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Australian Institute of Criminology

Recidivism in Australia: findings and future research

Jason Payne

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Director's introduction

In 2005 the Australian Bureau of Statistics (ABS) identified 12 national priority areas underpinning the *National information development plan for crime and criminal justice* (ABS 2005b). One was a commitment to develop 'an agreed measure or measures of recidivism and an evidence base that will inform policy research in the development of effective strategies' (2005b: 36). The plan outlines a shared responsibility between key research and government agencies to achieve these priorities.

In June 2005 the Australian Institute of Criminology (AIC) convened a roundtable of national research and policy delegates to explore the value and limitations of defining recidivism and its analysis. The delegates confirmed that there is an inherent difficulty in developing a single definition of recidivism in the research and policy environments. They recommended that further work be undertaken to consolidate what was then known about recidivism in Australia. The delegates agreed that AIC would develop a report on recidivism as a first step towards building a systematic evidence base in this national priority area.

This report summarises studies published in the Australian literature that have focused on recidivism over the past 10 years. Despite recidivism being a key aspect in understanding offenders and their offending behaviour, there have been relatively few studies. This is partly because of legislated privacy and ethics constraints in working with human subjects and their criminal histories. Two other factors that can impede access to data are the problem of data linkage across the justice sector and a risk averse approach by public officials to data and the publication of those data. There is a strong policy focus on recidivism in European countries because they know that strategies that target recidivist offenders, based on a solid understanding of the existing data, will be effective in driving down crime and reducing the number of victims. However, Australia is well behind in developing national recidivism datasets that are widely accessible for research purposes.

This report brings together, for the first time, the different methods used by Australian researchers to measure recidivism, and highlights their strengths and weaknesses. All methods and data have limitations. Quality research is not just about the best methodologies and data, however. It is also the art of interpreting the findings in the context of a thorough knowledge of criminological theory as it applies to the question being asked and the context in which the estimates have been generated. As the methodology and data will vary according to the question, there will be different measures and different numbers, making a single definition of recidivism unrealistic. This means that it is important that researchers locate their results within the broader theoretical and empirical work on recidivism so that policy makers are not left with a confusing array of findings. Understanding the context and detail of the specific research is sometimes just as important as the ultimate findings from the work.

This report identifies three priority areas for future investment – the development of a national research agenda and national indicators of recidivism; improving capacity through improving the quality of administrative databases (including linkage) and positively enabling access to the data by researchers; and improving the value of recidivism for policy development by improving methodological clarity and rigour.

Investments in some key areas of research are likely to generate important findings for public policy and crime prevention including:

- developing recidivism prediction models for specific offender populations
- focusing recidivism research on emerging areas of crime such as white collar crime, transnational crime and cybercrime
- greater investment in evaluating the number and variety of crime prevention and reduction programs operating across Australia with a commitment to publish evaluation results, both positive and negative.

Toni Makkai
Director
Australian Institute of Criminology

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Executive summary

At a time when evidence based policy development has become increasingly important in the criminal justice policy arena, recidivism research provides promise for crime control strategies targeted at reducing reoffending. Identifying recidivists, understanding the correlates of high volume offending, and evaluating programs designed to reduce offending remain three key research and policy priorities in Australia.

Despite the importance of recidivism, there is a large divide between research and policy. What policy makers would like to measure often bears little resemblance to what researchers are able to measure, given the limitations on appropriate data and available information. As a result, research findings are often used out of context and with little regard for limitations imposed on them by the methodological constraints they face. This is driven primarily by a lack of clarity surrounding an appropriate definition of recidivism and clear articulation of research methodologies.

This report deals with important questions relating to recidivism research. It provides a conceptual framework through which recidivism can be defined and interpreted and arms both researchers and policy makers with a battery of tools useful in critical assessment of the research literature. It begins by looking at the general definition of recidivism and the problems inherent in its measurement and identification.

Defining and measuring recidivism

Defining recidivism seems reasonably straightforward. It is a term frequently used in the criminal justice literature to refer to repetitious criminal activity and is synonymous with terms such as repeat offending and reoffending. A recidivist offender is generally seen as one who engages in repeated criminal activity.

Underlying this seemingly simple and generic term is a complex web of research studies whose definition of recidivism varies with each different methodological approach. Like most criminological concepts, recidivism is constantly being redefined, as new and innovative attempts are undertaken to understand why offenders reoffend.

In essence, this report highlights that the research context, described here as the where, when and why the research is being undertaken, is a key driving force in the methodological development of recidivism. It is the research questions, developed to fill gaps in the knowledge base or to provide answers to specific policy goals, which drive much of the research in this field. Context plays a critical role in the specification of the three key elements of recidivism. It determines the selection of:

- the sample – the target group of offenders whose recidivism is being measured
- the indicator events – the events used to indicate the occurrence of recidivism: specifications are determined by the data sources and counting rules used when identifying and quantifying them
- the observation period – the time period over which the indicator events are observed and counted.

Having an appreciation of the research context and the specification of the three key elements of recidivism is the first step in understanding the differences between recidivism studies. The sample chosen for analysis directs the research findings to a specific group of offenders. Between studies, the sample may differ by location and year of selection, or more specifically, it may be tied to a criminal justice event such as participation in a drug court program, community corrections order or an event of imprisonment. As a general rule, research findings that differ in the underlying sample cannot be directly compared, and specific studies of specific samples cannot be generalised to a broader offending population.

Identifying and quantify recidivism occurs after the selection of the sample and is heavily reliant on the source of the data used. Due to the illicit nature of criminal activity, researchers must rely on either self-reported offending data or official administrative records to determine the advent of criminal offending. Neither source provides a precise measure of actual offending and each is limited in the extent to which it may overestimate or underestimate offending or distort the measurement of time. This report highlights some of the key limitations of each data source as follows:

- Self-report data – these data are, by design, retrospective in nature. They typically measure all offences for which an offender is willing to self-report, and their quality and reliability are only as good as the offender's capacity and willingness to recall past events. The offender's understanding of the instruments used (for example, surveys) to obtain information on offending behaviour is a key consideration in the use of the self-report methodology.
- Police data – these data measure apprehensions, charges or arrests and include offences that come to the attention of police. Not all offenders are detected and arrested by the police, but if they are, not all are guilty. Police data underestimate offending to the extent that they include only offences that are reported officially or otherwise come to the attention of the police. They may overestimate offending because not all offenders apprehended by the police are, in fact, guilty of their alleged offences.

- Court data – these measure appearances or convictions and include offences that result in an appearance or conviction in court. Court data represent offences the police sought to prosecute and convictions are those offences for which an offender pleaded or was proven guilty. They do not include other offences such as those that were dropped or dismissed during plea negotiations.
- Corrections data – these data measure recontact with the department of corrective services, such as an offender's return to a community corrections order or imprisonment. Not all offences resulting in a court conviction will result in contact with corrective services, and some offenders may be incarcerated on remand for offences of which they were not guilty.

Aside from these general limitations it is important to recognise a few additional issues regarding the data used in recidivism analysis.

- Jurisdictional variation exists such that different or additional limitations are imposed, depending on when and where the data were obtained.
- As each data source represents a point in the chronology of the criminal justice process, each is generally regarded as a filter through which fewer and fewer offences proceed to each successive stage. This means that a data source not only has its own internal limitations; it is also likely to inherit many of the limitations imposed by earlier systems. For example, court conviction data do not generally include offences that were not detected by the police.

Choosing a data source is but one step in identifying recidivism – deciding what to do with that data, how to construct them, what to count and how to quantify recidivist events are equally important to the specification of recidivism. This report describes two key issues central to the measurement and quantification of recidivism:

- definitional issues – the type of reoffending chosen as an indicator of recidivism
- counting rules – the unit of measurement selected to count the indicator event (for example, will the study aggregate offences occurring at the same time on the same day, or will they be counted separately?)

Not all recidivism research examines recidivism as any and all events of reoffending. Some studies examine recidivism for specific offence types or offence typologies, such as sex offences, or property offences. How the research defines the indictor events, that is, the types of offences used to indicate recidivism will have important implications on how much recidivism is observed.

Moreover, once the event of recidivism is defined by what will or will not be included as a recidivist event, researchers are required to make decisions about the rules applied to counting these events. Some studies utilise aggregation techniques that pool together groups of offences into a single offending episode, while others may measure all events regardless of whether they resulted from a single offending incident. Both measures, even if conducted using the same data source and for the same sample of offenders, are likely to produce significantly different estimates of recidivism.

The final key element of recidivism is the observation period – the length of time over which offending is to be observed. In the research environment, this is termed the follow-up period, and is the number of days, months or years for which recidivism data have been obtained. This report highlights a number of key issues to be considered when interpreting recidivism analysis with varying observation periods:

- longer observation periods offer a greater opportunity to observe criminal events
- short observation periods may be limited in the extent to which offending may be observed, but allow of more timely and perhaps less costly analysis
- there is no gold standard observation period, but decisions about appropriate length should be driven by the research questions and aims, and consider how the data chosen may impact on the timely identification of criminal events. For a single offence, arrest occurs chronologically prior to conviction and conviction prior to imprisonment. To observe that offence at each point may require different observation periods
- not only do observation periods vary between studies, but the length of an observation period may vary between individuals within the chosen sample. Specific longitudinal analyses are needed to account for these variations.

In concluding, this report reiterates the problem of recidivism – that the context of recidivism and the questions the research seeks to identify affect the selection of the sample, the identification and quantification of the indictor events and the specification of the observation period. Each has a unique impact on the definition of recidivism, but combined, they result in very specific definitions. Those undertaking recidivism research or those interpreting it for the purposes of policy and program development would be well served to ask the following questions of the information that is presented:

- When, where and for whom is the research undertaken? Context in this sense shapes the research questions and can assist in the identification of broad level variations in research results.
- What sample was chosen and what specific characteristics of that sample prevent wider application or generalisation?

- What data are used to identify criminal events and how are they defined and counted? Understanding the limitations imposed by the data and counting methods is paramount to understanding when and how much recidivism is measured.
- How long was recidivism observed and to what extent has the observation period limited the identification of recidivism? Are observation periods different within the sample, and if so, what methods have been used to account for these differences?

Australian recidivism research

The second aim of this report was to provide a synopsis of the Australian recidivism literature, highlighting key findings and conclusions. This was undertaken with caution, for much of the previous discussion highlighted just how recidivism research should not be compared, contrasted or generalised without appropriate consideration of the key elements. Nonetheless, this report combines similar Australia research studies into subject areas in an effort to describe what is currently known (and not known) about recidivism.

The first section deals with the recidivism of adult prisoners. This includes their retrospective self-reported and administratively recorded prior offending and imprisonment, as well as their prospectively measured reappearance, reconviction and reimprisonment. Although the studies vary widely in context and across the key methodological elements, they show a number of interesting findings:

- about two in every three prisoners will have been previously imprisoned
- about one in four prisoners will be reconvicted within three months of being released from prison
- between 35 and 41 percent of prisoners will be reimprisoned within two years of being released
- the recidivism rates (regardless of how they were measured) appear reasonably consistent over time.

Second, the report deals with recidivism of adult offenders from studies that have selected convenience samples at different stages of the criminal justice system, but not including prisoners. There are fewer studies of generalised offender samples than there are of prisoners, however similar self-report and administrative methodologies have been used. The studies show that:

- approximately 50 percent of adult police arrestees will have been arrested at least once in the past 12 months, and approximately one in five will have spent time in prison in the past 12 months

- between 50 and 60 percent of adult police arrestees will be rearrested at least once within 10 years, although the probability of arrest is highest within the first two years
- about two-thirds of adult offenders appearing before the lower courts will have been previously convicted, and one in five previously sentenced to prison
- approximately 15 percent of adult offenders released from community corrections will return to community corrections within two years

Third, studies of juvenile detainees were examined, with the findings suggesting that:

- approximately half of all juveniles in detention across Australia have spent time in prison on at least one prior occasion
- more than half of those released from detention will be reconvicted within at least six months
- nearly eight in every 10 juveniles released from detention will be subject to supervision (community or custodial) by a corrective services agency within seven years and almost half will be imprisoned as an adult
- juvenile detainees are likely to be reconvicted of new offences much sooner than adult prisoners.

Finally, juvenile offender studies were examined. Similar to the studies of adult offenders, those for the juvenile offender population used convenience samples of police arrestees, court attendees, court convictees and community corrections participants. These studies suggest that:

- around half of juveniles police arrestees have been arrested at least once in the 12 months prior to their current arrest; three percent of police arrestees had spent some time in detention in the past 12 months
- approximately half of the juveniles appearing before a youth or children's court will have been convicted previously
- approximately one-third of juveniles appearing in the youth or children's court will be reconvicted before the age of 18, increasing to two-thirds when early adulthood convictions are included.

Correlates of recidivism

In addition to an analysis of recidivism rates, this report highlights some key findings about the correlates of recidivism.

- Consistent with the early findings of the age-crime curve, reoffending peaks in the mid to late teenage years. The probability of being a recidivist is greatest between the ages of 17 and 21 years of age, and decreases into adulthood.

- There is conflicting evidence about the probability of reoffending and gender. Some studies suggest that females are less likely to reoffend, while others find no difference by gender. Studies that identified a difference are consistent in their finding that females, particularly juveniles, are less at risk of recidivism, and will commit less serious offence types.
- Criminal history is also important. The younger the age at which an offender commences offending, the more likely they are to be recidivist offenders. Similarly, more frequent and serious prior offending is linked to increased risk of reoffending, as is prior imprisonment.
- The current most serious offence is also a key indicator of recidivist behaviour, but there is little consistency between studies in the types of offences most linked to reoffending. Serious acquisitive offences, such as robbery and property offences, are clear markers of an increased risk of reoffending.
- An offender's lifestyle and drug use are also shown to be linked to recidivism. Unemployment, limited or low level education, poor residential location, a history of mental health problems, family instability and serious, prolonged drug use are the key factors identified.
- Post-release difficulties are particularly important. These difficulties, such as limited access to financial resources, limited contact with family and limited knowledge of social support and health services are all key factors identified as barriers to successful reintegration. They are factors that are subsequently linked to a higher probability of reoffending.

Future directions

Three areas were identified as future priorities in recidivism research:

- **Developing a national research agenda and national indicators** of recidivism that are useful and provide information relevant to the aims and information needs of the various criminal justice agencies.
- **Improving capacity** to measure recidivism using administrative databases by improving the comparability of and linkage between criminal justice data collection sources and access by researchers to those data.
- **Increasing the value of recidivism research for policy development** by ensuring that data, methodology and limitations are clearly identified and where possible, standardised. This will facilitate more accurate interpretation and application to program and policy development.

Finally, the report highlights some emerging areas of research that are likely to generate important and interesting findings for public policy and crime prevention including:

- developing recidivism prediction models using exploratory analysis of specific offender populations
- additional exploratory analysis of recidivism in neglected or emerging areas of crime such as white collar crime, transnational crime, cybercrime, family and domestic violence, and recidivism among the mentally ill
- further investment in evaluating the number and variety of crime prevention and reduction programs operating across Australia. This includes investment in other forms of evaluation such as process and cost-benefit analysis. Evaluation results, positive and negative, should be publicised.

Understanding recidivism

Underlying research in the criminal justice sector is the knowledge that crime and victimisation incur significant costs, both financial and social, to the Australian community. In 2002 the AIC estimated the annual financial cost of crime in Australia at $19 billion. An additional $13 billion was spent on criminal justice services such as policing, corrections, court administration and security (Mayhew 2003). At the macro level these figures indicate the economic importance of crime to the Australian community. At the micro level they demonstrate the impact of crime on individuals, families and communities – an impact that is clearly indicated by national victimisation estimates, which suggest that every year almost 10 percent of Australians are victims of personal crime (robbery, assault and personal theft) while one in five households experience a burglary, theft or motor vehicle theft (Johnson 2005). On average, there are two victims of theft every minute of every day in Australia (ABS 2005a).

Growing concern for public safety places government at the forefront of the crime prevention agenda. The criminal justice system is the network of agencies that aim to prevent and investigate crime as well as to ensure that those who break the law are held accountable. The Steering Committee for the Review of Government Services Provision (SCRGS) has summarised the objectives of the criminal justice system as providing protection for the rights and freedoms of all people through the:

- operation of police services that enhance community safety by preventing, detecting and investigating crime
- administration of criminal justice that determines guilt and applies appropriate, consistent and fair sanctions to offenders
- provision of a safe, secure and humane custodial environment and an effective community corrections environment that provide program interventions to reduce the risk of reoffending.

These objectives are to be 'pursued in a manner that is accessible, equitable, timely and efficient' (SCRGS 2006). That is, governments are not only responsible for providing criminal justice services but also for ensuring that these services are delivered equitably, fairly and efficiently to the Australian community.

Of particular interest to this report are the terms 'efficiency' and 'effectiveness'. They are terms that have, in the past 20 years, become ensconced in the political lexicon as indicators of the quality and cost of government service provision. They apply to all facets of the criminal justice system and are of great interest to researchers. In her account of the development of therapeutic jurisprudence in the Australian court system for example, Jefferies noted that courts, Australia wide, have experienced shifts in the intellectual paradigm concerning the roles and responsibilities of the criminal justice system in delivering interventions designed to address the underlying

causes of offending (Jefferies 2003). These shifts have resulted in a greater emphasis being placed on proactive crime prevention strategies than on reactive crime control measures to deliver tangible reductions in crime. Jefferies suggested that growing community expectations of a more responsive and cost effective criminal justice service may be part of the reason for this move towards therapeutic jurisprudence. It is no longer considered sufficient to deal with crime when it occurs, but instead, a concerted effort should be made to prevent it from occurring.

To this end, policy makers and practitioners have turned to the criminological evidence base to assist them in identifying what works and what doesn't (AIC 2005). They are becoming increasingly responsible for ensuring that their policies are effective in terms of what they seek to deliver and the cost of delivering them. It is no surprise that policies and programs must be adequately and appropriately targeted before implementation, and evaluated after some time in operation. They rely increasingly on research findings to help them answer questions about whom to target, how and when.

For every crime there are three basic elements: a motivated offender, a suitable target, and an absence of capable guardians (Graycar and Grabosky 2002). Recidivist offenders present an interesting dimension to this model because they are seemingly motivated to commit more crime, more often and are more resistant to regulatory responses that aim to prevent their criminality. Moreover, recidivist offenders are also likely to account for a significant proportion of reported and unreported crime, and initiatives aimed at reducing their offending have the potential to deliver sustainable reductions in crime rates across Australia.

Recidivism research, therefore, offers a methodology for understanding crime and criminal activity within the context of fluctuating crime rates, growing concern for public safety, and increasing public sector accountability. It has the potential to identify the size and characteristics of the recidivist population, improve understanding of the factors that correlate with high volume offending, and assist in evaluating the effectiveness of programs designed to reduce reoffending. Recidivism research assists in the development of the evidence base necessary for effective and efficient crime prevention strategies, with the potential to reduce the burden and cost of crime to the Australian community.

There are numerous instances in Australia where recidivism research has had a significant impact on both policy and program development. One example is the AIC's work on the Queensland drug court program which analysed reoffending as a measure of program effectiveness (Makkai & Veraar 2003; Payne 2005). The research results were used to justify the implementation of the drug court program as a permanent fixture in the Queensland criminal justice system. Another example is the longitudinal study by the New South Wales Bureau of Crime Statistics and Research (BOCSAR) on juvenile offending trajectories. Until recently the conventional wisdom, as supported by earlier research findings, was that only a small number of juvenile offenders come back into contact with the court system. However, this new research by BOCSAR produced results that challenge this belief. It has the potential to change the landscape of juvenile justice policy in Australia. Finally, the AIC's research on recidivist offenders in the ACT examined the reoffending behaviour of that jurisdiction's most prolific property offenders (Makkai et al. 2004). The results were used to shape local operational policing practices – in particular, targeted strategies for high volume offenders – and the ACT's property crime reduction strategy.

What is recidivism?

The term recidivism originates from the Latin *recidere*, which means to fall back. It is often used interchangeably with others such as repeat offending or reoffending. In the criminological literature it has been variously described as 'the reversion of an individual to criminal behaviour' (Maltz 1984: 1), the 'return of a prisoner to custody' (SCRGS 2006), the 'reappearance of a juvenile in court' (Victoria. Department of Human Services 2001) or the, 'reconviction of a drug court participant' (Payne 2005). Although the technical elements of each definition may vary, there is one common theme that underpins them – recidivism is generally used for describing repetitious criminal activity, and a recidivist offender is an individual who engages in such activity. It is these offenders who are the subject of much debate as they have become variously described throughout the literature as 'chronic', 'multiple', 'frequent', or 'prolific' offenders, among others.

It is not a new concept in criminology although, for the reasons mentioned earlier, it has gained greater prominence in more recent times. One of the earliest and most frequently cited recidivism studies was conducted in Philadelphia in 1972 (Wolfgang, Figlio & Sellin 1972). The authors used a longitudinal cohort methodology with official police arrest data to measure the frequency of offending among nearly 10,000 males born in 1945. The authors found that by the age of 18, only 35 percent (n=3,475) had been arrested by the police at least once, but that these offenders had accounted for more than 10,000 episodes of arrest, giving an average of almost three arrests per offender.

Further analysis revealed that these young male delinquents could be categorised into three sub-groups:

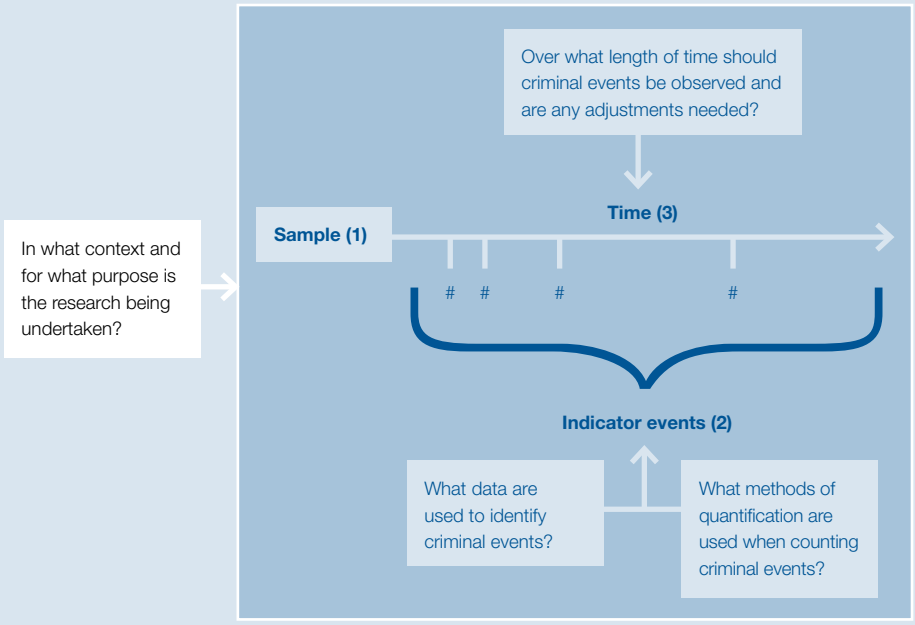
- one-time offenders
- non-chronic recidivist offenders
- chronic recidivist offenders – these represented only six percent of the total cohort but were found to be responsible for more than half of all recorded criminal offences committed by the cohort.

This seminal study demonstrated that recidivism was an important consideration in understanding population level crime rates, and drew attention to the fact that a small number of young offenders accounted for a large proportion of crime. It also indicated that 'recidivism' as a generic term to refer to any secondary offending, could be disaggregated depending on the level of subsequent offending. Terms such as chronic and non-chronic recidivism, or persistent and non-persistent offending, have now become an integral part of criminological parlance and have in some ways added to the confusion about what recidivism actually means.

The underlying model of recidivism

Underlying the use of recidivism as a concept of 'generalised reoffending' is a plethora of discrete research studies that have attempted to quantify and measure it. It is these research studies, and the various methods by which they are undertaken, that have led to much of the existing confusion surrounding recidivism. For this reason, it is important now to move away from a generic and conceptual understanding of recidivism to a more structured view of the underlying research, where recidivism is seen to be composed of two main components: first, the broad purpose of the research and the context within which it sits; and second, the key methodological elements that need to be identified and analysed to derive a useful and meaningful quantitative measure of recidivism.

Figure 1: Simplified model of recidivism research



Research purpose and context

Fundamental to this model is the purpose and context within which the research is undertaken. Recidivism research can be grouped into one of three broad categories depending on the aim and objectives. The first category – generally referred to as prevalence studies – attempt to estimate the size of the recidivist population as well as the proportion of all offences attributable to recidivists. There are two types of prevalence studies: those that aim to measure recidivism among a total population (such as a cohort of all persons born in a particular year) and those that take as their starting point a particular group of known offenders and seek to estimate the extent to which this group reoffends. Two studies undertaken in South Australia illustrate the differences in these approaches. One took as its starting point, all young people born in that state in 1984 and found that 83 percent were never apprehended by police during their juvenile years, while 17 percent were apprehended at least once. The second study concentrated on that subset of the same birth cohort who had actually been apprehended on at least one occasion and found that 44 percent had been apprehended multiple times (Skrzypiec 2005). The different results obtained by these two studies are simply due to the different samples used.

The second category studies are exploratory in nature. Rather than simply attempting to estimate the prevalence of reoffending, they are more concerned with identifying those personal, socioeconomic and psychological factors that correlate with, and may therefore help to explain, recidivism.

The third set involves the use of recidivism as an outcome measure in evaluation. Here researchers are asked by policy makers and program operators to measure the extent to which participation in a particular program or intervention reduces the risk of reoffending. Some examples from the Australian literature include:

- evaluations of re-offending among participants in specialist drug, mental health and domestic violence courts (UWA CRC 2003; Lind et al. 2002; Makkai and Veraar 2003; Payne 2005; Skryzpiec, Wundersitz & McRostie 2004)
- evaluations of juvenile justice interventions such as youth conferencing (Hayes & Daly 2004; Luke & Lind 2002)
- evaluations of particular policing operations (for example, Makkai et al. 2004).

The purpose for which the research is undertaken also helps to define its contextual parameters, that is, the broad range of factors that influence the research and the methodological decisions made by the researchers. It provides the backdrop for the analysis, often defining the parameters of both the data collection and the analytic techniques to be used. Having an appreciation of that context provides the necessary platform from which the results are interpreted.

There are a wide variety of contextual issues to be understood. At the very least they include those factors associated with the selection of the target sample, the location of the study and the time period within which it was conducted. Other factors are the data sources used, the counting rules, and the length of the observation period.

Key elements

Once the purpose and context of the research has been determined, it is the researcher's task to develop an appropriate conceptual and methodological approach that will effectively answer the questions posed by policy makers and program operators. For every given question, researchers are responsible for determining and implementing a measurement model that will provide the most accurate answer possible, usually in the most efficient and cost effective manner.

The measurement model outlined in Figure 1 assumes the existence of a sequence of criminal events that can be observed and measured. This sequence involves three distinct elements:

- the sample – the group of individuals/offenders whose recidivism is being measured. Their selection is often tied to what is commonly referred to as an index event
- the indicator events – the number and type of events observed subsequent to the index event which are considered to be indicative of re-offending
- time – the period over which the sequence of indicator events are observed.

In its simplest form, this model views recidivism as any secondary event occurring subsequent to an index event. Time is inherent in the model because the index and indicator events must occur separately – whether separated by minutes, days, weeks or years. The index and indicator events are essentially the same units (of offending), but the index event is the first of the events observed over time.

There is one important alternative to this sequential model worth noting. Although depicted in Figure 1 as a prospective, forward observation of events, it is easy to conceive of the retrospective identification of recidivism – most commonly referred to as criminal history analysis. In this retrospective analysis, the index event is typically the last of all events within the sequence, and the indicator events are those that occurred in the prior time period. In either case, whether the prospective or retrospective identification of events is used, the same three key elements of recidivism can be identified.

Defining recidivism

While the term 'recidivism' is freely used throughout the research and policy environments to describe the general act of reoffending, in reality it evades simple and systematic definition. In his 1984 study of recidivism, Maltz highlighted this issue, noting that:

> For the most part, recidivism has been defined on an ad hoc basis, without consideration of its true meaning; and it has been measured in ways remarkable for their inconsistency. Yet we find 'recidivism rates' – based on different definitions applied in different contexts and measured in different ways – being compared to each other (Maltz 1984).

The inconsistency noted by Maltz is not only inevitable but also legitimate because of the wide variation in the purpose and context which define the research questions and parameters of investigation. Such variation impacts on how each of the three key elements illustrated in Figure 1 are identified. Purpose and context impact on decisions regarding the type of sample selected. Depending on the purpose of the research, this may vary according to the demographic profile of offenders, the type of offence committed, their ethnic, racial or cultural identity, their gender, or whether the individual has been involved in a particular program. Other components inherent in the choice of the sample include geographic location and the year of investigation.

Purpose and context also drive decisions about which data sources will be used to determine the indicator event. Since there is no absolute measure of the total number of offences committed by offenders, researchers must rely on data sources such as self-reported or administrative data to provide proximal measures and estimates. Researchers must also develop definitions and counting rules, where, even if the same indicator events are selected and the same data sources are used, different researchers may apply different definitions and counting rules to quantify those events. The results of the research will inevitably be quite different depending on the data sources used and the counting rules applied to those data.

Finally, the purpose of the research is also likely to play a significant role in determining the length of time over which the indicator events are observed. Some studies, for example, may track offending over a six or 12 month period, while others may opt for a five or ten year observation period. Differences in observation periods result in differences in the thresholds used for determining whether recidivism has occurred, which are ultimately driven by the context and purpose of the research.

For the reasons outlined above, the results from recidivism studies inevitably vary, often quite substantially, which may lead to confusion among non-specialist readers of these studies. The key to using the results wisely is to understand the purpose and context of each piece of research as well as the methodology used by the researchers to determine what and how to measure reoffending. Such understanding is critical to ensuring that the results from a particular study are appropriately interpreted and applied, and for determining the extent to which findings from one study can be legitimately compared with those from another.

Conclusion

Recidivism is an interesting and useful conceptual tool with the capacity to inform debates over effective crime prevention strategies. It is a criminological concept that describes the phenomenon of criminal propensity, where a recidivist offender is generally identified as one who repeatedly engages in criminal activity. Although in this generic sense, recidivism provides a useful point of reference, in reality, it evades systematic and consistent description and identification. This section highlighted some key reasons for this:

- the purpose and context of recidivism research vary significantly between studies and influence both the methodologies used, the meaning of the research findings, and the level of comparability between different studies
- the research varies markedly in the ways by which recidivism is measured – researchers focus on different samples of offenders, use different sources of information and data to identify recidivism, apply various counting and quantification rules and use different observational periods.

The following section examines these key elements of recidivism in more detail, highlighting the conceptual and methodological issues and problems faced by researchers and practitioners in trying to understand and interpret this criminological phenomenon.

Key elements of recidivism

Some thirty years ago, around the time of Wolfgang's cohort study in 1972 (Wolfgang, Figlio & Sellin 1972), recidivism was something that researchers were content to describe in theoretical terms. The growing body of research demonstrating this phenomenon was largely confined to the research world, despite its obvious significance for policy and practice. Academics – those who under took research in this field – were content to specify and re-specify the measurement of recidivism because variation was the cornerstone of knowledge development. Each new research project, heralded for its innovative approach to the question, provided fodder for academic debates over the extent of and factors associated with recidivism. These debates are important, and continue, even today. However, as governments become more focused on efficiency and effectiveness, recidivism research has become more and more relevant in discussions of policy and program development – an environment where methodological and contextual variation is important but has the potential to lead to considerable confusion and misinterpretation.

As identified in the previous section, there are a number of important questions that need to be asked about both the contextual purpose of recidivism research and the way in which the key elements of the recidivism measurement model are defined. In this section, the three key elements examined are:

- What sample of individuals are being examined in the research?
- What indicator events have been selected to identify recidivism, including what data sources are being used, and what counting and definitional methods are applied to those data?
- Over what time period is recidivism being measured?

What is the target population for the study?

Recidivism, in its absolute sense, refers to any and all repeated criminal events over the life course. A study of absolute recidivism would therefore require information about all offences ever committed by all individuals for all the years they were alive and able to offend. However, rarely is the question of recidivism so broad that it requires following all offenders all of the time. Instead, policy makers, practitioners and researchers are usually more interested in assessing recidivism amongst particular population groups or samples.

Take a hypothetical example. Suppose that a policy maker in the New South Wales corrective services sector was interested in the effectiveness of a prison-based sex offender treatment program. Effectiveness in this research was to be defined as the extent to which the treatment program prevented post-release sex offending. The criteria, for selecting the sample would include a range of limiting factors – including the geographical and operational location of the program being evaluated. In undertaking the project, the researcher would have little reason to examine the recidivism of community-based drug treatment participants in Queensland, because firstly, this is not a study of drug treatment participants. Secondly, it is an assessment of prison-based treatment, not community-based treatment, and thirdly, offenders in Queensland are not assumed to be the same as their NSW counterparts. By asking the question specific to a NSW prison-based sex offender treatment program, the researcher must endeavour to select a sample that matches, as closely as possible, the criteria of the program to be evaluated, otherwise the results would provide limited information to answer the question as originally asked by the policy maker.

As noted earlier, the target group may be selected according to a range of criteria, including demographic characteristics, prior offending profiles, prior contact with the criminal justice system, participation in a particular program, geographic location and time period, and rarely are these criteria mutually exclusive. A single recidivism study may specify any number of different combinations of these criteria when selecting the target group, for example, juveniles in Sydney who were involved in a juvenile diversion program in 2004. Moreover, studies using one set of criteria may, in fact, inadvertently invoke other criteria. An example of this is an evaluation of a drug court program where recidivism is used to measure program effectiveness. The sample selection seems relatively straight forward – namely the completion of the drug court program. However, participation in this program is subject to a variety of important eligibility criteria that results in a highly specific index event. In the North Queensland Drug Court, for example, it is a requirement of participation that an offender:

- be assessed as drug dependent and willing to undertake abstinence based drug treatment
- be referred for offences not including a violent offence

- be over 18 years of age
- live within the geographical location of the drug court
- be likely to face a term of imprisonment
- plead guilty to their current charges (Payne 2005).

The specifications by which a sample of offenders is selected and their offending is examined are therefore crucial to understanding the recidivism estimates. They help identify the group of offenders to whom the recidivism results can be generalised, as well as the groups to which they cannot. In the hypothetical example cited above, the recidivism results can be safely said to apply to the participants of the prison-based sex offender treatment program in New South Wales. It cannot, however, be assumed that they can be generalised to other populations of sex offenders, such as those who did not participate in the program, or those who participated in a different sex offender treatment program, or those who were not imprisoned – unless of course samples of these latter groups were included as controls or comparison groups.

Although comparative analysis is possible, generalising the results to similar programs operating in different contexts (such as interstate or at different periods of time), should be undertaken with caution. It is not necessarily the case that research conducted within one jurisdictional or temporal context will be transferable to another. In terms of jurisdictional context, this is because there are different procedures by which policing and criminal justice services are delivered, different laws under which offenders can be charged and prosecuted, and different data systems used to capture the relevant information. In terms of temporal context, this is because the criminal justice system is not static, but is subject to significant and sometimes rapid change. Over time, criminal justice policies, policing practices, laws and data recording methods change, each having the potential to impact the ability to generalise recidivism results across different temporal contexts.

Understanding the context of the research is about understanding the limitations imposed by the parameters of the research in terms of who is observed, when and where. Using this formula, recidivism research can be deconstructed and an appreciation of the extent to which the results may be generalised across different offending populations, jurisdictions and time periods developed. While the earlier example of offenders involved in a sex treatment program is hypothetical, it is not far from the reality of recidivism research. Following are two examples from the Australian research literature, to illustrate how context has significant implications for the interpretation and generalisation of recidivism results.

Examples from the Australian literature

Evaluating a police operation

In 2004, the AIC conducted a recidivism study to examine the effectiveness of an Australian Federal Police operation in the Australian Capital Territory (Makkai et al. 2004). Operation Anchorage used intelligence-led, targeted policing to apprehend known recidivist offenders in an effort to reduce local property crime. The research was commissioned by the ACT Department of Justice and Community Safety to determine the effectiveness of the operation, in conjunction with changes in the ACT *Bail Act 1992,* in prolonging an offender's return to offending.

The results of the study suggested that, by targeting recidivist property offenders, police could have a real impact in reducing property crime rates, primarily through the incapacitation effects of incarceration. The context of the research – the question of who, where and when – provides an interesting dimension to the interpretation of the results. For example, the study focused on a sample of property offenders apprehended during a policing operation in which the police intentionally targeted high volume offenders. Although shown to be successful for these offenders, the same cannot be said of low volume or first time property offenders, or offenders who committed other offences, such as good order or violent offences.

The study was conducted in the ACT, a metropolitan region with particular suburb and population characteristics (see Ratcliffe 2001). There is no reason to expect that the same effect would be achieved had the operation been conducted in the metropolitan regions of Sydney, Melbourne or Brisbane where key suburban characteristics vary.

Finally, the timing of the operation was coordinated with changes to the ACT *Bail Act 1992* that modified the presumption of bail for recidivist offenders. This meant that a recidivist offender apprehended by the police would not be granted bail a second time, but would be remanded. The study clearly showed that a significant contributing factor to the success of the operation was the greater use of incapacitation through incarceration. Given this, it would be difficult to conclude that the same policing operation would have been effective (and the same recidivism rates achieved) if the changes to the Act had not been introduced.

Evaluating a drug court

As of December 2006, there had been more than seven studies across Australia using recidivism to examine the effectiveness of drug courts. Among these were studies in New South Wales (Lind et al. 2002), North and South East Queensland (Payne 2005; Makkai and Veraar 2003) and Western Australia (UWA CRC 2003). Although each study seemingly examined recidivism for a general target sample of drug court clients, there are a few obvious contextual factors impacting on the characteristics of each sample that prevents exact comparisons between the studies. These variations included:

- Physical location of the court program – each program operated in a different geographical location separated by state borders and where different crimes and sentencing provisions apply. Aside from other program differences, local drug markets can vary significantly between states, impacting the type of offenders likely to participate in the respective drug court programs.
- Severity of likely sentence – the Western Australian program excluded participants likely to face mandatory imprisonment. In North Queensland, South East Queensland and New South Wales however, an offender was eligible only if they were likely to face a term of imprisonment. Excluding those likely to be imprisoned may result in the selection of participants with a less serious offending profile, which may affect the probability that a participant will reoffend.
- Offender profile – the West Australian program was available to adult and juvenile offenders, while the programs in the east were available only to offenders aged 18 years or more. Moreover, in North Queensland offenders referred to the program could not have spent more than 12 months in prison before their participation (although recent moves have been made to relax this criterion). There were no such restrictions in New South Wales, South East Queensland or Western Australia.
- Program content – the drug court programs in each location operated in a different manner. In New South Wales for example, methadone maintenance was an acceptable form of accompanying treatment, while the Queensland program preferred abstinence from drug use over maintenance. In Western Australia, the drug court intervention operated for a maximum of six months, while in the other jurisdictions participants could remain on the program for more than 18 months.

Not surprisingly, the results of the studies varied. The initial Western Australian study concluded that the drug court program did not have a significant effect in reducing reoffending (although a more recent study has demonstrated a positive effect), while in New South Wales and North and South East Queensland the results suggested that those who successfully completed the program were less likely to reoffend, and when they did, they took significantly longer to do so. Casting aside the possible methodological differences (data, counting rules and observation period) how might the contextual differences that exist between the programs impact on the results? Is it that the Western Australian project was too short to have any real effect on recidivism rates? Or perhaps the drug treatment options (including more intensive case management and compliance monitoring through urinalysis testing) offered in Queensland or New South Wales are more effective in reducing drug use, and therefore offending? While the answers to these question have yet to be systematically tested, this example demonstrates the importance of context in defining who, where and when recidivism analysis is conducted, and the impact of these contextual differences in understanding and interpreting the results.

What are the indicator events and how are they identified?

The identification of the indicator events is a cornerstone of recidivism research. The methods used to identify the occurrence and frequency of an individual's criminal activity have considerable implications for understanding their patterns of reoffending. But doing so is not easy, because crime is an illegal activity and those who engage in it can go to extreme lengths to evade detection. There is a large body of Australian and international research that demonstrates that many victims do not report crimes committed against them, and even if they do, many remain unsolved (see, for example, Weatherburn 2004). In Australia, the Australian Bureau of Statistics estimated that, in 2005, there were approximately 770,600 victims of assault, of whom only 31 percent reported their most recent experience to the police (ABS 2005a).

For every unreported and unsolved crime, there is an offender or group of offenders whose criminal activity has not been identified by the police and not processed through the criminal justice system. Similarly, for every offence an individual commits that is not detected by the police, there is one that is never formally recorded against their name. It is an offence that occurred, but for which there is no official record. Maltz (1984) refers to this as the criminal justice system's lack of complete information and suggests that the inability to identify every criminal offence ever committed by every offender has serious implications for recidivism analysis. How can policy and program interventions be understood, debated and developed for a concept whose total value cannot be readily identified or estimated?

The answer is that it cannot. Instead, like many other social phenomena whose precise quantities cannot be measured, understanding must develop in response to the information that is available. This raises two fundamental methodological questions which recidivism researchers must address:

- In the absence of accurate and accessible information on the nature and extent of an individual's actual total offending behaviour, what source of information is the most appropriate to obtain the best estimate of their offending?
- Since each source of data is unlikely to be an entirely accurate measure of a person's offending, what definitions and counting rules should be applied to minimise error and ensure consistency?

What data source should be used?

In the context of recidivism research, there are two main sources of data – self-reported and administrative offending data. Self-reported offending data are collected by asking an offender to provide information on all, or a selection of criminal offences they have committed. In some studies offenders are asked to recall historical events over their entire lifetime (see Johnson 2004; Makkai & Payne 2003a; Prichard & Payne 2005), while in others, they are required to report their offending over a shorter period, such as the past six or 12 months (Mouzos, Smith & Hind 2006).

Administrative data are the sources of information compiled by agencies involved in the administration of criminal justice services. These administrative agencies include the police, the courts and the corrective services agencies, but on the periphery are others such as the offices of the directors of public prosecutions, legal aid services, departments of community services and the Australian Taxation Office. Each of these agencies collects information in the course of the administrative role they perform in the criminal justice system. The police for example are involved in the investigation of criminal offences and the apprehension, arrest and charging of offenders. The courts are responsible for processing criminal matters from first appearance to finalisation, while the corrective services agencies are charged with the responsibility of managing the offenders placed by the court in their care, as either remanded or sentenced prisoners in a community corrections or a custodial setting.

Each agency represents part of the chronological criminal justice process and, fundamental to our use of their administrative data sources is an assumption that for every entry recorded, there is an underlying offence or pattern of offending that cannot be directly identified. Moreover, it is assumed that the number and type of charges recorded against individuals is indicative of the underlying frequency, severity or seriousness of their actual offending behaviour. Those individuals with a higher number of recorded entries are assumed to be more frequent offenders, while those with more severe offences (such as violent offences compared with property offences) are assumed to represent a greater level of offending seriousness . While these two assumptions may hold for the majority of cases, there are situations where administrative data (and indeed self-reported data) contravene these assumptions, generating error in the estimates derived. Should an entry or an event be recorded where no actual offence was committed, offending will be overestimated. Alternatively, should an offence be committed, but never detected or recorded, offending will be underestimated. And finally, should an offence be committed, but not recorded until some time after the actual offence was committed, there is a risk of underestimating recidivism and inflating the estimated time it took for recidivism to occur.

Both self-reported and administrative data are therefore proximal measures of offending, used in criminal justice research as an alternative to the complete observation of all criminal offences committed by each offender. In the following discussion, the strengths and weaknesses of each data source are identified by asking the extent to which criminal events are underestimated, overestimated and inaccurately recorded against time.

Self-reported offending data

Self-reported data contain information about actions and activities as reported by the actors themselves. There is a long tradition in criminology that relies on self-reported data as a measure of offending. In Australia, there have been a number of major research studies that have collected and used this type of information to examine important and contentious criminal justice issues. The Drug Use Careers of Offenders (DUCO) study (Makkai and Payne 2003a), conducted in 2001 by the AIC, involved an interviewer-administered survey of incarcerated prisoners, asking questions about lifetime offending and drug use. The purpose was to explore the relationship between drugs and crime from a temporal and developmental perspective. The study showed that the majority of incarcerated offenders had used illicit drugs prior to their incarceration and many were regular illicit drug users. Subsequent self-reported criminal history analysis identified various offender sub-groups, including high volume property and high volume violent offenders.

Another self-reported offending study is the AIC's Drug Use Monitoring in Australia (DUMA) program, established in 1999 and currently operating in nine police stations or watchhouses across six states and territories (see Makkai 1999). The study involves an interviewer-administered survey conducted with police detainees within 48 hours of their arrest. It is administered quarterly and involves the collection of self-reported drug use, prior arrest and prior incarceration data. The self-reported data on recent drug use data are verified by urinalysis. The results from this study show that the majority of police detainees had used drugs and test positive to drugs at the time of their arrest. Around 18 percent of detainees have been imprisoned in the 12 months prior to their current arrest.

Self-reported offending data are often heralded as one of the most reliable and useful sources of information for recidivism research, for the reason that the information is derived direct from the individual. As a result, the self-report methodology has the capacity to identify and measure offending behaviour that has not yet, or may never, come to the attention of the criminal justice system. It therefore aids in bridging the gap between actual offending and administrative criminal justice data. This is crucial when attempting to assess recidivism levels for offenders involved in criminal behaviours that rarely come to police attention, such as sex offending.

However, self-reported data are not without error. Issues of accuracy and reliability must be considered. The key assumption underlying the self-report method is that individuals are willing and able to report their offending reliably, but it is well known that this methodology may over- or underestimate offending because offenders:

- may choose not to divulge information about offences because they have not yet been apprehended for them or for other reasons such as shame and embarrassment
- seek to shock or impress an interviewer by exaggerating their offending behaviour
- cannot recall with accuracy or detail the events that occurred in the past – particularly in the distant past, such as when they were a child. This is especially true in the case of recidivist offenders involved in high frequency offending on a regular basis, or for particular sub-groups such as drug offenders who, because of the effect of long term drug use, may not have the capacity for accurate recall
- do not understand the questions being asked of them and therefore unintentionally omit information or provide incorrect information
- do not share a common understanding of what behaviours are defined in law as criminal. For example, young men who engage in pub brawls may not consider that particular type of behaviour to be illegal, even though, according to legislation, it could result in an assault charge being laid against them. Similarly, in South Australia, where possession of a small amount of marijuana attracts an infringement notice, anecdotal evidence indicates that many people believe that such activity is not illegal.

The impact of these broad methodological issues will vary between studies. The propensity of an individual to under-report their offending may be higher in one study than in another because of the survey setting, the sample of individuals being interviewed or the design of the survey instrument. Research conducted in controlled settings such as prisons or police stations may be prone to under-reporting because of a concern that the information will be relayed back to the authorities and result in fresh charges. Studies conducted in schools may be prone to over-reporting because of a tendency of young people to exaggerate their behaviour to impress their peers. This may occur even though the individuals are assured by the researchers that any information they provide will remain strictly confidential.

Administrative data

A range of agencies involved in the administration of the criminal justice system collect data about their client group and the processing components for which they are responsible.

Police apprehension/arrest data

Police apprehension/arrest data are the first in the chronology of the criminal justice administrative data sources. These data are usually structured according to the sequence of events used by the police in processing a criminal matter. For this reason they have a nested structure, as illustrated in Figure 2. This diagram depicts an offender who, over an unspecified period of time, engaged in three discrete offending episodes. The first was a physical altercation at the local pub, the second was a break and enter offence and the third was a traffic offence (speeding). Both the incident at the local pub and the traffic incident involved just one offence each, defined here as a contravention of the criminal law. The break and enter offence, however, involved more than one offence (as would be the case, for example, if an offender breaks into a house and during the course of that one incident, assaults the home owner, vandalises the property, and steals the owner's car).

Of the six offences committed in each of the three offending episodes, suppose that the offender was apprehended not three times, but twice, with the first and second offending episodes detected by the police at the same time. This situation, where multiple offending episodes are dealt with through single apprehension event is not uncommon. Often offenders may commit many separate episodes of offending over many years before they are detected and apprehended.

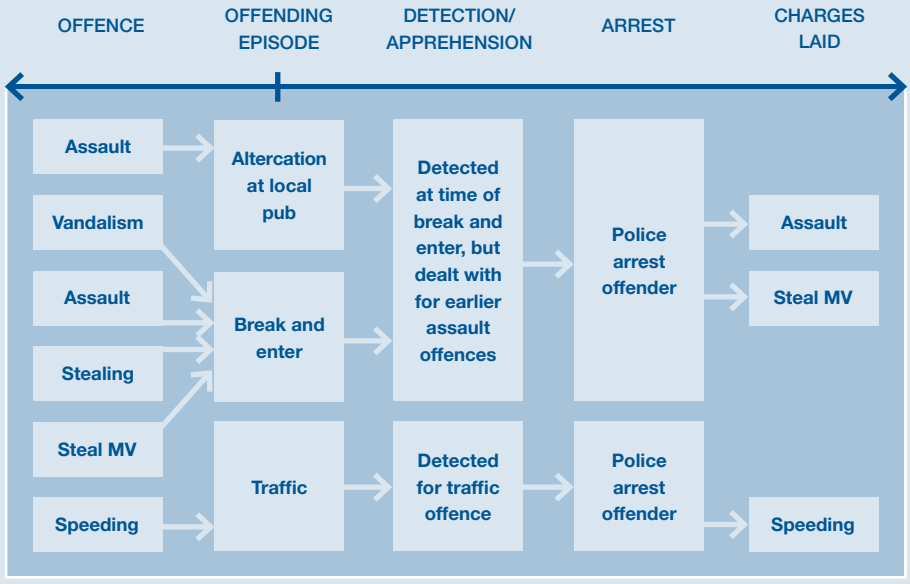
According to Figure 2, each apprehension resulted in an arrest, which is the action taken by the police before formally charging the offender for their crimes. Laying charges and commencing court proceedings is the final step. Not all offences from all offending episodes result in a formal charge, however. In Figure 2, for example, only three of the six original offences resulted in a formal charge.

While the relationship between the five stages outlined in Figure 2 is sometimes difficult to quantify, it is worth noting the following general rules:

- An apprehension may include just one offence from one offending episode or multiple offences resulting from a single or multiple offending episodes.
- When police locate an offender and choose to initiate formal proceedings, they may either arrest the individual or issue a report (summons) or a court attendance notice. An arrest is the more serious of these responses, because the individual is detained and taken back to the police station for formal questioning and charging. An arrest record normally contains information about one apprehension event but not all apprehensions result in a formal arrest.
- Not all offences involved in the original offending episode result in a formal police charge. For example, if an offending episode involves a serious criminal act accompanied by relatively minor offending behaviour, police may decide to charge the individual with only the most serious act. Alternatively, police may feel they have insufficient evidence to charge them with all of the offences. (However, although not depicted in Figure 2, the opposite may also apply – police may opt to lay duplicate charges for the same offence to increase the likelihood of securing a conviction for at least one charge).

Of the five stages depicted in Figure 2, a unique event identification and person identification number is often recorded in police databases to serve two purposes. First, it may allow three of the five stages - an apprehension, an arrest and a charge to be linked. Second, it ensures that, where an offender is identified as having an existing criminal record, any new event recorded against that unique person identification number will be identifiable. In the absence of a unique identification number, the offender's name and date of birth can also be used to link a fresh apprehension with previous apprehension records. The consolidated list of apprehensions and criminal events recorded for each individual provides the basis for identifying recidivism levels for a group of individuals.

Figure 2: Nested police data



Underestimating offending

The one obvious reason that police data may underestimate actual offending is that an offence is only recorded by the police if it comes to their attention and results in an apprehension (either as a result of a victim report or where the police are witnesses to the offence themselves). Therefore, police data generally underestimate an offender's criminal behaviour because undetected offences committed by that offender will never be identified. In addition, there are a variety of offences and situations in which the police do not formally record an event, even if an offence is identified by them. In the case of trivial offending, for example, they may choose to ignore the behaviour. Or, if they do choose to proceed, there may be other options available which do not involve a formal apprehension. These may include:

- offences that result in official diversion away from the criminal justice system – such as through police drug diversion
- offences that result in the imposition of an infringement notice – such as traffic offences and some drug offences
- offences that result in other forms of processing by police such as an informal caution or warning.

There are also some offences such as tax-related or social security offences which, because they are detected and prosecuted by agencies other than the police, (notably the Australian Taxation Office or Centrelink) are not recorded in police databases.

Overestimating offending

Police data may also overestimate offending. Perhaps the most obvious situation is where an alleged offender is apprehended and charged by the police for an offence they did not commit. This might be for two main reasons. First, at the time of apprehension a police officer must have reasonable grounds for suspecting that the offender is guilty, whereas in court, the prosecution must prove the case beyond reasonable doubt. The primary responsibility of the police is to prevent crime by apprehending suspected offenders, some of whom may be released without arrest or charge. Second, there are indications from the literature that police may inflate the number of offences and charges applied to an offender in some cases, in the hope of securing a conviction on at least one of those charges (Payne 2006).

Misrepresenting time

It is standard practice to record the apprehension date and/or arrest/charge date. In some states, police may also record the date of the actual offending episode that gave rise to the apprehension. However, where such a date is not recorded or, if recorded, is not available to the researcher, then the only alternative is to use the date of the apprehension and charge as a proxy date for the offending event itself. In those situations where the date of apprehension is far removed from the date at which the offence was actually committed, police apprehension data will provide an inaccurate 'proxy' record for the timing of the criminal event itself.

The disparity between apprehension and event dates at the police level may result from any number of factors, not the least of which is the time taken for the victim to report the offences and for the police to investigate the crime and to identify, locate and apprehend the offender. All of this may take days, weeks or even years, and is likely to vary considerably depending on the type of offence involved. It is well documented, for example, that many child sex offences are not reported until the victim becomes an adult. In such cases, decades may elapse between the commission of the offence and the subsequent apprehension of the offender. Homicides are another example of where the apprehension date may be far removed from the date of offence – with delays primarily attributable to the lengthy periods of investigation required in these cases.

The implications for recidivism studies are twofold. First, given that most such studies track reoffending for relatively limited periods such as two years, any offending during this period which results in a delayed apprehension will not be counted in the study. Second, it may also affect any estimate of the time taken by an individual to reoffend. For example, if an individual commits two separate criminal events on consecutive days, but is not apprehended for the second event until some months later, it will appear as if they 'survived' for several months before reoffending when in fact, there was only one day separating the actual events. The reverse may also apply. An offender may commit two events several months apart, but their apprehension for the first event may result in the police becoming aware of, and quickly laying a fresh apprehension report for the second event. In this situation, the time between offending will appear to be relatively short – possibly a matter of days when in fact there were months separating the two events.

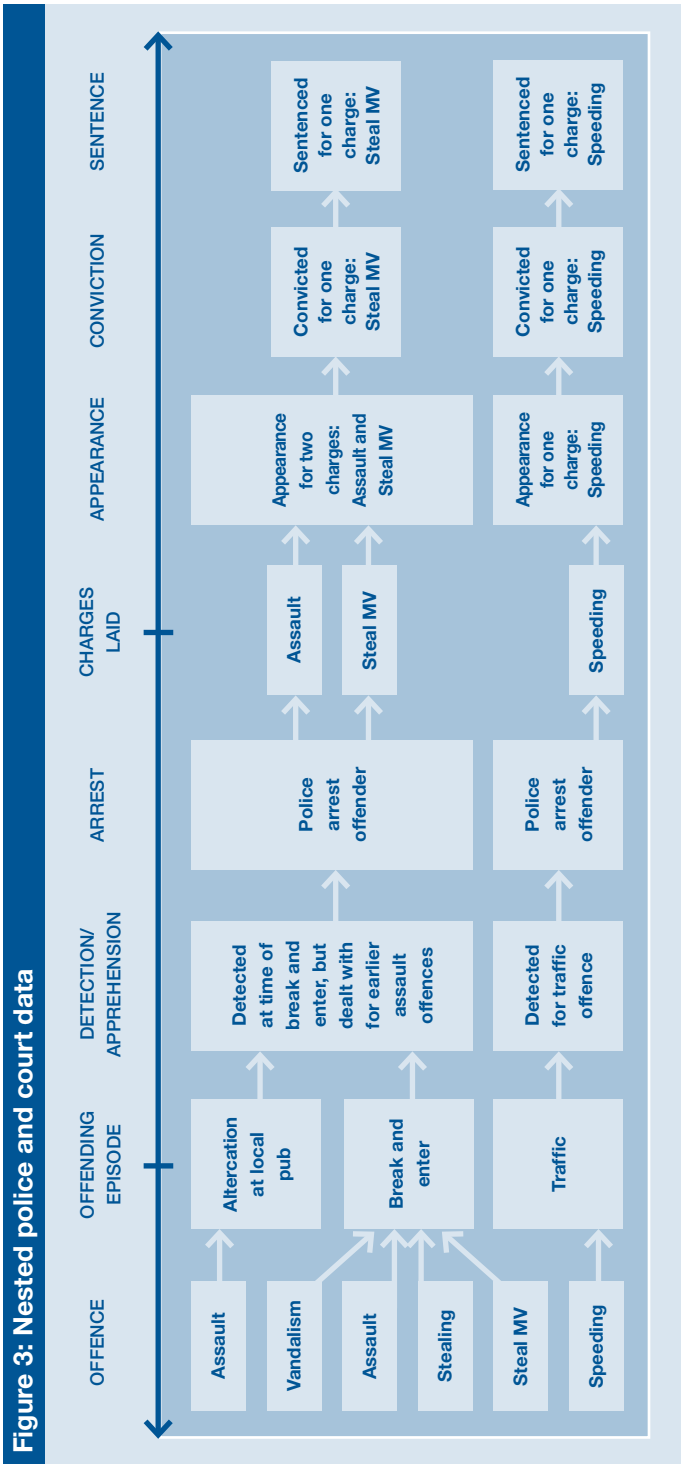
Court appearance/conviction data

Once an offender has been apprehended and charged with a criminal offence the matters usually result in an appearance at court. These appearances are the result of an investigation and subsequent decision by the prosecuting agency to proceed with prosecution. In the majority of cases, the offender pleads guilty to the offence and the court's role is then to decide whether to record a conviction and what, if any, penalty should be imposed. In other cases, the charges may be withdrawn or dismissed, or the defendant may choose to plead not guilty and go to trial where a verdict of guilty or not guilty will be handed down.

As was the case with police data, court databases are structured according to a sequence of events, as illustrated in Figure 3. They contain chronological information on the progress of the criminal matter as it passes from the police apprehension phase to first court appearance, through to determination of guilt or innocence, and the imposition of a conviction and sentence. This sequence of events provides two proxy recidivism measures that are assumed to represent an underlying pattern of offending.

- an individual appears in court, irrespective of the outcome of that appearance
- an individual has been found guilty by the court or has pleaded guilty. This second option excludes all cases where the defendant was found not guilty, or where all charges were dismissed or dropped by prosecution.

Figure 3: Nested police and court data



Underestimating offending

To appear in court, an offender needs to have been apprehended and charged by the police, so court appearance data inherit all the limitations previously noted for police apprehension and arrest data. It is only in a small number of cases, such as matter prosecuted by agencies other than the police, that an offence may appear in the court records without having first appeared in police databases. However, in the majority of cases, offences not detected by police for the range of reasons previously mentioned will not be identifiable in court records. Moreover, court appearance data have the potential to further underestimate offending because not all police apprehensions proceed to court. For example:

- not all criminal apprehensions have sufficient evidence to be proven beyond reasonable doubt in court and so the matter is dropped at the prosecutorial stage
- some criminal apprehensions may be diverted to processing options other than court. This is particularly true in the case of juveniles, who, in most jurisdictions, can be dealt with either by way of a formal police caution or a family conference, without the need to bring the matter to court. In South Australia for example approximately 60 percent of apprehensions per year are dealt with either through a formal police caution or family conference, without the matter ever coming before the Youth Court.

Conviction data, measured at the end point of the court process, provide an even smaller pool of cases because:

- some charges may be dropped or negotiated away as a result of a plea negotiation
- some cases may not result in a finding of guilt.

There is one added complexity inherent in the way the court organises its work that may result in underestimation of both appearances and convictions. This occurs when the same defendant is facing charges arising from more than one apprehension event that all are being processed through the court at roughly the same time. It is not uncommon, particularly in the case of recidivist offenders, for an individual to have several court cases being processed at the same time, but in different courts on different days and before different judicial officers. At some point, the decision may be made to consolidate all current files and charges into a single case. Hence, what may have started off as three distinct matters will, at the point of disposition and sentence, be combined into one single case.

Overestimating offending

While the potential for court based data to overestimate offending is lower than it is with police apprehension data, it still requires consideration. Overestimation of court appearances may occur when a person is prosecuted for an offence that was never committed, or for an offender who was never involved in the incident. This often results in the prosecution withdrawing the charges either on or just before the day of trial or, if the matter does proceed to trial, results in a not guilty finding.

This is not an issue if court conviction data are used as the measure of reoffending. In relation to court convictions, overestimation occurs in rare situations when an offender is convicted of an offence for which they were wrongly accused. A more likely contributor to overestimation of conviction data occurs where charges from the one criminal incident are split into different cases during the court process. For example, if the defendant decides to plead guilty to some charges in the case but not guilty to others, the court may decide to finalise the guilty charges as part of the original case but open a fresh file for the unfinalised charges. This means that what started as one case may end up being recorded in court data as two distinct cases.

Misrepresenting time

Over and above the problems inherited from police apprehension data, court appearance and conviction data have the potential to further distort the estimated time taken for a recidivist to reoffend in situations where the actual date of the criminal event itself is not recorded in the court file. In such situations, the researcher's only indication of the timing of the offence is the court appearance date which invariably occurs some time after the apprehension. In turn, the conviction date occurs even later. The time between when an offence actually occurs and when it is heard in court includes not only the time taken by police to investigate the matter, apprehend the offender and lay charges, but also the time taken by:

- the prosecuting agencies to prepare the documentation for court
- court to list the matter for hearing
- the time taken for the matter to progress through the higher courts in the case of indictable offences.

In many cases, the date the matter is finally disposed of in court may be far removed (often by years) from the date at which the offence was actually committed, court data will provide an inaccurate proxy for the timing of the criminal event itself.

Corrective services data

Corrective services data are collected and maintained by the agencies with responsibility for supervising offenders. This supervision can occur in the community – such as supervised bail, community service orders, home detention, or intensive corrections orders – or it can take place in a custodial environment. The information contained in the corrective services data relates primarily to an episode of contact, either as part of a court sentence or as a result of remand.

Underestimating offending

Not all court convictions result in contact with the corrective services agency. In fact, in 2005 less than one in ten criminal matters resulting in a finding of guilt in the magistrates courts across Australia resulted in a custodial order, while the remaining 91 percent resulted in non-custodial orders such as fines and good behaviour bonds (ABS 2006a). For this reason, corrective services data underestimate recidivism because only a small number of convictions result in a contact episode that will be recorded in the corrective services databases. Moreover, given the criminal justice system's orientation toward graduated sanctions, the probability of having multiple episodes of contact with a corrective services agency is likely to be biased towards the more serious long term criminal offenders with significant criminal histories.

The other potential source of underestimation stems from the fact that if the offender has multiple cases proceeding through the courts at the same time, and is sentenced to imprisonment for each of those cases, theses sentences may be ordered to run concurrently, resulting in the individual being counted only once in the corrections data.

Overestimating offending

With the strict tests required to prove a criminal matter beyond reasonable doubt, overestimation is not likely to be of major concern in corrective services data if the study focuses only on sentenced offenders. However, there are some situations where this assumption does not hold, with examples of false conviction and imprisonment documented in the literature.

A more significant source of overestimation occurs in those studies which consider any re-entry to prison or community supervision as evidence of fresh offending. An offender need not be convicted of or sentenced for an offence to be incarcerated or placed under supervision. The classic situation is where an offender is remanded into custody or placed on supervised bail either at the time arrest or at some stage during the court case, but is subsequently acquitted and released. There is also the problem that the same individual may be remanded but then released on bail numerous times during the processing of a case. If each remand episode is counted as recidivism, this will significantly overestimate the level of reoffending.

Misrepresenting time

As the final step in the chronology of the criminal justice system, episodes of imprisonment or community based orders, when imposed as part of a sentence, inevitably commence some time after a conviction in court because sentencing is often adjourned by the court to a later date. The date of admission into custody may therefore occur months, or even years after the offence was committed. This is particularly the case if an appeal is lodged. In some situations, where an offender has been sentenced to imprisonment, but appeals that sentence, the court may release them pending the outcome of their appeal.

The obvious exception to this rule is remand, where an offender will be recorded as entering custody or community supervision well before they are convicted. In fact, for defendants who have been arrested and refused both police and court bail, the remand episode will more closely coincide with the date of the first court hearing rather than the last.

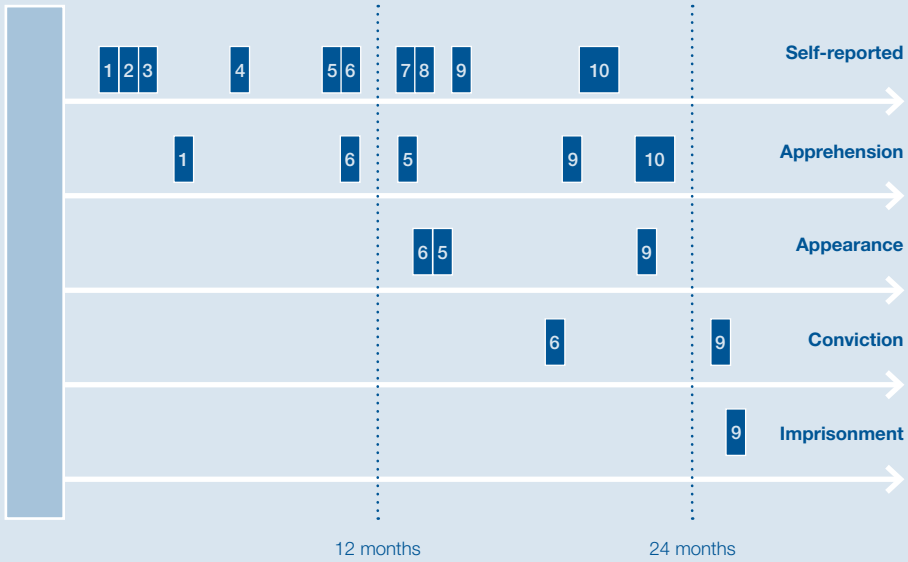
Illustration

Understanding the strengths and weaknesses of each criminal justice data source is important in understanding the criminal justice concept of recidivism. However, with so many complex issues to consider (including others that are not highlighted here) it is sometimes difficult to conceptualise how each data system really affects capacity to identify criminal events. To tie this together, this section describes a hypothetical recidivism study that seeks to examine the extent to which 100 newly released prisoners commit new offences within two years of their release. Figure 4 depicts the post-release offending behaviour of just one of these offenders. The figure includes five arrows travelling from left to right, each indicating the number of offending episodes committed by the offender according to five different data sources. The first is a measure of total actual offending, represented by self-reported data. The second is measured using police apprehension data, followed by court appearance data, court conviction data and finally, sentenced imprisonment data as recorded by the corrective services agency.

According to this hypothetical example, the offender experiences ten new offending episodes in the first two years after release. There may have been offence episodes that were not self-reported, but for the purposes of this illustration it is assumed that the self-reported information is accurate. Of these ten offences episodes, only five result in an apprehension by the police – perhaps the other five were not reported to the police, were investigated but were not solved, or they occurred in another jurisdiction. Note also that the offence episode need not be recorded as an apprehension at the same time it was committed (as indicated by the change in the position of the offences along the time scale), and some offence episodes may be recorded out of the order in which they were actually committed. Of the five offence episodes recorded as an apprehension, only three result in a court appearance. Perhaps the other two matters were dropped at the pre-court stage due to insufficient evidence, or, particularly in the case of juveniles, the matter may have been diverted to a family conference. Finally, only two of the three court appearances result in a conviction and only one of those convictions carries a prison sentence.

This depiction of recidivism using different data sources illustrates the attrition that occurs at consecutive stages of the criminal justice system. It also illustrates how different data sources may affect our understanding of an individual's recidivist behaviour. Consider what might be concluded about the frequency and timing of recidivism using each data source. The self-reported data indicate that the offender returned to offending almost immediately after being released from prison and was most prolific during the first twelve months. The police apprehension data suggest that the individual reoffended after approximately six months, and was most prolific during the second year. The court appearance and conviction data suggest that the offender did not reoffend until some time in the second year and was by no means as prolific as suggested in the self-report. Finally, while the offender was subsequently imprisoned for one of the ten self-reported offence episodes, their reimprisonment did not occur until after the second year, and thus would not be identified as recidivism in this study.

Figure 4: Identifying recidivism events using criminal justice data sources



In terms of the total pool of offence episodes committed by an offender, this hypothetical illustration demonstrates a generally accepted principle in recidivism research (see Guarnieri 1993) – that the further into the criminal justice process recidivism is measured:

- the greater the probability that recidivism will be underestimated and the greater the probability that an offender will be labelled as a non-recidivist when in actual fact, they had reoffended
- the lower the probability that recidivism will be overestimated and the lower the probability that a non-recidivist offender would be incorrectly labelled as a recidivist.

What does it mean to be a non-recidivist?

Much of this report so far has been dedicated to showing how and when an offender may be labelled a recidivist. It has demonstrated how the specification of the key elements can underestimate or overestimate an individual's offending. The discussion has thus far been directed at the identification of recidivism and when it occurs. Before concluding, it is perhaps useful to take a different perspective and ask what it means for an offender to be a non-recidivist? That is, when an offender has no further recorded criminal events, is it that they have been rehabilitated, or is it something else?

This question has been largely answered by looking at the extent to which each of the data sources underestimates offending. In every instance of underestimation is a pool of possible offences that are not being identified throughout the research. However there are a number of other important issues to be considered. First, inter-jurisdictional offending is unlikely to be counted as recidivism because each state and territory operates a separate criminal justice system and therefore the administrative data collected within one jurisdiction will pertain only to offences committed in that jurisdiction. Should an offender have a police apprehension, court appearance or corrective services record in another jurisdiction, results will underestimate recidivism. This includes both retrospective and prospective criminal history analysis.

The inability to measure criminal events across state and territory borders is likely to have its greatest impact in situations where mobility is high. In general, the probability that an offender may have moved interstate or overseas, or committed offences in another jurisdiction is high where the study examines criminal events over a protracted period of time (for example, lifetime criminal history analysis) or where the offender resides in an area close to state borders. Take, for example, the relatively small jurisdiction of the Australian Capital Territory. Although it has an independent policing and criminal justice system, it is completely encircled by New South Wales. Moreover, it is situated less than 300km from the outer suburban boundary of Sydney, Australia's largest city. It is not unreasonable to expect that an offender in the ACT may commit offences across the border, and have a criminal history record in both jurisdictions.

Second is an offender's incapacitation. Being incarcerated is one example, where an offender is unlikely to obtain additional police apprehension records for the period of their imprisonment. Third is an offender's complete removal from opportunity for reoffending – serious chronic illness and hospitalisation, or death will render an offender incapable of having additional contact with the criminal justice system.

Table 1: Data sources for recidivism research

	Common source	Measure	Advantages	Disadvantages
Self-reported offending	Offender surveys	General offending	Likely to include a greater volume of offending than is officially recorded.	Subject to over/ underestimation by the respondent. Subject to the respondent's capacity to recall events. Subject to survey design limitations – offence types, incident descriptions.
Arrest data	State/territory and Federal Police	Offences detected and recorded by the police	As the first point of contact, police records may be closest to actual offending – raw arrest. Provide the most accurate detail of the date/ time of an offence. Allow greater differentiation between offence types and more flexibility in episodic measurement.	Rarely differentiate on the basis of guilt– may include offences that were not proven or that the offender did not commit. Do not include cross-jurisdictional offending. Subject to police bias in charging practices – for instance police may target specific offenders, target offenders with prior criminal histories, over-charge or charge on more serious offences to ensure conviction after plea negotiation. Subject to missing offences, such as summons, notice to appear, diversion, fines or offences identified by other prosecuting agencies such as Centrelink or the Tax Office. Rarely include information on prosecution or court outcome.

Table 1: Data sources for recidivism research (continued)

	Common source	Measure	Advantages	Disadvantages
Court appearance	Court appearance/ listing database	Offences proceeding to court appearance	Include summons, fines and offences identified by alternative prosecuting agencies.	At the point of court appearance, offences rarely differentiate on the basis of guilt – may include offences that were not subsequently proven or that the offender did not commit. Do not include cross-jurisdictional offending – across states/territories or across the lower and higher courts within a jurisdiction, as separate databases are often kept by each court. Subject to bias from early plea negotiation. Information about the date and time of an offence may become less reliable. May aggregate offence details into single appearance records – information is lost about individual offences. Inflate the time to event data – data include criminal justice processing.

Table 1: Data sources for recidivism research (continued)

	Common source	Measure	Advantages	Disadvantages
Affirmative prosecution	Prosecuting agency files	Offences resulting in affirmative prosecution.	Allow differentiation between charges where some evidence existed for affirmative prosecution. Reduces the number of offences counted where the offender was not guilty or where there was insufficient evidence to prosecute – greater alignment with the burden of proof required for conviction. Reduces the impact of bias in police charging practices – only those offences that can be proved will be prosecuted.	Subject to bias from early plea negotiation. Files are rarely electronic and require second level coding. Do not include cross-jurisdictional offending. Will include some offences where the offender was not guilty, but fewer such cases than police arrest data. May aggregate offence details into single prosecution records – information is lost about individual offences. Inflate the time to event data – data include criminal justice processing.
Conviction	Court outcome database Prosecuting agency files State/territory and Federal police – court outcome is recorded in some cases	Offences resulting in a conviction – by the offender pleading or being found at trial.	Convictions relate only to those offences where the offender pleaded guilty or was proven guilty.	Subject to bias from early plea negotiation. Do not include cross-jurisdictional offending. Information about the date and time of an offence may become less available. May aggregate offence details into single conviction records – information is lost about individual offences. Inflate the time to event data – data include criminal justice processing.

Table 1: Data sources for recidivism research (continued)

	Common source	Measure	Advantages	Disadvantages
Corrections	Prison database Corrective Services Specialist program databases – Drug Court, diversion etc.	Offences resulting in a specific criminal sanction – (incarceration, attendance in probation, participation in specialist diversion programs	Provide an accurate measure of who entered and exited the care of the corrective service department or specialist program provider. Dates and times of supervision easily identifiable.	Do not include all offences for which the offender was found guilty, only those where a specific criminal sanction was imposed. Do not include cross- jurisdictional offending. Files may not be electronic and require second level coding. Information about the date and time of an offence may become less available. May aggregate offence details into single sentencing records – information is lost about individual offences or convictions. Inflate the time to event data – data include criminal justice processing.

How should the indicator events be defined and counted?

Having determined the most appropriate source of data – whether self-reported or administrative data and, if the latter, whether police, courts or corrections data – the researcher must then make a number of methodological decisions about the definitions and counting rules to apply to the indicator event. These have a significant impact on the identification and measurement of recidivism. Even those studies which have a similar context and use the same data source may produce very different results depending on the choices made at this stage of the research process.

This section examines the impact of:

- definition– what type of reoffending will be chosen as an indicator of recidivism?
- counting rules – what unit of measurement will be selected to count the indicator event? For example, will the study aggregate offences occurring at the same time on the same day, or will they be counted separately?

Definitional issues: what type of offending is indicative of recidivism?

In determining an appropriate definition to apply to the indicator event, a researcher has three options. Take a hypothetical study which aims to measure recidivism among a sample of convicted sex offenders using police apprehension data. Here, the researcher can choose to:

- include all re-apprehensions recorded for those individuals, irrespective of the type of offence involved (a generic approach)
- restrict the definition to apprehensions which involved a sexual offence (a typology approach)?
- focus on those apprehensions that involved a particular type of sexual offence, such as rape or sexual intercourse with a minor (a specific approach).

Of these three options, the generic approach obviously provides the broadest measure of recidivism. Because it takes no account of the nature or severity of offending, each indicator event is given equal weighting, irrespective of whether it involves a minor breach of traffic regulations or a murder. For those studies which aim to assess reoffending levels among a general population of individuals (such as a birth cohort, or all persons dealt with by the courts in a given year), this may be appropriate because the sample itself is generic – that is, it has not been selected on the basis of a specific offence type.

In contrast, where a study is tasked with measuring the success of a drug intervention program aimed at reducing drug-related offending for example, the fact that the program participants subsequently commit a minor traffic offence may not be relevant. For this type of study, a more appropriate indicator of the success of the program may be whether the participants commit further drug related offences after program completion.

The definitional choices will, by and large, be determined by the purpose of the research and the context in which it takes place. However, while there are usually sound reasons for choosing between a generic or a specific approach, the results are likely to be quite different. To return to the sex offender study: a research approach based on a generic definition of reoffending will probably produce significantly higher recidivism levels than a study that opts for an approach which focuses on only one type of sexual offence. Any attempt to compare results across these studies would be inappropriate. Although this seems intuitive and straightforward, the results of both studies may be discussed generally as 'recidivism of sex offenders' with little accounting for the differences in the definition of the offences being used to measure that recidivism.

What is included and excluded in the measurement of recidivism is particularly pertinent to studies that use a typological approach, where a group of offences are, in combination, considered to represent a common latent offence typology. Common examples are property offences, violent offences, serious offences or indictable offences. As noted, in each case, a number of discrete offence types are counted as an event of recidivism within the banner of the broader offence typology. For example, an offender will be considered to have committed a property offence if they are convicted of stealing, shoplifting, break and enter, motor vehicle theft, property damage, or fraud.

The difficulty posed by this approach is that it can be difficult to discern what individual offence types are included within the one typology and whether the inclusions and exclusions differ between studies. If they differ, then the capacity to compare the studies and interpret the differences may be compromised. A common example in criminology is the classification of robbery, where theft from a person with or without the use of a weapon is classified by law as a violent offence. Some criminologists on the other hand, argue that it is the offender's motivation – which, in the case of robbery, is property acquisition – that should be used as the primary classification tool. As a result of this conceptual variation, some studies may count robbery as a property offence while others count it as a violent offence.

Another example is a sub-category of offending known generically as breaches, which typically includes technical violations of criminal justice orders, such as violating the conditions of parole, a probation order or drug court order. Breaches may also include violations of a domestic violence order, apprehended violence order, or even the failure to pay a court imposed fine by the nominated time. In many studies of recidivism, all of these offences are grouped together as indicators of the offender's contravention of criminal justice and law enforcement orders, while in others, the nature of a particular breach is important and examined separately. In an evaluation of a drug court for example, researchers may be specifically interested in technical violations of a drug court order as a separate category from other breach offences.

Regardless of which offences are included under a broad offence typology, what is more important is whether this information is accurately conveyed to the reader, and whether classification differences are taken into account when comparing the results from such research. Having an appreciation of the variability between different studies is critical to understanding and interpreting them accurately.

How should the indicator event be counted?

Once a data source has been selected and an appropriate definition of reoffending determined, the next decision concerns the counting rules to be applied to the data. To understand the choices available, it is necessary to understand the individual units that comprise a particular dataset. Take, for example, police apprehension data. Table 2 illustrates a hypothetical (but quite realistic) situation where on a particular day, an offender broke into a house while the owner was at home, assaulted the owner, vandalised the property and stole the owner's vehicle. Several hours later on the same day, the offender used that vehicle as the get-away car in an armed robbery of a service station. Several weeks later, having identified the suspect, police went to arrest him, but the offender resisted arrest and assaulted the arresting officers. As a result, he was arrested and charged with seven separate offences.

Four different counting units could be applied to this example:

- Each of the seven charges on the arrest form could be counted separately, giving a total of seven events of recidivism
- Charges arising from the same offence event could be aggregated, with an event defined as those charges involving the same victim. In this example, this would result in a count of three because the seven charges involved three different victims (the home owner, the service station and the apprehending police officer)

- Each offence event could be aggregated into offence episodes, defined as those offences committed on the same day. In this example, because the housebreak and robbery occurred on the same day, they would be counted as one episode while the resist arrest/ assault police charges would constitute a second episode
- Finally, all charges on the one arrest form could be aggregated. In effect, the counting unit becomes the arrest itself.

Depending on the level of aggregation used by the researcher, recidivism for this individual could be counted as seven, three, two or one events of recidivism.

Table 2: Sample police apprehension data and event counting

UID	Offence date	Offence	Apprehension date	Charge	Offending event	Daily offence event	Arrest event
12345	14/05/2006	Break and enter	1/06/2006	1	1	1	1
12345	14/05/2006	Property damage	1/06/2006	2	1	1	1
12345	14/05/2006	Assault	1/06/2006	3	1	1	1
12345	14/05/2006	Vehicle damage	1/06/2006	4	1	1	1
12345	14/05/2006	Robbery	1/06/2006	5	2	1	1
12345	1/06/2006	Assault police	1/06/2006	6	3	2	1
12345	1/06/2006	Resist arrest	1/06/2006	7	3	2	1

This process of aggregation is commonly used in recidivism analysis. While it can be applied to self-report data, aggregation is more often an artefact of administrative data where one or more offences are aggregated into an administrative event. An apprehension report, for example, is an aggregation process that is a byproduct not only of the individual's offending pattern but also the police response to that offending. Similarly, a single court appearance may involve multiple charges spread across multiple offending events and a single imprisonment may result from multiple charges listed on multiple court files combined for the purposes of sentencing.

In cases where aggregation is built into the agency's administrative dataset, researchers have no choice but to accept aggregation. In other cases, researchers may obtain disaggregated data but choose to aggregate it to develop standardised measures of offending that are as consistent as possible for each individual in the study. Underlying such a decision is recognition of the difference between offending as a behaviour, and the criminal justice system's categorisation of that behaviour into discrete activities. In other words, there is a marked difference between what an offender views as a crime and how the criminal justice system deals with that crime as a matter of its process.

Break and enter offending is a good example because it is an offence that most offenders are likely to view as a single crime, but in the eyes of the law may be subdivided into a range of discrete offences. Depending on the circumstances of the offence, the nature and timing of the offender's apprehension as well as the available evidence, the police may issue any one or more of the following charges:

- possession of implements with the intent to break and enter
- wilful damage, unlawful damage or vandalism
- unlawful entry of a dwelling with the intent to steal
- stealing
- possession of, or trading in stolen goods
- trespass.

What the offender may view a single crime, may be treated and recorded by the criminal justice system as a number of discrete offences. Counting each offence as a new criminal incident in a recidivism study will inflate recidivism estimates. Aggregation is necessary to ensure that systematic bias, resulting from variations in the recording of offences within and between offenders' criminal records, is minimised.

However, the utilisation of event or episodic aggregation techniques introduces an added complexity in those studies where the type of reoffending is important - for example, in a study where recidivism among a sample of sex offenders is to be measured according to the commission of a subsequent sex offence. In cases where only a single offence is committed on any one day, this task is easy, because the offence and the offence episode are synonymous. However, if an offender commits multiple, different offences on a single day, and they are aggregated into a single offending episode, the task of categorising the type of offending involved in that episode and in turn, whether to count it as an indicator of recidivism is more problematic. In the example given in Table 2 where there are seven different offences aggregated into the one arrest episode, how should the type of offending be categorised? Again, the decision will vary between studies depending on the context and purpose of the analysis.

One common method for categorising criminal episodes is a classification system known as the most serious offence (MSO), whereby the offending episode assumes the characteristics of the most serious offence. Take, for example, an offender who is apprehended for two offences within a single episode – break and enter and common assault. Using an MSO classification scheme, the offending episode will be categorised as a violent offending episode because the common assault is deemed more serious than the break and enter offence. Another method used primarily in studies of court data is classification by most serious penalty, or the offence which was awarded the longest prison sentence. Both methods assume that the most serious penalty or longest sentence will reflect the most serious charge.

Although widely used, such classification methods should be used (or interpreted) with caution. First, there are no standards by which seriousness is determined and researchers often employ their own independent classification schemes developed according to the context of their research. This is complicated because what is seen to be serious in one context or by one group may not be seen as serious by another. Moreover, conceptions of seriousness vary over time as offences become more common and community attitudes change. To aid the process, the ABS developed the National Offence Index (NOI) and the Australian Standard Offence Classification (ASOC) as starting points, but there is still some dissent in the literature about whether these are adequate tools for the most serious offence classification methodology. Moreover, there is a risk that such methods may result in the classification of an offender as a particular type of recidivist that is not truly reflective of their offending behaviour. Seriousness is often used, but sometimes without consideration for the impact it may have on how an offender and their offending behaviour are viewed. In the example above, there is little doubt that common assault is (at least in law) more serious than break and enter. The former involves violence or threats of violence against a victim, while the latter relates primarily to the theft of goods. However suppose that the break and enter offence was for a total sum of goods worth in excess of $100,000 but the assault offence was for a minor altercation between two young males in a pub. Would the assault offence still be the most serious?

Examples from the Australian literature

Sex offender recidivism

In their 1995 study, Broadhurst and Loh examined recidivism in sex offenders in Western Australia. They used police apprehension data over the period between 1984 and 1994 and found that 2,828 offenders had been apprehended for at least one sex offence. Of these offenders, 19 percent had been rearrested for at least one additional sex offence before the end of 1994, and approximately nine percent had been rearrested for a second sex offence.

Although the purpose of the study was to examine sex offence recidivism, the authors also provided estimates of recidivism using two offence classifications. These included two generic offence typologies – 'any offence' and 'any offence against the person'. Using survival analysis, they showed that, for this sample of sex offenders, the re-arrest probability was estimated at 0.56 for 'any offence' type, and 0.36 for 'any offence against the person'.

Episodic measurement using police apprehension data

Skrzypiec and Wundersitz (2005) examined the probability that a cohort of juveniles born in South Australia in 1984 would be apprehended by the police. Although not strictly a study of recidivism – examining each offender's first apprehension only – the study nonetheless provides a discussion about the complications of aggregation methods. The authors highlighted three reasons that the estimates of contact with the criminal justice system – indicated by a single aggregate apprehension report – would affect understanding of the true extent of an individual's criminal activity:

- young offenders will commit crime that is not detected by the police
- even if detected, not all young offenders will be dealt with via a formal apprehension, due to the diversion and cautioning schemes used in South Australia
- a single apprehension report may include several discrete criminal offences occurring at the same time, or at different times – the single most serious offence on the apprehension report was used for the analysis.

This study focused on first time appearance only, but its methodology highlighted concerns about measurements that might be used to estimate recidivism, particularly the implications of using aggregate, rather than disaggregate, measurement and the potential to mask important questions about frequency and severity of recidivism. An apprehension report, when used to measure offending is an episodic measurement tool that aggregates multiple offences into a single transaction (apprehension). Categorisations of the episode according to the most serious of the offences listed do not account for the number of or type of other offences listed in the report.

For how long should criminal events be observed?

In the measurement model of recidivism outlined in Figure 1, the period over which criminal events are observed was identified as a key component for understanding reoffending. This is because criminal offending, like most other observable behaviours, varies markedly not only between individuals but also over time. It may take many years for one person to reoffend, while it may be a matter of days for another. This uncertainty and unpredictability in criminal behaviour makes the specification and measurement of time extremely important in recidivism analysis. How long criminal events are observed has significant implications for our capacity to identify and count events as recidivism.

Consider two studies, both measuring rearrest levels of a sample of offenders having recently participated in a drug treatment program. Suppose the first study collected and analysed all arrest episodes in 1999 and 2000, and the second collected arrest episodes from 1999 to 2004. In the former study, recidivism was observed over two years, while in the latter it was five years. It is likely that the estimates of recidivism would be higher in the study that observed offending for longer simply because the longer an offender's behaviour is observed, the more likely it is that an event that indicates recidivism will be identified and counted.

What defines an observation period?

An observation period, by definition, has a start and an end date. The start date specifies the point in time from when a sample of offenders is observed. In the post-release literature for example, this is usually marked as the date on which an offender is released from prison. In the drug court literature, recidivism may be measured from the date of referral to the court, the date of admission, or the date of completion. The end date is an arbitrary point where the observation of an offender's criminal activity ceases. In most cases it is evenly rounded, such as two years since release from prison, or two years since commencing on the drug court. In other cases, the end point may be tied to a specific event, such as when an offender turns a certain age.

Although understanding what constitutes the beginning and the end of the observation period in each study is important, the relationship between the two events as they vary across the sample of offenders included within the study is possibly more important. In some studies, such as the post-release example above, each offender may be observed for an equal period of time. For example, if the study aims to track recidivism over a 12 month period, an offender released on 30 June 2003 will be observed until 30 June 2004, while an offender released on 28 September 2004 will be observed until 28 September 2005. In other words each offender is tracked for 12 months starting from the specific release date for that offender.

However, in other studies, such as the example of the drug court, a common end date for the entire sample may be set – such as 30 June 2005. Offenders who completed the drug court on 30 March 2004 would therefore be tracked for 15 months, while those who completed on 30 June 2004 would be tracked for only 12 months. In such studies, each offender has a unique period of observation that extends from the date of their commencement, to the date at which the observation period for the entire study ended. Although a study may seemingly estimate recidivism for a single specified period of time, in reality, the precise period of observation varies markedly between offenders depending on their contact with the program.

What is an optimal period of observation?

The optimal observation period (whether six months, one year, two years or more) depends on several factors, including the purpose of the research. As in the example of a drug court evaluation, results are often required at the earliest possible time, subject to methodological constraints, so that adequate assessments, policy changes and program restructures can be implemented. The trade-off between study length, study cost and research timeliness are key considerations in longitudinal analysis and there is often a compromise.

Context is also important when determining an optimal observation period. Sometimes it is unnecessary to examine recidivism for protracted periods of time. Using the drug court example again, it is reasonable to anticipate that the maximum expected benefit to be achieved by the drug court intervention may be a reduction in recidivism for a period of six, 12 or 24 months. It may not be reasonable to expect that the drug court program will have a lasting effect on recidivism after three, four or five years. If recidivism is expected to be reduced, but only for a short time, it is acceptable to limit the observation period so that more useful analyses can be conducted. As a general rule, however, longer periods of observation can always be shortened during the analysis stage, but shorter periods cannot be extended without further data collection and investment.

The data source used to identify recidivism will also be an important consideration when deciding on an optimal observation period. As previously illustrated, recidivism can be measured using administrative data, such as police apprehension records, court appearance and conviction records, or incarceration records. Each record represents the chronological sequence of an offence as it passes through the criminal justice system. For this reason, a single offence that is recorded in all systems will first appear as a police apprehension, followed some time later as a court appearance, conviction and possibly incarceration. If recidivism is measured using data sources at later points of the criminal justice system, the likely time frame in which to expect these events to occur must be considered. Recidivism analysis over 12 months may be sufficient when using police apprehension data, but not for incarceration data because of the much longer period of time required for a criminal event to proceed from apprehension to incarceration.

Are adjustments needed in observations?

Two important concepts have been discussed – the beginning and end of the observation period – and the factors to consider when determining the period for which an offender's recidivist behaviour is observed. However, the observation period is not always measured as a single, uninterrupted timeline. In fact, it is possible for an offender to be incapacitated for a portion of their observation period, during which time they are technically unable to engage in recidivist activities. Their 'free time' is defined as the proportion of their free time that they were free and able to reoffend. Although incapacitation can occur for many different reasons such as illness or hospitalisation, imprisonment is the primary consideration in recidivism research.

Consider the hypothetical example of two offenders, each having committed 10 offence episodes within one year. Without knowledge of any periods of incapacitation, each has an estimated offence rate of 10 offences for every 365 days in observation. Suppose however that one offender was incarcerated twice during that year, for a total of six months. For this offender, the ten offences were committed within the six- month period he/she was free and able to reoffend, and his/her adjusted offending rate is twice that of the other offender who was not incarcerated at any stage during that 365 day observation period.

Findings from the literature are divided on the importance of free time adjustment. Several studies have shown that such adjustments have little influence on overall recidivism estimates (Makkai et al. 2004), while others have shown that results can vary when free time is used as the basis for analysis (Lind et al. 2002). If individuals within the sample are expected to have multiple and lengthy periods of contact with prison or other forms of incapacitation, adjustment seems warranted. However, in other studies where only a few offenders are likely to be imprisoned and for relatively short periods of time during the observation period, adjustment may not be necessary.

Examples from the Australian literature

The importance of time (1)

In an evaluation of the effectiveness of a community corrections officer training course, Trotter (1995) examined differences in recidivism between offenders supervised by two groups of community corrections officers: those who participated in the training course (the experimental group) and those who didn't (the control group). The offenders were randomly assigned to one of the two groups in late 1990 and the first recidivism study was conducted in 1992. The results indicated modest, but significant differences between the groups after 12 months with prisoners assigned to the experimental group having lower rates of reconviction.

In 1994, Trotter returned to the project to determine whether the experimental group were still less likely to have been reconvicted than the control group. After 48 months, the reconviction results suggested that there was now no statistically significant difference between the two groups in terms of whether they had been reconvicted in court, suggesting that either the program was generally ineffective in reducing recidivism, or that the effect experienced by the experimental group was real, but only short-lived.

The importance of time (2)

Coumarelos (1994) examined recidivism for a sample of juveniles who had first been convicted of an offence in the New South Wales Children's Court between 1982 and 1986. Recidivism was measured using Children's Court conviction data which, because that data only included juvenile criminal matters, were censored at 18 years of age. The observation period therefore varied for each individual within the study, depending on how old they were when first convicted. Due to the variability in the observation period, the study was framed as an examination of the probability that an offender would be re-convicted in court before the age of 18 years. The results suggested that the probability of reconviction was small, with approximately 30 percent being reconvicted for one or more offences in the Children's Court.

More than ten years later, in 2005, Chen et al. revisited the question of whether juvenile offenders were likely to have multiple episodes of conviction, but this time extended the analysis to include court convictions recorded in any criminal court, not just the Children's Court. The authors were now no longer dealing with data censored at 18 years of age, but were able to observe recidivism well into adulthood.

This second study (Chen et al. 2005) was unique in that it challenged the long held belief that most juveniles do not reappear in court after their first criminal conviction. It found that 68 percent of those first appearing in 1995 reappeared in a New South Wales criminal court within eight years. This result was considerably different from the estimated 30 percent in the Coumarelos study, a difference which has been partly attributed to the lengthier period of observation.

The results of this new study had important consequences for juvenile justice policy, where it was generally thought that most juveniles would not return to court and that policy intervention should target those with multiple juvenile court appearances. Now it appears that interventions 'should not to be delayed in the belief that most young people making their first appearance in the Children's Court will never reappear in court again.' (Chen et al. 2005).

Accounting for free time

Payne (2005) evaluated the outcomes of the North Queensland Drug Court pilot program. The results were derived from recidivism estimates calculated for an observation period that accounted for the time each offender spent in custody. To illustrate how free time might impact on recidivism results, the report compared the average number of days each offender was observed with the average number of days each offender was in custody. The results were presented for graduates of the drug court program as well as for those who were terminated.

Because participants of the drug court program commenced on different dates, each had a unique period of observation. On average, the graduates were observed for 503 days, during which time they spent an average of four days in custody. This compared with the terminated participants who were observed for an average of 473 days, but spent an average of 160 days in custody. In total, the graduates were free and able to reoffend for an average of 499 days, while the terminated participants were free and available to reoffend for an average of 328 days.

Using the offending frequency data for the terminated offenders it was estimated that on average, they committed 2.8 offences every 365 days. Adjusting the observation period to account for free time, terminated participants had in fact committed an estimated 4.1 offences every 365 free days – a fifty percent increase in the estimated offending rate. This compared with the graduates who had an estimated offending rate of 0.6 offences for every 365 free days.

Conclusion

This section commenced with the observation that interpreting recidivism is seemingly straightforward, but its practical definition and application are complex and context specific. Recidivism was conceptualised as a basic sequential model with three key elements:

- a sample – the target group of offenders for whom recidivism is being measures
- the indicator events – the data source and counting rules used when identifying recidivism
- the observation period – the time period over which the indicator events are observed and counted.

All recidivism research can be understood and interpreted within this framework, but each study differs in the definition of each key element. Both index and indicator events may be defined according to a variety of different criteria, including:

- an offender's demographic or prior offending profile
- their current offence type
- their contact with the criminal justice system
- their residential or other geographical location
- the time period studied.

Time is inherent in all recidivism models, as recidivist offending must be observed as a sequence of events separated by units of time. Recidivism studies often differ in the length of time over which events are observed. This has obvious implications for the interpretation of recidivism estimates. The longer an individual is followed, the more likely it is that any recidivist events will be indicated.

The methods used to measure criminal events have implications for the resulting estimates:

- aggregate offence categories may be classified differently between studies – that is, broad categories such as property or violent offence may include different combinations of offences.
- some individual offences may be classified differently between studies. Robbery, for example, may be classified as a property or violent offence.
- events occurring at the same time may be aggregated into episodic measurement units, or disaggregated into incident analysis.
- where episodic analysis is used, studies typically use most serious offence or most serious penalty classification, which may underestimate underlying offending behaviours and patterns.

Recidivism in Australia

The preceding section described the complexities of defining and understanding recidivism. It highlighted that the underlying research base from which recidivism is measured and understood, varies significantly in context and purpose, as well as across the key methodological elements. To facilitate this discussion the report used key examples from the Australian literature that were identified through a broader literature review, conducted by the AIC and using the Australian criminology database (CINCH). CINCH is a bibliographic database maintained by the AIC that indexes and abstracts articles from published and unpublished material on all aspects of crime and criminal justice in Australia. It represents the most comprehensive collection of research material in Australian criminology.

In this section, this report brings together the broader literature on recidivism in Australia with the intention of summarising key findings from the research. At the same time this section will use that research to further illustrate the complexities within and between the studies and their likely impact on understanding recidivism.

Overview of the literature: methodology

Through CINCH, the literature search was conducted using a combination of truncated keywords across all search fields – recid*, repeat offend*, reoffend* and re-offend*. The results were restricted to items published in Australia since 1995. The search yielded a total of 416 items, with numbers fluctuating from 25 in 1998 to 65 in 1995. The average number of publications abstracted each year was 42.

Following the literature search, each item was reviewed and coded according to specified criteria. Some of this information was available directly from the record on the CINCH database while other items were identified by reviewing the article. The coding criteria included:

- document type – monographs, chapters in monographs, journal articles, short research pamphlets and conference papers
- document purpose – commentary, estimation analysis, exploratory analysis and evaluation analysis
- location and year of publication
- methodology – including the measure of recidivism, the sample, the offence type and the data source where applicable.

The research location was defined as the state or territory where the analysis was undertaken. In cases where there was no actual analysis of recidivism, location was coded according to the location of context/publication. Some of the items were coded as Australia (unspecified) indicating that the discussion of recidivism was generalised and did not focus on, or use the research results from any one jurisdiction. There were 119 items in this category. Where location was identifiable, New South Wales had the majority (105); followed by Western Australia (88); Victoria (62); Queensland (48) and South Australia (32). A publication could be recorded as having more than one jurisdiction.

Despite the seemingly high number of general Australian research items, these were most likely to have been of a commentary nature. The general paucity of national recidivism research using data from across Australian jurisdictions is noted.

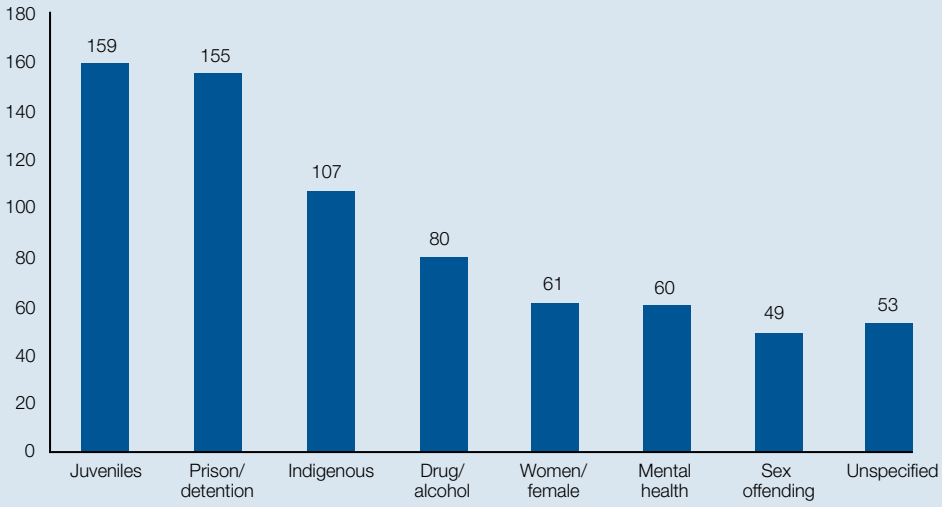
Table 3: Recidivism research in Australia, by jurisdiction, 1995–2004 (number)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	Total
ACT	2	0	3	2	1	0	1	0	2	2	13
NSW	15	5	6	5	11	11	8	16	20	8	105
NT	1	1	2	2	2	3	4	4	2	2	23
Qld	4	3	3	5	5	4	6	4	9	5	48
SA	6	2	5	2	2	0	1	6	7	5	36
Tas	1	0	1	2	1	0	0	0	1	3	9
Vic	10	10	2	3	5	6	6	3	13	4	62
WA	29	10	9	6	6	6	7	3	8	4	88
Unspecified	9	5	13	11	13	22	9	10	15	12	119
(Total)[a]	**(65)**	**(32)**	**(35)**	**(25)**	**(35)**	**(48)**	**(37)**	**(38)**	**(63)**	**(38)**	**(416)**

a: Annual total does not sum across jurisdictions, as some articles have been coded with multiple jurisdictions.

Figure 5 shows the topic areas most frequently examined in Australian recidivism research. A research article could be coded as covering multiple topic areas. Of the 416 articles published between 1995 and 2004, the most frequently cited topic area was juvenile offending, with 159 articles (38%). This was followed by prison or detention related topics (37%), Indigenous offenders (26%) and drug and alcohol issues (19%). Approximately 15 percent of articles examined recidivism and women or those with a mental health disorder. Sex offender research accounted for 49 articles (12%). The final column in Figure 5 identifies 53 articles where the subject or topic area was not identified as one or more of the above (13%). This indicates that the seven identified topics accounted for more than 85 percent of recidivism research conducted in Australia.

Figure 5: Subjects of recidivism research, Australia 2003–04 (number)



Note: Topic classifications are not mutually exclusive

How much recidivism is there?

For the reasons highlighted, conclusions about the extent of recidivism and factors associated with repeat offending are dependent on the extent to which the contextual and methodological variations have been taken into account. To this end, the key findings of the Australian literature since 1995 have been summarised and differences and similarities between the studies in context and methodology identified. The report proceeds with a systematic discussion of the literature using these elements as a means to guide interpretation. The summaries are categorised by sample type (adult/juvenile, prisoner/non-prisoner) and by data type used by the study to measure recidivism (self-report/administrative data).

Adult prisoner recidivism

Prisoners have been the subject of a large proportion of Australian recidivism research to date. This is possibly because of the ease with which a sample of prisoners can be identified or the relative importance of rehabilitation as a focus in correctional policy development. In any case, studies have used various data sources and methods, such as self-report and administrative data, in an effort to estimate how many prisoners are recidivists.

Table 4: Australian research on adult prisoner recidivism

Author	Context/sample	Data	Quantification	Observation period	Key findings
Thompson B 1995. Recidivism in NSW: general study	This study aimed to identify the prevalence of recidivism among adult offenders released from full time custody in NSW in 1990 and 1991. All prison releasees were included regardless of offence type. Exploratory analysis by offence type, Indigenous status and gender were included in the study. These analyses further restrict the specification of the index event.	Court conviction data	Episode of conviction irrespective of offence type	Observation period was consistent for all offenders – two years from being released from prison in 1990–91	35% of males and 38% of females prisoners retuned to prison within two years. The recidivism rate was higher for younger offenders, offenders with prior imprisonment, offenders with a higher security classification at the time of discharge, offenders sentenced for property, violent offences rather than drug and sex offences and Indigenous offenders.
ABS 2005. Prisoners in Australia, 2005	The ABS Prison Census provides information annually on prisoners in Australia. As a census, the information is collected for all prisoners incarcerated on the night of 30 June each year.	Corrective services data	Episode of imprisonment irrespective of offence type	Observation period was retrospective for each prisoner's lifetime. The observation will vary depending on the age of the prisoner.	60% of prisoners have been in prison on at least one other occasion in their lifetime. The proportion of prisoners with prior imprisonment increased by about 10% since the 2004 census. The proportion of prisoners with prior imprisonment was highest for those incarcerated for property offences or offences against justice procedures.
Makkai T & Payne J 2003. Drugs and crime: a study of incarcerated male offenders	This study was conducted using a geographically stratified random sample of the prison population in Tasmania, Queensland, Western Australia and the Northern Territory. There were 2,135 adult male respondents.	Self-report data	Episode of imprisonment irrespective of offence type	Observation period was retrospective for each prisoner's lifetime. The observation will vary depending on the age of the prisoner.	63% reported a history of prior imprisonment. The average number of prior imprisonment episodes was 3 and the average time since the last imprisonment episode was 58 months.

Table 4: Australian research on adult prisoner recidivism (continued)

Author	Context/sample	Data	Quantification	Observation period	Key findings
Johnson 2004. Drugs and crime: a study of incarcerated female offenders	This study surveyed the female prisoner population in 2003. There were 470 adult female respondents.	Self-report data	Episode of imprisonment irrespective of offence type	Observation period was retrospective for each prisoner's lifetime. The observation will vary depending on the age of the prisoner.	43% reported a history of prior imprisonment. The average number of prior imprisonment episodes was 3 and the average time since the last imprisonment episode was 32 months.
SCRGS 2006. Report on government services 2005	The report on government services examines the proportion of prisoners in each Australian state and territory who return to corrective services supervision within two years of their release from prison. The sample includes offenders who were released from prison into further non-custodial correctional supervision orders.	Corrective services data	Episode of imprisonment or custodial supervision irrespective of offence type	Observation period was consistent for all offenders – two years from being released from prison	38% of prisoners across Australia were reimprisoned within two years of their release. A further 7% of prisoners were retuned to other corrective services orders within two years – a total return rate of 45%.
Jones C et al. 2006 Risk of reoffending amongst parolees	This study explored patterns of reoffending among 2,793 New South Wales offenders released to parole supervision in the 2001–02 financial year.	Court appearance data Court conviction data	Episode of court appearance, conviction or imprisonment	Observation period was consistent for all offenders – two years from being released from prison	68% of parolees reappeared in court, 64% were reconvicted and 41% were reimprisoned within two years of release. This study also showed that the risk of reoffending was increased for parolees who: had multiple prior imprisonment episodes; had at least one prior drug conviction; were younger; were Indigenous; and were given parole by the court rather than the parole authority.

Table 4: Australian research on adult prisoner recidivism (continued)

Author	Context/sample	Data	Quantification	Observation period	Key findings
Ross S & Guarnieri T 1996. Recidivism rates in a custodial population: the influence of criminal history, offence and gender factors	This study followed 838 adult offenders released from prison in Victoria between 1985 and 1986.	Court conviction data Corrective services data		Observation period was consistent for all offenders – seven years from being released from prison in 1985–1986	74% of prisoners were reconvicted at least once within seven years of release. Around 25% were reconvicted within three months of release. 54% were reimprisoned at least once within seven years of release.
Baldry E et al. 2006. Ex-prisoners, homelessness and the state in Australia	This study examined post-release reimprisonment among a sample of prisoners released from NSW and Victorian prisoners in 2001 or 2002. The study used a prospective self-report methodology by recontacting the prisoners and asking them to complete a survey. Reimprisonment was identified either through self-report or through observation, where the prisoner was back in prison at the time of the survey. The study's primary aim was to examine the impact of post-release housing on the likelihood of reimprisonment	Self-report data Corrective services data	Episode of reimprisonment	Observation periods was consistent for all offenders – nine months after being released in 2001 or 2002	The results suggested that approximately 40% of prisoners had returned to custody within the 9 months follow-up period. Homelessness and instability in family environment were significant contributors to increasing reimprisonment.
Stevenson R & Forsythe L 1998. The stolen goods market in New South Wales: an interview study with imprisoned burglars	This study used a self-reported offending methodology to examine the prevalence of pre-imprisonment custody among a sample of burglars imprisoned in NSW.	Self-report data	Episode of offending – burglary offences	Two measures were recorded: one was the number of times burglary was committed in the last free period before the current incarceration. The other was lifetime charges by police	Estimates of the extent of reoffending showed that the median number of burglary offences committed per month was 8.7 for adults.

Adult prisoner self-reported prior offending and imprisonment

In 2001, the AIC conducted the first part of the DUCO study (Makkai and Payne 2003a) which surveyed 2,135 adult male prisoners on their lifetime offending and drug use histories. The purpose of the study was to examine the links between drug use and offending within a criminal career and developmental context. The research was funded by the Australian Government Attorney-Generals Department under the National Illicit Drug Strategy and was conducted in Queensland, Western Australia, Tasmania and the Northern Territory. It used an interviewer administered survey where the prisoners were asked to report how often they had committed property and violent offences in the six months prior to their incarceration and how often they had been previously imprisoned. Both offence types were generically defined so that the prisoner could freely interpret which offences they would include in their self-report. If an offender needed prompting, the interviewer would suggest that property offences included things like 'break and enter, selling stolen goods, shoplifting, theft, forgery, fraud or car theft'. The interviewer prompt for violent offences included 'assaulting someone, sex offences, armed robbery, robbery without a weapon or killing someone'.

As discussed, the self-report methodology is advantageous in that it is likely to include a greater number of offences than are officially recorded, specifically those that the prisoner had committed but not detected by police. On the other hand, the self-report may be subject to reporting bias, where the offender intentionally or unintentionally misreports their offending pattern. A key issue for the interpretation of the DUCO research is whether one prisoner's idea of what should be included as a property offence is different from another's. Should two prisoners have differing concepts of offending, their self-reported information is also likely to be different.

Additional analysis of the DUCO data suggested that of all adult male prisoners:

- thirty-eight percent report having committed at least one property offence in the six months prior to their incarceration and 49 percent had committed at least one violent offence
- in terms of frequency, 23 percent reported committing property offences and eight percent reported committing violent offences at least once a week in the six months prior to their arrest
- sixty-three percent reported having been previously imprisoned at least once in their lifetime, with the average number of imprisonment episodes being three, and an average of 58 months since the last episode (see table 5).

In 2003 the AIC surveyed 470 adult female prisoners (Johnson 2004). The study was conducted in every Australian state with the exception of New South Wales and followed a similar self-report methodology as its male predecessor. Additional analyses of the adult female data showed that:

- forty-seven percent reported committing at least one property offence and 33 percent a violent offence in the six months prior to their incarceration
- thirty percent reported committing property offences and three percent reported committing violent offences at least once a week in the six months prior to their arrest.
- Forty-three percent reported having been previously imprisoned at least once in their lifetime, with the average number of imprisonment episodes being three, and an average of 32 months since the last episode (see table 5).

Table 5: Self-reported imprisonment history of incarcerated males and females

	Males	Females
Percentage reporting any prior imprisonment	63	43
Percentage reporting imprisonment within the previous 12 months	15	17
Percentage reporting imprisonment within the previous 24 months	25	27
Mean (median) number of prior imprisonment episodes	3 (2)	3 (2)
Mean (median) number of months since last time in prison	58 (36)	32 (23)
(n)	**(2,135)**	**(470)**

Estimates exclude cases with missing data

Source: AIC DUCO male survey 2001 [computer file]; AIC DUCO female survey 2003 [computer file]

Stevenson and Forsythe (1998) conducted a self-report offending study among a sample of NSW prisoners incarcerated for burglary. The purpose of the research was to develop a further understanding of the offence profiles of burglary offenders and the factors associated with high volume property offending. As a select sample of incarcerated burglary offenders the offence prevalence rates are not representative of the total adult prisoner population. Moreover, the self-reported offending rates are similarly subject to reporting bias as described above. Nonetheless, the results suggested that for the period leading up to their incarceration, adult burglary offenders in NSW committed approximately 8.7 burglaries per month.

Adult prisoner prior imprisonment

There are a number of Australian recidivism studies that use administrative data to measure recidivism. The results address specifically the prisoners' recontact with the agency from which the data were obtained and are likely to underestimate their true level of offending.

One of these studies is the most recent ABS national prisoner census, a snapshot of prisoners in the legal custody of adult corrective services on the night of 30 June 2005 (ABS 2005c). The sample constitutes all offenders incarcerated on the census night and the measures use administrative data obtained from corrective services agencies. The report records the proportion of prisoners who had been previously imprisoned, where recidivism is defined as any recorded episode of prior imprisonment. The measure is retrospective and shows that the current term of imprisonment for more than 60 percent of all adult prisoners in Australia is not their first. By Indigenous status, this number was quite different, with seventy-seven percent of Indigenous prisoners and 57 percent of non-Indigenous prisoners having been in prison before. The two categories of prisoners most likely to be imprisoned are those currently incarcerated for an offence against justice procedures, or for break and enter offences.

Adult prisoner reappearance, reconviction and reimprisonment

Each year the Steering Committee for the Review of Government Services (SCRGS) releases the *Report on government services* (ROGS) which uses the prospective observation of reimprisonment to measure recidivism of released prisoners. In the 2006 report, recidivism is defined as the proportion of released prisoners that returns to prison, or to corrective services, within two years of their release. Return to corrective services includes prison and community corrections orders. Table 6 summarises reimprisonment and corrective services data from the report and estimates that, across Australia, approximately 38 percent of prisoners return to prison within two years of release. This increases to 45 percent when other corrective service sanctions are included in the measure (SCRGS 2006).

ROGS also provides reimprisonment estimates for every Australia jurisdiction except the Australian Capital Territory. The jurisdiction with the lowest reported rate of reimprisonment was Queensland with 31 percent of prisoners returning to prison within two years. The highest was New South Wales where nearly 44 percent of prisoners return within two years. These differences should be viewed conservatively as they likely to represent differences in judicial practice and sentencing policy between the jurisdictions, rather than recidivism propensity. Given this, these figures can be taken to indicate that, nationwide, between 35 and 40 percent of prisoners released from custody will be reimprisoned within two years.

Table 6: Releasees during 2002–03 returning with a new correctional sanction within two years (percent)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Prisoners returning to:									
Prison[a]	43.5	38.2	30.6	40.6	31.7	37.8	. .	42.1	**38.4**
Corrective services[b]	46.7	45.6	36.6	49.4	46.4	46.2	. .	45.7	**44.7**

. .= data not available

a: Refers to all prisoners released following a term of sentenced imprisonment including prisoners subject to correctional supervision following release

b: Includes prison sentence or a community corrections order

Source: Adapted from SCRGS 2006:C.12

In 2006, a report was released in New South Wales (Jones et al. 2006) that explored the patterns of reoffending among 2,793 offenders released to parole supervision in the 2001–02 financial year. Reoffending was defined as reappearance in court, reconviction for a new offence, and/or reimprisonment. The results were reported for a two-year observation period from the time of release until September 2004 – an observation period consistent with that used in the ROGS. The results demonstrate that in New South Wales:

- sixty-eight percent of parolees reappeared in court
- sixty-four percent were reconvicted
- forty-one percent were reimprisoned.

Reimprisonment is only one of several measures used in this study to estimate recidivism. Jones et al. (2006) also provides additional estimates of court appearance and court conviction, for which the prevalence rates are higher than those for reimprisonment. This is not surprising given the discussion earlier regarding the tendency for underestimating recidivism using administrative data to increase the further into the system recidivism is defined. According to the court appearance data, reoffending rates for released prisoners are closer to 70 percent, but would be higher if police apprehension data were used.

In addition to the two-year prevalence rates, Jones et al. (2006) conducted a statistical technique known as survival analysis to demonstrate that the majority of re-convicted parolees were re-convicted within the first 12 months of their release. The analysis estimated that 23 percent of the reconvicted parolees were reconvicted within three months of release from prison and 52 percent were reconvicted within one year. In a similar study ten years earlier, Thompson (1995) used corrective services data and found that in New South Wales, the overall two year reimprisonment rate was 35 percent for males and 38 percent for females.

In Victoria, Ross and Guarnieri (1996) describe a study of 838 prisoners released in from prison between 1985 and 1986. Using both reconviction and reimprisonment measures they found that approximately 25 percent were reconvicted within three months of their release, increasing to 74 percent being reconvicted and 54 percent reimprisoned at least once within seven years of their release. Although similar in data, the major difference between this study, and the ROGS (2006), Jones et al. (2006) and Thompson (1995) reports, was the length of time for which the prisoners were observed. In these three, observation was for approximately two years while in the Ross and Guarnieri (1996) study it was for a period of up to seven years. However, the Jones et al. and the Ross and Guarnieri studies provided reconviction estimates for the three month post-release period (23% and 25% respectively).

Baldry et al. (2006) presented the findings of a unique study into post-release housing of prisoners released in New South Wales and Victoria. The study is one of the rare few that employ a prospective self-report methodology – where prisoners were contacted by the research team three, six and nine months after release. The purpose was to identify how a prisoner's post-release housing situation impacted on their probability of being reimprisoned – where reimprisonment was indicated by whether the prisoner was back in prison at the time of the follow-up survey. Although not strictly reliant on administrative data, the event of reimprisonment was indicated by a formal episode of contact, rather than self-reported contact. The results suggested that about 40 percent of prisoners had returned to custody at least once within the nine-month follow-up period. Although these results seem similar to the Jones et al. and Thompson studies, they were calculated over a much shorter observation period of nine months.

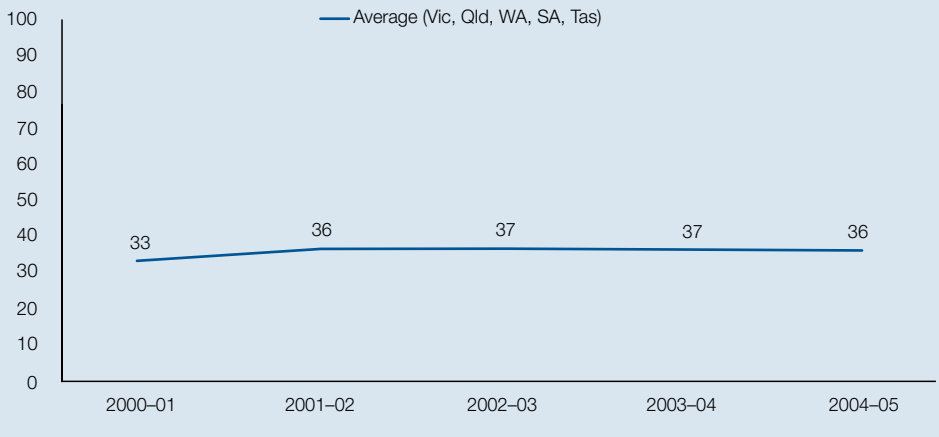
Summary

Recidivism amongst adult Australian prisoners has been investigated by research studies using either a retrospective or prospective methodology. Studies varied in the types of data used and the length time over which recidivism was observed. In addition, the studies were conducted using different samples of prisoners, from different jurisdictions and at different time points over the past 10 years. In all, this variation makes comparative analysis difficult. Nonetheless, there are some important consistencies worth noting:

- both the self-reported (Makkai and Payne 2003a) and administrative (ABS 2005c) analysis suggested that about two in every three prisoners have been previously imprisoned
- the Jones et al. (2006) and Ross and Guarnieri (1996) studies suggested that about one in four prisoners would be reconvicted within three months of being released from prison
- the ROGS (SCRGS 2006), Jones et al. (2006) and Thompson (1995) studies suggested that between 35 and 41 percent of prisoners would be reimprisoned within two years of being released.

Despite the studies being conducted over a ten year period (between 1995 and 2006), the recidivism rates (regardless of how they were measured) appear reasonably consistent. This suggests that there has been little change in the prevalence of reconviction among prisoners in recent times. In support of this proposition, the ROGS provides time series data on the prevalence of reimprisonment within two years for each year from 2000–01 to 2004–05 (see Table 6). The data are only available for five jurisdictions – they do not include New South Wales, the Northern Territory or the Australian Capital Territory – but the results show that the proportion of released prisoners returned to prison within two years has remained reasonably steady at approximately one-third.

Figure 6: Releasees returning to prison within two years[a], by year of collection (percent)



a: Refers to all prisoners released following a term of sentenced imprisonment including prisoners subject to correctional supervision following release

Source: Adapted from SCRGS 2006:C.12

Adult offender recidivism

Unlike prisoners, who are a select and relatively easy group of offenders to identify, measuring recidivism for the general adult offender population is more difficult. This is because researchers often struggle to identify an appropriate and representative sample of offenders and as a result, rely on convenience samples such as persons apprehended by the police, or those who appear or are convicted in court. These convenience samples are not invalid or necessarily unreliable, but they discuss only a subset of the total offender population who are caught and prosecuted for their crimes. For the same reasons that recidivism may be underestimated or overestimated using administrative data, the samples of general offenders identified using the same methods may similarly under- or overrepresent specific groups of offenders.

Given the elusive nature of the general offender population, the Australian studies that have attempted to measure recidivism vary significantly in context and methodology. A range of studies that measure recidivism for general offender population (not prison releasees) is described in this section.

Table 7: Indicator and index specifications: examples from Australian research, adult offenders

Author	Context/sample	Data	Quantification	Observation period	Key findings
SCRGS 2006. Report on government services, 2005	The report on government services examines the proportion of community corrections participants who return to community corrections or corrective services supervision within two years of completion. The data are presented for Western Australia, the Northern Territory, South Australia, Tasmania and Queensland.	Corrective services data	Episode of recontact with the corrective services agency	Observation period was consistent for all offenders – two years from completing a community corrections order.	15% of community corrections participants return to community corrections within two years of release. A further 10% return to non-community based corrective services supervision, including imprisonment.
Mouzos J, Smith L & Hind N 2006. Drug use monitoring in Australia: 2005 annual report on drug use among police detainees	The Drug Use Monitoring in Australian program examines the link between drugs and crime. The study surveys offenders each quarter in seven police stations in New South Wales, Queensland Western Australia and South Australia.	Self-reported data	Episode of previous arrest Episode of previous imprisonment	Observation was retrospective but consistent for all offenders – 12 months	54% of police detainees had been arrested previously in the past 12 months 18% had spent some time in prison in the past 12 months

Table 7: Indicator and index specifications: examples from Australian research, adult offenders (continued)

Author	Context/sample	Data	Quantification	Observation period	Key findings
Broadhurst R & Loh N 1995. Re-arrest probabilities for the 1984–1993 apprehended Western Australian population: a survival analysis	Western Australian police arrest records were taken for all adults between 1984 and 1993. This study aimed to identify the probability of rearrest for offenders apprehended at least once in the ten-year study period.	Police arrest data	Episode of rearrest Recidivism has been for any offence type, although the authors generate specific rearrest probabilities for specific offence types.	Observation period varied between offenders – maximum was 9 years, minimum was less than one year.	The probabilities were 0.52 for male non-Indigenous offenders, 0.36 for female non-Indigenous offenders 0.88 for male Indigenous offenders and 0.85 for female Indigenous offenders. Variations in re-arrest probabilities were estimated for the Indigenous and non-Indigenous populations, although other variables that were linked to increased probabilities were: age, number of previous arrests; occupational status; offence type and bail status; and place of birth.
Makkai T et al. 2004 ACT recidivist offenders	This study was an evaluation of an intelligence-led, targeted policing operation conducted in the ACT. Operation Anchorage lasted for 16 weeks and targeted known, high-volume property offenders, resulting in the apprehension of 232 offenders.	Police arrest data.	Episodic measurement is used to aggregate multiple offences into daily offending episodes.	Observation period varied between offenders – maximum observation of 18 months.	64% of offenders apprehended during the police operation reoffended within the observation period. 26% committed just one or two new offences, while 37% committed between 3 and 14 new offences. The time taken to reoffend was estimated at around 130 days.

Adult arrestee self-reported prior arrest and imprisonment

There is one major self-report study in Australia that examines the extent to which persons apprehended and detained by the police have a prior arrest or imprisonment history. This is the AIC's Drug Use Monitoring in Australia program, a quarterly collection of information from police detainees in seven police stations or watchhouses (Mouzos, Smith & Hind 2006). It is compiled from data supplied by four jurisdictions: New South Wales, South Australia, Queensland and Western Australia. Using a self-report questionnaire, the police detainees are asked whether they have spent time in prison or been arrested within the 12 month period prior to their current arrest. According to the most recent annual report, in 2005:

- approximately half (54%) of adult police detainees had been arrested at least once in the 12 months before their current arrest, and
- eighteen percent had spent time in prison (Mouzos, Smith & Hind 2006).

By asking the police detainees to self-report prior arrests and periods of incarceration, these measures of recidivism inherit many of the limitations imposed by administrative data in addition to the limitations of the self-report method itself. This is because the police detainees are not asked to identify all episodes of offending in the past 12 months, but rather, only those episodes for which they were arrested or imprisoned. The DUMA study does not seek information about offending episodes that may have been committed but not identified by the criminal justice system.

The rearrest of adult police arrestees

Broadhurst and Loh (1995) undertook a comprehensive prospective recidivism study of all individuals apprehended by police in Western Australia between 1984 and 1993. To be included in the study, an individual must have committed at least one offence during that time, and it was from the time of that offence that subsequent episodes of rearrest were identified. Because of the nature of the study, each police arrestee was observed for as many years as there were between their first arrest after 1984 and the end of the overall observation period in 1993. Multiple charges occurring on any single day were aggregated as a single arrest episode.

Unlike DUMA (Mouzos, Smith and Hind 2006) which looks at an offender's retrospective arrest history, this project followed offenders prospectively. Using a Weibull mixture model in survival analysis, the authors estimated the probability that an offender would be rearrested within 10 years of their first arrest. The key results suggested that the probability of being rearrested was:

- 0.61 for male non-Indigenous offenders and 0.88 for male Indigenous offenders aged between 18 and 21 years (equivalent to 61% or 88% rearrested within 10 years)
- 0.45 for male non-Indigenous offenders and 0.82 for male Indigenous offenders aged between 21 and 25 years
- 0.31 for male non-Indigenous offenders and 0.48 for male Indigenous offenders aged 40 years or more.

Another prospective analysis of recidivism was the ACT Recidivist Offenders Study undertaken by the AIC in 2004 (Makkai et al. 2004). The study, commissioned by the ACT Department of Justice and Community Safety analysed rearrest rates in a sample of high volume property offenders in the Australian Capital Territory. It formed part of an evaluation of a 16-week intelligence led, targeted policing operation during which ACT Policing apprehended 232 property offenders, most of whom were well known high-volume offenders. The evaluation observed each episode of police arrest before and after the first arrest during the operation for up to 18 months. The study found that:

- in terms of prior offending, 77 percent of the offenders had at least one previous arrest, and 18 percent had been arrested 15 or more times before being arrested during the police operation; these offenders accounted for 62 percent of all prior arrest episodes recorded by the sample
- sixty-four percent of the offenders were rearrested within 18 months for at least one other offending episode
- the average number of days before being rearrested was 311.

The ACT Recidivist Offenders Study was unique in that it used recidivism to assess the effectiveness of a policing operation – something normally undertaken using aggregate police data rather than individual recidivism data. Despite this, the results should be considered conservatively because they are not representative of general offender recidivism rates. To be included in the sample, offenders must have been apprehended by the police during the police operation which specifically targeted high volume property offenders. This means that the recidivism estimates may be inflated compared with the general offending population.

Return to custody or supervision among adult community corrections participants

The 2006 ROGS calculated the two-year recidivism rate among offenders released from a community corrections order, where recidivism was taken to have occurred if the offender had some level of recontact with the corrective services agency for either a community corrections or custodial sentence. Recidivism was observed prospectively for a period of two years subsequent to being released in 2002–03. This sample differed from prisoners in that they were subject to less severe custodial sanctions, but nevertheless inherited many of the limitations imposed by utilising corrective services data for identifying recidivism.

The results are presented in Table 8 and indicate that across Australia, approximately 15 percent of offenders released from a community corrections order will be returned to community corrections within two years. This increases to 25 percent (or an additional 10 percent) when any corrective services order is imposed, including imprisonment. There were some differences between the jurisdictions. Western Australia had the highest rate of return to community corrections and corrective services. Note, however, that data were not available for New South Wales, Victoria and the Australian Capital Territory.

These jurisdictional differences should be viewed conservatively as they are also likely to reflect jurisdictional differences in judicial practice and sentencing policy. Each jurisdiction legislates for the administration of criminal justice and sentencing, so the number and type of community corrections options available, as well as who is eligible for such sentencing options, will vary. If community corrections options are used more liberally or for more serious offenders in one jurisdiction than in others, the rates of recontact are also likely to be different in that jurisdiction.

Table 8: Releasees from community corrections orders during 2002–03 returning with a new correctional sanction within two years (percent)

	NSW	Vic	Qld	WA	SA	Tas	ACT	NT	Aust
Offenders returning to:									
Community corrections	na	na	11.3	20.8	14.6	11.0	na	16.2	**15.2**
Corrective services	na	na	19.2	37.6	19.3	25.0	na	26.0	**25.1**

Source: SCRGS 2006:C.13

Summary and comparative analysis

There have been only a few studies in Australia examining recidivism in the general adult offender population. Unlike prison populations who are relatively easy to identify, general offender populations are more difficult to sample. More often than not, research relies on the identification of convenience samples of, for example, police arrestees or community corrections participants. This variation in sample selection results in some differences in the estimation of recidivism. Of the four studies presented, each varied in their sample, data, location and observation period. Not surprisingly, this resulted in different recidivism estimates, but which overall suggested that:

- around half of police arrestees self-report having been arrested at least once in the past 12 months, with 18 percent imprisoned in that time
- more than 60 percent of police arrestees will be rearrested within ten years, but with high volume offender samples being arrested in much shorter time frames
- about one in four adult offenders released from a community corrections order will return to corrections (either as an additional community services or other custodial order) within two years.

Juvenile detainee recidivism

There is no systematic national data collection which provides information about the prevalence of prior imprisonment among juvenile detainees. Recently however, the Australian Institute of Health and Welfare established a national minimum dataset for juvenile justice. It collects data on juvenile contact and multiple episodic contact with the juvenile justice system (AIHW 2006), although the results were not yet available at the time of writing this report.

As with adult prisoners, juvenile detainees are a select group of offenders who can be relatively easily identified through their participation in a custodial corrections order. For this reason, both self-reported and administrative analyses have been conducted to measure the extent of their recidivism and contact with the criminal justice system. Table 9 provides a summary of five key Australian research studies that have used samples of juvenile detainees in their analysis of recidivism.

Table 9: Indicator and index specifications: examples from Australian research, juvenile offenders

Author	Context/sample	Data	Quantification	Observation period	Key findings
Prichard J & Payne J. 2005. Alcohol, drugs and crime: a study of juvenile detainees	This study surveyed the juvenile detainee population in all Australian states and territories in 2004. There were 467 respondents.	Self-reported data	Episode of imprisonment irrespective of offence type	Observation period was retrospective for each detainee's lifetime. The observation will vary depending on the age of the prisoner.	55% of the juvenile detainees reported a prior episode of detention, 34% were detained within the previous 12 months, while 44% were detained in the previous 24 months. The average number of prior detention episodes was three and the average time since the last episode of detention was 14 months.
Buckman J, Livingstone M & Lynch M 2003 Youth justice: criminal trajectories	This study estimated the proportion of Queensland juvenile detainees who progressed to adult corrections, defined as at least one admission to adult custody or participation in an adult supervised community corrections order in Queensland. The sample consisted of 1,503 young offenders aged between 10 and 17 years who had been ordered to serve a supervised juvenile justice order during the 1994–95 year. The observation ended in 2002, after 7 years.	Corrective services data	Episode of imprisonment irrespective of offence type Episode of contact with corrective services as an adult irrespective of offence type	Observation period varied between offenders – maximum was 7 years, minimum was 6 years.	79% of juvenile detainees progressed to adult corrections including both community corrections and custodial care. 49% of juvenile detainees progressed to adult imprisonment. Exploratory analysis revealed that progression to adult corrections was higher for males, Indigenous offenders, offenders living in a low socioeconomic residential location and offenders subject to a care and protection order as a juvenile.

Table 9: Indicator and index specifications: examples from Australian research, juvenile offenders (continued)

Author	Context/sample	Data	Quantification	Observation period	Key findings
Putnins A 2003. Substance use and the prediction of young offender recidivism	This study examined the offending records of 447 youths admitted to detention centres in South Australia. This study also focused on the capacity of the Secure Care Psychological Screening (SECAPS) to predict recidivism.	Court conviction data	Episode of court conviction irrespective of offence type	Observation period was consistent for all offenders – six months of being released from prison	Between 60% and 68% of juveniles had reoffended within six months of release from detention. Recent substance abuse (use prior to detention) was not a strong predictor of reoffending.
Stevenson R & Forsythe L 1998. The stolen goods market in New South Wales: an interview study with imprisoned burglars	This study used a self-reported offending methodology to examine the prevalence of pre-imprisonment custody amongst a sample of burglars imprisoned in NSW. The sample included juveniles.	Self-report data	Episode of offending – burglary offences	Two measures were recorded: one was the number of times burglary was committed in the last free period before the current incarceration. The other was lifetime charges by police.	Estimates of the extent of reoffending show that: the median number of burglary offences committed per month was 12.1 for juveniles.
Victoria. Department of Human Services 2001. Recidivism among Victorian juvenile justice clients 1997–2001	This study measured the reconviction of juvenile offenders within two years of completing a juvenile justice sanction (order). There were 1,527 juveniles included in the study who were placed onto a juvenile justice order in 1997–98.	Corrective services data Court conviction data	Episode of prior contact with corrective services irrespective of offence type Episode of conviction irrespective of offence type	The observation period was both prospective and retrospective. The prospective observation was consistent for all offenders – two years from being released from a juvenile justice sanction.	38% of the offenders had prior contact with the juvenile justice department. 37% of juveniles were reconvicted at least once within one year of being released from a juvenile justice sanction. 49% were reconvicted after two years.

Juvenile detainee self-reported prior arrest and imprisonment

Further to the adult male and adult female DUCO studies, the AIC also surveyed a sample of 467 juvenile detainees in all Australian states and territories (Prichard & Payne 2005). Conducted in 2005 the study used a similar self-report approach to examine the extent of the juveniles' prior detention history (table 10). It showed that:

- fifty-five percent reported a history of at least one episode of prior detention
- thirty-four percent of the juveniles were detained within the 12 months before their current sentence and there was an average of 14 months since the last episode of sentenced detention
- of those juveniles who had been detained previously, there was an average of three incarceration episodes (times sentenced to detention and not including remand).

For comparative purposes, the DUCO adult male and adult female data have been aggregated and presented alongside the juvenile data in Table 10. In all, similar proportions of both samples reported prior detention – 55 percent compared with 59 percent – and both juveniles and adults report an average of three prior incarceration episodes. This is an interesting finding given that prior incarceration history is defined in all three studies as the lifetime experience of prior imprisonment. It is interesting because, as an artefact of age, the juveniles have had less opportunity to be incarcerated than their adult counterparts. This result suggests a more serious or prolific offending profile among the juveniles that would lead to a speedier return to custody. This is partly confirmed by the fact that juvenile detainees were more likely to report returning to prison much earlier than the adults – 14 months compared with 55 months.

Table 10: Self-reported prior imprisonment history, incarcerated adults and juveniles

	Adults	Juveniles
Percentage reporting any prior imprisonment	59	55
Percentage reporting prior imprisonment within the previous 12 months	15	34
Percentage reporting prior imprisonment within the previous 24 months	25	44
Mean (median) number of prior imprisonment episodes	3 (2)	3 (2)
Mean (median) number of months since last time in prison	55 (32)	14 (9)
(n)	**(2,605)**	**(467)**

Estimates exclude cases with missing data

Source: AIC DUCO male, female and juvenile survey 2001, 2003, 2004 [computer file]

In addition to the prior imprisonment estimates, the DUCO juvenile study also examined the retrospective self-reported offending history for a number of different offences in the six months prior to detention. Table 11 presents some additional analyses of these data for five selected offence types: vandalism, motor vehicle theft, break and enter, assault and robbery. The results suggest that of the juvenile detainees:

- more than two thirds had committed at least one of these offence types at a frequency of once a month or more, while 57 percent were engaged at a frequency of once a week or more
- sixteen percent of juvenile detainees reported committing assault at a frequency of once a week or more – this was the case for 30 percent of juveniles committing break and enter offences.

Table 11: Self-reported offending in the six months prior to detention

	Vandalism	Motor vehicle theft	Break and enter	Assault	Robbery	Combined
Nearly every day/every day	9	10	15	2	4	28
A few times a week	8	8	12	7	5	17
About a day a week	6	5	10	7	4	12
About monthly	7	8	11	12	6	12
Less than once a month	16	19	18	29	21	22
Not in the last six months	54	49	34	42	60	7
(n)	**466**	**467**	**467**	**465**	**466**	**467**

Note: The combined category is the maximum frequency reported across all offence types. Estimates exclude cases with missing data

Source: AIC DUCO juvenile survey, 2004 [computer file]

Juvenile detainee reconviction and reimprisonment

As the DUCO study was based on the retrospective analysis of offending and detention it provides limited information about the levels of recidivism likely to be experienced by juveniles as they are released from detention. Two prospective studies of juvenile detainees are now examined. The first was conducted in South Australia and measured the rate of post-release reconviction amongst juveniles (Putnins 2003). The study examined the offending records of 447 youths admitted to detention centres in South Australia and measured recidivism as any proven (i.e. court adjudicated) offence that occurred within six months of release. The results showed that between 60 and 68 percent of the juveniles were reconvicted within six months of release from detention.

The second study was conducted by the Victorian Department of Human Services (2001) which defined recidivism as 'the reappearance of juvenile justice clients in court leading to the further proven offence and supervised statutory order or sentence' (2001: 7). In this study the results showed that of the 373 juveniles released from a custodial order in 1997 (Youth Residential Order or Youth Training Centre Order), 42 percent were identified as recidivists within one year and 57 percent within two years.

The recidivism rates reported by Putnins (2003) in South Australia are considerably higher than in the Victorian study, especially since the observation periods differed. In the Victorian study, juvenile detainees were observed for up to two years, while in South Australia it was for six months. The most probable explanation for the differences in recidivism rates is in the definition of recidivism itself, where the Victorian study counted only those events where a juvenile was retuned to the supervision of the corrective services agency, where as in the South Australian study it was any proven conviction despite the final sentencing outcome.

Transition of juvenile detainees into adult imprisonment

A study undertaken in Queensland on the nexus between juvenile and adult incarceration is of note. This study examined the likelihood that the juvenile detainee would, once released, be subject to a further order of incarceration as an adult (Buckman, Livingstone & Lynch 2003). The sample consisted of 1,503 young offenders aged between 10 and 17 years who had been ordered to serve a supervised juvenile justice order during the 1994–95 financial year. The juveniles were observed for seven years ending in 2002. Seventy-nine percent progressed to adult corrections including both community corrections and custodial care and 49 percent progressed to adult imprisonment.

Summary and comparative analysis

As there is little research which prospectively examines the recontact of juvenile detainees with the criminal justice system, it is difficult to estimate with confidence the recidivism rates for juvenile detainees. Despite this, the available evidence suggests:

- for approximately half of all juveniles in detention across Australia, the current period of detention is not their first
- more than half of the juveniles released from detention will be reconvicted within at least six months
- nearly eight in every ten juveniles released from detention will, within seven years, be subject to supervision – community or custodial – by a corrective services agency as an adult – and almost half will be imprisoned.

Not only are there few studies of the recidivism of juvenile detainees, the analysis and methodology of those that have been conducted differ substantially. The self-reported studies are retrospectively and rely on the capacity and willingness of juvenile detainees to self-report their offending and incarceration histories. The prospective analyses of Putnins (2003), the Victorian Department of Human Services (2001) and Buckman, Livingstone & Lynch (2003) measured recidivism using significantly different data sources in different jurisdictions and over significantly different observation periods.

Juvenile offender recidivism

The majority of recidivism research in Australia has been conducted with juvenile offenders. However, like studies within the adult offender population, these vary considerably in the methods used to select a sample of juvenile offenders. The key findings from a selected sample of research from the Australian literature are summarised, highlighting similarities and differences.

Table 12: Indicator and index specifications: examples from Australian research, juvenile offenders

Author	Context/sample	Data	Quantification	Observation period	Key findings
Doherty J 2002. Repeat contact with the juvenile justice system: apprehensions by police	This study looked at the extent of juvenile contact with the police by examining the proportion of all juvenile police apprehensions recorded in South Australia (8,992) that were attributable to recidivist offenders. There were 5,352 young people aged between 10 and 17 who were apprehended during 2000.	Police apprehension data	Episode of police apprehension irrespective of offence type or number Discrete offence analysis was also conducted	The observation period varied between offenders – maximum of 12 months.	70% of juveniles apprehended in 2000 were apprehended on just one occasion. 15% were apprehended twice, 7% three times and 8% four or more times in the 12 months Because an apprehension report may include multiple offences, separate analyses were conducted for all recorded offences. 48% of the juveniles had only one alleged offence in 12 months while 21% had two alleged offences, 11% had three and the remaining 20% had four or more alleged offences.
Doherty J 2002. Repeat contact with the juvenile justice system: contact with the Youth Court	This study looked at the extent of juvenile contact with the Youth Court by examining the proportion of all juvenile court appearance recorded in South Australia (8,992) that were attributable to recidivist offenders. There were 1,616 young people who appeared and were fund guilty for a total of 2,052 times in the Youth Court during 2000. The study also examined the prior conviction history of the juveniles who appeared in the Youth Court in 2000.	Court conviction data	Episode of appearance where at least one charge was proven guilty	Observation period was retrospective – examining conviction records dating back to 1996 (four years)	47% of the youths appearing in 2000, had at least one prior conviction dating back to 1996 (four years). 18% had one prior conviction, 11% had two prior convictions and 18% had three or more prior convictions. Exploratory analysis revealed juveniles with a higher rate of prior conviction tended to appear for property offences or offences against the person, and be males and Indigenous.

Table 12: Indicator and index specifications: examples from Australian research, juvenile offenders (continued)

Author	Context/sample	Data	Quantification	Observation period	Key findings
Cain M 1998. An analysis of juvenile recidivism, in Juvenile crime and juvenile justice: toward 2000 and beyond	This report presents the results of a 1996 NSW study into the recidivism of juvenile offenders appearing before the Children's Court between 1986 and 1994. Recidivism was measured for juveniles who were first convicted of a criminal offence in the Children's Court on or after 1 October 1986.	Court conviction data	Appearance before Children's Court 1986–1994	Observation prior varied between offenders – maximum 8 years, minimum less than one year	70% of the juvenile offenders were not reconvicted before the age of 18 years. 15% of the juvenile offenders were reconvicted once only and the remaining 15% were reconvicted on more than one occasion. Exploratory analysis revealed that males were more likely than females to be reconvicted and that the risk of reconviction increased with decreases in the age of first conviction.
Carcach C & Leverett S 1999. Recidivism among juvenile offenders: an analysis of times to reappearance in court	This study examined court appearance data from the NSW Children's Court for a sample of 5,509 juvenile offenders who were convicted in the 1992–93 financial year. These offenders were followed up to 30 June 1997.	Court conviction data	Conviction in the Children's Court	Observation period varied between 4 and 5 years	37% recorded at least one additional court appearance (but not necessarily a conviction). The average time until a subsequent court appearance was 17.9 months
Luke G & Lind B 2002. Reducing juvenile crime: conferencing versus court	This study examines the reoffending patterns of young people in NSW who appeared in the Children's Court in 1997. The purpose of the study was to examine the differences in the reconviction rates between juveniles who attended a juvenile justice conference and those who did not.	Court conviction data (New South Wales Children's Court)	Episode of conviction irrespective of offence type	The observation period varied between offenders, minimum 27 months, maximum 39 months.	38% of juveniles were reconvicted within two years. The difference in reconviction between those who attended court and those who attended a juvenile justice conference was statistically significant. Those attending the conference were less likely to be reconvicted, although the difference was small.

Table 12: Indicator and index specifications: examples from Australian research, juvenile offenders (continued)

Author	Context/sample	Data	Quantification	Observation period	Key findings
Coumarelos C 1994. Juvenile offending: predicting persistence and determining the cost effectiveness of interventions	This study examined the reappearance of juveniles in the NSW Children's Court system.	Court appearance data	Episode of appearance in the Children's court	The observation period varied, depending on the year of first appearance, between 1982 and 1986. All data were censored at 18 years of age.	This study found that only 30% of juveniles reappeared before the Children's court. The remaining 70% seemingly desisted from offending. Later studies demonstrate that many of those that did not reappear as a juvenile, did reappear as an adult in the Magistrates court.
Victoria. Department of Human Services 2001. Recidivism among Victorian juvenile justice clients 1997–2001	This study measured the reconviction of juvenile offenders within two years of completing a juvenile justice sanction (order). There were 1,527 juveniles included in the study who were placed onto a juvenile justice order in the 1997–98 financial year.	Corrective services data Court conviction data	Episode of prior contact with corrective services irrespective of offence type Episode of conviction irrespective of offence type	The observation period was both prospective and retrospective. The prospective observation was consistent for all offenders – two years from being released from a juvenile justice sanction.	38% of the offenders had prior contact with the juvenile justice department. 37% of juveniles were reconvicted at least once within one year of being released from a juvenile justice sanction. 49% were reconvicted after two years.
Chen S et al. 2005. The transition from juvenile to adult criminal careers	This study examined the court appearance data among a sample of 5,476 juvenile offenders who first appeared in the NSW Children's Court in 1995. The juveniles were aged between 10 and 18 years and their recidivism was measured using both Children's Court and Magistrates Court appearance records.	Court appearance data	Episode of appearance	The observation period was consistent for all offenders – eight years from first appearance in 1995.	68% of juveniles reappeared in court (Children's or Magistrates Court). 43% reappeared at least once in the Children's Court. 57% reappeared at least once n the Magistrates court as an adult. 13% went on to receive a custodial sentence as an adult.

Table 12: Indicator and index specifications: examples from Australian research, juvenile offenders (continued)

Author	Context/sample	Data	Quantification	Observation period	Key findings
Skryzpiec G 2005. Young people born in 1984: offending behaviour of juveniles apprehended at least once	This study examined the criminal contact of a birth cohort in South Australia, born in 1984	Police apprehension data	Episode of apprehension	The observation period varied, depending on the age of first apprehension. Data were censored at age 18 years	Of those juveniles in the birth cohort that were apprehended, the majority (57%) were apprehended only once before turning 18. 29% were apprehended between two and four times; 10% between 5 and 10 times and 3% more than 10 times.
Mouzos J, Smith L & Hind N 2006. Drug use monitoring in Australia: 2005 annual report on drug use among police detainees	The Drug Use Monitoring in Australian project examines the link between drugs and crime. The study surveys juvenile offenders each quarter in two NSW police stations: Bankstown and Parramatta. 101 juveniles were interviewed in the 2005 reporting period.	Self-reported data	Episode of previous arrest Episode of previous imprisonment	Observation was retrospective but consistent for all offenders – 12 months	55% of juvenile police detainees in Parramatta and 50% in Bankstown had been previously arrested in the past 12 months. 3% had spent some time in prison in the past 12 months

Juvenile arrestee self-reported prior arrest and imprisonment

Unlike the AIC's juvenile DUCO study, there is no national systematic collection of self-reported recidivism data for a generalised sample of juvenile offenders. As with adult offenders, identifying and sampling juveniles using self-report is difficult and costly. One study, the AIC's DUMA project, surveys juvenile police detainees in two NSW police stations: Bankstown and Parramatta. In 2005, 101 juveniles were surveyed, of whom just over half (50% in Bankstown and 55% in Parramatta) reported having been arrested in the past 12 months. Only three percent reported spending time in detention (Mouzos, Smith and Hind 2006).

The authors caution on the use of these results and their generalisation to the broader juvenile offender population because 'the police are sometimes able to deal with juveniles away from the police station, parents can refuse access to the young person and … the young person can refuse to participate despite the parent agreeing to the interview.' (Mouzos, Smith and Hind 2006: 25).

Rearrest of juvenile police arrestees

A cohort study, conducted in South Australia provides a unique opportunity to examine the extent to which a sample of juveniles will have multiple episodes of contact with the police before the age of 18 years (Skrzypiec 2005). In this study, police apprehension data were used to estimate the proportion of all persons born in 1984 who had been apprehended by the police at least once before the age of 18 years, and for those persons, any subsequent episodes of apprehension. Recidivism in this study was defined as two or more apprehensions before the age of 18 years.

Skrzypiec found that approximately 10 percent of the birth cohort were apprehended once only and seven percent were apprehended on more than one occasion before the age of 18 years. Of all persons apprehended, about 44 percent were apprehended twice, and the average number of apprehensions was 2.7.

There are some limitations to the use of police apprehension data, especially when used to measure recidivism among juvenile offenders. First, apprehension data contain information about only those offences committed by an individual that come to the attention of the police. They exclude matters that are not reported or where there was insufficient evidence to warrant an apprehension. Moreover, the police apprehension data may also exclude an offender's informal contact with the police, such as offences that result in cautioning or diversion. Among juveniles, where both formal and informal cautioning are used most frequently this is likely to contribute considerably to the underestimation of juvenile offending.

Another South Australian study examined the proportion of police apprehensions attributable to juvenile offenders in a 12-month period (Doherty 2002a). The study used data for all police apprehensions in the year 2000, where recidivism was defined as multiple episodes of apprehension during that time. Unlike the South Australian cohort study, where the sample included anyone from an entire birth cohort who was apprehended, in this study, the sample consisted only of those juveniles who were apprehended in 2000. An apprehension episode was defined as a daily apprehension event under which one or more charges were listed. The author found that:

- 5,352 young people aged between 10 and 17 were apprehended in South Australia and accounted for 8,992 apprehension episodes
- the majority of these young people (70%) were apprehended by the police only once in the 12 months of 2000 while the remaining 30 percent were apprehended twice or more
- just over half (52%) of juvenile apprehensions involved multiple charges.

These two studies of juveniles provide an interesting mix of results regarding recidivism, especially since both studies were conducted in South Australia and used the same data source. Despite these consistencies the results are somewhat different. Doherty (2002a) suggests that around 30 percent of juveniles apprehended by the police each year will be reapprehended within 12 months, whereas Skrzypiec (2005) suggests that of all juveniles born in a single year who were apprehended at least once, 44 percent were reapprehended before the age of 18 years. These differences are most likely explained by the length of the observation – with the cohort study examining recidivism for the juvenile's entire lifetime (to age 18), while the 2000 snapshot was for a 12 month period only.

Reappearance in court of juvenile court attendees

In 1999, the AIC released a report into juvenile recidivism using court appearance data from the NSW Children's Court (Carcach & Leverett 1999). A sample of 5,509 juvenile offenders convicted in the 1992–93 financial year was observed up to the four years to June 1997. Because the study used NSW Children's Court records only, the observation varied between offenders from the time of their first appearance to June 1997 or their 18th birthday, whichever came first. To understand the 18th birthday limitation, it is important to recognise that Children's Court data pertain only to those offences committed before the offender becomes a legal adult. This means that any offences committed within the four year observation period, but over the age of 18 years, would be processed through the Magistrates Court and not be included in the Children's Court data. For an offender whose first court appearance in 1992 was at the age of 11 years, their observation would extend for the full four years and end at the age of 15. The observation period for an offender whose first appearance in 1992 was at the age of 17 ends at this offender's 18th birthday, less than one year after their first offence.

Recidivism in this study was defined as any new record of court appearance during the maximum four years of observation. The results showed that one in three (37%) reappeared in the Children's Court, where the average time until a subsequent court appearance was 18 months.

Another NSW study, conducted in 2005 examined data for a sample of juveniles who appeared in the NSW Children's Court for the first time in 1995 (Chen et al. 2005). The sample consisted of 5,476 juveniles who, at the time of their appearance in 1995, were aged between 10 and 18 years. Recidivism was measured as any new offence leading to a court appearance within eight years from 1995.

Unlike Carcach and Leverett (1999) this study examined court appearance data for all subsequent appearances in both the Children's Court and Magistrates Court. This means that recidivism information was not censored at the age of 18 years and adult criminal court appearances could also be examined. Moreover, although both studies used a sample of offenders appearing within a single 12-month period, the total observation period used by Chen et al. (2005) was double that used by Carcach and Leverett (1999). The authors found that after eight years:

- sixty-eight percent of juveniles reappeared in court (Children's or Magistrates Court)
- forty-three percent reappeared at least once as a juvenile in the Children's Court
- fifty-seven percent reappeared at least once as a adult in the Magistrates Court
- thirteen percent went on to receive a custodial sentence as an adult.

Reconviction of juvenile court convictees

Three years earlier than Carcach and Leveritt (1999) and almost ten years earlier than Chen et al. (2005), Cain (1998) conducted a very similar study using data from the NSW Children's Court. The data consisted of court conviction records for all individuals appearing before the court between 1986 and 1994. To be included in the sample, a juvenile offender must have been convicted of at least one offence, and recidivism was determined by any subsequent conviction during the eight year observation period. As with Carcach and Leverett (1999) this study used Children's Court data only, so again the observation period varied between offenders depending on the age at which they were first convicted. The key conclusions of this study were that:

- thirty percent of juvenile offenders appearing before the NSW Children's Court were reconvicted before the age of 18 years
- fifteen percent were reconvicted once only while the remaining 15 percent were reconvicted on more than one occasion
- nine percent of juvenile offenders were responsible for almost one-third of all juvenile convictions.

In terms of Children's Court appearances, the three NSW studies reported that 30 percent (Cain 1998), 37 percent (Carcach and Leverett 1999) and 43 percent (Chen et al. 2005) of juveniles would reappear at least once before the NSW Children's Court. These differences are not small with, for example, 40% more juveniles being classified as recidivists in the Chen et al. (2005) study than in the Cain study. What is interesting is that for the most part, these three studies are quite similar in context – they use similar data sources from within the same jurisdiction and from the same court – and this is what makes their difference more interesting. Consider the following:

- Cain (1998) examined court convictions, not court appearances as in Carcach and Leverett (1999) and Chen et al (2005). This means that not only was the sample of offenders different (convictees vs. all court attendees), so too were the events used to identify recidivism. Convictions are likely to underestimate recidivism compared with attendances.
- Cain (1998) and Chen et al (2005) examined recidivism for up to eight years, whereas Carcach and Leverett (1999) followed offenders for a maximum of four years. Longer observation periods are likely to yield higher recidivism estimates.
- Cain (1998) examined recidivism of any juvenile appearing before the court over an eight year period, whereas Carcach and Leverett (1999) and Chen et al (2005) measured recidivism for a sample of juveniles appearing within a 12 month period only.
- Cain (1998) included those convicted in court as early as 1986, whereas Carcach and Leverett (1999) and Chen et al (2005) examined a sample first appearing in 1992–93, or 1995 respectively. Over this time there were likely to have been considerable changes to the ways in which both the police and the courts dealt with juvenile offenders that may have affected recidivism estimates.

Reconviction of juvenile justice conference participants

Another study conducted in New South Wales was by Luke and Lind (2002). They evaluated the effectiveness of youth justice conferencing in reducing recidivism. The follow up period ranged between 27 and 39 months. Recidivism was measured as any new conviction after appearing in the Children's Court or participating in a youth justice conference in 1997. Using survival analysis the study showed that for all juveniles, regardless of conferencing, the overall probability of reconviction within two years was 0.38 – that is, 38 percent of juveniles were reconvicted within two years.

In 2001 the Victorian Department of Human Services undertook a study of recidivism among 1,527 juvenile offenders in Victoria. The sample consisted of juveniles who participated in a juvenile justice sanction in the 1997–98 financial year. Recidivism was measured as reconviction within two years of completing the justice sanction. The study found that 38 percent of the offenders had prior contact with the juvenile justice department. Thirty-seven percent of offenders were reconvicted at least once within one year of being released from a justice sanction. This increased to 49 percent after two years.

Reconviction and sentence of juvenile community corrections participants

Earlier this report described a study conducted by the Victorian Department of Human Services (2001) which examined recidivism for a sample of clients released from youth justice orders, both custodial and non-custodial. The results presented earlier were specific to those juveniles released from custodial orders and demonstrated a two year recidivism rate of 57 percent. Recidivism of those juveniles who were released from non-custodial orders is examined in this section – where recidivism was identified as any new conviction resulting in a supervision order or sentence. The results demonstrated that:

- thirty-three percent of juvenile probationers, 40 percent of Youth Supervision Order participants and 49 percent of Youth Attendance Order participants had been reconvicted and sentenced within one year
- the reconviction rates increased to 42, 53 and 58 percent respectively within two years.

Summary

In the study of juvenile offenders, recidivism has been measured in many different ways. The samples included police arrestees, court attendees, court convictees and community corrections participants. Moreover, the studies were conducted at different times over the past ten years, in different jurisdictions and using different sources of data. Nonetheless, these studies highlighted several important, if tentative, findings about the recidivism of juvenile offenders:

- generally, juveniles are unlikely to be apprehended by the police more than once in a 12 month period
- approximately half of the juveniles appearing before a Youth or Children's Court will have been previously convicted
- approximately one-third of juveniles appearing in the Youth or Children's Court will be reconvicted before the age of 18. This increases to two-thirds when adult convictions are accounted for.

What is known about recidivist offenders?

Recidivism is as much about knowing when it occurs as who engages in it. As discussed earlier, the analysis of recidivism provides a unique opportunity to develop and implement evidence-based criminal justice policy targeted at high volume offenders. The premise is that by specifically targeting criminal justice resources to recidivist offenders, tangible reductions in crime may be achieved. To do this, policy makers must have an appreciation of the personal, developmental or situational characteristics that give rise to reoffending.

Insofar as a comparative analysis of recidivism rates is hampered by contextual and methodological variance, understanding of the factors associated with recidivism is also affected. What in one study appears to be a significant contributing factor to the propensity for reoffending, in another may be not be an important factor at all. Should we expect that gender, for example, will be equally important as a correlate of reimprisonment as it is for reconviction? Should we expect that if Indigenous prison releasees are more likely to be reimprisoned, that Indigenous arrestees are more likely to be arrested? Perhaps not, given that both the sample of offenders and the measure of recidivism between the studies are likely to be significantly different.

Moreover, in recidivism analysis that seeks to identify correlates of reoffending, we are confronted by two new methodological issues not already discussed in this report. The first is that the definition and measurement of the so called correlates may also vary between studies. For example, the definition of juvenile in one context may be different from another –in Queensland, a juvenile offender was once defined any person under the age of 17 years, whereas in New South Wales, the term juvenile includes persons under the age of 18 years. Another example may be drug use, where one study uses drug dependency as its measure, while another uses frequency of use.

The second issue relates to the methods used to analyse and identify the impact of a correlate on recidivism. Although the purpose of this report is not to describe in detail the number of analytical methods and tests that can be used in recidivism analysis, it is important to recognise that these techniques may also affect whether a factor is identified as significant or not. Multivariate analysis – analysis that takes into account multiple explanatory factors in a single predictive model – offers an advantage in that it can isolate the independent effect of a factor, for example Indigenous status, after taking account of the other factors in the model. What appears as significant in a simple bivariate test of significance, may not be in a more complex multivariate model that controls for other covariates.

This section summarises the key findings from the Australian literature on the correlates of recidivism. Situations are illustrated where the correlates appear consistent across multiple contexts and despite multiple methodologies, as well as situations where they are not.

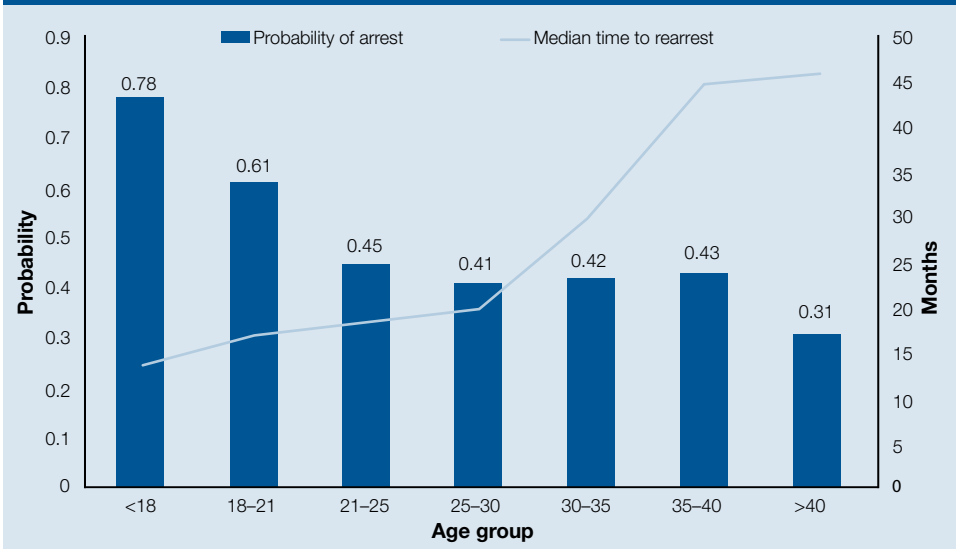
Age

One of the most consistent and long standing criminological findings is the relationship between age and crime, first discovered in the early nineteenth century in the pioneering work of Adolphe Quetelet (1833). Since then, Australian and international studies have repeatedly shown that criminal offending peaks in the mid to late teenage years, before diminishing in adulthood. Interestingly, the age-crime curve has remained constant, despite a long period of change and development in criminal justice policy around the world (Hirschi & Gottfredson 1983).

Given the consistency of this finding, it is not surprising that recidivism also appears to be related to an offender's age. The best known Australian recidivism study to demonstrate this link was Broadhurst and Loh's 1995 Western Australian study. It used official police records from 1984 to 1993 to measure the probability that an offender would be rearrested within the ten years of data collection. Using survival analysis techniques the authors demonstrated that younger offenders – those aged less than 18 years at the time of their first arrest – were more likely to be rearrested than older offenders. Figure 7 illustrates these probabilities along with the median time to rearrest. The median measures how many months it takes for half of all offenders within each age group to have been rearrested. The graph highlights several findings about age and recidivism:

- seventy-eight percent of offenders under 18 were rearrested and the probability is greatest for that age group
- probability declines within age, levelling out at approximately 40 percent for offenders aged between 25 and 40 years; while a recidivism rate of 31 percent demonstrates that offenders older than 40 years were even less likely to be rearrested
- younger offenders are also more likely than older offenders to be rearrested sooner.

Figure 7: Probability of arrest by age, non-Indigenous offenders



Source: Broadhurst & Loh (1995)

Four other Australian studies have demonstrated the link between age and reoffending.

- Makkai et al. (2004) measured the probability of reoffending among a sample of property offenders apprehended in the Australian Capital Territory in 2001. The analysis indicated that juveniles were more likely to have reoffended, and to have reoffended sooner, than adults. This was the case even when controlling for factors such as drug use, prior offending history and Indigenous status.
- Thompson (1995) and Jones et al. (2006) examined the rate of reimprisonment among released prisoners in New South Wales. Their studies showed that the risk of reimprisonment was higher for offenders who were younger at the time of release.
- Ross and Guarnieri (1996) also measured recidivism among a sample of released prisoners. They found that the younger the offender when they first offended, the higher the probability of reconviction and reimprisonment.
- Stevenson and Forsythe (1998) used self-report analysis to examine the frequency of offending among a sample of burglars imprisoned in New South Wales. The study asked offenders to report the frequency of their offending in the months preceding their imprisonment. It found that juveniles reported a higher frequency of offending than adults – 12.7 burglaries committed per month compared with 8.7.

Gender

Unlike age, the link between gender and recidivism is unclear. Of the Australian recidivism studies, some found significant differences between men and women, while others found no difference. In their analysis of West Australian offenders, Broadhurst and Loh (1995) found that regardless of Indigenous status, men were more likely to be rearrested, and rearrested sooner, than women. Their analysis estimated that 52 percent of non-Indigenous males would be rearrested within ten years compared with only 32 percent of non-Indigenous females. Moreover, males were more likely to be rearrested sooner than females – 17 months compared with 27 months (Figure 7). Three other Australian studies have demonstrated a significant gender differential.

- Cain (1998), and Carcach and Leverett (1999), studied juveniles in New South Wales. They found that males were more likely to reappear or be reconvicted in court. Males were also likely to reappear in court sooner than females.
- Doherty (2002a; 2002b) used 12 months of South Australian police apprehension and Youth Court data to measure the prevalence of recontact in 2000. The results demonstrated that males were more likely than females to have multiple episodes of contact with the police and youth court.
- Buckman, Livingston and Lynch (2003) measured the proportion of juvenile detainees in Queensland who progressed to adult corrections within seven years. The results demonstrated that adult males were more likely to be incarcerated as an adult than females.

However, not all studies found major differences between males and females and their levels of recidivism. Thompson (1995) examined the probability of reimprisonment among released prisoners in New South Wales. Thirty-five percent of male and 38 percent of female prisoners were returned to custody within two years – a difference of only three percent. This study was supported by a more recent analysis of New South Wales parolees which found no significant difference in the probability of reconviction or reimprisonment by gender (Jones et al. 2006). Ross and Guarnieri (1996) examined reconviction and reimprisonment amongst a sample of offenders released from custody in Victoria. The study found that approximately 74 percent of offenders would be reconvicted within seven years. However, the analysis was unable to discern any difference between males and females. The Victorian Department of Human Services (2001) measured the rate of reconviction among juvenile detainees and found that males and females were reconvicted at similar rates. Makkai et al. (2004) used survival analysis to predict reoffending among property offenders apprehended by the ACT police. The multivariate survival model found that, after controlling for factors such as age, drug use history, education and Indigenous status, there was no difference in the probability of rearrest by gender.

The difference between male and female recidivism rates is complex. There are almost as many studies that find no difference by gender as those that do. Moreover, gender is one variable unlikely to be defined and measured differently in different contexts. Nonetheless, there are a few important issues worth noting. First, every study that confirmed the gender differential found that females are less likely than males to engage in recidivism. Although the gender differential itself was not well established, the direction appeared consistent. Second, most of the studies that found a difference between males and females examined the juvenile offender population. This suggests that there is strong evidence in Australia that juvenile female offenders are less likely to be recidivists.

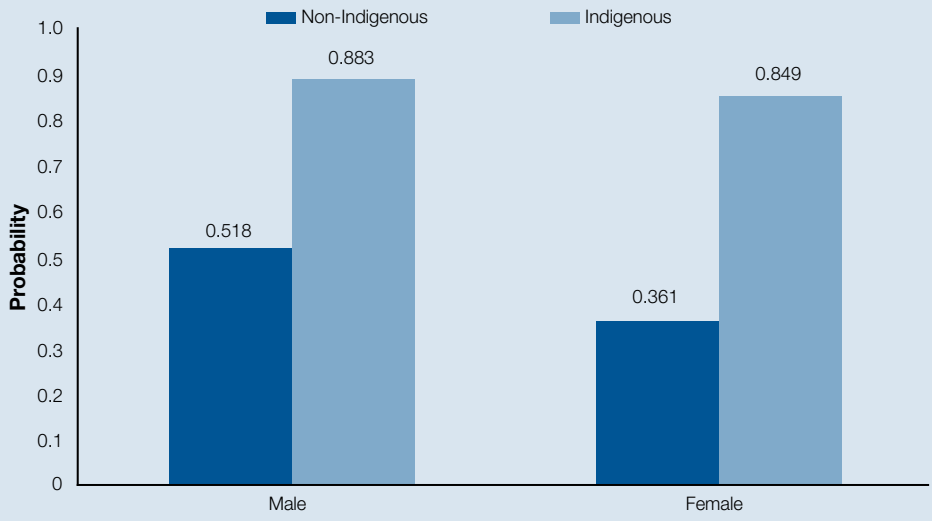
Finally, the gender differential in recidivism rates appears to be related to the offender population studied. Most of the studies that found no gender differential focused on the more serious offender populations – that is, offenders released from prison. Studies that focused on the general offender population – that is, those offenders who came into contact with the police – found that females were less likely to be identified as recidivist offenders. This suggests that at the more serious end of the offending scale, there is no difference between males and females, but for the average offender having contact with the police, gender is an important factor in recidivism.

Indigenous status

The relationship between an offender's Indigenous status and propensity to reoffend has received considerable attention in the Australian recidivism literature. An overwhelming majority of studies find significant differences been Indigenous and non-Indigenous offenders, where Indigenous offenders are more likely to be recidivists.

Broadhurst and Loh (1995) estimated the probability that an offender apprehended in Western Australia would be rearrested within ten years. The probabilities are presented in Figure 8 and illustrate the significant difference between Indigenous and non-Indigenous offenders. Eighty-eight percent of Indigenous male offenders will be rearrested within ten years, compared with 52 percent of non-Indigenous males. Note also that the gender differential noted in non-Indigenous offenders is much less apparent in Indigenous offenders.

Figure 8: Probability of arrest by Indigenous status



Source: Broadhurst & Loh (1995)

Similar differences in Indigenous status are identified in recidivism studies of released prisoners and juvenile detainees. The research consistently shows that released Indigenous prisoners are more likely to be reconvicted (Jones et al. 2006; Victoria Department of Human Services 2001) or reimprisoned (Jones et al. 2006; Thompson 1995) than their non-Indigenous counterparts.

One study found that Indigenous status was not a significant factor associated with rearrest. Makkai et al. (2004) used multivariate survival analysis to predict rearrest among a sample of property offenders apprehended in the Australian Capital Territory. The analysis controlled for factors such as education, drug use history, gender, age and offence history, and found that Indigenous status was not a distinguishing factor. The advantage of this analysis was in the number of factors accounted for in the model. The results were significantly different from most of the research on this topic. However, this study highlights the importance of understanding that several other factors, in addition to a person's Indigenous status, influence the likelihood of them being rearrested.

It could also be argued that the differences between Indigenous and non-Indigenous offenders are the result of differential rates of detection rather than differences in each offender group's propensity for reoffending. Cunneen (2001), for example, argues that Indigenous overrepresentation in prison arises from systemic bias against Indigenous people within the criminal justice system, including the impact of overpolicing. There is some evidence to suggest that this is a factor for specific types of offences, such as public order offences (Jochelson 1997), although other evidence suggests that systemic bias is not the only explanation (Weatherburn, Fitzgerald & Hua 2003). It is possible that all or part of the difference in recidivism between Indigenous and non-Indigenous offenders is attributable to factors other than the propensity for reoffending.

Criminal history

In recidivism analysis, criminal history refers to several different indicators showing an offender's prior offending profile. These include:

- the age of first or regular offending – criminal career
- the number and type of offences committed prior to being included in the sample
- prior contact with the criminal justice system including the police, the courts and corrective services.

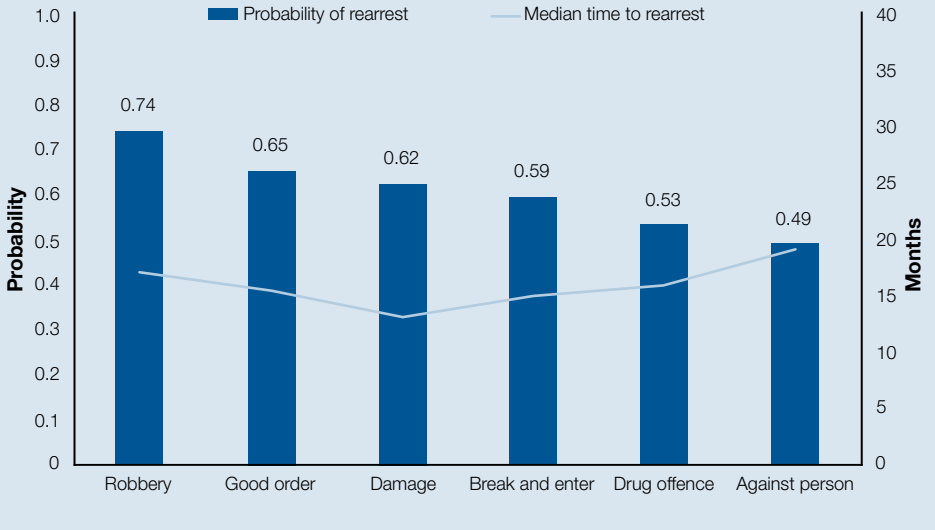
The point at which an offender begins their offending career (age at first offence) is consistently demonstrated as a significant factor linked to higher levels of offending. Recent self-report studies of incarcerated offenders highlight this finding as significant for adult males, adult females and juveniles (Johnson 2004; Makkai & Payne 2003a; Prichard & Payne 2005). The advantage of the self-report studies is that the age of first offence is not the age of first contact with the police, but rather the actual age the offender first reports engaging in criminal activity. The disadvantage is that it is possible that offenders cannot recall with accuracy their first offence and make a guess. Sometimes this guess might better reflect significant events in that person's life, such as their first arrest, rather than when they first engaged in offending.

Makkai et al. (2004) found that of the offenders apprehended in the Australian Capital Territory in 2001, those with 15 or more prior arrest episodes were first arrested at an average age of 18 years. This compared with 21 years for offenders with only one or two prior arrest episodes. Similarly, in their study of recidivism amongst adult Victorian prisoners, Ross and Guarnieri (1996) found that the risk of reconviction and reimprisonment increased as the age of first offence decreased. Cain (1998) found that the younger juvenile court convictees were at the time of first conviction, the more likely they were to be reconvicted before the age of 18 years.

Current offence type

The term 'current offence type' in recidivism research generally refers to the offence that occurred at the time of sample selection. For example, Carcach and Leverett (1999) studied the reappearance of juveniles who first appeared before the NSW Children's Court in the 1992–93 financial year. The most serious offence that led these juveniles to appear was used to define the offender's current offence type. The research was then interested in whether offenders, categorised on the basis of their offence type, were more or less likely to reoffend compared with offenders of other offence types. Broadhurst and Loh (1995) examined the probability of reoffending for offenders who were first apprehended for property or violent crimes. Their results (Figure 9) found that offenders apprehended for robbery had the highest probability of reoffending, followed by those apprehended on good order, property damage and break and enter charges. Violent offenders – those apprehended for offences against the person – were the least likely of all offender types to be rearrested.

Figure 9: Probability of rearrest by offence type, non-Indigenous offenders



Source: Broadhurst & Loh (1995)

Several studies used the primary offence type that led to the period of incarceration to examine the probability of reoffending among released prisoners. Thompson (1995) found that in New South Wales the probability of reincarceration for a sample of released prisoners was higher among property and assault offenders than for drug, fraud, robbery and sex offenders. Similarly, reconviction rates varied between aggregate offence categories. Those imprisoned for break, enter and steal, or motor vehicle theft were more likely to be reincarcerated than those previously incarcerated for receiving stolen goods and malicious damage. Ross and Guarnieri (1996) examined reconviction rates of released prisoners in Victoria. They found that they were higher for property and assault offenders (81% and 77% respectively) than for sex and homicide offenders (51% and 46% respectively). In their study of imprisoned burglars in New South Wales, Stevenson and Forsythe (1998) examined whether differences in reoffending could be attributed to differences within specific offence types, rather than between aggregate offence typologies. They divided burglary offenders into commercial or residential burglars. The results demonstrated that self-reported frequency of offending was higher for residential than for commercial burglars.

As with adult offenders, research on the effect of prior convictions and incarceration produced mixed results for juvenile offenders. In a retrospective study, Doherty (2002b) found that juveniles with a higher rate of prior conviction tended to be those appearing in court for property offences and offences such as burglary and larceny than those appearing for violent crimes against the person.

Luke and Lind (2002) conducted an evaluation of juvenile conferencing in New South Wales and found that both the rate and time to reappearance in court were affected by current offence type. Controlling for gender, age and participation in conferencing, the authors found that theft offenders were more likely to reoffend and to reoffend at a higher frequency than serious violent (robbery, homicide, etc) and other offenders (drug, good order, weapons etc). They were not more likely to reoffend than less serious violent offenders (common assault, minor sexual assault).

Cain (1998) found that juveniles in New South Wales were more likely to be reconvicted if their first conviction in the Children's Court was for common assault, break and enter or motor vehicle theft.

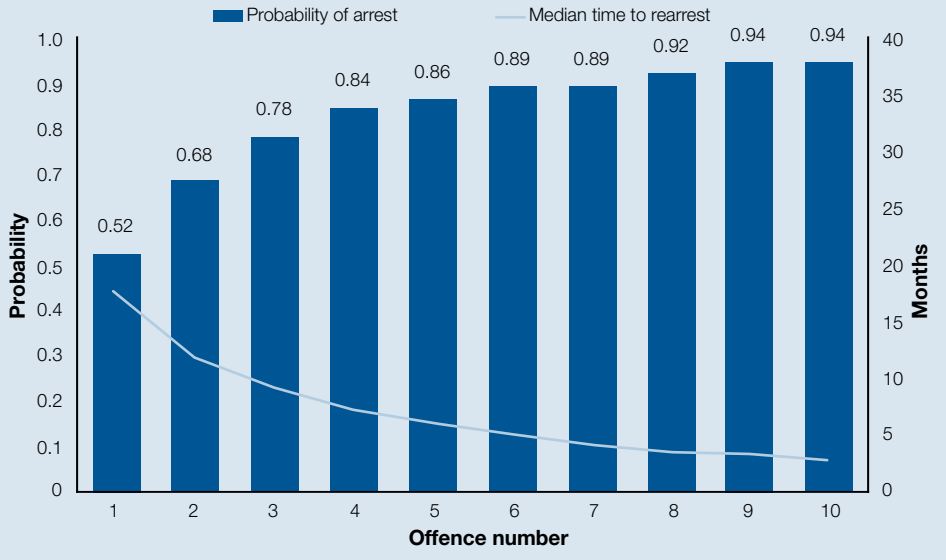
Buckman, Livingstone and Lynch (2003) examined the extent to which juveniles serving a supervised juvenile order between 1994 and 1995 would progress to adult corrections within seven years. The authors analysed the post-release records of juveniles by offence type. They found that those serving an order for property offences were more likely to receive an adult corrective services order (any order and imprisonment) than were violent and drug offenders.

Among adults and juveniles, current offence type was consistently shown as a clear indicator of recidivism. However, there is limited consistency between the studies in terms of offence definitions and comparisons. Some studies used most serious offence classifications, while others use frequency counts to categorise offenders into offence type groupings. Such variation is likely to have an impact on the resulting comparisons. With most serious offence classification, any offender with a single violent offence is categorised as a violent offender. When frequency counts are used, however, only those whose violent offence count exceeds other offence types are categorised as a violent offender. Despite these differences, offenders incarcerated, apprehended or convicted for property offences are consistently among the groups most likely to reoffend. The relationship with violence is unclear, but may be for the reasons mentioned above.

Finally, this report has focused so far on categorising the current offence by offence type. However, Broadhurst and Loh (1995) examined the probability of rearrest for each successive arrest over a ten-year period. Figure 10 illustrates that, for all offenders, the probability of being rearrested for the first time was 52 percent. Of those offenders rearrested once, the probability of rearrest for the second time increased to 68 percent. This is equivalent to saying that 68 percent of those rearrested for the first time, will be rearrested on a second occasion within ten years. Note also from Figure 10 that the probability of rearrest increases with each successive arrest episode. If an offender is rearrested nine times in ten years, the probability of being arrested a tenth time is 94 percent.

It is possible to use these arrest probabilities to forecast rearrest among a general offender population. The Broadhurst and Loh (1995) study examined all Western Australian police arrest records between 1984 and 1994. Using these probabilities and a random sample of 100 offenders it is estimated that within 10 years, 13 percent of offenders will be rearrested 10 or more times.

Figure 10: Probability of rearrest by rearrest frequency, non-Indigenous offenders



Source: Broadhurst & Loh (1995)

Lifestyle and drug use

There is a large body of research demonstrating a link between an individual's lifestyle and their propensity for offending. These factors are separate from an individual's criminal offending profile and are linked to the types of activities, social networks, and physical and financial circumstances they experience. The literature recognises these factors in two ways: development and situational.

In the developmental sense, lifestyle factors may have a lasting impact on the decisions and activities that are engaged in as juveniles and adults. Developmental factors include the environment in which an individual was brought up. The situational perspective acknowledges that lifestyle factors, as they are currently experienced by offenders, may also impact on the propensity for high volume recidivism. Salmelainen (1995) found that, although somewhat related to development factors, situational factors were more important in differentiating between high and low volume juvenile offenders. The factors most consistently demonstrated in the Australian literature include:

- unemployment – the unemployed, or those without stable or consistent employment, are more likely to reoffend (Baldry et al. 2003; Makkai & Veraar 2003; Makkai et al. 2004; Salmenainen 1995)
- education and schooling – those with lower educational attainment are more likely to reoffend (Prichard & Payne 2005; Salmelainen 1995)
- residential location – those living in low socioeconomic areas including government housing, the homeless, or those with high residential mobility are more likely to reoffend (Buckman, Livingstone & Lynch 2003; Cain 1998; Carcach and Leverett 1999; Makkai et al. 2004; Salmainen 1995)
- family attachment – offenders with limited family support or attachment are more likely to reoffend (Makkai & Veraar 2003; Payne 2005; Great Britain. Social Exclusion Unit 2002)
- mental health – offenders with mental health problems and limited social and medical support are more likely to reoffend
- drug use – drug-using individuals are more likely to reoffend, with differential probabilities depending on drug type, and frequency of use (Makkai et al. 2004; Putnins 2003; Salmenainen 1995; Stevenson & Forsythe 1998).

Post-release difficulties

Finally, it is important to note that some offenders, primarily released prisoners, experience added complexities as they transit into and out of the criminal justice system. It is important to acknowledge that the way the criminal justice system deals with offenders can have significant implications for recidivism. In a comprehensive report on post-release services in Australia, Borzycki (2005) highlighted many of the complexities released prisoners face in addition to the factors highlighted above, during the post-release period. These include:

- inadequate personal identification, resulting in delays in accessing welfare benefits and other services (Great Britain. Social Exclusion Unit 2002)
- limited financial resources, compounded by limited access to welfare benefits and accumulated debt from other justice sanctions (Borzycki 2005; Petersilia 2000)
- limited information about the number and type of social, health and mental health support services that are available – including housing options (Borzycki 2005; NACRO 2000).

Borzycki (2005) also discussed the collateral effect of imprisonment described as 'unarticulated and unintended negative consequences'. These result from the punishment and removal of an offender from mainstream society. Examples include:

- the loss of personal belongings due to the inability to store possessions while in custody (Carnaby 1998)
- institutionalisation and the decreasing ability to live independently, excessive vigilance, aggression, emotional over-control and a loss of self-worth (Borzycki 2005; Haney 2002)
- strengthening of criminal social networks (Western, Kling & Weiman 2001).

Future directions for recidivism research in Australia

Priorities in recidivism research

Recidivism is a key issue on the criminal justice agenda. Preventing reoffending and reducing reincarceration are, among others, key priorities for both state and federal governments – and they should be, because the research clearly shows that a minority of offenders are responsible for the majority of crime.

This report has been focused on improving understanding of recidivism in Australia. It undertook the task of piecing together the underlying conceptual and methodological framework to show that recidivism can be measured in many ways and used for a variety of purposes. At a macro level, recidivism rates provide information that can be used to model the future flow of offenders through the criminal justice system. They can also act as crude performance measures over time as well as to identify whether the criminal justice system is still dealing with a similarly constituted population. On a smaller scale, recidivism measures can be employed to evaluate specific interventions, or to better understand a particular offender group and its likelihood of reoffending. Both levels of analysis have an important place in the future of crime and criminal justice policy development.

Sections one and two of this report described how the context and purpose of recidivism research shapes the methodological decisions made by researchers attempting to measure it. Section three took a closer look at the Australian recidivism literature, describing consistencies and differences in the key findings and their potential relationship to contextual and methodological variations. The report concludes by highlighting that recidivism is best understood, not as a generic term, but rather as a multifaceted term shaped by the purpose and context of within which it is measured. In turn, this determines the specification of the three key elements of recidivism:

- the sample – decisions about who, when and where recidivism analysis is conducted
- the indicator events – the data used to identify them and the rules for counting them
- the observation period – the length of time over which these events are observed.

During this analysis and discussion a number of issues arose. The first was the lack of consistency in the reporting of recidivism research. Of all the independent studies conducted and contributing to the growing evidence base in Australia, there is no consistency how the methodological elements of each study are reported. Although the information is often available, it is not often described in a simple and systematic fashion that allows the consumers of that research – the policy makers and other researchers – to digest and understand it with ease.

Secondly, there is a paucity of ongoing national research that examines recidivism using a consistent methodology across the jurisdictions. The ROGS (SPRGC 2006) and prisoner census (ABS 2006b) are the only national sources of information available, but both studies focus specifically on the prospective and retrospective analysis of persons having contact with corrective service agencies. There is no national research on the prevalence of recidivism at earlier stages of the system, notably at the police and court levels.

Finally, there is no national agenda that sets priorities for research in recidivism. While independent jurisdictional analyses, such as those conducted in New South Wales (Jones et al 2006) and South Australia (Skryzpiec 2006), are being conducted, it appears that they are designed and undertaken to meet the specific internal needs of each jurisdiction, rather than reflecting a set of key national research and policy priorities. Whilst these independent analyses are vital and valuable to developing the national evidence base, there has been little discussion at the national level about formulating a research agenda through which key policy questions may be answered within the recidivism framework.

Given this, there appear to be three national priority areas for the future development of recidivism research. These are to improve:

- the comparability and utility of recidivism research at a national level by developing national measures and definitions that have broad application to police, court and corrective services agencies
- discussion of recidivism at the national and jurisdictional level, with the goal of developing national priorities for future research
- the usability and utility of recidivism research by developing standard protocols for the reporting of methodology – namely the context and specification of the three elements of recidivism.

Priority 1: developing national indicators and a national research agenda

The problem of limited national data on recidivism in Australia, especially at the police and court levels, is not restricted to recidivism, but applies across all areas of criminal justice research. It is not due to the lack of need for such data, but rather, the lack of national systems for capturing criminal justice data. Unlike New Zealand for example, where the criminal justice system operates under a national framework, Australia has eight states and territories within which separate laws exist, and separate agencies operate to administer the criminal justice process. Each state and territory independently manages the collection of criminal justice data (police, court and corrective services), and collection systems vary considerably in the information that is collected and how they are maintained. It is for these pragmatic reasons that national measures of recidivism have not yet surfaced in Australia across all levels of the criminal justice system.

This is not a problem experienced exclusively in Australia – take for example current attempts by the Research and Documentation Centre of the Ministry of Justice in the Netherlands to create an inventory of large scale recidivism research across 33 countries in Europe (Wartna & Nijssen 2006). The project sought to identify the extent of recidivism research and future directions for the development of international comparative data on reoffending. Although international indicators are still being developed, the report showed that at least 14 of the 33 European nations have recently analysed recidivism on a national scale. Interestingly, the authors highlighted many of the definitional difficulties identified in this report. For example, they noted that significant variation exists across the 14 countries in terms of defining the three elements of recidivism.

Nonetheless, Australia still lags behind its overseas counterparts in attempts to develop national recidivism measures. In the United States, the Bureau of Justice Statistics measures recidivism for a national sample of prisoners, as criminal acts that resulted in the rearrest, reconviction, or return to prison with or without a new sentence during a three-year period following the prisoner's release (BJS 2002). In New Zealand, a 2002 report contained national recidivism estimates (Speir 2002) measured as the reconviction of all offenders convicted in the 12 months of 1995.

The purpose and context of national measures

The need for national recidivism measures is clear. However it is important that consideration is given to how such measures may be developed and what they are expected to show: that is, what is their context and purpose? Although recidivism research has the capacity to provide answers to a range of specific policy questions, national measures will most likely be targeted at more generic issues relating to the information needs of the criminal justice agencies from which the data are sought. These generic questions will focus on two key areas:

- effectiveness – to assess the extent to which the criminal justice system has been effective in reducing reoffending
- resource utilisation – to identify the proportion of criminal justice resources that can be attributed to dealing with recidivist offenders.

In the first instance, measuring effectiveness is about measuring the number of individuals who, after having had contact with the criminal justice system, do not return. In this crude sense, those who do return to have multiple episodes of contact are those for whom the criminal justice system was ineffective. Of course there are significant debates about whether recidivism is in itself a good measure of the effectiveness of the criminal justice system, but nonetheless, knowing how many and what type of individuals return to the criminal justice system is important for policy development. This type of analysis is best undertaken using a prospective methodology, following a sample of police apprehendees, court convictees and prisoners to determine how many recontact the system after a specified date. Again, this national analysis is currently being undertaken for prisoners in the ROGS (SPRGC 2006), but similar analysis is missing at a national level for the police and courts.

Measuring the proportion of criminal justice resources involved in responding to recidivist offenders may be best undertaken using a set of retrospective studies. For example, examining the prior criminal justice experience of all persons apprehended, convicted or imprisoned in 2006 would provide information on the number and proportion of those apprehensions, convictions and imprisonment episodes that were attributable to offenders who had already had some contact with the criminal justice system. In turn, this would allow an estimation of the proportion of criminal justice expenditure involved in processing repeat offenders, together with the identification of projected savings that would accrue if recidivism levels were reduced by specified amounts. At the prisoner level, this is already being done by the ABS in their prisoner census (ABS 2006b), but there are no national data on the number of police apprehendees or court convictees with prior criminal justice contact.

More detailed analysis of the extent and seriousness of repeat offenders' prior contact with the criminal justice system, or future recontact, could also be undertaken to identify those particular groups of repeat offenders who were the most heavy or 'top end' users of criminal justice resources. Specific initiatives targeted at subsets of chronic or persistent offenders could then be developed.

Furthermore, changes over time in the proportion of recidivist offenders together with changes in their offending frequency and seriousness would be indicative of changes in the underlying population of offenders who are utilising criminal justice resources. The task would then be to seek explanations for these changes – whether it be changes in policing practices, legislative changes or changes in sentencing – and to identify the resource implications of these changes.

Developing and implementing national measures of recidivism is unlikely to be a simple or straightforward task. This is because, as previously mentioned, each Australian state and territory has an independent data collection framework which may limit the extent to which the standardised data can be retrieved. Nonetheless, the minimum requirements of any national measures of recidivism are that they should be capable of:

- consistent measurement across the jurisdictions in terms of the three key elements of recidivism (sample, indicator events and observation period) – consistency is important for comparative purposes
- being measured in a timely fashion – the currency of the results is important for policy development
- repeated measurement – conducted on an ongoing basis – to provide time series data that allow for the identification of trends and changes which are vital for comparative assessments of effectiveness.

The data required to measure the indicators should also be such that each jurisdiction is able to provide them on an annual basis without high recurrent costs or excessive resource inputs.

A framework for the specification of national indicators

In light of earlier discussions, there are two possible methods for measuring recidivism – as self-reported offending or administratively recorded offending. Self-reported offending studies offer the advantage of being able to capture information about offences that do not come to the attention of the criminal justice system. They do however require significant resources to undertake, and with the sample sizes likely to be needed for national analysis, these costs are likely to be prohibitive.

Although administrative data are limited by the extent to which they underestimate or overestimate true offending levels, they consist of data already being collected for administrative purposes. Aside from their extraction, manipulation and analysis, no additional cost is required in maintaining the systems. It is therefore recommended that national recidivism measures be developed using the administrative data collection systems in each jurisdiction and that the measures be developed for each of the three key levels of the criminal justice system – police, courts and corrections. This means that three samples should be identified, each consisting of persons having contact with the police, the courts or the corrective services agencies. For ease of analysis and interpretation, sample selection will most likely be determined according to a specified time period – such as the 12 months of 2006 – so there would be three national samples:

- all persons apprehended by the police
- all persons convicted in court
- all persons released from prison or other corrective services orders.

Using these three samples, recidivism can be measured both retrospectively and prospectively, but to do so, the specification of the indicator events and the observation periods will need to be formalised. For this, we return to the questions posed at the beginning of this report:

- What data source and which events should be used to identify recidivism?
- What counting rules and methods of quantification should be used?
- Over what time period should recidivist behaviour be observed?

The answers to these questions are best discussed and agreed to by the individuals who work at the coalface of each of the respective levels of the criminal justice system. The police should be best placed to advise on how to develop the measures of recidivism for police arrestees, and similarly, court practitioners for court convictees. As a result of this process, it is likely that the three preferred measures will be those classified as uni-system measures because both the sample and indicator events are identified from data the same level of the criminal justice system. The police need only identify new episodes of police contact for individuals they have already identified as being included in the initial sample. These uni-system measures have the distinct advantage that they only require data from a single agency's database. Most Australian criminal justice agencies provide for the unique identification of offenders within independent systems, however cross-system tracking is only currently available in two jurisdictions. This means that until cross-system tracking capabilities are enhanced across Australia, multi-system recidivism measures may not be feasible as national recidivism indicators in the short term. To this end, three recidivism measures emerge as preferred national indicators:

- the number of police arrestees who are reapprehended
- the number of convicted offenders who are reconvicted
- the number of released prisoners or community corrections participants who are re-sentenced to a corrections sanction.

It is necessary that the development of national measures be conducted in consultation with key practitioner groups from each of the three key criminal justice agencies. This process would assist to document:

- the sample of offenders appropriate for selection and analysis at each level of the criminal justice system
- the data, counting rules and offence classification techniques to be used when identifying and quantifying recidivism
- the observation period necessary to develop useful measures at each level of the criminal justice system.

National recidivism research agenda

The second, but equally important area for further prioritisation is the development of a national recidivism research agenda. Unlike standardised recidivism indicators that provide comparative data across jurisdictions, independent research conducted by research agencies and universities are also valuable to enhance the national evidence base. The AIC's evaluation work on the Queensland Drug Courts (Payne 2005; Makkai et al 2004), OCSAR's 1984 cohort study (Skrzypiec 2005), the Crime Research Centre's research into sex offenders (UWA CRC), or BOCSAR's juvenile transitions study (Chen et al. 2005) are examples of jurisdictional-specific research that provide a unique insight into recidivism and provide answers to specific policy questions that could not be undertaken at a national level. They also highlight the distinctive policy focus of the work undertaken by government research agencies.

The development of a national research agenda would highlight key areas where recidivism research would assist in further developing knowledge on topics of national importance. Current priority areas where recidivism is not well researched in Australia include fraud and white collar crime, transnational crime, cybercrime, domestic and family violence, and recidivism among the mentally ill.

Priority 2: improving capacity

Underlying the development of a national recidivism research agenda, including national recidivism indicators, is recognition that recidivism research requires significant investment. Not all jurisdictions will be able to immediately facilitate recidivism research at every level of the criminal justice system, so national measures and research priorities should be seen as a long term goals. Possibly a more important short term goal is to develop an understanding of the current limitations faced by recidivism researchers and an agenda to be set for working towards improving capacity. There are four key issues likely to impede recidivism analysis at the national, state and territory levels:

- availability of unique person identification numbers
- inter- and intra-jurisdiction variations in data collections
- availability and consistency of key demographic data
- willingness to provide access to administrative data for independent research.

Improving the availability and use of unique identifiers

Identifying an individual offender each time they have fresh contact with a single criminal justice agency is considered a minimum level requirement for recidivism analysis. Such a process is facilitated through the assignment of a unique identification number for an individual on each contact occasion. In New South Wales for example, each offender arrested by the police is given a Central Names Index number. This number is generated at the time of first offence, and linked to the name, date of birth and fingerprint of the offender. The police database is checked for matching details at the time of any subsequent arrest. If the offender already has a police record (and an identification number), the new arrest records are lodged using that identification. A similar process is employed in South Australia where each unique offender receives a unique personal identification number. This number of retained by the police to match future events, and is transferred to the courts, corrections and to juvenile justice units within Families SA.

The use of a unique identification number simplifies the matching of criminal justice records. It is limited, however, to the extent that an offender provides matching information at the time of each arrest. An offender's use of one or more aliases is an example where multiple records may not be linked by a unique identification number. Data recording errors are also a confounding factor. If an individual's name is spelt differently, even if by only one or two letters, or a different birth date is entered, a different identification number may be assigned to that individual.

Not all criminal justice databases provide a unique identification number. Instead, some provide a series of offender based information that may be extracted and matched using complex matching algorithms. Some of these matching techniques are described by Weatherburn, Lind and Hua (2003) in the development of BOCSAR's reoffending database. In essence, where the offender based information in a database entry mirrors an earlier or subsequent entry, the two records are taken to pertain to the same offender. There are several limitations in matching records using information fields such as name and date of birth. Lind (2003) reports that the quality of the matching process is highly reliant on the quality of the original data. It can be disrupted when data entry processes have resulted in typographical errors such as misspelt names and variations in the date of birth or when an individual offender uses multiple names or aliases.

In either case, it is clear that recidivism analysis requires the capacity to identify each criminal event belonging to an individual within and across different data systems. Intra-system identification is the minimum requirement necessary for the proposed national measures, although the preferred standard, to be included on a forward working plan, would be the implementation of unique identification across all systems in the criminal justice process. Currently only South Australia and the Northern Territory have the capacity to routinely match and track offenders in this way: other jurisdictions, including Victoria, Queensland, Western Australia and Tasmania, are developing integrated justice data systems to allow offender tracking across multiple systems. The Australia Bureau of Statistics is undertaking a feasibility study to assess jurisdictional capacity to measure recidivism.

Understanding inter- and intra-jurisdiction variation

Aside from the issues of unique person identification, there are three factors that limit current ability to undertake national recidivism research. The first is jurisdictional variation, where each jurisdiction employs different data collection methodologies and data definitions and where ultimately, standardised methodological specifications of the key elements of recidivism are likely to be difficult to implement.

The second is longitudinal variation which results when separate data systems are used to capture similar information, but at different points across an individual's life course. A classic example is that of court appearance and conviction data which, in some jurisdictions, is split between the Children's Courts and Magistrates Courts. Court records for people under the age of 18 years are recorded in Children's Court collections, while all criminal conviction records from 18 years onwards are recorded in the adult court collections. This longitudinal variation in data collection may have implications for the identification of retrospective and prospective recidivism where juvenile records are concerned.

The third limiting factor, procedural variation, is a product of the jurisdictional and longitudinal variations, but is not limited to when an offender is processed, but also, where the information is stored. Not all records of arrest are held by the police and not all records of conviction are held by the magistrates Court. At each level of the criminal justice system there are other agencies with some responsibility for the processing of offenders. If these agencies maintain separate data collection systems, recidivism identification may be impeded. A common example is that court records may be maintained separately at different levels of jurisdiction within the court system – such as the magistrates, district or supreme courts.

Increasing the quality and availability of key demographic data

Understanding recidivism is as much about knowing how much there is and how often it occurs, as it is about understanding who engages in it and why. To answer these questions, researchers need to know more about recidivist offenders than simply the number and type of offences they commit. Key indicators discussed earlier suggest that an offender's demographics and prior criminal history are important indicators of recidivism that should not be overlooked. There is little doubt that national and jurisdictional analyses of recidivism would be enhanced by the systematic collection of key demographic information such as an offender's age, gender and Indigenous status, among others. Increasing the availability of such information requires improvements in data collection within and between jurisdictions.

There are further considerations in discussing the improvement of data collection systems. Who should be responsible for collecting the information? How will this information be stored and shared between data systems? Consider the example of an Indigenous offender, apprehended for the first time by the police, prosecuted in the local court and sent to prison. When the offender is first arrested, should the arresting officer be responsible for recording the offender's Indigenous status? How should it be collected? When the offender appears in court, will the court clerks also record Indigenous status or will the police give that information to the court? If the court collects the information, and the police do not, will it be passed back so that the police record contains it after conviction? Will the agency collecting the information collect it at each consecutive contact with that offender or will the data be transferred between records? If the data are collected with each contact, how will data discrepancies be dealt with?

These are just some of the questions that require consideration in the development of standardised data collection methodologies. A national minimum data framework for recidivism indicators is needed that details what information should be collected across the jurisdictions, and how it should be collected. The ABS's recent work in developing the standard Indigenous identification question is an example of what is needed to ensure consistency across states and territories.

Improving access to criminal justice data sources

Not all Australia's recidivism research in the past 10 years has used large scale criminal justice databases. In some cases, restrictions were imposed by specific research questions and design. In others, there were restrictions due to limitations imposed on access to data from administrative databases. There are ethical and privacy issues in the use and distribution of data from administrative databases, for the most part so that specific offenders cannot be identified. To date, individual jurisdictions and agencies have been cautious about providing data to external research agencies and this has impeded recidivism analysis.

There are risks associated with distributing administrative data. Sometimes, however, unrealistic restrictions have been imposed, well beyond the actual level of risk involved. Once data have been linked across systems and cleaned, researchers have the capacity to confidentialise data records and prevent the identification of individuals. Researchers are also responsible for guaranteeing the appropriate use and confidentiality of their data procedures through strict ethical guidelines. If Australia wishes to enhance its statistical and empirical knowledge of recidivism, more cooperative and productive relationships between researchers, policy makers and practitioners are needed to ensure that the research is able to answer the questions that policy makers and practitioners ask.

Priority 3: standardising methodological reporting

Priority three relates specifically to the development of standardised protocols in the methodological reporting of recidivism analysis. The bulk of this report has been dedicated to describing the difficulties associated with the interpretation of recidivism research. For the most part, these difficulties result from the non-comparability of studies across the key elements of recidivism, but confusion also results from the inability to clearly identify these elements in the written text. A level of standardisation is needed in the methodological reporting of recidivism analysis, which clearly specifies the context within which the sample was chosen and key elements. The minimum reporting requirement should include details of:

- the sample and how it was chosen (including who, when and where the analysis was undertaken)
- the data source used to identify recidivism
- the quantification and counting rules applied to criminal events (including the aggregation methods and offence classification schemes used
- the length of the observation period (and how that observation period varied across the sample.

Researchers should also provide a clear discussion of the limitations of the chosen methodology and its implications for interpretation and generalisation.

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Appendix A

Selected recidivism research 1995–2006

Author	Publication year	Title	Key recidivism findings	Comments
Salmelainen P	1995	The correlates of offending frequency: a study of juvenile theft offenders in detention	This study examined the self-reported offending frequency for a sample of 247 juveniles detained in NSW for a most serious offence of break and enter, motor vehicle theft or shoplifting. The results indicated that in the six months immediately preceding the arrest which led to their detention, the self-reported (median) offending frequencies were: • one shoplifting offence per week for those who reported shoplifting • one break and enter offence every three weeks for those who reported break and enter • one motor vehicle theft every four weeks for those who reported motor vehicle theft.	The main purpose of this study was to identify the causes and correlates of high volume offending among juvenile detainees. The exploratory analysis illustrated that factors relating to current lifestyle were more important for predicting high volume offending than developmental factors. These lifestyle factors were: • level of school attendance • residential mobility • employment • use of drugs and poly drug use.
Thompson B	1995	Recidivism in NSW: general study	This study aimed to identify the prevalence of recidivism among prison releasees in NSW. Recidivism was defined as returning to prison within two years of release. The results were: • 35% of males were retuned to prison within two years • 38% of females were returned to prison within two years.	The recidivism rate was higher for: • younger offenders • offenders with prior imprisonment • offenders with a higher security classification at the time of discharge • offenders sentenced for and property, violent offences compared with drug and sex offences • Indigenous offenders.

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Broadhurst R & Loh N	1995	Re-arrest probabilities for the 1984–1993 apprehended Western Australian population: a survival analysis	This study estimated the probabilities of being re-arrested within the 10 year data collection. The probabilities were: • 0.52 for male non-Indigenous offenders • 0.36 for female non-Indigenous offenders • 0.88 for male Indigenous offenders • 0.85 for female Indigenous offenders.	Re-arrest measures were taken as the second episode of arrest within the 1984–1993 data period. The first arrest recorded between these dates was taken as the first offence, although it may not have been that offender's first offence. Variations in re-arrest probabilities were estimated for the Indigenous and non-Indigenous populations, although other variables that were linked to increased probabilities were: • age • number of times arrested • occupational status • offence type and bail status • place of birth.

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Harding R	1995	Aboriginal contact with the criminal justice system and the impact of the Royal Commission into Aboriginal Deaths in Custody	In an examination of arrests recorded in Western Australian between 1990 and 1993 the researcher found that: • in 1990, 86,079 charges were attributable to 39,097 individual offenders – an average yearly charge rate per offender of 2.2 • in 1993, 78,859 charges were attributable to 34,602 individual offenders – an average yearly charge rate per offender of 2.3. Using analysis by Broadhurst (1993) the report showed the probability of reimprisonment in the first instance as: • 0.43 for male non-Indigenous offenders • 0.36 for female non-Indigenous offenders • 0.76 for male Indigenous offenders • 0.66 for female Indigenous offenders.	
Wundersitz J	1996	Juvenile justice, in Crime and justice: an Australian textbook in criminology	Using data from a Morgan and Gardner (1992) study, this report highlighted that: • 21% of a South Australian 1972 birth cohort had some contact with the juvenile justice system within the juvenile years • of those who had contact, 35% had multiple episodes of contact • a small proportion (5%) recorded more than five episodes of contact. Similar results were found in another South Australian study (Department of Family and Community Services 1991).	It was identified that Indigenous juveniles had higher rates of contact and recontact with the juvenile justice system.

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Ross S & Guarnieri T	1996	Recidivism rates in a custodial population: the influence of criminal history, offence and gender factors.	This study followed 838 offenders released from prison in Victoria between 1985 and 1986. The results indicated that: • within seven years after release 74% were reconvicted for at least one offence • around 25% were reconvicted within three months of release • within seven years after release, 54% were reimprisoned at least once.	Recidivism was measured as reconviction and reimprisonment. Other findings were: • male and female prisoners were equally likely to be reconvicted and reimprisoned • risk of reconviction was higher for offenders with younger ages of first offence and/or a greater number of prior offences • risk of reconviction and reimprisonment was higher for those convicted of property offences.
Western Australia. Parliament. Select Committee Into the Misuse of Drugs Act 1981	1997	Taking the profit out of drug trafficking	This study examined the offender profiles of those arrested for drug offences in Western Australia in 1996. The analysis was undertaken to determine whether the arrest offender was a 'old' offender – defined as an offender with a prior record of conviction. The results indicated that the proportion of the 1996 drug arrests attributable to 'old' offenders were: • 71% for drug possession and trafficking offences • 87% where the possession offence was for heroin, and 70% for cannabis • 77% where the trafficking offence was for heroin and 69% for cannabis.	

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Queensland. Criminal Justice Commission	1998	Prisoner numbers in Queensland: an examination of population trends in Queensland's correctional institutions	This report highlighted two measures of recidivism: the number of offenders admitted to Queensland prisons previously sentenced to prison; and persons returning to prison as a result of the revocation of a post-release order. The estimates are: • 72% of offenders sentenced to imprisonment in a lower court had been previously convicted by a lower court • 24% of offenders sentenced to imprisonment in a higher court had been previously convicted by a higher court • 62% of Queensland's prisoners were known to have had previously been imprisoned • Approximately 12% of all admissions to Queensland prisons in 1997–98 were the result of the revocation of a post release order, and a further 14% due to breaches of court orders.	
Stevenson R & Forsythe L	1998	The stolen goods market in New South Wales: an interview study with imprisoned burglars	This was a self-reported offending study amongst a sample of burglars imprisoned in NSW. Estimates of the extent of reoffending showed that: • the median number of burglary offences committed per month was 8.7 for adults and 12.7 for juveniles.	The results also showed differences in the offending frequency rate for the following offenders: • heroin users (13.0 vs 8.7 median offences) • commercial burglars (8.7) compared with residential burglars (12.8) • the risk aware (8.3) compared with the risk unaware (13.0).

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Cain M	1998	An analysis of juvenile recidivism, in Juvenile crime and juvenile justice: toward 2000 and beyond	This report re-presented the results of a 1996 NSW study into the recidivism of offender appearing before the Children's Court between 1986 and 1994. The key conclusions were: • 70% of the juvenile offenders were not reconvicted before the age of 18 years • 15% of the juvenile offenders were reconvicted once only (one conviction subsequent to the first) • the remaining 15% were reconvicted on more than one occasion • 9% of juvenile offenders were responsible for almost one third of all juvenile convictions.	The study analysed the recidivism of juveniles who: • were first convicted of a criminal offence in the Children's Court on or after 1 October 1986 • had reached the age of 18 by 1994. Analysis revealed that: • males were more likely to be reconvicted • risk of reconviction increases with decreases in the age of first conviction • reconviction was higher where the first conviction was common assault, break and enter or motor vehicle theft • juveniles given a custodial sentence as the first sanction were more likely to be reconvicted • reconviction rates differed by region and court location.
Carcach C & Leverett S	1999	Recidivism among juvenile offenders: an analysis of times to reappearance in court	This study examined court appearance data from the NSW Children's Court for a sample of 5,509 juvenile offenders who were convicted in the 1992–93 financial year. These offenders were followed up to 30 June 1997. Recidivism was defined as any subsequent conviction during this time. The results showed that: • 37% recorded at least one additional court appearance (but not necessarily a conviction) • the average time until a subsequent court appearance was 17.9 months	Analysis revealed that: • males were more likely than females to re-appear and re-appear earlier • juveniles given a supervised correctional order were more likely to reappear than those on non-supervised orders, or those with fines • there was no difference in the re-appearance rates by area of residence • those dealt with by a specialist Children's Court were more likely to reappear.

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Western Australia. Parliament. Standing Committee on Estimates and Financial Operations	2000	Report of the Standing Committee on Estimates and Financial Operations in relation to the financial management of prisons	This report provided two estimates of reoffending: • 52% of juveniles offenders imprisoned will reoffend within two years of release • 31% of adult offenders imprisoned will reoffend within two years of release.	The source of the data used for estimating reoffending is not identified in this report, although it referenced the annual report of the Ministry of Justice. The adult estimates were lower than the 2000-01 estimates from the *Report on government services.*
Victoria. Department of Human Services	2001	Recidivism among Victorian juvenile justice clients 1997–2001	This study measured the reconviction of juvenile offenders within two years of completing a juvenile justice sanction (order). There were 1,527 juveniles in the study with the inclusion criterion that they were placed onto an order in the 1997–98 financial year. The study found that: • 38% of the offenders had prior contact with the juvenile justice department • within one year of the index offence, 37% of juveniles were re-convicted at least once, increasing this increased to 49% after two years.	Additional analysis of offender type revealed that: • first time offenders (those whose index offence was their first recorded contact) were less likely to be re-convicted • male and female offenders were re-convicted at similar rates • younger offenders (by age at time of index offence) were more likely to be re-convicted • Indigenous offenders were more likely to be re-convicted.

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Luke G & Lind B	2002	Reducing juvenile crime: conferencing versus court	This study examined the reoffending patterns of young people in NSW and compared the differences in reconviction between juveniles who attended conferencing with those who did not. The follow-up period ranged from 27–39 months. The study used survival analysis to measure the probabilities of reconviction and showed that: • the probability of reconviction within two years of appearing in court in 1997 was 0.38: that is, 38% of juveniles will have been reconvicted within two years • the difference in reconviction between those who attended court and those who attended a juvenile justice conference was statistically significant. Those attending the conference were less likely to be reconvicted, although the difference was small.	Recidivism was defined in terms of reconviction as recorded by the NSW Children's Court. The study noted complications with small sample sizes and short observation periods.

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Doherty J	2002	Repeat contact with the juvenile justice system: apprehensions by police	This South Australian study looked at the extent of juvenile contact with the police. Using police apprehension reports from the year 2000 the analysis found that: • 5,352 young people aged between 10 and 17 accounted for 8,992 apprehensions • 70% of these young people were apprehended on just one occasions with 12 months • 15% were apprehended twice, 7% three times and 8% four or more times in 12 months. Police apprehension reports may include multiple offences so analysis was also undertaken to determine the total number of alleged offences recorded by these young people in 2000: • 48% of the young people had only one alleged offence in 12 months • 21% had two alleged offences, 11% had three and the remaining 20% had four or more alleged offences.	Police apprehension reports may include multiple offences and not include other diversionary options such as police cautioning. Exploratory analysis revealed that the 12 month apprehension result was higher for males and Indigenous offenders.

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Doherty J	2002	Repeat contact with the juvenile justice system: contact with the Youth Court	This South Australian study looked at the extent of juvenile contact with the Youth Court. Using court conviction data from the year 2000 the analysis found that: • 1,616 young people accounted for 2,052 appearances at the youth court where at least one charge for that appearance was proven guilty (conviction); • 53% of the youth appearing in 2000, had no prior conviction dating back to 1996 (four years); • 18% had one prior conviction, 11% had two prior convictions and 18% had three or more prior convictions dating back to 1996 (four years).	Analysis revealed that juveniles with a higher rate of prior conviction tended to be: • appearing for property offences or offences against the person • male • Indigenous.
Allan A et al.	2003	Recidivism among male juvenile sexual offenders in Western Australia	This research used both prospective and retrospective analysis to measure the reoffending behaviour for a sample of 334 juvenile male sex offenders convicted in Western Australia between 1990 and 1998. The index offence was the first sexual offence conviction within this time. The study used court conviction data, supplemented with police arrest data to measure reoffending for up to eight years after the index offence. The results showed: • 48% of the offenders had no convictions prior to the index offence – the index offence was the first recorded conviction • 48% had prior convictions, although only one juvenile offender had a prior conviction for a sex offence • 67% recorded a new conviction after the index offence; the majority were for offences other than sex offences.	

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Kutin J & Koutroulis G	2003	Strike a light: this match didn't work! Evaluation of the Victorian community based corrections treatment and testing policy: does matching to treatment improve outcomes?	This study examined the implementation of the Victorian community based corrections treatment and testing policy. Reoffending was used to measure the effectiveness of a policy that recommended matching offenders to different treatment programs based on detailed assessment. Reoffending was measured for 358 offenders as new offence/charge by police while on a community corrections based order. The results estimated that: • new charges during the community corrections based order were between 28% and 37%.	It was difficult to determine the observation period for this study. The reoffending measures were estimated for the duration of the community corrections based order, but the results did not appear to adjust for the length of time each offender spent on the order.
Putnins A	2003	Substance use and prediction of young offender recidivism	This study examined the offending records of 447 youths admitted to detention centres in South Australia. The measure of reoffending was defined as any proven (court adjudicated) offending that occurred within 6 months of first release from detention. The results showed that: • between 60% and 68% of the juveniles had reoffended within six months of release from detention.	This study also focused on the capacity of the Secure Care Psychological Screening (SECAPS) to predict recidivism. It demonstrated that: • recent substance abuse (use prior to detention) was not a strong predictor of reoffending.

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Hayes H & Daly K	2003	Youth justice conferencing and reoffending	This research paper looked at the effectiveness of youth justice conferencing in reducing reoffending. Reoffending was measured for 89 juvenile offenders as any new official incident to which the police responded by arrest or apprehension after the date of participation in the conference. The observation period was for between eight and 12 months. The results were: • 60% of the juveniles had no official contact with the police after their participation in the justice conference • 17% had one additional contact and 23% had two or more contact incidents.	The definition of reoffending meant that multiple charges were aggregated into apprehension episodes.
Makkai T & Payne J	2003	Drugs and crime: a study of incarcerated male offenders	This study involved an interviewer administered survey of 2,135 male prisoners from Western Australia, Queensland, The Northern Territory and Tasmania. The study asked prisoners to recall their commission of a range of offence types, including how often on average they engaged in those offences and when they started first and regular commission of each offence. • 30% of adult male prisoners had a prior history of juvenile detention • Prisoners had been, on average, charged 41 times, convicted 34 times and sentenced to prison 15 times prior to their current episode of imprisonment. The current episode of imprisonment was, on average, these males offender's third.	Recidivism was retrospectively measured as prior offending and prior imprisonment.

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Buckman J, Livingstone M & Lynch M	2003	Youth justice: criminal trajectories	This study estimated the proportion of juvenile offenders who progressed to adult corrections, defined as at least one admission to adult custody or participation in an adult supervised community corrections order in Queensland. The sample consisted of 1,503 young offenders aged between 10 and 17 years who had been ordered to serve a supervised juvenile justice order during 1994–95. The observation ended in 2002, after 7 years. The results showed that: • 79% progressed to adult corrections including both community corrections and custodial care • 49% progressed to adult imprisonment.	Exploratory analysis revealed that progression to adult corrections was higher for: • males • Indigenous offenders • offenders living in a low socioeconomic residential location • offenders subject to a care and protection order as a juvenile.
Johnson H	2004	Drugs and crime: a study of incarcerated female offenders	This study involved an interviewer administered survey of 470 female prisoners from all Australian states and territories. The study asked prisoners to recall their commission of a range of offence types, including how often, on average, they engaged in those offences and when they started first and regular commission of each offence.	Recidivism was retrospectively measured as prior offending and prior imprisonment.

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Makkai T et al.	2004	ACT recidivist offenders	This study was an evaluation of an intelligence-led, targeted policing operation conducted in the ACT. Operation Anchorage lasted four 16 weeks and targeted known, high volume property offenders, resulting in the apprehension of 232 offenders. The evaluation observed each episode of police arrest prior and subsequent to the first arrest during the operation (index offence). Measured as episodes of offending (daily arrest transactions) the study found that: • 77% of the offenders had at least one prior episode of arrest, and 18% had been arrested 15 or more times prior to the operation (accounting for 62% of all prior arrest episodes recorded by the sample) • 64% of the offenders were rearrested for at least one other episode after their index offence • the average number of free days to re-arrest was 311.	
Smallbone S & Wortley R	2004	Criminal diversity and paraphilic interests among adult males convicted of sexual offences against children	This study examined the offending histories of 362 adult male offenders incarcerated for sexual offences against children in Queensland. Examining the retrospective lifetime conviction history, the study found that: • 64% had at least one previous conviction • 19% had a previous conviction for a sex offence • 52% had a previous conviction for an offence other than a sex offence.	This study relied on the retrospective analysis of official lifetime conviction history as a measure of repeat offending. Note that the sample consisted only of sex offenders.

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Parkinson P et al.	2004	Nonsex offences committed by child molesters: findings from a longitudinal study	This study utilised both prospective and retrospective observation of the offending behaviour for a sample of 30 convicted child molesters. The prospective observation was for up to ten years after the index offence (child molestation conviction) and offending was measured as either the number of charges or convictions recorded by the courts. The results found that of the 30 child molesters: • 60% had at least one other charge by police prior to the index offence, and the average number of charges was 10 • 43% recorded at least one additional charge after the index offence and the average number of charges was 4 • 60% had at least one other conviction prior to the index offence and the average number of convictions was 7.6 • 37% recorded at least one additional conviction after the index offence and the average number of convictions was 4.	In this study reoffending was measured as: • the number of prior charges and convictions recorded for the offender prior to the index offence • the number of charges and convictions recorded after the index offence. The index offence was defined as the child molestation conviction. This study is an interesting demonstration of the difference in reoffending estimates derived when different definitions (charge and conviction) are used.

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Lievore D	2004	Recidivism of sexual assault offenders: rates, risk factors and treatment efficacy	This study used retrospective analysis of sexual assault recidivism using eight years of re-arrest data for a sample of 629 offenders processed in Victoria in 2001 for an arrest relating to sexual assault where the victim was known to be 16 years or older. The results demonstrated that: • 14% of sex offenders were apprehended for at least one sex offence other than the index offence – the maximum number of prior sex offences recorded was 5 • 35% were apprehended for at least one other violent offence prior to the index offence • 55% were apprehended for at least one other offence, including property offences.	This study was a retrospective analysis of the apprehension records of offenders identified has having committed a sex offence in Victoria in 2001. By looking back over eight years, the number of prior apprehensions by police were used as a measure of recidivism. This study also highlighted the important difference in apprehensions vs charges, recognising that a single apprehension (being arrested) may in fact count multiple charges.
Prichard J & Payne J	2005	Alcohol, drugs and crime: a study of juvenile detainees	This study involved an interviewer administered survey of 371 juvenile detainees from all Australian states and territories. The study asked the detainees to recall their commission of a range of offence types, including how often, on average, they engaged in those offences and when they started first and regular commission of each offence.	Recidivism was retrospectively measured as prior offending and prior imprisonment.

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
Chen et al.	2005	The transition from juvenile to adult criminal careers	This study examined the court appearance data among a sample of 5,476 juvenile offenders who first appeared in the NSW Children's Court in 1995. The juveniles were aged between 10 and 18 years and their recidivism was measured using both Children's Court and Magistrates Court appearance records. The report noted that: • The majority (68%) of juveniles reappeared in court (Children's or Magistrates Court) • 43% reappeared at least once in the Children's Court • 57% reappeared at least once in the Magistrates court as an adult • 13% went on to receive a custodial sentence as an adult.	

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
South Australia. Office of Crime Statistics and Research	2005	Crime and justice in South Australia 2004: adult courts and corrections	This report examined the disposition of 38,624 cases by the South Australian Magistrates Court in 2004. The report noted: • more than half (69.7%) of the defendants had at least one previous conviction • the average number of prior convictions was 14 • defendants appearing on serious criminal trespass and robbery had the highest number of prior convictions • one in five (19.9%) defendants had a prior history of adult imprisonment and prior imprisonment was greatest for defendants appearing for serious criminal trespass.	
ABS	2005	Prisoners in Australia, 2005	The ABS prison census is conducted on 30 June each year. The 2005 data collection indicated that: • 60% of prisoners had been in prison on at least one other occasion in their lifetime • the proportion of prisoners with prior imprisonment had increased by about 10% since the 2004 census.	

Selected recidivism research 1995–2006 (continued)

Author	Publication year	Title	Key recidivism findings	Comments
SCRGS	2006	Report on government services 2005	The ROGS report highlights a number of recidivism estimates across Australia as a partial indicator of the effectiveness of the criminal justice system. The report showed that: • 38% of prisoners across Australia were reimprisoned within two years of their release • a further 7% of prisoners were retuned to other corrective services orders within two years – a total return rate of 45% • 25% of offenders released from a community corrections order were returned to corrective services within two years • The rate of return remained relatively stable since the 2000–01 financial year.	
Jones C et al.	2006	Risk of re-offending amongst parolees	This study explored patterns of re-offending among 2,793 New South Wales offenders released to parole supervision in the 2001–02 financial year. Reoffending was defined as reappearance in court, reconviction for a new offence and reimprisonment. The results demonstrated that of the parolees: • 68% reappeared in court within at least two years • 64% were reconvicted • 41% were reimprisoned.	Using survival analysis as an exploratory tool this study also showed that the risk of reoffending was increased for parolees: • with multiple prior imprisonment episodes • with at least one prior drug conviction • who were younger • who were Indigenous • who were given parole by the court rather than the parole authority.

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Program and policy development in the criminal justice arena has become increasingly reliant on quantitative and qualitative evidence to assess efficiency and effectiveness and to guide better practice. Recidivism has received much attention in recent years – the extent to which an individual offender or group of offenders reoffend. Recidivism research provides promise for crime control strategies targeted at reducing reoffending. Identifying recidivism risk factors, understanding the correlates of high volume offending, and evaluating programs designed to reduce offending remain three key research and policy priorities in Australia.

There is still a considerable divide between recidivism research and policy. What policy makers would like to measure is often not the same as researchers are able to measure, given the limitations on appropriate data and available information. As a result, research findings are often used out of context and with little regard for limitations imposed on them by the methodological constraints they face. This is driven primarily by a lack of clarity about an appropriate definition of recidivism and clear articulation of research methodologies.

This report deals with important questions relating to recidivism research. It provides a conceptual framework through which recidivism can be defined and interpreted and arms researchers and policy makers with a battery of tools useful in critical assessment of the research literature.