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Technical and background paper: Measuring juvenile recidivism in Australia

Kelly Richards

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GPO Box 2944
Canberra ACT 2601
Tel: (02) 6260 9200
Fax: (02) 6260 9299
Email: front.desk@aic.gov.au
Website: <http://www.aic.gov.au>

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Foreword

Performance measurement (the use of empirical indicators to measure outcomes that government services are supposed to achieve) has emerged in recent years as a strategy to assist governments assess the impact of their operations, improve service provision and effectively target resources. In the criminal justice sector, recidivism is often used as a measure of the performance of government agencies, such as correctional services and juvenile justice agencies. Recidivism has, however, been identified as a limited and problematic measure of performance, for a range of reasons. It has been argued, for example, that many factors influence whether an offender recidivates, some of which are not within the control of government agencies.

Recidivism is a particularly problematic measure of the performance of juvenile justice agencies, as offending peaks during adolescence. As such, juveniles might be expected to recidivate at a higher rate than adults, irrespective of interventions provided by juvenile justice agencies. Recidivism nonetheless remains one important measure of the performance

of juvenile justice agencies, albeit one that should be cautiously interpreted. This report presents the findings of a literature review and consultations with key stakeholders in each of Australia's jurisdictions on measuring juvenile recidivism. It outlines the limitations of using recidivism as a measure of performance for juvenile justice agencies and presents a range of options for better conceptualising and measuring juvenile recidivism. The report also provides four international examples of recent efforts to adopt more robust and meaningful measures of juvenile recidivism. Finally, 13 principles are proposed that could be used to inform and enhance the measurement of juvenile recidivism in Australia.

Clearly, measuring juvenile recidivism is a challenging task. This study is an important step towards having national data on juvenile recidivism that are both meaningful and comparable across Australia's jurisdictions, and that would contribute towards the development of more effective juvenile justice interventions across Australia.

Adam Tomison
Director

Contents

iii	Foreword	
vii	Acknowledgements	
viii	Acronyms	
ix	Executive summary	
1	Introduction	
1	What is performance measurement?	
4	Measuring juvenile recidivism in Australia	
4	What is recidivism?	
4	Why is it important to measure juvenile recidivism?	
5	What are the limitations of using recidivism as an outcome measure for juvenile justice?	
10	Why does measuring <i>juvenile</i> recidivism pose unique challenges?	
11	How could juvenile recidivism be better conceptualised?	
12	How has juvenile justice performance been measured internationally?	
16	The use of risk assessment tools to measure the performance of juvenile justice agencies	
18	Principles to inform the measurement of juvenile recidivism in Australia	
19	Should the counting unit be <i>juvenile offenders</i> , <i>offences</i> , <i>orders</i> , <i>convictions</i> or <i>sentences</i> ?	
19	Should a <i>prospective</i> or <i>retrospective</i> approach be adopted?	
19	Should juveniles be tracked into the adult criminal justice system?	
20	Should minor offences be included in measures of juvenile recidivism?	
20	Should technical breaches of supervised orders be included in measures of juvenile recidivism?	
20	Should restorations of suspended sentences be included in measures of juvenile recidivism?	
21	Should data from specialty courts be included in measures of juvenile recidivism?	
21	Over what timeframe should juvenile recidivism be measured?	
22	Should pseudo-recidivism be included in measures of juvenile recidivism?	
23	Should <i>offence</i> , <i>conviction</i> or <i>sentencing</i> dates be used to measure juvenile recidivism?	
23	Should offences committed while a juvenile is serving an order be included?	
24	Should frequency and severity of offending be considered in measures of juvenile recidivism?	
26	How should concurrent orders and combined orders be dealt with?	
26	Conclusion	
27	References	

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Acronyms

FDJJ	Florida Department of Juvenile Justice
MSO	most serious offence
PACT	Positive Achievement Change Tool
PAM	Program Accountability Measures

Executive summary

This report provides an overview of the limitations of using recidivism as a measure of the performance of juvenile justice agencies. Based on consultation with key stakeholders in each of Australia's jurisdictions, the report also provides an overview of principles to inform the use of juvenile recidivism as a more robust and meaningful measure of performance.

Limitations of using recidivism as a measure of performance of juvenile justice agencies

Recidivism can be a problematic measure of the performance of criminal justice agencies for a number of reasons, including that

- measures of recidivism can be inaccurate and/or misleading. Although a decrease in rates of recidivism might reflect a genuine decrease in reoffending, this might also reflect other unrelated factors, such as offenders committing less detectable offences, or delays in the processing of offenders;
- rates of recidivism can be influenced by many factors and therefore cannot accurately reflect the performance of a particular criminal justice intervention. That is, many of the factors that influence recidivism are not able to be controlled by criminal justice authorities;
- the length of time over which recidivism is measured impacts on the extent of recidivism uncovered. Generally speaking, the longer the period of time, the higher the rate of recidivism;
- focusing on recidivism renders other (perhaps equally important) outcomes redundant. Criminal justice interventions may be effective at improving

a range of indicators for offenders (eg health and wellbeing; educational and/or employment opportunities), without reducing recidivism. These measures may have an impact on offending trajectories in the longer term and may therefore provide a better assessment of the performance of criminal justice services;

- measures of recidivism assume a steady rate of offending. That is, to say that the recidivism of a cohort of offenders has 'increased' or 'decreased' by a particular percentage following a criminal justice intervention assumes that without the intervention, the cohort would have continued offending at the same rate as prior to the intervention. This may not, however, always be the case; and
- rates of recidivism are often compared with an unrealistic ideal of zero percent, which might be considered unrealistic given the characteristics of offenders whose recidivist behaviour is being measured (ie often serious offenders in detention or under another type of criminal justice supervision).

Using recidivism as a measure of the performance of juvenile justice agencies in particular can be problematic, as

- juveniles have a different offending profile from adults. As a result of a range of factors, juveniles tend to come to police attention more often than adults. The characteristics of juvenile offending may therefore impact on measures of juvenile recidivism;
- offending peaks during adolescence. Recidivism measures of juveniles are therefore calculated for periods when there may be an increase in offending irrespective of the intervention of the criminal justice system; and

- measuring juvenile recidivism requires access to data on offenders in both the juvenile and adult justice systems, as a proportion of juveniles continues offending into adulthood. This may require substantial resources and is not always achievable in practice.

Recidivism has nonetheless been identified as an important performance measure in the juvenile justice system. As such, it is important to consider how best juvenile recidivism could be measured.

Principles to inform the measurement of juvenile recidivism in Australia

Consultations with key staff from the statutory juvenile justice authority in each of Australia's jurisdictions were used to inform proposals for the enhanced measurement of juvenile recidivism in Australia. These are

- that the primary counting unit should be juvenile offenders, rather than offences, orders, convictions or sentences;
- that a prospective, rather than retrospective, approach be adopted;
- that juveniles should be tracked into the adult criminal justice system;
- that minor offences should be excluded from measures of juvenile recidivism;
- that technical breaches of supervised orders should be excluded from measures of juvenile recidivism;
- that restorations of suspended sentences should be excluded from measures of juvenile recidivism;
- that data from specialty courts should be included in measures of juvenile recidivism;
- that juvenile recidivism should be measured over multiple periods of time where possible;
- that pseudo-recidivism (ie when all convictions recorded after an index sentence, including those imposed for offences committed prior to this sentence, are counted as recidivism) should be excluded from measures of juvenile recidivism;

- that offence dates, rather than conviction or sentencing dates, should be used to measure juvenile recidivism;
- that offences committed while a juvenile is serving a community-based order should be included in measures of juvenile recidivism;
- that offences committed while a juvenile is serving a detention-based order should be excluded from measures of juvenile recidivism; and
- that measures of juvenile recidivism should consider frequency and severity of reoffending.

Recommendations for measuring juvenile recidivism in Australia

Based on these principles, it is recommended that a suite of measures be adopted to calculate rates of juvenile recidivism, including

- the proportion of juvenile offenders that recidivates;
- the proportion of juvenile offenders that seriously recidivates;
- the proportion of juvenile offenders that 'progresses' to more serious offending;
- the rate of juvenile recidivism per population;
- the average number of re-offences per juvenile recidivist; and
- the average number of serious re-offences per juvenile recidivist.

As individual measures of juvenile recidivism each have strengths and limitations, these measures should be considered together where possible, rather than in isolation. Using a range of measures to capture levels of juvenile recidivism is a prudent strategy to minimise the limitations of any sole measure.



Introduction

Reconviction rates should not be...the sole measure of success. They are crude proxies for reoffending and a very blunt tool for measuring the desistance process. However...it is likely that reconviction rates will remain a key measure of area performance. How well they fulfil that role depends on a whole range of technical decisions about what is measured and how (Hedderman 2009: 124).

This report presents the findings of an Australian Institute of Criminology study into the measurement of juvenile recidivism and the use of recidivism as a measure of juvenile justice performance in Australia. The study, funded by the Australasian Juvenile Justice Administrators, sought to explore a broad range of areas, including:

- how and to what extent juvenile justice services influence levels of recidivism;
- the limitations of recidivism as a measure of performance (particularly in relation to juveniles);
- the factors that may limit the extent of comparability when measuring juvenile recidivism across Australia's jurisdictions;
- additional or alternative outcome measures that could better assess the effectiveness of juvenile justice services; and

- principles for measuring juvenile recidivism on a comparable basis across Australia's jurisdictions.

In order to interrogate these research areas, a focused international literature review and a series of consultations with senior juvenile justice staff in each jurisdiction were undertaken. This report presents some key findings from the study.

What is performance measurement?

Performance measurement has emerged in recent years as a key strategy to assist governments and other service providers assess the impact of their operations, improve service provision and effectively target resources (Cunneen & Luke 2007; Mears & Butts 2008; Winokur, Tollett & Jackson 2002). A range of definitions of performance measurement have been proposed. The US Center for Accountability and Performance Measurement (cited in Bazemore 2006: v) defines performance measurement as

a method of gauging progress of a public program or activity in achieving the results or outcomes that clients, customers, or stakeholders expect...[it] tells people how well public programs are doing.

Mears and Butts (2008: 266) put forward the following definition of performance measurement:

[Performance measurement involves] the use of empirical indicators to document the extent to which intended services and activities are undertaken and to measure outcomes that are supposed to result from these services and activities (see also JJEC 2004; Thomas 2006).

Why measure the performance of juvenile justice agencies?

Juvenile justice agencies, both in Australia and internationally, have increasingly been called upon to measure their performance (JJEC 2004). Recently, the Florida Legislature mandated that the Florida Department of Juvenile Justice evaluate the effectiveness of juvenile justice programs (Winokur et al. 2005). This demonstrates that the shift towards performance measurement in juvenile justice has even been legislated in some instances (see also JJEC 2004).

In the Australian context, the Australian Bureau of Statistics' (2005) *National Information Development Plan for Crime and Justice Statistics*, which sought to identify Australia's statistical priorities in the crime and justice area, highlighted a number of priority areas relevant to this project, including:

- improving data comparability across jurisdictions;
- developing statistics on juvenile contact with the crime and justice system; and
- developing measures of recidivism.

Meaningful and comparable measures of recidivism were highlighted as a key priority as they can assist with:

- the development of programs that reduce crime and enhance community safety;
- evaluating the performance of the criminal justice system, for sub-populations and as a whole; and
- reducing recidivism (ABS 2005).

Recent audits of both the NSW and Victorian juvenile justice departments have also identified

improved data collection on recidivism as key priorities (NSW Auditor-General 2005; Victorian Auditor-General 2008).

A range of benefits of performance measurement has been identified. Performance measures can:

- assist agencies to identify problems as they arise and allow for action to be taken to address problems;
- assist agencies to identify whether policies are likely to be effective;
- inform evaluation strategies (Mears & Butts 2008);
- enable progress towards achieving goals to be tracked;
- enable the prioritisation of new stakeholders (eg crime victims);
- enable resources to be targeted towards achieving objectives; and
- strengthen practice (Harp et al. 2006).

Reporting on performance measures has a range of benefits, including:

- demonstrating that an agency is operating effectively and that changes have been properly implemented (Mears & Butts 2008);
- increasing public confidence in the system;
- promoting effective service delivery and accountability; and
- assisting policymaking and related processes (Harp et al. 2006).

Bazemore (cited in Thomas 2006) argues that there are three primary reasons for measuring performance in the juvenile justice sector:

- juvenile justice services are publicly funded and carried out for the public good. The public should be able to access information about publicly funded services;
- measuring performance assists organisations to operate effectively, to establish priorities, direct practice and prioritise resources; and
- measuring performance provides empirical support for the theoretical frameworks that underpin juvenile justice services and programs.

What makes good performance measures?

Characteristics of good performance measures include:

- they are widely accepted and meaningful;
- they clearly and empirically demonstrate that goals and objectives are being met;
- they are valid and reliable;
- they are easily understood and unambiguous;

- they are collected, processed and reported in an economic and timely fashion; and
- they are strength-based, not deficit-focused and supportive of continuous improvement (Harp et al. 2006).

As Mears and Butts (2008: 281) argue

the benefits of performance monitoring substantially outweigh its costs, but as with any tool, its impact will be greatest when it is wielded with care and precision.



Measuring juvenile recidivism in Australia

What is recidivism?

The term 'recidivism' originates from the Latin 'recidere', which means to 'fall back'; the term is often used interchangeably with 'repeat offending' or 'reoffending' (Payne 2007). Maltz (cited in Ellermann, Sullo & Tien 1992: 485) defines recidivism as 'the reversion of an individual to criminal behavior after he or she has been convicted of a prior offense, sentenced, and (presumably) corrected'.

In the criminological research literature, the particular element used to determine whether recidivism has occurred (eg re-arrest or a new court appearance) varies depending on the nature of the research project. A range of elements, coinciding with the various stages of progression through the criminal justice system, can be used as a proxy for recidivism. These elements essentially form a continuum from least to most serious interaction with the criminal justice system (ie from police apprehension to reincarceration).

Levels of recidivism can also be measured via self-report survey instruments. That is, offenders can be surveyed about their levels of reoffending once they have been released from custody, or have exited a criminal justice order or program. Surveys of this nature aim to capture 'genuine' levels of recidivism by asking respondents to disclose all

reoffending behaviour, irrespective of whether their offending has come to the attention of the criminal justice system. Although this type of measure addresses the problem of having to use a proxy measure of recidivism, recidivism surveys are also limited, as they rely on offenders' memories and willingness to disclose information about their offending behaviour. Self-report studies have been shown to underestimate the prevalence of reoffending (Cottle, Lee & Heilbrun 2001).

Why is it important to measure juvenile recidivism?

Recidivism is widely acknowledged to be a key indicator of the effectiveness of juvenile justice interventions—'recidivism, or rather the absence thereof, is readily embraced as a valid and efficient outcome indicator' (Wartna 2009: 175). As Cunneen and Luke (2007: 1968) argue

measures of recidivism...appear to now outweigh all other measures when considering the impact of particular criminal justice policies, programs and other types of interventions.

In Australia, the ‘mission statements’ or ‘vision statements’ of all state and territory government departments responsible for providing juvenile justice services reflect the importance placed on reducing recidivism.

The mission statements of departments variously refer to reducing reoffending and reducing the likelihood of reoffending. In some jurisdictions, strategies for reducing recidivism are stated (eg in the Australian Capital Territory, recidivism is to be reduced via the provision of vocational/educational and rehabilitative programs (ACT DDHCS 2009); in the Northern Territory, recidivism is to be reduced via the provision of effective rehabilitation and reintegration programs and services (NT DoJ 2009); and in South Australia, recidivism is to be reduced through appropriate services and programs (SA DFC 2008).

Some jurisdictions’ mission statements refer to reducing recidivism; others refer to eradicating it. In Victoria, young people are to ‘establish crime-free lifestyles’ (VDHS 2010) and in New South Wales, young people are to participate in the community ‘without re-offending’ (NSW DJJ 2009). In some cases, both reducing and eradicating recidivism are stated goals.

Where a reduction in recidivism is not a stated goal per se, broader aims that are likely to either facilitate a reduction in recidivism (eg in Tasmania, juveniles are to take responsibility for their actions (Tasmania DHHS nd)); and in Queensland, juveniles are to be held accountable and be assisted to reintegrate into the community (Qld DoC 2011)) or result from a reduction in recidivism (eg in Western Australia and Queensland, community safety is a stated goal (WA DCS 2010; Qld DoC 2011)) inform mission or vision statements of departments.

The reduction or eradication of juvenile recidivism is therefore a key goal of departments responsible for juvenile justice services in Australia—‘reducing re-offending may seem to constitute their *raison d’être*’ (Cunneen & Luke 2007: 197). In addition, measures of recidivism are often used to determine the ‘success’ or ‘failure’ of individual programs within the juvenile justice arena. Such measures are often

used to determine whether a program or policy can be considered as effective—whether the program can lay claim to being an ‘evidence-based’ intervention in the ‘what works’ approach (Cunneen & Luke 2007: 199).

Given the recent growth of the ‘what works’ and ‘building the evidence base’ discourses (see JJEC 2004), measures of recidivism may be increasingly relied upon to inform criminal justice and juvenile justice policy and practice. Importantly, funding decisions can be based on evidence of the ability of programs to reduce recidivism.

Although recidivism is a limited measure of the performance of juvenile justice agencies (as discussed in detail below), it has been argued that rates of recidivism should still be captured. In particular, it is important for juvenile justice agencies to be able to differentiate between those juveniles who desist from crime and those who become persistent offenders—‘identification of juvenile delinquents most at risk of continued offending and the factors contributing to such persistence is crucial in reducing offending behaviour’ (Watt, Howells & Delfabbro 2004: 142).

What are the limitations of using recidivism as an outcome measure for juvenile justice?

Although recidivism may appear to be a transparent and universal measure of the efficacy of juvenile justice Departments (Cunneen & Luke 2007), it is both limited and problematic, for a number of reasons.

Measures of recidivism can be inaccurate and/or misleading

It is widely acknowledged that measures of recidivism can be inaccurate and/or misleading. A number of factors influence this:

- Measures of recidivism rely on the accuracy of officially recorded administrative data. The use of recidivism as a measure of a department’s success relies on the accurate recording of official data (Friendship, Beech & Browne 2002).
- Official data also substantially underestimate the true extent of recidivism, as only a small proportion of incidents are reported to the police and/or result in charges being laid (Friendship, Beech & Browne 2002; Murphey, Musser & Maton 1998; VDHS 2001),

- It is impossible to measure recidivism directly. Instead, proxies (such as re-arrests or reconvictions) are used. Each of these proxy measures distorts the true picture of recidivism in some way (Cunneen & Luke 2007; Hedderman 2009),
- Measures and studies of recidivism usually do not involve the use of a control group (Cunneen & Luke 2007). Randomised Controlled Trials—which involve assessing the effectiveness of a criminal justice program or intervention by randomly assigning offenders to either a treatment group or a control group—have long been regarded as producing the highest quality evidence available. The use of a control group—that is, a group of offenders who did not receive the intervention, or who received a different intervention—enables researchers to assess the impact of an intervention while controlling for the influence of other variables. It should be noted, however, that the use of control groups is rare in criminal justice research, for a number of reasons. Control groups are often expensive and unwieldy and may raise ethical issues about offenders' access to interventions. Nonetheless, it has been agreed that 'even the most comprehensive long-term measurement and analysis of reoffending is of limited value without the use of an appropriate control group' (Cunneen & Luke 2007: 201). In addition, this type of research is not appropriate for assessing the performance of juvenile justice systems or departments as a whole.
- Where less rigorous methodological approaches are used to determine levels of recidivism, changes in rates of recidivism may be due to factors unrelated to the intervention being measured. An evaluation of the UK's Intensive Supervision and Surveillance Program, for example, found that although a reduction in recidivism was recorded among program participants, a larger reduction in recidivism was recorded among the comparison group (Youth Justice Board of England and Wales 2005). Therefore, without the use of a control group, measures of recidivism can be misleading.
- Variations in the length of time over which recidivism is measured can result in highly varied levels of recidivism being identified—the longer an individual is observed, the more likely it is that recidivism will be identified (Tresidder, Payne & Homel 2009).

- Levels of recidivism may reflect shifts in criminal justice policy or procedure, rather than actual levels of offending.
- Counts of recidivism are something of a blunt instrument—the commission of a new offence does not provide information about the reasons a juvenile has reoffended, or an insight into what might have prevented the act of recidivism (Anderegg 2006).

Therefore, as Tresidder, Payne and Homel (2009) argue, a decrease in recorded recidivism might indicate a genuine reduction in offending. Alternatively, it might indicate, among other things, that:

- offenders committed more covert and less detectable offences, so that while their actual offending continued (or even increased), their apprehensions, prosecutions, convictions and/or sentences decreased;
- offenders were subject to alternative processing strategies that influenced the way in which their offending was dealt with and/or recorded by criminal justice personnel; and/or
- criminal justice processing delays were more substantial than in previous years, affecting the proportion of offenders who were officially counted in recidivism estimates.

Specific measures of recidivism can be limited

In addition to general limitations of using recidivism as a measure of performance, specific measures of recidivism (such as re-arrest, reconviction, or reincarceration) each have limitations.

Using *re-arrests* as a measure of recidivism can result in an overestimation of levels of offending, as not all persons arrested go on to be prosecuted or convicted. Hedderman (2009: 113) argues that 'where there is no clear single suspect, the police may arrest several potential candidates, some (or all) of whom may not be prosecuted or convicted'. This may be particularly problematic in relation to juveniles, who tend to commit offences in groups more so than adult offenders (Cunneen & White 2007). Levels of arrests are also easily influenced by changes in the political climate, including 'get tough' strategies or new policing initiatives (Hedderman 2009). Importantly, changes to policing strategies may

particularly impact young people, whose offending behaviour is more likely to draw police attention than the offending behaviour of adults for a range of reasons, including juveniles' tendency to commit offences in groups and in public, and of an attention-seeking nature (Cunneen & White 2007).

Reconvictions are also a limited measure of recidivism, for a number of reasons. Offenders may be reconvicted for very minor offences, such as traffic infringements or fare evasion offences. While this may constitute 'recidivism' in the strictest sense, it does not necessarily reflect genuine recidivism and does not assist juvenile justice authorities to assess their performance. This issue is most likely to impact on rates of juvenile recidivism, as juveniles are more likely than adults to commit minor offences such as fare evasion (Richards 2009). Conversely, as the vast majority of offences committed by juveniles never come to police attention, reconvictions are very likely to significantly underestimate the true level of offending (Prentky et al. 1997). Hedderman (2009: 113) argues, therefore, that 'reconviction's value as an outcome measure lies in the fact that, quite simply, it is often the only one available'.

Reincarcerations are also a fraught measure of recidivism. Reincarceration may result from a technical breach of a juvenile's parole (Hedderman 2009), rather than genuine instances of recidivism. As noted later in this report, this is currently the case in a number of Australian jurisdictions. Like arrest rates, rates of incarceration can be influenced by changes to legislation, policy and associated procedures. In addition, juvenile detention is regarded as highly criminogenic (Gatti, Tremblay & Vitaro 2009) and juveniles who have been detained are typically very likely to reoffend (Minor, Wells & Angel 2009).

Using police *warnings and/or cautions* as measures of juvenile recidivism could also be problematic, for a range of reasons. Depending on the jurisdiction, police *warnings* do not require any admission of guilt on the part of a juvenile. In addition, they are often not formally recorded. Although police *cautions* are more likely to be recorded and may require an admission of guilt, they remain a limited measure of recidivism as they can be given for very minor offences and, like arrests, are easily influenced by the political climate and changes to policing practices.

Recidivism measures cannot determine the performance of a particular criminal justice intervention

There are a wide variety of factors that influence levels of recidivism, many of which are not able to be controlled by juvenile justice authorities:

[T]he juvenile justice system is just one of many influences in a juvenile's life; one that comes late in the game and realistically has limited time to affect individual offenders (Thomas 2006: 3).

Therefore, while levels of recidivism may reflect on juvenile justice departments, such departments cannot be held solely responsible for recidivism. As Tresidder, Payne and Homel (2009: 8) argue,

recidivism cannot be directly attributed to any one component of the criminal justice process... Further investigation would be needed to clarify what has precipitated the change [in levels of recidivism].

In addition, there is some disagreement about how long the impact of a criminal justice intervention should reasonably be expected to last. The influence of the juvenile justice system on a juvenile is mediated by a wide range of factors (eg the juvenile's peers and family) once the juvenile has left the juvenile justice system. The influence of the system must therefore reasonably be expected to decline over time or cease altogether at some stage.

It has been acknowledged that using recidivism as a measure to compare criminal justice interventions (eg 2 different juvenile justice programs or 2 jurisdictions' juvenile justice systems) can be problematic, as the offenders whose recidivism is measured may have very different characteristics.

[S]hould two programs differ in...the recidivism of participants, this conclusion may not mean that one program is more effective than another. A difference between programs can arise purely because of differences in the types of persons placed into them (Mears & Butts 2008: 281).

As Winokur, Tollet and Jackson (2002: 51) argue if programs were ranked strictly on recidivism, low-risk...[programs]...serving minor offenders, for instance, would *always* fare better than high-risk programs serving youth with serious offending histories [*italics in original*].

This is important to consider, given that Australia's states and territories have juvenile justice systems that vary substantially across a range of domains. Some jurisdictions have, for example, a strong emphasis on diverting juveniles from the formal criminal justice system, including the use of restorative justice programs, therapeutic courts (such as drug and alcohol courts and Koori courts) and other diversionary programs for juveniles. As a result, the rate of juveniles in detention per 100,000 population varies substantially across Australia's states and territories. Victoria had the lowest rate of juveniles in detention, at 14.3 per 100,000 on 30 June 2008, and has had the lowest rate of juveniles in detention per 100,000 population in Australia every year since 1993 (Richards & Lyneham 2010).

Populations of juveniles under the supervision of juvenile justice authorities therefore vary across Australia's jurisdictions. Jurisdictions with a very strong emphasis on diversion, such as Victoria, primarily supervise only those juveniles with the most challenging behaviours and most pronounced criminogenic needs. These juveniles are, as Winokur, Tollett and Jackson (2002) argue, more likely to recidivate than those more minor offenders who are likely to be diverted from the criminal justice system in jurisdictions where a strong emphasis is placed on diversion and rehabilitation. It is therefore likely that jurisdictions with low rates of juvenile detention, such as Victoria, supervise juveniles with particularly challenging criminogenic profiles, who are more likely to recidivate than juvenile detention populations in other jurisdictions. This should be borne in mind when interpreting differences in levels of juvenile recidivism across Australia's jurisdictions.

It should also be noted that Australia's jurisdictions have populations with very varied demographic characteristics. Comparisons of rates of juvenile recidivism across jurisdictions can therefore be problematic, as juvenile offending populations may vary considerably (see Mears & Butts' 2008 and Winokur, Tollett & Jackson 2002 comments above). For the reasons outlined above, calculating rates of juvenile recidivism *per population* is likely to provide a fairer comparison of juvenile recidivism across Australia's jurisdictions than calculating only the proportion of juveniles that recidivate. As described above, in jurisdictions with strong diversionary measures, such as Victoria, the population of juveniles under supervision is likely to consist primarily of very serious and persistent offenders

who are highly likely to recidivate. For this reason, calculating recidivism rates per 1,000 juvenile offenders under supervision is highly problematic and is likely to result in unfair comparisons being made across Australia's jurisdictions. Calculating rates of juvenile recidivism per 1,000 population may help overcome this issue. A population base of 1,000 rather than 100,000 10 to 17 year olds is most appropriate, as the small number of juvenile recidivists may obscure differences among jurisdictions, and changes over time, if a larger base population is used.

Improving research design and investing in high-quality research studies with rigorous methodologies that allow for differences among interventions and across jurisdictions to be controlled for, could also improve confidence in conclusions about the impact of interventions of juvenile recidivism.

Focusing on recidivism renders other (perhaps equally important) outcomes redundant

It has been argued that more meaningful measures of the performance of juvenile justice departments would relate to the period of time during which the juvenile is under the care of the system.

The processing of cases involves many other performance-relevant indicators...that occur within the system (i.e., while youth are being processed or are under direct control of the system) and arguably constitute important outcomes (Mears & Butts 2008: 267).

As a corollary, it has been argued that undue emphasis is given to recidivism and that there are more directly relevant measures that could be used to assess the performance of juvenile justice services (Mears & Butts 2008). Juvenile justice interventions may be effective at improving a range of indicators for juveniles, without reducing recidivism. Mears and Butts (2008) suggest, for example, that assessing the effectiveness of juvenile justice interventions at improving the life skills or education of juveniles would be appropriate. Cunneen and Luke (2007) add to this the value of assessing the impact of interventions on juveniles' health and wellbeing, employment skills and/or harmful/risk-taking behaviours. The measures suggested by Mears and Butts (2008) and Cunneen

and Luke (2007) are likely to have an impact on juveniles' offending trajectories in the longer term and may therefore provide a better assessment of the performance of juvenile justice services.

Victim participation and/or satisfaction with juvenile justice interventions that include a role for victims could also be assessed, as could the views of juveniles' families and/or communities about the value of particular programs and their impact on juveniles' behaviour (Cunneen & Luke 2007). The compliance of particular juvenile justice programs with human rights principles and/or the relevant legislation could also be determined to assess the effectiveness of these programs (Cunneen & Luke 2007). For example, the compliance of a juvenile justice department, program or intervention with the *Convention on the Rights of the Child* (United Nations 1990a) or another UN instrument relevant to juvenile justice (see United Nations 1990b, 1990c, 1985) could be used to measure performance.

Cunneen and Luke's (2007) evaluation of the Post Release Support Program in New South Wales demonstrates the limited value of recidivism as a measure of success. This program was found to have had a range of positive impacts on young people, but did not decrease their recidivism in the immediate term. Cunneen and Luke (2007: 12) argue that

if success or failure of the [Post Release Support Program] was measured by recidivism alone, then the results would not be seen as an endorsement of the effectiveness of the program'. As such, while recidivism may be one indicator of the success or failure of a juvenile justice intervention, it should be 'considered in a broader context of evaluative tools (Cunneen & Luke 2007: 12).

Measures of recidivism assume a steady rate of offending

As Hedderman (2009) points out, recidivism analyses assume that offenders would otherwise have maintained a steady rate of offending. That is, to say that the recidivism of a cohort of juveniles has 'increased' or 'decreased' by a particular percentage following their participation in an intervention assumes that without the intervention, the cohort would have

continued offending at the same rate as prior to the intervention. This concern is limited to measures of recidivism that use pre- and post-intervention analyses, rather than those that compare a treatment group with a control group. This point is important to grasp; because many crimes 'peak' in late adolescence (Richards 2011; Watt, Howells & Delfabbro 2004), it may be the case that juveniles' offending would actually normally increase over a period of time, rather than remain constant.

Rates of recidivism are compared with an unrealistic ideal

Rates of recidivism are often compared with the ideal recidivism rate of zero percent, which is unrealistic, given the characteristics of offenders whose recidivist behaviour is being measured. This is particularly problematic when the recidivism of juveniles is being measured, as late adolescence has been found to be 'the 'crime prone' years' (Wooldredge cited in Watt, Howells & Delfabbro 2004: 141)—'numerous studies have indicated that offending behavior escalates during early adolescence before peaking in late adolescence, and declines in early adulthood' (Watt, Howells & Delfabbro 2004: 141). As Minor, Wells and Angel (2009) point out, it is rare to find studies of juvenile reoffending that report recidivism rates of less than one-third.

It has therefore been recommended that a 'normal rate' of recidivism could be used as a benchmark against which rates of recidivism are assessed (Cecile & Born 2009). Smith and Jones (2008: 1–2) suggest that

one way to measure improvements in reoffending... is to develop a formula that predicts what the re-conviction rate should be (based on the profile of offenders coming before the court system) and then compare the predicted to the observed reconviction rate (see also Howard et al. 2009).

Although it would be difficult to formulate a base rate of juvenile recidivism that could be agreed upon, one suggestion that has been made is to compare the total number of juveniles sentenced to supervised orders with the total juvenile population, then compare this group with the number of juvenile recidivists.

Why does measuring juvenile recidivism pose unique challenges?

Measuring juvenile recidivism poses unique challenges beyond those of measuring recidivism generally, for a number of reasons.

Juveniles have a different offending profile from adults

On the whole, juveniles have a different offending profile than adults. As Cunneen and White (2007) explain, by comparison with adults, juveniles tend to

- be less experienced at committing offences;
- commit offences in groups;
- commit offences in public areas such as on public transport or in shopping centres; and
- commit offences close to where they live.

In addition, by comparison with adults, juveniles tend to commit offences that are

- attention-seeking, public and gregarious; and
- episodic, unplanned and opportunistic (Cunneen & White 2007).

Some offences committed disproportionately by juveniles, such as motor vehicle theft, have high reporting rates due to insurance requirements (Cunneen & White 2007). In addition, some behaviours (such as underage drinking) are illegal solely because of the minority status of the perpetrator. It is also important to note that broad legislative or policy changes can disproportionately impact upon juveniles and increase their contact with the police. Farrell's (2009) and Walsh and Taylor's (2007) analyses of police 'move on' powers clearly demonstrate, for example, that the introduction of these powers has disproportionately affected particular groups of people, including juveniles. As a result of these factors, juveniles tend to come to police attention more so than adults. The characteristics of juvenile offending may therefore impact on measures of juvenile recidivism.

Offending peaks during adolescence

Offending typically increases from adolescence until early adulthood and then decreases. This is 'one of the most generally accepted tenets of criminology' (Fagan & Western 2005: 59; see also McVie 2009) and the relationship between age and crime has been found to hold, independent of other variables (see Farrington 1986). As Tresidder, Payne and Homel (2009: 34) point out, 'recidivism measures of youth justice clients are...calculated for periods when there is likely to be an increase in individual-level offending'. In addition, 'juvenile delinquents tend to be a population that strongly resists change' (Cecile & Born 2009: 1217).

It stands to reason, therefore, that juvenile justice interventions that do not result in a decrease in offending, but result in a constant rate of offending among juveniles, may have had an impact on stemming juvenile recidivism. As outlined above, recidivism could be compared against a 'normal rate' of recidivism, rather than the 'ideal rate' of zero percent (Cecile & Born 2009). As juveniles are in the peak offending period of life, it stands to reason that the 'normal rate' of juvenile recidivism would be higher than the 'normal rate' for adults.

Access to data on adult offenders is required

Measuring juvenile recidivism requires access to data on offenders in both the juvenile and adult justice systems, as a proportion of juveniles continue offending into adulthood. This may require substantial resources and is not always achievable in practice.

It is important to note that comparisons between levels of adult recidivism and juvenile recidivism are often misleading

life course differences in the offender groups do not support direct comparison...[as]...the far larger adult system is predominantly populated by offenders outside the peak age for offending (VDHS 2001: 8).

In addition, juvenile offenders have a higher likelihood of reoffending due to the small population

of juvenile offenders compared with adult offenders (VDHS 2001). That is, because juvenile justice legislation across Australia's jurisdictions requires juvenile detention to be used only as a last resort, juvenile detainees are likely to have very pronounced criminogenic needs by comparison with the broader adult detention population. As a result, juvenile detainees are perhaps more likely to recidivate once released from detention than adults. Where sound comparisons have been made, it has often been found that recidivism rates among juveniles are generally higher than rates among adults (Wartna, Tollenaar & Blom 2005).

Summary

Data on juvenile recidivism can be limited and/or problematic, and it is important to recognise their limitations. As a small number of recidivist offenders are responsible for a large amount of crime, however, recidivism remains an important outcome indicator. As Cunneen and Luke (2007: 199) argue, 'measuring re-offending is important and it needs to be done as effectively as possible. However...it should not stand as a substitute for all other outcome measures' (see also Thomas 2006).

How could juvenile recidivism be better conceptualised?

Recidivism can be conceptualised as a dichotomous or continuous indicator. Dichotomous indicators are concerned with whether recidivism has occurred

irrespective of when it occurs, how often, and for what crime types...no distinction is made between those who reoffend on multiple occasions and those who commit offences of varying degrees of severity (Tresidder, Payne & Homel 2009: 27).

By contrast, continuous indicators of recidivism examine the frequency with which recidivism occurs, the length of time until an offender recidivates and/or the length of time between acts of recidivism. Continuous indicators therefore allow distinctions to be made between early and late recidivism, and/or

high and low levels of recidivism. Continuous indicators are particularly useful where recidivism is expected to occur, but where it is hoped that an intervention will reduce the overall frequency of that recidivism (Tresidder, Payne & Homel 2009). As such, they may be particularly useful in relation to measuring juvenile recidivism, as juveniles are more likely than adults to recidivate.

Although dichotomous indicators are the most commonly used, it has been argued that they are 'sometimes the least informative measures' (Tresidder, Payne & Homel 2009: 27). Dichotomous indicators also do little to enhance understanding of what works in reducing recidivism. They are therefore of limited use in relation to performance measurement and improvement.

Dichotomous measures are, however, comparatively easy to calculate and to comprehend. This may be important where communicating recidivism rates to the public is concerned. It has been argued, therefore, that it is important to capture both dichotomous and continuous indicators of recidivism—'criteria [for measuring recidivism] should allow for measurement of not only the amount of a given activity or outcome but also the quality' (Mears & Butts 2008: 268).

Recommended alternatives to recidivism for measuring the performance of juvenile justice agencies

Additional outcome measures are needed to measure the contribution made by Youth Justice [agencies] to re-engaging young people and providing the support necessary to assist them in becoming crime-free (Tresidder, Payne & Homel 2009: 10).

While desistance on the part of juveniles is a long-term goal of juvenile justice agencies, it is important to include intermediate measures in recognition of juveniles' progress towards this goal and in recognition of adolescence as a peak time in the life course for offending (Tresidder, Payne & Homel 2009). Intermediate measures could include:

- reduction in frequency and/or severity of offending;

- compliance with the requirements of a period of supervision;
- school attendance;
- obtaining employment or participating in training;
- reduction in the use of drugs or alcohol;
- participation in offence-related behaviour change programs (Tresidder, Payne & Homel 2009);
- reduction in time taken to reoffend; and
- reduction in the seriousness of recidivism (Cunneen & Luke 2007).

Alternative methods for measuring juvenile recidivism

The three most widely accepted analyses of recidivism measure *prevalence*, *frequency* and *volume* of reoffending. Measuring the prevalence of recidivism involves determining the proportion (eg percentage) of repeat offenders in the group (or a sub-group). Measuring the *frequency* of recidivism involves documenting the average number of reconvictions (if reconvictions are the counting unit) per repeat offender. This is one of the new counting measures for juvenile recidivism adopted by the UK Ministry of Justice (Ministry of Justice 2008a, 2008b; discussed later in this report). Measuring the *volume* of recidivism involves documenting the total number of reconvictions (if reconvictions are the counting unit) within the group (or a subgroup; see Wartna, Blom & Tollenaar 2008).

A range of statistical techniques are associated with the various methods of measuring juvenile recidivism. It should be noted that these techniques rely on the existence of good quality data. *Survival analysis* is a statistical procedure for measuring the period of time between two events—in the criminal justice context, usually between the end of detention and reconviction (Friendship, Beech & Brown 2002). The aim of survival analysis is to measure the length of time before an event takes place (Wartna, Blom & Tollenaar 2008). This technique was developed for use in the medical sciences, where the survival of patients undergoing treatment was of interest (Payne 2008). In the criminal justice context, survival analyses are better understood as ‘failure’ analyses (Ferrante, Loh & Maller 2004; Payne 2008); that is, they aim to capture the length of time before an offender recidivates, or fails to desist from crime. Survival

analysis ‘provides a better understanding of the patterns of re-offence and the impact of time-related factors such as age [on recidivism]’ (Cunneen & Luke 2007: 200).

Logistic regression is a technique specifically designed for the purpose of analysing a dichotomous outcome (such as whether an offender has recidivated). In a logistic regression analysis, the length of time until an offender recidivates is not taken into account (Wartna, Blom & Tollenaar 2008).

Multivariate analyses, such as Cox regression, ‘help identify the individual effects of each measured characteristic [on recidivism] and provide initial predictive models’ (Cunneen & Luke 2007: 200). Cox regression analyses aim to determine how variables such as an offender’s gender, country of birth, or offending history, impact levels of recidivism (Wartna, Blom & Tollenaar 2008). The technique compares the difference between bivariate classifications after controlling for confounding effects of other variables (Payne 2008). For example, a bivariate analysis may show that males are more likely to be recidivists than females. The males may, however, be older and more likely to have had previous experience with the criminal justice system. A Cox regression analysis assesses the strength of gender as a predictive factor after controlling for these possibly confounding effects (Payne 2008). This effect is expressed in the form of a coefficient, called the ‘beta exponent’. The size of the coefficient indicates the strength of the connection between variables (Wartna, Blom & Tollenaar 2008).

How has juvenile justice performance been measured internationally?

Juvenile justice agencies in other Western jurisdictions have faced similar challenges to those faced in the Australian juvenile justice context. A number have sought to address these challenges and to develop performance measures that are more meaningful and/or comparable across a number of jurisdictions. In some instances, international jurisdictions have developed improved counting measures for juvenile recidivism; in others, alternative or complementary methods of assessing performance have been developed. These are outlined below.

It should be noted that the way in which juvenile recidivism is measured has not often been publicly documented in Australia or internationally. This report therefore seeks to contribute towards the body of knowledge on this important issue.

The Florida Department of Juvenile Justice Program Accountability Measures project

The Florida Legislature recently passed legislation that required the Florida Department of Juvenile Justice (FDJJ) to evaluate the effectiveness of juvenile justice programs that provide care, custody and/or treatment for juveniles under the department's care (Winokur et al. 2005). The legislation mandated that 'recidivism rates shall be a component of the model' (see Winokur et al. 2005: 1). Evaluation measures were to include a cost-effectiveness component and promote accountability in the delivery of juvenile justice services.

FDJJ, in conjunction with the Justice Research Center, developed the annual Program Accountability Measures (PAM) report. As FDJJ processes in excess of 150,000 intake referrals annually and has responsibility for approximately 10,000 juveniles with highly diverse criminogenic risk profiles across more than 150 residential programs, basic comparisons of recidivism rates across programs were deemed inequitable and ineffective (Winokur et al. 2005: 3–4):

Programs serve youth whose risk to re-offend varies widely. These factors affect the likelihood that youth will recidivate. A simple comparison of program recidivism rates does not take these factors into account. In fact, such a method would unfairly penalize programs that serve the most challenging youth. It is therefore important that outcome measurement take into consideration the risk factors that influence the likelihood of re-offending for the youth released from each program (see also Winokur, Tollett & Jackson 2002).

This is particularly important to consider in the United States, where many jurisdictions do not have juvenile justice systems that are centrally operated (ie where juvenile justice is a county-level, rather than state-level issue; Winokur, Tollett & Jackson 2002). It could nonetheless be relevant in the Australian context where varied legislative, policy and

demographic context of jurisdictions' juvenile justice systems make comparisons difficult.

The primary measure of recidivism developed to address this issue in the PAM project was

the difference between how well a program is expected to do given the risk for re-offending attributed to each youth completing the program (expected recidivism), and how well the program youth actually performed (observed recidivism) (Winokur et al. 2005: 1; see also Winokur, Tollett & Jackson 2002).

Cost effectiveness—that is, a program's average cost per youth completing the program compared with the statewide average cost per completion—is also measured. The recidivism score is weighted by two-thirds, and the cost effectiveness score by one-third, to produce a combined PAM score.

Recidivism effectiveness is assessed according to the following schedule:

- *highly effective* programs are those programs where observed recidivism rates are more than one standard deviation below the lower limit of the expected recidivism range;
- *effective* programs are those programs where recidivism rates are up to one standard deviation below the lower limit of the expected recidivism range;
- *average* programs are those programs where recidivism rates fall within the expected recidivism range;
- *below average* programs are those where recidivism rates are up to one standard deviation above the upper limit of the expected recidivism range; and
- *least effective* programs are those where recidivism rates are more than one standard deviation above the upper limit of the expected recidivism range (Winokur et al. 2005).

Programs or residential facilities involving very small numbers of juveniles are excluded from PAM analyses to ensure that small sample sizes do not affect the validity of the results. This may be problematic in Australia, however, as in some jurisdictions, small numbers of juvenile justice clients come under the supervision of juvenile justice services that cover large geographical areas. The PAM approach is considered one component of identifying the effectiveness of programs in reducing juvenile recidivism (Winokur et al. 2005).

An inventory of large-scale recidivism research in 33 European countries

The research bureau of the Dutch Ministry of Justice (known as the WODC) has begun work to compare levels of recidivism across Europe. A questionnaire was sent to 41 European countries to determine which countries collect data on recidivism, and the types of data collected. Thirty-three countries responded to the questionnaire; 14 of these reported collecting national recidivism data (Wartna & Nijssen 2006a, 2006b).

Although this project does not relate to juveniles specifically, it raises a number of key issues about comparing recidivism data across jurisdictions. These include:

- over what period of time should recidivism be measured?
- which is the most meaningful proxy measure of recidivism (eg court appearances, reconvictions)?
- how do cultural differences affect the criminal justice systems of different countries and what impacts do these have on measuring recidivism? and
- to what extent are offender populations comparable (eg a country that sentences a low proportion of offenders to detention will have a high risk prison population and therefore may be likely to have higher rates of recidivism (Wartna & Nijssen 2006a, 2006b)).

As Wartna and Nijssen (2006b: 13) acknowledge, 'making comparisons of reconviction rates is a difficult and somewhat hazardous enterprise'. A European Research Group on National Reconviction Rates (the ERNR) has been established to guide this process.

The UK Ministry of Justice's new national recidivism measures

In 2008, the UK Ministry of Justice made substantial changes to the way recidivism was measured nationally, for both juveniles and adults. Prior to this, the Ministry of Justice had measured the proportion of offenders that went on to commit further offences. In relation to juveniles, this meant measuring the proportion of offenders who reoffended following the commencement of a pre-court disposal or

community-based sentence, or upon release from detention (Ministry of Justice 2008a).

The new measures aim to capture the frequency of recidivism; that is, the number of reoffences that are committed within the following year and result in a conviction at court or a pre-court disposal within the following 18 months (to account for court processing times; Ministry of Justice 2008a).

In addition, the new measures aim to show the frequency of serious recidivism. 'Serious offences' are the most serious acts of violence (homicide offences, including driving offences causing death and wounding or other acts endangering life) and serious sexual offences (including sexual assaults against adults and children, child prostitution and pornography offences, and trafficking of persons for sexual exploitation; Ministry of Justice 2008b). The Ministry of Justice (2008b: 3) argues that measuring rates of serious reoffending is of greatest importance to the community—'[while traditional measures of recidivism] would show both a theft and a murder as being the same...[these offences clearly have]...a very different impact on society'. During the period 2000 to 2005, the frequency of serious reoffences by juveniles decreased from 0.91 to 0.90 serious reoffences per 100 juvenile offenders (Ministry of Justice 2008b). Importantly, this method of calculating recidivism demonstrates that serious reoffending is relatively uncommon among juvenile offenders.

To calculate rates of recidivism, data are obtained on a cohort of offenders (all those commencing a community-based sentence or discharged from a custodial sentence within the first 3 months of each calendar year). The sampling method is used each year to allow comparisons to be made across time. The frequency of reoffending is produced by calculating the number of proven reoffences per 100 juvenile offenders. The same method is utilised to calculate the frequency of serious reoffending. Breakdowns by age, sex, ethnicity, index offence, index disposal and offending history are also calculated (Ministry of Justice 2008b).

Multiple Offender Entries (ie juveniles who, after entering the cohort, commit a reoffence and either commence a new community-based sentence or are discharged from detention within the first 3 months of the year) are only counted once (from their index offence) to avoid double-counting reoffences. The Ministry of Justice (2008b) estimates

that Multiple Offender Entries comprise seven percent of the cohort of juvenile offenders. Breach proceedings (ie where a juvenile receives a new penalty for breaching an order, but no new offence has been committed) are also excluded (HM Government 2009).

A key aim of the new measures is to allow the Ministry of Justice to distinguish between high volume and low volume offending, and to measure serious reoffending. This, it is hoped, will allow better targeting of resources (Ministry of Justice 2008b).

The Ministry of Justice (2008b: 3) argues that measuring reoffences provides better feedback on the performance of juvenile justice agencies and will enable

a better understanding of the impacts of programmes and interventions which do not just lead to complete desistance by offenders, but may also reduce the volume of re-offences offenders commit.

The US National Demonstration Project

In 2003, the US Congress awarded a grant to the American Prosecutors' Research Institute to research and develop a set of performance measures for juvenile justice systems (Harp et al. 2006). Four jurisdictions were selected to participate in the project—Allegheny County, Pittsburgh, Pennsylvania; Cook County, Chicago, Illinois; Deschutes County, Bend, Oregon; and the state of South Carolina.

Ten benchmark performance measures were developed to assess the performance of these juvenile justice systems:

- *juvenile crime trends* (the per capita rate of juvenile offenders who are adjudicated delinquent by the juvenile court and per capita rate of juvenile offenders who commit crimes that warrant a waiver to an adult court);
- *law-abiding behaviour* (this is measured in 2 ways—the number of juveniles who completed juvenile court supervision with no charges filed against them for new offences and the number of juveniles who had no charges filed against them for a new offence within 1 year of completing the order);

- *adult criminal convictions* (the number of juveniles who had no adult criminal convictions by 21 years of age);
- *restitution* (there are 4 measures related to restitution—the number of cases in which restitution was ordered, the amount of restitution ordered, the amount of restitution paid and the number of cases in which restitution was paid in full);
- *work service* (there are 3 measures of work service—the number of cases with work service obligations, the number of hours of work service ordered and the number of hours of community service work completed);
- *victim satisfaction* (this is measured through surveys of crime victims administered by the juvenile court, the prosecutor's office, or victim service agencies);
- *resistance to drug and alcohol use* (this is measured as the number of juveniles tested for alcohol and other drug use while under supervision and, of those tested, the proportion that tested negative);
- *school participation* (there are 2 measures of school participation—the number of juveniles who were actively involved in school or vocational training and the number of those juveniles who were within mandatory school attendance requirements);
- *employment* (outcome measures include the number of juveniles employed at the time of a case closing); and
- *volunteer and citizen involvement* (outcome measures include the number of juvenile justice system volunteers, the number of volunteer hours and the dollar value of volunteer hours; Harp et al. 2006).

Although recidivism measures form a key part of these performance measures, other measures are also included. This reflects the conceptual framework adopted by the National Demonstration Project, which emphasises three aims of juvenile justice systems—community safety, offender accountability and competency development. In this context, reducing recidivism (ie increasing community safety) is one aim among others.

Importantly, these measures are strength- rather than deficit-focused, in line with the guidelines from Mears and Butts (2008) about effective performance measures. Measuring and reporting to the community on law-abiding behaviour, rather than recidivism, may increase public confidence in the criminal justice system. Trust in the criminal justice system has, in turn, been consistently shown to increase law-abiding behaviour (see Indermaur & Roberts 2009).

This project requires juvenile justice workers to describe their activities and the results of their efforts with juveniles:

These descriptions are aggregated and converted into a stand-alone database that can be used to track system performance... Analogous to hospital discharge records, the case closure reports summarized the services and sanctions provided for each youth before the release from probation supervision, as well as any school, work, or other activities in which the youth was involved during the period of supervision (Mears & Butts 2008: 276–277).

Each jurisdiction involved in the National Demonstration Project produced a Report Card outlining its performance against each of the 10 measures listed above. Report Cards take varied formats—some are published in local newspapers (see Harp et al. 2006; Thomas 2006) and/or online. In Deschutes County, a Report Card is distributed to 32,000 local households.

Jurisdictions that participated in the National Demonstration Project reported a range of uses for Report Cards, including:

- highlighting the success of juvenile justice programs to the public;
- identifying areas of poor performance and developing strategies to address these;
- as a training tool to inform prosecutors and judges about the outcomes of cases; and
- as an online education tool (Harp et al. 2006).

A number of other jurisdictions have since adopted the Report Card system and in Pennsylvania, the system has been implemented on a statewide basis (Mears & Butts 2008; Thomas 2006).

The use of risk assessment tools to measure the performance of juvenile justice agencies

There has been a great deal of debate about the role that risk assessment tools should play in juvenile justice generally (see Phoenix 2009) and in the process of measuring the performance of juvenile justice agencies specifically. Risk assessment tools are instruments designed to measure both the static factors (ie factors that cannot be changed, including a juvenile's sex, Indigenous status, offence history, offence type, intelligence and neuropsychological characteristics) and the dynamic factors (ie factors that can be changed, including a juveniles' association with delinquent peers, substance abuse, education and employment) that are likely to influence a juvenile's recidivism (Mulder et al. 2010).

The use of risk assessment tools to predict the likelihood of recidivism has occurred for many decades.

[T]he notion of assessing individuals' risk to offend or recidivate has been a constant focus for criminologists and policymakers for several decades. As early as 1923, Warner examined offender characteristics related to violation of parole (Baglivio 2009: 596).

Risk assessment tools have become increasingly sophisticated and empirically-based over time (Hiscox, Witt & Haran 2007) and have evolved from clinical judgements (ie 'gut feelings' on the part of professionals), to actuarial assessments that assess only static factors, to actuarial assessments that assess both static and dynamic factors, to actuarial assessments that assess both static and dynamic predictors as well as protective factors and strengths (Baglivio 2009). This latter model of risk assessment tool, which Baglivio (2009: 596) describes as a 'fourth generation tool', links risk predictions with case management plans—they enable juvenile justice agencies to 'target offenders to interventions effectively' (Howard et al. 2009: 1). Risk assessment tools have been adopted across the United States and Canada (Schwalbe et al. 2006) and in some Australian jurisdictions.

How are risk assessment tools used to assess the performance of juvenile justice agencies?

To measure the performance of a juvenile justice department, risk assessment tools are used to measure a juvenile's risk of reoffending at the commencement of their supervision by the department and again at the conclusion of their supervision by the department. The aim of the department is therefore to have a juvenile decrease their risk 'score', or likelihood of reoffending, while they are under the department's supervision. This is the approach used in a number of international jurisdictions, as described below. Essentially, this approach involves assessing a department's risk management—the 'process of assessing changes in an offender's...risk and devising methods for lowering that risk' (Hiscox et al. 2007: 505). The extent to which a department has been able to do this is the variable measured using this type of approach.

What are the benefits of this approach?

The use of risk assessment tools to measure the performance of juvenile justice agencies has been proposed primarily on the grounds that this approach overcomes the problem of departments (or programs) with higher risk clients consistently having higher levels of recidivism among their offender population than departments (or programs) with lower risk offenders (and therefore appearing to perform poorly in comparison with these departments; see Winokur, Tollett & Jackson 2002). As Smith and Jones (2008: 1) acknowledge, recidivism outcomes can be 'influenced by...the profile of offenders coming into contact with the criminal justice system'.

Using a risk assessment tool allows analysis of recidivism to focus on

how well a program is *expected* to do based on the program youths' risk of reoffending (expected success) and compares this to how well the program youths actually performed (observed success) (Winokur, Tollett & Jackson 2002: 51, italics in original).

As Winokur, Tollett and Jackson (2002: 51) argue

this ensures that programs serving more difficult youth are not held to inequitable standards due to the higher re-offense risk of the youth they serve, and provides a realistic measure of program effectiveness for those programs serving less challenging youth.

Tresidder et al. (2007) assert that the research literature clearly shows that juvenile recidivists are often the most disadvantaged young people. It stands to reason, therefore, that reducing the 'dynamic' aspects of disadvantage (eg by addressing juveniles' education, employment, financial, legal, housing, health, drug and alcohol and family needs and issues) may be a critical strategy for measuring a department's impact on a juvenile offender's risk of recidivism. In particular, substance abuse (Cottle, Lee & Heilbrun 2001) and offence type (Cottle, Lee & Heilbrun 2001; Hedderman 2009) have been shown to be factors clearly linked to the likelihood of a juvenile reoffending. These factors could therefore be considered critical risk (or conversely, protective) factors to consider in the calculation of juveniles' risk of recidivism.

Taking the characteristics of offenders into account when calculating rates of recidivism has been shown to be critical in accurately assessing recidivism trends. Smith and Jones (2008) found that considering only unadjusted rates of recidivism (ie those that do not account for the characteristics of offender cohorts) led to false conclusions that recidivism was either increasing or decreasing. In their study of juvenile recidivism between 2002 and 2004, Smith and Jones (2008: 8) found that

the observed reconviction rates suggested that there had been no discernable change in reconviction over this three-year period. In 2002, 59.3 per cent of juveniles were reconvicted within two years. The proportions for 2003 and 2004 were 61.3 per cent and 59.0 per cent respectively. However, after adjusting for the characteristics of offenders coming to court in 2003 and 2004, the 2004 cohort were reconvicted at a significantly lower rate than would have been expected based on the characteristics of that cohort.

This demonstrates that while the juvenile justice service in question had, in fact, been successful in curbing the recidivism of juveniles, this was

not reflected in rates of recidivism due to the characteristics of the juvenile cohort not having been taken into account. It is important to recognise, however, that the opposite scenario is also possible where juvenile offender characteristics are not taken into account in calculations of juvenile recidivism rates. Whiting and Cuppleditch (cited in Smith & Jones 2008), for example, found that a large decrease in juvenile recidivism rates between 2000 and 2004 was much more modest after adjustments had been made to account for the characteristics of the juvenile cohort (Smith & Jones 2008).

What are the limitations of this approach?

A range of criticisms have, however, been made of this approach. Baglivio (2009) argues that a high level of inaccuracy has marred predictions of offenders' recidivist behaviour. According to Baglivio (2009), there are two forms of error in risk prediction—false negatives (predicting low offence rates for individuals who go on to commit offences at a high rate) and false positives (predicting a high offence rate for those who go on to commit few offences). The extent of false positives has been found to be around 50 percent for most prediction studies (Baglivio 2009). Importantly, 'reducing the occurrence of one type of error will in all cases increase the occurrence of the other type' (Baglivio 2009: 596).

There has also been a great deal of debate over whether separate risk assessment tools are needed for females and males (Baglivio 2009; see also Howard et al. 2009). The FDJJ, one of the largest juvenile justice departments in the United States (see Winokur et al. 2005; Winokur, Tollett & Jackson 2002), introduced the Positive Achievement Change Tool (PACT) across the state in 2006. The PACT was based on the Washington State Juvenile Court Assessment, called 'Back on Track!' (Baglivio 2009). Under PACT, juveniles are given a 'criminal history' score (from 0 to 31) and a 'social history' score (from 0 to 18) to make an 'overall risk' score. Higher scores predict higher levels of recidivism.

Baglivio's (2009) study of the PACT found that it could predict recidivism (defined as a subsequent referral to the department) over a 12 month period (at $p < .001$). Importantly, PACT was found to be 'capable of predicting re-offending for males and for females equally well with a twelve-month follow-up' (Baglivio 2009: 602). There therefore 'exists no need, with respect to predicting re-offending, for a 'gender-specific' assessment' (Baglivio 2009: 604). In the Australian context, it is also important to consider whether separate risk assessment tools might be appropriate for Indigenous and non-Indigenous juveniles.

According to Schwalbe et al. (2006), whether different risk assessment tools are necessary depending on the demographic characteristics of various cohorts of offenders, is primarily related to the comprehensiveness of the instrument. Schwalbe et al. (2006) argue that studies of comprehensive risk assessment tools have found no predictive variances across demographic groups, whereas studies of brief risk assessment tools have found differences (eg between genders and across ethnic groups). Schwalbe et al. (2006: 308) therefore argue that 'comprehensive measures of risk have more equivalent levels of predictive validity across gender and race/ethnicity than brief instruments'.

Principles to inform the measurement of juvenile recidivism in Australia

Consultations with key staff from the relevant juvenile justice authority in each jurisdiction indicated that there are a number of issues related to the measurement of juvenile recidivism. These are outlined below. Where possible, relevant literature has been included to contextualise and inform the discussion; although in some instances, the literature on measuring recidivism is limited and offers little guidance. Overall, these principles are intended as a best practice framework to assist future researchers and practitioners seeking to develop meaningful indicators of performance in the juvenile justice sector.

Should the counting unit be *juvenile offenders, offences, orders, convictions or sentences*?

In crime statistics in Australia and elsewhere, various ‘counting units’ are used. These include *juveniles, offences, convictions* and *sentences*. Consensus around a counting unit is crucial if juvenile recidivism is to be reliably measured across Australia.

Counting the number of ‘juveniles’ reconvicted, rather than the number of ‘reconvictions of juveniles’, will provide a more meaningful measure of juvenile recidivism for a number of reasons. First, this approach overcomes the issue that some jurisdictions count all offences committed by a juvenile, while others record only the most serious offence (MSO). Second, it overcomes the issue that in some jurisdictions, a juvenile’s offences may be ‘rolled up’ into one charge (discussed below). Third, in some jurisdictions, a juvenile offender can be ‘found guilty’ of an offence, but not formally ‘convicted’ and not sentenced (see ACT DJCS 2008).

Should a *prospective or retrospective* approach be adopted?

It is possible to adopt a *prospective* or *retrospective* approach to measuring recidivism. A prospective approach would involve, for example, first counting the number of juveniles who were on a supervised order during the period under consideration and then counting how many of these juveniles received a new supervised order during the period following the ‘index’ offence. A retrospective approach would involve the opposite—counting the number of juveniles on a supervised order during the period under consideration and then counting how many of these juveniles had previously received a supervised order. In relation to juvenile recidivism, a prospective approach is most appropriate, primarily because it allows jurisdictions to measure recidivism that occurs once individuals exit the juvenile justice system and enter adult supervision (see below).

Should juveniles be tracked into the adult criminal justice system?

Tracking juveniles into the adult criminal justice system is crucial to enabling jurisdictions to produce accurate and meaningful measures of recidivism. Research has demonstrated that recidivism studies of juveniles that do not trace juveniles into the adult criminal justice system substantially underestimate the extent of juvenile recidivism. Chen et al. (2005) argue that Coumarelos’ study of juveniles who appeared in the Children’s Court of New South Wales between 1982 and 1986 did not accurately present the extent of recidivism, as it did not trace juveniles into the adult criminal justice system. Coumarelos found that 70 percent of juveniles did not reappear in the Children’s Court following their first court appearance. This finding ‘underpinned a long-standing policy of trying to minimise the intensity of criminal justice intervention among juvenile offenders in New South Wales’ (Chen et al. 2005: 1). The more recent study of Chen et al. (2005) of 5,476 juveniles who appeared in the Children’s Court for the first time in 1995, tracked the offending trajectories of those juveniles over an eight year period. The study found that 68 percent of these juveniles reappeared at least once in a criminal court by the end of 2003. Forty-three percent of the cohort reappeared at least once in the Children’s Court and 57 percent at least once in an adult court during this period. Thirteen percent of the total cohort received an adult prison sentence during the period (Chen et al. 2005). This research clearly demonstrates that the capacity to track juvenile offending trajectories into adult criminal justice databases would improve the accuracy of juvenile recidivism measures.

Where jurisdictions do not have the capacity to track juveniles into the adult criminal justice system, the potential exists for juveniles who do not return to the juvenile justice system (but who may have recidivated and come into contact with the adult criminal justice system) to be counted as non-recidivists. That is, these juveniles may be neither traced into the adult criminal justice system nor excluded from calculations of juvenile recidivism. This is likely to obscure measures of juvenile

recidivism and may also limit comparability with jurisdictions that are able to either exclude juveniles as they attain majority status and/or determine whether these young people have recidivated as adults. Where data on juveniles cannot be linked with data on adult criminal justice systems, it would be appropriate to exclude from calculations of recidivism all juveniles who have achieved majority status.

Should minor offences be included in measures of juvenile recidivism?

In addition to logistical problems associated with capturing very minor offences (such as traffic and fare evasion offences) under existing data collection procedures, it is important to consider whether these offences are 'real' acts of recidivism, whether counting traffic or fare evasion offences would produce a meaningful measure of recidivism and whether doing so would provide an accurate measurement of the performance of juvenile justice agencies.

Although the Steering Committee for the Review of Government Service Provision (SCRGSP 2009) counts traffic offences in its measures of adult recidivism, it is important to exclude these from counts of juvenile recidivism, as juveniles are disproportionately likely to commit 'public' offences (eg fare evasion) and to be apprehended for doing so (Cunneen & White 2007). Capturing offence type is nonetheless important, as it will allow for analyses to be conducted on the 'escalation' of offence seriousness.

Should technical breaches of supervised orders be included in measures of juvenile recidivism?

It is important to consider, further to the above discussion, whether juveniles who breach supervision conditions due to a technicality should

be counted as recidivists. In most jurisdictions, breaking supervision conditions (eg by failing to adhere to a curfew), is not an offence. Excluding technical breaches from measures of juvenile recidivism has been the approach adopted in previous studies of juvenile recidivism (Minor, Wells & Angel 2009) and in the United Kingdom's new Counting Rules for juvenile recidivism (HM Government 2009).

Should restorations of suspended sentences be included in measures of juvenile recidivism?

Although suspended sentences are rarely imposed on juveniles, it is important to consider accurate and comparable methods for measuring recidivism that take this into account. According to the Australian Bureau of Statistics (ABS 2010a), two percent of juveniles adjudicated in Australia's Children's Courts during the 2008–09 financial year received fully suspended sentences (suspended sentences are not available as a sentencing disposition for juveniles adjudicated in Victoria). This varied substantially across jurisdictions, however, from 0.2 percent in Queensland to nine percent in Tasmania. In New South Wales, the jurisdiction that adjudicates the largest number juveniles, five percent of juveniles received a fully suspended sentence (ABS 2010b). In a number of jurisdictions, the proportion of juveniles sentenced to suspended sentences in the Children's Courts appears to be increasing. In the Northern Territory, for example, suspended sentences comprised 0.6 percent of all sentences imposed on juveniles during 2007–08. This increased to seven percent during 2008–09 (ABS 2010b). Nationally, this proportion has increased slightly from 1.3 percent of all sentences in 2006–07, to 1.6 percent in 2007–08, to two percent in 2008–09 (ABS 2010b). In addition, a proportion of juveniles adjudicated in the Children's Courts receive partially suspended sentences, although it is unclear what this proportion currently is.

Data on the proportion of juveniles who breach suspended sentences by reoffending are currently unavailable. An analysis of suspended sentences

in Victoria, however, indicated that young adults are significantly more likely to breach suspended sentences than those aged 25 years or above (Turner 2007). This could suggest that juveniles are more likely to breach suspended sentences, although further research is needed in this area.

Nonetheless, it is important to exclude restorations of suspended sentences from counts of juvenile recidivism as:

- technical breaches of suspended sentences are not instances of genuine recidivism; and
- there may be a substantial amount of discretion on the part of juvenile justice staff as to whether juveniles are breached for violating conditions of suspended sentences. This could lead to considerable disparity in counting juvenile recidivism among the jurisdictions.

In jurisdictions in which a breach of a suspended sentence constitutes a criminal offence, this report takes the view that these should not be counted as recidivism, for the reasons outlined above. Where a breach of a suspended sentence is a new offence, rather than a technical breach, this could be counted as recidivism because:

- a new offence represents a genuine case of recidivism; and
- the role of discretion on the part of juvenile justice staff is minimised.

Where the act would not have been an offence if the juvenile was not on a suspended sentence (eg not adhering to a curfew or not presenting to a juvenile justice staff member), this could also be excluded from counts of recidivism.

Should data from specialty courts be included in measures of juvenile recidivism?

The introduction of a range of specialty courts (such as Youth Drug Courts and Koori Courts) in many of Australia's jurisdictions (see Payne 2006, 2005) is important to consider in the context of measuring juvenile recidivism in a comparable and meaningful way.

It is important to consider whether data from specialty courts are, or can be, accessed alongside those from the Children's Courts. In jurisdictions where this is not the case, juveniles who reoffend and are adjudicated in a specialty court (rather than the Children's Courts) may not be counted as recidivists.

It is also important to consider specialty courts for juveniles, as their use in some jurisdictions but not others may result in different cohorts of juveniles coming under juvenile justice supervision. That is, the pathways of juveniles in jurisdictions that have specialty courts may differ from those in jurisdictions that do not have specialty courts. Whether juveniles are diverted via a group conference or other diversionary measure, or are adjudicated in the Children's Court in lieu of being adjudicated in a specialty court may impact this. This is especially important to consider in relation to Indigenous juveniles, who may be adjudicated in the Koori or Murri courts in some jurisdictions, but the mainstream Children's Courts in others.

This report recommends the inclusion of any juvenile reoffending adjudicated in specialty courts, in line with the other principles outlined here, as:

- these represent genuine cases of recidivism; and
- to exclude specialty courts would affect comparability among the jurisdictions, perhaps particularly in relation to Indigenous juveniles.

Over what timeframe should juvenile recidivism be measured?

Given the limitations associated with measuring recidivism at any particular point in time, measuring recidivism at multiple points has been highlighted in the literature as best practice—'it is...important, wherever possible, to examine (re)conviction data at different points in time' (Maxwell & Morris 2001: 245).

There are a range of issues to consider in relation to the timeframe over which juvenile recidivism is measured. Advantages of shorter timeframes (such as 1 year) include that:

- recidivism appears most likely to occur within the first year after a sentence or intervention (Hedderman 2009; Maxwell & Morris 2001), although this appears to vary by offence type (Prentky et al. 1997);
- this period of time is short enough that the influence of juvenile justice interventions may still be having a measurable impact of juveniles' behaviour;
- the effectiveness of a particular intervention may be greatest in the period directly following it. Over time, other factors may influence the effectiveness of the intervention and it may become more difficult to determine its effectiveness, disaggregated from other factors (Maxwell & Morris 2001); and
- using a two year period may invite comparisons with adult recidivism that are not warranted (as 2 years is the period used by the Steering Committee for the Review of Government Service Provision over which to measure adult recidivism).

Advantages of longer timeframes (such as 2 years) include that:

- if an intervention slows the rate of offending, then a substantial proportion of those who recidivate may not do so until after one year (Maxwell & Morris 2001);
- recidivism rates generally decline with time from release (Ellermann, Sullo & Tien 1992; Prentky et al. 1997);
- it is only possible to measure persistence in recidivism over a longer period of time (Maxwell & Morris 2001); and
- they may better capture serious recidivism, as serious offences take longer to come to court and to be finalised (Hedderman 2009). Importantly, this may make juvenile recidivism appear worse than adult recidivism, as juveniles' offences are typically not of a very serious nature. Using a shorter timeframe, a higher proportion of juvenile recidivists may be recorded than adult recidivists, whose offences may be more serious and therefore take longer to be finalised.

Judicial administration time should also be considered in relation to the above. Judicial administration time (length of time between offence and court hearing, between court hearing and

conviction, between conviction and sentencing, and between sentencing and commencement of an order) may vary among jurisdictions and be heavily dependent on offence type (with serious offences being more likely to require greater judicial administration time than minor offences) and the nature of juveniles' pleas. For these reasons, longer timeframes are often considered to be better suited to measuring juvenile recidivism.

Should pseudo-recidivism be included in measures of juvenile recidivism?

Pseudo-recidivism, also known as 'immediate' or 'spurious' recidivism, occurs when all convictions recorded after an index sentence, including those imposed for offences that were committed prior to this sentence, are counted as incidents of recidivism (Bartels 2009). Pseudo-reconvictions are 'convictions which occur during the follow-up period, but which result from offences committed prior to the sentence of interest' (Hedderman 2009: 115).

A consideration of pseudo-recidivism is critical in the development of meaningful and comparable measures of juvenile recidivism. Capturing offences that were committed prior to the intervention of the relevant juvenile justice authority, but were adjudicated after the commencement of a juvenile justice intervention, may unnecessarily inflate jurisdictions' rates of recidivism. In addition, it may obscure these rates and detract from a jurisdiction's capacity to calculate accurate and meaningful counts of recidivism. In turn, this may reduce departments' capacity to measure and improve their performance.

Bartels' (2009) study of suspended sentences in Tasmania, which calculated reconviction rates of offenders sentenced in the Supreme Court of Tasmania between 1 July 2002 and 30 June 2004, found that when pseudo-reconvictions were included in this analysis, the reconviction rate was falsely inflated from 42 percent to 62 percent. It is therefore important to consider to what extent the inclusion of incidents of pseudo-recidivism may be obscuring rates of juvenile recidivism in Australia.

Should *offence, conviction or sentencing dates* be used to measure juvenile recidivism?

While conviction and sentencing dates are likely to be close, there may be considerable delays between offence dates and conviction/sentencing. This may be particularly the case in relation to serious offences, which are important to capture in counts of juvenile recidivism.

Although it is necessary for conviction to have occurred before a juvenile can be counted as a recidivist (where conviction is deemed to 'define' a juvenile recidivist), using the offence date rather than the date of conviction/sentencing will provide a more meaningful measure of recidivism. While the date of an offence is within the control of the juvenile, conviction and sentencing dates are a reflection of court processes. Judicial administration time may vary substantially both over time and across jurisdictions, and may therefore impact the comparability of measures of recidivism. In addition, the use of offence dates addresses the issue of pseudo-recidivism (discussed above).

Should offences committed while a juvenile is serving an order be included?

Debate exists about whether a juvenile who commits a new offence while serving an order (ie community-based or detention-based) should be counted as a recidivist, or whether recidivism should only be counted once a juvenile has completed an order. Each of these approaches has merit. Offences committed by a juvenile on an existing order represent genuine cases of recidivism. A key component of an order (whether community- or detention-based), is the supervision of the juvenile by juvenile justice staff. Recidivism while on an order therefore provides some indication of the success of juvenile justice authorities in addressing the criminogenic needs of the juvenile.

Conversely, counting recidivism that occurs while a juvenile is serving a community-based order may

result in inaccurate comparisons being made. As Hedderman (2009: 112) argues

it is not accurate to compare...a two-year period of incarceration with a two-year period of community-based supervision, as those incarcerated have fewer opportunities to re-offend.

A number of caveats need to be made in relation to this point, as follows:

- while juveniles serving community-based orders may have increased opportunities to offend compared with juveniles under detention-based orders, those in detention are nonetheless able to offend (eg by assaulting another juvenile detainee or a staff member);
- juveniles in detention are under much closer supervision than those on community-based orders. It stands to reason, therefore, that offences committed by juvenile detainees are more likely than those of juveniles on community-based orders to come to the attention of juvenile justice authorities;
- some offences committed by juvenile detainees may be responded to via the operational procedures of the relevant juvenile justice department, rather than externally, via the police and children's court systems. This is not to suggest that juvenile justice authorities do not respond appropriately to offences committed by juveniles in detention, but that some offences, particularly minor offences, may be less likely than offences committed by juveniles in the community to be formally recorded as acts of recidivism;
- if recidivism is measured while juveniles are in detention, the rate is likely to be very low. This may lend political support to incarcerating increased numbers of juveniles;
- a cohort of serious juvenile offenders may be almost always subject to an order due to ongoing reoffending. Excluding offenders currently serving an order would therefore exclude this cohort of juveniles, which is very important to capture; and
- it is likely that the community will be primarily concerned with the reoffending behaviour of juveniles in the community, rather than those in detention.

These issues appear to be underpinned by competing views about the purpose of juvenile detention. It is widely acknowledged that as a sanction, the purpose of incarceration is manifold; it

seeks to meet a number of (sometimes competing) aims, including incapacitation, deterrence, denunciation, retribution and rehabilitation. The issue of whether to include juvenile recidivism that occurs while a juvenile is serving a detention-based order partly stems from the issue of whether detention is supposed to be rehabilitating the juvenile (in which case recidivism might only be reasonably counted from the completion of the order—ie once the juvenile has been rehabilitated), or incapacitating the juvenile (in which case recidivism might reasonably be counted while the juvenile is in detention).

In addition, it is debatable whether counting recidivism that occurs while a juvenile is serving an order assists juvenile justice authorities to measure their performance. It could be argued that as juveniles attend programs during their community-based order that have the aim of reducing their offending behaviour, the impact of this should only be measured from the completion of the order. In Schneider's (1986: 541) study of the impact of restitution orders on juvenile offenders

crimes that were committed after the immediate offense but before entry into the program were counted as 'concurrent' incidents and were not included in the analysis.

Previous research has included recidivism that occurs while an offender is serving a community-based order or suspended sentence, on the grounds that such sanctions should 'send a message' to the offender that recidivism is not acceptable. As this 'message' should have an impact on the offender at the time of sentencing, this body of research argues that all recidivism—even that that occurs during an order—should be counted. Although this is an important point, it is also important to consider whether this is relevant for juvenile offenders in the same way as adults and to what extent this approach allows jurisdictions to measure their performance.

It may not be necessary to count the recidivism of juveniles on community-based orders and the recidivism of juveniles on detention-based orders from the same 'starting point'. Studies of recidivism often use varied follow-up periods—'from the date of release in custodial sentences and the date a court order is given for community penalties' (VDHS 2001: 7). Under the new counting measures adopted by the UK Ministry of Justice, for example, the recidivism of offenders on community-based orders is counted from the commencement of an order, but

the recidivism of those on detention-based orders is counted from the completion of an order (ie the release of the detainee; Ministry of Justice 2008a). Although it has been argued that juvenile offenders subject to community-based orders are typically less likely to recidivate than those subject to detention, due to having less serious offending histories (Minor, Wells & Angel 2009; VDHS 2001), this is not always the case, and juvenile offenders frequently move between community- and detention-based orders.

It should be noted that it is typical for any time spent in custody to be excluded from analyses of recidivism (Ferrante, Loh & Maller 2010). Analyses are usually calculated based on 'available street time' or 'exposure time'; that is, the time that an offender is assumed to be available to commit offences (Ferrante, Loh & Maller 2010; Piquero et al. 2001). Ferrante, Loh and Maller's (2010) study of the effects of exposure time and mortality on calculations of recidivism found that while adjusting for time spent in custody and mortality made little difference to the recidivism rate of adults (measured after 2 years), substantial differences were found when only those offenders who had ever served a community- or detention-based order were considered.

Should frequency and severity of offending be considered in measures of juvenile recidivism?

Many measures of recidivism rely on the calculation of a single figure that indicates 'how much' recidivism occurs (eg what proportion of juvenile offenders return to the criminal justice system?). It has been argued, however, that measures of recidivism might capture the *frequency* and/or *severity* of juvenile recidivism in addition to the proportion of juveniles who return to the criminal justice system (Cunneen & Luke 2007).

This approach was adopted by Schneider (1986: 541), who used

multiple measures of recidivism...to incorporate both the seriousness and frequency of reoffending as well as to minimize possible misinterpretations based on single-indicator analysis.

In Schneider's (1986: 542) study, an *annual offence rate* was calculated by

summing all of the recontacts for the group, dividing by the time at risk (in days), and then correcting to an average annual rate per 100 youths.

Schneider (1986) also calculated a *recontact rate*, which involved dividing the total number of reoffences for each juvenile by the total time at risk, creating an individual-level rate of recidivism.

Seriousness was calculated in a range of ways in Schneider's (1986) study. First, an ordinal coded variable representing the seriousness of the offense committed by the juvenile was assigned:

violent personal offenses were coded '6', followed by serious property offenses '5', other felony property offenses '4', minor personal offenses '3', minor property offenses '2', and trivial offenses, '1' (Schneider 1986: 542).

Second, a variable representing seriousness was created by scoring each reoffence in terms of its seriousness and summing the number of reoffences and the seriousness score 'to obtain an overall measure of frequency and seriousness of reoffense' (Schneider 1986: 524) per juvenile. Finally, this overall score for each juvenile was divided by the amount of time at risk, thereby 'taking into account that youths with longer follow-up periods would be expected to have more reoffences' (Schneider 1986: 542).

It may be worth considering whether averages could also be created from the above approaches. For example, each juvenile's score (the sum of the number of reoffences and the seriousness score) could be added together and divided by the total number of juveniles to produce an average score for reporting purposes.

The Australian Standard Offence Classification (ABS 2008) and National Offence Index (ABS 2009) could be used in the assignment of ordinal coded variables, although as the Australian Standard Offence Classification and National Offence Index have been the subject of debate (Andersson 2003), decisions about what constitutes a 'serious' offence will require further discussion.

New measures for counting juvenile recidivism in the United Kingdom

As described earlier in this report, the United Kingdom recently changed from counting the

proportion of *offenders* that reoffend to counting how many *reoffences* occur. One element of this new approach is counting how many *serious reoffences* occur.

The frequency of reoffending is calculated by dividing the number of proven reoffences by the number of juvenile offenders. This provides an average number of reoffences per juvenile offender. The same approach is used to calculate the average number of serious reoffences. This approach allows high-volume and low-volume offences to be measured and therefore enables better targeting of resources (Ministry of Justice 2008b).

This approach is, however, problematic for a number of reasons. First, in some jurisdictions, if a juvenile is charged with multiple offences, these may be 'collapsed' or 'rolled up' into one charge. If this is the case, calculating an average number of reoffences is likely to be highly inappropriate and may cause difficulties with comparing levels of recidivism across jurisdictions. Second, this method of measuring recidivism provides an average reoffence count across the entire cohort of juveniles. As a result, it does not provide any indication as to the proportion of juvenile offenders that recidivate. Finally, this approach, in presenting an average number of offences committed by juveniles, may risk portraying all juveniles as recidivists and divert attention from the fact that a small number of juveniles are responsible for the majority of recidivist behaviour. If this measure is to be used, it would be important to bear this limitation in mind, particularly in relation to resource allocation. That is, it may not be prudent to allocate funding based on the average number of offences committed, but to target funding towards juveniles with the most serious criminogenic needs and those most likely to recidivate.

Another possible means to measure the severity of reoffending is measuring escalation/de-escalation. This approach would measure whether a juvenile recidivist's new offence was more or less serious than the index offence. Although this type of measure could overcome the problem outlined above, it could only measure severity, not frequency, of recidivism.

It should be noted that measuring escalation/de-escalation is likely to be very challenging, given that 'offence seriousness' is a highly subjective concept (Andersson 2003). In addition, it should be noted in any reporting of escalation/de-escalation of offence seriousness that young people may have

different perceptions of offence seriousness than adults, and that among young people, perceptions of offence seriousness vary according to gender and cultural group (Tyson & Hubert 2003). Perceptions of the relative seriousness of offences also changes over time (Andersson 2003).

How should concurrent orders and combined orders be dealt with?

As juveniles can be subject to concurrent orders in the community (eg a 6 month community-based order and a 9 month community-based order) or combined community- and detention-based orders, it is important to consider at what point a juvenile can be deemed to have ‘exited’ an order. In relation to community-based orders that are served concurrently, it is possible in some jurisdictions for a juvenile to commence two community-based orders on the same day. These may be of different lengths (eg a 6 month order and a 9 month order). In such cases, it is necessary to consider what might constitute the ‘index’ order. One option is that

- if concurrent community-based orders are being served by a juvenile, the ‘index’ order should be the order that was commenced first; and
- where two community-based orders are commenced on the same day, the order relating to the MSO should be considered the ‘index’ order.

One limitation of using the order relating to a juvenile’s MSO as the ‘index’ order, however, is that if this order is shorter than a concurrent community-based order, the juvenile will remain under supervision and the completion of the ‘index’ order will have little practical effect.

In relation to combined community- and detention-based orders, detention-based orders could take precedence as the ‘index’ order. That is, if a juvenile is serving combined community- and detention-based orders, recidivism should be measured from the end of the detention-based order. In practical terms, juveniles on combined orders become subject to a community-based order at the completion of a detention-based order (ie upon release from a correctional facility). This approach concurs with the principle of counting recidivism from the completion of detention-based orders

but from the beginning of community-based orders (described above).

Conclusion

Measuring the performance of juvenile justice agencies is an important but challenging task. As highlighted in this report, there are a range of indicators that could provide a useful insight into the performance of juvenile justice agencies, including levels of recidivism. Measuring juvenile recidivism is itself a highly technical and challenging task. It is nonetheless an important one and worth doing in a meaningful and useful way. As discussed in this report, all measures of recidivism are essentially proxies and all have their limitations. As such, it is recommended that a suite of measures be adopted to calculate rates of juvenile recidivism. This could include:

- the proportion of juvenile offenders that recidivates;
- the proportion of juvenile offenders that seriously recidivates;
- the proportion of juvenile offenders that ‘progresses’ to more serious offending;
- the rate of juvenile recidivism per population;
- the average number of reoffences per juvenile recidivist; and
- the average number of serious reoffences per juvenile recidivist.

These measures should be considered together where possible, rather than in isolation. Using a range of measures to capture the performance of juvenile justice agencies and levels of juvenile recidivism is a prudent strategy to minimise the limitations of any sole measure.

Finally, it should be recognised that these are essentially a set of best practice measures that should be considered for use when planning future recidivism research. While some of the measures are able to be used now, others are more aspirational targets predicated on being able to access the appropriate data. Thus, in the immediate future, while attempts should be made to incorporate such measures, proxy measures may need to continue to be used in order to better estimate juvenile recidivism.



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