Adjudicated Youth Recidivism Rates

(FY2017 Appropriation Act - Public Act 268 of 2016)

March 1, 2017

Sec. 513 (4). *It is the intent of the legislature that the department shall work in conjunction with the courts and the state court administrative office to identify data needed to calculate statewide recidivism rates for adjudicated youth placed in either residential secure or nonsecure facilities, defined at 6 months after a youth is released from placement.*

Sec. 513 (5). *By March 1 of the current fiscal year, the department shall notify the legislature on the status of efforts to accomplish the intent of subsection (4).*

MDHHS

Michigan Department of Health & Human Services

RICK SNYDER, GOVERNOR
NICK LYON, DIRECTOR

Adjudicated Youth Recidivism Rates

The MDHHS juvenile justice member of the Mental Health Diversion Council continued to work with the State Court Administrative Office (SCAO) and representatives from three courts to identify data needed to calculate statewide recidivism rates for adjudicated youth placed in either residential secure or non-secure facilities, defined at 6 months after a youth is released from placement. Due to a lack of funding to support the development of a comprehensive juvenile justice statewide database, efforts focused on drafting a statewide operational definition of recidivism.

The following definition is proposed:

An individual recidivates when adjudicated or convicted of a new offense within 6, 12 and 24 months of release from a secure or non-secure residential treatment facility and he or she was adjudicated or convicted of at least one other offense prior to placement in the facility. Recidivism offenses do not include probation violations, status offenses, or civil infractions.

However, this definition is proposed by SCAO and the workgroup with the following concerns:

- Using the same measurement of recidivism for youth adjudicated of a status offense released from a non-secure treatment facility and a youth adjudicated of a felony sex offense released from a secure treatment facility may be invalid due to the nature of the original offense and/or different treatment program components.

- Recidivism data is not readily available in Michigan, as it requires multiple, confidential data systems to conduct a comprehensive and complicated individualized match of youth identifying data from public and private facilities.

- Recidivism rates for a specific program and population require multiple measures over time to develop a baseline and must be considered along with positive outcome measures such as engagement in education and employment when evaluating training program effectiveness.

The data elements laid out in the attached 2009 white paper written by the Council of Juvenile Correctional Administrators to measure recidivism continue to be relevant. This white paper can serve as a template if funding is appropriated for Michigan to build a statewide juvenile justice technology that incorporates and analyzes the disparate local law enforcement, state police, juvenile court, criminal court, county-based and MDHHS case management systems, and facility treatment systems currently in existence.

A CJCA White Paper
November 2009

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Defining and Measuring Recidivism

This white paper was prepared by the Council of Juvenile Correctional Administrators (CJCA) with support from the Office of Juvenile Justice and Delinquency Prevention (OJJDP).

Copies of this paper can be downloaded at www.cjca.net.

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A CJCA White Paper

Defining and Measuring Recidivism

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Introduction

Juvenile justice agencies are judged successful or not based on recidivism rates that denote the extent to which youths commit crimes after receiving juvenile justice services.[i] This is not to say that delinquency prevention is the exclusive purpose of these agencies or of any single juvenile justice system: rather, it is to acknowledge a central expectation of the public and policy makers that juvenile justice agencies prevent future crime by rehabilitating young offenders.

In 2003, an estimated 307 juveniles were in custody for every 100,000 youths under age 18 in the population (Snyder & Sickmund, 2006). According to a one day count of public and private juvenile facilities in 2003, more than 65,000 juveniles were being held in facilities as a result of a court-ordered sanction -- a 28% increase since 1991. The 1999 Census of Juveniles in Residential Placement (CJRP) estimated that nearly 100,000 juvenile offenders were released from custody facilities in the United States and returned to their communities (Sickmund, 2000; Snyder & Sickmund, 2006). This figure has remained consistent throughout the 21st century and there are no indications that it will decline in the near future (Snyder & Sickmund, 2006). The number of juveniles discharged from correctional and treatment facilities each year has grown significantly from decades past, creating concerns about how to most effectively prevent their return to custody.

Compounding difficulties inherent in large numbers of juveniles reentering communities is the recidivism rate of these returning juveniles. Rates of juvenile re-offending have been found to be as high as 66% when measuring recidivism by rearrest and as high as 33% when measuring re-offending by reconvictions within a few years of release (Mears and Travis, 2004; Bureau of Data and Research, 1999). Accurately estimating a national juvenile recidivism rate, however, is problematic. Snyder and Sickmund (2006: 234) state that, "Such a rate would not have much meaning since juvenile justice systems vary so much across states." The most accurate nation-wide juvenile recidivism statistics are likely to be found by aggregating state rates of juvenile recidivism. However, as evidenced by the varying recidivism rates mentioned above, recidivism findings can differ greatly depending on how recidivism is defined and measured.

Recidivism is most commonly measured in terms of rearrests, referrals to court, reconvictions, or reconfinement. As can be seen from Table 1, reproduced from Snyder and Sickmund (2006, p. 234), using the average of state juvenile recidivism rates for a small number of states, the national juvenile rate could be anywhere between 25% and 55% depending on what measure of recidivism is used to comprise the measure. Consequently, averaging rates based on unknown and varying measures of recidivism does not produce meaningful information. Furthermore, this table illustrates how recidivism rates decline as we move from one system process point to the next.

Table 1

Reoffending data from studies of juveniles released from state incarceration show that rearrest rates are substantially higher than rates based on other measures of recidivism

Recidivism measured for 12-month followup period	States	Average rates across studies: Recidivism	Average rates across studies: Success
Rearrest			
Delinquent/criminal offenses in the juvenile and adult systems	FL, NY, VA	55%	45%
Rereferral to court			
Delinquent/criminal offenses in the juvenile and adult systems	CO, MD	45	55
Reconviction/readjudication			
Delinquent/criminal offenses in the juvenile and adult systems	AK, FL, GA, KY, MD, ND, OK, VA	33	67
Reincarceration/reconfinement			
Delinquent/criminal offenses in the juvenile and adult systems	FL, MD, VA	24	76
All offenses in the juvenile and adult systems	AZ, OH, TX	25	75
Delinquent offenses in the juvenile system only	AR, MO, NM	12	88

Source: Authors' adaptation of Virginia Department of Juvenile Justice's *Juvenile Recidivism in Virginia.*

Table 1 demonstrates the need to consider carefully the value of recidivism as an outcome of services delivered and to ensure that statements about recidivism are based on a common understanding of what the term means and what data were used to calculate rates and draw conclusions.

The Value of Outcome Data

Within jurisdictions, and within probation and correctional agencies, outcome data provide the basis for designing more effective programs and services and demonstrating accountability for public agencies that spend tax dollars. Two critical roles that outcome measurement plays are to feed back outcome information that informs decision makers about levels of success relative to objectives and to examine the effects of programmatic or policy changes on outcomes of interest. Outcome data can also be a primary means of communicating the need for increased resources, demonstrating achievements with regard to shared objectives, and documenting improvements in performance.

Outcome data also are used for program evaluation. The most common types of program evaluations include impact studies, process studies, and cost-effectiveness studies. Impact and cost-effectiveness studies require comparison with similar groups of clients in

order to establish the relative benefit of the program being evaluated. Relevant to this report are impact evaluations that demonstrate the relative beneficial effects of one program over others, or over doing nothing.

It is uncommon to conduct a program impact evaluation in juvenile justice without measuring recidivism. Despite challenges posed by definitional ambiguity and misuse of recidivism data, a program's recidivism rate is generally regarded as the most critical indicator of program success to the widest audience.

Appropriate comparisons of recidivism rates are, in part, contingent on the measures used. If the recidivism rate of a program's clients is to be compared to the recidivism of a comparison group of adolescents (i.e. both groups are similar in all ways other than exposure to the services experienced by the treatment group), the measure of recidivism, whatever it is, must be the same for both groups.

Recognition of the need for common definitions and measures of recidivism arose from attempts by CJCA to facilitate discussions about the different recidivism rates reported by different juvenile correctional agencies. It quickly became obvious that directors of these state agencies were not speaking the same language: they were using different decision points in the justice system to define recidivism, and they were using different criteria to select cases for measurement.

In October of 2008, OJJDP funded a CJCA all-directors conference in Chicago to begin the process of developing common definitions and measures of recidivism. Speakers at the conference included Steve Aos, Mark Lipsey, Edward Mulvey, and Carol Shapiro. By the end of the conference, a rough set of definitions of recidivism emerged, contingencies such as identifying youths at different levels of risk received support, and the directors recognized that access to needed data would be an obstacle to outcome measurement in some states.

This white paper is a product of the proceedings of the all-directors conference and a work group, comprised of directors and researchers, created out of that conference. Over the past year, members of the group submitted ideas, responded to interviews, and edited drafts to advance the group's goal of reaching consensus on how to measure recidivism. The work group is focused on developing a set of standards regarding the definition and measurement of recidivism that will be adopted by all juvenile justice agencies with the ultimate goal of facilitating the development of more effective responses to the problem of delinquency.

In October 2009, OJJDP funded a second all directors conference in Chicago to review the proposed White Paper and consider the findings. The directors adopted the White Paper by consensus. Having achieved White Paper consensus an Implementation Subcommittee of the Work Group was formed to develop a comprehensive implementation plan for national recidivism data gathering and measurement.

Goals of Measurement

The CJCA Recidivism Work Group, as tasked by the CJCA membership and the Office of Juvenile Justice and Delinquency Prevention (OJJDP), Office of Justice Programs, U.S. Department of Justice, identified three goals of measuring recidivism:

1. To reduce re-offending;
2. To increase support for evidence-based programs (both proven and promising); and
3. To support continuous quality improvement of programs and systems of services.

1. Reduce re-offending

Recidivism and re-offending are in most cases synonymous (Blumstein & Larson, 1971; Maltz, 1984). There are measures of recidivism, such as re-incarceration, that may include subjects who were incarcerated due to a technical violation, and in such cases the terms are not synonyms. The goal of reducing re-offending, however, implies the commission of delinquent acts that would be crimes if juvenile offenders were adults, as well as crimes prosecuted through the adult criminal justice system. This definition of re-offending excludes status offenses and technical violations. Since re-offending is likely to produce harm to victims, offenders and families of offenders, as well as additional costs to the state, the public interest is served well if policymakers and program administrators commit to and invest in collecting, analyzing, and using recidivism data to prevent repeat offending. This is not to say that studies of juvenile justice defendants cannot include status offenders or technical violations; it is to argue that for purposes of setting standards, we should adhere to the more common meaning of recidivism, which is grounded in criminal behavior.

2. Increase support for evidence-based programs

Program designs that have been proven effective over a number of rigorous evaluations (referred to as evidence-based programs) provide jurisdictions with opportunities to short-cut the search for effective programs. A number of such programs exist, as well as organizations equipped to assist with implementation of the program, since fidelity to the program design is critical to a program's effectiveness. Information regarding these programs is readily available online from sources such as the Center for the Study and Prevention of Violence at the University of Colorado (Blueprints for Violence Prevention)[1], National Center for Mental Health and Juvenile Justice (NCMHJJ)[2] and the Office of Juvenile Justice and Delinquency Prevention and Substance Abuse Services Administration (Strengthening America's Families: Model Programs for Delinquency Prevention).[3] For example, programs identified by Blueprints for Violence Prevention include Multisystemic Therapy (MST), Functional Family Therapy (FFT) and Aggression Replacement Training (ART). The availability of recidivism studies conducted on these program designs, as well as cost-benefit information, can supply the juvenile justice leader with data likely to attract support and funding for local replication.

[1] http://www.colorado.edu/cspv/blueprints/
[2] http://www.ncmhjj.com
[3] http://www.strengtheningfamilies.org/html/model_programs.html

At the same time, it is likely that other programs exist nationally that are successful in meeting the goal of preventing future crime, but that have not been evaluated in order to demonstrate their effectiveness. As the public and lawmakers increasingly demand evidence that their tax dollars are well spent, measuring recidivism in a standardized way will help generate data that can be used to identify other successful programs and continue to support those programs already recognized as evidence-based.

3. Improve program and system quality

Continuous quality improvement (CQI) depends on a continuous flow of data regarding inputs (e.g. resources, staff training), outputs (e.g. hours of group counseling) and outcomes (e.g. educational attainment, re-offending,). CQI is based on the theory that small incremental adjustments to inputs and outputs can change outcomes, and that these adjustments are carefully recorded and assessed. Re-offending is likely to be seen as an ultimate outcome, with intermediate outcomes contributing to reducing re-offending. For example, youths who invest in their schooling, communicate more effectively with their parents, or successfully implement tools for managing their emotions are less likely to re-offend.

Each of these three goals of measuring recidivism depends on how outcomes are defined and measured. Table 1, above, showed that measures of recidivism, if taken from official records, include rearrest, petitioning to court, adjudication, and reincarceration. Reincarceration, however, can be the product of a technical violation rather than a new offense. In addition to official actions, some studies make use of self-reported re-offending, producing yet another rate of recidivism.

To achieve the aforementioned goals, definitions of recidivism must be specified and recidivism must be measured consistently over time. Otherwise, factors causing changes in outcomes cannot be identified with confidence. Second, a conclusion made regarding the superiority of one program over another, based on recidivism as an outcome, requires use of the same definition and measure of recidivism. Similarly, when recidivism is measured at the system level, say a state agency's recidivism rate, the same measure of recidivism must be used for all programs and program clients in order for the aggregate rate to be valid.

Valid comparisons of programs or systems, as will be discussed later in this paper, require comparability of populations whose data are being used to calculate outcome measures such as recidivism. Aside from experimental designs in which similar youths are assigned to different conditions, knowing the risk level (probability of re-offending) of youths in comparison groups makes it possible to reduce the impact of some of the many factors, other than the intervention being evaluated, that may be influencing aggregate recidivism figures.

Purpose of This Paper

Juvenile justice leaders face several problems due to the complexity underlying measurement of recidivism and demands for recidivism rates as simple, definite numbers that describe the effectiveness of a broad range of services and youths. These problems include:

1. Assumptions of comparability of recidivism measures that underlie demands for public statements on program and system recidivism rates,
2. Policy makers that incorrectly assume that the programs contained in a system have alone produced the system's aggregate recidivism rate,
3. A lack of comparability of youths for whom data are being collected, and
4. An undervaluing of outcome measures other than recidivism rates that are often better measures of program and system effectiveness.

One of the most serious problems leading to the inappropriate use of recidivism data is the lack of standardization of definitions and measures. Granted, any number of factors can confound findings of effectiveness, but comparisons of program and system outcomes must begin with a common understanding of what is being measured. This white paper lays out recommendations for standardizing measures of recidivism. CJCA will analyze the uses and misuses of recidivism data in a subsequent paper. In a third, we discuss outcomes and outcome measures other than recidivism that are useful for program and system development and that reflect important aims of the juvenile justice system.

The Need for Standardization

Calls for standardization of measurement can be found in the scholarly literature and noteworthy federal documents dating back at least to the early 1970s. For example, the National Advisory Committee on Criminal Justice Standards and Goals (1976) stated the following:

> *A major problem in research on criminal justice is the absence of standardized definitions . . . . The confusion over definitions has not only impeded communication among researchers and practitioners, but also has hindered comparisons and replications of research studies.*

Any assessment of impact or worth requires comparison. Is a 30% recidivism rate good or bad? There is no way to answer this question unless we have some other recidivism rate to use as a comparison. In program evaluations, comparison groups are typically drawn from a population of clients that did not receive the program interventions being evaluated. Since no one expects to accomplish a perfect outcome, such as 0% recidivism, a benchmark is needed against which to compare actual results of a program. In order to compare two groups in terms of an outcome measure, however, the outcome measure being used for each group must be the same. Recidivism is a concept that can be

operationalized in many ways, and there are no agreed-upon standards for measuring recidivism.

Standardization is necessary in order to communicate clearly the meaning of outcome study results, to communicate unambiguously the methods used to obtain research findings, to enable replication of research designs, to make possible comparisons across studies and regions, and to facilitate knowledge development.

Why Measure Recidivism?

Recidivism is an inherently negative indicator of program or system performance. It is an undesirable outcome, or if expressed in terms of non-recidivism, the absence of an adverse outcome. Some will argue that programs and agencies should be measuring positive outcomes such as educational attainment, improved family functioning, attachment to positive adults or employment. CJCA fully supports the application of positive outcome measures and will pursue this line of thinking in a separate white paper. Recidivism, meaning the commission of a new delinquent or criminal offense, is a public safety concern. Its reduction is a traditional goal of the juvenile justice system; policy makers and funding agencies routinely define performance in terms of reductions in delinquency and recidivism. Moreover, preventing future re-offending, with its inherent victimization, is a goal shared by all agencies of the justice system.

There is, of course, another reason why recidivism is a popular outcome measure: it is easier to obtain recidivism data than other kinds of outcome data. As problematic as access to arrest, adjudication, adult conviction and re-incarceration data may be, these data are recorded systematically by agencies of the justice system. Collecting data on educational achievement, consistent employment, family functioning, and stable relationships with prosocial peers and adults following termination of court jurisdiction would present many more obstacles, including, but not limited to, policies regarding confidentiality. Not surprisingly, convenience has been suggested by Michael Maltz (1984) as one reason why recidivism has become the most common measure of correctional effectiveness.

Aside from convenience, there is a genuine interest among policy makers in comparing recidivism rates across jurisdictions. These comparisons sometimes reflect competiveness among states, but they also reflect a desire to hold juvenile justice agencies accountable for the outcomes of the services delivered to delinquent youths and their families. There have certainly been times when doubts have been raised about the value of the juvenile justice system. The introduction of due process protections by the U.S. Supreme Court[4], the overwhelming response to Robert Martinson's (1974) claim of systemic program ineffectiveness (Gendreau, Cullen), statements by respected scholars that juvenile justice systems rarely provide services proven to be effective (Bishop, 2006; Feld, 1997; Miller, 1996), legislation increasing the numbers of juvenile cases tried in adult criminal courts (Griffin, Torbet, & Szymanski, 1998), and the recent call for wide-spread adoption of evidence-based programs (Greenwood, 2008) all call into question the

[4] In re Gault, 387 U.S. 1 (1967); In re Winship, 397 U.S. 358 (1970); Breed v. Jones, 421 U.S. 519 (1975)

social value of existing juvenile probation and correctional services. Thus, demands for recidivism data often put juvenile probation and correctional administrators on the defensive. At the same time, these administrators acknowledge the value of outcome data for their own agencies and for communicating to responsible authorities and the public the worth of the services their agencies provide.

Defining Recidivism

The term "definition" and "measure" are often confused. Definition has to do with the meaning of a word or phrase, while measure is a systematic way to assign a value (count or score) to a subset of a sample. In this case, definition refers to what is meant by the term recidivism. Recidivism is generally defined as "a falling back or relapse into prior criminal habits, especially after punishment" (Blumstein & Larson, 1971). In other words, recidivism means the commission of an offense by an individual already known to have committed at least one other offense. Appropriate definitional questions, then, include: 1) does recidivism mean only the commission of a new offense or does it include technical violations of parole, 2) does recidivism include status offenses, and 3) does categorizing an individual as a recidivist require that he or she was found guilty of a prior offense by a court of law?

The term "measure" refers to the type of data that will be used to assign values to recidivists and non-recidivists. These data types (which we discuss later in this paper) include, among others, self-reports of re-offending, police records of new arrests, and court records of new adjudication and dispositions. Recidivism may mean the actual commission of a new felony or misdemeanor, but the measure of recidivism is likely to be an adjudication of delinquency based on evidence that a youth committed a new felony or misdemeanor. In this example, it is the measure "adjudication" that is used to categorize youths as recidivists or non-recidivists.

Status offenses are violations of laws that govern the behavior of juveniles but not adults. They include such behaviors as being truant from school and running away from home. CJCA has taken the position that recidivism does not include status offenses or technical violations of court orders. The most obvious definition of recidivism is a new offense that would be a crime if perpetrated by an adult, committed by a previously-adjudicated youth who has been released from a program or returned to the community. This definition can be expected to resonate with public interests in safety. Since the follow-up period for a youth may include his or her transition to adulthood, this new offense includes crimes committed by adults.

It may be, however, that the population of interest includes youths who have not yet been adjudicated, but who have been previously arrested and have had their cases handled informally, either by means of a diversion program or a court's informal adjustment. Under these circumstances, repeat offending may be an appropriate concept but the definition of the first offense does not require proof of guilt. Use of recidivism in this sense would likely involve the measures of arrest and re-arrest.

Measuring Recidivism

The definition of recidivism adopted by CJCA involves the commission of a new offense. Knowledge of which youths committed new offenses, what offenses they committed, or how many offenses they committed during the period of follow up is, however, not obtainable. The vast majority of offending isn't visible to the justice system. Consequently, proxies such as arrest, charging, conviction and re-incarceration decisions are used to measure recidivism. These are indicators of youth behavior based on decisions made by agents of the justice system about youths who come to their attention. These are indicators of recidivism over which the justice system has some control and that probably reflect patterns of actual re-offending. Of course, there is also the influence of chance, both in terms of who gets caught and for what. These decisions are also subject to local practices of justice system decision making, differences in policies across jurisdictions, and informal agreements among members of courtroom workgroups. Consequently, there is opportunity for bias built into any measure of recidivism. A fact to keep in mind, then, is that ***every measure of recidivism based on an official record always involves behavior or alleged behavior of a youth and a formal decision made by at least one official of the justice system***. What varies in the measure of choice is the decision point in the case processing system, the source of information about the decision, policies governing that decision and practice norms within agencies that influence that decision.

Official recidivism is measured in terms of one or more system responses, such as arrest, filing of charges, adjudication, incarceration or parole revocation. As previously discussed, the selection of decision point has a great impact on the proportion of recidivists identified. Maltz (1984, p. 66) found that among over 90 recidivism studies, recidivism was defined using nine different decision points: arrest, reconviction, incarceration, parole violation, parole suspension, parole revocation, a new offense, absconding, and probation. But as we saw from Table 1, the average percentage of youths found to have recidivated shrinks from 55% when arrest is used as the recidivism measure to 12% if reincarceration for a new offense is selected. This shrinkage has to do with desirable and necessary decisions to remove (dismiss or divert) some cases at each decision point and allow others to continue to the next stage of the justice process. That is, decision-makers screen out cases for which evidence is insufficient to support the charges or an informal option is seen as more suitable, given the offense and accompanying circumstances. The definition of recidivism that is selected, then, greatly affects the recidivism rates reported.

Issues Relating to Measurement

Aside from recognizing the need to use official decisions as proxies for re-offending, a number of considerations should be addressed in developing recidivism outcome data. We have identified a number of these issues and discuss them briefly in this section, conceding that we may not be doing justice to any of them in this short document.

1. Deciding on the Appropriate Measure

Prior to selecting a measure of recidivism, those conducting the study must consider the relevance of the definition for the population being studied. For example, if reincarceration (a disposition decision) is the measure selected, youths who have never been incarcerated are not eligible. If re-adjudication is selected as the measure of recidivism, then youths never adjudicated but whose cases were handled informally through a diversion or consent decree process are not eligible. Conversely, a first residential placement may be a relevant measure of recidivism for youths on probation, assuming that the difference between technical violations and new offenses is acknowledged. Given the variety of populations for whom recidivism is of interest, this matching of recidivism definitions to population attributes is of critical importance.

2. Selecting the Best Source of Information

Two factors should be kept in mind when selecting a data source: 1) how accurate are the data, and 2) how complete are they. Data quality is often a major concern when deciding which data source to use. In some databases, the information is recorded by a variety of people and careless data entry results in information that is unreliable. Often, important data are missing in so many cases that reliable aggregate estimates cannot be made. Some data sources are incomplete because of cases that are not processed beyond a certain point in the system.

When recidivism is measured with arrest data, for example, the source of arrest information is sometimes court records rather than police records. This use of the term "arrest" in such cases is likely to be erroneous: the arrest decision is made by the police, and that decision alone contains several separate decisions, including whether or not to take the youth into custody, whether to file a formal arrest report, and whether or not to submit the arrest report to the district attorney and/or court intake authority. If the police pass the case forward for court processing, the district attorney then reviews the arrest report and evidence and decides whether or not to file charges in court. In some jurisdictions, an intake unit of the court also screens cases for further processing. It is only at this point that the arrest appears in court records. Thus, there are many more arrests than those that appear in court records.

Colorado's Division of Youth Corrections, for example, decided that the filing of a delinquency petition with the court by the district attorney more accurately represented knowledge of a new offense than arrest data found in court records. They reasoned that the arrest data in court files undercounted actual arrests. On the other hand, a recent report from Florida's Office of Program Policy Analysis and Government Accountability (2009) appropriately made use of law enforcement records to measure arrest as an outcome of the Redirection Program, thus maximizing validity of the arrest data.

3. Time and Recidivism

Another important consideration is ***the follow-up time period***. Studies that are limited to less than a year will undoubtedly produce lower recidivism rates than those that follow cases for three years. On the other hand, treatment effects are likely to deteriorate over time as other influences grow in number and potency. If a randomized control trial is

being conducted, treatment effects can be measured indefinitely, but barring random selection of cases to treatment and control groups, long periods of follow-up are hard to justify. The question to address is what period of time is sufficient to produce a clear picture of intervention impact?

With reference to follow-up, it is also important to ***identify clearly the starting and end points of the follow-up period***. As Barnoski (1997) argues, recidivism typically refers to a period of time that begins with release to the community or the beginning of a community-based commitment. Maltz (1984) points out that release may be from an institution, a community residential program, an after-school program, or aftercare. Regarding the end point, time may be restricted to a fixed set of dates (e.g. January 1, 2009 – December 31, 2009) or a time period may be applied at the individual level, so that each youth is followed for the same number of days, weeks or months.

A further approach to be considered is measuring time to the first new offense, referred to as survival analysis. With this measure, we are looking for an amount of time from the start date of our follow-up to the first offense that occurs within the entire follow-up period. We are assuming that the longer a youth survives without offending, the less likely it is that he or she will reoffend. Some youths will not have reoffended during the follow-up period, so a statistical adjustment, called censoring, needs to be made to account for them. Typically the researcher reports the average time to first offense.

One further time issue: many researchers recognize the importance of measuring ***time at risk***. That is, if an offender is removed from the community after two months, reincarcerated for six months, and then placed back in the community, the six months of incarceration should not count as part of the follow-up. In order for the time to count, there should be an opportunity to offend.

4. Counting All Cases

Tracking individuals for purposes of measuring recidivism often requires ***obtaining information on offenses processed by the adult criminal justice system***. This transition to the criminal justice system can have occurred as consequence of age, or it may be that the youth's case was waived to the adult system. In either case, a valid measure of recidivism should not stop solely as a result of actions taken by a non-juvenile justice agency. Ignoring arrests or convictions committed within the follow-up period solely because of an individual's age or status will result in an undercount of the recidivism measure.

5. Differentiating Among Offenses

Defining recidivism goes beyond simply noting whether or not a youth has been arrested or adjudicated. Studies that ***include type of offense, offense severity and offending frequency*** often examine changes in offending patterns. Collecting more detailed descriptions of new offenses creates opportunities to examine intervention effects with greater complexity. For example, recent research has found that some types of treatment are effective depending on offense type.

Recidivism can also be examined in terms of ***charges brought against the youth***, including the most serious charge and the number of charges. These charges may be classified in terms of felony or misdemeanor, or in terms of a seriousness scale. Not all of these charges will survive the adjudication process, however, so differentiating charges on which the case was adjudicated from those that were dropped is important when differentiating "filing of charges" as the measure of recidivism from "adjudication of delinquency."

6. Data Reporting Options

Measurement is not simply a matter of selecting a study population or a specific stage in case processing: ***measurement also involves decisions related to how the data are reported***. In fact, even after the case processing stage is selected, a number of measurement choices can be made. A good example of these optional measures of recidivism can be found in Anne Schneider's 1986 experimental study of restitution programs. In this study, she provides recidivism data on the experimental and control groups, using only juvenile and adult court data, and excluding those cases that were dismissed due to lack of evidence or a not-guilty finding. Follow-up ranged from 22-36 months depending on when the youth entered the program. The measures analyzed and reported were:

1. Prevalence of reoffending: the percentage who reoffended during the period of follow-up,
2. Annual rate of reoffending: the number of court contacts for each youth divided by time at risk, and then expressed as a percentage,
3. Recontact frequency during entire follow-up period,
4. Individual recontact rate: number of new offenses in follow-up period divided by time at risk,
5. Offense seriousness: most serious charge (a scored item),
6. Offense seriousness: sum of most serious charge scores for each subsequent offense,
7. Offense seriousness rate: sum of most serious charges for each subsequent offense divided by time at risk.

Influences on Recidivism Rates

Individual Differences

Not all delinquent youths are alike. Consequently differences in recidivism rates will be influenced by differences among those persons whose behavior is of interest. Demographic characteristics such as gender, age, race, and ethnicity are all related to recidivism rates (Dembo et al., 1998; Minor, Hartmann, & Terry, 1997). Family, peer and school factors are known to influence re-offending, as are substance abuse and mental health problems (Chung and Steinberg, 2006). In addition, there is some evidence that special needs youths – those with mental health, substance abuse or learning problems – are more likely to be rearrested and re-committed. It is for this reason that

program evaluators are careful to create comparison groups that are sufficiently similar to intervention groups so that differences found can be attributed to the intervention. This suggests the need to include detailed information on individuals included in measures of re-offending.

A second relevant set of effects has to do with the environment in which the youth resides. If the follow-up period encompasses a time when the youth is living in the community, then the forces present in that community are likely to be affecting the youth's behavior. A large body of research supports a theory of delinquency which argues that socially disorganized neighborhoods lack informal social controls that suppress crime and delinquency (Bursik, 1988). The proliferation of such ecological considerations within the field of criminology stems from the work of Shaw and McKay (1942), who demonstrated the impact of environmental attributes such as poverty, ethnic heterogeneity, and residential mobility within neighborhoods on rates of delinquency.

Several studies have concluded that juvenile crime is dependent on neighborhood processes, particularly where economic disadvantage decreases collective efficacy (Bursik, 1988; Liberman, 2007; Loeber and Wikstrom, 1993; Sampson and Groves, 1989; Sampson et al., 1999; Simcha-Fagan and Schwartz, 1986). Drug and alcohol availability (Freisthler et al., 2005; Herrenkohl et al., 2000), the spatial concentration of juveniles with delinquent attitudes (Oberwittler, 2004), and number of "unconventional" friends (Rankin and Quane, 2002) have also been identified as neighborhood-level predictors of juvenile offending. Recent research has found that both the likelihood of recidivism and the type of offense a youth will commit depend heavily on the neighborhood in which the youth resides (Harris et al., 2009).

Intervention characteristics are relevant to this paper as well. To a large extent, this paper focuses on system-level recidivism rates. Interventions designed to affect recidivism, however, are delivered through programs. Although programs do not shape system level recidivism rates alone, system recidivism rates are based on aggregates of program recidivism rates. It follows, then, that differences among programs and the numbers and types of youths committed to different programs will contribute heavily to system rates. Moreover, follow-up data typically include period of time following a period of residential confinement that includes an aftercare program. The design and quality of aftercare services, which may vary by city and county, must also be considered.

Because ***offender characteristics can affect rates of reoffending***, recidivism data are more useful for comparison when those characteristics can be statistically controlled. For example, comparing recidivism rates of youths following a period of placement in secure facilities with a sample of probationers would make little sense given likely differences in factors associated with risk of re-offending. Recidivism data, then, should be accompanied by information about the study subjects to enable comparisons of similar samples.

It may also be the case that some types of youths are more likely to be arrested and processed than others. Here is where system-level knowledge regarding ***disproportionate***

minority contact and the ***vulnerability of special needs populations*** (mental health, substance abuse, special education) can help to explain differences in recidivism rates among different populations of youths.

State System Differences

Aside from issues of measurement, we need to consider differences among the states being compared. A state that treats 17 year olds as adults will have a different recidivism rate than one that treats 17 year olds as juveniles. Recidivism may also be affected by the quality of aftercare services, variation in police practices, differences in arrest and conviction standards, and policies that control waiver to the adult system. An entirely or largely urban jurisdiction will experience different recidivism rates than a largely rural jurisdiction. A jurisdiction that formally processes and brings to court lower level offenses would be expected to have different recidivism rates than one that does not. These differences would be expected regardless of the effectiveness of juvenile justice system interventions.

Any number of societal factors can also shape recidivism rates and account for jurisdictional differences. These factors include economic and cultural differences, the presence of metropolitan areas, and levels of support for education, families and health care. Communities that are economically disadvantaged and lacking in social capital are likely to have high rates of delinquency and crime (Sampson &Groves, 1989). It follows then that the prevalence of such communities will influence recidivism rates.

Data access and information sharing will affect a state agency's capacity to measure recidivism. Some states have made significant strides in developing statewide juvenile court databases, while in other states a state juvenile correctional agency must rely on multiple data sources for information on its clients. Often, information sharing agreements have not been achieved. Moreover, some state agencies can access adult court data on youths who are past the age of majority or who have been waived to the adult system, while others do not have access to recidivism data once a youth has moved into the adult system.

Conclusion

This discussion has raised a number of issues relating to defining and measuring recidivism. Clearly, developing consensus around how to address all of them will be difficult. CJCA contends, however, that increasing the ability of juvenile justice agencies to communicate clearly about recidivism requires use of a common language, in this case common definitions and related measures. Standardization of definitions and measures of recidivism can increase the juvenile justice system's capacity to learn about effective programs and practices, and build support for greater information sharing. To develop consensus around standards requires first a review of current practices, both by state agencies and by researchers that conduct program and system-wide evaluations.

Current Practices

In order to introduce our description of current practices, this section of the report provides a brief listing of decision points in the juvenile justice system used to measure recidivism.

1. Arrest: Arrest reflects a decision made by a law enforcement officer. It is the first of several points in the processing of a case where a record of an offense and an offender is created. Although the term arrest is often used in recidivism studies as the measure of arrest, we find that the source of data is sometimes court records. An accurate measure of arrest requires use of police data, since not all arrests result in a petition to juvenile court.

2. Informal adjustment and diversion failure or success: Youths who are diverted from juvenile court processing prior to adjudication present one of the first points at which youths known to be delinquent (although guilt has not necessarily been proven) can re-offend. Although guilt has not necessarily been proven, some of these adjustments are contingent upon admission of guilt.

3. Filing of charges: Cases that result in a petition have been screened by the police and a prosecutor and/or intake officer. Thus, although not all arrests produce a petition, the number of cases for which charges are filed will be larger than the number adjudicated delinquent. Moreover, if the collection of charge data is seen as valuable, some charges may be dismissed, while for others the youth may be found guilty. Collecting all charges as well as adjudicated charges may be desirable.

4. Adjudication/conviction: A finding of guilt, while not the same as an adjudication as delinquent in all jurisdictions, provides a greater degree of confidence that the youth committed a new offense (a reduction of false positives), and what offense[s] the youth committed.[5] By this point, confidence that the youth committed a new offense is maximized and justification of further intervention has been demonstrated.

5. Juvenile commitment: Incarceration or re-incarceration suggests a judgment of offense seriousness or some related problem by the court. Although some adjudicated youths, even on their second or third offense, will not be incarcerated, for an agency that operates only residential facilities, this is an important measure of intervention impact.

6. Adult commitment: Adult commitment is an important measure for those youths whose cases are followed past the age of juvenile court jurisdiction or for juveniles whose cases are waived to criminal court. Without this measure, commitment data will underestimate the amount of recidivism.

[5] A finding of guilt at this stage requires proof beyond a reasonable doubt (Breed v. Jones, 421 U.S. 519 (1975)).

Given these six decision points that can be used to calculate recidivism, we turn our attention to examining current practices in the measurement of recidivism. In order to capture current practices, and recognizing that evaluation researchers and juvenile correctional agencies may have different views about how to measure recidivism, the Recidivism Work Group looked at three sources of information:

1. Recent reports published by juvenile correctional agencies
2. A CJCA survey of state and metropolitan area juvenile correctional agencies
3. Program evaluations and related research published in academic journals

Current Practices among Juvenile Correctional Agencies

Many juvenile correctional agencies track recidivism data in order to improve services and service delivery, and to provide performance data to policy makers, the press and the public. Occasionally, juvenile correctional agencies will devote resources to conduct an in-depth study of system-wide outcomes, including recidivism rates. In some cases, these studies are conducted by external evaluators under contract with the agency. Our request to juvenile correctional agencies produced ten recent studies. Table 2 summarizes information as to the definition of recidivism used, length of follow-up and other information pertinent to population targeting. Six of these studies measured recidivism in terms of placement or return to custody; four used adjudication. One study measured recidivism in terms of the filing of charges in juvenile court, and one made use of arrest information, but this latter study also provided a measure based on adjudication. Based on this subset of state reports, it appears that placement (a disposition decision) and adjudication are measures commonly used. We can also see that the follow-up time period ranges from one to three years, with no particular time period dominating.

Table 2
Definitions and Measurement of Recidivism by Juvenile Correctional Agencies
as Indicated by Published Reports

State	Recidivism Measure	Other Information
Arizona	Return to custody	Up to 36 months follow-up Differentiates new offense from technical violation
Colorado	Filing for new offense	12 month follow-up
Kansas	Return to custody	12 month follow-up
Louisiana	Re-adjudication and placement in facility	36 month follow-up Includes adult cases
Maine	Adjudication	18 month follow-up First adjudication cases only
Massachusetts	New adjudication	24 month follow-up
North Carolina	New arrest New adjudication	24 month follow-up Includes adult cases

Ohio	Return to custody or adult sentence	
Virginia	Return to custody	Up to 36 month follow-up
Wisconsin	Return to custody	Up to 24 months Differentiates new offense from technical violation

Aside from these occasional reports, most state juvenile correctional agencies routinely monitor recidivism data. As part of its annual survey of state and metropolitan area juvenile correctional agencies, CJCA asked its members a number of questions pertaining to how recidivism is measured. These questions are listed in Figure 1 below.

Figure 1
CJCA Annual Survey Questions on Recidivism

Recidivism

Please download the 2008 Yearbook Glossary for reference while completing the survey.

102. Does your agency track recidivism rates?

○ Yes ○ No

102a. How do you use the information?
Check all that apply

- ☐ External reporting
- ☐ Internal program evaluation or assessment
- ☐ Agency planning
- ☐ Other

102a-1. Please specify:

_____

103. How do you define recidivism?
Please indicate your definition based on the following three variables: the group of youths measured, the action that determines a youth has recidivated and the tracking or follow up time period.

103a. Group of youths being measured:
Select one

- ○ All youths who have left secure care
- ○ A specific subgroup of youths selected based on the program/facility attended (e.g., secure treatment only, youths on probation only)
- ○ A specific subgroup of youths selected based on delinquency charge (e.g., first time offenders only, sex offenders only)
- ○ A specific subgroup of youths selected based on another criteria

103a-1. Please describe the group:

_____

_____

_____

_____

103b. The action that determines a youth has recidivated:
Check all that apply

- ☐ Arrest
- ☐ Adjudication
- ☐ Commitment - to youth corrections/services
- ☐ Commitment - to adult corrections/services
- ☐ Other

103b-1. Please specify:

_____

103c. Tracking or follow up time period:
Check all that apply

- ☐ Less than 12 months
- ☐ 12 months
- ☐ 18 months
- ☐ 24 months
- ☐ 36 months
- ☐ More than 36 months
- ☐ Other

103c-1. Please specify:

_____

104. What is your rate of recidivism?

_____

105. What is your date of study?

_____ / _____ / _____

106. Which data elements do you and your agency have access to?
Check all that apply

- ☐ Youths transferred to the adult correctional agency
- ☐ Youths' arrest data
- ☐ Youth risk level, as determined by a standardized risk protocol or assessment
- ☐ Youths' most recent offense
- ☐ Youths' most serious offense
- ☐ Age of youths
- ☐ Gender of youths
- ☐ Ethnicity of youths

107. CJCA is trying to develop a continuum of measures that effectively report how well agencies rehabilitate young offenders.

Please indicate which of the following evaluation and outcome measures you think are meaningful indicators of your agency's services and programs.
Select all that apply

- ☐ Increased educational scores (pre-, post-testing within facilities)
- ☐ Improved behavior demonstrated in points/levels system
- ☐ Vocational skills/training acquired
- ☐ School attendance
- ☐ High school graduation
- ☐ Secure employment
- ☐ Employment for more than 3 months

Please indicate which of the following evaluation and outcome measures on which you collect data.
Select all that apply

- ☐ Increased educational scores (pre-, post-testing within facilities)
- ☐ Improved behavior demonstrated in points/levels system
- ☐ Vocational skills/training acquired
- ☐ School attendance
- ☐ High school graduation
- ☐ Secure employment
- ☐ Employment for more than 3 months

All 50 states plus the District of Columbia and Puerto Rico participated; 51 of these agencies responded to the questions regarding recidivism. Of these, 40 currently track recidivism data. Our interest here is in what definitions and measures are used by these agencies.

The ways in which different state juvenile correctional agencies define recidivism are shown in Table 3, which is based on the survey questions above.

Table 3
Definitions of Recidivism
Used by Juvenile Correctional Agencies

Action	n	Percent of jurisdictions that track recidivism
Arrest (total)	11	28
Only arrest	2	5
Arrest plus one or more other actions	9	23
Adjudication (total)	19	48
Only adjudication	8	20
Adjudication plus one or more other actions	11	28
Commitment to juvenile corrections (total)	19	48
Only commitment to juvenile corrections	4	10
Commitment to juvenile corrections plus one or more other actions	15	38
Commitment to adult corrections (total)	18	45
Only commitment to adult corrections	2	5
Commitment to adult corrections plus one or more other actions	16	40

Source: CJCA Yearbook 2009

This table shows that most agencies use more than one measure of recidivism when reporting recidivism data. Relatively few agencies (11 of 40) use arrest to measure recidivism; only two use arrest only, but nearly half (48%) use adjudication and/or commitment decisions, and most of these agencies use more than one measure. This table contains one more interesting finding: less than half (45%) follow their clients into the adult system. It is likely that access to data is an obstacle to obtaining this information in many states. In fact, the CJCA survey data show that only 32 of the 40 agencies had access to data on youths transferred to the adult system.

Results of the CJCA survey also show that more than half of the 40 agencies that track recidivism (60%) followed cases for at least 24 months. Some of these agencies (37.5%) continued following cases for at least 24 months, and 35% for 36 months. We mentioned earlier the importance of standardizing length of follow-up, since length of follow-up affects recidivism rates. It may be that this data boundary consideration is related to data access, as noted in the previous paragraph with regard to obtaining adult system data.

Table 4 shows the implications of different measures of recidivism and different follow-up periods. This table, although based on only a small number of participating agencies, indicates clearly that as the follow-up period increases, the rate of recidivism also increases. Similarly, as we move further into the justice system process to measure recidivism, the rate of recidivism drops. These findings parallel those reported in Table 1 on page 6.

Table 4
Recidivism Rates and Measurement Criteria

Components used in recidivism calculations that include all youths who have left secure care	Number of jurisdictions that reported recidivism rate using component	Average recidivism rate
Tracking periods		
12 month tracking period	5	21.7
24 month tracking period	4	35.7
Recidivating act		
Arrest only	1	58
Adjudication only	3	27.8
Commitment to juvenile and/or adult services	4	22.3
Commitment to youth services only	2	13.0

Source: CJCA Yearbook 2009

Current Practices in Evaluation Research

Another way to think about definitions and measures of recidivism is to consider the measures used by evaluation researchers. Researchers that have taken on the task of evaluating a program most often consider what outcome measures will best reflect success in achieving program objectives. If a major long-term objective of a program is to reduce the likelihood of recidivism, the researcher will want to identify a measure of recidivism that best estimates actual re-offending behavior. That is, the researcher will want to minimize two types of error: errors made in identifying correctly those who have re-offended (false positives) and errors made in identifying those who have not re-offended (false negatives). Of course, researchers, like juvenile correctional agencies, will be affected by data access limitations. The most critical considerations will be to make sure that the definitions and measures used are reported clearly and that the data are collected and coded accurately.

An examination of program evaluation research relating to juvenile justice reveals a consistent use of recidivism data to measure program effectiveness. Recidivism can, of course, be measured in a variety of ways. Table 5 summarizes the kinds of data used by evaluation researchers in studying the impact of specific programs.

Table 5
Definitions and Measurement of Recidivism in Published Research Literature

Source	Treatment	Population	Recidivism Measure(s)
Herzfeld et al., 2008	MST	898 juvenile offenders within the Office of Children and Family Services. 457 within MST programs, and 441 in control groups	Rearrest (violent felony or other), reconviction, and reincarceration from the Division of Criminal Justice Services (DCJS) database and the New York Criminal Justice Agency (CJA) Follow-up: 1.3 – 5.5 years
Borduin et al., 1995	MST	176 **serious** juvenile offenders. 92 within MST and 84 in individual therapy program (control group)	Rearrest (by type) – from juvenile courts, local police, and state police records Follow-up: 2.04 – 5.42 years (mean = 4 years)
Rosky et al., 2004	Youthful Offender System (Colorado)	496 juveniles transferred to adult court	Felony court filings and convictions from the Criminal Justice Information System (CICJIS) Follow-up: 1, 2, and 5 years
Frederick & Roy, 2003	City Challenge Intensive Aftercare Program	323 juvenile offenders released from the Youth Leadership Academy to an intensive aftercare program	Rearrest, (felony, violent felony, and other) and rearrest resulting in reconviction from the Division of Criminal Justice Services (DCJS) and the NYC Corporation Counsel's Office (family court in NYC) Follow-up: 6 months and 1 year
Lemman et al., 1993	Multi-Component Group Treatment	57 male juvenile offenders in a medium-security correctional facility with anti-social conduct disorders. One treatment group and 2 separate control groups	Parole revocation/court contact from state's juvenile corrections research office Follow-up: 6 months and 1 year
Tarte et al., 2007	Juvenile Crime Prevention Program	3278 high-risk (not necessarily offenders) juveniles	Juvenile department **referrals (court) (JJIS)** Follow-up: 1 year

Peters et al., 1997	OJJDP Boot Camps	493 juveniles offenders in 3 different boot camps	**Court-adjudicated new offenses and technical violations** Follow-up: 9-32 months
Wiebush, 1993	Intensive Supervision	244 juvenile felony offenders. 81 in ISU, and 163 in two control groups	Complaints and adjudications (by seriousness) Follow-up: 18 months
Bouffard & Bergseth, 2008	Reentry services	112 juvenile offenders. 63 served by the reentry program and a comparison group of 49.	Official court contacts Follow-up: 6 months
Hagan & Cho, 1996	Sex offender treatment	100 serious juvenile sexual offenders	Reconvictions from Central Records Office of the Wisconsin Department of Corrections Follow-up: 2-5 years
Brannon & Troyer, 1995	State residential group treatment	36 juvenile sexual offenders.	Adult correctional system contact (court) Follow-up: 4 years
Smith & Monastersky, 1986	Juvenile Sex Offender Treatment Program, community-based	112 juvenile sexual offenders.	Referral charges (sex, nonsex) from the Juvenile Information Systems of the King County Division of Youth Services and the Division of Juvenile Rehabilitation. Follow-up: 17 months
Fagan, 1990	Violent Juvenile Offender Program (VJO)	227 violent juvenile offenders. 122 juveniles in experimental group, 105 in comparison group	Rearrest (by type and case outcome) from juvenile court and parole records Follow-up: 1, 2, and 3 years
Caldwell & Van Rybroek, 2002	Decompression Treatment	30 violent juvenile offenders. 10 in experimental group and 20 in two different control groups.	Reconviction from central state court records Follow-up: 2 years
Guerra & Slaby, 1990	Cognitive	120 juveniles incarcerated for	Parole violations

		aggressive offenses. 40 in the experimental group, and 80 in two control groups (40 each)	Follow-up: 0-10 months, 11-24 months
Greenwood & Turner, 1993	Paint Creek Youth Center	148 serious juvenile offenders. 75 in the experimental group and 74 in the comparison	Rearrest (by offense type) and reconviction (by offense type) from self-reports and juvenile and adult court records. Follow-up: 1 year
Lukin, 1981	Residential Treatment	823 juveniles in two residential facilities	Reconviction from parole data provided by the California Youth Authority Follow-up: 6 months
Moody, 1987	Pair Counseling	28 incarcerated juveniles. 14 in experimental group, 14 in control group	Probation violation Follow-up: not specified
Borduin et al., 1990	MST	16 male juvenile sexual offenders. 8 juveniles in experimental group, 8 in comparison	Rearrest from juvenile and adult court, and state police data Follow-up: 21-49 months, (mean = 37 months)
Lab et al., 1993	Sexual Offender Treatment (SOT)	155 juvenile sexual offenders. 46 in experimental group, 109 in comparison	Juvenile court contact (sex and non-sex offense) Follow-up: 3 months – 3 years
Farrington et al., 2000	Intensive Regimes	303 juvenile offenders in two boot camp-like programs. 176 in boot camps and 127 in control group	Reconviction from the Police National Computer Follow-up: 1 year and 2 years
Zhang, 2001	Drug Treatment Boot Camp	954 male boot camp participants. 427 in experimental group, 427 in comparison	Rearrest, new petition, and reconviction from Probation Department, Bureau of Criminal Statistics, and self-reports Follow-up: 5 years (4+ years on average)
Botcher & Ezell, 2005	Boot camp	632 juvenile offenders. 348 in experimental group, 284 in	Rearrest from CDOJ database -Follow-up: 2-9 years, 7.5

		comparison group	average
Josi & Sechrest, 1999	Community reintegration program	300 high-risk youthful offenders (not all juveniles). 115 in program, 115 in control group	Rearrest and parole violations from parole records and self-report surveys Follow-up: 90 days, 1 year
Henggeler et al., 1993	Family Preservation with MST	84 serious juvenile offenders. 43 received program services, 41 in control group	Rearrest from Department of Youth Services(DYS) Follow-up: average of 2.4 years
Worling & Curwen, 2000	Specialized Community-Based Treatment	148 juvenile sexual offenders. 58 in experimental group, 90 in comparison	Rearrest and reconviction (CPIC – Canadian Mounted Police) Follow-up: 2-10 years
Kahn & Chambers, 1991	10 different treatment programs	221 juvenile sexual offenders.	Reconviction from JUVIS, a statewide juvenile information system Follow-up: mean 20.4 months
Armstrong, 2003	Moral reconation therapy	256 youthful offenders (15-22, mean = 20 years). 110 in experimental group, 102 in comparison group	Reincarceration - data from jails and the FBI NCIC Follow-up: between 1-2 years on average
Bank et al., 1991	Parent-training	55 juvenile offenders under the age of 16. 27 in experimental group, 28 in comparison group	Offense records from juvenile courts Follow-up: 3 years following treatment
Barton & Butts, 1990	In-home, intensive supervision	511 juvenile offenders. 326 in one of three experimental groups, 185 in control group	Offense data from juvenile court Follow-up: 2 years
Boisvert et al., 1976	Intensive probation	180 juvenile offenders	Juvenile court complaints Follow-up: 2 years (including time in program)
Castellano & Soderstrom, 1992	Therapeutic wilderness programs	72 juvenile offenders. 36 in experimental group, 36 in matched control group	Arrest Follow-up: 2 years

Davidson et al., 1987	Four varying interventions	213 juvenile offenders, 60 of which were control participants	Adult and juvenile police records, juvenile court data, self-report surveys Follow-up: 2 years
Howitt & Moore, 1991	Intensive Early Intervention	206 juvenile offenders. 145 in experimental group, 61 in control	Court adjudication records Follow-up: not specified
Wooldredge et al., 1994	Culturally specific community treatment	320 black juvenile offenders. 160 in experimental group, 160 in control	Petition for new offense (felony or non-felony) from probation records Follow-up: 1-2 years
Cox et al., 1977	Community-based diagnostic program	61 juvenile offenders. 30 in experimental group, 31 in comparison group	Offenses from court records Follow-up: 10 months
Gottfredson & Barton, 1993	Deinstitutionalization	927 juvenile offenders. 318, in preclosing group, 355 in transition group, and 256 in postclosing group	Juvenile court referrals from DJS, adult police arrest records, and length of sentence from prison records (by type of offense and using a seriousness scale), and interviews Follow-up: 1 and 2.5 years
Kirigin et al., 1982	Teaching-Family Group Homes	192 juvenile offenders. 140 in experimental groups, 52 in comparison group	Court and police records, including alleged offenses Follow-up: 1 year minimum
Chamberlain & Reid, 1997	Group Care & Multidimensional Treatment Foster Care (MTFC)	79 juvenile offenders. 37 within MTFC group and 42 within Group care	Criminal referral data from the Oregon Youth Authority and self-report data. Follow-up: 6 months and 1 year
Schaeffer & Borduin, 2005	MST and Individual therapy (IT)	176 serious adolescent offenders. 92 received MST, 84 received IT	-Juvenile court records and adult offense data from public records. Follow-up: avg. of 13.7 years
Bank et al., 1991	Parent-training	53 repeat juvenile offenders. 28 in experimental group, 27	Juvenile court records

		in the control group	Follow-up: 1, 2, and 3 years
Myers et al., 2000	After school diversion program	60 juvenile offenders. 30 in experimental group, 30 in control group.	Criminal charges Follow-up: 1 year
Deschenes et al., 1993	Wilderness program with intensive community supervision	190 juvenile offenders. 96 in experimental group, 94 in the comparison group	Official records at 2 years, self-reported delinquency at 1 and 2 years Follow-up: 1 and 2 years
Greenwood et al., 1993	Intensive aftercare	187 juvenile offenders at two locations of the program. 97 in experimental group, 90 in comparison group	Juvenile and adult court records – arrest (by offense type) and convictions, self-reported delinquency Follow-up: 1 year
Sontheimer & Goodstein, 1993	Intensive aftercare	90 juvenile offenders. 44 in experimental group, 46 in control group	Juvenile arrests from two sources of court data. Adult arrests from state police and court records. Follow-up: 3 -17 months (11 months average)

Comparison of Recidivism Measures between State Surveys & Juvenile Program Evaluations

A comparison of measures used by state juvenile correctional agencies and evaluation researchers to operationalize juvenile recidivism illustrates several differences in ways recidivism is quantified. As can be seen from Table 4, the most apparent difference is the use of commitment measures to construct state recidivism rates. The state survey results indicate that state juvenile correctional agencies often measure juvenile recidivism in terms of juvenile commitment (48%) and adult commitment (45%). This is likely due to the fact that many of these agencies are limited operationally to residential care. These rates contrast sharply with the corresponding use of these measures among program evaluations (3.8% and 1.9%), among which 22 of 53 studied community-based programs. Similarly, while 30.2% of the program evaluations conceptualized recidivism in terms of adjudication, that figure was much greater for correctional agencies (48%). Another noticeable difference can be found with the use of court petitions to measure recidivism by program evaluators. Because the state surveys did not ask respondents specifically about petitions to court, we used the two instances of states reporting this measure under the category of "other," and created a variable to represent the proportion and number of studies that used either arrest or court petition to measure recidivism. This value indicates that a much higher proportion of program evaluations used petition or arrest as a measure of recidivism (69.8% and 28%). Seven of the program evaluations reported both arrest and petition measures.

Table 6
Actions Used To Define Recidivism

	Probation /Parole Violation	Petition	Arrest	Petition or Arrest	Adjudication	Juvenile Commitment	Adult Commitment	Other	Multiple Measures
State Surveys (n = 40)	7.5% (3)	5%* (2)	28% (11)	28% (11)	48% (19)	48% (19)	45% (18)		60% (24)
Evaluations (n = 53)	17% (9)	60.4% (32)	22.6% (12)	69.8% (37)	30.2% (16)	3.8% (2)	1.9% (1)	17% (9)	43.4% (23)

* The state surveys did not specifically ask state juvenile justice organizations whether they collected recidivism data based on petitions to court. The two states that indicated that they used petition as a recidivism criteria, mentioned so in the "other" section of the survey.

It is likely that the term "arrest" is often used to refer to arrests recorded in court records, and is thus actually a measure of petition. That is, since not all arrests that appear in police records will result in a referral to court, arrest decisions may appear in court records only as a result of decisions made to file charges in court. Thus the comparison based on "petition or arrest" is most likely the more meaningful one.

Considering these differences, it can be said that state juvenile justice agencies more often measure recidivism using "back-end" measures (adjudication and re-incarceration) that reduce the number of false-positives, rather than "front-end" measures that program evaluations were found to include (probation/parole violation, arrest, and petition) that are more likely to balance false-positives and false-negatives. Reasons for the use of early process measures by program evaluators likely include the fact that nearly half of the program evaluations focused on community-based programs. Moreover, data access is less likely to be an issue since researchers typically seek temporary arrangements with agencies and have resources to collect the data.

The program evaluation studies more often included measures that were classified as "other" (17%), than were the state agencies (5%). These measures included self-reports by juvenile offenders and interviews with parents and probation/parole officers. The program evaluations were less likely to include multiple measures of juvenile recidivism (43.4%) than were the state surveys (60%). This, too, may be due to data access limitations, as well as time constraints.

Comparison of Recidivism Follow-up Periods between State Surveys & Juvenile Program Evaluations

Relative to the state agency surveys, program evaluations more often measured recidivism with shorter follow-up periods (Table 7). The program evaluations more often measured recidivism with follow-up periods of less than one year (20.8%) and 1.5 years (7.5%) than did the state agencies (15% and 5%). State agencies, however, measured

recidivism with a one year follow-up period (60%) nearly twice as often as the program evaluations (34%). Similarly, state agencies were more likely to measure recidivism with follow-up periods of two (37.5%) and three years (37.5%) than the program evaluations (24.5% and 5.7%). This difference is likely due to time constraints of program evaluation projects.

Table 7
Follow-up Time Period Used By
State Agencies and Evaluation Studies

	Less than 1 Year	1 Year	1.5 Years	2 Years	3 Years	More than 3 Years	Average MAXIMUM Follow-up	Varied	Other	Multiple Follow-up
State Surveys (n = 40)	15% (6)	60% (24)	5% (2)	37.5% (15)	37.5% (15)	15% (6)	2.2 years*	7.5% (3)	7.5% (3)	35% (14)
Evaluations (n = 53)	20.8% (11)	34% (18)	7.5% (4)	24.5% (13)	5.7% (3)	18.9% (10)	2.6 years	34% (18)	1.9% (1)	28.3% (15)

* This value is based on 38 of the 40 surveys. Two states responded that their follow-up periods varied without providing any additional information.

Although the average maximum follow-up periods for the state agencies and program evaluations are very similar (2.2 years on average for state agencies and 2.6 years on average for program evaluations), there are several significant differences that can be observed regarding the follow-up periods of recidivism measurement. Program evaluations were more likely to include follow-up periods that varied by the juveniles in their study. This was largely due to studies in which case start dates varied over a period of time but the end date of the study was fixed. Regarding the use of multiple follow-up periods, state agencies (35%) more often included multiple, fixed follow-up periods (28.3%). We want to emphasize, however, that on average both program evaluations and state agency studies follow cases for a maximum of two years.

Conclusions

Recidivism, a term meaning commission of a new offense by an individual known to be an offender, and particularly after having been sanctioned by the justice system, is typically measured in terms of an action taken by the police, a prosecutor, or a juvenile or criminal court judge (Blumstein & Larson, 1971). In rare instances, and usually in cases of criminological research or a program evaluation, youths are asked directly about their involvement in delinquent acts. Given that recidivism as measured means that a justice system official has accused a youth of an offense, that a court has found the youth guilty of an offense, or that the youth has been committed to a juvenile or adult facility, the

challenge is to decide which of these justice system decisions should be used to estimate the recidivism rate of a program or system of services. As the previous section on current practice showed, a variety of decision points are being used to measure recidivism, both by program evaluators and by juvenile justice agencies. It follows, then, that standards need to be developed for more than one decision point, and that these standards should specify the precise data elements and their structure that should be applied when collecting, coding, and reporting recidivism data.

Another major decision has to do with differentiating among youths sufficiently so that comparisons of recidivism rates are based on similar samples of youths. This raises two issues. First, some form of risk assessment would help ground recidivism data in terms of different expectations of treatment impact. Youths that are already unlikely to reoffend prior to participating in a program are unlikely to demonstrate any program impact. Second, juvenile correctional agencies often track subgroups of youths, so that their results do not apply to all delinquent youths that have received services. The CJCA survey found that of 40 juvenile correctional agencies, 50% tracked youths who had left secure care and another 41% used other criteria to select cases. One state examined only first time offenders, arguing that including all youths biases results by increasing the number of chronic offenders in the dataset. The decision to follow specific subgroups of youths necessarily affects how recidivism rates are interpreted and limits circumstances under which outcome data can be compared. These decisions often stem from the goals of monitoring outcome information, a fact that must be taken into account when developing standards.

Time of follow-up is another consideration when measuring recidivism. As the follow-up period increases, recidivism rates grow. We have seen that follow-up periods vary considerably, and arguments regarding the appropriateness of one time period over another continue to be raised. Program evaluators who have advised CJCA have suggested a minimum of 18 months. Our findings reported above suggest that two years is an average maximum follow-up period. Because of the impact of time on rates of recidivism, however, it will be necessary to create a standard that specifies a minimum follow-up period and that requires reporting of specific dates that define the start and end points of the period.

Finally, the creating of standards with the expectation that they will be implemented nationally by juvenile correctional agencies (and perhaps others) carries with it a number of implementation challenges. These challenges include access to data, which varies widely from state to state, development or modification of information systems designed to manage the data and produce reports (this may involve the need for additional technical assistance), costs related to information system development and staffing of new data management and reporting functions, and efforts to educate stakeholder communities to improve capacities to understand the data reported and to prevent inappropriate uses of these data.

Recommendations for Standardization

Defining and Measuring Recidivism

The first step in developing standards for the measurement of recidivism is to define the term. Recidivism is defined as commission of an offense that would be a crime for an adult, committed by an individual who has previously been adjudicated delinquent.

Because most delinquent offenses and crimes are not known to the justice system, recidivism is typically measured in terms of actions taken by justice system officials. Below are the actions that can reasonably be used for measuring of recidivism.[6]

1. Arrest: An arrest for any offense that would be a crime for an adult. Source of information: Police department files.

2. Filing of Charges: Filing of charges with the juvenile court or adult criminal court based on accusations of an offense that would be a crime for an adult. Source of information: Juvenile court files.

3. Adjudication or Conviction: Adjudication by a juvenile court or conviction by an adult criminal court of guilt, based on charges filed by the prosecutor. Source of information: Juvenile court files if tried as a juvenile, or Criminal court files if tried as adult.

4. Commitment to a juvenile facility[7]: Commitment to a juvenile residential facility by a juvenile court following an adjudication of delinquency. Source of information: Juvenile court files.

5. Commitment to an adult facility: Commitment to an adult residential facility following a trial in which the defendant was found guilty of a crime. Source of information: Criminal court files.

This list of decision points indicates that several options are available for defining recidivism. **We strongly recommend, however, that all studies of recidivism include adjudication or conviction**. Adjudication/conviction includes all cases in which the justice system process has reached a conclusion regarding guilt, made by an independent fact-finder. By this point the number of false positives has been minimized. The Recidivism Work Group has found that there is widespread consensus on this measure, while none of the other measures are free of controversy.

[6] Other actions are available prior to adjudication in some states. Our aim in developing standards was to limit available decision points to those common to all states.

[7] It is possible in some jurisdictions for a juvenile to be tried and convicted as an adult and committed to a juvenile facility to serve some or all of his or her sentence. This information should be obtained from criminal court files.

Standards for Measuring Recidivism (These standards apply to all measures of recidivism)

1. When reporting program or system outcomes, population parameters of the study should be specified: e.g. age boundaries, public agency programs only (versus a combination of public and private programs), first-time offenders only, secure care programs only. At minimum, age and gender boundaries of the population should be delineated. Any comparisons of outcome data can, then, take into account differences in populations studied.

2. The source or sources of data for each data element should be clearly identified as well as who is responsible for collecting the data, and frequency of data collection.

3. Adult convictions should be included in order to ensure that offenses occurring at some point in the follow-up time period are not excluded. It should not matter that the offense resulted in adult system processing.

4. More than one measure of recidivism should be used in order to increase opportunities for comparison. Multiple measures of recidivism – such as re-arrest for a new offense, adjudication and reincarceration for a new offense – make comparisons more meaningful and provide options for selecting appropriate comparison data. Since not all states will collect exactly the same data, and since some data sources are known to store more reliable data than others, reporting several measures of recidivism increases chances that two states will have collected at least one measure on which comparisons can be made. <u>All recidivism tracking should, however, include adjudication or conviction as a measure of recidivism.</u>

5. Measurement of recidivism should start with the date of disposition. Reporting of recidivism, however, should be reported separately for the following categories of cases:

    a. Youths who are adjudicated for new offenses while in custody,

    b. Youths released from custody to the community and youths committed directly to probation, including youths receiving community-based services, who are under juvenile court jurisdiction,

    c. Youths discharged from juvenile court jurisdiction.

    Aggregate recidivism rates should not include category a. above: Youths in custody.

6. The follow-up period for tracking an individual's recidivism should be at least 24 months from either of the two date options mentioned in Item 5 above, and should include data from the adult criminal justice system. Outcome reports may examine recidivism at shorter time intervals, such as 6 months, 12 months, 18 months and 24 months. In order to measure known offenses that occurred within

24 months, data collection will need to continue to 30 months to account for a time lag between arrest and adjudication.

7. Sufficient data about individual youths should be recorded to make possible appropriate comparisons and future classification; at minimum, the data recorded should include characteristics often associated with risk of re-offending (see item 13 below) such as demographic information (age (in years), gender, race, ethnicity) and offense history information (age at first arrest, number of adjudications and types of offenses (see item 12 below)). Special needs youths (mental health, substance abuse, and special education) should be clearly identified, since the probability of their being arrested and reincarcerated is disproportionately high.

8. Time frames must be clearly recorded since recidivism is always time specific:

    a. Record date of adjudication or conviction – all cases.

    b. Record date of disposition or sentencing – all cases.

    c. In the case of persons committed to residential facilities, record the date the offender is released to the community.

    d. For all youths, record the date on which juvenile court jurisdiction was terminated.

    e. No matter what measure of recidivism is used (e.g. re-arrest, new adjudication/conviction, or reincarceration) the date the offense occurred should be recorded. It is the date the offense occurred that should be used to determine the date of a recidivism event.

    f. In order to determine the completeness of the data, the date that the data were last updated should be recorded.

9. In order to create the possibility of reporting recidivism following termination of all court-ordered services, the date of discharge from court jurisdiction should be recorded.

9. Typically, a delinquent event will produce more than one charge. All charges should be recorded if there is more than one, the most serious charge should be identified, and the charges on which the youth was adjudicated should be recorded.

10. If more than one offense is being processed at the same time, the information in #9 above should be recorded for each offense.

11. Probation or parole technical violations confirmed by the court and related dispositions should be recorded separately from data on new offenses. Technical violations may result in incarceration or re-incarceration, but they do not imply the commission of a new offense.

12. For system comparison purposes, offense type is more useful than a more precise offense term that may be state-specific. The following general offense categories

are recommended. When recording most serious charge, this ordering of offense categories should be used, with a. being the highest, and g. being the lowest.

a. Offense against persons
b. Property offense
c. Weapons offense
d. Drug trafficking/possession (felony)
e. Other felony
f. Drug or alcohol use (misdemeanor)
g. Other misdemeanor or lesser offenses

13. Different jurisdictions use different risk assessment tools. On occasion, the same tool is used but cut-off scores for classification differ. Consequently, resulting risk scores and levels cannot be used to classify all juveniles. This problem was addressed by Lowenkamp and Latessa (2005) who adopted a method using age at first arrest and offense history items. We have adopted that method here, adding drug, school, family and peer items that are known predictors of recidivism.

    In order to group similar cases for comparison of recidivism rates, the following person characteristics should be collected for each youth. The first set of items will be used to identify demographic subgroups. The second set, labeled risk items, will be used to construct a generic risk score (see endnote i for literature supporting these choices of items). The scoring plan is indicated to the right of each item.

    Demographic Characteristics

    a. Age in years
    b. Gender (Female, Male)
    c. Ethnicity (Hispanic or Latino: yes or no)
    d. Race (Black or African American, Asian, American Indian orAlaskan Native, Native Hawaiian or Other Pacific Islander, White)[8]

    Risk Items[ii]

    The risk score based on these items can range from 0 to 9. Risk groups will be defined as: low = 0-3; medium = 4-6; high = 7-8; very high = 9).

    a. Age at first adjudication, in years (less than 14=1;else=0)
    b. Total number of prior offenses (3 or more=1; else=0)

[8] These racial categories were taken from the 2000 U.S. Census. A discussion of how to bridge different race/ethnicity coding schemes appears in Ingram et al. (2003).

c. Number of prior adjudications for felony offenses (3 or more=2; 1 or 2=1; 0=0)

d. Youth has been diagnosed with a substance abuse problem (yes=1; no=0)

e. Youth has dropped out of school and is currently not attending school (yes=1; no=0)

f. Youth has been the subject of substantiated abuse or neglect (yes=1; no=0)

g. One or both parents have been convicted of a crime (yes=1; no=0)

h. Youth is a gang member or is gang involved (yes=1; no=0)

14. If a formal risk (of recidivism) assessment was conducted near the time of disposition, and prior to delivery of services to a youth, record the level of risk (low, medium, or high). Also record the specific risk assessment instrument that was used.

    Risk Classification: Low, Medium, High, Very High

    Name of Risk Assessment Instrument:_____

15. In addition to an individual's likelihood of recidivating, the risk that neighborhood forces present should be included in creating comparison groups of youths. The following community risk factors should be attached to each case as neighborhood environmental risk indices:

    a. Higher number of gun violence incidents in last year than average for the larger community

    b. A higher crime rate than average for the larger community

    c. A higher residential mobility rate (US Census data)

    d. A higher than local average percentage living under the poverty level (US Census)

    e. A lower than local average of persons over age 25 with a high school education (US Census) [9]

    The first two items are often available on police department websites. The others are common census data items. Each item should be scored yes (=1) or no (=0). The total score of these items should be used as an index of environmental risk.

    Each item requires a comparison. This comparison can be at the census tract level in the case of a city, or the county level in the case of a small town or rural area.

[9] These risk factors were adapted from the risk factors utilized by Communities that Care (http://beta.ctcdata.org/?page=static_files/risk_factors.html).

Some Further Considerations

System Penetration

One way of characterizing the target population of a recidivism study is to identify the extent of penetration of the system experienced by the targeted youths. For example, re-adjudication implies prior adjudication, reincarceration implies prior incarceration, return to secure care implies prior placement in a secure setting. For each of these distinctions, some youths will have penetrated the system more deeply. For some reports, then, it may be desirable to analyze different categories of youths separately, or to report their outcomes separately.

The CJCA 2009 Yearbook results show that most juvenile correctional agencies included youths who had been released from secure care, but that other agencies used some other criteria to select a subgroup of youths for measuring recidivism rates. These selection criteria are critical to an understanding of what reported recidivism rates mean.

Implementation of New Programs

New programs are likely to experience a period of instability in terms of program elements, staff team development, and resource acquisition. We recommend that outcome data for the first two years be used solely for program development. After two years, outcome data for these programs should become available for other purposes such as external reporting and impact evaluation.

Uses of Recidivism Measures

Recidivism data can be employed to serve a number of purposes. It is best to identify those purposes in advance of data collection to ensure that appropriate data are available for analysis. In some cases, however, data collected by means of a standardized information system with multiple sources of input will be used for several purposes. Each of these purposes, then, should be considered in designing the information system. Below are some of the more common uses of recidivism data.

System Diagnosis and Monitoring

Recidivism data can enable systems to examine the impact of policy changes, budget reductions, the adoption of new programs and/or practices, and changes in offender characteristics on system level performance. Changes in outcome are linked to system changes using time series analysis or other tools that can detect outcome patterns over time.

Evaluation against Prior Performance

This use involves tracking outcome data over time and examining performance in terms of previous outcomes. When purposeful changes are made to a program in order to improve outcomes, sustained trends tell us something about likely impact of these program modifications.

Comparing Different Offender Groups

A program may be more effective with one type of offender than another. Differentiating offenders in terms of demographic, risk and needs assessment information can help to pinpoint differential impacts of interventions. Interventions can then be matched to youths likely to benefit from a specific set of methods.

Program Evaluation

Studies involving comparison groups make it possible to test the impact or effectiveness of a program. Experiments are most effective for this purpose: they isolate the effects of an intervention from all other factors that may also influence outcomes. There are a variety of quasi-experimental designs available if random assignment is not possible or desirable.

Cost-Benefit Analysis

For purposes of influencing public policy, cost-benefit analyses, which examine variation in cost associated with different program or policy options, should be pursued. Policy makers responsible for allocating tax dollars find such analyses particularly persuasive.

Comparing Systems

This is the most risky use of recidivism data since the number of confounding factors is far too great to make possible valid comparisons. If necessary, classifying systems on factors likely to affect outcomes, making comparisons within groups of similar systems (e.g. those with large urban areas and similar age boundaries), and comparing similar populations of individuals will decrease errors in the conclusions that are drawn. Here again, risk levels and other population attributes should be accounted for in the analysis.

Conclusion

CJCA recognizes that public demands for accountability will continue to grow, and it takes the need for performance information seriously, as is evidenced by its Performance-based Standards (PbS) and Community-based Standards projects. Many of its members have struggled with the issue of presenting data that are appropriate and that fairly represent the outcomes of their agency's work. At the same time, reports of recidivism rates often appear nonsensical because of differences in the measures of recidivism that have been applied. Often these rates represent the behavior of subgroups of the delinquent population, such as youths in secure care, rather than the entire population of adjudicated delinquents.

This white paper attempts to address the complexity of providing accurate and fair data on recidivism that can stand up to close examination and that can be used to compare programs, agencies and, although far more likely to risk invalid claims, entire jurisdictions. The recommended standards listed above and the suggestions for implementation are intended as critical steps in a long-term process of development. CJCA acknowledges the need for juvenile correctional agencies to work in collaboration with courts, adult correctional agencies and law enforcement in order to develop needed data, and it is committed to assisting jurisdictions in facilitating these partnerships and in helping to obtain needed resources to implement the standards it recommends.

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[i] Recidivism is not the only outcome of interest, nor should it be. We take up the topic of positive youth outcomes in another companion white paper, currently under development by Jeffrey Butts.

[ii] Studies examining the predictors of juvenile recidivism have uncovered a number of individual-level factors that influence the likelihood that a juvenile will re-offend. Research has shown that juveniles at highest risk to offend are those who have done so in the past (Cottle, Lee, & Heilbrun, 2001; Farrington & Hawkins, 1991; Snyder & Sickmund, 2006). Other individual-level predictors of recidivism include substance abuse (Elliott, Huizinga, & Ageton, 1985; Stoolmiller & Blechman, 2005), early childhood misbehavior (Farrington, 1986; White, Moffitt, Earls, Robins, & Silva, 1990), current age (Snyder & Sickmund, 2006) age at first arrest (Frederick, 1999; Katsiyannis & Archwamety, 1997), participation in education (Katsiyannis & Archwamety, 1997; Myner, Santman, Cappelletty, & Perlmutter, 1998), delinquent peer relations (Akers, 1985; Hoge, Andrews, & Leschied, 1996; Marczyk, Heilbrun, Lander, & DeMatteo, 2003; Myner, Santman, Cappelletty, & Perlmutter, 1998), parental criminality (Rowe & Farrington, 1997; Harris, et al., 2009), and family conflict (Hoge, Andrews, & Leschied, 1996; Wiebush, Baird, Krisberg, & Onek, 1995). We have selected obvious indicators of these constructs.