

3 Identification and population estimation

Over the last few decades a considerable effort has been put into improving the enumeration of Aboriginal and Torres Strait Islander peoples and the identification of Indigenous people in successive Censuses, surveys and administrative data collections.

Identifying Aboriginal and Torres Strait Islander peoples

Complete and consistent Indigenous identification in Censuses, surveys and administrative data collections is fundamental to developing high-quality information about Aboriginal and Torres Strait Islander peoples. This requires substantial effort on the part of government and non-government organisations to establish the broad acceptance of a standard question on Indigenous origin in all key data collections. The ABS standard question on Indigenous status is used in the five-yearly Census of Population and Housing, ABS surveys and many national administrative datasets. Box 3.1 provides the current wording and an explanation of the way it is recorded and reported.

Before 1967, 'Aboriginal' people were identified in the Census in order to exclude them from official population figures, as required by the Constitution, and identification of a person as 'Aboriginal' was restricted to people of more than 50% Aboriginal descent. Following the results of the 1967 Referendum, the Constitutional requirement that Aboriginal people be excluded from the official population figures was revoked, resulting in the need for a new, broader definition of an Aboriginal person. Numerous changes over the past three decades have led to the development of the Commonwealth working definition (Ross 1999).

The Commonwealth working definition states that 'an Aboriginal or Torres Strait Islander person is a person of Aboriginal or Torres Strait Islander descent who identifies as an Aboriginal or Torres Strait Islander and is accepted as such by the community in which he or she lives' (DAA 1981). Although this definition is commonly cited, it is not always practical to collect information on all three aspects (descent, self-identification and community acceptance) in statistical collections. In the absence of appropriate methodology to measure community acceptance, the definitions used in statistical collections generally focus on descent and/or self-identification.

In Australian Censuses of Population and Housing, the question currently used to identify Aboriginal and Torres Strait Islander peoples asks about origin (or descent) only, on the basis of self-identification. The approach used by the ABS in Censuses has been broadly the same since 1981, although since 1996 a modification to the standard has enabled people of both Aboriginal and Torres Strait Islander origin to make two responses, that is 'yes' to both 'Aboriginal' and 'Torres Strait Islander' (Box 3.1).

Box 3.1: ABS standard question on Indigenous status

In 1995, the ABS formally adopted the following question as the standard for identifying persons as members of the Indigenous population:

Are you of Aboriginal or Torres Strait Islander origin?

For persons of both Aboriginal and Torres Strait Islander origin, mark both 'Yes' boxes.

No

Yes, Aboriginal

Yes, Torres Strait Islander

The categories expected to be used in collecting Indigenous status data are derived from answers to the relevant question in the question module, but include the supplementary category 'Not stated/inadequately described', where applicable:

- 1. No*
- 2. Yes, Aboriginal*
- 3. Yes, Torres Strait Islander*
- 4. Not stated/inadequately described*

However, these 'input' categories do not include the category 'Both Aboriginal and Torres Strait Islander origin'. If a person ticks both 2 and 3, the results are amalgamated and appear in standard output.

The 'output' categories are the same as the categories agreed for use in the collection protocol for Indigenous status in the National Health Data Dictionary and the National Community Services Data Dictionary, and create the following output data:

- 1. Aboriginal but not Torres Strait Islander origin*
- 2. Torres Strait Islander origin but not Aboriginal origin*
- 3. Both Aboriginal and Torres Strait Islander origin*
- 4. Neither Aboriginal nor Torres Strait Islander origin*
- 5. Not stated/inadequately described*

The ABS standard question is based on the 'Commonwealth working definition' but does not include the third element of the Commonwealth definition, namely that 'an Aboriginal or Torres Strait Islander person who is accepted as such by the community in which he or she lives'. Collecting information on the basis of community acceptance is often impractical and can lead to inaccuracies, and for these reasons it is not included in the ABS standard.

The standard question is used in the Census and in other surveys conducted by the ABS, and has also been adopted by Registrars General throughout Australia. The *National health data dictionary* (NHDD), the *National housing data dictionary* and the *National community services data dictionary* (NCSDD) recognise the ABS standard. Version 12 of the NHDD, published in mid-2003, no longer includes 'community acceptance' in its definition, recognising that it is often not feasible to collect this information in general purpose statistical and administrative collections. This change also occurred in Version 3 of the NCSDD, which was also published in 2003. These data standards are now available online via the AIHW's Metadata Online Registry – METeOR (<http://meteor.aihw.gov.au/>). Later sections of this paper discuss some of the differences that remain between collections with respect to the actual question used and, for data reported by service delivery agencies, whether the question is actually asked of clients.

These issues have a potentially substantial impact on the completeness and consistency of reported data.

Although largely the same question on Indigenous status has been used in Censuses since 1981, there have been changes in the Census counts of Aboriginal and Torres Strait Islander peoples which cannot be fully explained by natural increase (ABS 2004d). Between 1991 and 1996, the number of people counted as Indigenous in the Census increased by 33% – 14% was due to natural increase (births and deaths) and a further 19% was due to a combination of other factors including changes in Census awareness, and field and editing procedures. Between 1996 and 2001, the number of people counted as Indigenous in the Census increased by 16% – 12% due to natural increase (by births and deaths) and 4% due to other factors (considerably less due to other factors than occurred between 1991 and 1996) (ABS 2002c).

Other possible contributions to the ‘non-demographic’ component of growth include changes in the level of the Census undercount, and previous non-response to the question on Indigenous status on the Census form. In addition, improvements to the ABS Indigenous Enumeration Strategy may have had an impact on the Census count in some areas, especially remote areas. Factors such as how the information is collected (for example, by using Indigenous collectors and interviewers) and perceptions of how the information will be used (education strategy) can influence coverage. The ABS Indigenous Enumeration Strategy also focuses on the importance of Indigenous people identifying their Aboriginal and/or Torres Strait Islander origin and may, therefore, have contributed to the increase.

The ABS and the AIHW – in partnership with state and territory authorities and the Indigenous community – are continuing efforts to improve the quality and completeness of Indigenous identification in key administrative and survey collections. There have been significant improvements in progressively implementing consistent standards of Indigenous identification in administrative data sets (ABS 2004a).

Estimating the Aboriginal and Torres Strait Islander population

Population estimates and projections for the total Australian population are derived from the most recently available Census counts, using well-established methods. The counts (by sex and single year of age) are first adjusted for the estimated amount of under-enumeration at the time of the Census, and then backcast or projected forward to the date for which the estimate or projection is required. For the total Australian population, this involves adjustments for the numbers of births, deaths and estimated migration into and out of Australia (or a state or territory, for jurisdictional population estimates). Assumptions about future rates of fertility, mortality and migration are used to derive population projections.

However, estimating the size and demographic structure of the Indigenous population is problematic and prone to uncertainty (ABS 1998a, 1998b, 2004d). Because satisfactory data about Indigenous births, deaths and migration are often not available, the usual methods cannot be applied effectively. For this reason, the ABS estimates and projections of the Indigenous population (see Appendix 2) are referred to as ‘experimental’.

The best currently available estimates are the final experimental Indigenous estimated resident population figures based on the 2001 Census, presented by age and sex in Appendix 3, and for each state and territory in the ABS publication *Experimental estimates and projections, Aboriginal and Torres Strait Islander Australians, 1991–2009* (ABS 2004d).

The projections are not intended as predictions or forecasts, but are illustrations of the changes which would occur in the population if the assumptions about future demographic trends were

to prevail over the projection period. Care must be taken when comparing the experimental population estimates and projections presented here with those produced at other times, because estimation procedures and assumptions will continue to be refined and modified as new information becomes available.

Torres Strait Islander population estimates

Torres Strait Islander people are a culturally distinct group within the Indigenous population. They comprise 11% of the total Indigenous population in Australia, mainly living on the east coast (59% of Torres Strait Islanders live in Queensland, 18% live in New South Wales).

Separate estimated resident population figures for the Torres Strait Islander population are detailed in *Experimental estimates and projections, Aboriginal and Torres Strait Islander Australians, 1991–2009* (ABS 2004d, also see Appendix 3).

Estimating the homeless

Estimates of homeless Indigenous Australians have been compiled from 1996 and 2001 Census data. These estimates indicated that there were about 14,000 homeless Indigenous Australians on Census night 1996 and 6,861 homeless Indigenous Australians on Census night 2001. The data are, however, not comparable as the definition of dwelling for the 2001 Census was changed to include some dwellings that were previously defined as improvised dwellings (primary homeless). The 2001 Community Housing and Infrastructure Needs Survey (CHINS) data estimated that the number of Indigenous Australians in remote areas living in improvised dwellings to be more than 5,600 (ABS 2002a).

4 Quality and availability of data

Considerable effort has been expended to collect health and welfare data on Aboriginal and Torres Strait Islander peoples through dedicated surveys, and to improve the quality of Indigenous identification in Censuses, vital statistics collections and other administrative data collections.

Census of Population and Housing

The Census of Population and Housing, conducted every five years, provides the basis for the estimation of the size of the Indigenous population, as well as information on a range of topics such as housing, employment, education, income and language, at all levels of geography. The range of Indigenous-specific outputs has been expanding and improving with each Census since 1971.

The 2001 Census was held on 7 August with results progressively released from July 2002. As with previous Censuses and the forthcoming 2006 Census, an Indigenous Enumeration Strategy (IES) was used to improve the coverage and accuracy of the count of the Indigenous population. The IES consists of special collection procedures and Census awareness activities. Special collection procedures include the use of specially designed forms for use by interviewers in many Indigenous communities in remote areas. A variety of awareness activities are used as and when appropriate. These include newspaper articles, posters, presentations in Indigenous languages, radio and television interviews and information brochures. Awareness activities are designed to break down cultural barriers that may discourage Aboriginal and Torres Strait Islander peoples from participating in the Census, and to help them understand the purpose of the Census and its potential benefits. Extensive and ongoing consultation and liaison with Indigenous organisations and communities are seen as essential elements of the strategy. Census staff are also trained in Indigenous enumeration procedures, and a special recruitment effort ensures that, wherever possible, Aboriginal and Torres Strait Islander people are employed to help with the Census collection. Over 1,600 Census field staff in 2001 (about 5%) were of Aboriginal or Torres Strait Islander origin. Coordination of Census activities with preparations for the 2001 Community Housing and Infrastructure Needs Survey (CHINS) were another element of the IES.

Major Indigenous outputs from the Census include the publications *Population distribution, Aboriginal and Torres Strait Islander Australians, 2001* (ABS 2002c) and *Population characteristics, Aboriginal and Torres Strait Islander Australians, 2001* (ABS 2003b).

For the 2001 Census IES, the ABS arranged for three independent researchers from the Centre for Aboriginal Economic Policy Research to accompany Census enumerators. These official observers were able to assess the effectiveness of the IES in a selection of different types of remote locations designed to cover different remote-area contexts. A full discussion of the findings and recommendations of the research team have been released in *Making sense of the Census: observations of the 2001 enumeration in remote Aboriginal Australia* (Martin et al. 2002).

In addition to the IES, the ABS implemented evaluation activities for discrete Indigenous communities which included capturing field information about collection activities, community response, difficulties and barriers experienced in the field; an assessment of the success of the collection; identification of unoccupied dwellings; comparisons of the Census counts of people and dwellings with the counts obtained in the 2001 CHINS; and observational studies undertaken during the Census 2001 collection. Findings from these evaluations were used to develop changes to the IES for the 2006 Census.

Enumerations of the 2006 CHINS and preparations for the 2006 Census are well advanced. The strategy includes specifically targeted Census awareness campaigns; a separate collection of community-level data run during the preparatory stages of the Census, as occurred in the 2001 CHINS; the use of Indigenous engagement managers as part of the ABS Indigenous Community Engagement Strategy, who will liaise with communities to establish rapport; a more flexible approach to enumeration, enabling the tailoring of strategies to suit community characteristics and specific situations; the further development and widespread implementation of appropriate strategies for the enumeration of Indigenous people in urban and regional areas; the use of a matrix Interviewer Household Form in nominated discrete communities, in place of the separate Special Indigenous Household and Personal Forms used in 2001; for nominated discrete communities, the capture of more details about Indigenous persons who are away from their usual residence at the time of the Census and unlikely to be counted elsewhere; and independent observations of the Census enumeration in a number of remote communities and potentially rural and urban enumeration areas.

Indigenous survey program and other surveys

Following the 1999 review of its household survey program, the ABS developed a strategy for Aboriginal and Torres Strait Islander statistics (ABS 2000a). Both initiatives included wide consultation, involving all levels of government and the Aboriginal and Torres Strait Islander community. The key elements (discussed individually below) in the ABS Indigenous household survey program are a six-yearly National Aboriginal and Torres Strait Islander Social Survey, and a six-yearly National Aboriginal and Torres Strait Islander Health Survey (both surveys designed to produce national and state/territory-level estimates, and cover remote and non-remote areas of Australia), and regular identification of Aboriginal and Torres Strait Islander peoples in the Labour Force Survey so that broad employment data are available between Censuses. In addition, the ABS was commissioned to administer the CHINS in 1999, 2001 and 2006. The results of these surveys provide broad and complementary information to improve understanding about the social environment and health and wellbeing of the Indigenous population.

The survey strategies are designed to ensure that data are relevant, that collection methods are sensitive to Aboriginal and Torres Strait Islander peoples, and that broad consultation processes are in place. Achieving long-term credibility for survey results requires a substantial level of acceptance by the Aboriginal and Torres Strait Islander community, and the ABS is involving a wide range of community stakeholders in consultative processes throughout the conduct of its Indigenous surveys. There is also need for routine ongoing liaison with communities and respondents in the consultation process.

These Indigenous-specific surveys along with a number of other surveys which collect information on Indigenous Australians are outlined below.

National Health surveys

The Australian Government Department of Health and Ageing entered into a partnership with the ABS to fund a program of triennial national health surveys from 2001. The program incorporated an enhanced Indigenous sample into the 2001 National Health Survey, and involves an Indigenous-specific survey, the National Aboriginal and Torres Strait Islander Health Survey (NATSIHS), first conducted in 2004–05 and to be conducted every six years thereafter (to coincide with every second NHS). Results from the Indigenous supplement to the 2001 NHS were released in 2002 and provide national estimates on some indicators of health status (ABS 2002b). Estimates from the 2004–05 NATSIHS at the national, state and territory level, and by remoteness, were released in April 2006 (ABS 2006d).

In addition, the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATSISS) delivered state/Northern Territory estimates for some Indigenous health items.

Bettering the Evaluation and Care of Health (BEACH) survey

Information about general practitioner (GP) consultations is available from the Bettering the Evaluation and Care of Health (BEACH) survey. BEACH is a collaborative program between the AIHW and the University of Sydney. The survey questionnaire includes an Indigenous identifier – patients are asked whether they are Aboriginal (Yes or No) or Torres Strait Islander (Yes or No). However, it is unknown whether GPs filling out the survey forms always ask the question of their patients and record the information consistently. The reliability of the results in BEACH has been tested in a sub-study of about 9,000 patients encountered during the survey. The sub-study found that when the question on Indigenous status is asked of the patient within the context of a series of questions about origin and cultural background, 2.2% will identify as Aboriginal or Torres Strait Islander, which is twice the rate routinely recorded in BEACH. However, this difference was not statistically significant.

The representation of Aboriginal and Torres Strait Islander patients in the survey is below their representation in the population. However, this may be due to lower attendance in general practice where other services (such as Aboriginal Community Controlled Health Services) exist, failure by GPs to record Indigenous status of patients, or reluctance of patients to identify as Indigenous. Other reasons may also include the geographic distribution of GPs not reflecting that of the Indigenous population, Aboriginal and Torres Strait Islander peoples not accessing care when they need it and using hospital emergency departments, or seeking other advice (such as from pharmacists). The rate of GP consultations of Indigenous Australians is likely to be an underestimate of the true level of consultation with GPs (AIHW 2003).

National Drug Strategy Household Survey

The National Drug Strategy Household Survey is conducted every 2–3 years and is Australia's most comprehensive national survey on drug issues. The 2004 survey was conducted between June and November 2004. This was the eighth and largest survey in a series which began in 1985, and was the third to be managed by the AIHW, commissioned by the Australian Government Department of Health and Ageing. Almost 30,000 Australians aged 12 years and over participated in the survey in which they were asked about their knowledge of and attitudes towards drugs, their drug consumption histories, and related behaviours.

Initial results of the 2004 survey were released in April 2005 and detailed findings in October 2005. To enable comparisons over time, many of the analyses reported are based on the population aged 14 years and over.

In the 2004 survey, respondents were asked whether they were Aboriginal, Torres Strait Islander or both. Approximately 1.5% of respondents identified as Aboriginal or Torres Strait Islander which is below their representation in the population (AIHW 2005a). Results from the survey should therefore be interpreted with caution.

Western Australian Aboriginal Child Health Survey

The first fully representative community survey of Aboriginal child health and wellbeing was undertaken in Western Australia from April 2001 to June 2002. The survey aimed to research the factors that contribute to significantly higher death rates, illness and disability in comparison with other Australians, and to identify resilience factors. The project was conducted under the auspices of the Kulunga Research and Training Network by researchers from the Telethon Institute for Child Health Research. The project was funded by the Australian Government, state/territory governments and private organisations. The ABS was a major partner, providing consultancy services as well as staff and support for survey development and field work.

By the end of 2001, over 130 screeners and interviewers (60% of whom were Aboriginal) enumerated a selection of 786 Census districts in Western Australia, listing 166,287 dwellings and randomly sampling 2,386 families with Aboriginal children under the age of 18 years. A total of 1,999 families (84%) agreed to participate. Interviews with parents/carers and children aged 12–17 years gathered information on 5,289 Aboriginal children living in metropolitan, rural and remote areas of Western Australia. School data were also collected for a high proportion of the children.

During 2002, intensive data screening, cleaning, editing and validation took place. In addition, record linkage work further enhanced the scope of the data; 92% of carers gave consent for their survey data to be administratively linked to hospital records, and 96% of carers gave consent for the data on their children to be linked to both hospital and birth records. Where consent was given, 96% of children and 93% of carers were successfully linked to the administrative health records maintained on the WA Health Services Research Linked Database.

Survey results were communicated to participating Aboriginal communities in a culturally appropriate form with the assistance of the project's Aboriginal Steering Committee (comprising senior Aboriginal people from a cross-section of agencies and settings) and the Kulunga Research and Training Network.

To date, two publications have been released: *The health of Aboriginal children and young people* (Zubrick et al. 2004) and *The social and emotional wellbeing of Aboriginal children and young people* (Zubrick et al. 2005). These publications provide an epidemiological framework not previously available as a planning resource to define the burden and impact of common child disorders at the Western Australian population and regional levels. This information will help policy makers, service planners and purchasers in health, education, family and children's services and justice to estimate service needs and the potential advantages of alternative policies and programs.

Community Housing and Infrastructure Needs Survey

The first CHINS was conducted by the ABS in 1999. It collected housing and management information from Aboriginal and Torres Strait Islander housing organisations, and a range of community infrastructure information for those locations identified as discrete communities. Data are available at the community, not household or individual, level. The 2001 CHINS was conducted in conjunction with Census 2001, and updated the 1999 CHINS by maintaining comparability with that collection (ABS 2002a). As in 2001, the 2006 CHINS is being conducted immediately prior to the 2006 Census, with enumeration from March–June 2006.

CHINS data include details of the current housing stock, and management practices and financial arrangements of Indigenous housing organisations. Details of housing and related infrastructure, such as water, power and sewerage systems, and other facilities such as education and health services available in discrete Aboriginal and Torres Strait Islander communities, are also collected.

National Aboriginal and Torres Strait Islander Social Survey

The NATSISS, conducted by the ABS in 2002, will be repeated at six-yearly intervals. It provides broad information across areas of social importance, including health, housing, work, education and income. The results allow relationships between different areas of social concern to be explored, and provide information on the extent to which some people face multiple social disadvantages. The final content of the 2002 NATSISS achieved about 50% overlap with the 1994 National Aboriginal and Torres Strait Islander Survey (NATSIS) conducted by the ABS, thus allowing some comparative studies. Summary results from the 2002 NATSISS were released in June 2004 (ABS 2004e). Key comparisons with results from the rebenchmarked 1994 NATSIS, and with results for non-Indigenous Australians from the 2002 General Social Survey, are included. Relevant data items have been age-standardised to facilitate more useful comparisons with statistics for the non-Indigenous population. The 1994 NATSIS results have been rebenchmarked to reflect the significant change in Indigenous population levels between the 1991 Census-based population benchmarks used when the 1994 data were first released, and subsequent experimental Indigenous population estimates based on 1996 Census results. Preparations for the 2008 NATSISS will start in 2006.

Table 4.1 lists previous national Censuses and surveys that have produced information relevant to the health and welfare of Aboriginal and Torres Strait Islander peoples and those either currently underway or planned.

Table 4.1: National Census and survey collections relevant to Indigenous health and welfare, 1994–2006

	Status	Coverage	Approximate sampling fraction	Comment
Census of Population and Housing, 2001 & 2006 (ABS)	Results reported for 2001 Census. Results expected in 2007 for 2006 Census.	Indigenous data reportable down to Indigenous location level, and Census Collection Districts except where confidentiality is an issue.	1	Conducted every five years. Content includes population, housing, income, education, employment. Complete coverage of the population is an advantage.
National Aboriginal and Torres Strait Islander Survey, 1994 (ABS)	Results reported.	All Indigenous persons; data reportable down to ATSI regional level.	0.05	Wide range of topics in the areas of family and culture, health, housing, education and training, employment and income, and law and justice.
National Aboriginal and Torres Strait Islander Social Survey, 2002 (ABS)	Results reported.	Indigenous persons aged 15 years and over; data reportable by remoteness area at the national level and down to state/territory level with some regional data also available.	0.034	Reported on areas of social concern including health, disability, language, culture, law and justice, employment, education and income.
National Health Survey: Indigenous supplement, 1995, 2001 (ABS)	Results reported for non-remote areas in 1995, and both non-remote and remote areas in 2001.	All Indigenous persons; data available at national level.	0.006, 0.008	Wide range of information about health conditions, actions, risk factors etc. For 2001, subset of questions used in remote areas.
National Aboriginal and Torres Strait Islander Health Survey 2004–05 (ABS)	Survey conducted. Results reported 2006.	All Indigenous persons; data reportable by remoteness area at the national level and down to state/territory level with some regional data also available.	0.022	Wide range of information about health conditions, actions, behaviours.
Community Housing and Infrastructure Needs Survey, 1999, 2001 & 2006 (ATSIC & ABS in 1999 and 2001, FaCSIA & ABS in 2006)	Results reported for 1999 and 2001 surveys. Results expected in 2007 for 2006 survey.	Discrete Indigenous communities and Indigenous housing organisations; data reportable down to community level.	100% of selected discrete Indigenous communities and Indigenous Housing Organisations	Housing, environmental and health service infrastructure.
National Drug Strategy Household Survey 1998, 2001, 2004 (DHAC & AIHW)	Results reported.	All persons aged 14 years and over in 1998 and 2001 surveys; all persons aged 12 years and over in 2004 survey; Indigenous data reported at national level.	0.0008, 0.0014, 0.0015	Drug use and exposure, attitudes, awareness, knowledge and behaviours.
Bettering the Evaluation and Care of Health, 1998 onwards (AIHW & Australian General Practice Statistics and Classification Centre, Sydney University)	Results reported annually.	General practitioners in private practice, some state-level Indigenous data on services provided to Indigenous clients.	0.1% of encounters between GPs and patients.	A survey of general practice activity. Includes information on service delivery to Indigenous clients and GP consultations including characteristics of GP, patients, reasons for encounter, treatment and risk factors.
State Owned and Managed Indigenous Housing (SOMIH) National Social Housing Survey, 2005 (Roy Morgan & AIHW)	Survey conducted. Results reported in 2006.	Main tenant/spouse living in SOMIH; data reportable down to state/territory level.	7% of SOMIH households	Reports on tenant's satisfaction with various aspects of their housing including condition, amenity, location and service provided by SOMIH.

Administrative data

Different problems occur when collecting data at the point of service delivery. These problems relate to a lack of understanding about why the Indigenous status question is being asked, reluctance on the part of some staff to ask the question and reluctance on the part of some clients to identify themselves as Indigenous.

As a result, significant shortcomings exist in administrative data about Indigenous people in Australia. These problems occur in vital statistics and in point-of-service administrative data, such as hospitalisations and primary health care services records. Central to these problems is the undercounting of Aboriginal and Torres Strait Islander peoples that occurs because their status as Indigenous Australians is not accurately recorded in data collections. The degree of under-identification varies by data collection and by jurisdiction.

The AIHW and ABS have initiated programs in partnership with state and territory authorities to improve the completeness with which Aboriginal and Torres Strait Islander peoples are identified in a wide range of administrative data sets. Work on birth and death registrations continues to be undertaken by the ABS in collaboration with state and territory registrars, and has uncovered a number of ways in which the quality of Indigenous births and deaths data can be improved. The AIHW continues to work with state and territory authorities to document and improve the quality of data in such areas as hospital separations, cancer registrations, general practice, community mental health services, alcohol and other drug treatment services, juvenile justice, children protection, disability services, aged care and housing assistance services.

Vital statistics data

Births

Information regarding Indigenous births is obtained by the ABS from birth registration forms and by the AIHW from the perinatal collections from each jurisdiction. Birth registrations provide information on the Indigenous status of both parents. Perinatal collections in all jurisdictions, apart from Victoria, include information only about the mother.

With minor variations, the questions used in each jurisdiction to identify Indigenous status on birth registration forms are based on the ABS standard question which allows for five potential responses (see Box 3.1 for the standard question). Four of the jurisdictions use the standard ABS question on the perinatal form. South Australia and Western Australia ask a question on the mother's race, and the Northern Territory question on the mother's Indigenous status has a Yes/No option only. For Tasmania, in the provision of data to the National Perinatal Statistics Unit, the 'Not stated' category for Indigenous status cannot be distinguished from the category of mothers who were neither Aboriginal nor Torres Strait Islander. The Indigenous status item in the perinatal collections may also come from linkage with hospitalisation data, as was the case in Western Australia up until 2003.

The standard definition of births differs between the ABS birth registration data and the National Perinatal Data Collection. The ABS birth registration data includes only live births whereas the National Perinatal Data Collection includes all births of at least 400 grams birthweight or 20 weeks or more gestation (both live births and still births).

Births from the Perinatal Data Collection are published on a year of occurrence basis while registered births are published on a year of registration basis and on a year of occurrence basis. Birth registration data also provide information on state of registration or state of usual residence of mother whereas the National Perinatal Data Collection only provides data on the

state or territory in which the birth took place (that is, the state or territory of occurrence). Differences between the two data sources are thought to mainly reflect differences in the level of Indigenous identification in the two data collections and delays or failure to register the birth of a child (ABS 2004b).

In 2003, there were 11,740 births registered in Australia in which at least one of the parents was of Indigenous origin, representing 4.7% of total births in Australia (ABS 2004c). This is likely to be an underestimate of the actual number of births to Indigenous parents because not all parents of Indigenous origin would have been identified as such. In 2003, 72% of births registered as Aboriginal or Torres Strait Islander were to Indigenous mothers and the remainder were to Indigenous fathers where the mother was not identified as Indigenous. It is, however, possible that some parents of non-Indigenous origin may have been incorrectly identified as Indigenous.

One way of assessing the completeness of the data on Indigenous births is to compare the number registered (in which at least one parent was Indigenous) with the number expected, which is derived using low-series experimental Indigenous population estimates/projections and a constant set of age-specific fertility and paternity rates (see ABS 2004b, 2004d). Table 4.2 shows the number of births registered in the period 1998–2003 as a proportion of expected births.

Table 4.2: Indigenous births, coverage, 1998–2003

	Births registered as Indigenous (no.)	Projected Indigenous births (no.)	Estimated coverage of Indigenous births^(a) (%)
New South Wales	18,762	21,971	85.4
Victoria	3,408	4,308	79.1
Queensland	19,325	20,665	93.5
South Australia	3,802	3,947	96.3
Western Australia	9,512	10,502	90.6
Tasmania	2,250	2,688	83.7
Northern Territory	9,090	8,580	105.9
Australian Capital Territory	392	633	61.9
Australia^(b)	66,553	73,328	90.8

(a) Defined as the ratio of births registered as Indigenous to projected Indigenous births.

(b) Includes Other Territories.

Note: Data based on year of registration and state/territory of usual residence.

Source: ABS 2004b.

The coverage estimate for Australia for the period 1998–2003 was 90.8%. Note that there are some limitations in the methodology used to calculate the coverage ratios of Indigenous births and deaths (see below), and therefore these ratios are indicative only.

On the basis of the ratios in Table 4.2 and other available information about collection processes, detailed data on births registered as Indigenous were published by the ABS from 1999 for all states and territories except the Australian Capital Territory. The small total number of Indigenous births in the Australian Capital Territory precluded publication of anything other than basic numbers of births registered as Indigenous. Detailed Indigenous birth registration data for New South Wales and Victoria were published for the first time in 1998 and for Tasmania in 1999.

Another way of assessing the completeness of birth registration data is to compare registrations with data collected by midwives and others for perinatal statistics collections held at AIHW. As indicated in Table 4.3 the perinatal collections include only information about the Indigenous status of the mother, whereas most birth registration forms ask about both the mother and the father. Table 4.3 presents data for 2002 from birth registrations and perinatal collections.

Table 4.3: Indigenous births, 2002

	Birth registrations ^(a)			Perinatal Data Collection ^(b)
	All Indigenous births	Births to Indigenous mothers	All births	Births to Indigenous mothers
New South Wales	3,339	2,149	86,583	2,165
Victoria	601	344	61,478	415
Queensland	3,349	2,438	47,771	2,719
Western Australia	1,481	1,138	23,601	1,603
South Australia	679	490	17,665	444
Tasmania	431	237	6,003	n.a.
Australian Capital Territory	n.a.	n.a.	n.a.	72
Northern Territory	1,539	1,456	3,724	1,409
Total births	11,488	8,292	250,988	8,827

n.a. Not available

(a) Based on year of registration of birth and state/territory of usual residence

(b) Based on year of occurrence of birth and state/territory of occurrence.

Note: Live births only.

Sources: ABS 2003a; Laws & Sullivan 2004.

The information in Table 4.3 can be used to highlight discrepancies between the various data sources. Discrepancies between data sources vary between states and territories. Some jurisdictions have established data linkage projects between the perinatal data collection and the relevant Registry of Births, Deaths and Marriages to highlight and resolve these discrepancies.

Deaths

All jurisdictions have adopted the ABS standard question on Indigenous status (see Box 3.1) on death registration and medical cause of death forms. Almost all deaths in Australia are registered. However, the Indigenous status of the deceased is not always recorded, or recorded correctly. The incompleteness of Indigenous identification means the number of deaths registered as Indigenous is an under-estimate of deaths occurring in the Aboriginal and Torres Strait Islander population. Estimated implied coverage rates for Indigenous deaths in 1999–2003 were 58% nationally. As a result, the observed differences between Indigenous and non-Indigenous mortality are under-estimates of the true differences. The incomplete recording of Indigenous deaths restricts precise analysis of the data and presents difficulties for monitoring of mortality trends over time. The ABS continues to work with state and territory registrars to improve the recording of Indigenous status on registration forms.

In 2003 there were 2,100 deaths registered as being of an Aboriginal or Torres Strait Islander person (ABS 2004c). Although most Indigenous deaths in Australia are registered, Indigenous status is not always recorded on death notification forms. The extent to which identification of

Aboriginal and Torres Strait Islander peoples occurs in data collections is referred to as 'coverage', or 'completeness of coverage'. Coverage in death registrations can be estimated by comparing the number of registered deaths with an expected number of deaths, derived using a life table. A life table is a statistical model that can be used to show the levels of mortality of a population at different ages. Life tables produced for the Indigenous population are considered 'experimental' because of limitations in births, deaths and population data.

Table 4.4 shows the estimated coverage of Indigenous deaths in the period 1999–2003, that is, the actual number of deaths registered as Indigenous in 1999–2003 as a proportion of the Indigenous deaths expected to occur in those years over that time period. These coverage ratios have been carefully monitored over time. When coverage ratios have been deemed to be at acceptable levels on a consistent basis, data from the respective jurisdictions are combined to provide a representative picture of Indigenous mortality. Currently Queensland, South Australia, Western Australia and the Northern Territory (where approximately 60% of the Indigenous population reside) meet these consistent coverage criteria. Longer term mortality trends are based on an analysis of data from South Australia, Western Australia and Northern Territory, the only jurisdictions with 12 years of reasonable coverage of Indigenous death registrations. Other states and territories will be added when they meet the consistent coverage criteria.

Furthermore, deaths can be analysed by year of occurrence of death or by year of registration of death. Most deaths are registered in the year of occurrence but some of those registered in a given year occurred in previous years. Delays in registration can occur when deaths are subject to the findings of a coroner or when deaths occur in remote areas. Late death registrations are more common for Indigenous people than for other Australians, and therefore have a greater impact on mortality statistics (for example, 95% of deaths of other Australians that occurred in 2002 were registered in that year and the remaining 5% were recorded in 2003. For deaths of Indigenous Australians, the corresponding figures were 82% in 2002 and 14% in 2003). The coverage analysis presented in Table 4.4 is based on year of occurrence of death in the period 1999–2002 (2002 being the latest year for which year of occurrence data are available) augmented by year of registration of death for 2003 (the latest year for which such data are available).

Note that the calculation of 'expected' Indigenous deaths discussed here is related to the assessment of the completeness of registration of Indigenous deaths, and 'expected' numbers are based on assumed underlying Indigenous mortality rates.

Table 4.4: Indigenous deaths, estimated coverage, 1999–2003

	Registered deaths (no.)	Expected deaths (no.)	Implied coverage (%)
New South Wales	2390	5278	45
Victoria	447	1106	43
Queensland	2788	5200	54
Western Australia	1811	2513	72
South Australia	629	958	66
Tasmania	94	(a) ..	(a) ..
Australian Capital Territory	19	(a) ..	(a) ..
Northern Territory	2175	2300	95
Australia^(b)	10390	18038	58

.. Not applicable

(a) Not calculated due to small numbers.

(b) Includes Other Territories.

Source: ABS 2004c.

The coverage ratios for births and deaths were calculated using the 2001 Census-based experimental Indigenous estimates and projections. Given the experimental nature of the base populations, any estimates of coverage are indicative only.

There has been significant progress in Indigenous mortality statistics in recent times, particularly in the Northern Territory. Condon et al. (2004) have been able to estimate trends in Indigenous mortality in the Northern Territory from 1967 by combining de-identified record data from the ABS with Northern Territory death registration forms. Over 1967–88 the Indigenous status for Northern Territory deaths was inferred from information in the death registrations, providing estimates of the number of Indigenous deaths for the period as well as allowing an Indigenous population time series from 1967 to be created. For the first time Indigenous mortality trends over several decades have been produced, showing a decline for Indigenous males and females and across all age groups in the period 1967–2000. In addition, mortality trends for more recent times, albeit for a shorter period (1991–2002), have been estimated for Western Australia, South Australia and the Northern Territory (ABS & AIHW 2005). The sensitivity of significant trends to changing identification was analysed, with most trends remaining significant through all scenarios examined.

Health-related data

Hospital separations data

Hospital separations data in the National Hospital Morbidity Database held at the AIHW are based on the *National health data dictionary* definitions for the National Minimum Data Set for Admitted Patient Care which includes the standard ABS question on Indigenous status (see Box 3.1). All jurisdictions have implemented the standard Indigenous status question and all except two jurisdictions have implemented the standard categories.

Information concerning the number of hospitalisations of Indigenous people is limited by the accuracy with which Indigenous patients are identified in hospital records. Problems associated with identification result in an underestimation of hospitalisations for Aboriginal and Torres Strait Islander persons.

Uncertainties regarding the accuracy of information about Indigenous persons also make it difficult to draw conclusions about changes over time. Improvements in the identification of Aboriginal and Torres Strait Islander patients can lead to higher apparent rates of hospitalisation. At present, it is not possible to ascertain the extent to which a change in hospitalisation rates for Indigenous people is due to differences in Indigenous identification or a genuine change in hospital use/health status.

Variation in the number of hospital separations involving Indigenous patients (per 1,000 Indigenous population) among the states and territories suggests that there was variation in the proportion of Aboriginal and Torres Strait Islander persons who were identified as such in the hospital morbidity data collections and/or in the total population. (However, it may also represent variation in underlying needs for hospitalisation and/or different patterns of provision of hospital and non-hospital services.) The level of completeness of Indigenous identification in hospital data is assessed by each state and territory and this information is provided annually to the AIHW. For 2003–04, only South Australia, Western Australia and the Northern Territory reported that the quality of Indigenous status data was acceptable (AIHW 2005c).

There are no national estimates of the level of completeness of coverage of Indigenous identification in hospital morbidity collections. However, a number of studies indicate that Indigenous persons are under-identified in hospital records or that the rate at which hospitals correctly record Indigenous status varies across jurisdictions (ATSIHWIU 1999; Condon et al. 1998; Lynch & Lewis 1997; Shannon et al. 1997; Young 2001).

The report *Expenditures on health services for Aboriginal and Torres Strait Islander people 2001–02* (AIHW 2005k) used under-identification factors for most states and territories to allow for an estimation of health expenditure on Indigenous Australians. Many of these estimates, however, are not very robust. Under-identification factors used were 6% for Western Australia, 20% for Queensland, 25% for Victoria, and 30% for New South Wales and the Australian Capital Territory. Although data for Tasmania are considered to be in need of improvement, no under-identification factor was used for Tasmanian data.

In 2003–04, there were approximately 246,000 hospitalisations for which Indigenous status was not reported. The proportion of records for which Indigenous status was not reported declined from approximately 12% of hospitalisations in 1997–98 (AIHW 1999a) to 3.6% of hospitalisations in 2003–04 (AIHW 2005c) This provides some indication of improvement in data quality. However, there is evidence that most under-identification is caused by Aboriginal and Torres Strait Islander persons being recorded as not Indigenous, rather than from their Indigenous status not being recorded.

Despite data limitations, progress has been made in investigating differences in access to certain treatments, procedures and other interventions (ABS & AIHW 2005; AIHW 2004f; Cunningham 2002).

Recent work by the AIHW on the quality of Indigenous status data in hospital separations records has resulted in recommendations for appropriate analysis of Indigenous status data and for improving the quality of the data (AIHW 2005m).

These recommendations propose that analysis should be undertaken using data only from the Northern Territory, Western Australia, South Australia and Queensland. They also propose that caveats should accompany the analyses, noting that under-identification occurs and that the hospitalisation experience for Aboriginal and Torres Strait Islander peoples in those four jurisdictions may not necessarily reflect the hospitalisation experience of Indigenous persons in other jurisdictions. Also, it is recommended that under-identification factors should not be applied to the data (except when required by the analytical purpose, such as estimation of the proportions of health expenditures that are on Indigenous and other Australians), and that

records for which Indigenous status is not reported should be regarded as being for other Australians.

The recommendations for improving data quality relate to data collection processes, training of data collection staff, organisational policies and practices, and ongoing data monitoring and audit activities. States and territories are already engaged in a range of similar initiatives aimed at improving the quality of Aboriginal and Torres Strait Islander origin information in hospital separations data.

Communicable disease notifications

The National Notifiable Disease Surveillance System (NNDSS) is maintained by the Australian Government. It receives notifications of communicable diseases from all Australian states and territories which collect data under public health legislation. The NNDSS includes an Indigenous identifier. New South Wales, Queensland and Tasmania use the ABS standard question of Indigenous status. Other states and territories can provide data for the categories 'Indigenous', 'non-Indigenous' and 'not stated', but do not identify Torres Strait Islanders separately.

The completeness of Indigenous identification in 2004 was considered adequate (more than 60% coverage) in notifications from the Northern Territory (92%), South Australia (89%) and Western Australia (64%). However, completeness was poor in Queensland (33%), New South Wales (21%), Tasmania (5%) and the Australian Capital Territory (3%).

The project, Improving Indigenous Identification in Communicable Disease Reporting Systems, was funded by the Australian Government under the National Advisory Group on Aboriginal and Torres Strait Islander Health Information and Data, and the auspices of the National Public Health Information Working Group. A steering committee was established comprising peak Indigenous health organisations and Indigenous health experts to improve the quality of the Indigenous data in notifiable disease registries. Under the guidance of the steering committee, the project developed a draft discussion paper containing recommended strategies and options to improve Indigenous identification reporting in all communicable disease data collections in all jurisdictions through developing policy, creating incentives, improving reporting, introducing workplace reforms, enhancing information systems and exploring initiatives for targeted change.

Cancer registries

Data on cancer incidence are held at the AIHW National Cancer Statistics Clearing House and are provided by state and territory cancer registries. All jurisdictions except Western Australia comply with the national standards for recording Indigenous status. Although Western Australia has a high coverage rate of cancer registrations for Indigenous people overall, data do not separately identify Aboriginal Australians and Torres Strait Islanders.

Ascertainment of cancer cases is almost complete for all state and territory cancer registries, but Indigenous identification (the identification of Aboriginal and Torres Strait Islander peoples among the registered cancer cases) is not complete for any cancer registry. The South Australian and Northern Territory registries have undertaken specific projects to identify all Indigenous cases in their registers, but only the Northern Territory registry has reported the completeness of Indigenous identification; after attempting to identify all Indigenous cases, it was estimated that approximately 18% of Indigenous cases remained incorrectly recorded as non-Indigenous. Incidence rates will therefore underestimate the actual cancer incidence in the Northern Territory's Indigenous population by approximately 18%. Identification of Indigenous cases is

also believed to be reasonably complete in the Western Australian and Queensland registries, but this has not been formally assessed.

National Diabetes Register

Since 1 January 1999, the National Diabetes Register has been collecting information about people who have begun to use insulin to manage their diabetes. The main source of records of insulin-treated diabetes mellitus in Australia is the National Diabetes Services Scheme (NDSS), administered by Diabetes Australia. Secondary sources are the research databases of the Australasian Paediatric Endocrine Group and state and territory databases.

According to the most recently published data from the Register, over the period 1999–2001, 2.2% of registrants were recorded as Indigenous, 92.9% were recorded as not being Indigenous, and 5.0% were recorded with a ‘not stated’ Indigenous status (AIHW 2001b). Although the proportion of Indigenous registrants is consistent with the proportion of Aboriginal and Torres Strait Islander people in the Australian population (2.4% in 2001), the Register is likely to significantly under-report the true level of Indigenous people with insulin-treated diabetes because:

- the NDSS does not receive data from people who purchase diabetes products through remote area pharmacy services – many of these people are Aboriginal and Torres Strait Islander peoples who inhabit remote areas; and the NDSS form is believed to obtain inadequate identification of Indigenous status
- Indigenous status and other personal details are often recorded by someone other than the registrant, such as a doctor or diabetes educator
- the register does not have information on people who began taking insulin before 1999 and continue to take it.

There is currently no work underway by either the NDSS or the Australasian Paediatric Endocrine Group to improve Indigenous identification in the Registry.

Primary health care

The Service Activity Reporting (SAR) data collection is a joint annual data collection project of the National Aboriginal Community Controlled Health Organisation and the Office for Aboriginal and Torres Strait Islander Health (OATSIH). Service-level data on health care and health-related activities covering a 12-month period are collected by questionnaire from Australian Government-funded Aboriginal and Torres Strait Islander primary health care services. The SAR data collection commenced in 1997–98.

The SAR includes only Aboriginal and Torres Strait Islander health organisations that receive Australian Government funds to facilitate access to primary health care. Some services in the SAR provide the full range of comprehensive primary health care activities, whereas others focus on specific elements of primary health care such as health promotion. A separate process gathers information from Australian Government-funded Aboriginal and Torres Strait Islander substance use specific services.

In 2003–04, OATSIH funded 140 services to provide or facilitate access to primary health care for Aboriginal and Torres Strait Islander peoples. An estimated 1,600,000 episodes of health care were provided by Australian Government-funded Aboriginal and Torres Strait Islander primary health care services, 87% of which were to Indigenous clients (ABS & AIHW 2005).

Medicare Australia data

As a result of collaborative efforts of DoHA, and the Health Insurance Commission and stakeholders, a voluntary Indigenous identifier was introduced to the Medicare database in November 2002. This was to enable access to mainstream Medicare Services and the Pharmaceutical Benefits Scheme to be assessed more accurately. Aboriginal and Torres Strait Islander Australians who had identified as Indigenous in this database as at 1 July 2005 numbered 80,658. Data available for statistical purposes from these administrative databases can provide essential and timely information on some aspects of service use and expenditure by Indigenous Australians. These data should be used with caution, however, due to the small proportion of the Indigenous population who identified as Indigenous in the database.

Community mental health care

The National Community Mental Health Care Database (NCMHCD), which contains records of service contacts in public community mental health services throughout Australia, was collated for the first time for 2000–01. This data collection, held at the AIHW, is based on the National Health Data Dictionary definitions for the National Minimum Data Set for Community Mental Health Care, which includes the data element for Aboriginal and Torres Strait Islander status based on the standard ABS question on Indigenous status. Data on the Indigenous status of clients for service contacts are included in the database. In 2002–03, about 3.2% of service contacts were reported to be with Aboriginal and Torres Strait Islander patients (AIHW 2004g).

Rates at which Indigenous peoples accessed community mental health services should be interpreted with caution, as there is likely to be an underestimate of the actual number of service contacts for Aboriginal and Torres Strait Islander clients. Indigenous clients may have been reported as non-Indigenous or they may have been represented within the service contacts (8%) with a 'not stated' Indigenous status. In addition, the 'Both Aboriginal and Torres Strait Islander' category may include some Maoris and South Sea Islanders. All state and territory health authorities, apart from Tasmania, provided information on the quality of 2002–03 NCMHCD data. With the exception of the Northern Territory, the quality of Indigenous status data was considered to be in need of improvement in all states and territories (AIHW 2004g). States and territories are using a range of strategies aimed at improving the quality of Indigenous status information in these data. These include surveying service providers to determine the approaches currently used; dissemination of pamphlets, posters and information sheets, and feedback of aggregated data to data collectors and users; and removal of default values in computer systems, clarifying the meaning of the NHDD categories, and developing approaches to recording Indigenous status and other demographic information relating to crisis care situations.

Alcohol and other drug treatment services

The Alcohol and Other Drug Treatment Services National Minimum Data Set (AODTS–NMDS), held at the AIHW, is a subset of alcohol and other drug treatment services information that is routinely collected by states and territories to monitor treatment services within their jurisdiction. The AODTS–NMDS is a nationally agreed set of common data items collected by government-funded service providers for clients registered for alcohol and other drug treatment. The standard ABS question on Indigenous status is a data item included in the dataset.

The 2003–04 AODTS–NMDS collection reported a national 'not stated' response relating to Indigenous status of 6.1% (AIHW 2005b). The 'not stated' response varied across jurisdictions from 1.4% in Western Australia to 17.8% in Tasmania. The proportion of closed treatment

episodes where 'not stated' was reported for Indigenous status has decreased from 8.5% in 2000–01 to 6.1% in 2003–04. Continual improvements are being made in the quality of data collected on Indigenous status within the AODTS–NMDS.

The paper *Data quality of Aboriginal and Torres Strait Islander identification: seven community services data collections* (AIHW 2004c) included an assessment of the quality of Indigenous identification in the first AODTS–NMDS collection in 2000–01. Findings included:

- Some agencies have higher rates of missing/not stated Indigenous status than others. Follow-up work is being undertaken to alert those agencies so that they can explore ways to increase the level of Indigenous identification of their clients.
- Missing/not stated Indigenous records are sometimes part of a broader pattern where other demographic data on clients are also missing. In these cases, general efforts to improve the collection of demographic information from clients are likely to increase the Indigenous identification rate.
- Within agencies providing alcohol and other drug treatment services, the higher the proportion of clients who were reported as Indigenous, the lower the proportion with a missing/not stated Indigenous status.

Education data

Preschools

The National Indigenous Preschool Census provides data on Indigenous enrolments through the Indigenous Education Strategic Initiatives Program. Data on government preschools are compiled from government departments using their existing census arrangements. Data on non-government preschools are obtained by the Australian Government Department of Education, Science and Training through the Supplementary Non-government Preschool Census, carried out on contract through Data Analysis Australia.

In 2005 the National Indigenous Preschool Census was expanded to include non-Indigenous students and, for the first time, staff. Response to the 2005 collection has been excellent and supportive of expanded analysis.

Schools

The National Schools Statistics Collection is a collaborative arrangement between state, territory and Australian government education authorities and the ABS. The latest release of Schools Australia (ABS 2006e) was released in February, 2006.

In 2004, the Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) Performance and Measurement and Reporting Taskforce released the Data Implementation Manual. This manual was developed to assist schools and school systems implement changes required by Education Ministers to enrolment forms (and associated data collection and storage processes). This will enable nationally comparable reporting of students in Years 3, 5 and 7 who are involved in literacy and numeracy testing, and the reporting of students' outcomes against the National Goals for Schooling in the 21st Century. The manual details the agreed set of core standards, including the ABS standard for Indigenous status.

In addition, the ABS is currently represented on several MCEETYA taskforces, investigating the possible development of measures of attendance (for all students and including Indigenous students) and the Indigenous status of staff.

Vocational education and training

The release of the Australian Vocational Education and Training Management Information Statistical Standard (AVETMISS) version 6.0 (expected release June 2006 for implementation in 2007), will contain improvements to collection and coding procedures to standard items including Indigenous status. ABS continues to work closely with the National Centre for Educational Research Ltd on issues of implementation and best practice of the AVETMISS in the national Provider, and Apprentices and Traineeships collections. The national Provider Collection has been expanded to include privately-funded providers (in addition to those providers in receipt of government funding). Full implementation by private providers of Indigenous status and other standards is expected to be ongoing.

Higher education

The Higher Education Information Management System (HEIMS), a new web-based system, has been developed to support recent Higher Education reforms. HEIMS will enable the efficient and effective management of statistical data for people who:

- are enrolled, or seeking to enrol, in a unit of study with the provider
- have indicated that they are seeking Commonwealth assistance under the Higher Education Support Act 2003 for the unit, or are a Commonwealth-supported student for the unit.

The Commonwealth Higher Education Student Support Number (CHESSN) is a unique identifier allocated to students in receipt of Commonwealth student loans and higher education entitlements (including scholarships). The CHESSN will remain linked to the student for the remainder of their academic life and while it will be integral to HEIMS, its application is limited to students in receipt of some government funding. Nonetheless, improvements to data quality over time are expected.

Housing data

Mainstream housing

All jurisdictions are able to report on the Indigenous status of mainstream public housing tenants. Some jurisdictions record this information at the person level (Victoria, Queensland, South Australia, Tasmania and the Australian Capital Territory) and some at the household level (New South Wales, Western Australia and the Northern Territory).

The quality of the Indigenous identification varies considerably across jurisdictions. In Queensland, Western Australia and the Northern Territory, tenants with unknown Indigenous status are recorded in the same category as non-Indigenous tenants, so the quality of the data cannot be assessed.

A number of jurisdictions have introduced processes to improve the quality of Indigenous identification. The number of new households in public housing with unknown Indigenous status is therefore much lower than for all households. In New South Wales and South Australia in 2003–04 there were no new households with ‘unknown’ or ‘missing’ Indigenous status (AIHW 2006b).

The quality of Indigenous identification has also improved over time, with a lower proportion of recent tenants than long-term tenants of mainstream public housing having an unknown Indigenous status.

National Reporting Framework

The National Reporting Framework (NRF) for Indigenous Housing includes data on Indigenous Community Housing (ICH) and State Owned and Managed Indigenous Housing (SOMIH) programs (AIHW 2005o). National data are collected by the AIHW from states and territories and from FaCSIA.

Currently, not all jurisdictions can provide data for all the required indicators, and there are problems with the comparability of the data. The scope of the data collection for ICH, for example, is not consistent across all jurisdictions.

Future data development will focus on the indicators for overcrowding and dwelling condition. The 2003–04 NRF data collection included data on overcrowding for ICH dwellings, but most jurisdictions could not provide these data. Further work with the jurisdictions is required to develop these data and to obtain regular data that can monitor overcrowding levels in ICH dwellings.

There are currently no national data available on the condition of SOMIH dwellings and data on ICH dwellings come from the ABS CHINS survey which is conducted every five years. The development of national definitions and data items for the collection of administrative data on the condition of ICH and SOMIH dwellings will therefore be a priority over the next year.

Further work is also required on national definitions and data standards for the NRF data collection – both to ensure national consistency and to increase the scope of the collection. Through further collaboration with the jurisdictions, the quality of the NRF data collection will continue to be improved.

Community services data

Child protection

Data on child protection notifications, investigations and substantiations, children on care and protection orders, and children in out-of-home care are collected each year by the AIHW from community services departments in each state and territory.

The quality of Indigenous data in child protection notifications varies across jurisdictions due to differences in the practices used to identify and record the Indigenous status of children and young people in the child protection system (AIHW 2005d). Each state and territory has its own legislation, policies and practices in relation to child protection, so the data provided by jurisdictions are not strictly comparable. It is also important to note that variations in the distribution of types of abuse or neglect across jurisdictions are likely to be the result of differences in the types of incidents that are substantiated. In addition, some jurisdictions record large numbers of ‘unknowns’. Children whose Indigenous status is recorded as ‘unknown’ are included in the category ‘other children’. The counts for Aboriginal and Torres Strait Islander children are therefore likely to be an underestimate of the actual number of Aboriginal and Torres Strait Islander children in the child protection system.

An assessment of the number of children and young people with a ‘not known/missing/not stated’ Indigenous status collected in the 2001–02 National Child Protection Data Collection (AIHW 2004c) found:

- a relatively low rate of not known/missing/not stated Indigenous status in the national data collection for children on care and protection orders
- variations across jurisdictions in the quality of the data on Indigenous status due mainly to differences in practices used to identify and record Indigenous status. For example,

although the Indigenous status field is mandatory in all jurisdictions, there is a 'not known' option when entering the information into the data system in six out of eight states and territories. To reduce variation across jurisdictions it is recommended that child protection workers be encouraged to ask the standard ABS question on Indigenous status. For this to be done effectively, staff need to be supported and trained appropriately.

Children's services

The Children's Services National Minimum Data Set (NMDS) was designed to capture information on childcare and preschool services in Australia. Information will be collected on the services, children using the services and staff providing these services. The development phase of the Children's Services NMDS is now complete, following testing of data items in two stages of pilot testing. A data item on Indigenous status of children and workers which matches the standard question recommended by the ABS is included in the NMDS. The information is provided by child care workers or parents and should be available from administrative records.

Both pilot tests have revealed that many services do not keep records of the Indigenous status of their staff or children attending. In the Second Stage pilot test, 20% of services used their records to obtain this information for staff, and 43% for children. However, not all parents chose to provide this information on their child's enrolment forms. In the Second Stage pilot test, respondents were able to answer 'don't know' to the Indigenous status question, and 4.7% of children and 0.2% of workers were coded in this category.

Commonwealth-State/Territory Disability Agreement

The Commonwealth-State/Territory Disability Agreement National Minimum Data Set (CSTDA NMDS) collects information on people using disability services across Australia. The AIHW has collected data annually from each jurisdiction since 1994. Following a major redevelopment by the National Disability Administrators and the AIHW, a revised collection began in 2002-03. The standard question recommended by the ABS on Indigenous status is included in the data set.

In the training in all jurisdictions for implementation of the redeveloped collection, the importance of correct Indigenous identification and the reasons for the data item were emphasised. All jurisdictions were provided with pamphlets to distribute to participating disability service agencies to support them in collecting information about Indigenous status.

As with many newly developed collections, missing rates for data items in the CSTDA NMDS have generally increased in comparison with previous snapshot day collections. The 'not stated' rate for Indigenous status rose from 5.2% in 2001 and 2002 to 5.7% in 2002-03, then to 8.0% in 2003-04 (the first full year of data collection). It is expected that this rate will decline in future collections.

The quality of Aboriginal and Torres Strait Islander identification in the CSTDA NMDS was assessed in 2004 (AIHW 2004c), with the following findings:

- The coding categories used in the Indigenous data item in the CSTDA NMDS changed between 1997 and 2002. In 2002, the 'not known' option was removed. In 2001 and 2002 the proportion of missing data was generally lower than in previous years, at 5%.
- A large proportion of the missing data on Indigenous status came from a small number of agency outlets with high 'missing/not stated' rates. Significant gains in data quality could therefore potentially be made by concentrating efforts to reduce missing data from those agencies.

- Services with moderate proportions (10–24%) of clients who identified as Indigenous appear to have the highest proportions of ‘missing/not stated’ records.
- ‘Missing/not stated’ Indigenous records are sometimes part of a broader pattern where other demographic data on clients are also missing. In these cases, general efforts to improve the collection of demographic information from clients are likely to increase the Indigenous identification rate.
- The highest proportions of ‘missing/not stated’ data on Indigenous occurred in regional areas and major cities (which also involve the largest numbers of clients). Proportions of ‘missing/not stated’ data were lowest in remote areas of Australia.
- Higher rates of ‘missing/not stated’ data were found for clients who communicate non-verbally other than with sign language, and for clients who use aids to communicate.
- Higher rates of ‘missing/not stated’ data were found in the records of clients receiving community access and community support services. For these services, data quality may be affected by the sporadic nature of their contact with some clients.

Supported Accommodation Assistance Program

The Supported Accommodation Assistance Program (SAAP) is jointly funded and managed by the Australian Government and the state governments and was established in 1985. SAAP provides temporary accommodation and support services, such as domestic violence counselling, employment assistance and living skills development, to homeless people, to help them achieve self-reliance and independence. The SAAP National Data Collection has been providing information on assistance through SAAP since 1996–97. The AIHW has had the role of national data collection agency since the collection’s inception. The SAAP collection includes data on Aboriginal and Torres Strait Islander status based on the standard ABS question on Indigenous status.

In 2003–04, Aboriginal and Torres Strait Islander peoples made up 16.5% (excluding ‘missing/not stated’ data) of all adults helped under the SAAP program (AIHW 2005l). The number of Indigenous clients of SAAP services constitutes a substantial over-representation of this population group, which was about 2% of the total Australian adult population during this period.

The data quality of Indigenous identification in the SAAP data collection was analysed in *Data quality of Aboriginal and Torres Strait Islander identification: seven community services data collections* (AIHW 2004c). Key findings were:

- The proportion of valid responses to each category from the Indigenous status question increased between 1996–97 to 2001–02 as consent rates to the data collection have improved.
- The proportion of ‘missing/not stated’ responses to Indigenous status decreased across all years from 1996–97 to 2000–01; there was a rise in the ‘missing/not stated’ rates in 2001–02 which is likely to be attributable to the introduction of new agencies to the SAAP national data collection in this year.
- The proportion of ‘missing/not stated’ responses by service type provided tended to be smaller where there were high proportions of Indigenous records.
- Results from analyses related to target group and service delivery model tended to indicate that the less targeted the service provision, the higher the proportion of ‘missing/not stated’ responses to the Indigenous status question.

- Linked key analysis showed that Indigenous status was reported consistently for 95% of SAAP clients for the period 2001–02.

In conclusion, the rate of missing information where consent was provided was not considered to be within the bounds of reasonable quality but the level of participation of agencies providing support to Indigenous clients has more impact on the quality of Indigenous data than missing information. Also, not all clients consent to participate in data collection. Consent rates are around 88%. It is not known whether Indigenous clients consent more or less than non-Indigenous clients.

Strategies to improve the consent rate in the SAAP collection will help improve the identification rate of Aboriginal and Torres Strait Islander clients, as will strategies to improve the participation rate of SAAP-funded agencies in the SAAP collection. The SAAP National Data Collection Agency and the SAAP Information Sub-Committee are currently looking at strategies to increase and encourage participation of SAAP-funded agencies. The major vehicle for improving Indigenous data quality in the SAAP data collection is the training directed at Indigenous agencies and clients.

Indigenous training package and strategy

A three-part strategy to improve and maintain Indigenous data quality and participation in the SAAP national data collection, along with proposals for future work have recently been discussed by the SAAP Information Sub-Committee. This strategy will include:

- the development and testing of an Indigenous-specific data-training package and its method of delivery and provision
- ongoing support to maintain involvement and data quality
- building of Indigenous data networks to support the SAAP data collection within Indigenous agencies.

It is envisaged that the package will:

- not change the content of existing data but change the delivery
- recognise cultural specificity
- provide practical hands-on examples based on agency practice (such as use of role plays)
- include extended training to help develop support networks and local contacts with other Indigenous agencies
- provide information on why data are collected, how it is used, and how Indigenous agencies can use the data for their own purposes.

The package aims to ensure that training participants receive the same or similar information as that received in mainstream courses.

It is envisaged that as well as introductory Indigenous SAAP data training there is potential to offer advanced training to facilitate advocacy using the data available to foster capacity and develop Indigenous data expertise.

Aged Care

Data about residential aged care, Community Aged Care Packages (CACPs) and Extended Aged Care at Home (EACH) are collected as a by-product of the Australian Government payments for these programs, and stored in a data warehouse managed by the Australian Government Department of Health and Ageing. For each program, the warehouse contains a file of client characteristics including an Indigenous identifier.

The Indigenous identifier has been a part of the collections for CACP since 1992, for EACH since 2002 and for residential aged care (in easily accessible form) since 1997, although earlier systems which separated hostels and nursing homes also contained the identifier.

Client data, including Indigenous status, are collected from questions in the Aged Care Assessment Form, and stored in the data warehouse at the time the care recipient is admitted to residential care or starts receiving CACP or EACH assistance. The data are unlikely to be updated. Consequently the proportion of care recipients identified as Aboriginal or Torres Strait Islander is influenced by changes in willingness to self-identify Indigenous status over time, resulting in poorer quality of data on long-term residents than for persons admitted to care in recent years (the CACP census conducted in 2002 reported that around 10% of care recipients had been receiving CACP assistance for more than 10 years).

The Indigenous status question in the Aged Care Assessment Form has evolved from a simple query 'Indigenous (yes or no)' to the current question which offers the following response categories: Aboriginal; Torres Strait Islander; Both; and Neither.

Missing data

The quality of Indigenous identification in the residential aged care and CACP data holdings was analysed in the AIHW paper *Data quality of Aboriginal and Torres Strait Islander identification: seven community services data collections* (AIHW 2004c). Generally, in the residential care program there has been improvement over time in the reporting of the Indigenous identifier. In 1999, 10.3% of records were missing Indigenous status information. In 2004, the proportion of records with missing Indigenous identifiers had dropped to 7.5%.

The number of CACP records with 'missing/not stated' Indigenous status is very low. This is partly due to data imputation carried out by the state and territory offices: recipients with 'missing/not stated' Indigenous status, unless clearly receiving services from a predominantly Aboriginal and Torres Strait Islander service, are assumed to be non-Indigenous (AIHW 2004c). The proportion of CACP records missing Indigenous information was 1.6% at 30 June 2003 and 1.3% at 30 June 2004.

EACH is a new program with a small number of recipients and it is too early to comment on missing data for Indigenous status.

Home and Community Care Program

The Home and Community Care Minimum Data Set (HACC MDS) is collected quarterly by the Australian Government Department of Health and Ageing (DoHA). The first available data set covers the July–September 2001 quarter. Quarterly data are linked using a data linkage key and DoHA publishes an annual report for the program.

Although one set of demographic, circumstance and assistance totals is held in the data repository for each agency reporting a client's data, only one set of demographic data is included in the combined linked data set. These demographic data are not a compilation from multiple data records but rather a selection of one demographic data record. Consequently, not all valid demographic values may be captured and some invalid or missing values may be included. This may have an impact on the consistency of reporting of Indigenous status over time within the linked data, although an increase in the reporting of Indigenous status over time in the unlinked data can be expected to result in an improvement in the linked data.

The HACC data dictionary identifies Indigenous status in the same way as the Aged Care Assessment Form. In 2003–04, DoHA reported that the data item 'Indigenous status' had a combined 'null' and 'not stated' response of 10.9% (ABS & AIHW 2005).

Community Aged Care Packages census 2002

Community Aged Care Packages (CACPs) provide in-home community care assistance to people who are eligible for at least low-level residential care.

The census of the CACP service providers and care recipients was conducted in September–October 2002. This census provided information about the socio-demographic characteristics and service use of care recipients that was unavailable through DoHA's administrative database (ACCMIS), and information about supplementary care recipients who are not included in the ACCMIS database.

The census reported a national 'not stated' response for Indigenous status of 1.7%. The 'not stated' response varied across jurisdictions from 0.8% in the Northern Territory to 2.4% in New South Wales (AIHW 2004b).

Although the CACP census identified 5.3% of care recipients (5.2% excluding supplementary care recipients) as Indigenous, the corresponding data in the ACCMIS database identified only 2.9% of care recipients as Indigenous, highlighting the discrepancy in Indigenous identification between the two collections.

Extended Aged Care at Home packages census 2002

Extended Aged Care at Home packages (EACH) provide in-home community care assistance to people who are eligible for high-level residential care. Up until 2002, EACH was run as a pilot program. At the time of the census in May 2002, the program had less than 300 care recipients and none identified as being of Aboriginal or Torres Strait Islander origin. Indigenous status was missing or unknown for 1.4% (4 out of 288) care recipients (AIHW 2004e).

Day Therapy Centre census 2002

The Day Therapy Centre (DTC) Program subsidises a range of therapies provided to frail older people living in the community or in government-funded residential care. Therapy is offered to individuals or groups to help them to either maintain or recover a level of independence that allows them to remain either in their own homes or in low-level residential care.

The DTC census was conducted in October–November 2002 by DoHA. Indigenous status was not stated for 2.0% of DTC clients (AIHW 2004d).

Law and justice data

The National Information Development Plan for Crime and Justice Statistics (ABS 2005a) recognises that more accurate and reliable data on the Indigenous status of victims and offenders are required in order to better understand the interactions between Indigenous people and the crime and justice system. This Plan outlines a strategy to improve crime and justice statistics about Aboriginal and Torres Strait Islander people through further developing data from police agency systems, the courts and corrective service institutions. While there have been developments in implementing a national standard for Indigenous identification in some areas, further work is underway to improve identification throughout all parts of the criminal justice system.

Police and courts

The ABS, under the auspices of the National Crime Statistics Unit, is working with jurisdictions to improve the quality of Indigenous identification for offenders and victims in police records. Since the nature and extent of Indigenous involvement in the courts is reliant on police provision of offender information to courts' systems, improvements in the quality of Indigenous

identification in police systems will support jurisdictional capability to transfer data about some defendants. The goal of improved identification is to provide a wider view of outcomes for this critical population group.

Prisoners

The ABS presents annual national statistics on prisoners who were in custody at 30 June of each year in *Prisoners in Australia* (ABS 2005b). These data are used to compare the relative rates of incarceration of Indigenous and non-Indigenous people across jurisdictions. In addition, aggregate data on persons in corrective services institutions are available on a quarterly basis and include numbers of Indigenous prisoners and selected characteristics. These are presented in *Corrective services, Australia* (ABS 2006a). The AIHW, in collaboration with the Centre for Health Research in Criminal Justice, is currently developing a National Minimum Data Set on prisoners' health. This work is overseen by the Prisoners' Health Information Management Group.

Juvenile justice

Juvenile justice is a complex system, involving numerous organisations with different roles and responsibilities. In past years, there has been little integration of information across these organisations even at the state and territory level, and very limited nationally comparable information is available. The quality of information on Indigenous status varies among organisations and jurisdictions.

National juvenile justice data currently available:

- a quarterly collection on people in juvenile detention centres conducted by the Australian Institute of Criminology (AIC). This collection includes information on the Indigenous status of people held in juvenile justice detention centres
- the AIHW, in conjunction with the Australasian Juvenile Justice Administrators (AJJA), released the first Juvenile Justice National Minimum Data Set (JJ NMDS) collection report in February 2006 (AIHW 2006a). Information about community supervision as well as detention centres are available from 2000–01 to 2003–04. The data for this NMDS are unit record administrative data from each Australian state and territory provided to the AIHW annually. The ABS standard question on Indigenous status is one of the data items collected as part of the NMDS
- an annual collection on defendants finalised in the Children's Criminal Courts across all states and territories (apart from New South Wales and the Australian Capital Territory) is conducted by the ABS. This experimental data was published in *Criminal courts Australia 2004–05* (ABS 2006b). The ABS intends to collect and publish information on Indigenous status in the future, however, this will be reliant on both police recording and transfer of this data to court systems.

As part of the further development of the JJ NMDS, the AJJA is undertaking work on National Indicators for Juvenile Justice. The level of Indigenous representation will be an important element in these considerations.

Other

The Australian Institute of Criminology *National deaths in custody* report presents information on deaths in custody in Australian states and territories for each calendar year, including comparisons by jurisdiction and Indigenous status. The report is available at <www.aic.gov.au>.