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Trends in the adult Indigenous inmate population in NSW 1998-2010: the impact of changes in measurement

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The Indigenous offender population has continued to increase over recent years in terms of both numbers and imprisonment rates. This paper presents a review of changes to and impact of statistical system definitions and processes employed by CSNSW in the measurement of the Indigenous offender population. The paper shows that a revision of the statistical definition of Indigenous status increased the representation of Indigenous offenders in NSW by 1.9% in 2002 and that a secondary 'backward looking' implementation of this revision further increased the population by more than 2.0% in some years. A significant component of the increases came from the identification of Indigenous offenders within the population of offenders who at the time of the original Census report had identified as Non-Indigenous. The phenomenon whereby individuals change their Indigenous status is described as 'category-change' and has been employed by the ABS in explaining significant growth in the Indigenous estimated resident population (ERP) enumerated in the ABS Population and Housing Census. This paper shows that revisions of ERP statistics reduced Indigenous imprisonment rates by more than 8% in some years and that imprisonment rate trends can mask more complex relationships between trends in ERP and offenders. It is suggested that given their impact, temporal differences in the manner in which persons respond to standard questions on Indigenous status should be factored into any examination of trends in Indigenous offender populations in addition to standard criminal justice system factors more commonly used to account for trends in this population.

KEY FINDINGS

- Changes to the statistical definition of Indigenous inmate in 2002 increased the representation of Indigenous inmates in NSW by 1.9% in that year.
- Secondary revision (backward implementation) of the 2002 statistical revision increased the Indigenous representation by more than 2% in some years.
- A significant component of the increase in Indigenous offenders arose from inmate whose Indigenous status changed from Non-Indigenous to Indigenous (category change) over the period of the study.
- Revisions in Australian Bureau of Statistics estimates of the Indigenous resident adult population of NSW based on 1996, 2001 and 2006 Census series reduced Indigenous imprisonment rates by 8% in some years.
- Temporal changes in data collection systems used to enumerate Indigenous inmate and estimated resident populations have significant impacts on trends in imprisonment rates derived from these statistics and should be factored into explanations of trends in Indigenous imprisonment rates.

INTRODUCTION

Recent statistics published by the Australian Bureau of Statistics (ABS) show that nationally, Indigenous adults are close to fourteen (14) times more likely to be imprisoned than Non-Indigenous persons. Over the past decade this disparity between Indigenous and Non-Indigenous rates of imprisonment has increased substantially. Nationally, the Indigenous imprisonment rate increased from 9.6 times that of the Non-Indigenous rate in 2000 to 14.2 times the Non-Indigenous rate in 2010 (ABS 2010 Table 4.2). Significantly, this substantial increase took place within a decade where the national (all prisoner) imprisonment rate increased from 150.2 in 2000 to 172.4 (ABS 2010 Table 3.4). In NSW the picture was very similar with the Indigenous over-representation rate increasing from 8.8 in 2000 to 13.0 in 2010 whilst the overall (all prisoner) imprisonment rate increased from 172.2 to 196.0 over the same period (ABS 2010 Tables 4.2 and 3.4 respectively).

The increase in the Indigenous over-representation rate indicates that the Indigenous offender population and imprisonment rate increased over and above any increase in Non-Indigenous population. This pattern suggests that changes in criminal justice system-wide factors which effect increases in imprisonment rates (the type and number of crimes, policing operations and sentencing policy and practice etc.) may impact on the Indigenous community in a more pronounced way.

While the processes and their interaction and impact are not felt homogenously across the community, simple explorations of administrative data can assist in beginning to explore their complexity. A recent study by the NSW Bureau of Crime Statistics and Research suggests that higher levels of bail refusal, increases in time on remand, increases in the use of imprisonment and an increase in full-time custodial sentence terms were responsible for the increase in the NSW Indigenous offender population between 2000 and 2008 (Fitzgerald 2009).

Corrective Services NSW (CSNSW) collects a significant amount of administrative data which can be used to answer similar questions in some detail. For example, Are increases in the Indigenous offender population concentrated within certain gender, age or offences groups? Have sentencing patterns as reflected in aggregate sentence terms increased? Answers to these more explorative questions have yet to be examined in detail in NSW.

A less prominent consideration, however, is that statistics on Indigenous offender populations can also be affected by changes in the administrative data systems and statistical definitions utilised in capturing and reporting on these populations.

Changes in administrative data systems are not just an issue for CSNSW. Indigenous offender imprisonment rate statistics published by the ABS continue to be updated as estimates of the Indigenous resident population (which form the denominator in imprisonment rate calculations) continue to be revised (ABS, 2010 Explanatory Note 29). ABS population estimates (referred to as estimated resident population or ERP) are based on data and projections from the *Census of Population and Housing (ABS Census)*. Population projection methods and parameters continue to be revised, and in some cases can result in significant revisions of population estimates and therefore Indigenous offender imprisonment rates.

Estimated resident population (ERP) for Indigenous persons were revised significantly following the 2001 ABS Census of Population and Housing. One reason commonly put forward to explain a significant proportion of the increase was that more Indigenous persons self-reported their Indigenous status in the ABS Census, a phenomenon referred to a 'category change' (ABS 1999, Taylor, 2002; Wijesekere, 2001). In more recent years, less marked revisions have been brought about by revision of ABS methodologies and population parameters (birth rates etc.) used in projecting population trends (ABS 2010).

There is some benefit in briefly examining the impact of revisions of Indigenous ERP in terms of how they impact on trends in derived Indigenous imprisonment rates. Wider issues relating to difficulties in measuring and projecting Indigenous ERP may also provide insight into how community-wide trends may impact on the self-reporting of Indigenous status of offenders entering the adult correctional system in NSW.

AIM

The aim of this paper was to examine the impact of a number of data definitions and processing system issues on trends in the full-time Indigenous offender population in NSW. Firstly, the paper describes changes in CSNSW data collection systems and statistical definitions used to monitor trends in the Indigenous offender population. The impacts of these revisions on Indigenous offender population trends are discussed. Secondly, the paper briefly examines changes in published Indigenous offender imprisonment rates and estimates of the resident adult Indigenous community population in NSW. The impact of these changes in interpreting trends in the Indigenous offender population are also discussed.

METHOD

Two sets of data were examined in this report. The first CSNSW Census series is a thirteen year series of population snap-shots taken on 30 June each year between 1998 and 2010. This data are sourced from the CNSW Offender Integrated Management System (OIMS) and is based on adults held in full-time custody. For this study the offender population excludes ACT offenders held in NSW¹, periodic detainees and juveniles managed by CSNSW². Due to this definition adopted specifically for this paper, offender population statistics presented here may not reflect statistics published in other data series such as the CSNSW *Inmate Census* (Corben, 2011) and the ABS *Prisoners in Australia* (ABS 2010).

Changes in CSNSW data collection systems and statistical definitions discussed in this paper have been sourced from explanatory notes published with CSNSW and ABS offender population statistics (Corben, 2011 and ABS, 2008) and from the author's professional experience.

The second data series is the adult Indigenous estimated resident population (ERP) of NSW as at 30 June each year and includes imprisonment rates derived from the ERP. These have been sourced from selected *Prisoners in Australia* series publications (ABS, 2003; ABS 2006, and ABS 2010).

CSNSW DATA PROCESSING SYSTEM

Recording of demographic data

Selected demographic details of offenders, including Indigenous status are recorded as part of the CSNSW custodial reception processes as prescribed Schedule 1 of the *Crimes (Administration of Sentences) Regulation 2008*. Individual's details are collected through a self reported reception interview and later entered into the corporate offender records system (OIMS). These characteristics can also be brought forward from previous records (following verification), or updated when additional information is self reported.

The offenders' self-reporting of Indigenous status is voluntary and the recording of this data in OIMS is not mandatory to the reception data entry process. In this manner data quality is improved as neither the offender nor records staff are forced to provide or record an Indigenous status value in OIMS as part of a reception data entry process. It is noteworthy that it has always been possible for an offender to alter their self-reported Indigenous status at any time, such as on re-imprisonment.

Up until 2007, the custodial based reception data entry process was duplicated for offenders entering the CSNSW system through the community based (non-custodial) arm of the agency and this data was recorded separately. In 2007 this data model was replaced by the 'Single Active Booking' model under which contemporaneous community and custody based episodes were recorded against a single shared episode of contact. Some of the benefits of this model were a reduction in data entry and greater consistency between custody and community based records.

The Indigenous status question

As part of the reception screening interview process each offender is asked the ABS standard Indigenous question (SIQ) "Are you of Aboriginal or Torres Strait Islander descent" (ABS, 2008). The SIQ identifies three criteria for the identification of Indigenous people; being of Aboriginal or Torres Strait Islander descent, self-identification as such and acceptance as such by the community. While in practice correctional agencies are unable to identify whether an offender is accepted by their community as an Indigenous person, this is not an uncommon issue for administrative data systems (ABS and AIHW, 2003).

CSNSW DEFINITIONAL CHANGES

First revision: change of definition

Prior to 2002, the Indigenous status of offenders reported as part of the CSNSW Census data series described the status recorded at the commencement of the current episode of imprisonment.

In 2002, statistical staff within CSNSW revised the statistical definition of Indigenous status in response to a need to address on-going data quality issues. One of these was an increase in the proportion of offenders whose current Indigenous status was recorded as 'Unknown' but had been recorded as Indigenous and/or Non-Indigenous in a previous episode of imprisonment. Under the revised definition an offender was reported as Indigenous if they had been recorded as Indigenous in their current or any previous episode of custody or community contact.

The purpose of the definition change was to reduce the numbers of offenders whose Indigenous status was recorded as 'Unknown' and to provide a consistent identifier of Indigenous status for individuals across multiple episodes of imprisonment.

Second revision: 'backward' implementation

The aggregation of the individual census year datasets conducted for this project enabled a 'backward' implementation of the (first) revision of Indigenous

status definition across the entire thirteen years of the study period. The purpose of this secondary revision of the data was to improve the consistency in the reporting of Indigenous status both pre-dating and post-dating the 2002 introduction of the revised definition. The status of any offender recorded as Indigenous at any point within the study period was recorded as Indigenous for the entire study period. The same process was then undertaken for Non-Indigenous offenders whose Indigenous status was recorded as 'Unknown' at any point.

Whilst the second revision provides consistency within records for offenders who appear in more than one year in the data series, it makes little impact on records for offenders with 'Unknown' Indigenous status who appear in only one year. To control for this effect, those persons still recorded as 'Unknown' after the second revision had their Indigenous status verified against OIMS to allow for any update to that status that had occurred outside of the thirteen year census data series.

TRENDS IN THE INDIGENOUS ESTIMATED RESIDENT POPULATION (ERP)

The adult Indigenous estimated resident population (ERP) measured at the time of each ABS Census (the *ABS Census of Population and Housing*) forms the basis of calculations of Indigenous imprisonment rates published in the *ABS Prisoners in Australia* series. In inter-censal years the ABS make projections of the Indigenous resident population using assumptions about future fertility, paternity, life expectancy at birth and migration.

Indigenous ERP statistics were last updated in September 2010 and the most recent *Prisoners in Australia* publication presented revised imprisonment rates for Indigenous offenders to reflect these changes. It is worthwhile, however, to take a brief look at the extent of these revisions to examine the impact they may have had on trends in Indigenous imprisonment rates. Changes in ERP may also reflect on changes in the offender population in terms how the Indigenous community responds to government agencies' questions on Indigenous status.

Between 2000 and 2008 the ABS published ERP statistics for each jurisdiction as part of the *Prisoners in Australia* publications. These data, however, were derived from two separate series. ERP statistics reported in publications 2000 to 2002 were based on projections of the 1996 ABS Census and data reported for years 2004 to 2008 were based on the 2001 ABS Census.

Prisoners in Australian publications 2009 and 2010 did not published ERP statistics, but presented revised imprisonment rates for years 2000 to 2010 based on the most recent ERP statistics based on the 2006 ABS

Census (see ABS 2010 Table 4.3). These therefore represent a third series of Indigenous adult ERP statistics. As this series was published as imprisonment rates only, ERP statistics for the 2006 ABS Census series have been derived³ from published offender and imprisonment rate statistics (ABS 2009 and ABS 2010).

RESULTS

Did the first CSNSW revision 'inflate' the Indigenous representation?

Yes. The introduction of the revised Indigenous status definition resulted in an apparent increase in the representation of Indigenous offenders in full-time custody in NSW.

Table 1 presents the trend in the proportion of full-time custody offenders identified as Indigenous within the CSNSW census series for each year between 1998 and 2010. Percentage values are used to enable measurement of the Indigenous offender population whilst controlling for changes in the total offender population. These statistics enable identification of increases in the Indigenous offender population over and above any annual increases in the total offender population itself.

Table 1 shows the Indigenous offender population increased from 16.3% of the total offender population in 2001 (prior to definitional change) to 18.2% in 2002 (immediately following its implementation). The 1.9 percentile point increase in 2002 represents a marked divergence from the trend for previous and subsequent years (with the exception of 2006).

Table 1: Trends in the Indigenous status of offenders; 1998 to 2010

Census year	Indigenous offenders (%)	Proportional increase per year
1998	15.4%	n.a.
1999	16.6%	1.2%
2000	16.1%	-0.5%
2001	16.3%	0.2%
2002 (revision introduced)	18.2%	1.9%
2003	18.7%	0.5%
2004	17.9%	-0.8%
2005	18.2%	0.4%
2006	21.0%	2.8%
2007	20.9%	-0.1%
2008	21.2%	0.3%
2009	22.2%	1.0%
2010	22.1%	-0.1%

It is important to remember that part of the increase in 2002 (or any year for that matter) would be due to the 'natural' increase in the offender population. Whilst the increase in 2002 is notable, trends from previous years indicate there was an average annual increase of 0.3% in the Indigenous population between 1998 and 2001. Based on this trend the Indigenous representation may have increased to 16.6% in 2002 had the definitional change not been implemented.

Following the definitional change the Indigenous representation continued to increase at this same level (approximately 0.3% p.a.), with 2006 again being the exception. Note also that whilst the increase is not always positive (2004 and 2007 for example) this does not indicate that the Indigenous population decreased, but that it decreased as a proportion of the offender population as a whole. Overall, however, the trend appears to confirm that the 1.9% increase in 2002 was significant compared to the proportional changes in other years which averaged approximately 0.3% per year.

Did the first CSNSW revision reduce the levels of 'Unknowns'?

No. The introduction of the revised definition should, in theory, have reduced the number and proportion of offenders with an 'Unknown' Indigenous status. This was expected because the revised definition summarised data for both current and previous episodes of custodial and community-based contact with CSNSW. In short, the premise was that widening the scope of the data reviewed in determining Indigenous status should lower the proportion of offenders with an 'Unknown' status where at some earlier point the Indigenous status had been recorded.

Table 2 shows that this does not seem to be the case. The table shows that the percentage of offenders with an 'Unknown' Indigenous status increased in 2002. Furthermore, the 'Unknown' proportion continued to increase from 1.0% in 2002, doubled from 1.4% to 2.8% between 2004 and 2005 and peaked at 3.5% in 2009.

These results indicate that while there was some reduction in the level of 'Unknowns' prior to 2002, the impact of the revised statistical definition in further reducing the level of 'Unknowns' has decreased since that time.

Did the second CSNSW revision impact on long term trends?

Yes, but not consistently across the study period. Table 3 shows the trends in Indigenous offenders following the second 'backwards' implementation of the definitional revision. The table shows that the revision increased the proportion of Indigenous offenders by close to 2% in years prior to 2002. With the exception of 2004 and 2005 the impact from 2002 onwards decreased. In 2002 the secondary revision added a further 0.9% to the Indigenous proportion and decreased to add just 0.6% in 2009. It is unclear what took place in 2004 and 2005. It is notable that, even in 2010, the impact of the revision is still evident, with the Indigenous proportion increasing by 0.2% from that recorded for 30 June 2010. This indicates that Indigenous offenders continue to be identified amongst offenders initially recorded as Non-Indigenous or 'Unknown'.

Table 2: Trends in the proportion of offenders with 'Unknown' Indigenous status; 1998 to 2010

Census year	Percent with Indigenous status 'Unknown'
1998	0.6%
1999	0.4%
2000	0.4%
2001	0.9%
2002 (revision introduced)	1.0%
2003	1.8%
2004	1.4%
2005	2.8%
2006	2.1%
2007	2.0%
2008	2.2%
2009	3.5%
2010	2.6%

Table 3: Trends in Indigenous status – second revision; 1998 to 2010

Census year	Indigenous population % First series	Indigenous population % Second series	Difference between series
1998	15.4%	17.3%	1.9%
1999	16.6%	18.1%	1.6%
2000	16.1%	17.9%	1.8%
2001	16.3%	18.4%	2.1%
2002	18.2%	19.1%	0.9%
2003	18.7%	19.5%	0.8%
2004	17.9%	20.0%	2.2%
2005	18.2%	20.4%	2.1%
2006	21.0%	21.7%	0.7%
2007	20.9%	21.4%	0.5%
2008	21.2%	21.7%	0.5%
2009	22.2%	22.7%	0.6%
2010	22.1%	22.3%	0.2%

Figure 1: Trends in Indigenous offenders: comparison between first and second series; 1998 to 2010

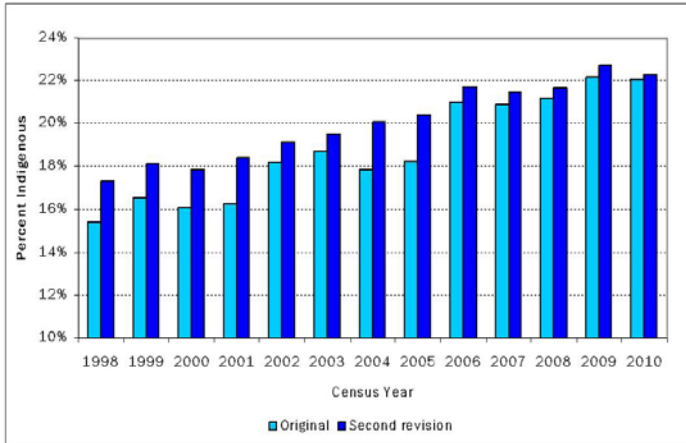


Figure 1 presents a graphical view of Table 3 results, showing that the second revision of Indigenous status 'increased' the proportion of Indigenous offenders in each year across the thirteen year series, but more substantially between 1998 and 2005. The dramatic two percent increase in Indigenous offenders in 2002 largely brought about by first (definitional) revision is a clear feature of the first data series, as is the variation between years. In contrast, the second revision series shows a smoother, more consistent increasing trend in the Indigenous offender population, with proportional increases resulting from the second revision being most evident prior to 2002.

Did the second CSNSW revision impact on the level of 'Unknowns'?

Yes. Table 4 shows a comparison between the proportion of offenders with 'Unknown' Indigenous status for the first and second revision data series and

Table 4: Trends in the proportion of offenders with 'Unknown' Indigenous stats – second revision; 1998 to 2010

Census year	Percent with Indigenous status 'Unknown'	Percent with Indigenous status 'Unknown'	Difference between series
	First series	Second series	
1998	0.6%	0.2%	-0.5%
1999	0.4%	0.1%	-0.3%
2000	0.4%	0.1%	-0.3%
2001	0.9%	0.2%	-0.7%
2002	1.0%	0.3%	-0.7%
2003	1.8%	0.4%	-1.4%
2004	1.4%	0.3%	-1.1%
2005	2.8%	0.2%	-2.7%
2006	2.1%	0.2%	-1.9%
2007	2.0%	0.2%	-1.8%
2008	2.2%	0.2%	-2.0%
2009	3.5%	1.5%	-2.1%
2010	2.6%	2.0%	-0.6%

a third column indicating the size of the change between these revisions.

The table shows that the second revision of the data was able to reduce the percentage of offenders with 'Unknown' Indigenous status to less than 0.5% for the period 1998 to 2008, where-after the percentage of 'Unknowns' increased to 2.0% in 2010. It is notable that between 2003 and 2008, when the original level of 'Unknowns' was between 2 and 3 percent, the second revision reduced the level to 0.4 percent or less.

The second revision reduced the levels of 'Unknowns' over the majority of the period. However, not all of these offenders would have had their status revised to Indigenous. It is not clear from these results that the increase in the Indigenous population resulting from the second revision was brought about by the identification of Indigenous offenders amongst offenders previously recorded as 'Unknown' or those previously recorded as Non-Indigenous.

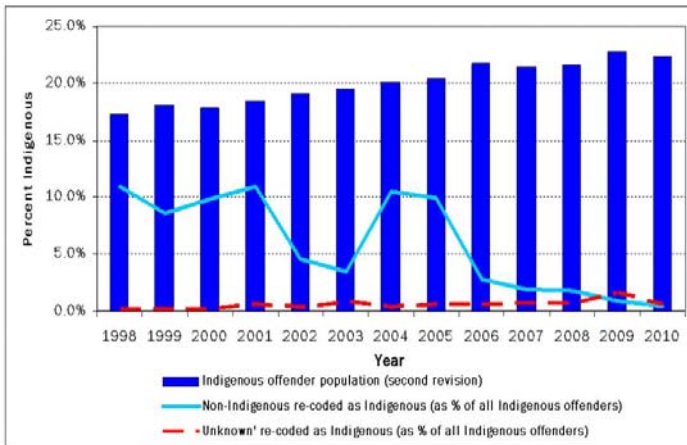
Was the increase in Indigenous offenders following the second revision due to reclassification of Non-Indigenous offenders?

Yes. Figure 2 shows trends in the Indigenous population against the trend in the proportion of Indigenous offenders originally recorded as 'Unknown' or Non-Indigenous offenders. Between 1998 and 2005 (with a few obvious exceptions) around 10% of the increase in the number of Indigenous offenders resulted from the recoding of Non-Indigenous offenders. In stark comparison, the recoding of 'Unknowns' accounted for not more than 1 percent of the increase in the Indigenous population up until 2008.

It is suggested that this same pattern would have taken place following the introduction of the revised statistical definition in 2002. That is, from 2002 onwards a significant proportion of the increase in the Indigenous population was brought about by the identification of Indigenous offenders amongst offenders previously recorded as Non-Indigenous. This explains why the increase following second revision was less marked in 2002 (but not why it peaked again in 2004 and 2005). Figure 2 shows that in 2004 and 2005 the decreasing level of reclassification of Non-Indigenous offenders turned around, indicating that a great number of offenders in custody in 2004 and 2005 had their Indigenous status updated from Non-Indigenous to Indigenous following those census years, rather than in some previous episode (which would have been identified under the first revision).

In summary, it is apparent that a significant component of the increase in the Indigenous offender population over the period of the study was brought about by the identification of Indigenous offenders amongst

Figure 2: Comparison of trends in Indigenous representation and re-coding of non-ATSI and Unknowns (i.e. where did the increase in ATSI come from)

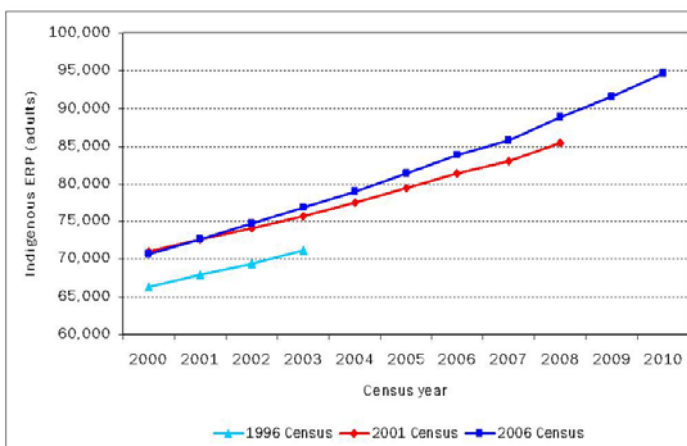


offenders who previously reported their status as Non-Indigenous. This 'category-change' effect far outweighs any increase brought about by the identification of Indigenous offenders amongst offenders whose status was recorded as 'Unknown'.

What were the revisions to the ABS Indigenous ERP?

Figure 3 presents the trends in the Indigenous adult estimated resident population (ERP) in NSW for the period 1998 to 2010 showing the three ERP series based on the 1996, 2001 and 2006 ABS Census. An immediate feature of the figure is that the 1996 series showed a significantly lower resident population than the later series. In fact, the estimates based on the 2001 ABS Census were approximately 7% higher than those based on ABS 1996 Census. The differences between the 2001 and 2006 ABS Census series are negligible between years 2000 to 2003 and increase from then onwards to a maximum of around 4% difference between estimates for 2008. It is worth noting that between 2000 and 2010 the adult Indigenous population of NSW increased by 34% (based on the most recent ERP statistics).

Figure 3: Trends in different ABS estimates of the resident Indigenous population of NSW based on various ABS Census series (1996, 2001 and 2006)

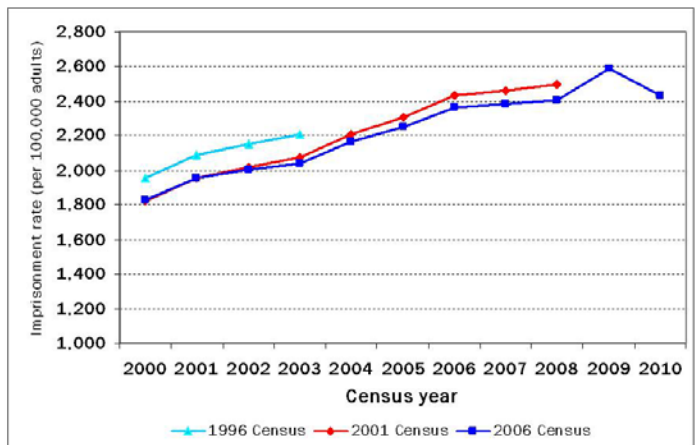


How do revisions to the Indigenous ERP impact on trends in Indigenous imprisonment rates?

Figure 4 shows the calculated imprisonment rates using the CSNSW second revision series and ERP statistics from the three ABS Census series (1996, 2001 and 2006).

The figure shows that the lower ERP derived from the 1996 ABS Census resulted in higher imprisonment rates for the period 2000 to 2003 compared to rates derived from the 2001 and 2006 ABS Census. For example, the 2003 imprisonment rate based on the 1996 ABS Census EPR (2,181) was 8.1% higher than the rate based on the 2006 ABS Census (2,019). In 2006, a difference between the rates based on the 2003 and 2006 ERP was smaller (2,492 and 2399 respectively, or 3.9%), but is still evident.

Figure 4: Trends in Indigenous imprisonment rates using CSNSW offender population (second revised) and the three ABS Census series estimates for resident Indigenous population.



Despite the revisions, however, the consistent picture is that Indigenous imprisonment rates increased substantially over the period of the study. The most recently derived rates show the Indigenous imprisonment rate increased by 33% between 2000 and 2010 (from approximately 1,800 offenders per 100,000 Indigenous adults in 2000 to over 2,400 in 2010). In comparison, the Indigenous offender population itself increased by 78% over this same period.

The results show that the overall change in imprisonment rates between ERP series were small relative to the total rate. The analysis does, however, highlight the need to represent imprisonment rates that are based on consistent ERP series.

Why didn't the Indigenous imprisonment rate increase more substantially?

As reported above, the Indigenous imprisonment rate increased by 33% compared to a 78% increase in the size of the Indigenous offender population. It is evident that growth in the Indigenous imprisonment rate was

retarded by the substantial growth in the ERP, which grew by 34% between 2000 and 2010. Over the same period, the adult Non-Indigenous ERP of NSW (also derived from published imprisonment rates and offender numbers) increased by only 14%. The disparity in the growth of the two ERP populations suggests that the Indigenous ERP have yet to reach a comparable level of stability between ABS Census enumerations. How else could such a disparity in population growth be explained? Furthermore, with such a significant component of the growth in the Indigenous ERP remaining 'unexplained', continued (and perhaps unexplained) increases in the Indigenous offender population might well be expected.

Despite these enumeration issues, the overwhelming evidence remains that Indigenous imprisonment rates continue to increase at rates that exceed Non-Indigenous increases, notwithstanding significant revision in the Indigenous ERP. This growing disparity is most succinctly described by the increase in the Indigenous offender over-representation rates reported in the introduction to this paper.

DISCUSSION

The introduction of the revised statistical definition of Indigenous offender introduced by CSNSW in 2002 had a significant impact on the representation of Indigenous offenders in that year, but no identifiable impact thereafter. In a sense, the introduction of the revised methodology was similar to the 're-basing' of the Indigenous ERP that takes place after each ABS Census and simply represents a revised estimate of the 'real' size of the Indigenous offender population.

The introduction of the revised definition in 2002 had an inconsistent impact on reducing the level of offenders with an 'Unknown' Indigenous status despite this being an impetus for the revision. This might be accounted for in two ways. Firstly, it may be that a significant proportion of offenders in custody on 30 June are 'first and only time' offenders. As the population as a whole increases and the flow of new offenders increases, demands on initial data entry and data quality processes increase and may account for fluctuations in the level of offenders with 'Unknown' Indigenous status.

Secondly, the increase in 'Unknowns' might reflect an increase in the proportion of offenders who choose not to report their Indigenous status. Over the past six years, as part of the census project, staff of the Corporate Research, Evaluation and Statistics unit (CRES) have reviewed a sample of paper based records for offenders whose Indigenous status was recorded as 'Unknown'. In the vast majority of cases reviewed, offenders with an 'Unknown' Indigenous status did have a status recorded on the paper based record of the reception screening interview, but this information had not been entered into the data system. It would

appear, therefore, that the increase in 'Unknowns' more probably relates to changing demands on records processing than a heightened propensity for offenders not to report their Indigenous status.

Overall, it would appear that trends in the reclassification of offenders with 'Unknown' Indigenous status did not have as significant an impact on trends as did the reclassification of Non-Indigenous offenders as Indigenous. Figure 2 showed that simply due to the size of the Non-Indigenous population, the identification of Indigenous offenders amongst this population far outweighed their identification amongst 'Unknowns', though this difference reduced towards the end of the study period. This mirrors the ABS explanation of unexplained increases in the Indigenous ERP being due to 'category change'. Similar to this phenomenon in the ERP statistics, the degree to which 'category change' impacts on the overall trends in Indigenous population remains difficult to determine. In terms of the Indigenous offender population, these changes can be significant, adding between 0.5 and 2.0% to the total Indigenous representation in any one year (Table 2).

There has been some discussion regarding trends in the Indigenous ERP. The ABS recognizes that changes in demographic profile such as birth, death and migration rates, process changes and continued development of the ABS Indigenous Enumeration Strategy can account for just over half of the increase in the ERP measured at the 1996 ABS Census. Levels of 'Unknown's within the ABS Census also remain high, the ABS noting that since the 1976 Census more people have consistently not reported their Indigenous status than have reported as being Indigenous (ABS 1999).

The primary force behind the unexplained increase, the ABS attributes to 'category change'. However, despite the 'category change' being significant, the impact compared to any natural increase in the population remains unknown. The ABS have reported levels of 'category change' as high as 16% amongst persons contacted immediately after the Census as part of the post-Census followed processes (ABS 1999).

For some authors, the inconsistency in the Indigenous ERP enumerated by the ABS is an understandable feature of this populations' demography. Taylor (2002) notes that since 1990 major issues such as land rights, the Royal Commission into Aboriginal Deaths in Custody, the creation of the Aboriginal and Torres Strait Islander Commission, the Wik and Mabo decisions and the Stolen Generation report have helped to push self-identification rates. It has been also suggested that changes in legislation may increase the identification of Indigenous offenders in the CJS. For example Hardman (2010) notes the recognition of Indigenous persons as 'vulnerable persons' for the purpose of invoking specialised police processes introduced into the *Law Enforcement (Powers and Responsibilities)*

Regulations 2005 (s24) may have increased the representation of Indigenous persons in police custody.

Wijesekere (2001) suggests that changes in self-identification may effect how offenders respond to the SIQ on entering the criminal justice system. Others such as Gardiner and Bourke (2000) have suggested that terminologies such as 'category change' are misleading and inadequate to explain the complex differences between identity and identification. These issues are important but beyond the scope of this paper.

Internationally, changes in the propensity for persons to report their Indigenous status in population census have been reported to be responsible for explaining a significant proportion of 'unexplained' increases in Indigenous population in the US (Passel, 1997) and Canada (Guimond *et al*, 2003). There is some evidence, therefore, that the difficulties in enumerating Indigenous populations are not simply issues effecting offenders or CSNSW.

Changes in estimates of the Indigenous ERP have significance for the analysis of trends in the offender population for two reasons. Firstly, ERP statistics are used to derive imprisonment rates which express the number of persons in custody as a proportion of the total resident population. Obviously, as the population estimates change, the derived imprisonment rates also change.

The second, but no less significant, impact is on how the changes in propensity to self-identify as an Indigenous person in the resident population might translate to increases in self-identification amongst persons entering custody. It is important to remember that the size of this change remains unknown and that it was a feature of the 1996 Census rather than more recent series. However, were this same community-wide phenomenon to continue to effect the way in which persons respond to the same questions on entering custody, it would have some impact on the representation of Indigenous persons in custody. As reported above, in recent years the Indigenous ERP has increased by 34% compared to 14% for Non-Indigenous persons. It remains that some part of this disparity in increase is attributable to 'category change' in the resident population that may subsequently impact on the reported representation of Indigenous offenders in custody.

The relationship between offenders and ERP trends are, however, complex. Any impacts on trends in imprisonment rates resulting from 'category change' are masked where the increases in each population are equivalent. By definition, increases in the number of Indigenous offenders (numerator) that are in direct proportion to increases in the ERP (denominator) have no impact on imprisonment rates. Therefore, imprisonment rates can remain stable despite significant increases in both the Indigenous ERP and

offender populations. Were the extent of any 'category-change' not equivalent between the two populations, this would significantly impact on imprisonment rate trends.

Nevertheless, it should be remembered that, as the name indicates, these population statistics remain 'estimates' that continue to be updated and revised. This infers that imprisonment rates themselves are also, at best, only estimates and subject to revision.

CONCLUSION

This paper has attempted to outline some of the background factors that should be borne in mind in reviewing trends in the NSW Indigenous offender population and associated imprisonment rates.

Like many other administrative data systems, CSNSW limitations in obtaining accurate measurement of the size of the Indigenous offender population relate to the fact that Indigenous status is based on the self-reporting of a status that, for an individual, may change over time. The paper has shown that simple revisions of administrative data can have significant impacts on trends in offender populations. The introduction of a revised statistical definition of Indigenous status in 2002 increased the Indigenous offender representation by 1.9% in that year. Subsequent 'backward looking' revisions of data increased the Indigenous representation by more than 2% in some years. Despite these revisions, it remains clear that the Indigenous offender population in NSW continued to increase at rates which exceed increases in the Non-Indigenous population, though there appears to be some slowing of that increase in recent years.

In explaining overall offender population trends it is clear that simple factors such as how populations respond to questions on self-identification of Indigenous status should be considered along with the more widely recognised criminal justice system factors normally used to account for custody based offender trends.

The measurement of Indigenous populations through self-report remains an issue for many administrative data collection systems nationally and internationally. Revisions of these population estimates have a noticeable impact on 'rebasing' trends in Indigenous offender imprisonment rates with subsequent ERP data shown to reduce imprisonment rates by more than 7%.

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Footnotes:

1. Prior to 2010 a small number of offenders from the ACT were held in NSW Correctional Centres on behalf of the ACT government. These offenders have been excluded as they are excluded from calculation of NSW imprisonment rates.
2. CSNSW commenced management of Kariong Juvenile Correctional Centre in 2004. Juvenile offenders (under the age of 18) held in this facility are excluded as NSW imprisonment rates are based on adults.
3. Estimated Resident Population (ERP) statistics have been derived from offender and imprisonment rates statistics published by the ABS (ABS 2010). ERP is calculated as number of offenders x 100,000 divided by the imprisonment rate.

Glossary:

Category change: the phenomenon whereby individuals change their self-reported Indigenous status between points in time.

ERP (Estimated Resident Population): the term used by the ABS to describe estimates of the community (or general) population.

First revision: the change in the statistical definition of Indigenous status from that recorded against the current episode of imprisonment to any record of custody or community based episode of contact with CSNSW.

Secondary revision (backward implementation): the reclassification of Indigenous status to provide a consistent status for individuals across the thirteen year CSNSW Census series.

Imprisonment rate: the number of offenders per 100,000 adults in the community.

Over-representation rate: a comparison of Indigenous to Non-Indigenous imprisonment rates such as an over-representation rate of 10.0 infers that Indigenous

offenders are imprisoned at 10 times the rate of Non-Indigenous offenders.

Offender population: for this study the offender population include all persons in full-time custody as at 30 June each year between 1998 to 2010. The population excludes periodic detainees, juveniles held at Kariiong Juvenile Correctional Centre and ACT offenders held in full-time custody in NSW (see footnotes 1 and 2).

SIQ (Standard Indigenous Question): the Australian Bureau of Statistics (ABS) standardised question on Indigenous status “*Are you of Aboriginal or Torres Strait Islander descent*”. The question identifies three criteria for the identification of Indigenous people *viz*, being of Aboriginal or Torres Strait Islander descent, self-identification as such and acceptance as such by the community.

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