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A Practical Approach to Evidence-Based Juvenile Justice Systems

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This article presents a practical approach that JJ systems can take in achieving evidence-based programming that reduces recidivism. Most JJ system programs produce relatively small reductions in recidivism, on average, thus there is much room for improvement. A research-based approach to making program improvements system-wide—and with that, increase the cost effectiveness of the system itself—is presented in this article. The success of this effort, however, depends on delivery of the right service to the right youth at the right time. The OJJDP Comprehensive Strategy for Serious, Violent, and Chronic Juvenile Offenders provides the scaffolding and structured decision-making tools that can be used across entire juvenile justice systems for promoting effective matches between evidence-based services and offender treatment needs on an ongoing basis. Programs across the entire system continuum can also be assessed for effectiveness through a data-driven program rating tool that was built around the intervention characteristics found to be most strongly related to recidivism reductions in hundreds of studies. Where scores are low, this tool provides a blueprint for improvements and, with those, larger recidivism reductions. The process can also be automated to facilitate system-wide program improvements.

INTRODUCTION

In recent years, a number of state and local juvenile justice (JJ) systems have taken steps to provide evidence-based programs for juvenile offenders. The major aim of this article is to describe a very practical approach that JJ systems can take in achieving statewide evidence-based programming aimed at reducing recidivism.¹ However, the prospects of realizing optimal recidivism reductions hinges on using state-of-the-art management tools—particularly risk and treatment needs assessments, a disposition matrix, and comprehensive case plans that facilitate

matching effective services with offenders who will benefit most from them. As an added payoff, effective use of these tools should lead to other system improvements such as reductions in detention and confinement and a more equitable and cost-beneficial juvenile justice system (Howell, Krisberg, & Jones, 1995). This article highlights implementation of this practical approach with examples from North Carolina and Florida.ⁱⁱ

What is an Evidence-Based Program?

For several decades, JJ system leaders were advised that the way to ensure that the programs used by a juvenile justice system are effective in reducing recidivism was to adopt programs from one of the lists of “model” programs certified by an authoritative source as having acceptable evidence of effectiveness. However, this advice has now been expanded in light of the results of meta-analysis research that has synthesized the rapidly growing body of JJ program evaluations. This research has identified common features of the most effective programs, including both name brand model programs and more generic “home grown” programs. In particular, this approach has shown that four general features of programs are associated with their effectiveness in ways that can be emulated by many local programs: treatment modality, amount of service, quality of service delivery, and the risk level of the juvenile participants (Lipsey, 2009).

A related and somewhat sobering finding is that programs that produce good effects in evaluation studies often show much smaller effects when evaluated under conditions of routine practice (Lipsey & Howell, 2012; Rhoades, Bumbarger, & Moore, 2012; Welsh, Sullivan, & Olds, 2010). It turns out that even model programs, when brought to scale in juvenile justice practice, often experience degradation in the quality of implementation that keeps those positive effects from being attained. In fact, some well-evaluated types of programs used in everyday JJ system practice can actually outperform so-called “model” programs when implemented well. When the evidence is sufficient and affirmative, the corresponding generic program types can rightly be described as evidence-based. An important implication of knowing the key features of programs that consistently reduce recidivism is that existing programs can be improved to achieve larger reductions in new offenses and thus do not necessarily have to be replaced with programs from one of the evidence-based programs lists in order to be effective.

Taking a Proactive Approach to Program Improvements

In a recent national survey of state, local, and tribal juvenile justice entities, more than half of the respondents said their most pressing needs were understanding what qualifies as “evidence-based,” difficulties associated with finding such programs that are applicable to their contexts, and guidance in sustaining them (National Juvenile Justice Evaluation Center, 2012). Moreover, when such programs are adopted, implementing and sustaining them with fidelity is frequently a challenge. As a result, many efforts to disseminate evidence-based model programs with fidelity to program requirements have not produced the expected juvenile justice system outcomes (Lipsey & Howell, 2012; Rhoades et al., 2012; Welsh et al., 2010).

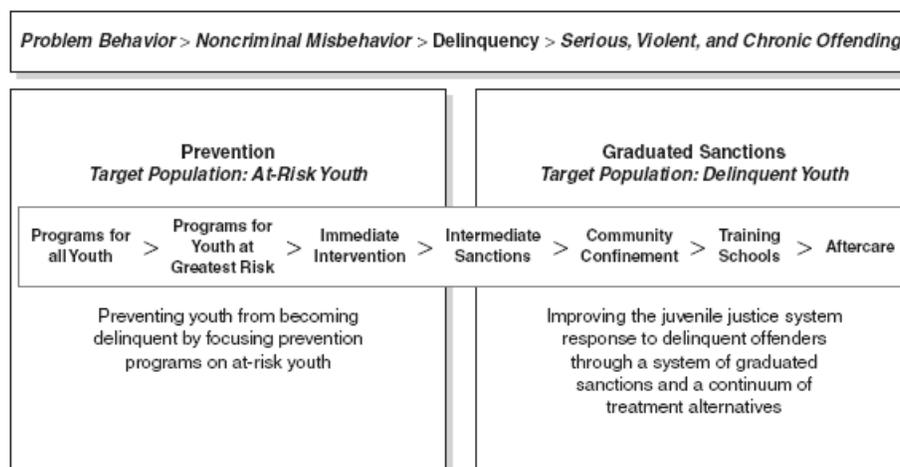
A relatively new practical approach to juvenile justice system reforms with a central focus on reducing recidivism with evidence-based services is described in the section that follows. A

distinct advantage for JJ systems is the widely shared statutory mandate to reduce recidivism. This is an increasingly important goal, as state legislatures restored juvenile court jurisdiction in 20 states between 2001 and 2011 (Brown, 2012), requiring broader services. Focusing more intently on the recidivism reduction goal by increasing the fidelity of existing programs should better position JJ systems to see system-wide benefits.

A COMPREHENSIVE STRATEGY FOR SERIOUS, VIOLENT, AND CHRONIC JUVENILE OFFENDERS

The recommended practical approach to achieving larger recidivism reductions is the OJJDP Comprehensive Strategy for Serious, Violent, and Chronic Juvenile Offenders (Wilson & Howell, 1993, 1994). The Comprehensive Strategy is a two-tiered system for responding proactively to juvenile delinquency (Figure 1). In the first tier, delinquency prevention, youth development, and early intervention programs are relied on to prevent delinquency and reduce the likelihood that at-risk youth will become delinquents and appear in the juvenile justice system. If those efforts fail, then the juvenile justice system, the second tier, must make proactive responses by addressing the risk factors for recidivism and associated treatment needs of the offenders, particularly those with a high likelihood of becoming serious, violent, and chronic (SVC) offenders. In the Comprehensive Strategy framework, this latter supervision and control component is referred to as *graduated sanctions or responses*, a term also used in this fashion in many juvenile justice systems to couple public safety with individual social development.

Figure 1: The Comprehensive Strategy for Serious, Violent, and Chronic Juvenile Offenders



Source: Wilson & Howell, 1993, p. 25

The OJJDP Comprehensive Strategy is based on the following core principles (Wilson & Howell, 1993):

- We must strengthen the family in its primary responsibility to instill moral values and provide guidance and support to children. Where there is no functional family unit, we must establish a family surrogate and help that entity to guide and nurture the child.
- We must support core social institutions such as schools, religious institutions, and community organizations in their roles of developing capable, mature, and responsible

youth. A goal of each of these societal institutions should be to ensure that children have the opportunity and support to mature into productive, law-abiding citizens. In a nurturing community environment, core social institutions are actively involved in the lives of youth.

- We must promote delinquency prevention as the most cost-effective approach to reducing juvenile delinquency. Families, schools, religious institutions, and community organizations, including citizen volunteers and the private sector, must be enlisted in the nation's delinquency prevention efforts. These core socializing institutions must be strengthened and assisted in their efforts to ensure that children have the opportunity to become capable and responsible citizens. When children engage in acting-out behavior, such as status offenses, the family and community, in concert with child welfare agencies, must respond with appropriate treatment and support services. Communities must take the lead in designing and building comprehensive prevention approaches that address known risk factors and target other youth at risk of delinquency.
- We must intervene immediately and effectively when delinquent behavior occurs to prevent delinquent offenders from becoming chronic offenders or committing progressively more serious and violent crimes. Initial intervention efforts, under an umbrella of system authorities (police, intake, and probation), should be centered in the family and other core societal institutions. Juvenile justice system authorities should ensure that an appropriate response occurs and act quickly and firmly if the need for formal system adjudication and sanctions is demonstrated.
- We must identify and control the small group of serious, violent, and chronic juvenile offenders who have committed felony offenses or have failed to respond to intervention and nonsecure community-based treatment and rehabilitation services offered by the juvenile justice system. Measures to address delinquent offenders who are a threat to community safety may include placement in secure community-based facilities, training schools, and other secure juvenile facilities. Even the most violent or intractable juveniles should not be moved into the criminal justice system before they graduate from the jurisdiction of the juvenile justice system.
- We must establish interagency teams that conduct in-depth assessments and craft comprehensive case plans for serious, violent, and chronic juvenile offenders that integrate treatment delivery and are implemented jointly. Members of these interagency teams should include juvenile justice, child welfare, social service, mental health, and educational system representatives.

Each of these principles is explicitly supported by research in longitudinal developmental studies of children and adolescents (Howell, 2003; Howell, Lipsey, & Wilson, 2014; Loeber, Farrington, Stouthamer-Loeber, & White, 2008, pp. 329-334; National Research Council, 2013).

Supporting these principles, the Comprehensive Strategy envelops the entire delinquency career—from risk factors leading to delinquent behavior to re-entry following confinement. This broad framework empowers JJ systems to exercise statewide leadership in addressing conditions leading to delinquency and juvenile justice system referral. Present-day juvenile justice systems continue to embrace the child developmental model that undergirded the formation of a separate JJ system more than a century ago (Tanenhaus, 2004). This purely American invention was designed to address developmental needs of children that often went unmet, such as inadequate

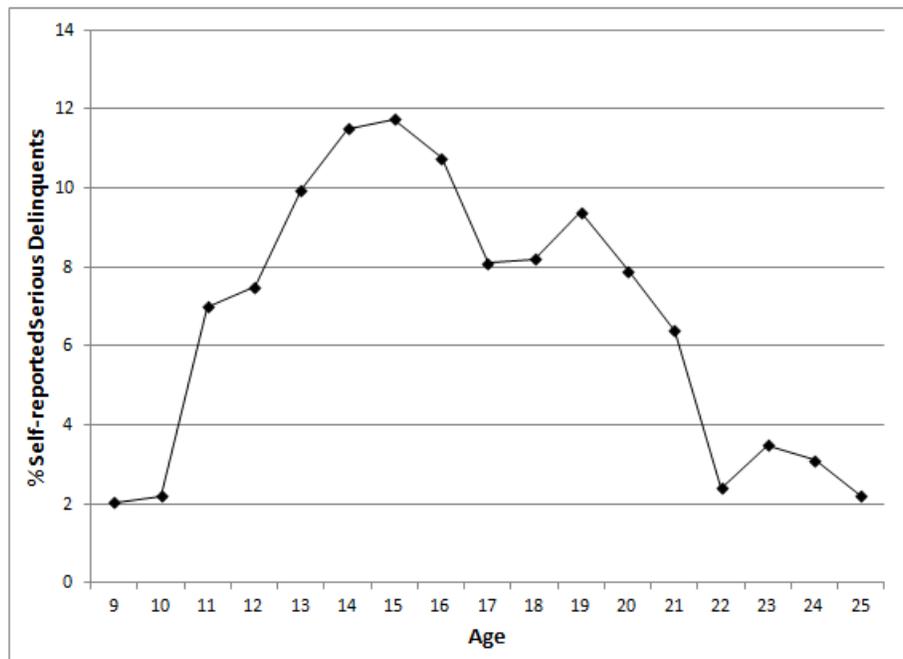
educational opportunities and parental shortcomings in nurturing children. With the adoption of a system-wide Comprehensive Strategy framework, JJ systems are well-positioned to lead development of large scale initiatives that address risk factors and harmful behaviors that impede healthy child development with comprehensive primary and secondary prevention strategies.

The graduated sanctions/responses component of the Comprehensive Strategy is a forward-looking administrative framework organized around risk management that provides a statewide continuum of graduated sanctions and services that parallel offender careers. It incorporates best practice tools, including validated risk assessment tools, reliable treatment needs assessments, and a disposition matrix that guides placements in a manner that protects the public. Every youth who enters the system is assessed for offending risk and service needs. Advanced tools include protocols for developing comprehensive treatment plans that match effective services with offender's developmental needs, and program quality assurance measures that enhance program fidelity. The Comprehensive Strategy is supported by research that reveals the rather straightforward process by which delinquency careers unfold. A brief summary of this research follows.

The Age-Crime Curve

Over the life-course, delinquent careers can be broken down into three periods: onset, maintenance, and desistance. Studies show that percentage of youth involved in delinquency increases from late childhood (ages 7-12) to an apex in middle adolescence (ages 13-16), at which desistance normally commences, with decreasing involvement in criminal activities from late adolescence (ages 17-19) into early adulthood (ages 20-25) (Loeber, Farrington, Howell, & Hoeve, 2012). This pattern is called the age-crime curve. Figure 2 depicts the typical shape of the age-crime curve as reflected in self-reported delinquent behaviour.

Figure 2. The Age-Crime Curve



Source: Authors' adaptation of Loeber et al., 2012, p. 359

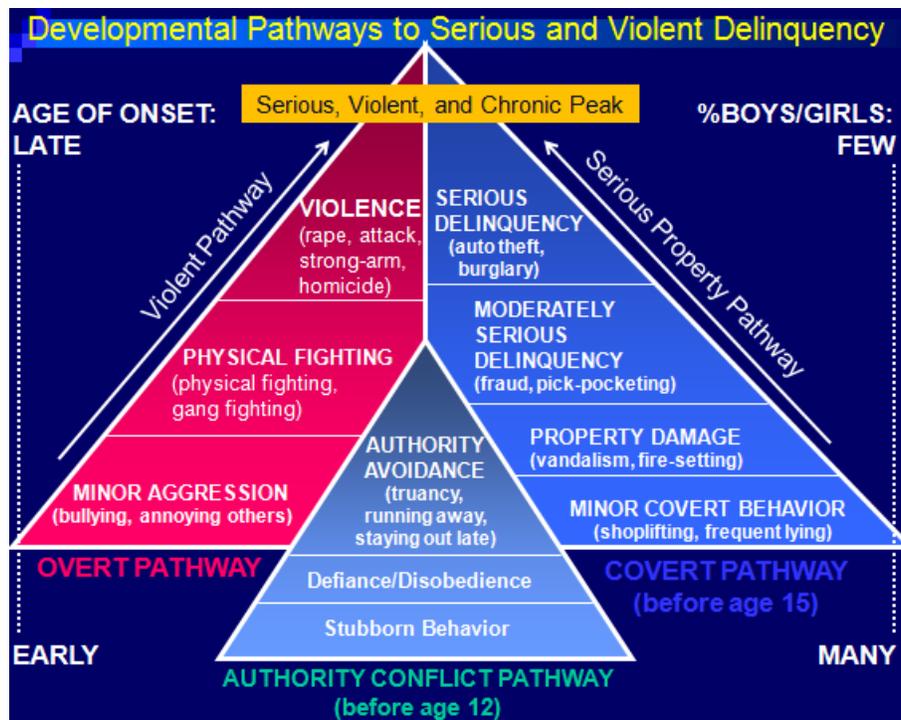
However, the careers of the most frequent offenders peaks slightly later at ages 17 to 19 among a small proportion of persistent offenders, approximately six percent. This subgroup that tends to commit a mixture of serious property and violent crimes and with considerable frequency is commonly known SVC offenders. These offenders normally account for a large proportion of all offenses. For example, the North Carolina SVC offenders averaged 14 court referrals each, and the total group of serious, violent, *or* chronic offenders—who represented 34% of all offenders—accounted for 62% of all delinquent offenses (M.Q. Howell, 2013). In the SVC offender group, 63% of the offenders were high risk. In Florida, SVC offenders, representing 8% of all offenders, were responsible for 30% of all arrests, and 35% of the murder/manslaughters, 41% of the armed robberies, and 37% of all aggravated assault arrests over a five year period (Baglivio, 2013a).

A Developmental Pathways Model

The discovery of SVC offenders raises three key issues: (1) Can pathways be identified that SVC offenders follow to reach this pinnacle? (2) Can risk and protective factors explain this progression? (3) Can progression in these pathways be interrupted? Fortunately, studies of juvenile offender careers have mapped the pathways that persistent offenders follow. In addressing the first issue, three distinctive pathways to SVC delinquency have been identified in several cities and in a national sample (Kelley, Loeber et al., 1997; Loeber, Slott, & Stouthamer-Loeber, 2008; Loeber, Wung, Keenan, et al., 1993). These are the “authority conflict pathway,” the “covert pathway,” and the “overt pathway” (Figure 3). The authority conflict pathway consists of predelinquent offenses, the covert pathway consists of theft and serious property

offenses, and the overt pathway consists of violent offenses. The segments of pathways are stepping stones in that those who have advanced to the most serious behavior in each of the pathways usually have displayed persistent problem behaviors characteristic of the earlier stages in each pathway. In other words, the “pathways” part of the picture shows a developmental progression (rather than more or less random delinquents and incidents) with the implication that these pathways can be interrupted by effective intervention.

Figure 3



Source: Authors' adaptation of Loeber et al., 1993

A social development model best describes how delinquent careers begin, often persist to serious property crime and violent levels, and gradually desist in most cases. The key elements in this developmental model are risk and protective factors. Predictive risk and protective factors have been identified that can be used to assess the likelihood that a youth will become a serious, violent, or chronic offender (Howell et al., 2014). Moreover, there are different points of intervention along that pathway, ranging from early prevention to more intensive intervention, easily graduated according to where a juvenile is positioned in the developmental progression. Young offenders who begin to engage in delinquent behavior at an early age are at especially high risk for serious, violent, or chronic delinquency and warrant particular attention when they appear in the juvenile justice system (Loeber & Farrington, 1998, 2001).

Risk and Protective Factors

To address the second issue raised above, risk and protective factors can account for the life-course of offender careers. Stated succinctly, a preponderance of risk factors over protective factors increases the risk of delinquency. The predictive value of the risk and protective factors is

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that they permit relatively early identification of juveniles on high risk pathways so the JJ system can give them special attention. Risk factors in key developmental domains explain increasingly prolonged offender careers, beginning with negative family influences. Several of these risk factors persist with age, and thus are “stacked” over time (Loeber et al., 2008). Risk factors thus multiply with age and tend to interact with one another to produce serious, violent, and chronic offenders in the absence of buffering protective factors.

Tanner-Smith and colleagues’ (2013) synthesis of findings from a large number of longitudinal studies revealed the following risk factors as having the strongest research support onward from age 12:

Individual: Prior levels of delinquent and criminal behavior, including substance use, externalizing problems, and anti-establishment attitudes.

Family: Family factors such as parenting skills and family cohesion were most potent during childhood, but remained relevant into adulthood with the exception of harsh parenting.

Peer: The influence of antisocial peers and the quality and extent of peer relations. Each of the peer factors remained relevant into adulthood, with the exception that peer substance use and relations lost strength in predicting recidivism from late adolescence to early adulthood.

School: The strength of school factors related to academic achievement waned into adulthood, with only overall school performance and school motivation/attitudes remaining important.

In response to the third issue noted earlier, pathways to SVC status can be successfully interrupted. Although immediate desistance may be unrealistic in certain cases, reduced frequency and seriousness of offenses are worthwhile intermediate goals. The challenge, however, is to distinguish youth with low potential for becoming SVC offenders from those at high risk. Without question, research shows that most youth who are arrested are not on a pathway that leads to lengthy criminal careers. In fact, most delinquency is neither serious nor violent as seen in the North Carolina and Florida offender career studies discussed earlier. In the North Carolina SVC study, two-thirds of the offender careers were non-serious, non-violent, and non-chronic, and this offender group made up 44% of all court referrals in Florida. It is the career paths of those who continue to offend and evidence a high-risk of doing so that should be targeted. The following are important intervention principles.

- First, prevention and intervention programs are likely to be more effective if they are mounted earlier rather than later. Thus, prevention programs and JJ systems should first and foremost concern themselves with preventing the initiation and escalation of delinquency among children.
- Second, programs should expand their focus to more than one risk domain or one risk factor within a particular domain such as substance use. Given the changing influence of risk factors from one developmental period to another at varying degrees among youths, individual assessments are imperative, and these must be graduated when multiple risk factors are interacting in more complex clients.
- Third, limited available resources should be mainly used to target the relatively small proportion of serious, violent, and chronic juveniles and other youths at elevated risk of

reaching this pinnacle. The prospects of altering these more serious and violent careers are quite good, provided that an array of services is administered with high fidelity.

- Fourth, girls present similar risk factors for delinquency involvement as boys. However, risk factors for recidivism differ for boys and girls. The female-specific risk factors are located mainly in the family domain. A Netherlands study (Van der Put, Deković, Hoeve et al., 2014) examined treatment needs of girls at high risk of recidivism, finding that this category can be divided into three different groups that have their own specific problems and treatment needs. For girls who have delinquent parents a family-oriented approach is probably most suitable. For girls who are victims of abuse, an intensive treatment that focuses on multiple systems is probably advisable in most cases. For girls who are repeat offenders, further diagnostics should be made to determine specific treatment needs.

A brief discussion of key tools for implementing evidence-based programming and reducing recidivism statewide follows.

KEY ADMINISTRATIVE TOOLS FOR ACHIEVING EVIDENCE-BASED JUVENILE JUSTICE SYSTEMS

The Comprehensive Strategy mantra is that juvenile justice systems must deliver the *right service, to the right youth, at the right time*. We break this important mantra down into three components to explain briefly here the use of key administrative tools for achieving system-wide evidence-based juvenile justice systems, beginning with the right service.

The right service. As Lipsey (2009) observed, “It does not take a magic bullet program to impact recidivism, only one that is well made and well aimed” (p. 145). The comprehensive meta-analysisⁱⁱⁱ that undergirds identification of effective juvenile delinquency services was an effort begun by Lipsey in the mid 1980s and continues, with periodic updates, to the present day. Multivariate analysis was conducted to identify the intervention characteristics most strongly associated with recidivism effects (see Lipsey, 2009, for a fuller account). The advantage of this view of evidence-based programs is that it may include many established local programs that already are of a type supported by research or can be readily modified to match the research findings.

Lipsey developed the Standardized Program Evaluation Protocol (SPEP), an evidence-based program rating scheme for assessing the expected effectiveness of programs currently in play for reducing the recidivism of juvenile offenders. Here we will only provide a summary of the structure and use of the SPEP (further details can be found in Howell et al., 2014; Lipsey & Howell, 2012; Howell & Lipsey, 2012). Four main features of JJ system programs are scored according to how closely their characteristics match those associated with the best recidivism outcomes for similar programs as identified in the meta-analysis. The maximum number of points available for each rated aspect of the program is proportionate to the strength of that factor for predicting recidivism effects in the meta-analysis: 1) primary (generic) and supplemental service types; 2) quality of service delivery; 3) amount of service (target values for treatment duration and hours of contact); and 4) the risk level of the juveniles treated by the program.

More generally, Lipsey’s analysis results can be reformulated as guidelines for program providers about the profile of program characteristics expected to produce the largest effects on

the recidivism of juvenile offenders (Lipsey, 2009). That advice can be stated in general terms as follows:

- Use therapeutically oriented approaches, not control-oriented ones. Familiar examples of primary or generic therapeutic services include cognitive-behavioral therapy, family counseling, mentoring, and the like. Ineffective control-oriented programs that may actually *increase* recidivism include boot camps and “scared straight” techniques.
- Use one of the more of the effective intervention types within the therapeutic category.
- For the selected intervention type:
 - Target high-risk juveniles; low-risk juveniles have little potential for recidivism.
 - Provide an amount of service that at least matches the average in the supporting research for that intervention type.
 - Implement the intervention with high quality; establish a treatment protocol and monitor service delivery for adherence to that protocol.

A particular program can be called “evidence-based” if it is of a type for which multiple studies show positive average effects and it is implemented in a way that matches what those studies show to be effective. The SPEP applies to any therapeutic intervention type for which there is a sufficient body of supporting research in Lipsey’s large meta-analytic database. The SPEP also can identify programs in use for which there is no research and thus alerts a juvenile justice system to their uncertainty. The SPEP ratings are derived from data about the services the rated program actually provides, typically generated by a management information system maintained by the program provider or the juvenile justice system that uses the program. In other words, as an evidence-based tool, the SPEP can be used to evaluate operational programs, designate them as evidence-based if they obtain high ratings, and guide improvements if they do not obtain high ratings. Importantly, the SPEP provides a blueprint with respect to program areas that need improving in order to achieve larger recidivism reductions.

To the right youth. Selecting *the right youth* for particular services in various levels in juvenile justice systems requires careful use of key management tools. The Comprehensive Strategy calls for the use of best practice management tools including a risk assessment instrument, a treatment needs assessment tool, a disposition matrix that guides placements in a manner that protects the public, protocols for developing comprehensive treatment plans that match effective services with offender treatment needs, and program quality assurance measures (Howell et al., 2014). The focus of this perspective is on matching youth at various risk levels with appropriate services and at a level of supervision that protects the public.

For maximum impact, every JJ system must have a well-defined array of programs that serve higher-risk youth. Because JJ systems are statutorily mandated to prevent and reduce delinquency, a full array of programs is needed. Ideally, these programs should be arranged so that they serve progressively higher-risk youth along the entire continuum from prevention programs that serve at-risk youth, to both community and residential programs that serve very high-risk offenders, and throughout re-entry. The key administrative tools for management of programs for the full array of youth at various risk levels are validated risk assessment instruments, reliable treatment needs assessments, and a disposition matrix. Used in tandem, these tools can provide the foundation for a data-driven juvenile justice system that helps enormously to ensure that youth are handled fairly, equitably, and consistently.

To achieve maximum impact, three principles should be followed (Slobogin, 2013; Slobogin & Fondacaro, 2011). First, risk assessment should be continuous, not limited to intake or adjudication functions, so as to manage risk in all juvenile justice system stages (including intake, detention, adjudication, probation, confinement, and reentry). Second, assessments must address both risk and rehabilitation of offenders, and *in concert*, using graduated sanctions to stabilize offenders (and protect the public) and giving treatment a chance to work. Third, risk and need assessments should dovetail in a comprehensive but flexible risk management plan designed to ameliorate dynamic factors that exist outside offender's static (unchangeable) offense histories. In this scheme, the philosophy of JJ systems is focused less on punishment than on prevention and risk management. Two other procedural points are important. The risk assessment instrument must be validated on the offender population to which it is applied (e.g., multi-year court referred cohorts). Assessments should be administered in a two-step process; first risk, then treatment needs. A validated risk instrument is one that consistently classifies offenders into distinctive risk levels (low, medium, and high) to guide the distribution of cases fairly and evenly across the risk continuum. Missouri's Performance Standards for the Administration of Juvenile Justice are exemplary for helping balance individual rights and treatment needs with public protection (Office of State Courts Administrator, 2004; Waint, 2002). In addition, the performance standards bring consistency to multi-county circuits across the state in providing individual justice to individual juveniles and families in supporting the Missouri structured decision making tools.

Risk assessment should focus solely on identifying cases most and least likely to be involved in future offending, and short instruments comprised of both static and dynamic factors performed best in a multi-state study (Baird, Healy, Johnson et al., 2013). Early and persistent delinquency involvement is the best predictor of future delinquency, thus actuarial risk instruments must prominently rely on *static factors* (e.g., age of first arrest or conviction, number of previous arrests, convictions, or incarcerations, runaway episodes etc.) and also include *dynamic factors* (current offender circumstances) that can strengthen predictions. Tools and protocols are now available for conducting effective clinical risk assessments on child delinquents for early intervention purposes (Augimeri, Enebrink, Walsh, & Jiang, 2010).

It is important that risk assessment instruments and needs assessment instruments are in sync with the developmental stages of offender careers. First, they must cover each of the developmental domains (family, school, peers, individual problems, and environmental conditions). Second, these instruments must be capable of prioritizing treatment needs in each of these developmental domains and as the relative strength of these changes with age and criminal involvement. When used in tandem, risk assessment instruments help determine placements and levels of supervision, and needs assessment instruments facilitate matching services to treatment needs at each level of advancement in criminal careers and juvenile justice system involvement.

Delinquent or antisocial peers should be included in the risk tool items, and this item should include gang membership as an indicator. Gang members can be expected to penetrate JJ systems deeper than non-gang offenders. In North Carolina, gang members represent:

- 7% of all juveniles on whom delinquent complaints are filed,
- 13% of juveniles adjudicated,

- 21% of juveniles admitted to short-term detention, and
- 38% of juveniles committed to secure residential facilities (M.Q. Howell & Lassiter, 2011).

Gang involvement is a unique form of deviant peer group membership, in that delinquency involvement is elevated during this period compared with periods both before and after gang membership (Howell & Griffiths, 2015). The North Carolina research also finds that gang members are well-represented among SVC groups, with more than 7 times as many high risk offenders among gang members than among non-gang youth (52% vs. 7%). A similar finding has been reported in statewide Florida data (Baglivio, Jackowski, Greenwald, & Howell, 2014). Nationwide, one in three youth in residential juvenile detention or correctional facilities professes some gang affiliation, and almost one-third (30%) of confined youth are in living units where between one-fifth and one-half of youth are gang members (Sedlak & McPherson, 2010). Security problems tend to escalate in facilities with substantial gang activity.

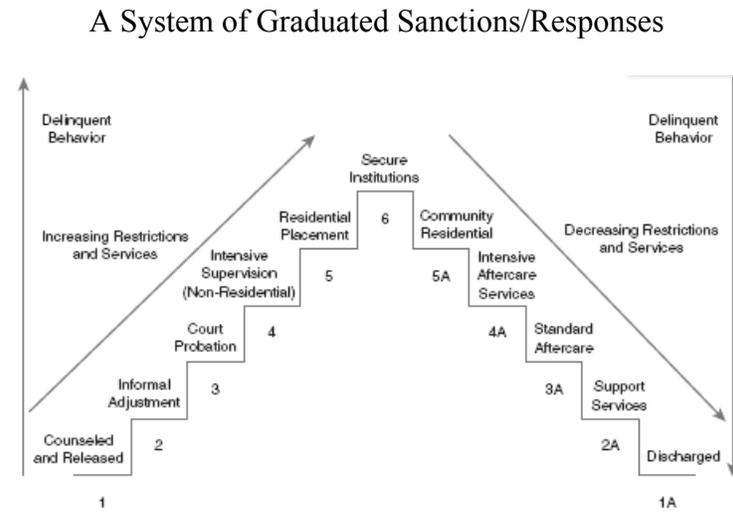
Next, graduated need assessments determine the specific generic services that are to be prescribed in conjunction with compatible scheduled supervision (e.g., standard or intensive supervision). The sources of these problems typically span the major developmental domains: family, school, peers, individual problems, and environmental conditions. Hence, multiple services are required that address a full array of problems. “There are important, and multiple risk factors in most domains at all developmental stages” (Tanner-Smith et al., 2013, p. 108). Thus an intervention with a single focus may have only limited impact.

At the right time. Six procedures are required to ensure that the right service is delivered to the right youth *at the right time* (see Howell et al., 2014, pp. 101-129). First, comprehensive assessments of treatment needs guide the selection of services most likely to reduce recidivism. These assessments should identify and prioritize services to address circumstances that contribute to delinquency in the developmentally relevant family, school, peer, individual, and/or community domains. Second, graduated assessments (increasingly in-depth) will be required for some offenders, particularly those with multiple problems in multiple domains of their lives, to obtain a more accurate assessment of presenting problems. Third, comprehensive case plans integrate supervision strategies with treatment services. Fourth, quality assurance procedures must be established to ensure that case management plans are implemented with fidelity. Fifth, a management information system is needed to track clients and service delivery, and evaluate outcomes. Sixth, this entire process is best supported by formalized court standards. As noted earlier, the influence of risk factors varies with age, in concert with developmental stages (Tanner-Smith et al., 2013). This comprehensive meta-analysis also finds that the strongest and most robust risk factors for crime during adolescence and early adulthood are those that represent prior delinquent or criminal behavior. Thus, prevention programs and JJ systems should first and foremost concern themselves with preventing the initiation and escalation of delinquency among children.

For those offenders whose delinquency career continues to escalate, a series of graduated sanctions can support more intensive services with stepped-up sanctions (restrictions) and less intensive services and stepped-down sanctions as behavior improves (Figure 4). However, this schematic does not imply that intervention should always begin at step 1 (counseled and

released). Rather a schedule of sanctions (and concomitant rewards) should be tailored to the offender's current position in delinquent pathways, degree of risk exposure, and current treatment needs (Figure 3).

Figure 4



Source: Howell, 2009, p. 232

Matching elevated offender needs with primary (generic) services embodied in the SPEP is a straightforward process (detailed in Howell et al., 2014). Primary (generic) services—mentoring, individual counseling, group counseling, family counseling and the like—are specific, organized, planned, direct interactions with the juvenile alone or with others (e.g., peers or family) intended to bring about psychological or behavioral change. The service matching process involves assignment of these primary service types in ways that connect juveniles with services that have the capability of addressing their greatest needs and are developmentally appropriate. For example, a given youth involved in substance use and also experiencing poor family supervision could benefit from individual counseling for drug dependence while his/her parents should receive family counseling. For each primary or generic service, the SPEP specifies the optimal service dosage (in terms of frequency and duration of services) that is needed to reduce recidivism. Inadequate service dosage is a common shortcoming of programs that do not score high on the SPEP.

State Examples of Comprehensive Strategy Benefits

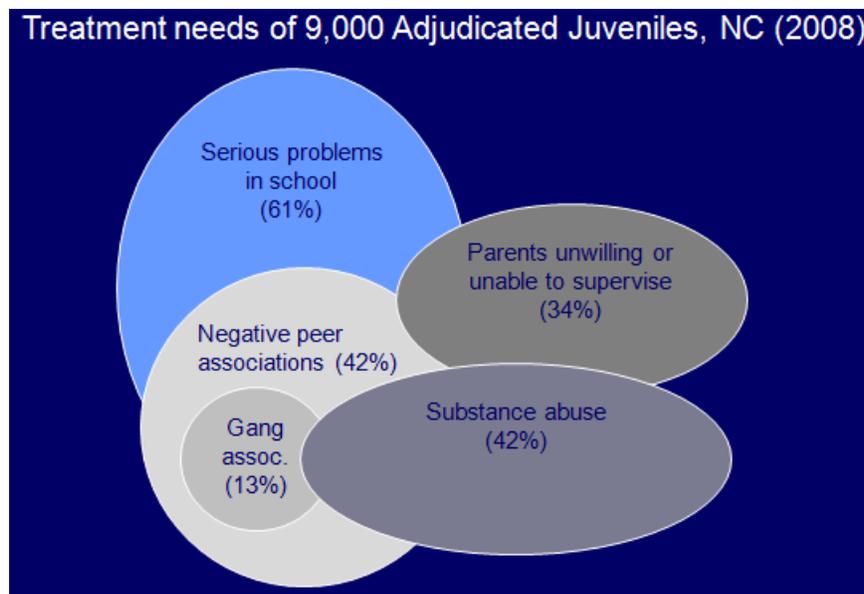
Research in two states (North Carolina and Florida) that have made remarkable progress in implementing Comprehensive Strategy principles and tools is featured here to illustrate the benefits of using this framework. Selecting *the right youth* for particular services implies benefits from reserving expensive confinement for higher risk youth. Over the past decade, a number of state legislatures have mandated a shift from confinement to community-based programming; largely adopting a reinvestment strategy (Brown, 2012). This strategy can pay handsome dividends. North Carolina reduced the number of offenders placed in correctional facilities by two-thirds in the past decade—attributable, in large part, to implementation of the

Comprehensive Strategy and use of a disposition matrix (described below) that restricted confinement to only SVC offenders. Juvenile delinquency also decreased along with reduced confinement, saving more than \$30 million as court referrals dropped by 27% during the period 2000-2011 (M.Q. Howell, Lassiter, & Anderson, 2012). North Carolina reinvested savings in front-end prevention services, a key principle of the Comprehensive Strategy. Further savings and redistribution of resources in this state to front end and community-based services was recently mandated by the North Carolina General Assembly through approval of the North Carolina Juvenile Facilities Strategic Plan (North Carolina Department of Public Safety, 2014). This state also diverts almost one-third of the youths referred to juvenile courts each year (M.Q. Howell & J. Bullock, 2013).

In the North Carolina analysis of nearly 9,000 youth adjudicated in 2008, the following priority and overlapping treatment needs were identified: serious school problems (drop out, expulsion, long-term suspension); substance abuse; negative peer associations; and parents unwilling or unable to supervise their children (Lassiter, Clarkson, & Howell, 2009).^{iv} The State of North Carolina uses model risk and needs instruments endorsed by the National Council of Juvenile and Family Court Judges' Juvenile Sanctions Center (Wiebush, 2002): the Model Risk Assessment Instrument and the Model Youth and Family Assessment of Needs and Strengths. One of the important features of these tools is the inclusion of indicators of gang involvement.

Figure 5 illustrates how the predominant treatment needs can overlap, requiring the matching of multiple treatment services and supports. Note that treatment needs are prominent in each of the four developmental domains, individual, family, and school problems, and negative peer group exposure, including gang involvement. This figure roughly approximates the proportion of some 9,000 offenders adjudicated in 2008 who were assessed as having problems in each of these domains (Lassiter et al., 2009).

Figure 5. Overlapping Treatment Needs



Data source: Lassiter, Clarkson, & Howell, 2009, p. 12.

A well-designed disposition matrix can help reduce recidivism and tailor programs to the treatment needs of offenders. Disposition matrices typically are designed with two dimensions: the presenting offense and risk level, in a 9 X 9 table that has low, medium, and high options along each dimension. A continuum of service options should be inserted at the intersections of each of the risk-need levels in the disposition matrix. To be most effective, program or facility placements must match the developmental status of offenders, their offense history, and recidivism risk. For example, Florida research (Baglivio, 2013b) shows that diverted low-risk youth who received services in less restrictive settings demonstrated significantly lower recidivism rates, indicating that diverting low risk youth is a very effective strategy in terms of reducing subsequent re-offending. Third, this analysis also identified a group of relatively low risk offenders who have considerably elevated treatment needs, that is, “low risk/high need” youth. North Carolina diversion research shows that two options (closed complaints or use of service plans/contracts) have proved successful in helping juveniles avoid committing further delinquent or “undisciplined” acts. For both groups, a variety of treatment and supervision options were exercised by the parent/guardian/custodian or the school system. Court counselors also refer juveniles with low risk/high need profiles to local developmental and mental health programs across the state. Overall, these options proved to be remarkably effective, with a 76% success rate for diverted cases (Howell & Bullock, 2013).^v

A Florida study examined the benefits of appropriate dispositions vis-à-vis the matrix recently adopted by the Florida Department of Juvenile Justice. Using a sample of 38,117 juvenile offenders, researchers found that dispositions/placements within the suggested range in the state’s juvenile justice disposition matrix had an average recidivism rate of 19%, versus 39% for those offenders whose dispositions were outside the range recommended by probation officers (Baglivio, Greenwald, & Russell, in press). Moreover, dispositions/placements that were the least restrictive option within the suggested range performed best. Dispositions above the suggested range (more restrictive) performed poorly, though those below the suggested range (less restrictive than suggested) performed worst. Research also shows that predictive risk and protective factors are substantively different for SVC offenders, thus providing guidance in crafting comprehensive treatment plans for this priority group (Baglivio et al., 2014; M.Q. Howell, 2013).

In another Florida study (Johnson, Lanza-Kaduce, & Woolard, 2011), the most rigorous study of the benefits of graduated sanctions to date, researchers found that failure to use graduated treatment interventions for older juvenile offenders, specifically by leapfrogging over graduated sanctions, increased recidivism. More intensive treatment was provided in conjunction with four graduated levels of supervision (from probation to maximum-risk residential). Only 36% of the juveniles who received graduated interventions reoffended, compared with 58% of those who were transferred to criminal court and did not receive graduated interventions. The researchers suggested that “graduated interventions may constitute sound crime control policy because it is linked to lower recidivism” (p. 771). In this context, re-entry services are vitally important. Each year, some 100,000 juveniles are released from confinement nationwide; and half of the states have passed laws in the past decade that aim to improve post-release supervision and supports for successful transitions home (Brown, 2012).

North Carolina JJ system professionals have developed a Juvenile Justice Planning Tool (JJPT) that is used to map the flow of juveniles across each county's juvenile justice system on an ongoing basis, and support county-wide and state-wide continuum building. The main purposes of this tool are to facilitate the matching of available services with offender treatment needs and to identify service gaps. The JJPT is structured in sections that correspond to the sequential JJ system processing stages (e.g., intake, diversion plans, approved for court, adjudicated, correctional commitments, and post-release supervision). Electronic client tracking data display the number of offenders that penetrate the system levels—that is; the overall system flow of offenders—on an annual basis. For the purposes of determining service availability and matching client needs, the JJPT displays available developmental and rehabilitative services for JJ system clients. Thus the tool permits a comparison between risk levels and treatment needs of existing clients at each JJ system stage, illuminating gaps in existing services. The system flow/program services feature is meant to be reviewed annually for the prior fiscal year in order to determine the array of juveniles served, and multiple years can be reviewed to determine trends and perform a service gap analysis.

Demonstration projects with the SPEP have been conducted in the state juvenile justice agencies of North Carolina (the original pilot state) and Arizona, and others are underway in Florida, Pennsylvania, Tennessee, Connecticut, Delaware, Iowa, Georgia, and Milwaukee. Further details of implementing the SPEP and integrated with the OJJDP Comprehensive Strategy are provided in a *Handbook for Evidence-Based Juvenile Justice Systems* (Howell et al., 2014).

CONCLUSION

The prospect of making statewide juvenile justice system program improvements appears to be within reach. Each state should take stock of the consistency of its JJ system operations with the framework and principles of the Comprehensive Strategy and the performance of its juvenile justice system with a focus on recidivism rates. In this assessment, particular attention should be given to the quality of structured decision-making tools, their adequacy for classifying offenders by risk level, building a continuum of evidence-based services, and matching offender characteristics with the programs that will benefit offenders most. If recidivism rates are elevated even though administrative tools presently used are well-suited for the purpose of providing services to the right youth at the right time, then a JJ system in this position should use the SPEP in improving existing programs and lower recidivism rates system-wide.

Any JJ system that is presently taking steps to deliver the right evidence-based services to the right youth at the right time is well-positioned to accomplish other system reforms and, with these, serve as a model for other JJ systems to follow. These reforms include reducing waivers and transfers to the criminal justice system, reducing disproportionate minority contact, providing more equitable dispositions and tailored treatment for girls, reducing reliance on confinement, and ensuring full due process and access to qualified legal counsel for referred youth. In addition, proper use of structured decision making tools will improve systems' capacity to effectively serve older SVC offenders who otherwise might be prosecuted in the criminal justice system. The use of objective risk and needs assessment instruments in

conjunction with a disposition matrix should help reduce disproportionate minority contact and also serve to expand options for female offenders. Ensuring due process and access to qualified legal counsel for referred youth will also help reduce unwarranted detention and confinement, two undesirable outcomes that are more likely for youth who are not provided adequate legal services. Additional information on these needed reforms and guidance in addressing them is readily available (Howell et al., 2014).

ⁱ While we focus on statewide JJ system implementation as the most cost effective and impactful way to achieve system reform, the concepts presented herein could also be implemented in systems where local jurisdictions have the authority to structure juvenile offender programs and services.

ⁱⁱ This article draws upon material in *A Handbook for Evidence-Based Juvenile Justice Systems* (Howell, Lipsey, & Wilson, 2014).

ⁱⁱⁱ Meta-analysis is a technique for extracting and analyzing information about intervention effects and the characteristics of the interventions producing those effects from a body of qualifying research studies (Lipsey & Wilson, 2001). This method of analysis allows researchers to analyze the characteristics of a large number of programs and synthesize the research findings about the effects of those programs in a systematic, replicable manner.

^{iv} Percents total more than 100 because of multiple treatment needs.

^v Success in this study was defined as not returning to the juvenile justice system with a new offense within two years.

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