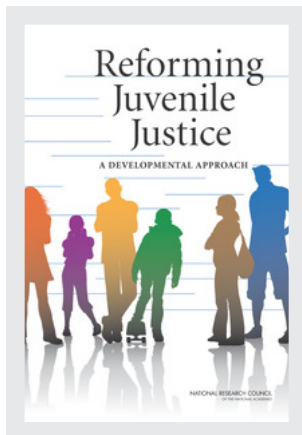


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Reforming Juvenile Justice: A Developmental Approach

DETAILS

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6

Preventing Reoffending

A core function of the juvenile justice system is to prevent reoffending by adolescents who have committed acts that would be considered crimes if committed by adults. Even if the court is an active partner in the broad prevention activities of the community, it will retain the primary responsibility for responding to adolescents who were not prevented from engaging in illegal behavior. Whether imposing sanctions or providing services, the court will continue to determine the type and intensity of interventions for the adolescents and families that come before it.

Whether the court can reduce reoffending depends on its ability to accomplish two interrelated tasks. Effectiveness lies in the system's ability to (a) intervene with the right adolescent offenders and (b) use the right type and amount of intervention. Achieving this ideal, or at least moving toward it, requires the court to examine its methods for assessing adolescents at different points of contact with the system, its thresholds and approaches for intervening in their lives, and how court resources and practices can promote the core task of preventing reoffending.

As explained in Chapter 5, consideration of the unique capacities and needs of adolescents is a necessary starting point for designing a theoretically coherent, just, and effective juvenile justice system. It is thus appropriate to consider how knowledge about adolescent development can be applied to the prevention of reoffending. In this chapter, we consider how efforts to keep juvenile offenders from continuing criminal activity might be extended and refined by consideration of advancing knowledge regarding adolescent development.

GENERAL RISK AND SERIOUS ADOLESCENT OFFENDING

Intervening with adolescent offenders to prevent continued offending would be a relatively straightforward task if one could identify those who would be chronic, serious, and/or violent offenders early in their offending careers and correct the factors that were most influential in producing this pattern of behavior. As noted in Chapter 1, however, this amounts to predicting and intervening to stop a relatively rare event; serious, violent, chronic adolescent offenders are a small proportion of the general adolescent offending population. This group is both proportionately and numerically quite small, and when the focus is restricted to the most serious delinquent offenders, for example, the chronically violent offender, it is exceedingly small (Snyder, 1998). In addition, the markers that differentiate this group cleanly at the start of their offending careers are rather limited in their predictive power.¹

The power of a risk marker to predict future arrest or the impact of an intervention to reduce the likelihood of future arrest is often depicted in terms of an “effect size.” An effect size is a metric that can be compared across multiple studies; it indicates how much impact a particular risk variable or intervention has on whether an individual is arrested. It is useful for comparing results across studies because, unlike indicators of statistical significance, it is less affected by the size of the samples examined. In the studies of interventions considered later in the chapter, the effect size indicates the average observed difference in arrest rate between a treated group and a comparison group. If a study indicates that a treated group has an arrest rate of 25 percent and the comparison group has an arrest rate of 35 percent, that intervention has an effect size of .10, a 10 percent lower rate of rearrest. Effect sizes across multiple studies are examined using a technique called *meta-analysis*, which uses regression approaches to identify aspects of programs that are related to larger or smaller effect sizes among the pool of studies examined.

¹The term “risk marker” is used throughout this section. This is in keeping with the distinction made by Kraemer and colleagues (1997), in which a marker has a documented association with a later outcome, and a factor has substantiation that the observed association with the later outcome is causal (i.e., changing the risk factor has been shown to reduce the likelihood of the outcome). Overwhelmingly, the research on risk for future delinquency has demonstrated the presence of risk markers, with much less evidence that these risk indicators are risk factors related to later delinquency. The literature uses these terms loosely and interchangeably. The wording used here is believed to be reflective of the general state of the literature, and further specific distinctions would be distracting.

PREDICTING SERIOUS DELINQUENCY

Over the years, a number of studies have examined risk markers for or predictors of serious delinquency, chronic offending, and violent delinquency. Several excellent summaries of that literature exist (Hawkins et al., 1998; Lipsey and Derzon, 1998; Biglan et al., 2004; Farrington and Welsh, 2007). Lipsey and Derzon (1998, p. 88), using meta-analytic techniques, identified 793 effect sizes from 66 reports of 34 independent studies, and Hawkins and colleagues (1998) identified 39 studies and provided a substantive summary of the identified risk markers. Summarizing the rather voluminous findings from these reviews in a short space is a difficult task. For an overview, see Table 6-1.

This table shows the largest effect sizes for particular risk markers at different ages. As the table shows, the identified risk markers cut across a number of developmental domains, including prior offending and aggression, as well as peer, family, and school factors. Hawkins and colleagues (1998) also found significant risk markers in all of the developmental domains they examined: individual, family, school, peer, and community. To illustrate their findings, we summarize risk markers from the area of the family: “Within the family, living with a criminal parent or parents, harsh discipline, physical abuse and neglect, poor family management practices, low levels of parent involvement with the child, high levels of family conflict, parental attitudes favorable to violence, and separation from family have all been linked to later violence” (Hawkins et al., 1998, p. 146). We can draw several important conclusions from the results presented in these and other reviews.

First, there is no single risk marker that is very strongly associated with serious delinquency. As is true of other problem behaviors, there are multiple risk markers drawn from multiple domains, each of which, alone, is only modestly related to these outcomes. In other words, there is no single solution on which to focus efforts to prevent serious delinquency. This behavior pattern appears to come about from the accumulation of risk across many domains (Hawkins et al., 1998; Lipsey and Derzon, 1998; Biglan et al., 2004; Farrington and Welsh, 2007; Howell, 2009).

Second, risk for serious delinquency is generated across multiple developmental stages from infancy through childhood and into adolescence, with risk markers at each stage making contributions to the origins of serious delinquency. Although early risk markers have a role to play, they are clearly not determinative of these outcomes. However, early risk markers are predictive of the development of new risk markers for delinquency at subsequent ages. For example, risk indicators during early childhood, such as increased aggression and hyperactivity, are predictive of peer rejection and either peer isolation or attachment to delinquent peers; both of these

TABLE 6-1 Ranking of Ages 6-11 and Ages 12-14 Predictors of Violent or Serious Delinquency at Ages 15-25

Ages 6-11 Predictor (r)		Ages 12-14 Predictor (r)
	Rank 1 Group	
General offenses (.38)		Social ties (.39)
Substance use (.30)		Antisocial peers (.37)
	Rank 2 Group	
Gender (male) (.26)		General offenses (.26)
Family socioeconomic status (.24)		
Antisocial parents (.23)		
	Rank 3 Group	
Aggression (.21)		Aggression (.19)
Ethnicity (.20)		School attitude/performance (.19)
		Psychological condition (.19)
		Parent-child relations (.19)
		Gender (male) (.19)
		Physical violence (.18)
	Rank 4 Group	
Psychological condition (.15)		Antisocial parents (.16)
Parent-child relations (.15)		Person crimes (.14)
Social ties (.15)		Problem behavior (.12)
Problem behavior (.13)		IQ (.11)
School attitude/performance (.13)		
Medical/physical (.13)		
IQ (.12)		
Other family characteristics (.12)		
	Rank 5 Group	
Broken home (.09)		Broken home (.10)
Abusive parents (.07)		Family socioeconomic status (.10)
Antisocial peers (.04)		Abusive parents (.09)
		Other family characteristics (.08)
		Substance use (.06)
		Ethnicity (.04)

SOURCE: Lipsey and Derzon (1998).

place a child at increased risk for delinquent behavior during puberty and adolescence (Biglan et al., 2004).

Third, there is no evidence that there are unique risk markers associated with serious delinquency, chronic delinquency, or violent delinquency. The risk markers listed in Table 6-1 and the illustrative family risk markers from the Hawkins and colleagues (1998) review quoted above have been linked to general delinquency, conduct disorder, substance use, and a host of other adolescent problem behaviors, as well as to serious delinquency

(Lorion et al., 1987; Farrington, 1989; Yoshikawa, 1994; Catalano and Hawkins, 1996; Biglan et al., 2004).

Other studies of risk markers for serious delinquency reached similar conclusions. Porter and colleagues (1999) used data from the three projects of the Office of Juvenile Justice and Delinquency Prevention's Program of Research on the Causes and Correlates of Delinquency in Denver, Pittsburgh, and Rochester. They compared three groups—nonoffenders, general but nonviolent delinquents, and violent delinquents—on 19 risk markers representing 7 domains—community, family structural characteristics, parent-child relations, school, peers, individual, and problem behaviors. They conclude that “there is not a different set of risk factors for serious violent offenders . . . [but] the serious violent offenders have greater deficits, or more extreme scores, on many of these risk factors as compared to general delinquents [and] are also more likely to experience risk in multiple domains” (Porter et al., 1999, p. 15). More recently, Esbensen and colleagues (2010) examined risk markers for serious delinquency in a sample of 5,935 eighth graders drawn from 11 different communities throughout the United States. They compared nonoffenders to nonviolent offenders and to serious violent offenders across 18 risk markers. In general, level of risk increased from nonoffenders to nonviolent offenders to violent offenders, but the differences appeared to be a matter of degree rather than kind. Similar results were also found when examining a high-risk sample of adolescents from Los Angeles (MacDonald, Haviland, and Morral, 2009). Once again, frequent and violent offenders differed from nonviolent and low-rate offenders, not in the presence of certain risk markers, but rather in that frequent and violent offenders had higher than average values across their baseline assessment of risk markers for delinquency, such as delinquent peers, family criminality, and substance use.

Comparing Delinquents and Nonoffenders

Few studies directly compare serious delinquents to both general delinquents and nonoffenders. Among those that do, however, the weight of the available evidence suggests that serious delinquents are influenced by the same risk markers and developmental processes as other youth. Some preliminary evidence of associations between neuropsychological or physiological indicators and serious adolescent offending exists (e.g., Cauffman, Steinberg, and Piquero, 2005), but there is no body of evidence of which we are aware to indicate that serious delinquents are qualitatively different from other delinquents who are involved in the juvenile justice system. They do commit more offenses and some more violent offenses, but that is because they appear to experience a greater accumulation of risk markers in comparison to others. But the individual risk markers that they experience,

such as impulsivity and risk taking, family distress, school failure, and peer influence, are, by and large, similar to those experienced by all youth caught up in delinquent behavior and in the juvenile justice system. More serious offenders may well experience more powerful and prevalent environmental influences, such as neighborhood disorder or deviant peer involvement, and these in turn may exacerbate existing intraindividual vulnerabilities for involvement in antisocial behavior. The processes by which these contextual and individual risk characteristics interact to increase the risk of criminal involvement, however, appear more similar than different among serious, nonserious, and nonoffending adolescents.

It is important to note that the findings summarized above and in Table 6-1 are inherently limited, in light of new, possible risk markers that might be examined if this type of research were done today. When the referenced studies were conducted, there was little awareness of the wide range of biological, neuropsychological, or psychosocial variables that might be considered as highly relevant to adolescent development. Examination of these new constructs of interest might elucidate powerful interactions or moderated effects that simply were not imagined as relevant when the reviewed studies were conducted.

IMPLICATIONS FOR DEVELOPING STRATEGIES

The above findings are nonetheless relevant for developing strategies for assessing and intervening with adolescent offenders. First, there is currently no clearly applicable approach for identifying the adolescent offender who will go on to commit the most horrific and troubling crimes. Hindsight often makes it seem like these adolescents must be readily detectable, but foresight for doing so has not been found (Mulvey, Schubert, and Odgers, 2010). Adolescent offenders differ on a gradient of risk for future offending, with no distinct set of risk markers associated with the most serious and chronic offending, and approaches that use this general framework for risk have the most solid empirical basis. In addition, the risk markers associated with future offending, either serious and chronic or not, cover a broad array of personal and social features and differ with developmental period. This means that interventions limited to just one “key” factor during a limited period of development are likely to have an equally limited sustained impact on reoffending.

This does not mean that secondary prevention efforts to reduce involvement in antisocial activities and future offending are for naught. Multiple effective prevention strategies for working with troubled and troubling youth have been shown to have positive effects (Office of the Surgeon General, 2001). The implication of the above findings about the limited specificity of risk markers is that interventions of this sort will have only

so much usefulness forestalling future offending, despite notable positive effects. Without the ability to identify the most serious juvenile offenders cleanly, prevention efforts will necessarily enroll and treat a proportion of adolescents who would otherwise have had a trouble-free adolescence in the absence of the intervention and will overlook another proportion who will become serious, chronic, or violent adolescents at a later developmental stage. The challenge of assessing adolescent offenders regarding the most reasonable level and type of intervention once they have come to the attention of the juvenile justice system remains unsolved.

ASSESSING RISK OF FUTURE CRIME AND NEED FOR SERVICE INTERVENTION

Many areas of health and social service practice have come to rely more on actuarial methods for screening and assessing individuals. These methods include checklists to identify particular problems for further assessment and structured protocols to determine the severity of a problem (e.g., screens for depression in primary care practices [Zuckerbrot et al., 2007], instruments for assessing intimate partner or sexual violence [Basile, Hertz, and Back, 2007; Rabin et al., 2009]). In some instances, structured instruments are used to assess the readiness of an individual to leave a restrictive environment or to identify potentially high-risk individuals if grave outcomes, such as imminent serious violence, might be avoided by admission into an institutional environment. Structured risk assessments have even made their way into court deliberations about the imposition of specialized laws, such as violent sexual predator statutes.

Use of Risk/Needs Assessment Instruments

Actuarial or structured professional judgment measures have also become more commonplace throughout the juvenile justice system. Detention screening instruments are now often used to determine an adolescent's risk of failing to appear in court or of committing another criminal act if released into the community. In addition, screening instruments for mental disorders have become a standard instrument used at detention intake to identify adolescents with incipient mental health problems (Desai et al., 2006). Finally, beginning in the 1980s, instruments for assessing the risk of reoffending by adjudicated adolescent offenders have also permeated practice in many locales, as a way for communities to establish a consensus about the appropriate threshold for sending an adolescent to institutional placement (Baird, Storrs, and Connelly, 1984; Wiebush et al., 1995). Many locales have developed slightly modified versions of early structured approaches, and a limited number of these have been validated and

received widespread distribution (Howell, 2003a). Researchers continue to refine assessment instruments by exploring innovative algorithms for identifying subgroups of offenders with differing levels of risk for reoffending (Grann and Langstrom, 2007; Yang, Liu, and Coid, 2010; Walters, 2011), and focusing on predicting reoffending in special populations of juvenile offenders (e.g., juvenile sex offenders) (Prentky and Righthand, 2003). Several initiatives (e.g., MacArthur Foundation's Models for Change) have promoted the use of structured instruments as a method to increase juvenile justice efficiency and effectiveness by limiting institutional placement to adolescents who are most likely to reoffend and investing intervention resources in those adolescents for whom they will make the most difference.

Newer juvenile assessment instruments consider not only risk of reoffending, but also attempt to identify the needs of the adolescent that might be addressed with interventions. The intent of these instruments is to go beyond calculating a single score of how likely a juvenile might be to reoffend, and acknowledge that risk of reoffending is not a fixed attribute of the adolescent, but rather a partially contextually dependent estimate that might be lowered by particular interventions, monitoring in the community, or changes in life situation. Newer structured risk/needs instruments include an assessment of potential protective factors or treatment needs that might be considered when planning interventions (Andrews and Bonta, 1995; Wiebush et al., 1995; Dembo et al., 1996; Hoge, Andrews, and Leschied, 1996), as well as an assessment of the adolescent's likely responsivity to interventions for these identified needs (Kennedy, 2000).

In line with the review of the risk marker literature cited above, most risk/needs instruments include an array of factors to consider, covering such considerations as prior offending history, family history of criminality, school performance, current peer associations, and antisocial attitudes. Based on the level of overall risk, an adolescent could be considered for more or less intensive services (e.g., institutional placement or community supervision). If appropriate dynamic risk factors for offending could be identified and assessed adequately, interventions for a particular adolescent could then be based on the number and type of dynamic factors related to continued offending. For example, an adolescent with high antisocial attitudes and levels of offending could be considered a good candidate for cognitive interventions aimed at altering these attitudes or promoting positive social skills, or an adolescent with a drug and alcohol problem might be considered a candidate for positive community adjustment if these issues can be addressed effectively. These methods, if built into an ongoing system of readministration and monitoring of services, hold considerable promise for assessing whether an adolescent offender has received appropriate services and whether intermediate goals of the interventions have been met.

Integrating Assessments and Case Management

Methods for integrating the findings from structured risk/needs assessments with case management planning and implementation have been developed (e.g., Bonta, 2002), but the effectiveness of these strategies is untested. The development of risk/needs instruments is instead at an early stage of sorting out whether it has identified the dynamic predictors of risk most associated with offending and the needs that will really make a difference if they are the targets of intervention (Baird, 2009). The groundwork for a more systematic assessment of risk and needs in juvenile offenders has been laid, but there is considerable work to be done on further development of instruments and application of these instruments to improve practice.

Risk/needs assessment instruments perform well for assigning adolescent offenders to groups with different likelihoods of future offending, and the predictive accuracy of these approaches has increased as refinements have been developed (Andrews, Bonta, and Wormith, 2006; Howell, 2009). The proportion of youth screened who will be classified high, medium, or low risk will vary depending on the sample examined and the cutoffs deemed acceptable in each locale. The use of risk/needs assessment instruments in the earlier phases of juvenile justice involvement will gain most of their predictive power from identifying “true negatives”—adolescents who have a low probability of continued offending. Across studies of adolescents on probation, the correlations between risk assessment scores and involvement in subsequent criminal offending are between .25 and .30 (Schwalbe, 2004, 2008a), with slightly higher associations ($r = .41$ for general delinquency) reported for the use of the Youth Level of Service/Case Management Inventory in some studies (Andrews, Bonta, and Wormith, 2006). Even given the modesty of these associations, these instruments do provide adequate guidance for the important task of identifying adolescent offenders who warrant more intensive intervention or supervision and those who should be diverted from intervention programs (Wiebush, 2002; Latessa, 2004; DeComo and Wiebush, 2005; Grisso, Vincent, and Seagrave, 2005; Borum and Verhaagen, 2006; Gottfredson and Moriarty, 2006a).

Predicting and Managing Risk

The introduction of risk/need assessment is a significant shift in how juvenile justice conceptualizes the potential impact of court involvement. This approach implies a more dynamic view of juvenile justice involvement, looking at both static and dynamic factors that might be relevant to reoffending. It reflects a shift in thinking more generally among service providers about the need to move from predicting risk to managing risk in certain populations, like individuals with mental illness who are involved

in violence (Mulvey and Lidz, 1998; Douglas and Skeem, 2005). It is also congruent with the risk-need-responsivity (RNR) approach taken in correctional rehabilitation (Andrews and Bonta, 2010; Skeem, Manchak, and Peterson, 2011). This orientation puts less stock in determining categories of offenders and places greater emphasis on the malleable factors that might contribute to continued criminal involvement.

Current Challenges

The orientation described above opens up the possibility for probation staff or the court to match adolescents more effectively with specialized treatment providers and for the court to monitor the provision of appropriate services. This latter task is rarely done effectively by the courts and represents perhaps the most fundamental payoff from advances in the assessment of adolescent offenders. Valid methods exist for assessing the risk of reoffending and intervention needs; the current challenge is to incorporate these effectively into standard court and probation practice.

Clarifying Outcomes. Integrating these instruments effectively into routine practice requires clarification of the mechanisms related to community service provision, reoffending, and subsequent systems involvement. In both research and practice, a variety of outcomes are often considered when determining the ideas of “risk” and “need” as well as the connection between these two concepts. Some instruments are developed to indicate the risk of being returned to a particular institutional setting during program involvement; others are developed to indicate the risk of rearrest or the general risk for multiple possible negative outcomes (e.g., dropping out of school) in some time period after program involvement. Moreover, the nexus of the particular need assessed (e.g., mental health disorder) and future offending is often more assumed than demonstrated (Grisso, 2008). Instruments thus often indicate risk markers that might or might not be appropriate foci for intervention or the need for services that might or might not actually reduce the likelihood of reoffending for that adolescent.

The Potential for Bias. It is worth noting that the most commonly used instruments are developed with rearrest or reconviction as the only relevant outcomes. These instruments thus provide estimates of the likelihood of detection, apprehension, and prosecution for illegal acts, not involvement in illegal activity. Given the well-documented patterns of selective law enforcement, gender differences in processing, and disproportionate minority contact (DMC), this means that risk/needs instruments might be conflating risk with the ongoing biases in the juvenile justice system and enforcing the status quo in juvenile justice processing. The potential for the

application of risk/need assessments to propagate system inequities seems to exist, although there is no available research that documents whether this possibility actually occurs.

Limited research on racial/ethnic and gender differences in risk/need and screening instruments has indicated different proportions of risk classifications and different patterns of problem identification by race/ethnicity and gender, as well as differential rates of rearrest and service involvement (Schwalbe et al., 2006; Schwalbe, Fraser, and Day, 2007; Vincent et al., 2008; Onifade, Davidson, and Campbell, 2009; Vincent, Chapman, and Cook, 2011; Baglivio and Jackowski, 2012; Desai et al., 2012). The amount and type of bias in assessment and processing in the juvenile justice system connected with the use of these instruments, however, has not been adequately documented. This research is a high priority, because the application of these instruments has become (and will become even more) widespread. While the application of risk/need and screening instruments is a clear improvement over unfettered discretion, there is a long way to go in determining the unintended, and possibly harmful, effects connected with their use.

Need for Monitoring. Putting these instruments into practice thus requires a collaborative process in which practice professionals, researchers, and policy makers/administrators come to a consensus about the reasons for adoption of risk/needs instruments as well as the procedures and expectations regarding the use of these instruments (Howell, 2009). Effective use of structured screening and assessment procedures implies changes beyond simply the agreement to endorse the use of a previously developed measure. The process of integrating risk/need principles involves an ongoing examination of how courts process adolescents with different risk profiles and monitoring of how dispositions and interventions fit the risk profile of adolescents coming to different decision points in the juvenile justice system (Coordinating Council on Juvenile Justice and Delinquency Prevention, 1996; National Conference of State Legislatures, 1996; Howell, 2009). By monitoring the appropriateness of the court actions taken and the interventions provided, a local juvenile justice system can implement a system of graduated sanctions, assigning more intensive interventions to the most serious adolescent offenders with the most cumulative risk.

Potential of Risk/Need Assessment Systems

There are two benefits of developing systems of risk/need assessment at critical points in the juvenile justice system. First, the introduction of these methods reduces idiosyncratic decision making, increasing the uniformity of juvenile justice practice. Unstructured decision making introduces individual biases and contextual influences that generally lower the overall accu-

racy of judgments about future behavior (Dawes, Faust, and Meehl, 1989). Having juvenile justice personnel follow a protocol for decision making reduces the variability in these determinations and increases the overall rate of sound decisions in the process. The use of actuarial instruments, however, can be seen as formulaic and clinically vacuous when confronted with the complexities of a particular adolescent's life situation (Mulvey, 2005). It is therefore recommended that overrides to the determination reached by the instrument alone be permitted, but that the proportion of cases that can qualify for such an override be limited to a set proportion of cases and that the procedures for documenting these be clear (Office of Juvenile Justice and Delinquency Prevention, 1995a). If implemented carefully, systematic consideration of relevant risk/need variables should produce more consistency than would unstructured professional judgment, while allowing adequate flexibility.

In addition, making focused improvements in accuracy at specific points in juvenile justice processing can have ripple effects. Evidence from the Juvenile Detention Alternatives Initiative (JDAI) indicates that many locales have seen this type of payoff in detention decision making: they have lowered the overall rate of detention as well as the rate of detaining minority adolescents after implementing a structured decision-making protocol at this single point in juvenile justice processing (Mendel, 2009). Limiting system involvement among adolescent offenders is often considered an indicator of progress in and of itself.

There is a commonly held belief among juvenile justice professionals that further systems penetration is associated with increasingly negative outcomes (National Research Council and Institute of Medicine, 2001). Research on adult incarceration identifies an iatrogenic effect from prison confinement, resulting mainly from postrelease obstacles in housing, employment, and family relationships (Vieraitis, Kovandzic, and Marvell, 2007; Nagin, Cullen, and Jonson, 2009; Cullen, Jonson, and Nagin, 2011). The limited research on juvenile processing indicates a small, and somewhat inconsistent, negative effect from juvenile justice system processing compared with diversion at the point of initial referral (Huizinga et al., 2003; Gatti, Tremblay, and Vitaro, 2009; Petrosino, Turpin-Petrosino, and Gluckenburg, 2010). There is not a convincing body of research, however, demonstrating that increasing penetration across the points of juvenile justice system processing significantly increases offending beyond what might be attributable to individual risk characteristics. This type of research is extremely difficult to do, given the strong selection effects that have to be accounted for. It is, however, an important area for future investigation.

The second benefit of introducing risk/needs assessments is that they can maximize the impact of resource investment by targeting resources to the risk level of the juvenile offender. The impact of both institutional

and community-based programs generally varies with the risk level of the adolescent. Higher risk adolescents show larger reductions in reoffending, while lower risk offenders show only modest positive effects or even negative effects—such as increased recidivism in some instances (Lowenkamp and Latessa, 2005c; Greenwood, 2008). These findings could well be the result of high-risk offenders having the most room for improvement in their levels of offending, whereas interventions for lower risk offenders are disrupting potentially positive developmental experiences or exposing them to antisocial peers (Smith, Gendreau, and Swartz, 2009). Whatever the specific mechanism, the appropriate focusing of more intense (and costly) interventions on higher risk adolescents produces a greater reduction in subsequent offending and limits the negative effects on less serious offenders from unwarranted intensive interventions (Aos et al., 2004; Howell, 2009).

The use of structured risk/need assessment at the initial stages of court processing can produce a substantial benefit. More than half of the adolescents seen at the initial phases of juvenile justice processing system do not have further involvement with it (54 percent of males and 73 percent of females) (Snyder and Sickmund, 1999). Structured instruments can be especially useful for identifying low-risk adolescents who are unlikely to reappear in the court system and releasing these adolescents outright or referring them to appropriate diversionary services. Relying on inferential clinical judgment about the need for further intervention with an adolescent inevitably leaves this judgment open to the market demands of diversionary service providers to generate referrals or the potential overreaching of court personnel on issues that might not be best addressed in the juvenile justice system.

Improved risk/needs assessment is not a panacea but a key component of a more informed and targeted juvenile justice system. The potential of these approaches lies in the juvenile justice system's ability to obtain reliable assessments, ensure that the information is used in decision making, and track the outcomes of interventions (Mulvey and Iselin, 2008). Making risk/needs assessment a functional component of juvenile court practice thus takes professional commitment, adequate data systems, accurate information about service provision, and a reorientation of judges and court personnel about the mission of the juvenile court.

RESEARCH NEEDS

Although the broad potential of risk/needs assessment lies in its role as a component of a data-informed juvenile court system, there is currently little empirical work to support the widespread use of risk/needs instruments beyond the face-valid argument for their use. There are numerous reports documenting the adoption of these instruments (Vincent, 2011), but a striking lack of evidence regarding the effects of such instruments

on the types of services received by adolescent offenders or the impact of altered service provision patterns on institutional or community adjustment (Chung, Schubert, and Mulvey, 2007). Studies of the introduction of risk/needs instruments or other structured decision-making approaches in juvenile justice have been largely restricted to assessments of how well received and implemented these approaches have been among practitioners. It is possible, however, that these assessment forms become a part of the adolescent's court file in many locales, with little impact on the types of services provided.

Implementation and outcome research is needed on whether and how information generated in screens or assessments is translated into receipt of appropriate services and, if so, whether these services tend to reduce criminal behavior or increase community adjustment for juvenile offenders. Risk/needs assessment is the first necessary step to achieving the overall goal of a more rational juvenile justice system. As pointed out earlier, however, it is important to remember that much of the literature tests the accuracy of these instruments by asking whether they predict future arrest or continued system involvement. As a result, these instruments and approaches can be seen as effectively predicting future system response to an adolescent offender as well as the future offending behavior of that adolescent. Given that DMC seems to be an enduring feature of the juvenile justice system and that mental health service involvement for adolescents shows consistent race/ethnicity differences, it is imperative that future research in this area sort out the possible racial/ethnic biases connected with the use of any risk/needs assessment strategy. Mere tests of accuracy regarding these approaches could reinforce a system of inequity in service provision and sanctions; careful examination of patterns of service provision and community adjustment are needed to determine the benefits and limits of risk/needs assessment. Finding out how to make these instruments contribute to a larger vision of effective and fair service involvement is a key challenge for future applied research.

EVIDENCE-BASED SERVICES FOR JUVENILE OFFENDERS

Academics and practitioners have pursued a number of related activities over the last two decades that have enriched our understanding of what interventions work with juvenile offenders. Most notably, evidence about the effectiveness of intervention programs with adolescent offenders has expanded in scope and strength. Numerous controlled trials of interventions have been completed, producing several documented approaches with convincing evidence of reduced offending for treated adolescents. Meta-analyses of existing data about interventions with adolescent offenders have been conducted, highlighting both the relative impact of interventions and

the characteristics of the interventions with notable and consistent effects. In addition, several groups have established criteria for demonstrating effectiveness of an intervention and provided easily accessible information to practitioners and policy makers about what programs meet these standards. State funding agencies and legislatures have become knowledgeable about the idea of evidence-based practices and have attempted to create a policy context to support such activities. These developments have pushed the field toward better informed and focused practice, although considerable challenges lie ahead for creating integrated and effective service systems for juvenile offenders.

Program Effectiveness Research

Clinical trials of interventions with adolescent offenders over the past 25 years have become increasingly sophisticated scientifically and, as a result, more convincing in their claims that interventions can actually produce sizeable reductions in criminal involvement of adolescents. Recent research on interventions with juvenile offenders has, in general, been more rigorous than previous work in documenting the adolescents treated, the interventions tested, and the effects of treatment involvement. The general ethos that “nothing works” has clearly been supplanted by the belief that many things do work.

Effective Programs

Several programs for adolescent offenders with demonstrated effectiveness have been identified (Office of the Surgeon General, 2001; Greenwood, 2008).² The most commonly recognized and often cited approaches include functional family therapy (FFT) (Alexander and Parsons, 1973; Barton et al., 1985; Alexander et al., 2000), multisystemic therapy (MST) (Henggeler et al., 1998; Schaeffer and Borduin, 2005), and multidimensional treatment foster care (MTFC) (Chamberlain, 2003; Eddy, Whaley, and Chamberlain, 2004). Each of these programs intervenes with the family and/or the community context of an adolescent offender, and each has repeatedly produced convincing evidence of reductions in offending behavior in samples of juvenile offenders. Each also provides clear information about the characteristics of the intervention. A number of other more specialized interventions targeting mediators of criminal involvement—most notably aggression

²In this section, the outcome of interest is rearrest, measured as either police reports or juvenile court petitions. Interventions are presented as effective or not in terms of how much they reduce rearrest. Programs often target and change other behaviors, but these effects are not considered in detail here.

replacement therapy (ART) (Goldstein et al., 1987) and cognitive-behavioral therapy approaches (Milkman and Wanberg, 2007)—have also produced convincing evidence of their positive effects (Sherman et al., 1998; Mendel, 2000). Unfortunately, efforts to identify effective programs for female adolescent offenders have been less successful (Larance, 2009). In a nationwide review of 61 girls' delinquency programs, only 17 had published evaluations, no programs could be rated as effective, and most programs were rated as having insufficient evidence (Zahn et al., 2008). Most recently, Kempf-Leonard (2012) noted that "The current body of knowledge is not sufficient to allow us to make informed decisions about accurate and effective responses to female delinquents" (p. 511).

Ineffective Programs

Many popular programs, like Scared Straight and boot camps, have consistently shown marginal, null, or negative effects. Individual counseling and peer group interventions relying on loosely structured group discussions (e.g., the guided group interaction model) have unimpressive records for preventing reoffending (Sherman et al., 1998). Repeated evaluations of the Scared Straight program, in which convicts confront groups of adolescent offenders with the horrors of prison life, show no effect or increased reoffending among the adolescents taking part (Finckenauer and Gavin, 1999; Petrosino, Turpin-Petrosino, and Buehler, 2003; Klenowski, Bell, and Dodson, 2010). Boot camp programs, widely adopted as a method for instilling discipline in adolescent offenders, have generally been shown to have no, or a negative, impact on reoffending (MacKenzie, Wilson, and Kider, 2001; Bottcher and Ezell, 2005), with some reviews showing that boot camps and other disciplinary programs increase recidivism by about 8 percent (Lipsey, 2009).

Measuring Effects

Meta-analyses of published reports of the effects of delinquency intervention programs (Lipsey and Wilson, 1993; Latimer, 2001) have provided quantitatively based estimates of the relative effects of a variety of interventions. In this approach, findings across studies are aggregated and summary statistics are generated regarding the effects found and the characteristics of certain interventions associated with larger or smaller effects. Using well-defined methods for determining the adequacy of a program evaluation as well as combining the reports, the analyst can derive a general estimate of the effect size of an intervention approach, that is, the reduction in the rate of rearrest associated with programs of a particular type. Meta-analyses of intervention programs with adolescent offenders (Andrews, Bonta, and

Hoge, 1990; Lipsey and Wilson, 1998; Cullen, 2005; Lipsey and Cullen, 2007; Lipsey, 2009) have not all agreed in their estimates of effects, given different sets of programs examined and the time periods covered. In general, however, these analyses have identified several features of interventions related to smaller and larger effects. Institutional programs show approximately a 10 percent reduction in rearrest, and generally show smaller effects than multifaceted community-based interventions, with about a 25 percent differential reduction in rearrest over a period of approximately a year or longer in one analysis. The important point of these meta-analyses, however, is the demonstration that there are a number of different types of interventions that have relatively large effects, and that these effects can be found even when these interventions are applied in community settings with relatively high-risk adolescents. Many of these specific program effects are presented later in this chapter, when consideration is given to the potential costs and benefits of different intervention approaches.

The average effect size attributed to a particular type of program or intervention in a meta-analysis is obviously dependent on the reports considered to be representative of that category of programs or interventions. There is often considerable variability of effect sizes within program types, with even more recognized “model” program types varying in their effect sizes (Lipsey et al., 2010). Not surprisingly, there are often reports of programs or interventions that illustrate the conditions under which a certain approach might be more or less effective.

Institutional Programs. Analyses indicate that institutional treatment programs generally have an unimpressive record for reducing reoffending and that large, overcrowded facilities with limited treatment programs (in which custody trumps treatment concerns) often have high recidivism rates (Ezell, 2007; Trulson et al., 2007). At the same time, there are empirically sound and convincing reports indicating that theoretically grounded, adequately staffed, and well-documented programs for seriously violent youth that involve institutional care can produce impressive and fiscally advantageous effects (Barnoski, 2004; Caldwell, Vitaceo, and Van Rybrock, 2006; Caldwell et al., 2006). General reviews also note that institutional programs that adopt a cognitive-behavioral approach show higher reductions in reoffending (Lipsey and Cullen, 2007; Lipsey, 2009). There is also an emerging literature demonstrating that the social climate of an institutional setting (e.g., its orderliness or harshness) affects the subsequent community outcomes of adolescent offenders in that setting (Schubert et al., 2012).

Counseling. Differential effects have also been observed in assessments of the impact of counseling as an approach in both institutional and community-based settings. A meta-analysis of these types of programs

(Lipsey, 2006) found a positive mean effect size of .12 for individual counseling and a smaller effect (.08) for counseling administered in groups of offending peers. Many juvenile justice models, such as guided group interaction (GGI) (Empey and Rabow, 1961) and positive peer culture (PPC) (Vorrath and Brendtro, 1985) bring groups of adolescent offenders together with the idea that peer influences are powerful but can be converted to a positive influence in institutional settings led by adult staff members (Gonzales and Dodge, 2010).

Contagion Effect. Some researchers have raised the possibility that group treatments create a “contagion effect,” in which adolescent offenders learn about and are reinforced for criminal involvement. The evidence for such an effect is at best equivocal, with results indicating that the level and structure of adult supervision is key to producing a positive effect from group interventions. There is some evidence of contagion effects promoting anti-social behavior in group interventions with younger adolescents (Dishion and Andrews, 1995; Dishion et al., 1996). In addition, a field experiment conducted by Feldman and colleagues (1983) that randomly assigned delinquent and nondelinquent adolescents to all-deviant groups, all-nondeviant groups, or mixed groups (predominantly nondelinquent) found that assignment to all-deviant groups was associated with worse outcomes (Gonzales and Dodge, 2010). Also, incarcerated adolescents placed in cells with peers arrested for drug-related crimes appear to be more likely to be arrested subsequently for drug-related crimes themselves than if placed in other cells (Bayer, Pintoff, and Posen, 2003), but this effect was found only for younger adolescents, those who were placed with slightly older peers, or those with prior experience with dealing drugs. A meta-analysis of this literature indicates that the strength of this effect is marginal and apparent mainly in younger adolescents (Weiss et al., 2005). Evidence for such an effect in juvenile justice interventions with more serious offenders is not available; the power of this influence, either positively or negatively, in juvenile justice interventions is still unclear and previously held views that institutional youth suffer a contagion effect have been called into question. Moreover, it appears that any potential adverse effect can be mitigated by a highly trained leader or a lack of opportunity for unsupervised peer interaction, and many interventions with demonstrated positive effects (cognitive-behavioral approaches) are usually done in group settings.

Characteristics of Effective Interventions

The above examples illustrate that certain conditions of an intervention, whether it is institutional or community-based, can alter its impact, over and above its categorization as a particular type of program. Meta-

analyses or other lines of research can provide valuable information about some of the general characteristics of interventions that might be influential in producing an enhanced or blunted effect. By coding the features of programs and assessing how well these features account for observed reductions in rearrest, analysts are able to identify certain practices that might increase effectiveness across different program types.

Program Developer's Role

More positive effects for a program are seen when the implementation and follow-up are done by the program developers, rather than by other agencies adapting a model program (Karloly et al., 1998; Dodge, 2001; Lipsey and Landenberger, 2006). In addition, the use of a clear treatment strategy (especially the use of cognitive-behavioral approaches), a focus on the most serious adolescent offenders, a matching of the needs of the offenders and the program orientation, and a demonstration that the program implementation has followed the program model are all associated with larger reductions in rearrests (Lipsey et al., 2010). Application of these practice principles is a key to improving both institutional and community-based interventions.

Program Duration

Any intervention must be provided with enough intensity to have an effect. This simple observation is recognized even by adolescent offenders who comment that longer stays in juvenile facilities (compared to shorter stays in adult facilities) offer adequate time to benefit from programming (Bishop and Frazier, 2000). Certain types of treatments have standards regarding the amount of time or number of sessions that must be provided to expect a desirable outcome. It is recommended, for example, that substance use treatment should have at least a 90-day duration to produce stable behavioral change (National Institute on Drug Abuse, 2006). Analyses of institutional treatment for juvenile offenders indicate that shorter and longer stays may each produce deleterious outcomes (Lipsey and Wilson, 1998; MacKenzie, 2001; Piquero, Gomez-Smith, and Langton, 2004). A recent meta-analysis (Lipsey et al., 2010) indicates that both institutional and community-based program treatment effects are most powerful when an adolescent has spent at least, but about, the approximate average amount of time observed for that type of program—that is, shorter stays do not produce positive effects and longer stays do not increase the effect appreciably. An investigation with stringent controls for selection but small samples at each time point substantiates this position, finding no reductions in rearrest or self-reported offenses from longer institutional stays (greater than six months, the average institutional stay in the sample), and a possible

detrimental effect from shorter (less than three months) stays for serious adolescent offenders (Loughran et al., 2009).

Based on work in adult corrections (Lowenkamp, Latessa, and Holsinger, 2006), it seems reasonable to posit that more time in a program ensures that an individual has sufficient exposure to a program's effect, but also that the largest effect from program involvement will occur when sufficient resources are provided only to the most high-risk individuals. The exact mechanisms or standards for program involvement that might produce these effects in interventions for juvenile offenders, however, are far from clear. In some, too little program involvement and too much program involvement undercut effectiveness. On one hand, there is no credible evidence that very brief, shock programs, either institutional or community-based, produce reductions in reoffending. On the other hand, there is evidence that extended program involvement beyond the average program length does not increase effectiveness.

Family Involvement

It is worth highlighting two general consistencies in the broad set of findings about program effectiveness presented above. First is the potential importance of family involvement in community-based treatment. Several of the interventions with positive program effects include the youth's family and give focused consideration to the particular features of the adolescent's social environment. This regularity is not too surprising, given the centrality of family dynamics (particularly parental monitoring) in the continuation of antisocial behavior in adolescents (Patterson and Stouthamer-Loeber, 1984; Chung and Steinberg, 2006) and the importance of family involvement in other areas of intervention with adolescents, such as substance use treatment (National Institute on Drug Abuse, 2006; Chassin et al., 2009). Such a finding is also in line with theoretical approaches positing that continued involvement in crime is the product of ongoing interactions between vulnerable individuals and their social world across the life span (Sampson and Laub, 2005), and that the interplay between parents and peers is particularly powerful in maintaining adolescent antisocial behavior (Laird et al., 2003a, 2003b; Dodge and Rutter, 2011).

There is a commonsense argument for engaging parents and family members in programming. Most adolescent offenders maintain contact with their families throughout and in spite of court involvement, and parents are usually the constant thread through the patch of service providers working with these adolescents. That is not to say that parents and family members are always positive influences on adolescents; some unknown percentage of parents and family members contribute to the chaos and corruption in an adolescent's development. Even in circumstances in which

parenting behavior may have contributed negatively to the development of antisocial child behaviors, though it seems axiomatic that positive change will have to include parent involvement (Romanelli et al., 2009). Given all that is known regarding the significance of parenting and of the parent-child relationship, expecting that a youth might experience significant and lasting change with only superficial family involvement seems illogical. The juvenile justice system, however, appears to have a long way to go toward integrating parents and families into interventions and court processes.

Despite the centrality of parental involvement in many successful programs, focus groups reveal that parents continue to be, or perceive being, blamed for the youth's problems, to be regarded as obstacles, and to be insufficiently involved in crucial decision-making and planning processes during disposition, placement, and preparation for aftercare (Osher and Shufelt, 2006; Luckenbill and Yeager, 2009). Parental involvement is often overlooked as a program priority, prompting many to demand greater effort to attain full and positive family-provider collaboration in services and service planning in the juvenile justice system (MacKinnon-Lewis, Kaufman, and Frabutt, 2002). Some efforts are under way to involve families more in the juvenile justice process, but most models for parental involvement are still in the early stages of development, needing further refinement and validation. For example, the Parent Empowerment Program (PEP) (Olin et al., 2010), a manualized training and consultation program designed to prepare family peer advocates to help empower families during involvement with child welfare services, has been adapted to juvenile justice, and initial pilot efforts of PEP in juvenile justice populations are under way. In addition, the Systems of Care approach in mental health (MacKinnon-Lewis, Kaufman, and Frabutt, 2002; Hoagwood, 2005), which takes an avowedly "family first" approach, has been adapted to juvenile justice in a few locales (e.g., Missouri), but no empirical validation of these programs is yet available. Expanding the role of families in juvenile justice appears to be a critical, unmet challenge, but the potential contributions of families in many interventions and in the juvenile justice process remain ill defined. Additional research regarding the processes of family involvement in juvenile justice and methods for successfully involving parents in these processes is urgently needed.

Other Factors Influencing Effectiveness. It is worth emphasizing the connection between the specificity and focus of an intervention and impact. Programs with clear guidelines and methods developed over successive trials appear to have positive effects when administered by the program developers. The success of these efforts is less clear when moved into general practice with existing service providers, where there is less control over practice. Attenuation in effect is even built into assessments of program impact when implementation is not done by the demonstration team (Aos, Miller,

and Drake, 2006; Welsh, Sullivan, and Olds, 2010). Moreover, structured forms of intervention, like cognitive-behavioral approaches, appear to exert a more consistent positive effect, mirroring research on effective approaches in adult corrections programs. Careful, quality program implementation has been identified as one of only a few factors (in addition to the presence of therapeutic intervention philosophy and serving high-risk offenders) linked to better outcomes for adolescent offenders after other aspects of programming were controlled (Lipsey, 2009). These findings highlight the importance of documenting the procedures of an intervention in sufficient detail to allow replication and to enhance the chances of consistent implementation. In addition, it raises the challenge of finding ways to monitor program implementation and to identify factors that contribute to, or undermine, the eventual effectiveness of an intervention.

Accreditation Efforts

More refined assessments of program impact and the development of clear program models have prompted the establishment of several accreditation bodies that judge the adequacy of the results supporting claims of effectiveness. Four highly visible and widely used examples illustrate these efforts.

1. The Blueprints for Violence Prevention Project (Mihalic et al., 2001), an initiative of the Center for the Study and Prevention of Violence at the University of Colorado, started as an effort to identify effective programs and implement them in Colorado. It rated delinquency prevention and treatment programs for their demonstrated effectiveness (e.g., a model program, a promising program) according to a set of criteria regarding the strength of the research design evaluating the program's impact and replicability.³ With support from the Office of Juvenile Justice and Delinquency Prevention (OJJDP), the project evolved to a larger scale to both identify model programs and provide technical assistance to implement them nationwide (Mihalic et al., 2004). To date, the Blueprints initiative has identified 11 model and 29 promising prevention and intervention programs effective in reducing adolescent violent crime, aggression, delinquency, and substance abuse.

³The Annie E. Casey Foundation recently began supporting the Blueprints program. With this funding, outcomes have been expanded to include not only behavior but also education, emotional well-being, health, and positive relationships. The program is now being called Blueprints for Healthy Youth Development. (E-mail exchange with Sharon Mihalic, director of Blueprints initiative, Center for the Study and Prevention of Violence, University of Colorado, May 21, 2012.)

2. The Substance Abuse and Mental Health Services Administration (SAMHSA) also operates a National Registry of Evidence-based Programs and Practices (NREPP) (<http://nrepp.samhsa.gov>) with a searchable database of interventions to prevent or treat a variety of mental health and/or substance use problems, including adolescent violence and antisocial behavior.
3. In addition, in the widely disseminated *Youth Violence: A Report of the Surgeon General* (Office of the Surgeon General, 2001), a set of standards is presented for determining best practices for violence prevention in several settings (e.g., schools, community agencies), and specific programs are identified in groups based on a scale of demonstrated effectiveness (e.g., model, promising).
4. Finally, OJJDP and its parent agency, the Office of Justice Programs (OJP), provide information about model programs for juvenile justice interventions in two locations (OJJDP Model Programs Guide at <http://www.ojjdp.gov/mpg> and OJP CrimeSolutions at <http://www.crimesolutions.gov>).

These centralized repositories of information about programs with solid evidence to support their use have been valuable resources for policy makers and funders sorting through the voluminous and scattered program evaluations in juvenile justice. These accreditation systems have also provided a goal for many program developers and service providers. Becoming a Blueprints program, for example, is a certification of achievement and opportunity to develop beyond current operations; a certified status such as this makes an agency stand out in its field of competitors and gives it a marketing tool for expansion to other locales. Government funding agencies have also been able to use these systems to mount focused research agendas by limiting service research activities to programs that have met the standards of these reviews (evidence-based practices). These systems indicate a major reorientation of the juvenile justice field toward recognition of the importance of empirical demonstrations of effectiveness.

However, standards and judgments across these different systems vary significantly, with each of the accrediting entities using slightly different categories and criteria for designating a program as having sufficient validity to warrant use or replication. The domain of programs with some certification as “evidence based” has thus become wider over time, and the meaning of this designation has become blurred and its value has become denigrated as the number of accrediting entities has grown (and continues to grow). Continued expansion of certification entities with different, and increasingly scientifically lax, standards could devalue the designation of a program as evidence-based and slow progress toward overall service improvement.

Having a sound scientific basis for designating program quality is a timely concern because legislators and public officials have been paying increased attention to information about what appears to work to reduce juvenile offending. In several states (e.g., North Carolina, Pennsylvania), there are efforts to direct funding for juvenile programs only to initiatives that have an empirically demonstrated record of success. Some state legislatures have passed provisions that lay out a plan over several years to restrict funding to only certain programs demonstrated to be effective (Howell, 2009). Pressed by fiscal realities and pushes for government accountability, state officials are now trying to create environments that build knowledge about what works with juvenile offenders into their prescriptive mandates and revise regulatory practices to increase monitoring of relevant program features.

Putting Evidence-Based Services into Practice

Based on the above review, it is apparent a significant number of existing programs have reduced criminal offending. The evidence from evaluation studies indicates that these programs are as effective, and usually even more effective, with the highest risk youth rather than the more prevalent low-risk adolescents in the juvenile justice system. This suggests that future research and policy should continue to investigate how far inclusion criteria for program involvement can be expanded to incorporate even more serious delinquents. After all, programs that are effective for these youth will be particularly beneficial given their disproportionate involvement in offending.

Although it would be ideal for all delinquent youth to receive a service with documented effectiveness, the reality of service provision is more complicated than simply finding something that works. While creating and documenting effective programs for juvenile offenders is a large step toward ensuring public safety and improving outcomes for these adolescents, it is still only one step toward these larger goals (Bickman and Hoagwood, 2010). Estimates are that, even with the current level of knowledge about what constitutes effective intervention with adolescent offenders, only about 5 percent of youth eligible for evidence-based programs participate in one (Hennigan et al., 2007; Greenwood, 2008). As seen in medicine and other areas of clinical care (Kazdin, 2008), having evidence-based practices is a necessary but not sufficient condition for changing how services are delivered every day, either within an organization or across a locale. Getting effective programming into practice requires both the identification of what works and the development of a framework for ensuring that programming as applied produces the effects expected.

One strategy for increasing the use of evidence-based practices is to market demonstrated programs broadly to practitioners and then ensure

that they are implemented with fidelity to the original model. This is usually accomplished by providing a renewable “license” to use the program materials that is contingent on provision of data indicating that certain standards of service provision have been met. This strategy is somewhat akin to franchising retail establishments, with product quality specifications that must be met to use the recognizable name and fees that are paid for services or products, like staff training or supervision rating forms, to promote consistency.

Program Drift

The distribution of brand-name programs has proven successful for introducing local service providers to evidence-based practices and giving them a method to implement these programs without having to reinvent the program anew. Local practitioners, however, often see certain aspects of the program as ill suited to their clients or community in particular, and additions or alterations to the standard program are made so that local stakeholders can “own” the program more enthusiastically. Changes to the program operations or requirements are also often made to accommodate the skills of the workforce in a particular locale. As a result, program operations drift toward less stringent or clearly defined practice, and local program monitors are usually unable to either document these shifts or enforce changes in a contracted agency’s practice. Research is still limited on the components of many programs that are essential to its previously documented effect (Real and Poole, 2005; Schoenwald, 2008), and changes in operations or slippage in fidelity in seemingly inconsequential program aspects may undermine program effectiveness. Moreover, as mentioned above, some states make funding contingent on the use of specified program approaches, and providers often retrofit existing programs to meet these new standards, with only some of the specified program components found in the program going by the name needed to meet the funding requirements. Recognizing and accounting for the tendency of service providers to alter program characteristics to make them more appropriate to the clients, culture, or resources of their locale poses a serious challenge to the effort to move juvenile justice services toward more effective, evidence-based practice.

One way to address the issue of program drift is to increase efforts to ensure model fidelity throughout the life of the intervention. More effort, energy, and data collection can be put toward documenting that the program as implemented meets the operational standards of the model as developed. The resources needed to do this well are considerable, however, and the funding for such activities is usually difficult to find in already tight budgets. Program implementation efforts have historically kept the costs of monitoring relatively low compared with service delivery costs. Moreover,

this approach assumes that evidence-based programs, as developed, are very robust to alterations in the population of adolescents and families enrolled or the community context in which they are implemented. In other words, if one could just get practitioners to follow the program protocol, the intervention would work almost anywhere and everywhere. This assumption is generally faulty, as several seemingly well-designed and implemented applications of sound evidence-based programs with juvenile offenders have failed to produce impressive outcomes (Barnoski, 2002; Landenberger and Lipsey, 2005; Lipsey, 2006; Welsh, Sullivan, and Olds, 2010; Washington State Institute for Public Policy, 2011).

Programs Versus Practices. Pinning hopes for a better juvenile justice system solely on expanding the currently limited sets of evidence-based, brand name programs seems ill advised. The task is more complicated than that. Certainly more controlled trials of intervention models and critical reviews of existing evidence bases are required. The number of programs with rigorous research designs and positive results is still strikingly small, and cumulative knowledge of how model programs actually work is thin. In the end, however, it is difficult to envision a broad range of empirically validated practices carried out by sufficiently trained and supervised individuals applying these approaches at the right point in development with the right types of problems. Although information about evidence-based practices is critical in showing the way toward more effective intervention, the efforts at knowledge generation cannot stop there. Valuable lessons must be also drawn from inquiries into evidence-based practices, and these must focus on the identification of general principles of effective care.

Monitoring. The application of evidence-based practices, no less than the application of sound but not empirically tested interventions, must occur in an environment that documents and monitors its operations and impacts. Even if a program is implementing a brand name approach, it is necessary to collect data on youth/family characteristics, program practices, and outcomes for enrolled adolescents. Programs for delinquents, whether evidence-based or not, should be subjected to rigorous evaluation to determine whether or not they are helpful, not just assumed to be so. It is important to bear in mind that intervention programs for delinquents can be iatrogenic as well as effective (Gottfredson, 1997, 2010; Dishion, McCord, and Poulin, 1999), and only rigorous scientific designs can separate the wheat from the chaff. Continuous evaluation can provide information about how well any program is specifically addressing the needs and behaviors of adolescent offenders involved with it (Thornberry, 2010).

A refinement of this approach is to monitor program implementation closely and to document adherence to *practices* that typify successful

evidence-based programs. In this formulation, it is not simply a question of whether a program did what it said it would do and if it worked in reducing reoffending. Instead, data about program operations is used to apply a quality improvement model to help programs move toward consistent use of practices that have been shown to improve performance across a range of programs. As stated above, careful reviews of meta-analysis results as well as reviews of the organizational features of successful interventions have identified general principles that increase the likelihood of putting a program into place that works with serious adolescent offenders (Lipsey et al., 2010). In general, programs are more likely to have a positive impact when (a) they focus on high-risk offenders (Lowenkamp and Latessa, 2005c), (b) connect sound risk/need assessment with the treatment approach taken (Schwalbe, 2008), (c) use a clearly specified intervention program rooted in a theory of how adolescents change and tailored to the particular offender (Andrews et al., 1990; Barnoski, 2004), (d) demonstrate program integrity (Gendreau, 1996), and (e) take into account the community context (Altschuler and Armstrong, 1994). Operationalizing and measuring how well organizations or locales follow the principles of effective practice is an important challenge, one that is critical to actually changing what happens to adolescents in the system.

Assessments of how well these principles guide practice can be done across the full spectrum of juvenile justice services. A variety of methods have been devised for determining how well institutional or community-based programs adhere to a theoretical model, focus on high-risk offenders, or demonstrate program integrity. It is equally important, however, to develop and apply sound principles of effective programming for probation practice, particularly surrounding the reentry process. The emphasis on probation practices during reentry seems particularly important in light of the potential benefits of increasing family involvement during this critical transition. Probation officers are in a pivotal position for increasing family involvement to promote positive community adjustment; identifying and promoting effective practices to achieve this potential is a pressing challenge for practitioners and researchers. Although a large proportion of juvenile offenders have repeated contact with probation officers, the development and testing of sound practice in this area is relatively undeveloped (Schwalbe and Maschi, 2009).

There is some reason to be optimistic about taking on the challenge of monitoring the principles of effective practice. Researchers in other areas of clinical practice (Donabedian, 1988; Berwick, 1989; Chohanec, 1994; Counte and Meurer, 2001; Heinemann, Fisher, and Gershon, 2006) have shown that principles of effective programming can be rated regularly, and settings can work toward improving their adherence to best practices as time goes on. Efforts along this line have begun in juvenile justice (Lipsey et al., 2010).

This does not mean that recognized, evidence-based programs will not be valuable as templates for best practice. Such an approach instead recognizes that building a system of effective services for adolescent offenders implies more than simply amassing a collection of evidence-based programs. For purposes of innovation, juvenile justice service systems will include programs that are variants of more established practices, and the challenge is to ensure that these services, as well as those touted as evidence-based, provide quality care. By measuring program adherence to the principles marking effective programs, a locale can increase the chances that all programs promote positive change in enrolled adolescents.

Looking Forward. The central point of this section on evidence-based services is that improving services in the juvenile justice system requires an ongoing process of program development and monitoring of the delivery of services. Although it is clearly necessary to develop more innovative and proven methods for intervening with adolescent offenders, it is also critical to make sure that these services can be put into practice as designed. Ongoing organizational assessment and quality improvement are essential tasks for improving the design, delivery, and ultimate effectiveness of services for juvenile offenders.

A first, necessary step in this effort would be the development of methods for collecting information about the organizational features and regularities of service provision in both institutions and community-based services for juvenile offenders. Efforts at measuring organizational and community-based program climates have been undertaken (Altschuler and Armstrong, 1996; Armstrong and McKenzie, 2000; Mulvey, Schubert, and Odgers, 2010), some quality improvement strategies have been developed (e.g., Performance Based Standards for Youth Correction and Detention Facilities at <http://pbstandards.org/initiatives/performance-based-standards-pbs>) (Torbet et al., 1996), and some research has been done on the effects of organizational dimensions and program content on outcomes (Glisson, 2007; Schubert et al., 2012). The scope of this work, however, is very limited, given the centrality of these issues for improving services for these adolescents.

The overall vision for improving services in the juvenile justice system does not rest solely with the development of more evidence-based interventions or with the establishment of quality improvement processes. Both are necessary, and neither alone is sufficient. Refining intervention models without getting them into practice does little; not knowing what interventions accomplish or how to improve them when they are put into place probably does even less. As John F. Kennedy and others have noted, “A rising tide lifts all boats.” Evidence-based programs provide valuable lessons in how to design a boat that floats well, and an ongoing process of quality improve-

ment provides a process for raising the level of performance for those that stay above water.

COSTS AND BENEFITS OF JUVENILE JUSTICE INTERVENTIONS

Because there is compelling evidence that a variety of intervention programs for juvenile offenders significantly reduces one-year rearrest (by anywhere from about 6 to 40 percentage points), it remains to ask if it is really worth it from a broader social policy perspective to promote these types of programs. Even if a juvenile offender intervention program is effective, it is still necessary to ask a number of questions about the wisdom of widespread adoption. Is the program more valuable than other opportunities that could be pursued with the resources devoted to it? That is, does the value of its effects exceed the cost of producing them? Information relevant to these questions can be obtained using the technique of benefit-cost analysis.

The fundamental idea of benefit-cost analysis is straightforward. These approaches comprehensively identify and measure the benefits and costs of a program, including those that arise in the longer term, after youth leave it, as well as those occurring while they participate. If the benefits exceed the costs, the program improves economic efficiency in the sense that the value of the output (i.e., the program's impacts) exceeds the cost of producing it. As a result, society is economically better off because certain measurable, positive outcomes have been achieved as the result of having the program in place, and the value of these outcomes is greater than the costs of putting the program into place. If costs exceed benefits, society would be economically better off not operating the program at all and devoting the scarce resources that would be used to run it to other programs with the same goal that do pass a benefit-cost test or to other worthwhile purposes.

Benefit-cost analysis may be viewed as a way to calculate society's return from investing in an intervention. In a sense, it is the public-sector analog to private-sector decisions about where to invest resources. Benefit-cost analysis, however, considers benefits and costs for all members of society, not just those for one enterprise.

Our analysis covers benefit-cost analyses of programs explicitly designed to reduce juvenile crime.⁴ There are a number of analyses of program effects on a range of outcomes for children and youth, including schooling, earnings, teen pregnancy, and sometimes crime as well (Aos et al., 2004; Small et al., 2005; National Research Council and Institute of

⁴Appendix A provides a more extensive discussion of how benefit-cost analysis is applied to juvenile justice programs.

Medicine, 2009), but these are not considered here. Although there are more than 500 impact evaluations of juvenile offender programs (Drake, Aos, and Miller, 2009; Lipsey, 2009), benefit-cost analyses of these programs are sparse.

The benefit-cost analyses produced by the Washington State Institute for Public Policy (WSIPP) are widely regarded as the most thorough and comprehensive in the juvenile justice literature. WSIPP's studies are notable for several reasons. First, they examine a wide variety of juvenile justice interventions that have been carefully evaluated. These include model programs endorsed by the Blueprints for Violence Prevention Project (<http://www.colorado.edu/cspv/blueprints>), such as multisystemic therapy, multidimensional treatment foster care, and functional family therapy. They also include other interventions that WSIPP judges to be effective, such as drug courts, as well as interventions shown to be ineffective, such as Scared Straight and juvenile intensive probation supervision. The studies use meta-analytic methods to combine findings from different evaluations of the same intervention to derive the effects on crime outcomes used in the benefit-cost analyses. Second, they use established methods to project the reductions in crime that an intervention is likely to produce over a 13-year follow-up period. They then use the projections to estimate the resulting cost savings for the criminal justice system and victims. The projected reductions in crime and the criminal justice system cost savings are meticulously derived from Washington state data. Victim costs are taken from Miller and colleagues (1996). Finally, WSIPP analysts are transparent in describing their assumptions and methods.⁵

Table 6-2 presents the findings for the juvenile justice programs analyzed in Drake and colleagues (2009) and Washington State Institute for Public Policy (2011). The message is clear: Whether one chooses to intervene with juvenile offenders when they are institutionalized, in group or foster homes, or on probation, states and localities can adopt programs that produce remarkably large economic returns. The same is true for programs that seek to divert juveniles before they are convicted of further crimes. Indeed, some programs deliver \$10 or more of benefits for each \$1 of cost. Although impressive, these findings are actually conservative; existing benefit-cost analyses measure the interventions' costs well but usually omit some important and possibly large categories of benefits.

For juvenile offenders in group or foster homes, the benefits of multidimensional treatment foster care exceed its costs by \$33,300. For juveniles on probation, the benefits of aggression replacement therapy and functional family therapy both exceed their costs by about \$34,500 per

⁵For further discussion of methods of estimating the benefits of preventing crime, including reductions in victim costs, see Appendix A.

participant. Multisystemic therapy also easily passes a benefit-cost test: a recent benefit-cost analysis of a program in Missouri shows large economic returns (Klietz, Borduin, and Schaeffer, 2010). For institutionalized juveniles, the benefits of aggression replacement therapy, functional family therapy, and family integrated transitions (Trupin et al., 2004) exceed their costs by roughly \$65,500, \$57,300, and \$16,000 per participant, respectively. For the small group of juvenile sex offenders, sex offender treatment yields large benefits that exceed the high treatment cost by nearly \$25,000 per participant.⁶

Six program models meant to limit the penetration of adolescent offenders into the juvenile justice system have benefits that substantially exceed costs. The benefits per participant of adolescent diversion (for lower risk offenders) are about \$51,000 greater than the costs. The corresponding figures for teen courts, drug courts, restorative justice, coordination of services, and victim offender mediation are \$16,800, \$9,700, \$9,200, \$4,900, and \$3,400, respectively.

Other programs clearly do not make sense economically. Boot camp programs do not reduce crime, but they cost less if one considers institutional care as the alternative and assumes that all individuals enrolled in these programs would be in an institutional setting if not enrolled. It is important to recognize that some programs are economically inferior to conventional practice (i.e., the benefits are lower than the costs). This is the case for alternative parole programs. Wilderness challenge, intensive probation supervision, and Scared Straight are all economically inferior to conventional practice. In these cases, the benefits are less than the costs; running these programs costs money for no gain in the long run.

Parole is the only custody status for which no alternative programs pass a benefit-cost test. There may be parole practices that are economically better than standard practice, but they have not yet been developed or successfully tested. Juvenile justice officials may consider supporting the development and testing of new parole models that might prove successful and pass a benefit-cost test. Alternatively, they can use their scarce resources to implement the already proven programs that intervene during a different custody status.

These bottom-line estimates of total benefits and costs have a degree of uncertainty because estimates of some of the underlying parameters needed

⁶Of the 14 programs that pass a benefit-cost test when all benefits are counted, 10 still pass even if one compares program costs only with the benefits to the criminal justice system (i.e., ignoring the large benefits to victims). The four that do not are family integrated transitions, sex offender treatment, multisystemic therapy, and drug courts. The sources for Table 6-2 provide separate benefit estimates for victims and the criminal justice system.

TABLE 6-2 Benefits and Costs per Participant of Juvenile Offender Programs (net present value, 2010 dollars)

Custody Status of Juvenile Participants ^a	Program	Benefits to Victims and Criminal Justice System	Program Costs (compared with cost of alternative)	Benefits Minus Costs	Benefit-Cost Ratio	Probability That Benefits Exceed Costs
Institution	Aggression replacement therapy ^c	\$66,954	\$1,473	\$65,481	45.5	.93
	Functional family therapy ^c	60,639	3,198	57,341	19.0	.99
	Family integrated transitions ^c	27,020	10,968	16,052	2.5	.86
	Sex offender treatment ^b	60,477	35,592	24,885	1.7	n/a
	Boot camp ^b	0	-8,661	8,661	n/a	n/a
	Wilderness challenge ^b	0	3,350	-3,350	n/a	n/a
Group or Foster Home	Multidimensional treatment foster care ^c	40,787	7,739	33,047	5.3	n/a
	Regular surveillance-oriented parole (versus no parole supervision) ^b	0	1,301	-1,301	n/a	n/a
Parole	Intensive parole supervision ^b	0	7,015	-7,015	n/a	n/a
	Aggression replacement therapy ^c	36,043	1,476	34,566	24.4	.93
	Functional family therapy ^c	37,739	3,190	34,549	11.9	.99
Probation	Multisystemic therapy ^c	29,302	7,206	22,096	4.1	.91
	Intensive probation supervision ^b	0	1,735	-1,735	n/a	n/a

Diversion	Adolescent diversion project (for low-risk offenders) ^b	53,072	2,077	50,995	25.6	n/a
	Teen courts ^b	17,782	985	16,797	18.0	n/a
	Drug courts ^c	12,737	3,024	9,713	4.2	.80
	Restorative justice ^b	10,106	954	9,152	10.6	n/a
	Coordination of services ^c	5,270	386	4,884	13.6	.78
	Victim offender mediation ^c	3,922	566	3,357	6.9	.90
	Scared Straight ^c	-6,031	63	-6,095	n/a	n/a

Benefits (Costs not available)

Institution	Behavior modification ^b	42,706				
	Cognitive-behavioral therapy ^b	7,744				
	Counseling, psychotherapy ^b	50,304				
	Education programs ^b	109,834				
	Life skills education programs ^b	13,908				
Diversion	Diversion with services (versus regular juvenile court) ^b	3,982				
	Other family-based therapy programs ^b	40,281				

NOTE: n/a = estimate not available. Monetary figures are converted into 2010 dollars.

^aAdapted from Greenwood (2008).

^bAdapted from Drake et al. (2009).

^cAdapted from Washington State Institute for Public Policy (2011).

to conduct a benefit-cost analysis are themselves uncertain.⁷ The Washington State Institute for Public Policy's (2011) recent analyses, however, take this uncertainty into account in calculating their costs and benefits. They use Monte Carlo methods, repeating the computations under thousands of variations to test the sensitivity of the overall findings to the inherent uncertainty of the underlying parameters. Columns 3 and 4 of Table 6-2 show the best point estimates of benefits and costs, using these methods.

The Monte Carlo results in the last column of Table 6-2 imply that one can be highly confident that aggression replacement therapy, family integrated transitions, functional family therapy, multisystemic therapy, and victim offender mediation are successful programs from a benefit-cost perspective. The probabilities that these approaches pass a benefit-cost test are all at least .86. Most exceed .90. The probabilities are somewhat lower for drug courts and coordination of services (.80 and .78), but one can still be quite confident that both are successful.

Because WSIPP uses Washington data to estimate changes in crime and the costs of the criminal justice system, the findings on program application from this locale are technically not generalizable to other states or to the nation as a whole. Washington's crime and the costs of its criminal justice system, however, in all likelihood do not differ substantially from those of other states, and the application of these findings to other locales is probably appropriate. Indeed, even if the savings in criminal justice costs and the benefits to victims (not shown separately in the table) were both 25 percent smaller, all programs that pass a benefit-cost test in WSIPP's analysis would still pass by a wide margin in this adjusted analysis. WSIPP's findings provide reliable guidance for other states and localities.

Seven other types of programs examined in Drake and colleagues (2009) also generate benefits to victims and the criminal justice system, as shown in the lower panel of Table 6-2. Four of the seven have benefits exceeding \$40,000 per participant, so they are likely to pass a benefit-cost test. We cannot draw this conclusion with certainty, however, because WSIPP had not computed cost estimates at the time of publication. WSIPP is currently developing a tool that other jurisdictions can use to derive benefit-cost estimates of criminal justice programs (Aos and Drake, 2010). The tool will allow analysts to use crime and cost data for their jurisdictions and vary the assumptions needed to compute cost savings.

⁷Suppose an evaluation reports that a program reduced crime by 12 percent, with a standard error of 1.4. This means that although the most likely impact is 12 percent, there is a 95 percent chance that the true impact lies between 9.3 and 14.7 percent. Similarly, estimates of program costs, estimates of victim costs, and the methods used by Drake and colleagues (2009) to combine findings from several studies are not perfectly precise.

Although the program cost estimates in Table 6-2 are essentially complete, all benefit estimates are understated for several reasons. These shortcomings apply to all other benefit-cost analyses of juvenile justice programs as well. First, although they assess the benefits of less crime to victims and to the justice system (police, prosecutors, courts, parole officers, etc.), they ignore possible benefits to nonvictims (e.g., less fear of being victimized) and to offenders and their families (e.g., increased productivity from substance use treatment). The latter could be especially large if programs help offenders to attain more schooling or reduce the likelihood that younger siblings engage in delinquent acts.⁸ Second, they count the savings of less crime for the justice system but not for other public or nonprofit agencies that may see savings (e.g., less money spent on mental health hospitalizations). Third, methods for measuring some types of victim costs have not yet been developed.⁹ Finally, because adolescent behavior, including delinquency, is heavily influenced by peers, programs that reduce a participant's delinquency may reduce their peers' antisocial activities as well. Because program evaluations have not measured this second-round impact on crime, benefit-cost analyses cannot include its benefits.¹⁰

Recognizing these reasons why benefits are understated further strengthens our earlier conclusion: states and localities can invest in a variety of programs for juvenile offenders that, if implemented well, have demonstrated effectiveness for reducing reoffending and pay large dividends.

SPECIFIC DETERRENCE

So far, we have focused mainly on the role of providing appropriate rehabilitative services to move an adolescent onto a more positive developmental track, away from continued offending. Adolescents may also refrain from future offending, however, by simply learning their lesson from their encounter with the juvenile justice system. Being held accountable for an offense may teach an adolescent that his or her own conduct is beyond the bounds of what the community will tolerate and well short of what is

⁸For example, if a program raises the probability of completing high school by .10. And in 2009, male high school graduates earned \$11,600 and female high school graduates earned \$8,900 more per year than those without a degree (U.S. Census Bureau, 2010a, 2010b), then the average increase in earnings would be \$1,160 for males and \$890 for females. Over a 40-year working life, the present value of \$1,160 and \$890 is \$20,900 and \$16,000 making the conservative assumption that it does not grow over time and using a discount rate of 5 percent.

⁹Some other studies are further limited because they estimate cost savings to the criminal justice system but not victim benefits (Robertson et al., 2001; Cowell et al., 2010).

¹⁰Butts and Roman (2009) observe that some potentially valuable program models, such as community-based interventions, lack the rigorous evaluations required to assess benefits and costs. This is less a limitation of the technique of benefit-cost analysis per se than of the funding priorities of agencies and researchers.

expected. Experience with the juvenile justice system could also lead the adolescent to rethink the risks and rewards of future criminal involvement (i.e., they are deterred from future crime). (The potential normative function of the juvenile justice system is addressed in Chapter 7.)

There is a very large literature in criminology on deterrence (Zimring and Hawkins, 1973; Andenaes, 1974), generally rooted in the position that criminal activity is reduced when criminal sanctions are seen as certain, severe, and swift. This happens because the risk and costs of sanctions will exceed the perceived returns from crime (Becker, 1968). Deterrence theorists usually distinguish between two types of deterrence: for society as a whole (general deterrence) and for individuals (specific deterrence). General deterrence is based on the idea of vicarious learning; widely known laws—accompanied by strong enforcement, prosecution, and punishment—send a clear message that crime will not be tolerated. Potential offenders, seeing or hearing about the experiences of others, decide that it is not wise to engage in that criminal activity or others. Specific deterrence is based on experiential learning; one's own prior offending and sanction experiences provide a framework for judging the likely costs and benefits of criminal activity involvement and determine whether one will offend again. We are concerned here with the idea of specific deterrent effects in adolescents who have already offended (consideration of general deterrent effects in adolescents is discussed in Chapter 5).

In general, punishment that is more certain should reduce crime, and the stronger a penalty connected with a crime, the less likely it should be that a person will do it. The majority of deterrence research indicates that the certainty of the punishment, rather than its severity, is the primary mechanism through which deterrence works (Nagin, 1998; Paternoster, 2010; Durlauf and Nagin, 2011). In other words, offenders typically respond to a punishment that is more likely than one that is more severe.

There is good reason to believe that adolescents might respond differently than adults to factors related to deterrence. As mentioned throughout this report, distinctive features of adolescent decision making (e.g., heightened risk taking and reduced sensitivity to threat of punishment, especially its long-term consequences) would be expected to affect an adolescent's weighing the consequences of criminal involvement. Moreover, the objective characteristics of certainty and severity are not the prime determinant of deterrence; subjective perceptions are more influential (Matsueda, Kreager, and Huizinga, 2006). How an adolescent might distinctly frame the issue of the certainty and severity of punishment then becomes an even more important concern.

The research on the applicability of deterrence models to adolescent decision making about criminal involvement, however, is rather limited. Most of the studies of the mechanisms of deterrence, with both adults and

adolescents, have used samples of nonoffenders or primarily nonserious offenders (Nagin and Pogarsky, 2001, 2003). As a result, there are very few findings regarding specific deterrence among adolescent offenders in particular. The best known of these (Shannon, 1980, 1985; Schneider, 1990) indicate that adolescents do not respond in accordance with the posited mechanisms of deterrence; that is, perceptions of higher costs of crime are not associated with decreased offending in serious juvenile offenders, and processes other than cost-benefit calculations (e.g., labeling oneself as an offender) may be operating in less serious offenders.

A series of relevant studies done on serious adolescent offenders from the Pathways to Desistance project has recently expanded this literature, finding that the elements of deterrence do operate in a sample of serious adolescent offenders over time, but that these effects are heterogeneous (Anwar and Loughran, 2011; Loughran et al., 2011a, 2011b, 2012). Some initial findings from these investigations indicate that, even in serious adolescent offenders, certainty of arrest appears to play a more important role in deterring future criminal activity than severity of punishment, offenders with more extensive histories of antisocial activity are less likely to change their risk perceptions after being arrested, and there may be a threshold level of risk that must be perceived (about a 30 percent chance of being arrested) to exert an effect on involvement in later offending. Most notably, this line of research so far indicates that deterrence operates to curtail future offending in serious adolescent offenders, although the mechanisms of its operations may still be different in some dimensions from those observed in adult samples.

There is a body of research on the effects of transfer to adult court, which could be considered a specific deterrent policy meant to dissuade serious offenders from continued involvement in crime. Numerous studies have compared the arrest histories of samples of juvenile offenders processed in the juvenile system with those processed in the adult court system. Analyses of these studies have repeatedly asserted that transfer laws are ineffective (i.e., they do not prevent future crime among those transferred) (Redding, 2008) and may in fact be harmful (i.e., counterproductive for the purpose of reducing crime and enhancing public safety) (McGowan et al., 2007). There is some indication that transfer to adult court may have a differential effect on adolescent offenders, with violent offenders reducing, and property offenders increasing, their subsequent offending levels (Loughran et al., 2010). Most of the analyses of these results, however, align with the assessment of Bishop and Frazier (2000, p. 261) that transferred adolescents are “more likely to reoffend, and to reoffend more quickly and more often, than those retained in the juvenile system.” Other work has examined the effects of placement in a juvenile facility compared with community-based treatment, finding that

the latter in general produces higher levels of successful adjustment after adjudication (Garrett, 1985; Andrews, Bonta, and Hoge, 1990; Sherman et al., 1997; Lipsey, 1999; Lipsey, Wilson, and Cothorn, 2000). A recent, well-controlled analysis of the effects of institutional placement versus probation, however, indicated no reduction, or increase, in rearrest or self-reported offending among serious adolescent offenders associated with placement in a juvenile institution versus assignment to probation (Loughran et al., 2009). Across the studies of deterrence and the effects of transfer, there is no evidence that more severe punishments reduce the likelihood of future offending.

TAKING A DEVELOPMENTALLY ORIENTED APPROACH

Clearly, juvenile justice policy and practice have to respond to so-called serious delinquents and hold them accountable for their behavior, especially because of the frequency and seriousness of the offenses committed by this small proportion of adolescent offenders. At the same time, concerns about serious offending delinquents should not dominate the approaches taken across the juvenile justice system. Over the past 20 years, the juvenile system has become increasingly punitive: for example, reducing the jurisdiction of the juvenile court, increasing transfer to adult court, and increasing sentence lengths (Logan, 1998; Feld, 1999; Howell, 2009). Much of this reorientation of the court to a “war on juveniles” (Howell, 2003a) appears to have been driven by concern over serious, chronic delinquency; a result of the moral panic about juvenile crime in the 1990s and the super-predator myth (Dilulio, 1995; Bennett, Dilulio, and Walters, 1996). In the midst of this uproar, the simple fact that serious delinquents represent a small minority of the total population of delinquents has become lost. The extreme end of the distribution of juvenile offenders, that is, youth who are chronically violent, is extraordinarily small. Thus, although it is essential to make every effort to successfully prevent and deter serious delinquent behavior, these efforts will not be behaviorally appropriate for the vast majority of less serious delinquents who make up the bulk of the delinquent population. Recall that approximately half of the delinquents are referred to the juvenile justice system only once. It is just as important to respond appropriately to the behavior and needs of this very large group as it is to respond to the very small group of serious, chronic offenders.

Consideration of knowledge regarding adolescent development can help refine the approaches taken to assess and intervene with juvenile offenders. Current approaches to processing and intervening with adolescents often build on models adapted from the adult criminal justice system or conceptions about behavioral disorders from mental health treatment. An alternative is to recognize that adolescent offenders, whether serious

or not, all share common processes of risk and development. There may be a greater accumulation of risk in serious offenders, but the underlying processes by which risk and protective factors affect outcomes appear to be the same for all juvenile offenders. Based on the studies cited earlier regarding differential program effects and reports of prevention work increasing stimulation of environmentally deprived young children (Masten and Coatsworth, 1998; Masten, 2001), it appears that the impact from interventions involving changes in social context may be most profound for those with the highest accumulation of risk. The mechanisms of influence may be consistent, but the size of the effect from an intervention may vary depending on the initial level of risk.

Given this, it makes sense that the core principles guiding the way that both less serious and more serious juvenile offenders are treated should flow from a developmental perspective. Farrington and Welsh (2007) call this risk-focused prevention, in which risk is examined from the appropriate developmental stage and appropriate domain of risk (Biglan et al., 2004). Viewing involvement in antisocial behaviors in light of what it means to be an adolescent, rather than in terms of what it might take to erase a deficit, puts a different light on how one might think about designing and administering the juvenile justice system.

For one thing, being an adolescent means living in a period of life when change, rather than behavioral consistency, is the norm. Adolescents, including juvenile offenders, undergo accelerated physical, emotional, psychological, and social context changes during the period of their potential involvement with the juvenile court. Despite involvement with the juvenile justice system, they are still growing up on multiple dimensions. In addition, based on our earlier review, being an adolescent also means that cognitive and emotional regulatory capacities are not yet synchronous enough to produce what would be considered logical judgments in times of emotional arousal. This means that adolescents may make reasonable judgments in some situations and not in others, or about some issues and not about others, and that their social learning can show considerable variability depending on the social context considered (Smetana and Villalobos, 2009). Developing the ability to regulate and integrate cognitive and emotional processes is one of the major tasks of this developmental period. These simple regularities have implications for how to most usefully frame and respond to criminal involvement.

Implications for Assessment

The fact that adolescents are moving targets has implications for how one characterizes and assesses adolescent offenders. Variability in adolescent behavior and perceptions means that mental health diag-

noses of adolescents are less reliable or valid and that the characterizations of adolescents as having certain immutable personality characteristics (e.g., psychopathy) are less trustworthy. In addition, involvement in anti-social activity, like many other adolescent behaviors, changes over time and has some relation to the developmental status of an adolescent. Considerable evidence exists that a high proportion of adolescent offenders reduce or stop their antisocial behavior as they move into their mid-20s (Broidy et al., 2003; Piquero, 2008b). This change appears to be attributable to some combination of the positive effects of social transitions that occur during this period (e.g., entry into the workforce, positive romantic relationships) (Laub and Sampson, 2003), increases in psychosocial capacities (Monahan et al., 2009), and decreases in substance use (Chassin, Forth, and King, 2004). Qualitative work has also pointed up the importance of an increased sense of personal agency in promoting these changes, with adolescents trying on new, more prosocial identities as part of their adoption of an emerging adult sense of self (Maruna, 2001; Giordano, Cernkovich, and Rudolph, 2002).

One implication of these observations is that depictions of an adolescent as having a fixed set of characteristics are highly likely to be inaccurate, and assessments of adolescents' risk of future offending and suitability for certain interventions have a limited shelf life (Mulvey and Iselin, 2008). Categorization of adolescents according to their presenting offense alone, without consideration of developmental factors, is particularly poor at predicting later adjustment or outcomes (Loeber and Farrington, 1998), except for the demonstrated low level of reoffending among juvenile sex offenders (Zimring, 2004). Assessments of adolescents are most valid when they focus on short-term outcomes and explicitly incorporate the types of events that might precipitate or reduce the likelihood of a particular outcome. Thus, to be most informative, assessments of high-risk adolescents should be done regularly and should consider the influential social factors in the adolescent's life.

This approach stands in sharp contrast to some trends in juvenile justice legislation and programming. Over the last two decades, statutes limiting the jurisdiction of the juvenile court have relied on the commission of one of a range of offenses to justify transfer or waiver of an adolescent to the adult court. Other program foci at the less serious end of the juvenile offender continuum have also taken an offense-oriented perspective for identifying adolescents who should receive specialized services, such as school truants and drug dealers. In these approaches, the overall risk profile of the adolescent is secondary to the presenting offense. From the outset, such approaches ignore the reality that the illegal behaviors of interest occur in a developmental framework and that there is considerable relevant variability among adolescents who commit the same offense or level of offense (Schubert et al., 2010).

Implications for Designing Interventions

Recognizing the fluid nature of adolescence has implications for interventions promoted by the juvenile justice system. Some interventions are clearly and appropriately aimed at fixing an adolescent's deficits. For example, providing intensive schooling to increase the likelihood that an adolescent offender will graduate from high school certainly makes sense. Increasing human capital in terms of expanded skills or competencies is a key aspiration in any balanced set of interventions (as advocated by the balanced and restorative justice approach) (Office of Juvenile Justice and Delinquency Prevention, 1997a; Griffin, 2006). Just "fixing" an adolescent on one dimension of functioning, however, is unlikely to have a great impact on later adjustment. As seen in the review above, interventions with the most success at altering the level of subsequent offending provide opportunities for an adolescent to develop successfully in a supportive social world. Model programs like those cited above work systematically with multiple aspects of the adolescent's world, including the family, the school, and the community. While building the personal competencies of the adolescent (e.g., increasing problem-solving strategies), they also work on constructing a more supportive social environment for the adolescent.

This makes sense from a developmental perspective. The process of changing an adolescent's trajectory rests on the ability of the systems around the adolescent to support and direct the ongoing change process. In late adolescence, most individuals follow a pattern of individuating from parents, orienting toward peers, and integrating components of attitudes and behavior into an autonomous self-identity (Collins and Steinberg, 2006). These processes are occurring simultaneously in an overlapping fashion, with the success of one process dependent on the course of another. Navigating this developmental period successfully, in which the adolescent sees himself or herself as a prosocial, law-abiding person, requires supportive adults, healthy relationships with peers, and opportunities to make autonomous decisions (Scott and Steinberg, 2008).

The juvenile justice system could increase its impact by considering when it might be impeding or promoting these developmental processes. The most obvious example is the system's continued reliance on institutional placement. Being in an institutional environment for extended periods, away from community opportunities to experiment with developing conceptions of self, might not allow for the developmental experiences needed in adolescence. Spending time in an institutional setting provides few opportunities to freely develop skills and competencies like learning job-related expectations or discovering qualities in a life partner that are a good match. Regimented schedules and restrictions reduce opportunities to develop the skills critical to a successful adolescent transition to

adulthood (Mulvey and Schubert, 2011). Although some adolescents may receive essential skills for later life relationships, a great many others may just not catch up when they return to the community. Following this logic, the longer they are out of the normal, developmental pattern, the more difficult this becomes.

An awareness of the developmental needs of adolescents also implies altered emphases in designing and assessing both institutional and community-based programming. If one adopts a developmental approach, the settings and regularities of programming environments take on increased importance. Instead of simply considering whether a program addresses a feature of internal change within the adolescent offender (e.g., promoting social skills that might reduce a reliance on aggression as a response), programs (both institutional and community-based) would become more focused on the mechanisms by which they are promoting positive development (e.g., encouraging adolescent involvement in program operations or the maintenance of a safe environment). Like many of the burgeoning efforts at promoting positive youth development, juvenile justice programs would become focused on how program environment and operations further the development of program participants to address the next set of challenges facing them. Assessment of programs would focus on aspects of program operations that contribute to the development of an environment that promotes positive outcomes (see the approach taken by the David P. Weikart Center for Youth Program Quality at <http://www.cypq.org/> for an example of what such an orientation might entail).

SUMMARY

Adolescents who are involved in delinquency continue to develop during adolescence and early adulthood. This is true both physically, for example, with respect to brain development, and socially, for example, with respect to decision making and peer influence. In a real sense they are not yet complete.

It is thus only logical, but nonetheless imperative, that the services provided to adolescent offenders foster positive, prosocial development. The developmental differences between adults and adolescents should be an orienting consideration in how assessments and interventions are designed for the juvenile justice system and how this system should differ systematically from the adult criminal justice system. Adolescents require certain social conditions to emerge successfully from this period of development, whether they have committed a crime or not. Evidence indicates that building these factors into the interventions used with adolescents reduces their likelihood of reoffending.

This is best accomplished in the context of a juvenile justice system that is responsive to developmental concerns and not in the context of the adult criminal justice system with its often shared, but nonetheless differently ordered, set of priorities. For juveniles, policies and programs that are predominantly punitive neither foster prosocial development nor reduce recidivism (Howell, 2009; Lipsey, 2009). Although they may reaffirm societal values and respond to the emotional needs of the victimized, they are not consistent with a developmental perspective and are less likely to foster the primary objective of public safety. There is no convincing evidence that confinement of juvenile offenders beyond a minimum amount required to provide sufficiently intense services for them to benefit from this experience, either in adult prisons or juvenile correctional institutions, appreciably reduces the likelihood of subsequent offending. To the extent that preventing reoffending is the primary policy consideration, juvenile court dispositions should avoid lengthy confinement, adolescents should be tried in criminal court only in the most serious cases of personal violence, and criminal court sentences should avoid confinement of adolescents in adult prisons.

With exceedingly few exceptions, adolescent offenders (even serious offenders) who experience secure confinement will return to society while still relatively young but at a considerable disadvantage for success as an adult. Given this, it is in society's interest to reduce the likelihood of continued offending by providing developmentally appropriate interventions that are rooted in what is known about adolescent development (Biglan et al., 2004; Farrington and Welsh, 2007). Forestalling future crime and building developmental strengths for offenders makes more sense in the long run than handicapping offenders by removing them from society in harsh environments and forestalling positive development in the process. This evidence for the effectiveness of developmentally sensitive interventions is bolstered by analyses of the costs and benefits of these interventions. The most comprehensive and detailed analyses of the dollars spent and saved by putting these types of programs into place show that the public savings are considerable. The advantages of many programs are not small; broad-based community interventions and theoretically sound institutional approaches all show benefits several times the costs.

This is more than simple-minded ideology. Almost all of the model programs that demonstrate impressive reductions in reoffending are rooted in a developmental perspective. Successful programs attempt to reduce the risk factors that are associated with delinquency and violence by fostering prosocial development and by building promotive factors at the individual, family, school, and peer levels. Policies and programs for the range of adolescent offenders, including those that take place in secure confinement, should be based on these same core principles of successful intervention.

