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## Appendix 4 Data limitations

This appendix is designed to assist readers in their interpretation of data used in this report. General information on the different types of data sources (Census, sample surveys and administrative data) are included in chapter 3, along with specific information on the ABS Census of Population and Housing and the ABS Indigenous household surveys. Information on other key collections used in this report is provided below.

### **ABS mortality data**

Caution should be exercised when undertaking analysis of Aboriginal and Torres Strait Islander deaths data, particularly trends in mortality.

The registration of deaths is the responsibility of registrars in individual states and territories. State and Territory registrars supply this information to the ABS for compilation into aggregate mortality statistics. Although it is considered that most Aboriginal and Torres Strait Islander deaths are registered, not all Aboriginal and Torres Strait Islander Australians are identified as such in deaths data. The likelihood that a person will be identified as being of Aboriginal and Torres Strait Islander origin is influenced by a range of factors including: who completes the form; perception of the information use; education programs on the importance of identifying and perceptions about the consequences of identifying (ABS 2013a).

The ABS carried out research linking Census records and deaths registrations following the 2006 and 2011 Censuses. The proportion of people identified as Indigenous in the Census but not in deaths records increased from 20 per cent in 2006 to 24 per cent in 2011. The ABS considered that this was consistent with the increase in the count of Aboriginal and Torres Strait Islander Australians across the two Censuses (ABS 2013b).

Mortality data in this report are presented with variability bands. The variability bands are used to account for natural random variations in counts, and provide a 95 per cent confidence interval. Variability bands should be used for the purposes of comparisons at a point in time and over time. They should not be used for comparing mortality rates across jurisdictions at a single point in time, as the variability bands and mortality rates do not take into account differences in under-identification of Indigenous deaths across jurisdictions.

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## Life expectancy data

Life tables used to calculate life expectancy estimates are available for the populations of NSW, Queensland, WA, the NT and Australia as a whole. (Due to the small number of Aboriginal and Torres Strait Islander deaths in Victoria, SA, Tasmania and the ACT, it is not currently possible to construct life tables for these jurisdictions.)

To account for the Aboriginal and Torres Strait Islander under-identification in deaths registrations, the numbers of Aboriginal and Torres Strait Islander deaths have been adjusted according to the factors derived from the ABS Census Data Enhancement (CDE) study. The factors are based on the 2011 CDE study, and therefore 2006 and 2011 life expectancy estimates are not directly comparable. ABS revised the 2005–2007 life tables which are comparable to the 2010–2012 life tables. These revised tables are included in section 4.1 in this report.

A further improvement was made to the method for calculating Indigenous life tables at the Australia level for the period 2010–2012. The method now takes age-specific identification rates into account when calculating the under-identification adjustment. A separate Australian total is provided for 2010–2012 and 2005–2007 on this basis (but this improved method cannot currently be applied to State and Territory or remoteness life tables).

## Hospitalisations data

Hospitalisations data are from the National Hospital Morbidity Database (NHMD), a national collection of hospitalisation records maintained by the Australian Institute of Health and Welfare (AIHW). Health departments in all states and territories provide the AIHW with information on the characteristics, diagnosis and care of admitted patients from almost all hospitals, including public acute and psychiatric hospitals, private acute and psychiatric hospitals, and private free-standing day hospital facilities.

Hospitalisations include admissions that result in discharges, transfers, deaths or changes in the type or episode of care (defined in the database as hospital separations). A record is included for each hospitalisation, not for each patient, so patients who are admitted more than once in a year have more than one record in the database. Due to the high rates of end-stage renal disease requiring frequent dialysis treatment among Aboriginal and Torres Strait Islander Australians, it is important to separate hospitalisation rates for dialysis from rates for other conditions.

Overall, the quality of Aboriginal and Torres Strait Islander identification in hospital separations data has improved in recent years and data for all states and territories can be reported for national analyses of hospitalisations from 2010-11 onwards (AIHW 2013). Prior to 2010-11, data for Tasmania and the ACT were considered not to be of sufficient robustness to be included in totals, but are reported separately with caveats (AIHW 2010).

The following should be used to guide interpretation of the hospitalisations data:

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- Each State and Territory has a unique demographic structure, and factors such as age and Aboriginal and Torres Strait Islander status can have an effect on the nature of health care delivery. The frequency of particular procedures, for example, can be affected by the demographic composition of the population (AIHW 2005).
  - Although data on hospitalisations from the NHMD can reflect an aspect of the burden of disease in the community, they do not usually provide measures of the incidence or prevalence of conditions. This is because not all people with a particular condition or degree of illness are treated in hospital, and there are multiple admissions for some chronic conditions. Also, the number and pattern of hospitalisations can be affected by differing admission practices, and differing levels and patterns of service provision (AIHW 2005).

### **National Perinatal Data Collection**

Data on pregnancy and childbirth are sourced from the National Perinatal Data Collection (NPDC), a collection maintained by the AIHW comprising of data items as specified in the Perinatal National Minimum Data Set (NMDS), plus additional items collected by the State and Territories. From 2011, the Indigenous status of the baby (that is, the mother and/or father has identified as being of Aboriginal and/or Torres Strait Islander origin) has been collected. Previously the Indigenous status of the baby was only available based on the Indigenous status of the mother, leading to an underestimate of Aboriginal and Torres Strait Islander births. For around 6 per cent of births the Indigenous status is unknown, due to unknown Indigenous status of the father. Identification of the father is not compulsory on birth registrations.

The accuracy of Aboriginal and Torres Strait Islander identification in the NPDC has not been formally assessed and is likely to vary across jurisdictions.

### **Australian Institute of Criminology (AIC) homicide data and other police data**

The National Homicide Monitoring Program (NHMP) is funded by the Commonwealth Government. The data (and tabulations) used in this publication were made available through the Australian Institute of Criminology (AIC). These data were originally collected by the AIC with the assistance of each of Australia's Police Services. Neither the police, nor the AIC bear any responsibility for the analysis or interpretations presented in this report.

NHMP data are derived from police records, which depend on the police accurately recording the Indigenous status of the victim and offender. In some jurisdictions this may involve the police making a subjective assessment based solely on the victim's or offender's appearance, which might lead to errors and inconsistencies. In other

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jurisdictions, Indigenous status is determined by police administering a standard question, but not all Indigenous people may choose to identify when asked by police.

In addition to NHMP data, police data are included in sections 4.11 (Family and community violence) and 11.3 (Juvenile diversions).

## References

ABS (Australian Bureau of Statistics) 2013a, *Deaths, Australia*, Cat. no. 3302.0, Canberra.

—2013b, *Information Paper: Death registrations to Census linkage project - Key Findings for Aboriginal and Torres Strait Islander peoples 2011-12*, Cat. no. 3302.0.55.005, Canberra.

AIHW (Australian Institute of Health and Welfare) 2010, *Indigenous Identification in Hospitals Separations Data - Quality Report*, Cat. no. HSE 85, Canberra.

—2013, *Indigenous Identification in Hospitals Separations Data - Quality Report*, Cat. no. IHW 90, Canberra.

—2005, *Improving the Quality of Indigenous Identification in Hospital Separations Data*, Cat. no. HSE 101, Canberra.