–02	9	1.4	6	0.4	41	3.0	104	3.6	54	2.4	12	1.1	226	2.3
2002–03	7	1.1	5	0.4	36	2.6	100	3.5	39	1.7	10	0.9	197	2.0
2003–04	4	0.6	3	0.2	24	1.7	76	2.6	40	1.7	8	0.7	155	1.6
2004–05	9	1.4	1	0.1	14	1.0	59	2.0	28	1.2	10	0.9	121	1.2
2005–06	8	1.2	5	0.4	22	1.5	71	2.4	39	1.6	7	0.6	152	1.5
2006–07	9	1.3	3	0.2	27	1.8	64	2.2	41	1.6	18	1.5	162	1.6
2007–08	14	2.0	2	0.1	28	1.9	62	2.1	47	1.8	7	0.6	160	1.5
2008–09	5	0.7	1	0.1	33	2.1	76	2.5	47	1.8	13	1.0	175	1.6
2009–10	2	0.3	5	0.4	24	1.5	78	2.5	51	1.9	13	1.0	173	1.6
2010–11	5	0.7	1	0.1	26	1.7	73	2.3	50	1.8	13	0.9	168	1.5
2011–12	5	0.7	4	0.3	28	1.8	76	2.4	43	1.5	15	1.0	171	1.5

(continued)

Table B31 (continued): Age-specific rates of assault deaths (homicide), by sex and age, Australia 1999–00 to 2011–12

Year of death	0–4		5–14		15–24		25–44		45–64		65+		Total	
	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate	Count	Rate
Females														
1999–00	9	1.4	4	0.3	24	1.9	48	1.7	14	0.7	12	0.9	111	1.2
2000–01	4	0.6	5	0.4	25	1.9	49	1.7	16	0.7	7	0.5	106	1.1
2001–02	8	1.3	2	0.2	17	1.3	48	1.6	23	1.0	10	0.7	108	1.1
2002–03	6	1.0	6	0.5	15	1.1	43	1.5	16	0.7	8	0.6	94	1.0
2003–04	8	1.3	1	0.1	17	1.3	28	1.0	15	0.6	9	0.6	78	0.8
2004–05	5	0.8	1	0.1	3	0.2	31	1.1	12	0.5	5	0.4	57	0.6
2005–06	4	0.6	5	0.4	16	1.2	38	1.3	20	0.8	6	0.4	89	0.9
2006–07	4	0.6	1	0.1	10	0.7	33	1.1	7	0.3	13	0.9	68	0.6
2007–08	2	0.3	5	0.4	12	0.8	44	1.5	20	0.8	13	0.9	96	0.9
2008–09	3	0.4	0	0.0	9	0.6	39	1.3	15	0.6	12	0.8	78	0.7
2009–10	6	0.9	5	0.4	11	0.7	41	1.3	16	0.6	16	1.0	95	0.9
2010–11	4	0.6	2	0.1	10	0.7	43	1.4	22	0.8	6	0.4	87	0.8
2011–12	2	0.3	6	0.4	8	0.5	24	0.7	18	0.6	20	1.2	78	0.7

Source: AIHW National Mortality Database.

Table B32: All cause injury deaths—counts and age-standardised rates, by remoteness area, Australia 2001–02 to 2011–12

Year of death ^(a)	Major cities		Inner regional		Outer regional		Remote		Very remote	
	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)
2001–02	5,787	42.9	2,308	59.6	1,195	65.6	217	78.4	191	124.9
2002–03	5,894	42.8	2,244	56.8	1,285	69.9	198	71.7	170	112.5
2003–04	5,959	42.5	2,260	55.9	1,188	63.8	205	73.1	182	133.3
2004–05	5,683	39.6	2,208	53.3	1,216	64.8	216	77.9	186	133.4
2005–06	5,865	39.8	2,290	54.2	1,225	63.8	209	76.0	163	111.0
2006–07	6,233	41.7	2,281	53.4	1,185	60.9	223	78.5	160	106.2
2007–08	6,515	42.4	2,355	53.3	1,166	59.1	208	71.3	148	90.4
2008–09	6,901	43.7	2,589	56.9	1,282	63.2	216	73.3	153	104.2
2009–10	6,843	41.5	2,326	52.9	1,213	58.5	206	72.0	136	77.5
2010–11	7,094	41.9	2,427	53.2	1,213	57.4	213	74.0	149	87.2
2011–12	7,050	40.7	2,411	51.9	1,252	58.5	213	72.8	151	75.6

(a) Counts and rates for 2001–02 to 2008–09 are ASGC-based, while counts and rates for 2009–10 to 2011–12 are ASGS-based.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B33: Unintentional transport injury deaths—counts and age-standardised rates, by remoteness area, Australia 2001–02 to 2011–12

Year of death ^(a)	Major cities		Inner regional		Outer regional		Remote		Very remote	
	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)
2001–02	962	7.1	596	16.1	285	15.7	69	24.6	55	32.0
2002–03	900	6.5	485	13.0	323	17.6	62	19.5	63	35.6
2003–04	809	5.8	517	13.4	260	14.2	49	15.4	62	37.4
2004–05	794	5.6	446	11.5	279	15.0	58	18.5	64	38.6
2005–06	843	5.8	470	12.1	298	16.1	54	17.7	53	32.3
2006–07	852	5.8	502	12.9	286	15.2	83	27.1	62	35.7
2007–08	801	5.4	445	11.0	284	15.1	60	19.0	50	26.1
2008–09	810	5.3	446	10.9	276	14.6	78	24.8	54	28.9
2009–10	776	4.9	450	11.3	253	12.8	54	17.2	45	23.6
2010–11	722	4.5	436	10.7	240	12.0	63	20.0	44	21.3
2011–12	717	4.4	404	9.9	266	13.6	55	17.5	51	25.3

(a) Counts and rates for 2001–02 to 2008–09 are ASGC-based, while counts and rates for 2009–10 to 2011–12 are ASGS-based.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B34: Unintentional drowning deaths—counts and age-standardised rates, by remoteness area, Australia 2001–02 to 2011–12

Year of death ^(a)	Major cities		Inner regional		Outer regional		Remote/Very remote	
	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)
2001–02	149	1.1	64	1.7	41	2.1	17	3.1
2002–03	143	1.1	66	1.7	49	2.5	14	2.4
2003–04	143	1.0	65	1.7	34	1.9	10	1.8
2004–05	124	0.9	56	1.5	33	1.7	16	3.2
2005–06	129	0.9	60	1.5	36	1.8	10	2.0
2006–07	147	1.0	49	1.2	38	2.0	19	3.8
2007–08	132	0.9	46	1.1	29	1.4	14	2.8
2008–09	130	0.9	47	1.1	41	2.0	19	3.6
2009–10	171	1.1	62	1.5	44	2.0	19	3.2
2010–11	111	0.7	89	2.1	33	1.6	12	2.6
2011–12	123	0.8	61	1.5	37	1.8	14	2.9

(a) Counts and rates for 2001–02 to 2008–09 are ASGC-based, while counts and rates for 2009–10 to 2011–12 are ASGS-based.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B35: Unintentional poisoning deaths involving pharmaceuticals—counts and age-standardised rates, by remoteness area year, Australia 2001–02 to 2011–12

Year of death ^(a)	Major cities		Inner regional		Outer regional		Remote/Very remote	
	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)
2001–02	484	3.6	108	3.0	55	3.0	13	2.3
2002–03	506	3.7	108	3.0	51	2.9	4	0.8
2003–04	633	4.5	124	3.4	40	2.0	10	1.9
2004–05	495	3.5	125	3.3	77	4.1	15	3.0
2005–06	468	3.3	151	3.9	55	3.0	6	1.2
2006–07	569	4.0	131	3.4	62	3.2	9	1.8
2007–08	680	4.6	152	3.9	55	2.9	15	3.0
2008–09	703	4.7	175	4.4	69	3.5	12	2.6
2009–10	746	4.8	164	4.4	95	5.0	20	4.0
2010–11	760	4.8	183	4.7	91	4.5	20	4.0
2011–12	743	4.6	180	4.8	76	4.0	15	2.8

(a) Counts and rates for 2001–02 to 2008–09 are ASGC-based, while counts and rates for 2009–10 to 2011–12 are ASGS-based.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B36: Unintentional poisoning deaths involving other substances—counts age-standardised rate, by remoteness area, Australia 2001–02 to 2011–12

Year of death ^(a)	Major cities		Inner regional		Outer regional		Remote		Very remote	
	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)
2001–02	199	1.5	68	1.8	38	2.0	10	3.4	10	6.5
2002–03	245	1.8	69	1.8	31	1.7	8	2.5	12	8.2
2003–04	178	1.3	52	1.3	39	2.1	7	1.5	8	4.6
2004–05	187	1.3	57	1.4	28	1.5	8	2.6	9	4.9
2005–06	146	1.0	59	1.4	32	1.7	6	2.1	11	6.9
2006–07	215	1.5	68	1.7	45	2.4	14	4.0	15	8.6
2007–08	230	1.6	71	1.7	42	2.2	14	4.6	9	4.3
2008–09	232	1.6	90	2.3	53	2.5	17	5.4	9	5.7
2009–10	256	1.7	70	1.9	55	2.8	17	5.1	9	4.6
2010–11	264	1.7	61	1.5	38	1.8	10	3.3	12	6.6
2011–12	259	1.6	64	1.6	36	1.8	8	2.6	18	8.3

(a) Counts and rates for 2001–02 to 2008–09 are ASGC-based, while counts and rates for 2009–10 to 2011–12 are ASGS-based.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B37: Unintentional fall injury deaths—counts and age-standardised rate, by remoteness area and year, Australia 2001–02 to 2011–12

Year of death ^(a)	Major cities		Inner regional		Outer regional		Remote		Very remote	
	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)
2001–02	1,777	13.2	687	16.3	330	18.5	32	16.0	20	24.5
2002–03	1,880	13.6	696	16.0	378	20.6	36	17.6	15	17.2
2003–04	1,888	13.2	679	15.1	333	17.9	32	16.0	23	34.1
2004–05	1,825	12.4	642	13.7	326	17.1	39	18.9	14	17.8
2005–06	1,946	12.7	712	14.5	338	17.0	41	18.9	14	18.1
2006–07	2,021	12.8	731	14.6	313	15.3	34	15.2	14	15.6
2007–08	2,116	12.9	741	14.1	338	16.1	34	15.1	10	5.9
2008–09	2,255	13.3	802	14.8	356	16.3	29	12.8	16	18.8
2009–10	2,346	13.2	732	13.7	369	16.2	37	16.0	14	13.3
2010–11	2,652	14.4	836	14.8	379	16.2	46	19.1	19	18.5
2011–12	2,594	13.6	849	14.6	400	16.3	39	16.3	10	6.3

(a) Counts and rates for 2001–02 to 2008–09 are ASGC-based, while counts and rates for 2009–10 to 2011–12 are ASGS-based.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B38: Unintentional thermal injury deaths—counts and age-standardised rate, by remoteness area and year, Australia 2001–02 to 2011–12

Year of death ^(a)	Major cities		Inner regional		Outer regional		Remote/Very Remote	
	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)
2001–02	65	0.5	31	0.8	25	1.3	12	2.6
2002–03	108	0.8	36	0.9	21	1.1	8	1.8
2003–04	63	0.5	32	0.8	27	1.4	14	2.5
2004–05	74	0.5	36	0.8	21	1.0	24	5.3
2005–06	58	0.4	34	0.9	25	1.2	8	2.0
2006–07	60	0.4	27	0.7	25	1.3	9	2.0
2007–08	63	0.4	35	0.8	20	1.0	11	2.1
2008–09	103	0.7	145	3.3	20	0.9	13	2.4
2009–10	54	0.3	28	0.7	16	0.8	6	1.3
2010–11	43	0.3	25	0.6	13	0.6	8	1.8
2011–12	68	0.4	23	0.5	17	0.8	4	0.7

(a) Counts and rates for 2001–02 to 2008–09 are ASGC-based, while counts and rates for 2009–10 to 2011–12 are ASGS-based.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B39: Intentional self-harm (suicide) deaths—counts and age-standardised rates, by remoteness area, Australia 2001–02 to 2011–12

Year of death ^(a)	Major cities		Inner regional		Outer regional		Remote		Very remote	
	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)
2001–02	1,421	10.5	533	14.5	281	15.3	59	18.9	54	30.9
2002–03	1,410	10.3	513	13.8	264	14.4	42	13.4	37	19.8
2003–04	1,350	9.7	453	12.2	271	14.8	59	19.0	41	26.8
2004–05	1,197	8.5	468	12.3	258	13.8	41	13.4	47	29.5
2005–06	1,273	8.9	464	11.8	251	13.3	55	17.6	44	24.1
2006–07	1,408	9.7	443	11.4	273	14.5	51	16.7	38	23.2
2007–08	1,442	9.8	441	11.1	237	12.5	57	18.5	43	24.7
2008–09	1,498	9.9	517	12.6	276	14.3	37	11.5	37	22.4
2009–10	1,541	9.9	474	11.9	250	12.8	48	15.1	37	19.6
2010–11	1,535	9.7	485	12.3	275	13.9	54	17.6	40	18.6
2011–12	1,572	9.7	520	12.8	263	13.3	66	22.0	53	24.9

(a) Counts and rates for 2001–02 to 2008–09 are ASGC-based, while counts and rates for 2009–10 to 2011–12 are ASGS-based.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B40: Assault (homicide) deaths—counts and age-standardised rates, by remoteness area, Australia 2001–02 to 2011–12

Year of death ^(a)	Major cities		Inner regional		Outer regional		Remote		Very remote	
	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)	Count	Rate ^(b)
2001–02	191	1.4	52	1.4	40	2.2	15	4.9	23	11.7
2002–03	161	1.2	60	1.7	33	1.8	13	4.1	11	6.2
2003–04	152	1.1	34	0.9	19	1.1	9	2.9	15	8.2
2004–05	98	0.7	37	0.9	19	1.0	6	1.8	12	6.8
2005–06	140	1.0	44	1.1	19	1.0	13	4.1	19	10.2
2006–07	139	1.0	33	0.9	28	1.4	12	3.9	11	6.0
2007–08	157	1.1	51	1.3	25	1.3	5	1.2	13	7.2
2008–09	150	1.0	46	1.1	32	1.7	11	3.5	10	5.5
2009–10	174	1.1	41	1.0	25	1.4	14	4.6	9	3.9
2010–11	145	0.9	49	1.2	26	1.3	9	2.8	18	8.7
2011–12	161	1.0	32	0.8	30	1.4	13	4.2	8	3.5

(a) Counts and rates for 2001–02 to 2008–09 are ASGC-based, while counts and rates for 2009–10 to 2011–12 are ASGS-based.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B41: All injury deaths—counts and age-standardised rates for Indigenous Australians and Other Australians, Australia, 2001–02 to 2011–12

Year of death	Indigenous Australians		Other Australians	
	Count ^(a)	Rate ^(b)	Count ^(a)	Rate ^(b)
2001–02	376	99.6	6,528	48.4
2002–03	339	98.3	6,674	48.5
2003–04	331	99.9	6,673	47.6
2004–05	354	115.4	6,502	45.5
2005–06	350	94.0	6,627	45.2
2006–07	366	93.3	6,792	45.3
2007–08	365	90.9	7,031	45.5
2008–09	356	85.3	7,442	46.9
2009–10	304	71.0	7,371	45.2
2010–11	398	93.8	7,698	46.0
2011–12	399	89.1	7,785	45.4

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B42: Unintentional transport injury deaths—counts and age-standardised rates for Indigenous Australians, by sex, Australia, 2001–02 to 2011–12

Year of death	5-state totals			
	Males		Females	
	Count ^(a)	Rate ^(b)	Count ^(a)	Rate ^(b)
2001–02	58	27.7	37	17.1
2002–03	67	31.3	28	13.3
2003–04	54	24.5	26	8.9
2004–05	61	33.6	23	13.5
2005–06	58	24.9	29	13.1
2006–07	72	29.5	32	16.9
2007–08	69	28.7	28	11.2
2008–09	60	22.8	34	14
2009–10	50	18.3	22	8.7
2010–11	64	25.8	23	7.1
2011–12	63	25.2	32	12.0

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B43: Unintentional drowning deaths—counts and age-standardised rates for Indigenous Australians, Australia, 2001–02 to 2011–12

Year of death	5-state totals	
	Count	Rate
2001–02	13	2.6
2002–03	12	2.6
2003–04	12	2.9
2004–05	19	4.1
2005–06	16	2.5
2006–07	11	2.1
2007–08	12	1.7
2008–09	13	2.0
2009–10	16	2.9
2010–11	19	3.1
2011–12	11	2.7

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B44: Unintentional poisoning by pharmaceuticals deaths—counts and age-standardised rates for Indigenous Australians, Australia, 2001–02 to 2011–12

Year of death	5-state totals			
	Males		Females	
	Count ^(a)	Rate ^(b)	Count ^(a)	Rate ^(b)
2001–02	19	7.9	10	4.5
2002–03	11	5.8	4	1.7
2003–04	11	4.9	6	4.3
2004–05	13	6.9	12	5.5
2005–06	18	8.3	8	3.9
2006–07	17	7.2	8	4.2
2007–08	19	11.0	16	6.3
2008–09	15	6.8	12	4.4
2009–10	24	9.9	12	5.9
2010–11	24	9.5	13	5.5
2011–12	28	11.4	23	9.6

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B45: Unintentional poisoning by other substances deaths—counts and age-standardised rates for Indigenous Australians, Australia, 2001–02 to 2011–12

Year of death	5-state totals			
	Males		Females	
	Count ^(a)	Rate ^(b)	Count ^(a)	Rate ^(b)
2001–02	18	9.3	11	5.5
2002–03	13	7.5	6	3.3
2003–04	12	4.4	6	2.5
2004–05	12	5.1	7	2.7
2005–06	16	6.6	7	3.2
2006–07	28	12.2	12	5.6
2007–08	16	5.8	10	4
2008–09	22	9.8	9	3.2
2009–10	23	10.1	9	4.9
2010–11	25	10.6	9	3.2
2011–12	31	12.4	9	3.3

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B46: Unintentional fall injury deaths—counts and age-standardised rates for Indigenous Australians, Australia, 2001–02 to 2011–12

Year of death	5-state totals			
	Males		Females	
	Count ^(a)	Rate ^(b)	Count ^(a)	Rate ^(b)
2001–02	11	7.4	11	26.1
2002–03	14	23.5	9	20.7
2003–04	19	37.2	7	15.4
2004–05	13	28.5	17	29.9
2005–06	15	18.4	11	20.9
2006–07	17	17.6	10	11.1
2007–08	19	27.6	14	18.6
2008–09	12	14.2	9	12.3
2009–10	14	13.5	11	15.2
2010–11	13	10.2	16	20.3
2011–12	15	13.1	10	12.4

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B47: Intentional self-harm (suicide) deaths—counts and age-standardised rates for Indigenous Australians, by sex, Australia, 2001–02 to 2011–12

Year of death	5-state totals			
	Males		Females	
	Count ^(a)	Rate ^(b)	Count ^(a)	Rate ^(b)
2001–02	85	39.2	21	7.5
2002–03	81	35.5	19	6.8
2003–04	67	27.0	15	5.4
2004–05	71	31.3	17	6.4
2005–06	80	30.6	16	5
2006–07	82	37.8	22	7.7
2007–08	73	26.3	23	8.3
2008–09	69	24.4	25	8.4
2009–10	66	28.6	27	9
2010–11	94	39.3	34	12.7
2011–12	87	28.6	35	11.9

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B48: Assault (homicide) deaths—counts and age-standardised rates for Indigenous Australians, by sex, Australia, 2001–02 to 2011–12

Year of death	5-state totals			
	Males		Females	
	Count ^(a)	Rate ^(b)	Count ^(a)	Rate ^(b)
2001–02	27	12.8	21	7.7
2002–03	24	11.1	12	5.2
2003–04	21	8.6	9	4.1
2004–05	15	6.4	10	4.4
2005–06	23	10.9	13	4.8
2006–07	17	7.7	16	6.0
2007–08	19	8.1	21	8.6
2008–09	18	7.8	14	5.6
2009–10	17	7.7	9	3.4
2010–11	32	11.5	19	7.7
2011–12	25	9.6	10	3.1

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Deaths per 100,000 population.

Source: AIHW National Mortality Database.

Table B49: Age-specific rates of unintentional drowning deaths in swimming pools in children aged 0–4, Australia, 1999–00 to 2011–12

Year of death	Males	Females	Persons
1999–00	2.9	0.8	1.9
2000–01	1.4	0.5	0.9
2001–02	1.7	0.8	1.3
2002–03	2.0	1.0	1.5
2003–04	1.8	0.8	1.3
2004–05	1.1	0.3	0.7
2005–06	1.4	1.0	1.2
2006–07	1.3	1.4	1.4
2007–08	1.1	0.8	1.0
2008–09	1.0	1.5	1.2
2009–10	1.2	0.9	1.0
2010–11	1.1	0.4	0.8
2011–12	0.8	0.3	0.5

Source: AIHW National Mortality Database.

Table B50: Firearm-related deaths—counts by intent, Australia, 1999–00 to 2011–12

Year of death	Unintentional	Suicide	Homicide	Undetermined intent
1999–00	41	237	47	4
2000–01	26	245	64	2
2001–02	23	239	43	0
2002–03	39	202	50	0
2003–04	48	189	36	3
2004–05	49	154	20	6
2005–06	29	168	35	9
2006–07	9	176	22	11
2007–08	5	187	25	14
2008–09	7	184	40	7
2009–10	7	157	29	14
2010–11	13	166	31	6
2011–12	5	168	40	10
Total	301	2,472	482	86

Source: AIHW National Mortality Database.

Appendix C: Transport deaths: motor vehicle traffic

This Appendix presents additional summary statistics for unintentional transport injury deaths in 2011–12 that were due to events that occurred in traffic. The deaths included here are a subset of the unintentional transport injury deaths presented in Chapter 3.

Case selection

Restriction of unintentional transport injury deaths to those due to road injury required use of the following selection criteria:

- (a) The UCoD is classified to ICD-10 (WHO 1992) external cause codes in the ranges V02–V04 (.1,.9), V09.2, V12–V14 (.3–.9), V19 (.4–.6), V20–V28 (.3–.9), V29 (.4–.9), V30–V39 (.4–.9), V40–V49 (.4–.9), V50–V59 (.4–.9), V60–V69 (.4–.9), V70–V79 (.4–.9), V81.1, V82.1, V83–V86 (.3–.5) V87 (.0–.8), V89.2 of Chapter XX External causes of morbidity and mortality), or
- (b) At least 1 MCoD is classified to external cause codes in the ranges V02–V04 (.1,.9), V09.2, V12–V14 (.3–.9), V19 (.4–.6), V20–V28 (.3–.9), V29 (.4–.9), V30–V39 (.4–.9), V40–V49 (.4–.9), V50–V59 (.4–.9), V60–V69 (.4–.9), V70–V79 (.4–.9), V81.1, V82.1, V83–V86 (.3–.5) V87 (.0–.8), V89.2 and at least 1 MCoD is classified to diagnosis codes in the range S00–T75 or T79 (injury).

How many deaths due to unintentional motor vehicle traffic injury were there in 2011–12?

Motor vehicle traffic injuries accounted for 1,242 injury deaths in Australia during 2011–12 (Table C1). This was just over 11% of all injury deaths for this period. In 2011–12, motor vehicle traffic injury deaths were 2.6 times as common for males as for females.

Table C1: Key indicators for unintentional motor vehicle traffic injury deaths, Australia, 2011–12

Indicator	Males	Females	Persons
Deaths	897	345	1,242
% of all injury deaths	13.2	7.9	11.1
Age-standardised rate (deaths per 100,000 population)	8.0	2.9	5.4

Source: AIHW National Mortality Database.

Persons aged 25–44 accounted for almost one-third (33.0%) of all unintentional motor vehicle traffic injury deaths, while persons aged 15–24, 45–64 and 65 and older each accounted for close to one-fifth each of this type of death (Table C2). The proportions of deaths within age groups was broadly similar for males and females, although deaths of males were proportionally higher than females in the age range 25–44, while females were proportionally higher than males for ages 65 and older.

Table C2: Unintentional motor vehicle traffic injury deaths, by age and sex, Australia, 2011–12

Age group	Males		Females		Persons	
	Number	%	Number	%	Number	%
0–4	11	1.2	14	4.1	25	2.0
5–14	25	2.8	10	2.9	35	2.8
15–24	184	20.5	79	22.9	263	21.2
25–44	323	36.0	88	25.5	411	33.1
45–64	190	21.2	71	20.6	261	21.0
65+	164	18.3	83	24.1	247	19.9
Total	897	100	345	100	1,242	100

Source: AIHW National Mortality Database.

The age-standardised rate for unintentional motor vehicle traffic injury deaths during 2011–12 for residents of the Northern Territory was more than 3 times that of the national rate of 5.4 deaths per 100,000 population (Table C3). Most other jurisdictions recorded rates either moderately above or moderately below the national rate.

Table C3: Unintentional motor vehicle traffic injury deaths, by state and territory of usual residence, Australia, 2011–12

Indicators	State and territory of usual residence							
	NSW	Vic	Qld	WA	SA	Tas	ACT	NT
Deaths	353	251	298	177	88	18	13	44
Per cent	28.4	20.2	24.0	14.3	7.1	1.4	1.0	3.5
Age-standardised rate (deaths per 100,000 population)	4.7	4.3	6.6	7.3	5.2	3.5	3.3	18.2

Source: AIHW National Mortality Database.

The number and rate of unintentional motor vehicle traffic injury deaths varied with remoteness of usual residence (Table C4). The age-standardised rate of deaths increased with increasing remoteness of residence, with the rate for residents of *Very remote* areas being more than 5.6 times the rate for residents of *Major cities*.

Table C4: Unintentional motor vehicle traffic injury deaths, by remoteness of usual residence, Australia, 2011–12

Indicators	Remoteness of usual residence ^(a)					
	Major cities	Inner regional	Outer regional	Remote	Very remote	Total ^(b)
Deaths	587	325	222	41	40	1,216
Per cent	48.3	26.7	18.3	3.4	3.3	100
Age-standardised rate (deaths per 100,000 population)	3.6	8.1	11.5	13.0	20.1	n.p.

(a) Derived using the ASGS classification.

(b) Excludes 26 deaths where remoteness was not reported.

Source: AIHW National Mortality Database.

Socioeconomic status

The number and rate of unintentional motor vehicle traffic injury deaths varied with socioeconomic status (Table C5). The age-standardised rate of injury death increased with socioeconomic disadvantage. The rate for residents of the *Most disadvantaged* areas (7.4 deaths per 100,000 population) was 2.3 times the rate for residents of the *Most advantaged* areas (3.2 per 100,000 population).

Table C5: Unintentional motor vehicle traffic injury deaths, by socioeconomic status, Australia, 2011–12

Indicators	SEIFA quintiles				
	Most disadvantaged	Second most disadvantaged	Middle	Second most advantaged	Most advantaged
Deaths	339	298	235	192	148
Per cent	27.3	24.0	18.9	15.5	11.9
Age-standardised rate (deaths per 100,000 population)	7.4	6.6	5.1	4.2	3.2

Note: Excludes 30 deaths where SEIFA quintile was not reported.

Source: AIHW National Mortality Database.

Aboriginal and Torres Strait Islander people

The age-standardised unintentional transport injury death rate for Aboriginal and Torres Strait Islander people was 3.1 times the rate for non-Indigenous Australians (Table C6).

Table C6: Key indicators for unintentional motor vehicle traffic injury deaths, Indigenous Australians and non-Indigenous Australians, Australia^(a), 2011–12

Indicator	Indigenous Australians			Non-Indigenous Australians		
	Males	Females	Persons	Males	Females	Persons
Deaths	58	27	85	625	233	858
Age-standardised rate (deaths per 100,000 population)	23.6	10.1	16.6	8.1	2.9	5.4
Rate ratio ^(b)	2.9	3.5	3.1	..	..	..
Rate difference ^(c)	15.5	7.2	11.2	..	..	..

(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

(b) Rate ratios are standardised rate for Indigenous males, females and persons/standardised rate for non-Indigenous males, females and persons.

(c) Rate differences are standardised rate for Indigenous males, females and persons minus standardised rate for non-Indigenous males, females and persons.

Source: AIHW National Mortality Database.

There were marked differences between Aboriginal and Torres Strait Islander people and non-Indigenous Australians in terms of the proportions of unintentional motor vehicle traffic injury deaths occurring in each age group (Table C7). For Aboriginal and Torres Strait Islander people, a much higher proportion of deaths occurred at ages 24 and under when compared with non-Indigenous Australians. Conversely, the proportions of injury deaths of Aboriginal and Torres Strait Islander males and females at age 65 and older were much lower than equivalent proportions for non-Indigenous Australians.

Table C7: Unintentional motor vehicle traffic injury deaths, by age and sex, Indigenous Australians and non-Indigenous Australians, Australia^(a), 2011–12

	Indigenous Australians		Non-Indigenous Australians	
	Number	%	Number	%
Males				
0–4	3	4.8	10	1.3
5–14	5	7.9	18	2.3
15–24	19	30.2	144	18.3
25–44	27	42.9	272	34.5
45–64	5	7.9	180	22.8
65+	4	6.3	165	20.9
Total	63	100	789	100
Females				
0–4	5	15.6	13	4.8
5–14	0	0.0	10	3.7
15–24	8	25.0	55	20.1
25–44	11	34.4	66	24.2
45–64	7	21.9	61	22.3
65+	1	3.1	68	24.9
Total	32	100	273	100

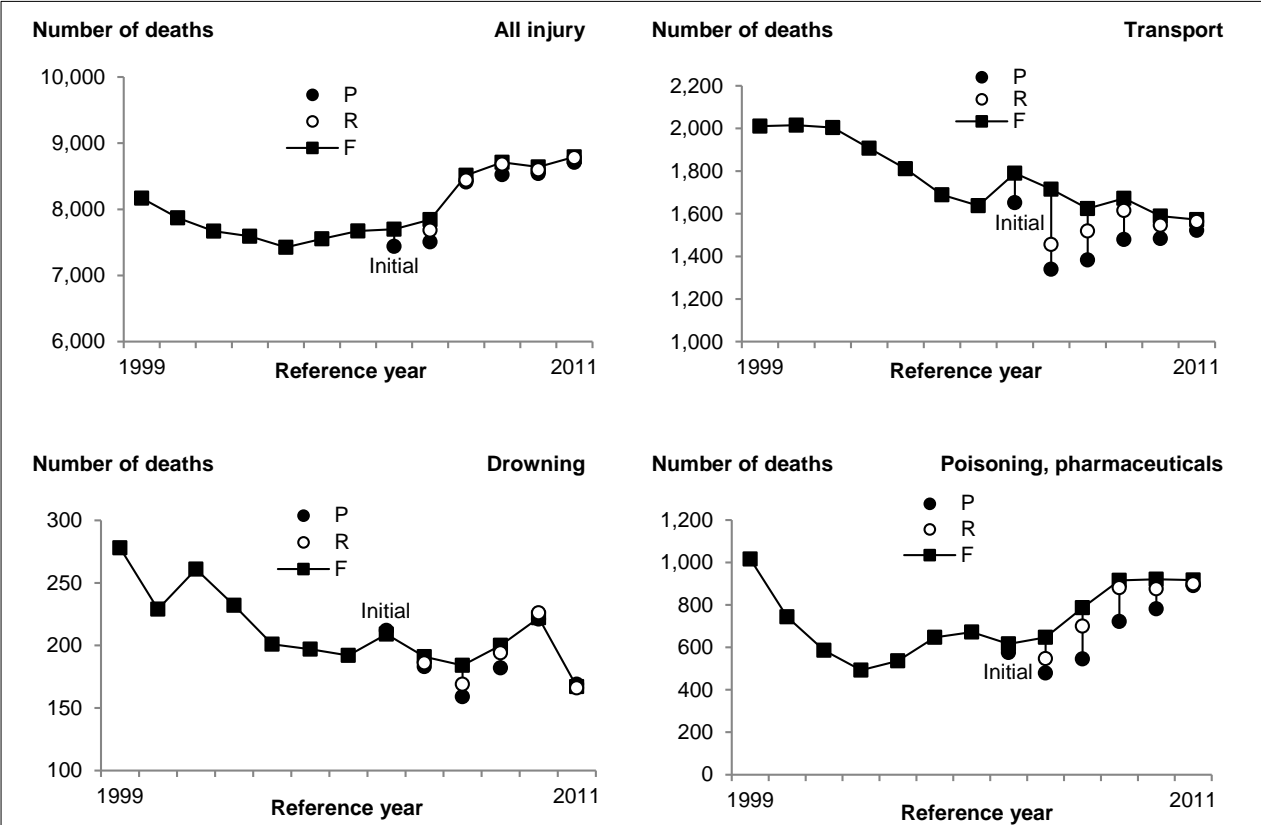
(a) Includes data for New South Wales, Northern Territory, Queensland, South Australia and Western Australia. See Box 1.2.

Source: AIHW National Mortality Database.

Appendix D: Injury death counts by reference year and CODURF release

As described in ‘Appendix A Coding of deaths data’, the ABS has released more than 1 file of causes of death data for deaths registered in 2006 and more recent years. Information on the external cause of some deaths is incomplete, or has not been finalised, when ABS cause coding is done for the first time. Such deaths are re-visited later by the ABS, by which time more complete and final information might be available. The charts in this appendix show the extent of the impact of this process on the number of deaths with each major external cause of death in each data release, by year of death registration.

Figure D1 shows counts for all injury and selected causes of injury by CODURF releases for ABS reference years 1999 to 2011. The difference between the *Preliminary* and *Final* counts for unintentional transport injuries fell from 375 in 2007 to 50 in 2011, while this difference for unintentional poisoning by pharmaceuticals fell from 242 in 2008 to 26 in 2011. These outcomes suggest that *Preliminary* counts in the years towards the end of the period more accurately reflect true counts. Differences between *Preliminary* and *Final* counts for all injury and unintentional drowning were less pronounced.



Note: Periods are reference years. P = Preliminary CODURF. R = Revised CODURF. F = Final CODURF. The first 2006 CODURF is referred to as the Initial release.
 Source: ABS 2000 to 2013.

Figure D1: Counts of injury deaths for all injury and selected causes of injury by reference year and CODURF release, Australia 1999 to 2011

Figure D2 shows counts for selected causes of injury by CODURF releases for ABS reference years 1999 to 2011. Generally, differences between *Preliminary* and *Final* counts were not pronounced for the 4 external cause categories shown in this figure. Notable differences between the *Initial* and *Final* counts in 2006 were seen for unintentional poisoning by other substances and other unintentional causes of injury.

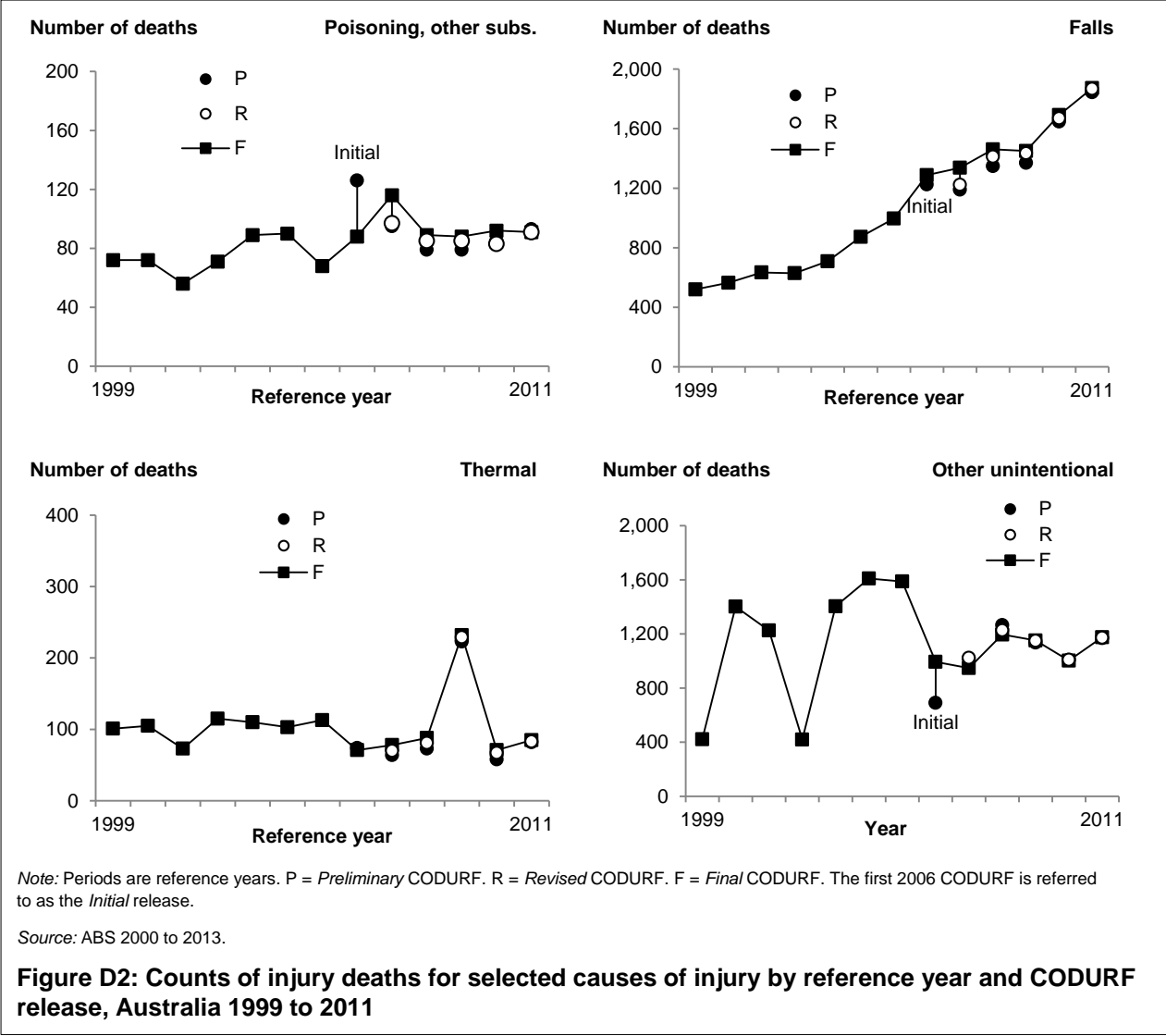
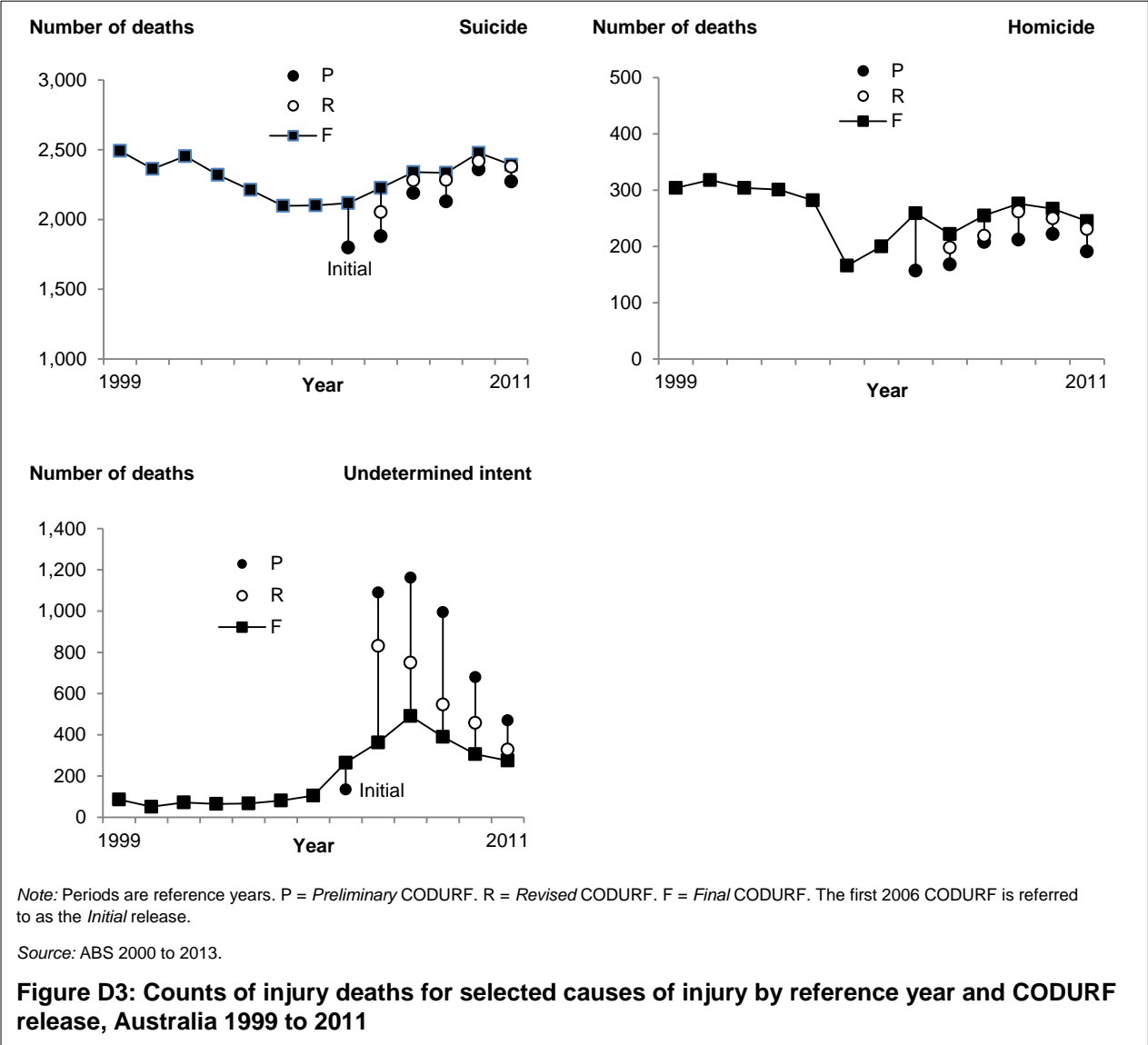


Figure D3 shows counts for other selected causes of injury by CODURF releases for ABS reference years 1999 to 2011. The difference between the *Preliminary* and *Final* counts for deaths where intent was undetermined fell from 727 in 2007 to 105 in 2011 suggesting cases in the *Preliminary* release of data registered in the years towards the end of the period were more likely to be assigned to a more specific external cause of injury. The difference between the *Preliminary* and *Final* counts for suicide fell from 347 in 2007 to 120 in 2011, while this difference for homicides remained relatively steady over the same period.



Glossary

Aboriginal or Torres Strait Islander: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander. See also **Indigenous**.

age-standardisation: A method of removing the influence of age when comparing populations with different age structures. This is usually necessary because the rates of many diseases vary strongly (usually increasing) with age. The age structures of the different populations are converted to the same 'standard' structure, and then the disease rates that would have occurred with that structure are calculated and compared.

cause of death: From information reported on the medical certificate of cause of death, each death is classified by the underlying cause of death according to rules and conventions of the 10th revision of the International Classification of Diseases. The underlying cause is defined as the disease that initiated the train of events leading directly to death. Deaths from injury or poisoning are classified according to the circumstances of the fatal injury, rather than to the nature of the injury. See also **underlying cause of death**.

crude death rate: The number of deaths in a given period divided by the size of the corresponding population (typically expressed per 1,000 or per 100,000 population).

external cause: The term used in disease classification to refer to an event or circumstance in a person's external environment that is regarded as a cause of injury or poisoning.

Index of Relative Socioeconomic Disadvantage: One of the set of **Socio-Economic Indexes for Areas** for ranking the average socioeconomic conditions of the population in an area. It summarises attributes of the population such as low income, low educational attainment, high unemployment and jobs in relatively unskilled occupations.

Indigenous: A person of Aboriginal and/or Torres Strait Islander descent who identifies as an Aboriginal and/or Torres Strait Islander. See also **Aboriginal or Torres Strait Islander**.

International Statistical Classification of Diseases and Related Health Problems: The World Health Organization's internationally accepted classification of death and disease. The 10th revision (ICD-10) is currently in use.

multiple cause of death: Code representing any disease, condition or external cause recorded on the death certificate or other source of information used when coding causes of death.

population estimates: Official population numbers compiled by the Australian Bureau of Statistics at both state and territory and statistical local area levels by age and sex, at 30 June each year. These estimates allow comparisons to be made between geographical areas of differing population sizes and age structures.

P-value: The probability that an observed difference has arisen by chance alone when the null hypothesis is true. By convention, a P-value of 0.05 or less is usually considered statistically significant because the difference it relates to would occur by chance alone only 1 in 20 times or less often.

remoteness classification: Each state and territory is divided into several regions based on their relative accessibility to goods and services (such as general practitioners, hospitals and specialist care) as measured by road distance. These regions are based on the Accessibility/Remoteness Index of Australia (ARIA) and defined as Remoteness Areas by either the Australian Standard Geographical Classification (before 2011) or the Australian Statistical Geographical Standard (from 2011 onwards) in each Census year.

socioeconomic status: An indication of how ‘well off’ a person or group is. In this report, socioeconomic status is mostly reported using the **Socio-Economic Indexes for Areas**, typically for 5 groups, from the most disadvantaged (worst off) to the least disadvantaged (best off).

Socio-Economic Indexes for Areas: A set of indexes, created from Census data, that aim to represent the socioeconomic status of Australian communities and identify areas of advantage and disadvantage. The index value reflects the overall or average level of disadvantage of the population of an area; it does not show how individuals living in the same area differ from each other in their socioeconomic status. This report uses the **Index of Relative Socioeconomic Disadvantage**.

underlying cause of death: The condition, disease or injury initiating the sequence of events leading directly to death; that is, the primary or main cause.

usual residence: Refers to the place where a person has lived or intends to live for a total of 6 months or more.

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Related publications

AIHW: Henley G & Harrison JE 2015. Trends in injury deaths, Australia, 1999–00 to 2009–10. Injury research and statistics series no. 74. Cat. no. INJCAT 150. Canberra: AIHW.

AIHW: Harrison JE & Henley G 2015. Injury deaths data, Australia: technical report on issues associated with reporting for reference years 1999–2010. Injury research and statistics series no. 94. Cat. no. INJCAT 170. Canberra: AIHW.



This report focuses on trends in deaths due to injury and poisoning that occurred over the period 1999–00 to 2011–12.

The age-standardised rate of injury deaths decreased from 55.4 to 47.2 deaths per 100,000 between 1999–00 and 2004–05 and changed little after that. Rates of injury deaths involving transport injury and homicide declined from 1999–00 to 2009–10, while rates for most other external cause groups fluctuated over this period. Rates for suicide deaths declined from 1999–00 until 2004–05 and remained relatively steady thereafter.

Rates for Aboriginal and Torres Strait Islander people were generally at least twice as high as rates for non-Indigenous Australians over the period from 2001–02 to 2011–12.

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