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A Decade of Advances in Risk Assessment: Implications for Corrections

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DRAFT (5-10-00)

Abstract

Interest in violence risk assessment has grown in recent years, as risk assessment is relevant to a variety of decisions in law, mental health practice, and correctional settings. Risk assessment can be particularly relevant in correctional settings, as it affects decisions on classification, transfer, and release, as well as parole service delivery planning. Focusing on correctional populations, including severely mentally disordered offenders and sexual offenders, we provide an overview of conceptual and empirical advances in violence risk assessment during the past decade, and describe the development of relevant risk assessment tools. We conclude by offering guidelines for the use of violence risk assessment in correctional settings.

A Decade of Advances in Risk Assessment: Implications for Corrections

There is currently a significant interest in and demand for violence risk assessment performed by mental health professionals. Risk assessment is relevant to a variety of important decisions, including clinical intervention, criminal and civil legal decisions, workplace violence potential, and a range of health care decisions, including Tarasoff (1976) notifications by therapists. In correctional settings, staff are often asked to make assessments of future violence risk as part of decisions for classification, transfer, and release. For many years, psychiatrists and psychologists were asked to make predictions regarding violence potential, even though the literature suggested that such predictions were often inaccurate. In a review of the literature at the time, Monahan (1981) concluded that "psychiatrists and psychologists are accurate in no more than one out of three predictions of violent behavior over a several-year period among institutionalized populations that had both committed violence in the past (and thus had high base rates for it) and who were diagnosed as mentally ill" (p. 47-49).

Otto's (1992) review of research in violence prediction performed between 1977-1992 allowed somewhat more optimistic conclusions. Otto noted that "changing conditions of dangerousness and advances in predictive techniques suggest that rather than one in three predictions of long-term dangerousness being accurate, at least one in two short-term predictions are accurate" (1992, p. 130). Since Otto's review, other important conceptual and empirical advances have occurred. This article will provide an update on these advances, as well as discuss relevant risk tools and important legal developments in risk assessment during the past decade. In addition, we will provide risk

assessment guidelines for the individual involved in violence risk assessment in correctional settings in light of these advances.

Recent advances in risk assessment have occurred in different populations (e.g., mentally disordered individuals without criminal involvement, Not Guilty by Reason of Insanity acquittees, juveniles, sex offenders, and those involved in domestic violence or workplace violence). It is beyond the scope of this article to detail the changes across all these populations and contexts, so we will focus on two populations relevant to correctional populations: severely mentally disordered offenders and sexual offenders.

Conceptual Advances

An important recent conceptual advance has been the shift from "violence prediction" to "risk assessment" (Monahan & Steadman, 1994). The term "dangerousness," which still appears frequently in law and policy, can be divided into three components: risk factors, harm, and risk level (National Research Council 1989). "Risk factors" are variables that are empirically associated with the occurrence of a target behavior such as aggression. They include individual characteristics and situational circumstances positively associated with the likelihood that violence will occur. Conversely, individual characteristics and situational circumstances decreasing the likelihood that violence will occur can be considered as "protective factors." Harm is related to the nature, frequency, and severity of aggression being predicted. Risk level is the probability that harm will occur.

Another important conceptual advance has involved the expansion of variables associated with violence considered as risk factors for violence. Such variables include individual/dispositional factors, historical factors, contextual factors, and clinical factors.

Individual risk factors include demographic variables, personality characteristics, cognitive variables, and the like. Historical risk factors include previously-experienced events that may predispose a person to act violently (e.g., family, work, prior psychiatric hospitalizations, past criminal activity and other past aggression). Contextual risk factors refer to aspects of an individual's environment that can contribute to the likelihood of future violence, such as social support and other physical aspects of environment. Clinical risk factors encompass symptoms of mental, emotional, or cognitive disorder that can contribute to the risk of violence (Monahan & Steadman, 1994).

A third conceptual development involves the notion that risk assessment can be considered under two models, depending on the nature of the decision to be made. These two models have been described as "prediction," which emphasizes overall prognostic accuracy, and "management," which emphasizes risk reduction (Heilbrun, 1997). There are a variety of differences between these models, but one of the most important concerns the nature of the risk factors used in each. Both models use dynamic risk factors, which are defined as variables that can change through planned intervention with the individual (e.g., treatment, monitoring) or control of the situation (e.g., living setting, access to weapons). Only the "prediction" model, however, also considers static risk factors, which are not subject to change through such planned intervention (Heilbrun, 1997). Static risk factors may include personal characteristics (e.g., age, gender) and certain kinds of disorders or deficits (e.g., psychopathy, mental retardation).

This conceptual development is particularly relevant to decisions made in correctional settings because such decisions may be prediction oriented or management oriented, depending upon the context in which the decision is being made. Decision-

making in correctional settings often occurs at crucial "decision points" after which ongoing legal jurisdiction may continue or discontinue. If the jurisdiction will discontinue, as in end of sentence commitment as a "sexual predator," then that decision most appropriately calls for a prediction model. In cases in which the legal authority retains some form of control over the individual, the management model is more appropriate, as the legal authority can manage or try to reduce the risk over time. As the legal context changes at each decision point, so may the respective model for a given decision (Heilbrun, 1997).

Consistent with this conceptual shift has been the classification of persons into groups according to risk level. Although the ability of mental health professionals to predict violence risk has improved with the empirical advances and development of tools we discuss later, it is still based on many contextual and contingent factors. To enhance the accuracy and effectiveness of communicating risk measured by these tools, it has been suggested that identifying risk level based on classification into categories (e.g., low, moderate, high, and very high) may be effective (Monahan & Steadman, 1996).

Another development in risk assessment has been in the area of risk communication. There has been growing attention to the theoretical and practical reasons for studying risk communication (see Heilbrun, Dvoskin, Hart & McNiel, 1999). It seems clear that risk assessment predictions and risk reduction interventions will be facilitated by effective risk communication. A few studies have begun to shed some light on the most effective means of communicating violence risk based on the model chosen (prediction vs. management) and the risk factors identified (static vs. dynamic) (see Heilbrun, O'Neill, Strohman, Bowman, & Philipson, 2000; Heilbrun, Philipson, Berman,

& Warren, 1996; Slovic & Monahan, 1995; Slovic et al., in press). It is anticipated that future studies will continue to identify the appropriate and most effective form of communication based on the model used and the risk factors being communicated. This is a development that will be particularly important for correctional staff who use formal risk assessment to inform classification, transfer, and release decisions, and may need to communicate this information to legal and quasi-legal decision-makers.

Empirical Advances

There have been numerous empirical advances in risk assessment relevant to corrections during the past decade. These advances have focused on identifying and distinguishing the risk factors that predict violent recidivism from those that predict general recidivism in mentally disordered offenders, and the risk factors that predict sexual offense recidivism versus nonsexual violent recidivism among sexual offenders. In addition, a recent study has identified dynamic risk factors that are linked to aggression in a correctional setting among mentally disordered offenders.

Mentally Disordered Offenders in Correctional Settings

One of the earliest empirical advances of the past decade was the identification of risk factors for predicting violent recidivism. Harris, Rice, and Quinsey (1993) studied a sample of 618 men admitted to Pentatanguishene Mental Health Centre for assessment prior to trial for a violent offense. About half were returned to Pentatanguishene following trial (most as NGRI); while the other half were sentenced to prison following conviction and matched to the first group on age, offense, and offense history. During an average time at risk of 81.5 months, 31% of the subjects committed a new violent offense. Harris et al. identified twelve predictors for violent recidivism, which accounted for 21% of the variance. The 12 variables

include separation from parents by age 16 or younger, age at index offense (negatively related), psychopathy, victim injury index offense (negatively related), schizophrenia (negatively related), never married, elementary school maladjustment, female victim index offense (negatively related), property offense history, failure on prior conditional release, alcohol abuse history, and personality disorder (Harris, Rice, & Quinsey, 1993). Data from this study were used to develop the Violence Risk Appraisal Guide (VRAG), a risk assessment tool we will discuss later.

In another study, Villenueve and Quinsey (1995) tracked 120 inmates released from an inpatient psychiatric unit of a maximum security federal prison in Canada over an average of 92 months. During this period, 50% of these individuals were arrested for a violent offense, while 78% were arrested for any offense. Predictors of violent recidivism included juvenile delinquency, younger age at release, drugs involved in offense, violent convictions, separation from parents before age 16, alcohol involved in offenses, criminal versatility, short periods of employment, and no psychotic illness.

Bonta, Law, and Hanson (1998) focused on a broad range of predictors of recidivism for mentally disordered offenders across different theoretical models. They conducted a meta-analysis among 35 predictors of general (any offense) recidivism and 27 predictors of violent recidivism, drawn from 64 prior samples and compared these variables to predictor variables for nondisordered offenders (Bonta et al., 1998). The results showed that the major predictors of both general and violent recidivism were substantially similar for mentally disordered offenders and nondisordered offenders. Criminal history variables were the strongest predictors, with clinical variables showing the smallest effect sizes. The strongest positive predictors included objective risk assessment measures, adult criminal history,

juvenile delinquency, antisocial personality, and nonviolent criminal history. The strongest negative predictors were clinical and psychological variables, such as mental disorder, homicide index offense, age, and violent index offense. Bonta et al. concluded that practitioners performing risk assessments should use the same variables to predict violence in mentally disordered offenders as with nondisordered offenders.

Another consistent empirical finding for criminal populations was the identification of high psychopathy, as measured by a high PCL-R score, to be a significant risk factor for violent recidivism. Salekin, Rogers, and Sewell (1996) performed a meta-analysis and concluded that the PCL-R is highly predictive of general recidivism, and an even greater predictor of violent recidivism. The Salekin et al. study (1996) found the greatest effect size when the PCL:SV was used to predict intrainstitutional aggression in a psychiatric hospital setting (Hill, Rogers, & Bickford, 1996). Based on their findings, Salekin et al. recommended using the PCL-R in corrections to help determine placement decisions, as well as parole and conditional release decisions. A variety of other studies in North America were conducted on the PCL and PCL-R, and found the following: the PCL-R was the best predictor of violent recidivism when compared to actuarial risk scales and prior history of crime (Serin, 1996), high scores on the PCL-R were more highly associated violent recidivism than was a DSM-III diagnosis of schizophrenia or alcohol abuse for mentally disordered offenders in a psychiatric institution (Rice & Harris, 1995), the PCL-R is a valid predictor of violent recidivism in an incarcerated sample (Serin & Amos, 1995), high scores on the PCL were significantly associated with post discharge arrests for offenses against persons in a forensic hospital population (Helibrun, Hart, Hare, Gustafson, Nunez, & White, 1998), and the PCL-R was a reasonably accurate predictor of violent recidivism and sexual offending among sex offenders

(Furr, 1993). In addition, studies with Swedish criminal populations have found that high psychopathy, as measured by a high PCL-R score predicts violent recidivism among criminal offenders with personality disorders convicted of a violet crime (Grann, Langstrom, Tengstrom, & Kullgren, 1999) and that high PCL-R scores (defined as Total Score $\geq$ 26 in this study) are strongly associated with violent recidivism among violent offenders with schizophrenia; while other potential risk factors could not equally well or better explain violent recidivism in this group (Tengstrom, Grann, Langstrom, & Kullgren, 2000).

Another recent study examined factors for violence risk within correctional institutions. Wang and Diamond (1999) examined institutional aggression among mentally ill male prisoners and reported that anger, antisocial personality style, and impulsivity were strong predictors of institutional aggression (anger and antisocial personality style were related to both verbal and physical aggression, and impulsivity was related to verbal aggression). They also noted that ethnicity and current violent offense were not directly related to institutional aggression. This study suggests that dynamic factors (anger, antisocial personality style, and impulsivity) are relevant to risk assessment when predicting institutional violence among mentally ill male inmates. Replication of these findings will provide a solid empirical basis for using such factors in classification and rehabilitation planning.

Sexual Offenders

There have also been empirical advances in the last decade in identifying risk factors for recidivism for sexual offenders. Many of the early studies in this and prior decades found in the literature differ in offender characteristics, outcome definition, and outcome period, which makes it difficult to draw conclusions on sexual reoffense risk

(Heilbrun, Nezu, Keeney, Chung, and Wassserman, 1998). The majority of available studies have employed conviction of a new sexual offense as the recidivism measure (Romero & Williams, 1985), others have included conviction for a subsequent non-sexual offense in their definition of recidivism, while yet others include rearrest for any crime, whether or not there was a conviction (Furby et al., 1989). Furby et al. (1989) argued that using any of these measures of recidivism rates underestimates the true reoffense rate of sexual offenders because many sexual offenses are unreported. Early studies that measured sexual reoffense and violent reoffense found lower rates of sexual reoffense than violent reoffense for sexual offenders. In one study, Quinsey, Harris, Rice, & Lalumi'ere (1993) found that among sexual offenders following release, the recidivism rate of those convicted for a new sexual offense (27.5%) was lower than the recidivism rate for those arrested, convicted or returned to the psychiatric facility for a violent offense (40.4%) (see also Rice, Quinsey & Harris, 1991).

In light of the Supreme Court's ruling in Kansas v. Hendricks, (1997), it has become especially important to identify which sexual offenders are most likely to reoffend. Thus, the most recent studies of the decade have focused on identifying the factors that best predict the sexual reoffending of sexual offenders, as compared to violent or general reoffending. These factors have been included in new tools used to assess risk for future offense. We will discuss the development and use of these tools later.

The most recent studies have found that it is the combination of sexual deviancy and criminal lifestyle/antisocial behavior that places sexual offenders at the highest risk for sexual reoffense, although there is some inconsistency in the findings as to which factor (sexual deviancy or criminal lifestyle) is more predictive. Rice and Harris (1997) studied male child molesters and rapists and found that the interaction between sexual deviance and

psychopathy was a predictor for sexual recidivism, but not for violent recidivism. They also found a difference in the importance of certain factors depending on the type of sexual offender. The results suggested that sexual deviance was a better predictor of sexual recidivism for child molesters, while general criminal deviance and psychopathy were more important factors to consider with rapists (Rice & Harris, 1997).

Both Prentky, Knight, and Lee (1997) and Hanson and Bussiere (1998) found that sexual deviance factors are most predictive of sexual reoffense among sexual offenders, while criminal lifestyle factors are most predictive of violent or general reoffense. Prentky et al. (1997) studied child molesters specifically and found that sexual deviance (e.g., degree of preoccupation with children, paraphilias, and number of prior sexual offenses) were predictive of sexual recidivism, while factors related to antisocial behavior more highly predicted violent (sexual and nonsexual) recidivism.

Hanson and Bussiere (1998) performed a meta-analysis and examined factors related to recidivism among sexual offenders. They differentiated between predictors of sexual offense recidivism and nonsexual violent recidivism and found different factors for each group. They found that the best predictors of sexual offense recidivism were related to sexual deviance (e.g., deviant sexual preferences measured phallometrically, prior sexual offenses) and the next best predictors were related to general criminality [e.g., prior criminal involvement and antisocial behavior, age (young), and marriage (never)]. However, consistent with the findings of Rice and Harris (1997), they found that sexual deviance was more related to prediction of recidivism with child molesters than with rapists, as phallometric preference for rape did not predict sexual recidivism. They found that the best predictors of nonsexual violent recidivism and any recidivism were those similar to the

predictors specified in the literature of recidivism among nonsexual offending criminals (e.g., prior violent offenses, age, juvenile delinquency). They argue, therefore, that risk assessments of sexual offenders should focus separately on the offender's risk for sexual and nonsexual recidivism, as there are differences between sexual offenders and nonsexual offenders when considering risk for future sexual offending.

More recently, Hanson and Harris (2000) examined the dynamic factors for sexual offense recidivism and found that recidivists were considered to have poor social supports, attitudes tolerant of sexual assault, antisocial lifestyles, and poor self-management strategies. In addition, the recidivists demonstrated an increase in anger and subjective distress before reoffending (what the authors classify as acute dynamic, but not as stable dynamic risk factors). In contrast to Hanson and Bussiere (1998), this study found that criminal lifestyle variables, as measured by VRAG scores, tended to be stronger predictors of sexual offense recidivism than measures of sexual deviancy.

Taken as a whole, the diverse studies on sexual offense recidivism point to the conclusion that the risk factors to consider in a sexual offender risk assessment should be tailored to the goal of what you are trying to predict (sexual offense recidivism vs. general recidivism). There have been several important empirical advances in sexual offender recidivism research the past few years that have begun to clarify the distinction between sexual reoffense risk and violent or general reoffense risk for risk assessment of sexual offenders. However, as you will see when we discuss sexual offender risk assessment tools, it is still difficult to draw conclusions as to which specific types of factors are most important to consider in predicting sexual recidivism.

Development of Risk Assessment Tools

VRAG/SORAG

Along with recent conceptual and empirical advances, the field has recently witnessed the development of tools that are designed to aid in the accuracy of risk assessment with correctional populations. The Violence Risk Appraisal Guide (VRAG) (Harris, Rice, & Quinsey, 1993) is a prediction-oriented, 12-item measure that was derived from intake, treatment and post-hospitalization data on Canadian mentally disordered offenders (Harris, Rice & Quinsey, 1993). We discussed some of the empirical findings of this study earlier and mentioned that the VRAG was derived and validated on mentally disordered offenders. The 12 variables identified in the Harris, Rice, and Quinsey study (1993) were weighed based on their relation to outcome, and the correlation between VRAG scores and violent recidivism was .44 (choosing the 80th percentile as a cutoff, the classification accuracy was 74%, the sensitivity was .40 and the specificity was .88) (Harris, Rice, & Quinsey, 1993). Rice (1997) concluded that the VRAG performed well on a prison sample of men who were arrested for a violent criminal offense. An actuarial, prediction-oriented risk assessment tool, the VRAG is appropriate for individuals with criminal justice involvement.

Rice and Harris (1997) also performed a cross-validation and extension of the VRAG. The cross-validation was performed on a sample of 159 sex offenders and found a rate of violent recidivism of 58% over a 10-year period. The extension added 288 sex offenders to the original sample and tracked violent recidivism over a 10-year period. The VRAG performed just as well on cross-validation as on construction in predicting violent recidivism, although and performed moderately well on the extended follow-up of sex offenders (Rice & Harris, 1997). The instrument used to measure sexual offenders is called

the SORAG (Sexual Offender Risk Appraisal Guide). When used to measure sexual offender recidivism, the VRAG/SORAG had only modest predictive ability (correlation of .20).

Quinsey, Harris, Rice, and Cormier (1998) have summarized the results of risk assessment research over the last twenty years in an important book. They describe the development of the VRAG and its validations, and respond to "fifteen arguments against actuarial risk appraisal" (Quinsey et al., 1998). They point out that although other instruments (like the LSI) are good predictors of general criminal recidivism, the VRAG is the first actuarial instrument that can predict violent recidivism.

Taken as whole, these studies suggest that the VRAG is an important tool for use with some correctional populations for two reasons. First, the VRAG was derived and validated on mentally disorder offenders. Second, these studies suggest that, with further research, the VRAG may eventually be applied with different criminal populations (NGRI, convicted offenders, sexual offenders) in predicting violent recidivism. However, the VRAG was developed with convicted male violent offenders and male sexual offenders with a history of past violence, and is not yet generalizeable to populations with no prior history of violence. It is also limited to male inmates and is oriented toward predicting community violence upon release, not institutional violence.

HCR-20

Another tool designed for use in the assessment of risk for future violence is the HCR-20 (Historical, Clinical, Risk Management) (Webster, Douglas, Eaves, & Hart 1997). The historical items include previous violence, young age at first violence, relationship instability, employment problems, substance use problems, major mental illness, psychopathy, early maladjustment, personality disorder, and prior supervision failure. The

clinical items are as follows: lack of insight, negative attitudes, active symptoms of major mental illness, impulsivity, and unresponsive to treatment. Finally, the Risk Management area has items on plans lack feasibility, exposure to destabilizers, lack of personal support, noncompliance with remediation attempts, and stress, which focus on the community conditions following hospitalization or incarceration. The results of validation research using the HCR-20 were recently published.

In one study involving the HCR-20, the files of 193 civilly committed patients in Canada were coded retrospectively using the HCR-20 and the PCL-Screening Version (Hart, Cox, & Hare, 1995). Follow-up data were obtained in the community over an average of 626 days using official records (provincial correctional files, which include court and correctional contacts, and hospital readmission records, as well as admission to any of 16 general hospitals throughout province, and coroner's death records). Persons scoring above HCR-20 median (19, of a possible total of 40) were 6-13 times more likely to be violent during outcome period. The investigators concluded that the HCR-20 added incremental validity to the PCL-SV, and was more strongly and consistently related to violence (Douglas, Ogloff, Nicholls, & Grant, 1999).

In another study involving the HCR-20, the files of 75 male, Canadian, federally sentenced maximum security inmates were coded using the HCR-20, the PCL-R, and the VRAG. The HCR-20 was as strongly related to past violence as either the PCL-R or the VRAG. Scores above the median (19) of the HCR-20 increased the odds of past violent and antisocial behavior by an average of 4 times (Douglas & Webster, 1999).

A study of mentally disordered offenders in Sweden explored the predictive

validity of the historical part of the HCR-20. Grann, Belfrage, and Tengstrom (2000) compared the VRAG to the historical section (H-10) of the HCR-20 and found that for a 2-year follow-up period, both the H-10 and VRAG performed better than chance in predicting violent reconvictions of personality disordered offenders, while only the H-10 performed better than chance in predicting violent reconviction of schizophrenic offenders. There are some apparent limitations in this study, such as using reconviction as the outcome measure and using a 2-year follow period for both groups (schizophrenic offenders might recidivate at a different pace). However, they conclude that their study suggests that historical factors might be more important to consider in correctional settings, as opposed to forensic and civil psychiatric settings, because the proportion of inmates suffering from personality disorders and/or substance abuse disorders as compared to psychiatric disorders is likely to be higher in correctional settings.

RRASOR/Static-99

There are several tools that have been developed specifically to predict sex offense recidivism for sexual offenders. One such tool is the Rapid Risk Assessment for Sexual Offense Recidivism (RRASOR) (Hanson, 1997). This tool was developed as a brief actuarial device to predict sexual offense recidivism, using only a few variables (Hanson, 1997). After development and validation, four variables remained that showed predictive accuracy: (1) prior sexual arrests (0=none, 1=one prior conviction or one to two prior arrests, 2=two or three prior convictions or three to five prior arrests, 3=four or more prior convictions or six or more prior arrests); (2) age (0=25 or older at time of release, 1=under 25 at time of release); (3) ever targeted male victims (0=no, 1=yes); and (4) whether any victims were unrelated to offender (0=no, 1=yes). The RRASOR had

only a modest correlation with sexual offender recidivism (.27).

Another tool called the Static-99 was recently developed from the merger of a North American database (used to develop the RRASOR) and a British database (used for a tool called the SACJ; Grubin, 1998). The SACJ differs from the RRASOR in that it considers nonsexual criminal history factors, and uses a stepwise approach to classifying sexual offenders as low, medium, or high risk. The Static-99 was designed to predict sexual offense recidivism. It performed better than the RRASOR and the SACJ in predicting both sexual offense recidivism and any type of violent recidivism, including sexual offending. However, this performance was only a small improvement over the RRASOR and the SACJ, and was not a statistically significant improvement over either measure. The authors note that the Static-99 may not be the tool of choice when predicting any violent recidivism, because the VRAG performs better ($r = 0.32$, ROC = 0.69 vs. $r = 0.47$, ROC area = 0.77). The authors also caution that the Static-99 ignores dynamic factors, so it should not be used to select treatment targets, measure change, evaluate whether offenders haven benefited for treatment, or predict under what circumstances sexual offenders are likely to recidivate.

Risk Reduction/Management Tools

Consistent with recent conceptual advances, the practitioner should use violence prediction tools mainly when the context calls for violence prediction. The violence prediction tools just discussed are appropriate when the task is prediction. When the context calls for planning interventions to reduce risk, or assessing risk status change in light of interventions, then it is appropriate to consider a tool developed for this purpose. This approach to risk assessment has been called *anamnestic* (Melton, Petrila, Poythress,

& Slobogin); it involves identifying violence risk factors specific to the individual being evaluated through a detailed consideration of that person's history of violence and the risk factors that were active at the times of previous violent acts. When an *anamnestic* tool is used to derive dynamic risk factors (subject to change through planned intervention), then it can be useful in planning interventions to reduce risk.

An example of such a management tool is the Violence Behavior Analysis (VBA), developed by staff at the Taylor Hardin Secure Medical Facility in the late 1980's.[1] The VBA is a semistructured interview, supplemented by collateral information, which is used to assess violence risk for Not Guilty by Reason of Insanity Acquittees considered for transfer or release into the community. A modified VBA, the Analysis of Aggressive Behavior (AAB) has been used with NGRI acquittees in Virginia since 1991 (Heilbrun, 1991). The AAB can be used to assess change in risk status over time by performing multiple administrations at crucial "decision points." However, the AAB provides no empirical basis for predicting future violent behavior.

Another option for a clinician asked to assess risk reduction with a correctional population is to use part of an existing tool, such as the HCR-20. The HCR-20 contains a clinical and risk management section that can be used for planning treatment and reducing risk in the community upon release from a hospital or correctional institution. The authors note that the HCR-20 may be used in ongoing risk assessment because it includes dynamic variables (the C and R subscales) (Douglas et al., 1999). The repeated assessment of individuals over time and under different circumstances can be performed using this strategy.

In addition, the Level of Service Inventory-Revised (Andrews & Bonta, 1995) is a combined risk/needs assessment tool prompts the collection of information on offenders in the following areas: criminal history, education/employment, financial, family/marital, accommodation, leisure/recreation, companions, alcohol/drug problems, emotional/ personal, and attitudes/orientation. Research suggests that LSI-R score is related to institutional maladjustment (Andrews & Robinson, 1984; Montuik, Bonta, & Andrews, 1990), likelihood of early release (Bonta & Higginbottom, 1991), recidivism and self-reported criminal activity (Bonta & Motiuk, 1990; Motiuk & Bonta, 1991), parole outcome (Bonta, 1981; Bonta & Motiuk, 1985), and halfway house success (Bonta & Motiuk, 1985; 1987; 1992; Bonta, Montuik, & Ker, 1985). Given its structure, the LSI-R can be used both to assign a priori risk for these outcomes, and to address risk relevant needs on an individual or a programmatic level.

Guidelines for Violence Risk Assessment with Correctional Populations

The conceptual and empirical advances in risk assessment in the last decade, along with the development of new tools, have changed the nature of risk assessment. In light of these recent developments, we offer guidelines for the assessment of violence risk with individuals in the correctional system.

1. *Determine if the task if prediction, management, or both.* Such a determination affects decisions about the relevance of research, tools, base rates, risk factors, and risk communication. In a correctional setting this can be determined by the context in which the legal decision is being made. The various "decision-points" concerning inmate classification, transfer, and release will influence the goals and methods of assessment.

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[1] The VBA is not commercially available, but can be obtained by a request to Taylor Hardin in Tuscaloosa,

Once that determination has been made, use risk assessment tools appropriate for your population and purpose. We have discussed several of the most recent tools being used in risk assessment; many of these have greater reliability and validity than previous tools and techniques. The use of better tools can identify risk factors and increase the overall accuracy of the risk assessment (Heilbrun, Dvoskin, Hart, & McNiel 1999). In addition, there are different tools available depending on the appropriate purpose of your risk assessment (prediction vs. management), the population you are assessing, and the type of violence you are asked to assess (violent recidivism vs. general recidivism vs. sexual recidivism). Whenever possible, use a tool developed and validated for your population that has empirically demonstrated psychometric properties for your purpose.

2. *Be familiar with evolving risk assessment literature.* Important conceptual and empirical advances in risk assessment have occurred in the last decade, and important changes are continuing with regularity. Familiarity with research findings, risk tools, and developing professional standards in this area not only results in better practice -- it also provides some protection against malpractice liability in the event of a clients violent act (Monahan, 1993).

3. *Obtain relevant information from several sources.* With the emphasis of many prediction-oriented tools on static risk factors, it is especially important to verify the relevant historical information that is used in the assessment. In addition to an interview, it is a good practice to examine collateral records, interview third parties, and sometimes conduct psychological testing (preferably standard, objective, with appropriate validation

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research, and with built-in indices of response style; see Heilbrun, Rogers, & Otto, in press).

4. *Communicate effectively.* Risk communication provides an important link between risk assessment and decision-making. Several risk communication guidelines have previously been offered (Heilbrun et al., 1999). These include: (a) use plain language and avoid technical jargon, (b) clearly state the purpose of the task in the beginning of the communication, (c) clearly describe the procedures used in the assessment, (d) describe the results of the risk assessment in terms of their consistency with other sources, (e) summarize the data that form the basis for opinions and recommendations; if forced to frame the conclusion in terms of "dangerous" or "not dangerous," additional clarifying language should include the nature of the harm or target behavior, risk factors, protective factors, and risk level, (f) specify over what periods of time the assessment is intended to be projected and the level of assessed risk for each period, (g) base predictions on actuarial data when available, (h) management recommendations should identify dynamic risk factors and describe the relevant interventions to make to reduce the impact of each risk factor, (i) recommendations should distinguish imminence, risk and nature, frequency and severity of potential violence, (j) include cautionary and explanatory language in written reports to direct the decision maker's attention to the nature of risk assessment, (k) when an expert is asked "will he be violent?", refer to relevant language in the report, indicate it is misleading to answer "yes" or "no," reply "it depends" and describe the factors on which it depends, (l) answer the question "is he/she dangerous?" by referring to the relevant language in the report, replying "it depends,"

ignoring the term "dangerous" and describing the risk of the target behavior within the specified time, or asking for clarification of the meaning of "dangerous."

5. *Incorporate "conditional" (specific to condition) and "contingent" (it depends) language into violence risk assessment and communication.* When the influence of situation on risk is noteworthy, it is useful to specify such risk-enhancing situations. It may also be useful to draw contingent conclusions, specifying the risk factors or protective factors that will, when present, increase or diminish an individual's risk of violence.

6. *Link risk assessment, risk reduction, and decision-making when appropriate.* When the task is risk reduction, it is helpful to consider how dynamic risk factors, derived from their application to previous acts of violence, can be reduced through planned intervention. It is also useful to consider how such risk factors change over the course of such intervention, and how the status of each may apply to risk-relevant decisions. Risk management can be used to plan interventions, monitor progress, update risk status judgments, and make decisions (e.g., conditional release or release on parole, and revocation of release). This is consistent with both the public safety and rehabilitation goals of corrections, and may provide a useful approach toward planning to address such goals with individuals under correctional jurisdiction.

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