



Contact with the New South Wales court and prison systems: The influence of age, Indigenous status and gender

Don Weatherburn, Bronwyn Lind and Jiuzhao Hua

This bulletin describes the construction of a reoffending database based on linking court appearance records for the same individual. The database provides a facility for tracking and examining patterns in recidivism in New South Wales. The database is used to examine the level of contact with the criminal court and prison systems in New South Wales. It is found that over a five-year period about 6.5 per cent of the New South Wales population appeared in court on a criminal matter. Over a one-year period the proportion is 1.9 per cent. Rates of contact with both the court and prison systems are higher for males than for females and are generally highest for 20-24 year-olds, often substantially so. Indigenous residents of New South Wales have very high rates of contact with both the court and prison systems. In just one year 12.8 per cent of the Indigenous population appeared in court and 2.2 per cent were given a custodial penalty. For Indigenous males aged 20-24, the proportion with a court appearance in the one-year period was 41.3 per cent and the proportion given a custodial penalty was 10.0 per cent.

INTRODUCTION

In comparison with Britain and the United States, most Australian States and Territories have been slow to develop facilities for measuring rates and patterns of recidivism (i.e. reoffending) among offenders. This is both understandable and unfortunate. It is understandable because Australian researchers have in the past been afforded much more limited access to the kind of arrest or court appearance data required to measure and monitor recidivism than their counterparts in the United States or Britain. It is unfortunate because, in the absence of any facility for monitoring recidivism, it is difficult to test or evaluate policies designed to curb offending behaviour. It is also difficult to give courts reliable and accurate advice on which individuals may be suitable for bail,

parole or non-custodial sanctions or determine how frequently different groups within the general population come into contact with the criminal justice system.

In 1994 the Crime Research Centre at the University of Western Australia developed an arrest-based reoffending database, using data supplied by the West Australian Police Service. That reoffending database has been used to evaluate programs designed to reduce recidivism and to develop risk assessment instruments for use in judging the suitability of offenders for non-custodial sanctions. No similar database exists in any other State, although some States, such as New South Wales (NSW), do keep track of the rate at which individuals released from prison are reimprisoned. The difficulty with re-imprisonment, as a measure of

recidivism, however, is that many individuals who reoffend are not returned to prison. A reoffending database constructed from arrest or court appearance data may still only catch a small fraction of all the reoffending that occurs. The amount of reoffending it is able to measure, however, is necessarily (and substantially) greater than that which can be measured from an analysis of imprisonment records.

The NSW Bureau of Crime Statistics and Research has for many years collected comprehensive data on people appearing in court on criminal charges in NSW. Up until recently, however, the records of individuals appearing more than once in the court system were not linked, making it impossible to track the frequency with which particular individuals reoffended and reappeared in court.

Thanks to supplementary funding provided by the NSW Attorney General's Department it became possible to construct a database which links successive court records belonging to the same individual. The purpose of this bulletin is to describe the contents of the database, explain how it was constructed and present some initial findings from the database concerning the level of contact between NSW citizens and the NSW court and prison systems.

DEVELOPMENT OF THE NSW REOFFENDING DATABASE

PURPOSE

The purpose of the reoffending database is to permit the tracking and analysis of patterns of recidivism. Since only a fraction of all offending comes to the attention of the courts, a threshold question arises as to its reliability as a source of information about recidivism. The reoffending database cannot be used to determine the true rate of reoffending of any group of offenders. In many circumstances, however, we are less interested in the true rate of reoffending than we are in differences in rates of reoffending between groups or within a group over time. As long as we can safely assume that a reasonably stable proportion of all offending comes to the attention of the courts (an assumption supported by the relative stability of crime clear-up rates from year to year) the reoffending database can be used to examine differences in recidivism rates between groups or within a group over time. If individuals who offend more frequently (or over a longer period of time) appear more often in court, we can also use the database to identify the factors associated with more frequent or persistent offending.

CONSTRUCTION

As already noted, the Bureau of Crime Statistics and Research has for many years maintained a database on persons appearing in the NSW criminal

courts charged with a criminal offence. Though the construction of a reoffending database might seem a straightforward task – involving little more than the linking of separate court appearance records belonging to the same individual – in practice the process turns out to be less straightforward than it appears.

To build the database we used data from three different data sources: court appearance records from the Higher Criminal Court (District and Supreme), the Local Criminal Court and the Children's Court. The Children's Court data were kindly supplied by the NSW Department of Juvenile Justice. To link records for the same person we had to match court appearance records using the available personal identifying information. This information is limited to first name, surname, date of birth and a police identifier known as the CNI (Central Names Index). For Children's Court records there is also a juvenile identifier.

Clearly, if all identifiers are identical for two persons (from two different court appearance records) then the two persons are considered to be the same person. However, restricting matches only to cases where there are *identical* values for all identifiers would be far too restrictive. In practice variations often occur as a result of data entry errors or for other reasons. We therefore had to develop procedures which would as far as possible maximise the chances of finding genuine matches but at the same time minimise the chance of mismatches. We chose to develop our own matching criteria rather than using specialist matching software for a number of reasons. First, the identifying information is limited. Second, the CNI is not a unique one-to-one identifier. An individual may legitimately have more than one CNI but, in theory, a specific CNI can only be assigned to one person. In practice, however, because of errors, the same CNI can sometimes be assigned to more than one person. A further problem with the CNI is that it is missing from a substantial number of records. Third, the names in court appearance records can include embedded aliases. For example,

if Smith and Jones are alias surnames for the same person, the name field may be recorded as 'Smith alias Jones' or 'Smith @ Jones' or 'Smith aka Jones' or 'Smith (Jones)' or something similar. Embedded aliases are a particular problem for the Higher Criminal Courts records because there is only one name field; within this field the name can be written in any order, that is surname before first name or vice versa, possibly with embedded aliases for both names.

The Appendix provides details on the common variations found in identifiers and the matching procedures which have been developed to account for them.

It is important to note that the database is dynamic in the sense that each new set of records added to the database can actually have an effect on earlier data stored in the database. For example, if a new record for person C matches with both person A and person B, two separate persons already in the database, then from that point on, persons A, B and C would be considered to be the same person.

DESIGN AND STRUCTURE

The reoffending database is set up in SAS statistical software (SAS was used for convenience because the NSW criminal courts databases are set up in SAS). Although SAS is not a relational database, the reoffending database has been set up with a relational structure. That is, it is set up as a series of tables each with identifiers to link to other tables. There are separate tables for 'master' personal details, alternative personal details, court appearance details, offence details and penalty details.

The 'master' personal details table includes a unique identifier for the person, the person's gender and date of birth, the person's age and postcode of residence at the *earliest* court appearance in the database, and an indicator of Indigenous status, which is set as Indigenous if the person is recorded as Indigenous at any court appearance. Note that because the recorded values for gender and date of birth may vary from one court appearance

to another, the master table includes the most frequently recorded gender and date of birth, or the earliest recorded if there is no most frequently recorded value. The table for alternative personal details includes all combinations of CNI, surname, first name and date of birth that appear in court appearance records for the person.

The court appearance details include information such as date of finalisation, custody status and court jurisdiction. Offence details include information such as offence type, outcome and plea. The penalty details include the type and amount of penalty.

Each table in the database includes identifiers to link across tables. The identifiers include the master person identifier, a personal details identifier for each unique combination of personal details, a case identifier for each court appearance, an offence identifier and a penalty identifier.

As noted earlier, three different data sources were used to build the reoffending database. These data sources were court appearance records for the Children’s Court, the Local Court and the District and Supreme Courts. Because each of the sources had different codes for the variables of interest, it was necessary to devise a coding scheme which was capable of being mapped from each data source.

CONTACT WITH NSW COURT AND PRISON SYSTEMS

In this section of the bulletin we use the NSW reoffending database to present some initial findings concerning the level of contact between NSW residents and the NSW court and prison systems. Before providing data bearing on these issues, however, some comments are in

order about the offences included in our analysis.

Criminal courts deal with a vast array of matters, many of which, from the standpoint of the criminal law, are relatively minor (e.g. not fixing a number plate properly, overloading a truck, leaving an animal unattended in a public place). In what follows we restrict our attention to offences for which the maximum penalty is no less than a \$550 fine. This definition includes all the main categories of property and violent crime, as well as all drug offences and breaches of court orders (e.g. breach of parole). It also includes serious driving offences (such as drink-driving or culpable driving) but not offences dealt with by way of an infringement notice (e.g. speeding). Note, however, that the tables and graphs that follow do include all cases dealt with by all criminal jurisdictions of the NSW court system (regardless of whether they were dealt with by the Children’s, Local, District or Supreme Court).

Table 1: Offence profile for people appearing in NSW courts in 2001

Offence type	All persons		Indigenous persons	
	Male	Female	Male	Female
	%	%	%	%
Homicide and related offences	0.3	0.2	0.2	0.1
Acts intended to cause injury	15.4	13.9	25.0	24.1
Sexual assault and related offences	1.1	0.1	1.0	0.1
Dangerous or negligent acts endangering persons	5.4	4.3	2.2	1.1
Abduction and related offences	0.1	0.1	0.1	0.1
Robbery, extortion and related offences	1.0	0.6	1.4	1.2
Unlawful entry with intent / burglary, break and enter	2.7	1.5	5.4	2.6
Theft and related offences	9.7	18.8	11.9	19.5
Deception and related offences	2.4	5.6	1.0	1.5
Illicit drug offences	6.3	5.4	4.9	4.2
Weapons and explosives offences	1.1	0.4	0.7	0.3
Property damage and environmental pollution	4.1	3.1	5.4	5.0
Public order offences	6.1	5.8	9.6	13.2
Road traffic and motor vehicle regulatory offences	34.3	30.0	20.0	17.9
Offences against justice procedures, government security and government operations	8.1	8.0	9.5	8.0
Miscellaneous offences	1.8	2.4	1.6	1.0

Note: Only one offence type is shown for each person. The offence selected is the offence with the most serious penalty, or, if no offence is proven, the offence listed first on the indictment or charge sheet. For persons with more than one court appearance in 2001, the offence refers to the most recent court appearance.

Table 2: Overall rates of contact with the court system
Percentage of NSW population who appeared in a NSW criminal court in 2001

Age	Percentage of NSW population		
	Males	Females	All persons
	%	%	%
10-14	0.3	0.1	0.2
15-19	5.2	1.1	3.2
20-24	8.4	1.7	5.1
25-29	6.5	1.4	4.0
30-34	5.2	1.1	3.1
35-39	3.9	0.9	2.4
40-44	3.0	0.7	1.8
45-49	2.2	0.5	1.3
50+	0.8	0.1	0.4
All aged 10+	3.2	0.7	1.9

LEVEL OF CONTACT WITH THE COURT SYSTEM

In NSW, in the five years between 1997 and 2001, there were about 352,000 distinct people or 6.5 per cent of the NSW population¹ who appeared in a NSW court charged with a criminal offence. Of the 352,000 persons about 286,500 were male (10.7 per cent of the male population) and about 65,500 were female (2.4 per cent of the female population).

Table 1 presents data on the offence profile of persons fitting our criteria who were dealt with by the NSW criminal courts in 2001, broken down by the gender and Indigenous status of the defendant. Where an individual had several court appearances in 2001, their most recent court appearance is taken as the basis for constructing Table 1. The offence counted was either the offence that attracted the most severe penalty (in cases where the person was convicted of one or more offences) or the first listed offence on the charge sheet or indictment (in cases where the person was not convicted of any offence).

It can be seen that, regardless of Indigenous status or gender, the most common categories of offence that people in court face are ‘acts intended to cause injury’, ‘theft and related offences’ and ‘road traffic and motor vehicle regulatory offences’. The most noteworthy differences across the population as a whole between males and females are in the offence categories of theft and deception offences, where female defendants tend to predominate. In terms of Indigenous status it is apparent that Indigenous people are more likely to turn up in court for offences related to violence and public order, and somewhat less likely to turn up in court for road traffic and motor vehicle offences.

Table 2 shows the age- and gender-specific rates of court appearance amongst this group, that is, it shows what proportion of males and females in each age cohort in the general population appeared in a NSW court in 2001 charged with a criminal offence.

As can be seen from the bottom row of Table 2, just under two per cent of the NSW population aged 10 and over appeared in a NSW court in 2001 charged with a criminal offence. It is also apparent

in every age category that the proportion of the NSW female population appearing in court is substantially less than that of males. Overall, males appeared in court in 2001 nearly five times more often than females.

There are also marked variations in the rates of appearance across age groups. Younger age groups are far more likely to appear in court charged with a criminal offence than older age groups. More than 8 per cent of men in NSW aged between 20 and 24 (i.e. about 1 in every 12 males in this age group) appeared in court charged with a criminal offence in 2001. This compares with just 2.2 per cent of males aged between 45 and 49. Similarly, whereas 1.7 per cent of NSW females aged 20-24 appeared in court in 2001, the corresponding percentage for females aged 45-49 is less than one third of this – 0.5 per cent.

These figures, though surprisingly high, pale in comparison to the rates of appearance in court by Indigenous people. In the five years between 1997 and 2001, about 25,000 distinct Indigenous people appeared in a NSW court charged with a criminal offence. This represents 28.6 per cent of the NSW Indigenous population. Their court appearance rate is therefore 4.4 times higher than the population as a whole.

Table 3 shows the age by gender breakdown of court appearance rates for Indigenous people appearing in a NSW court charged with a criminal offence in 2001. The overall rates of appearance are extremely high. Nearly 13 per cent of the total Indigenous population in NSW aged 10 and over appeared in court in 2001. The rate of contact between Indigenous males and the NSW court system is even higher. Nearly one in five Indigenous males in NSW appeared in court in 2001 charged with a criminal offence. For Indigenous males aged 20-24 the corresponding figure was more than 40 per cent (compared with 8.4 per cent for the corresponding male age group for the population of NSW as a whole: see Table 2). Even in the older male age groups the rate of Indigenous appearance in court is disturbingly high.

In 2001, nearly four per cent of all Indigenous males aged 50 and over appeared in a NSW court charged with a criminal offence. The corresponding figure for the population as a whole was 0.8 per cent.

Indigenous women appear in court on criminal charges about a third as often as their male counterparts. Still, by comparison with the general population, their rates of appearance are also high. In 2001 more than six per cent of the Indigenous female population appeared in court (compared with 0.7 per cent for the female population as a whole: see Table 2). For Indigenous women aged 20-24, the rate of appearance in court is more than double this (13.6 per cent). At this level, their rate of court appearance is eight times higher than the corresponding rate for the same female age group in the general population.

FREQUENCY OF PAST CONTACT WITH THE COURT SYSTEM

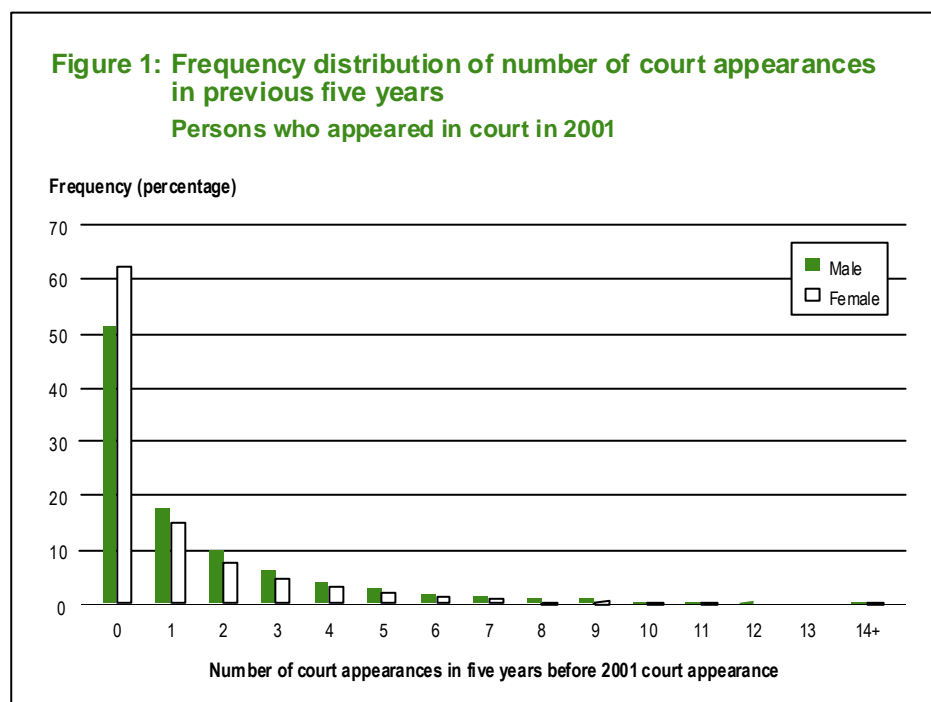
What percentage of the population appearing in court in 2001 had appeared before? Figure 1 provides the answer to this question. It shows, for those who appeared in court in 2001, the frequency distribution of the number of prior court appearances in the five years before their first court appearance in 2001.² Separate distributions are shown for males and females.

It is evident from the first column of Figure 1 that the majority of people appearing in court in 2001 (52 per cent of males and 62 per cent of females) had *not* appeared in court in the previous five years. About 18 per cent of males and about 15 per cent of females had just one prior court appearance in the five years before their 2001 court appearance. Though it is not immediately apparent from Figure 1, amongst those who had appeared at least once before, a large proportion (about 37 per cent of males and about 40 per cent of females) had only appeared once. The proportions of males and females turning up in court in 2001 who had had more than three previous court appearances in the preceding five years were fairly small

Table 3: Indigenous rates of contact with the court system
Percentage of NSW Indigenous population who appeared in a NSW criminal court in 2001

Age	Percentage of NSW Indigenous population		
	Males	Females	All persons
	%	%	%
10-14	1.7	0.3	1.1
15-19	21.7	6.3	14.1
20-24	41.3	13.6	27.7
25-29	37.7	12.1	24.3
30-34	35.1	9.8	21.6
35-39	25.7	7.7	16.2
40-44	17.6	5.9	11.6
45-49	10.7	2.8	6.7
50+	3.9	1.0	2.4
All aged 10+	19.7	6.1	12.8

Figure 1: Frequency distribution of number of court appearances in previous five years
Persons who appeared in court in 2001



(less than 15 per cent of males and a little over 10 per cent of females).

Figure 2 shows that the picture is very different for Indigenous males and females.

Among Indigenous people who appeared in court in 2001, only a minority (17 per cent of Indigenous males, 27 per cent

of females) had no previous court appearance in the five years before their 2001 court appearance. The long tail of the distribution shown in Figure 2 is also noteworthy. Frequent previous contact with the court system was much more common amongst Indigenous people than among the population as a whole. About 27 per cent of Indigenous males

Table 4: Offence profile for people sentenced to prison in 2001

Offence type for offence with most severe penalty	All persons		Indigenous persons	
	Male	Female	Male	Female
	%	%	%	%
Homicide and related offences	1.6	0.6	0.9	0.4
Acts intended to cause injury	19.6	16.1	31.3	21.5
Sexual assault and related offences	2.9	0.3	1.8	0.0
Dangerous or negligent acts endangering persons	4.4	2.2	3.7	3.0
Abduction and related offences	0.4	0.4	0.2	0.0
Robbery, extortion and related offences	6.1	6.6	5.1	9.4
Unlawful entry with intent / burglary, break and enter	13.3	10.6	14.1	13.7
Theft and related offences	18.8	33.6	16.9	34.8
Deception and related offences	2.4	7.8	0.7	2.1
Illicit drug offences	7.6	8.7	2.3	3.4
Weapons and explosives offences	0.8	0.6	0.6	0.9
Property damage and environmental pollution	1.8	0.6	2.9	0.4
Public order offences	1.5	1.0	2.1	1.3
Road traffic and motor vehicle regulatory offences	11.1	5.2	9.2	4.3
Offences against justice procedures, government security and government operations	6.3	4.5	6.7	4.7
Miscellaneous offences	1.4	1.0	1.6	0.0

and about 17 per cent of Indigenous females who had appeared at least once in 2001, had appeared in court *more than five times* in the five years prior to their 2001 court appearance.

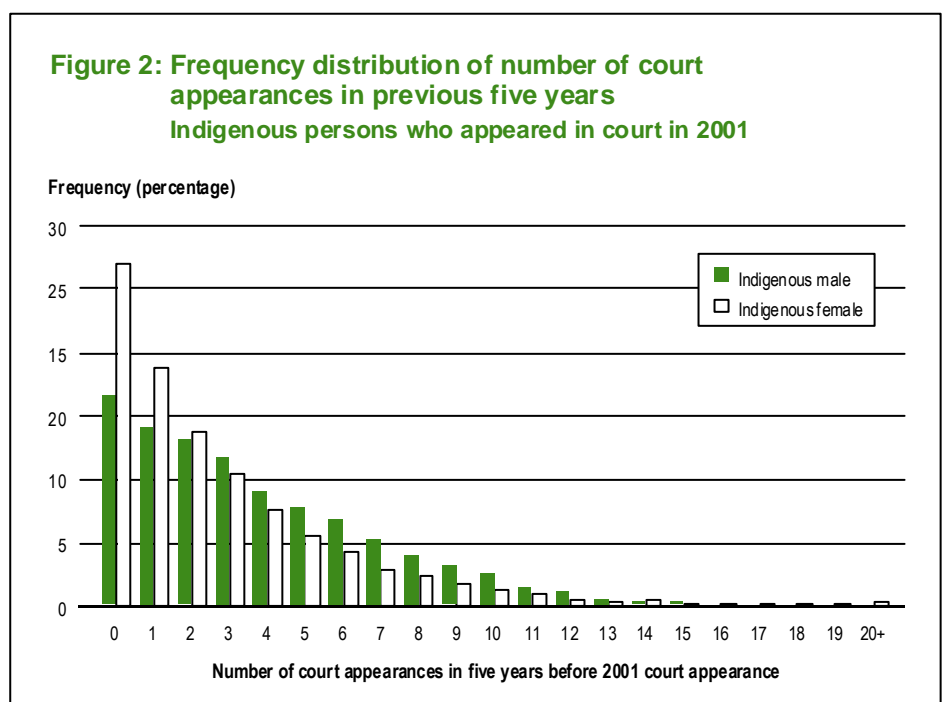
Table 4 shows the offence profile of persons appearing in court and given a term of imprisonment in 2001. For those who appeared in court and were

sentenced more than once in 2001, the count is based on their most recent court appearance. The offence counted is that attracting the most severe penalty.

LEVEL OF CONTACT WITH THE PRISON SYSTEM

We turn now to the issue of contact with the prison system. For convenience, throughout this and the next section we use the words ‘prison and ‘imprisonment to encompass both the adult and juvenile systems of incarceration (i.e. prison includes juvenile detention). In the five years between 1997 and 2001, about 25,000 distinct people or 0.46 per cent of the NSW population received at least one sentence of imprisonment.

The corresponding percentages for males and females in 2001 were 0.247 per cent and 0.024 per cent, respectively. In other words, in that year, about 1 in 400 males and about 1 in 4,000 females in NSW were given a prison sentence.



It is evident from Table 4 that the most common offences for which people are sent to prison in NSW fall into three classes: 'acts intended to cause injury', 'Unlawful entry with intent / burglary, break and enter' or 'theft and related offences'. Substantially higher proportions of women than men are imprisoned for theft and deception offences. Substantially higher proportions of Indigenous offenders than non-Indigenous offenders are imprisoned for 'acts intended to cause injury'. Note that, although Indigenous people are more likely than the general population to appear in court for public order offences (see Table 1), only a very small proportion are imprisoned for these offences.

Table 5 shows the age- and gender-specific rates of contact between NSW citizens and the NSW prison system for persons appearing in court in 2001.²

Once again, there are notable differences across age groups, with the percentage of males aged 20-24 who were given a prison sentence in 2001 (0.76 per cent) being about 25 times higher than the percentage of males aged fifty years and over who were given a prison sentence (0.03 per cent). The corresponding aged-based differences for women are slightly less pronounced but are still very substantial.

Not surprisingly, given what we have already seen, the level of contact between Indigenous people and the NSW prison system is much higher than that for the population as a whole. In the five years between 1997 and 2001, about 5,900 Indigenous people (6.8 per cent of the Indigenous population) were given a custodial sentence. In 2001, the corresponding figure was about 1,900, or 2.2 per cent of the Indigenous population in NSW. This is 16 times higher than the overall rate of contact between NSW citizens and the prison system in 2001.

Table 6 shows the age- and gender-specific rate of contact between Indigenous people and the NSW prison system.

Table 5: Overall rates of contact with the prison system
Percentage of NSW population given a custodial penalty in 2001

Age	Percentage of NSW population		
	Males	Females	All persons
	%	%	%
10-14	0.01	0.00	0.01
15-19	0.28	0.03	0.16
20-24	0.76	0.09	0.43
25-29	0.65	0.06	0.36
30-34	0.53	0.05	0.28
35-39	0.31	0.04	0.17
40-44	0.19	0.02	0.10
45-49	0.12	0.01	0.06
50+	0.03	0.00	0.02
All aged 10+	0.25	0.02	0.13

More than 1 in 10 Indigenous males aged 20-24 received a prison sentence in 2001. The rate of contact for males between the ages of 25 and 34 is almost as high. Furthermore, while Indigenous females in each age group have substantially lower rates of contact with the NSW prison system than their male counterparts, the rate at which they are

sentenced to imprisonment is nevertheless very much higher than that of the general population. For example, about 1.6 per cent of Indigenous women in NSW aged 20-24 received a prison sentence in 2001. This rate is 18 times higher than the corresponding figure for females in this age group in the general population (i.e. 0.09 per cent).

Table 6: Indigenous rates of contact with the prison system
Percentage of NSW Indigenous population given a custodial penalty in 2001

Age	Percentage of NSW Indigenous population		
	Males	Females	All persons
	%	%	%
10-14	0.24	0.01	0.13
15-19	3.34	0.56	1.97
20-24	10.05	1.62	5.93
25-29	8.49	1.03	4.58
30-34	8.10	0.80	4.19
35-39	4.49	0.62	2.43
40-44	2.24	0.31	1.24
45-49	1.44	0.18	0.80
50+	0.53	0.01	0.26
All aged 10+	3.93	0.53	2.20

FREQUENCY OF CONTACT WITH THE PRISON SYSTEM

Figure 3 shows the frequency with which convicted offenders, given a prison sentence in 2001, had received an earlier prison sentence in the five years before their first custodial penalty in 2001. As before, separate distributions are shown for males and females.

The distributions shown in Figure 3 are very similar for males and females and are also similar in general form to those shown in Figure 1. Most convicted offenders (52 per cent of males and 55 per cent of females) given a prison sentence in 2001 had not received any sentence of imprisonment in the preceding five years. Just under 20 per cent of males and females had had only one court appearance resulting in imprisonment in the five years prior to receiving their prison sentence in 2001. Though it is not immediately obvious from Figure 3, about 40 per cent of the males and about 41 per cent of the females who *had* received a previous prison sentence, had had only one such imprisonment episode over the relevant period. Individuals sent to prison more frequently than this were much less common. Less than 10 per cent of males and less than nine per cent of females, given a sentence of imprisonment in 2001, had had more than three court appearances resulting in imprisonment in the preceding five years.

Once again, the pattern for Indigenous offenders is very different. Figure 4 shows the distribution of the number of imprisonments for Indigenous offenders in the five years prior to the court appearance resulting in imprisonment in 2001.

Indigenous males and females sentenced to prison in 2001, who had *not* received a prison sentence in the preceding five years, constituted a minority (viz. 34 per cent and 38 per cent respectively). The proportions of Indigenous male and female offenders given a prison sentence in 2001 who had been sentenced to imprisonment at *more than three* court appearances in the preceding five years were very high, being 17 per cent and 15 per cent, respectively.

SUMMARY AND DISCUSSION

The data drawn from the NSW reoffending database indicate that a significant fraction of the NSW population at or over the age of criminal responsibility (i.e. 6.5 per cent, or about 1 in 15 people over the age of 10) appeared in court charged

with a criminal offence in the five years between 1997 and 2001. The most common categories of offence for which they are brought to court are theft, violence and serious road traffic or driving offences. Overall males appear in court charged with a criminal offence about 4.5 times more frequently than females.

Figure 3: Frequency distribution of number of prior imprisonment episodes
All persons given a custodial penalty in 2001

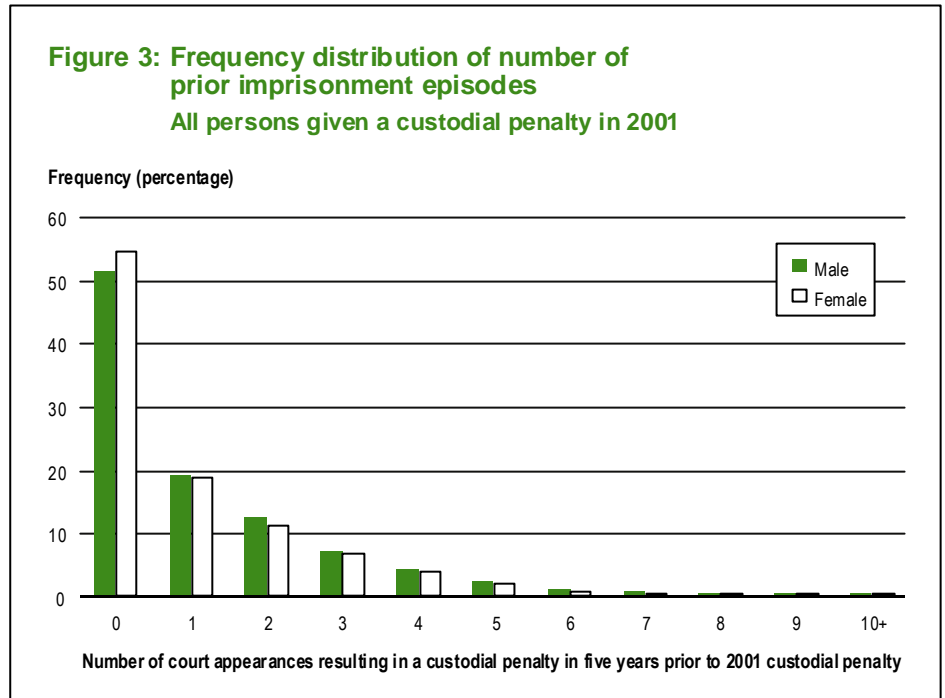
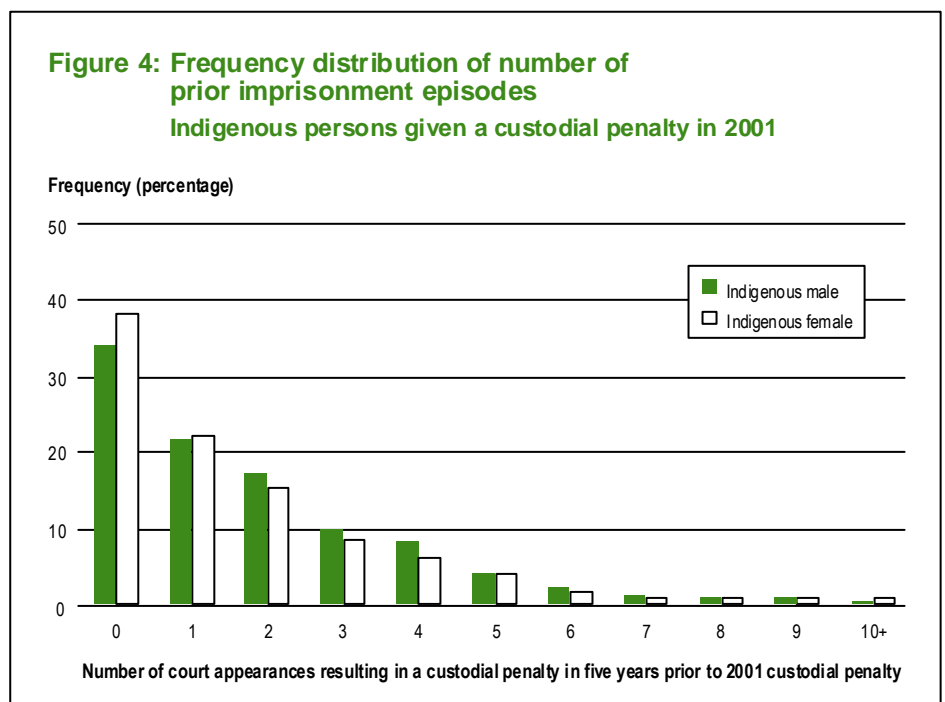


Figure 4: Frequency distribution of number of prior imprisonment episodes
Indigenous persons given a custodial penalty in 2001



Contact with the court system is far more common amongst younger age groups (male or female) than among older age groups. More than 8 per cent of men in NSW aged between 20 and 24 (i.e. about 1 in 12 males in this age group) appeared in court charged with a criminal offence in 2001, compared with 0.8 per cent of males aged 50 years and over. Similarly, whereas 1.7 per cent of NSW females aged 20-24 appeared as a defendant in NSW court proceedings in 2001, the corresponding percentage for females aged more 50 years and over was only 0.1 per cent.

The level of Indigenous contact with the court system is 4.4 times higher than for the population as a whole – with more than a quarter of the NSW Indigenous population appearing in court between 1997 and 2001. The figures are even more disturbing among young Indigenous people. More than 40 per cent of Indigenous males and about 14 per cent of Indigenous women aged 20-24 appeared in a NSW court in 2001 charged with a criminal offence.

Most people appearing in court charged with a criminal offence have not appeared in court in the preceding five years. The pattern of court appearance for Indigenous defendants in NSW, however, is very different. Only a minority (17 per cent of Indigenous males, 27 per cent of females) of the Indigenous people appearing in court in 2001 had no previous court appearance in the preceding five years. More than 25 per cent of Indigenous males and more than 15 per cent of Indigenous females had appeared in court more than five times in the preceding five years.

Contact with the NSW prison system is, not surprisingly, far less prevalent than contact with the NSW court system. Less than half of one per cent of the NSW population (0.46 per cent, or about 1 in 215 NSW residents) received a custodial sentence between 1997 and 2001. The most common offences for

which people are given sentences of imprisonment involve violence, theft or serious road traffic or motor vehicle offences.

The rate of contact with the prison system is significantly higher for young males and Indigenous people. In 2001, males in NSW received sentences of imprisonment at about 10 times the rate of females. Age also makes a big difference to the rate of contact with the prison system. The percentage of young males aged 20-24 given a custodial sentence in 2001 was about 25 times higher than that for males aged fifty years and over.

In the five years between 1997 and 2001, nearly 7 per cent of the Indigenous population in NSW received a prison sentence. Their rate of imprisonment in 2001 was 16 times higher than that for the population as a whole. The rate of imprisonment was even higher than this for young Indigenous males. In 2001 more than 1 in 10 Indigenous males received a prison sentence. The figures for Indigenous women were lower but still very high – about 1 in 62 Indigenous females in the age group 20 to 24 were imprisoned in 2001.

Nearly half of all offenders given a prison sentence in 2001 had received an earlier prison sentence in the preceding five years. Few had received more than three such sentences. By contrast, only a minority of Indigenous offenders sentenced to prison in 2001 had not previously been imprisoned in the preceding five years. Seventeen per cent of Indigenous males and 15 per cent of Indigenous females imprisoned in 2001 had been given a custodial sentence more than three times in the five years prior to their first custodial penalty in 2001.

Taken as a whole these data show that contact with the NSW court system as a defendant in criminal proceedings is not by any means a rare event in NSW. Indeed, in the case of Indigenous people in NSW, it is an all too common event.

The fact that Indigenous people are over-represented in the criminal justice system has, of course, been known for some time. Past studies, however, made no distinction between individuals turning up in court or prison just once in a reference period, and individuals turning up several times. This made it impossible to estimate the fraction of the population that has had contact with the court or prison system. This is the first time outside Western Australia such estimates have been available.

This is not the place for a detailed discussion of measures that might be taken to reduce this over-representation. It is clear from Tables 1 and 4, however, that efforts to reduce the rate of Indigenous court appearance and imprisonment need to focus on the high levels of Indigenous involvement in property and violent crime and serious road and traffic offending. Given the extraordinary level of contact between Aboriginal people and the criminal justice system it is to be doubted that further contact with that system is the best means of bringing down rates of Aboriginal offending. This is not to say that offenders (whatever their race) should not be arrested and imprisoned for serious or persistent offending. The point is, rather, that focusing on the factors that lie behind Indigenous offending, such as alcohol abuse, poor school performance and unemployment,³ is likely to do more to reduce crime in Indigenous communities than policies designed to apprehend and imprison an even higher proportion of Indigenous offenders.

APPENDIX

CLEANING THE DATA

Before the matching process begins it is necessary to do so some 'cleaning' of the data. This process involves separating aliases embedded within name fields and separating first name from surname within the single name field for Higher Courts records.

Separating aliases

Two names are considered to be aliases if they are separated by any of the following:

@	aka
a.k.a.	a k a
alias	or
k/a	known as

or if the alternative name is in brackets and is not one of the following:

(twin)	(triplet)
(senior)	(junior)
(snr)	(jnr)
(deceased).	

Matches are attempted with all aliases so identified.

Separating first names from surnames in Higher Court records

The Higher Courts data source has only one field for name. In the first instance it is assumed that the first word in the field is the surname and that remaining words are first and middle names. The matching criteria (see below) allow for matches with first name and surname swapped so if names are not in this order matching is not affected. However there are problems when the surname is a two-word name, for example De Jong, De Lacroix, Van Dyk, Van Leinen, El Ahmed, El Ali.

By sorting names with more than three words we established a list of common prefixes (such as De, Van and El in the examples already given). Whenever any of these prefixes is used as a separate word in the name field it is linked with the following word as a two-word name and the two-word name is used in the matching process.

MATCHING PROCEDURES

To link court appearance records for the same person it is necessary to match records using the personal identifying information. This information consists of CNI, surname, first name and date of birth.

We developed matching criteria using a 'trial and error' process. Each matching criterion was assessed by looking at a

sample of person records matched by the criterion and making a subjective judgment as to whether the matches seemed to be reasonable. This process was useful in informing how matching criteria should be refined.

The matching criteria we have developed generally fall into one of three categories:

- 1) all identifiers have identical values
- 2) a specified subset of identifiers have identical values
- 3) either (1) or (2) occurs with specified modifications to one or more identifiers.

It was necessary to develop criteria in the third category, that is with modifications made to identifiers, because of the variations which can occur in identifiers. The types of common variations found are described below.

Variations in names include:

- typing errors, for example, dropping a letter, adding a letter, swapping two adjacent letters
- misinterpretation of handwritten letters, for example, 'e' can look like 'c'
- names with a similar sound but different spelling, for example, 'Stephen' and 'Steven'
- nicknames or shortened versions of names, for example, 'Ben' and 'Benjamin'.

Variations in date of birth include:

- swapping day and month, for example, 9.2.1976 and 2.9.1976
- swapping the last digits of the day and month, for example, 19.2.1976 and 12.9.1976
- swapping the first digits of the day and month, for example, 9.12.1976 and 19.2.1976
- swapping the two digits in the day, for example, 12.3.1976 and 21.3.1976
- swapping the two digits in the month, for example, 9.10.1976 and 9.1.1976

- swapping the last two digits in year, for example, 9.3.1976 and 9.3.1967.

Variations in CNI include:

- swapping two adjacent digits, for example, 1433062 and 1433602
- omitting a digit, for example, 1433062 and 143362
- adding an extra digit, for example, 1433062 and 14333062
- replacing one digit by another digit, for example, 1433062 and 1433052.

To take account of these variations various modifications are made to identifiers. Examples of these modifications are listed below.

Modifications to names include:

- five types of user-defined soundex coding (soundex codes convert words to codes – they give the same value to letters in specified groups, for example, the letters C and K could be placed in the same group and therefore be regarded as identical)
- dropping one letter at a time (for example, dropping the letter P allows Thomson to match with Thompson)
- swapping surname and first name
- substituting shortened forms of names with the longer forms (e.g. Benjamin for Ben) using a look-up table.

Modifications to dates of birth include:

- swapping day and month of birth
- swapping last digits of the day and month.

Modifications to the CNI include:

- dropping one digit at a time (for example, dropping the digit 6 from both 1433062 and 1433602 allows them to match because both become 143302).

Examples of matching criteria

The list below includes a few examples of our matching criteria. Two persons are deemed to be the same person if:

- the CNI and date of birth are both identical
- the CNI, the soundex code of the surname, and at least two of the day, month and year of birth match identically
- the soundex code of the surname, the soundex code of the first name and the date of birth are all identical
- the date of birth and 'name' are both identical, where 'name' is a string of first name and surname combined but in alphabetical order, (for example, the 'name' for a person with first name Peter and surname Jones is *jonespeter*) – a similar criterion exists for persons with a middle name as well
- for persons with a middle name, the soundex codes of all three names, first, middle and surname, are identical and at least two of the day, month and year of birth match identically
- surname, first name and at least two of the day, month and year of birth all match identically, and in addition the CNIs are identical when one digit is dropped.

One further refinement recently introduced is to restrict use of some of the name-based matching criteria depending on the 'popularity' of the name. Obviously some names are much more common than others. Mismatches are more likely to occur if there is a name match and the name is a common one such as 'Smith'. The database now holds records for about half a million distinct persons. Hence for a common first name and surname combination there may be many, say 100 or more, distinct persons in the database with the same name. The chances of at least two of them having the same date of birth are therefore quite high. For some criteria we therefore impose a check on how frequently the name occurs before we accept matches using the criteria.

NOTES

- 1 Note that the population base is as at the 2001 census. Note also that it excludes children under the age of 10 because this is the age of criminal responsibility in NSW.
- 2 Note that the true rate of contact with the prison system would be higher than this if allowance were made for people imprisoned on remand but who do not subsequently receive a sentence of imprisonment.
- 3 Hunter, B.H. 2001, 'Factors underlying Indigenous arrest rates', NSW Bureau of Crime Statistics and Research, Sydney.

OTHER TITLES IN THIS SERIES

- No.40 Are the Courts becoming more lenient? Recent trends in convictions & penalties in NSW Higher and Local Courts
- No.41 Cannabis and Crime: Treatment Programs for Adolescent Cannabis Use
- No.42 Predicting Violence Against Women: The 1996 Women's Safety Survey
- No.43 Crime Against International Tourists
- No.44 Public Perception of Neighbourhood Crime in New South Wales
- No.45 The Effect of Arrest on Indigenous Employment Prospects
- No.46 Heroin harm minimisation: Do we really have to choose between law enforcement and treatment
- No.47 Predicting Women's Responses to Violence: The 1996 Women's Safety Survey
- No.48 Performance Indicators for Drug Law Enforcement
- No.49 Drug Use Among Police Detainees
- No.50 New South Wales Drug Court Evaluation: Program and Participant Profiles
- No.51 Community Survey of Willingness to Receive Stolen Goods
- No.52 New South Wales Drug Court: Monitoring Report
- No.53 New South Wales Drug Court Evaluation: Interim Report on Health and Well-Being of Participants
- No.54 What Causes Crime?
- No.55 The Scope for Reducing Indigenous Imprisonment Rates
- No.56 The Problem of Mobile Phone Theft
- No.57 Firearms and Violent Crime in New South Wales
- No.58 Does Prohibition Deter Cannabis Use?
- No.59 The Australian Heroin Drought and its Implications for Drug Policy
- No.60 Reducing Cannabis Consumption
- No.61 Preventing Corruption in Drug Law Enforcement
- No.62 Trends in Sentencing in the New South Wales Criminal Courts: 1999-2000
- No.63 Do targeted arrests reduce crime?
- No.64 Law enforcement's Role in a Harm Reduction Regime
- No.65 Multiple drug use among police detainees
- No.66 Hung juries and aborted trials: An analysis of their prevalence, predictors and effects
- No.67 Crime increases in perspective: The regional dispersion of crime in NSW, 2001
- No.68 Absconding on bail
- No.69 Reducing Juvenile Crime: Conferencing versus Court
- No.70 Recent trends in recorded crime and police activity in Cabramatta
- No.71 What lies behind the growth in fraud?
- No.72 Drug use monitoring of police detainees in New South Wales: The first two years
- No.73 The impact of abolishing short prison sentences
- No.74 Unemployment duration, schooling and property crime
- No.75 Driving under the influence of cannabis in a New South Wales rural area