

3. The 2002 NATSISS—the ABS survey methodology and concepts

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In 2002, the ABS conducted the second national social survey of Australia's Aboriginal and Torres Strait Islander population, the NATSISS. The first national survey was conducted by the ABS in 1994 as part of the Australian Government's response to the 1987–1991 Royal Commission into Aboriginal Deaths in Custody. The Royal Commission had brought to light the urgent need for more and better data about the social circumstances of Aboriginal and Torres Strait Islander people and had recommended a special national survey to cover a range of social, demographic, health and economic topics (recommendation 49).

The 2002 NATSISS was conducted and funded by the ABS as part of its ongoing household surveys program, whereas the 1994 survey was funded by a \$4 million Commonwealth grant as a direct response to the Royal Commission (ABS 2004c). In 2000, the ABS established the National Aboriginal and Torres Strait Islander Social Survey as an ongoing six-yearly survey that comprised one element in a much broader Indigenous statistics strategy. Other elements in this strategy include:

- a six-yearly national survey of the health of Indigenous people
- continued improvements to the enumeration of Indigenous people in the population census
- further work to improve the identification of Indigenous people in administrative collections, and
- further improvements to population estimates and projections.

At the time of writing, the 2004–05 National Aboriginal and Torres Strait Islander Health Survey, which had a sample size similar to that of the 2002 NATSISS, has already been enumerated and first results are due to be released early in 2006.

ABS statistical activity

Cultural considerations, the geographical location of Indigenous people and policy requirements influence the statistical activity of the ABS with regard to Australia's Indigenous population. Some of the developments in statistical activity over the past 10 years include:

- improvements in the quality, analysis and availability of information about Indigenous people from the five-yearly population census

- implementation of a regular cycle of household surveys of the Indigenous population, alternating every three years between a survey of social circumstances and a health survey
- the Community Housing and Infrastructure Needs Survey, funded by the Australian Government Department of Family and Community Services, which is now conducted in conjunction with preparations for the five-yearly population census
- progressive implementation of consistent standards of Indigenous identification in administrative data sets
- production (with the Australian Institute of Health and Welfare) of the biennial report *The Health and Welfare of Australia's Aboriginal and Torres Strait Islander Peoples* (ABS cat. no. 4704.0), and
- improved quality and availability of Indigenous population estimates and projections.

As part of its survey activity, ABS undertakes extensive consultation with government agencies, Indigenous people, Indigenous organisations and researchers. This takes the form of bilateral agency consultations, survey reference groups, direct community consultations and topic-focused working groups. In addition, the ABS is currently implementing an initiative to increase its engagement with Aboriginal and Torres Strait Islander communities.

Under its Indigenous Community Engagement Strategy, ABS has recruited State/Territory-based Indigenous engagement managers to provide an ongoing communication channel with discrete communities, community groups and organisations. Indigenous engagement managers will take a leadership role with Indigenous enumeration in the census and relevant ABS surveys. They are also undertaking dissemination and training activities, such as returning information to communities and Indigenous organisations in their preferred format and in ways that support the use of statistics for their own purposes.

The 2002 NATSISS

The 2002 NATSISS was designed to provide information on the social circumstances of Indigenous people relevant to Indigenous stakeholders and policy researchers. Like the General Social Survey of the total population, the NATSISS is a multi-dimensional survey covering a wide range of areas of social concern, with the capacity to enable analysis of interactions among different topics, including the analysis of multiple disadvantage. The 2002 NATSISS was designed to measure selected changes over time (since 1994) and to allow for comparisons with the circumstances of the non-Indigenous population. To enable this, the survey questionnaire had about a 50 per cent content overlap with the 1994 NATSIS and considerable overlap with the 2002 GSS (ABS 1995, 2003b).

It also included new material, for example, on disability, incarceration and age at first formal charge.

Sample design

The 2002 NATSISS was designed to provide reliable estimates at the national level and for each of the eight Australian States and Territories. In addition, the Torres Strait Islander population was over-sampled in order to produce data for the Torres Strait area and the remainder of Queensland. The sample was spread across the States and Territories in order to produce estimates that would have a relative standard error (RSE) of no greater than 20 per cent for characteristics that are relatively common in the Indigenous population; for example, characteristics that at least 10 per cent of the population would possess.

The 2002 NATSISS incorporated two broad samples that together comprised about 9400 people in 5900 households and covered all areas of Australia. The first was a random sample of about 2100 people in discrete Indigenous communities, predominantly in remote areas. Discrete communities in Queensland, South Australia, Western Australia and the Northern Territory were included in this sample. The second was a random sample of about 7300 people in so-called 'non-community' areas drawn from major cities, regional and remote areas in all States and Territories. The two samples were designed separately, with each involving a multi-stage sampling process. Overall, the 2002 NATSISS sampled one in 30 of the total Indigenous population (see Table 3.1).

Table 3.1. Sample size, 2002 NATSISS

	Non-remote ^a	Remote ^b	Total	Estimate (15 years or over)	Sample fraction
New South Wales	1137	365	1502	83 800	1 in 56
Victoria	806	–	806	17 400	1 in 22
Queensland	1018	847	1865	76 000	1 in 41
South Australia	605	405	1010	15 800	1 in 16
Western Australia	465	1097	1562	39 600	1 in 25
Tasmania	713	23	736	10 900	1 in 15
Northern Territory	168	1380	1548	36 200	1 in 23
Australian Capital Territory	330	–	330	2600	1 in 8
Australia	5242	4117	9359	282 200	1 in 30

a. Comprises major cities, inner regional and outer regional areas.

b. Comprises remote and very remote areas.

Source: The 2002 NATSISS MURF

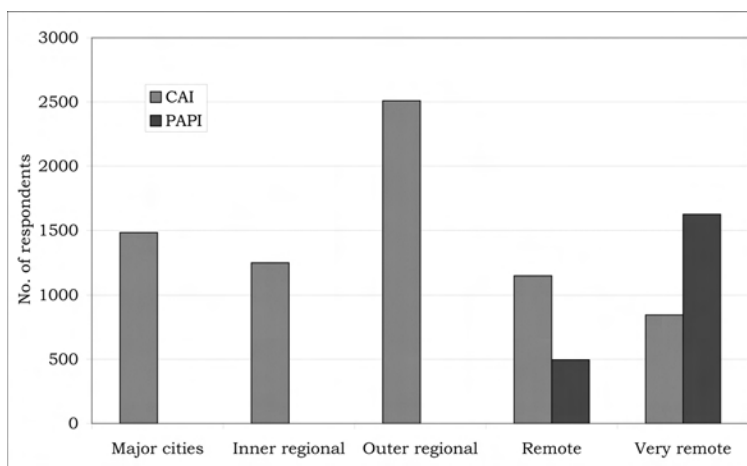
In 2002, survey content and methodology were specifically designed to take account of the different circumstances of Indigenous people in remote communities and non-remote areas. In the community sample, the standard household survey approaches were modified as a result of pre-testing, to

accommodate language and other issues associated with the geographic remoteness of these communities. ABS interviewers were accompanied by local Indigenous facilitators who assisted in the conduct and completion of the interviews. In the community sample, interviewers used a pen and paper interview (PAPI) questionnaire, while in the non-community sample interviews were conducted predominantly using Computer Assisted Interviewing (CAI).

While PAPI was only used in the four jurisdictions (Queensland, South Australia, Western Australia and the Northern Territory) that had households in the community sample, about half of the national sample of 4100 people surveyed in remote/very remote areas were interviewed using CAI and half using the PAPI form. Of the 1600 people surveyed in the remote component, just over two-thirds were interviewed using CAI, whereas of the 2500 people in the very remote component, two-thirds were interviewed using PAPI (see Fig. 3.1). Use of PAPI varied from 30 per cent of the total remote samples in South Australia and Western Australia to nearly 50 per cent in Queensland and almost 100 per cent in the Northern Territory.

While wording was modified in the PAPI questionnaire, most underlying concepts remained consistent with those in the CAI questionnaire. Data items or output categories that were specific to either PAPI or CAI, such as some output associated with disability status, are identified in the main ABS publication and in the documentation for the CURE.

Figure 3.1. Form type by area, 2002 NATSISS



Source: The 2002 NATSISS MURE.

Comparison between 1994 and 2002 survey methodologies

Scope

The 2002 NATSISS collected information from a maximum of three people aged 15 years or over in each selected private dwelling. The 1994 survey collected information from people in non-private dwellings, such as hospitals and prisons, as well as from people in private dwellings. In addition, the 1994 survey collected information about each person, including children, in each selected private dwelling.

The selection, for the 2002 NATSISS, of a sub-set of residents of a dwelling was designed to manage the provider load on any one household. The detailed questionnaire for this survey would otherwise place a burden on large households. Some information was collected from a household spokesperson on the composition of the entire household, including information on the number of children, so that households with children can be identified in output.

The restriction of the number of people sampled from any one household enabled the total 2002 survey sample to be spread across a large number of households. The 1994 survey sampled 17 800 people in total, 9400 of whom were aged 15 years or over and resident in 4000 private dwelling households. The 2002 NATSISS sampled about the same number of people aged 15 years or over in 5900 households. As a result, the 2002 NATSISS was less clustered than the 1994 survey and there were consequent reductions in sampling error.

While people in non-private dwellings may have characteristics that are different from the rest of the population overall, their exclusion from the 2002 NATSISS was judged to have only a minimal effect on the representativeness of results. By restricting the sample to private dwellings only, a larger number of people could be sampled within the survey budget. Also, the size of the population in non-private dwellings is relatively small. Based on census results, about 4 per cent of the Indigenous population may be resident in non-private dwellings at any point in time.

In addition, there is now a much broader range of administrative statistics available on people in prisons and other corrective service institutions than was available in 1994. In conjunction with the corrective service sector, the ABS publishes information on Indigenous people in prison from the annual prisoner census and quarterly movements in the population in corrective service institutions (ABS 2004e). Furthermore, in recognition that the prisoner population is not static, the 2002 NATSISS collected retrospective information from those respondents who had been incarcerated in the previous five years.

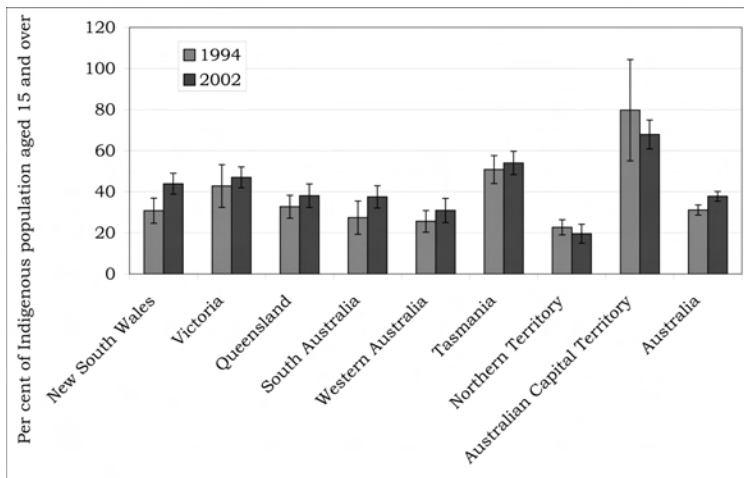
In all data comparisons between the 1994 and 2002 surveys that have been published by the ABS, the population of the 1994 survey has been restricted to

align exactly with the 2002 population, namely people aged 15 years and over living in private dwellings.

Geography

The 2002 NATSISS was designed to produce reliable estimates for all eight Australian States and Territories, resulting in higher quality estimates at the State and Territory level (particularly for Victoria and the Australian Capital Territory) than was the case for the 1994 survey (e.g. see the employment data in Fig. 3.2). In addition, robust estimates by ABS remoteness categories are available at the national level. While the 2002 survey was not designed to produce other regional data, reasonably robust estimates for some data items for some ATSI regions can be produced. In contrast, the 1994 sample was spread across the then 35 ATSI regions and the Torres Strait area to provide some estimates for each region. Under the 1994 strategy, estimates at the regional level were nevertheless associated with relatively high sampling errors.

Figure 3.2. Mainstream employment by State, 1994 and 2002



Source: The 1994 NATSIS MURF and 2002 NATSISS MURF.

Content

In designing the 2002 NATSISS questionnaire, ABS was responding to user expectations that the survey achieve both of the following:

- (1) Measure the social circumstances specific to Aboriginal and Torres Strait Islander people throughout Australia.
- (2) Provide valid measures of comparison with the circumstances of the non-Indigenous population. While there was generally a high degree of overlap between the topics covered in the 2002 NATSISS and those in the 1994 survey, there were some differences in question wording to align the 2002 survey more

closely with the 2002 GSS and with other ABS surveys. As a result, some changes were made to the education and employment modules that were used in 1994.

Statistics for policy

Initial results from the 2002 NATSISS were released in the *National Aboriginal and Torres Strait Islander Social Survey 2002* (ABS 2004c) and a series of web-based State and Territory spreadsheets (www.abs.gov.au). These releases covered topics as diverse as family and culture, health, disability, education, work, income and housing, law and justice, information technology and transport.

In response to the expectations of policymakers and researchers, the ABS has undertaken a range of initiatives to provide users not only with relevant statistics, but also with associated information about the quality of those statistics. In particular, ABS has calculated precise estimates of sampling error for 2002 NATSISS data using a grouped jack-knife methodology based on partitioning the primary sample into 250 cross-sectional groups (Wolter 1985). Estimates of relative standard errors have been released for all data shown in the main summary of findings report and in the web-based output at State and Territory level. The 250 replicate weights used in the jack-knife methodology are available on the CURF. Further, the results of tests of statistical significance are shown in selected tables in the main report and web-based spreadsheets, to inform users of the statistical significance of differences between estimates, for example in the measures of change over time or between the Indigenous and non-Indigenous populations.

Since the Indigenous population has a younger age structure than the non-Indigenous population, use of age-standardisation is sometimes appropriate when comparing estimates from the two populations. In the national report, age-standardisation was used for health, employment, law and justice, and information technology items, as these data items were judged to be associated with age in ways that warranted this statistical technique.

Responding to user demand for unit record data in order to facilitate more flexible and detailed analysis of survey files, the ABS developed the RADL in 2004. This facility allows users to access CURFs over the web. By maintaining the data file within the ABS computer environment and monitoring its use by researchers, the ABS is able to provide a more expanded data file than would be possible if the CURF was released on CD-ROM. While universities have access to CURFs via the RADL under an arrangement between the ABS and the Australian Vice-Chancellors' Committee, other agencies and researchers can purchase a licence to access CURFs via the RADL (i.e. over the web).

The 2002 NATSISS CURF contains a higher degree of disaggregation than the 1994 survey CURF. In particular, the 2002 NATSISS CURF includes geographic

items by State/Territory as well as by remoteness area. For more information, see the National Aboriginal and Torres Strait Islander Social Survey CURF Technical Paper (ABS 2005b).

The strength of the 2002 NATSISS data set is that the broad range of socioeconomic variables enables the exploration of associations among different outcomes, including analysis of multiple disadvantage. To this end, the ABS is engaging in a number of collaborative research projects to examine different topics, including self-assessed health, victimisation and cultural issues.