
Appendix 4 Data limitations

This appendix contains information on the limitations of the major data sources contained in this report, and is designed to assist readers in their interpretation of data.

ABS mortality data

Excessively precise analysis based on Indigenous death registrations, Indigenous deaths coverage or projected Indigenous deaths should be avoided.

The registration of deaths is the responsibility of registrars in individual states and territories. It is based on information supplied by a relative, another person acquainted with the deceased, a funeral director, or an official of the institution where the death occurred, and on information about the cause of death supplied by a medical practitioner. State and Territory registrars supply this information to the ABS for compilation into aggregate mortality statistics.

Although it is considered that most Indigenous deaths are registered, not all Indigenous people are identified as such in deaths data (ABS 2008a). There are several data collection forms on which people are asked to state whether they are of Indigenous origin, and the results are not always consistent. The likelihood that a person will be identified as Indigenous in a particular collection is influenced by factors including: whether the person or their next of kin is asked the question; who completes the form (for example, a relative, an official or a funeral director); the perception of how the information will be used; education programs about the importance of identifying as Indigenous; and perceptions about the consequences of identifying as Indigenous.

Understanding of the extent to which Indigenous deaths are recorded as Indigenous in death registrations data is improving. The ABS carried out research linking 2006 Census records and death registration data (ABS 2008a), from which the ABS concluded that identification of Indigenous people in mortality data was better than had previously been estimated.

Life expectancy data

Despite the ABS's efforts to improve the accuracy of Indigenous life expectancy estimates, the underlying population and death registrations data have limitations. Therefore, life expectancy estimates included in this report are experimental and are reported with confidence intervals that reflect these limitations.

In November 2008, the ABS released a discussion paper assessing various methods used to calculate life expectancy for Indigenous people (ABS 2008a). The ABS concluded that the indirect method that had been used to calculate Indigenous life expectancies included in the 2005 and 2007 editions of this report was no longer adequate and that previously published Indigenous life expectancy estimates for 1996–2001 may have been too low (although the disparity in outcomes between Indigenous and non-Indigenous people would still be substantial). However, it is not possible to recalculate identification rates for Indigenous deaths in earlier periods.

After consulting with experts and data users on the preferred method, the ABS used a direct demographic method to derive Indigenous life expectancy estimates for 2005–2007. This method applies identification factors (obtained from the ABS Census Data Enhancement (CDE) Indigenous Mortality Quality Study) to death registrations data to adjust for under-identification of Indigenous people in death registrations (ABS 2008a).

While the life expectancy estimates presented in this report are the best that can be compiled with currently available data, it is not possible to present time-series or trend statistics for Indigenous life expectancy. In addition, differences between the estimated life expectancies for Indigenous males and females, and for Indigenous Australians in different states and territories should be interpreted with care. These estimates are sensitive to the demographic assumptions and differing quality of death registration data across states and territories. Life expectancy estimates for Victoria, SA, Tasmania and the ACT, cannot be produced because of the small number of Indigenous deaths in those states and territories.

Survey data

This report uses data from the ABS National Aboriginal and Torres Strait Islander Survey 1994 (NATSIS 1994), the ABS General Social Survey 2002 (GSS 2002), the ABS National Aboriginal and Torres Strait Islander Health Survey 2004-05 (NATSIHS 2004-05), the ABS National Health Survey 2004-05 and 2008 (NHS 2004-05 and 2008), and the ABS National Aboriginal and Torres Strait Islander Social Surveys 2002 and 2008 (NATSISS 2002 and 2008). Data from surveys conducted by other organisations are also included where relevant.

ABS surveys are designed to provide estimates for all indicators at the national level, and for most indicators at the State and Territory level. Sample size limits the extent to which data can be disaggregated by different factors such as geography, age and sex, particularly for characteristics that are not widespread across the population. More information on using and interpreting survey data is available in NATSISS 2008 User's Guide (ABS 2008b). As a guide to readers, survey data in this report are presented in charts with error bars to show 95 per cent confidence intervals and relative standards errors (RSE) are included in the attachment tables accompanying the report on the Review website.

Census data

The ABS Census of Population and Housing takes place every five years. The Census is rich in information and has the potential for extensive disaggregation, and the 2006 Census was a major data source for the 2009 report. The next Census will be conducted in August 2011. Because of the five year gap between Censuses, other sources are used for more frequent reporting.

The 2006 Census includes responses from just over 450 000 people who identified as being of Aboriginal and/or Torres Strait Islander origin, out of an estimated Indigenous population of just over 500 000. Following the Census, the ABS conducted a Post Enumeration Survey to identify people who may have been missed in the Census count. The Post Enumeration Survey also identified people whose Indigenous status was recorded differently in the Census and the Survey. The undercount of Indigenous people was particularly significant in WA (estimated at 25 per cent) and the NT (estimated at 20 per cent). Census data for these jurisdictions still provide a high quality picture of the circumstances of those who were counted, but readers should not assume that the characteristics of those who were counted in the Census are necessarily the same as those who were missed.

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 in public and private hospitals. 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.

Overall, the quality of Indigenous identification in hospital separations data has improved in recent years, but still varies substantially between jurisdictions. Hospitalisation data for Indigenous patients are considered adequate for reporting purposes for NSW, Victoria, Queensland, WA, SA and public hospitals in the NT. National totals included in this report include these six jurisdictions only. Data were available by remoteness areas for these jurisdictions combined, with Indigenous identification highest in remote and very remote areas (AIHW 2010). Data for Tasmania and the ACT are still considered to be of insufficient robustness to be included in totals or aggregates, but are reported separately with caveats until further audits of the quality of data in these jurisdictions are completed.

The AIHW is currently working with states and territories on a project to improve the quality of Indigenous identification in their hospitalisations data. Changing rates of Indigenous identification in hospitalisation records means that time series and geographic comparisons should be interpreted with caution.

Data relating to admitted patients are incorporated from almost all hospitals, including public acute and psychiatric hospitals, private acute and psychiatric hospitals, and private free-standing day hospital facilities.

Analysis of hospitalisation rates both including and excluding dialysis is provided in section 4.8. Due to the high rates of end-stage renal disease requiring frequent dialysis treatment among Indigenous Australians, it is important to separate hospitalisation rates for dialysis from rates for other conditions.

AIHW and the data providers jointly validate the database to ensure data quality. When data are supplied using non-standard definitions or classifications, the AIHW maps them to the National Health Data Dictionary definitions, where possible, in collaboration with the data providers.

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

- Each State and Territory has a unique demographic structure, and factors such as age and Indigenous 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).

Perinatal data come from the National Perinatal Data Collection (NPDC), a national 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. Currently, all jurisdictions collect perinatal data on the Indigenous status of the mother, but not necessarily the Indigenous status of the baby. Therefore, Indigenous births will be underestimated because babies born to Indigenous fathers and non-Indigenous mothers are not included. Collection of data relating to Indigenous status of the baby will commence from 2012 onwards.

The accuracy of Indigenous 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) project is funded by the Australian 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 by an independent data collector with the assistance of the NSW, NT, Queensland, SA, Victoria and WA Police. Neither the collectors, the police, nor the AIC bear any responsibility for the analyses 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 involves 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 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 from individual states and territories are included in sections 4.11 (Family and community violence) and 10.5 (Juvenile diversions).

Collection of data in remote locations

Locational addresses are widely used in administrative data collections to compare and analyse multiple sources of statistics. However, many remote Indigenous

communities have little or no geographic location identifiers such as street names or house numbers, which may affect the accuracy of some data collections.

References

ABS (Australian Bureau of Statistics) 2008a, *Information Paper: Census Data Enhancement — Indigenous Mortality Quality Study, Australia*, Cat. no. 4723.0, Canberra.

— 2008b, *National Aboriginal and Torres Strait Islander Health Survey: Users' Guide*, Cat. no. 4715.0, Canberra.

AIHW (Australian Institute of Health and Welfare) 2005, *Improving the Quality of Indigenous Identification in Hospital Separations Data*, Cat. no. HSE 101, Canberra.

— 2010, *Indigenous Identification in Hospital Separations Data — Quality Report*, Cat. no. HSE 85. Canberra.