

INFORMATION PAPER: CENSUS DATA ENHANCEMENT - INDIGENOUS MORTALITY QUALITY STUDY AUSTRALIA

EMBARGO: 11.30AM (CANBERRA TIME) MON 17 NOV 2008

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I N Q U I R I E S

For further information about these and related statistics, contact the Director of the National Centre for Aboriginal and Torres Strait Islander Statistics on Canberra (02) 6252 6663.

INTRODUCTION

This information paper outlines the findings from the Indigenous Mortality Quality Study which was conducted as part of the Census Data Enhancement (CDE) project. The CDE project included a number of quality studies which brought together data from the 2006 Census of Population and Housing and other specified datasets. One aim of these studies was to better understand and improve Australian Bureau of Statistics (ABS) collections.

The CDE Indigenous Mortality Quality Study involved linking Census records with death registration records to examine differences in the reporting of Indigenous status across the two datasets. The aims of the project were to:

- assess the undercoverage of Indigenous deaths in death registration records;
- identify factors that may be contributing to undercoverage of Indigenous deaths in death registrations; and
- assess the feasibility of calculating and applying adjustment factors to improve estimates of Indigenous mortality.

The CDE Indigenous Mortality Quality Study linked 2006 Census records with deaths registered for the 11-month period following the Census. Death records examined related to deaths that occurred and were registered over the 11-month period. Due to lags between occurrence and registration, the number of death registrations would be lower than the number of deaths that occurred, particularly for those deaths occurring towards the end of the period. Records were linked during the Census processing period using name, address and other variables that were common across the two datasets, but excluding Indigenous status. After Census processing was completed, all names and addresses held by the ABS on Census records and the linked dataset were destroyed. Following completion of analysis, the linked dataset was also destroyed.

All of the CDE studies have strict data security procedures in place to ensure confidentiality. These procedures were followed for this study. For further information on the CDE project see the Statistician's *Census Data Enhancement: Statement of Intention*, available on the ABS website, and the following ABS papers:

Methodology of Evaluating the Quality of Probabilistic Linking (cat. no. 1351.0.55.018);

Exploring Methods for Creating a Longitudinal Census Dataset (cat. no. 1352.0.55.076);

Enhancing the Population Census: Developing a Longitudinal View 2006 (cat. no. 2060.0); and

Census Data Enhancement Project: An Update (cat. no. 2062.0).

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ABBREVIATIONS

ABS	Australian Bureau of Statistics
CDE	Census data enhancement
PES	post-enumeration survey
SEIFA	Socio-Economic Indexes for Areas

Brian Pink
Australian Statistician

SECTION 1

BACKGROUND

BACKGROUND

Almost all Indigenous deaths in Australia are registered. However it is thought that many are not being identified as Indigenous during the death registration process. Estimates of implied coverage of Indigenous deaths, as previously published by the ABS, are one measure of the undercoverage of Indigenous deaths in registered deaths data. See *Deaths, Australia, 2006* (cat. no. 3302.0). The CDE Indigenous Mortality Quality Study provides an alternative assessment of the quality of the Indigenous status identification in registered deaths data.

Death registrations data are provided to the ABS by the State and Territory Registrars of Births, Deaths and Marriages. Information supplied includes the Indigenous status of the deceased which is used by the ABS to produce estimates of Indigenous deaths. The information relates to all registered deaths including those referred to a Coroner. Prior to 2007, Indigenous status was recorded by the ABS based only on information supplied on Death Registration forms; that is, as reported by a relative, or other person acquainted with the deceased, or by an official of the institution where the death occurred. From 2007, the ABS has derived Indigenous status based on information supplied on the Death Registration form *and* the Medical Certificate of Cause of Death (completed by medical practitioners). Estimates of Indigenous deaths are used by the ABS as an input for calculating Indigenous population and life expectancy estimates.

Indigenous status recorded on Census forms is as reported by the person completing the form and in many instances the question is not answered at all. A responsible adult can complete a Household Census form for themselves and on behalf of other household members; and officials of non-private dwellings can complete the form for people enumerated in nursing homes, prisons and other institutions. Interviewer Household Forms are used in discrete Indigenous communities and are completed by the Census collector using information provided by household members, therefore the Indigenous status question is more likely to have been answered on these forms.

By linking Census records with death registrations, the CDE Indigenous Mortality Quality Study aimed to:

- assess the undercoverage of Indigenous deaths in death registration records;
- identify factors that may be contributing to undercoverage of Indigenous deaths in death registrations; and
- assess the feasibility of calculating and applying adjustment factors to improve estimates of Indigenous mortality.

SECTION 2

DATA LINKING METHOD

DATA LINKING METHOD

The CDE Indigenous Mortality Quality Study linked 2006 Census records with death registrations from 9 August 2006 to 30 June 2007, except for Victoria where death registrations were only available through till mid-March 2007. As there was no unique identifier available to link records, probabilistic methods using partial identifying information available on both datasets (name, address etc.) were used. For more information on the probabilistic methods used in the CDE studies generally see *Exploring Methods for Creating a Longitudinal Census Dataset* (cat. no. 1352.0.55.076) and *Methodology of Evaluating the Quality of Probabilistic Linking* (cat. no. 1351.0.55.018). Information specific to this study will be published in *Research Paper: Methodological Issues of the Census Data Enhancement Indigenous Mortality Quality Study* as part of the Methodology Research Paper series in early 2009.

VARIABLES USED DURING LINKING

Variables common to both datasets, such as name and address, were used in the linking process. Before records were linked, variables on both datasets were coded and formatted consistently to ensure record comparisons were meaningful. A name repair process was also applied to Census records. The Census dataset used for this quality study does not include imputed records, but Census records may include one or more imputed variables. These imputed variables were set to 'missing' for linkage purposes. To avoid introducing bias into any future analyses, reported Indigenous status was not used as a linking variable.

LINKAGE RATES ACHIEVED

There were 106,945 registered death records available to be linked in the study. Of these, 1,800 (1.7%) were identified as Indigenous on the death registration (see table 2.1).

Of the total registered deaths, 98,898 (92%) were linked to a Census record. However, a much lower linkage rate was achieved for Indigenous deaths, with more than one quarter of all Indigenous death registrations (26% or 473) unable to be linked to a Census record. As a result, Indigenous death records were over-represented in the unlinked death registrations.

As well as being over-represented in unlinked death registrations, unlinked Indigenous death records had different characteristics to linked Indigenous death registrations. Indigenous death records with older ages at death and from non-remote regions were more likely to be linked. See paragraph on *Characteristics of Indigenous death registrations* below for further discussion.

LINKAGE RATES

ACHIEVED *continued*

2.1 DEATH REGISTRATIONS(a), by Indigenous status—2006-07

	<u>Linked</u>		<u>Unlinked</u>		<u>Total death registrations</u>	
	no.	%	no.	%	no.	%
Indigenous	1 327	1.3	473	5.9	1 800	1.7
Non-Indigenous	96 531	97.6	7 456	92.7	103 987	97.2
Not Stated	1 040	1.1	118	1.4	1 158	1.1
Total	98 898	100.0	8 047	100.0	106 945	100.0

(a) Deaths registered from 9 August 2006 to 30 June 2007, except for Victoria where death registration records were only available through till mid-March 2007.

LINKAGE ACCURACY

False links occur when records from two different people are linked. Estimates of false links were obtained through a clerical review process. The parameters chosen and used in the linking process ensured that the link accuracy was very high, and that the analysis of the linked data would not be compromised by incorrect or false links. Of the 98,898 death registrations linked to a Census record it is estimated that 1.2% or 1,202 were false links. This estimate was obtained by clerically reviewing a sample of automatically linked record pairs and observing the percentage of presumed false links. The majority of these false links did agree on Indigenous status and thus will not compromise the analysis of differential Indigenous reporting.

One consequence of maintaining a very high link accuracy, was that some death registrations remained unlinked because they did not have enough agreement with their equivalent Census record to confidently assign the pair as a link. While the proportion of registered death records that remained unlinked was very low overall (8%), the proportion of registered Indigenous death records that remained unlinked was more than three times as high (26% or 473 records). Possible reasons for the lower rates of linkage for Indigenous death records are discussed below.

RECORDS NOT LINKED

The main reasons for a death registration not being linked to a Census record were:

- Census records not existing;
- Census records missing information for key linking variables; and
- disagreement across the two records for key linking variables.

The most common cause for an equivalent Census record not existing, is that the person was not recorded in the Census. This can be for a number of reasons including the person being temporarily overseas on Census night. Census undercount rates from the post-enumeration survey (PES) were used to estimate the number of death registrations without an equivalent Census record. Undercount adjustment factors were applied at five year age groupings for males and females and it was estimated that Census records did not exist for nearly half of all unlinked death registrations (46% or 3,747 records). This method assumes that the undercount rates (by age group) for the general population are the same as for the population who died in the period 9 August 2006 to 30 June 2007.

RECORDS NOT LINKED

continued

A large proportion of Indigenous death registrations that could not be linked to a Census record are expected to be due to Census undercount, with the net Census undercount rate for Indigenous Australians much higher than for non-Indigenous Australians, for further information see *Census of Population and Housing: Details of Undercount, August 2006* (cat. no. 2940.0).

Rolling enumeration procedures for Census in remote Indigenous communities also increased the likelihood of an equivalent Census record not existing for deaths occurring around the time of the Census. Rolling enumeration involves conducting the Census over an extended period of four to six weeks either side of Census night. In these instances it is possible that deaths occurred after Census night but before the Census enumeration had been completed in the community and therefore a corresponding Census record would not exist.

Instances where an equivalent Census record existed but could not be matched to a death registration resulted from Census and death records missing key linking variables, or the two records disagreeing for key linking variables. Census records tended to have much higher rates of missing values, scanning errors, and invalid answers for key linking variables than death registrations, and these issues were more prevalent among Indigenous Census records than non-Indigenous Census records.

CHARACTERISTICS OF
INDIGENOUS DEATH
REGISTRATIONS

Linked and unlinked Indigenous death records were examined to identify whether any social or demographic characteristics were associated with records that were harder to link (see table 2.2). While there was no difference in the linkage rates for Indigenous death records by gender or year of death, records with older ages at death, from non-remote areas, and from New South Wales, Queensland and South Australia were all more likely to be linked. Conversely, records from remote areas, and from Western Australia and the Northern Territory had low linkage rates. Areas with low linkage rates for Indigenous death registrations were consistent with areas with large estimated net undercount for Indigenous persons in the Census (*Census of Population and Housing: Details of Undercount, August 2006* (cat. no. 2940.0)).

CHARACTERISTICS OF
INDIGENOUS DEATH
REGISTRATIONS

continued

2.2 INDIGENOUS DEATH REGISTRATIONS(a), Selected characteristics—2006–2007

	<u>Unlinked</u>		<u>Linked</u>		<u>Total Indigenous death registrations</u>	
	no.	%	no.	%	no.	%
Age group (years)						
0–14	14	25.9	40	74.1	54	100.0
15–24	32	39.0	50	61.0	82	100.0
25–34	51	39.2	79	60.8	130	100.0
35–44	98	41.2	140	58.8	238	100.0
45–54	101	32.6	209	67.4	310	100.0
55+	177	18.0	809	82.0	986	100.0
Remoteness(b)						
Remote(c)	255	38.5	407	61.5	662	100.0
Non-remote	218	19.2	920	80.8	1 138	100.0
State/Territory of usual residence						
New South Wales	81	17.9	372	82.1	453	100.0
Victoria	20	31.3	44	68.8	64	100.0
Queensland	78	18.2	351	81.8	429	100.0
South Australia	23	22.5	79	77.5	102	100.0
Western Australia	133	34.4	254	65.6	387	100.0
Northern Territory	137	40.2	204	59.8	341	100.0
Total(d)	473	26.3	1 327	73.7	1 800	100.0

(a) Deaths registered from 9 August 2006 to 30 June 2007, except for Victoria where death registration records were only available through till mid-March 2007.

(b) Non-remote areas comprise Major Cities of Australia, Inner Regional Australia and Outer Regional Australia. All other areas are included in Remote.

(c) Includes 'not stated'.

(d) Includes Tasmania and the Australian Capital Territory.

SECTION 3

RESULTS

LINKAGE RESULTS

It is considered likely that most deaths of Indigenous Australians are registered. However, some of these deaths are not identified as Indigenous when they are registered. The extent to which this occurs is referred to as coverage of Indigenous deaths. By linking registered deaths to Census records, the CDE Indigenous Mortality Quality Study aimed to provide an assessment of the accuracy of Indigenous status in registered deaths data. The table below shows the number of linked death registrations by Indigenous status reported in the death registration and in Census.

3.1 LINKED DEATH REGISTRATIONS (a), Linkage results—2006-07

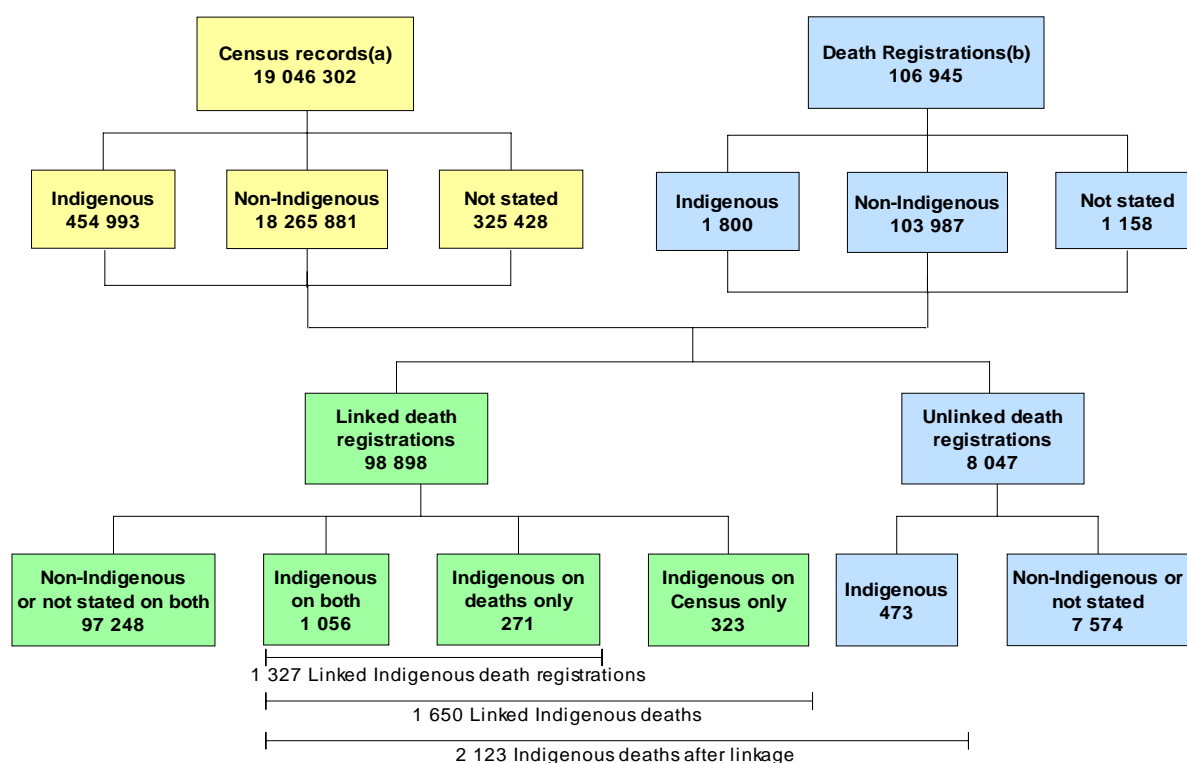
DEATHS				
CENSUS	Indigenous	Non-Indigenous	Not stated	Total
Indigenous	1 056	302	21	1 379
Non-Indigenous	231	91 076	970	92 277
Not stated	40	5 153	49	5 242
Total	1 327	96 531	1 040	98 898

(a) Deaths registered from 9 August 2006 to 30 June 2007, except for Victoria where death registration records were only available through till mid-March 2007.

For the purpose of this study, the linked record was assumed to be an Indigenous record if a positive response was recorded against the Indigenous status question on either the death registration or the corresponding Census record. Following linkage, the number of death records identified as Indigenous increased from 1,800 to 2,123 records, or from 1.7% to 2.0% of all registered deaths, see diagram.

While 323 additional death records were able to be identified as Indigenous from Census records, more may have been expected had all death records been able to be linked. As discussed in Section 2, a key reason for deaths records not being linked was that an equivalent Census record did not exist for linking. The large net undercount for Indigenous persons in the Census is the most likely reason for the low linkage rates for Indigenous records, with over one-quarter of Indigenous death registrations (473) unable to be linked in the study.

CDE INDIGENOUS MORTALITY QUALITY STUDY, Linkage results—2006-07



(a) Excludes overseas visitors and imputed records.

(b) Deaths registered between 9 August 2006 and 30 June 2007, except in Victoria where death registration records were only available through till mid-March 2007.

ASSESSMENT OF
UNDERCOVERAGE OF
INDIGENOUS DEATHS IN
DEATH REGISTRATIONS

There were 1,650 records on the linked dataset where the deceased was assumed to be Indigenous based on information from their death registration and Census records (see table 3.2). Of these linked records:

- nearly two-thirds (64% or 1,056 records) were reported as Indigenous consistently across Census and death records; and
- similar numbers were reported on one source only – Census only (323) and death registrations only (271).

3.2 LINKED INDIGENOUS DEATHS(a), Reported Indigenous status—2006-07

	Indigenous on Census only.....		Indigenous on death registration only.....		Indigenous on both sources.....		Linked Indigenous deaths.....	
	no.	%	no.	%	no.	%	no.	%
Australia	323	19.6	271	16.4	1 056	64.0	1 650	100.0

(a) Deaths registered from 9 August 2006 to 30 June 2007, except for Victoria where death registration records were only available through till mid-March 2007.

Table 3.3 shows registered Indigenous deaths before linkage as a proportion of all deaths identified as Indigenous following linkage. The proportion varies across states and

ASSESSMENT OF
UNDERCOVERAGE OF
INDIGENOUS DEATHS IN
DEATH REGISTRATIONS
continued

territories and indicates that nationally 85% of all deaths assumed Indigenous in the study were also reported as Indigenous in death registration records.

The results suggest that coverage of Indigenous deaths in death registrations is considerably higher, at least in 2006-07, than previous estimates have indicated. Previously published implied coverage rates released in *Deaths, Australia, 2006* (cat. no. 3302.0) indicated coverage rates of 55% nationally, with New South Wales (45%) and Queensland (51%) being the significant contributors to that low coverage estimate. Implied coverage rates were calculated by dividing the number of deaths registered for the period 2002-2006 by projections of expected deaths for the same period. The projected deaths were obtained from the low series of population projections based on assumptions regarding future fertility, mortality, migration and unexplained growth. See *Experimental Estimates and Projections, Aboriginal and Torres Strait Islander Australians 1991 to 2009* (cat. no. 3238.0).

The proportions shown in table 3.3 could be used as measures of coverage. It should be noted though that limitations with the study will affect interpretation of results, in particular because of unlinked records. Had more death registrations been linked, it is probable that some of the unlinked non-Indigenous death records would have been Indigenous, and hence the registered Indigenous deaths as a proportion of all assumed Indigenous deaths following linkage would have been lower than is shown. As well, in using the results of this study to measure coverage, adjustments may be needed to take account of undercount in the Census as measured by the PES.

3.3 INDIGENOUS DEATH REGISTRATIONS(a)—2006-2007

	Indigenous deaths prior to linkage	Indigenous deaths after linkage	Indigenous deaths prior to linkage as a proportion of Indigenous deaths after linkage
	no.	no.	%
New South Wales	453	594	76.3
Victoria	64	86	74.4
Queensland	429	493	87.0
South Australia	102	118	86.4
Western Australia	387	422	91.7
Northern Territory	341	345	98.8
Australia(b)	1 800	2 123	84.8

- (a) Deaths registered from 9 August 2006 to 30 June 2007, except for Victoria where death registration records were only available through till mid-March 2007.
- (b) Includes Tasmania and the Australian Capital Territory.

FACTORS CONTRIBUTING
TO UNDERCOVERAGE OF
INDIGENOUS DEATHS IN
DEATH REGISTRATIONS

There are a number of factors which are likely to contribute to undercoverage of Indigenous deaths in death registrations records. These relate to both the propensity of the deceased to have been identified as Indigenous by relatives or others (see Section 1) and the propensity of service providers to identify their clients as Indigenous. In the case of death registrations data, service providers include funeral directors who complete

FACTORS CONTRIBUTING
TO UNDERCOVERAGE OF
INDIGENOUS DEATHS IN
DEATH REGISTRATIONS
continued

Death Registration forms and medical practitioners who complete the Medical Certificate of Cause of Death.

A number of social and demographic variables were available for analysis on the deaths and Census records. The additional death records identified as Indigenous from Census (323) were examined and compared with registered Indigenous death records (1,800) to determine whether there were any social or demographic factors that may be contributing to undercoverage of Indigenous deaths in death registration records. Logistic regression modelling and significance testing (chi-square) was carried out. However, as any significance found in the linked file may be changed by the inclusion of the unlinked Indigenous death records, no conclusions were able to be reached about the significance of any of the factors examined.

In comparison with registered Indigenous deaths (see table 3.4), the additional death records identified as Indigenous from Census appeared to:

- have an older age profile;
- be almost entirely from non-remote areas; and
- be concentrated in New South Wales and Queensland.

As discussed in Section 2, Indigenous records more likely to be linked included those with an older age profile; from non-remote areas; and from New South Wales, Queensland and South Australia. With Indigenous death records for younger people, people from remote areas, and from Western Australia and the Northern Territory less likely to be linked, it is to be expected that these characteristics would not be strongly represented among additional records identified on the linked file.

Many of the other characteristics of the additional death records identified as Indigenous from Census were consistent with the older age profile of the linked records and not dissimilar to the characteristics of the registered Indigenous deaths (see Appendix). For example, these records

- had personal incomes consistent with pension incomes;
- were mostly not in the labour force; and
- the highest year of schooling was consistent with the schooling profile of older Australians.

Cause of Death was also examined, but was available only for deaths registered from 9 August 2006 to 31 December 2006, or just over one-quarter (28%) of Indigenous death registrations (see Appendix). Given the small number of death records with Cause of Death available, it was not possible to draw conclusions about whether any causes of death are associated with undercoverage of Indigenous deaths in death registration records.

FACTORS CONTRIBUTING
TO UNDERCOVERAGE OF
INDIGENOUS DEATHS IN
DEATH REGISTRATIONS*continued***3.4** INDIGENOUS DEATHS AFTER LINKAGE(a), Selected
characteristics—2006–2007

	<i>Indigenous on Census only</i>		<i>Indigenous on death registration</i>		<i>Indigenous deaths after linkage</i>	
	no.	%	no.	%	no.	%
Age group (years)						
0–14	9	2.8	54	3.0	63	3.0
15–24	18	5.6	82	4.6	100	4.7
25–34	16	5.0	130	7.2	146	6.9
35–44	24	7.4	238	13.2	262	12.3
45–54	48	14.9	310	17.2	358	16.9
55+	208	64.4	986	54.8	1 194	56.2
Remoteness(b)						
Remote(c)	16	5.0	662	36.8	678	31.9
Non-remote	307	95.0	1 138	63.2	1 445	68.1
State/Territory of usual residence						
New South Wales	141	43.7	453	25.2	594	28.0
Victoria	22	6.8	64	3.6	86	4.1
Queensland	64	19.8	429	23.8	493	23.2
South Australia	16	5.0	102	5.7	118	5.6
Western Australia	35	10.8	387	21.5	422	19.9
Northern Territory	4	1.2	341	18.9	345	16.3
Total(d)	323	100.0	1 800	100.0	2 123	100.0

(a) Deaths registered from 9 August 2006 to 30 June 2007, except for Victoria where death registration records were only available through till mid-March 2007.

(b) Non-remote areas comprise Major Cities of Australia, Inner Regional Australia and Outer Regional Australia. All other areas are included in Remote.

(c) Includes 'not stated'.

(d) Includes Tasmania and the Australian Capital Territory.

ADJUSTMENT FACTORS TO
IMPROVE ESTIMATES OF
INDIGENOUS MORTALITY

Results from the CDE Indigenous Mortality Quality Study may be able to be used to create factors to adjust and improve estimates of Indigenous mortality. A number of issues need to be considered when calculating and using adjustment factors based on this study, in particular the over-representation of Indigenous records on the unlinked file.

Adjustment factors using results from this study in conjunction with other information about Indigenous status reported in the 2006 Census of Population and Housing and the 2006 Census PES have been published in *Discussion Paper: Assessment of Methods for Developing Life Tables for Aboriginal and Torres Strait Islander Australians, 2006* (cat. no. 3302.0.55.002), which was released on 17 November 2008.

SECTION 4

SUMMARY AND RECOMMENDATIONS

SUMMARY

The CDE Indigenous Mortality Quality Study involved the linkage of registered deaths to Census records, for the 11 month period following the Census. Nationally, 98,898 registered death records were linked to Census records with a linkage rate of 92% achieved. However a much lower linkage rate was achieved for Indigenous registered death records, with more than one quarter (26%) of all Indigenous deaths not linked. Of the 1,800 Indigenous death registrations available in the study, there were 1,323 records that were able to be linked to a Census record.

For the purpose of this study, the linked record was assumed to be an Indigenous record if a positive response was recorded against the Indigenous status question on either the death registration or the corresponding Census record. This resulted in an increase in the total number of death records identified as Indigenous (from either the death registration or from a corresponding Census record) from 1,800 to 2,123 records, or from 1.7% to 2.0% of all registered deaths.

While 323 additional death records were able to be identified as Indigenous from Census records, more may have been expected if all death records had been linked. A key reason records could not be linked appears to be Census undercount, with a corresponding Census record not existing to link to for many Indigenous death records. Caution should be used when interpreting the results from this study given the number of records in the unlinked file.

RECOMMENDATIONS

The study has provided a range of information that can guide the development of both future linkage studies and strategies to improve Indigenous identification in mortality data. It is recommended that:

- Further work be undertaken to better understand the propensity for people to identify as Indigenous and under what circumstances this changes. Information is needed both from the perspective of individuals and from the perspective of service providers (i.e. the propensity of service providers to identify their clients as Indigenous) to both understand, and then correctly apply results from linkage studies where there are differences in reporting of Indigenous status by data source.
- Best practice guidelines be developed to support national consistency in approaches for studies involving linkage of Indigenous records.
- The study be repeated following the 2011 Census of Population and Housing and opportunities investigated for incorporating other datasets, to evaluate whether these could be used to supplement information on Indigenous status from death registrations and improve the quality of Indigenous mortality data.

A1.1 INDIGENOUS DEATHS AFTER LINKAGE(a), Selected characteristics—2006-07

	<i>Census only</i>		<i>Death registrations</i>		<i>Indigenous deaths after linkage</i>	
	no.	%	no.	%	no.	%
SEIFA Decile(b)						
1(c)	29	9.0	380	21.1	409	19.3
2	63	19.5	310	17.2	373	17.6
3	46	14.2	232	12.9	278	13.1
4	44	13.6	171	9.5	215	10.1
5	46	14.2	177	9.8	223	10.5
6	33	10.2	207	11.5	240	11.3
7	17	5.3	154	8.6	171	8.1
8	22	6.8	86	4.8	108	5.1
9	14	4.3	48	2.7	62	2.9
10	9	2.8	15	0.8	24	1.1
Marital status						
Never married	63	19.5	641	35.6	704	33.2
Widowed	67	20.7	263	14.6	330	15.5
Divorced	37	11.5	104	5.8	141	6.6
Married	123	38.1	384	21.3	507	23.9
Not applicable/Not stated	33	10.2	408	22.7	441	20.8
Total	323	100.0	1 800	100.0	2 123	100.0

(a) Deaths registered from 9 August 2006 to 30 June 2007, except for Victoria where death registration records were only available through till mid-March 2007.

(b) Socio-Economic Indexes for Areas, for more information see *Information Paper: An Introduction to Socio-Economic Indexes for Areas (SEIFA), 2006* (cat. no. 2039.0).

(c) Includes 'not stated'.

A1.2 INDIGENOUS DEATHS AFTER LINKAGE, Cause of Death(a)—2006-07

	<i>Census only</i>		<i>Death registrations</i>		<i>Indigenous deaths after linkage</i>	
	no.	%	no.	%	no.	%
Cancer	44	36.4	93	19.9	137	23.3
Diseases of the circulatory system	25	20.7	141	30.1	166	28.2
Diseases of the respiratory system	6	5.0	44	9.4	50	8.5
External causes	18	14.9	53	11.3	71	12.1
Other	28	23.1	137	29.3	165	28.0
Total	121	100.0	468	100.0	589	100.0

(a) Deaths registered between 9 August and 31 December 2006.

A1.3 LINKED INDIGENOUS DEATHS(a), Selected characteristics—2006-07

	<i>Indigenous on Census only</i>		<i>Indigenous on death registration</i>		<i>Linked Indigenous deaths</i>	
	no.	%	no.	%	no.	%
Gross individual income (weekly)						
Negative or Nil	18	5.6	29	2.2	47	2.8
\$1-\$149	11	3.4	77	5.8	88	5.3
\$150-\$249	107	33.1	493	37.2	600	36.4
\$250-\$399	66	20.4	252	19.0	318	19.3
\$400-\$599	23	7.1	91	6.9	114	6.9
\$600-\$799	10	3.1	32	2.4	42	2.5
\$800-\$999	10	3.1	16	1.2	26	1.6
\$1 000 and above	9	2.8	24	1.8	33	2.0
Not stated/not applicable	69	21.4	313	23.6	382	23.2
Labour force status						
Employed	47	14.6	162	12.2	209	12.7
Unemployed	7	2.2	37	2.8	44	2.7
Not in the labour force	224	69.3	930	70.1	1 154	69.9
Not stated	45	13.9	198	14.9	243	14.7
Family type						
Couple family	49	15.2	253	19.1	302	18.3
Couple only	69	21.4	188	14.2	257	15.6
One parent family	46	14.2	223	16.8	269	16.3
Other	5	1.5	50	3.8	55	3.3
Not stated/not applicable	154	47.7	613	46.2	767	46.5
Highest year of schooling completed						
Year 12 or equivalent	39	12.1	82	6.2	121	7.3
Years 10 or 11	65	20.1	252	19.0	317	19.2
Years 9 or below(b)	133	41.2	627	47.2	760	46.1
Not stated/not applicable	86	26.6	366	27.6	452	27.4
Dwelling type						
Private dwelling	261	80.8	1 011	76.2	1 272	77.1
Non-private dwelling	62	19.2	316	23.8	378	22.9
Total	323	100.0	1 327	100.0	1 650	100.0

(a) Deaths registered from 9 August 2006 to 30 June 2007, except for Victoria where death registration records were only available through till mid-March 2007.

(b) Includes 'never attended school'.

FOR MORE INFORMATION . . .

INTERNET

www.abs.gov.au the ABS website is the best place for data from our publications and information about the ABS.

INFORMATION AND REFERRAL SERVICE

Our consultants can help you access the full range of information published by the ABS that is available free of charge from our website. Information tailored to your needs can also be requested as a 'user pays' service. Specialists are on hand to help you with analytical or methodological advice.

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