

Resource Document on Psychiatric Violence Risk Assessment

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Approved by the Joint Reference Committee, October 2011

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1 Introduction

The APA published a Task Force report, "Clinical Aspects of the Violent Individual," in 1974 (1). Since then, the assessment of violence risk by psychiatrists has assumed increased prominence (2, 3). At the same time, significant changes have taken place both in the contexts in which psychiatrists assess risk and in the techniques that help them do so.

Although violence risk assessment has become more prominent in the last 40 years, assessing the various forms of clinical risk has always been integral to psychiatry. It is a necessary part of providing safe and effective outpatient psychiatric care. It is essential element also of proper decision making around hospital admission and discharge and of providing a safe environment to patients and those who care for them. Risk assessment and risk management

are practiced in a diverse array of settings, including emergency rooms, hospital consultation services and outpatient clinics. Like other aspects of psychiatric practice, risk assessment is a potential source of legal liability.

Psychiatric risk assessments are also used by courts to help them make a range of important decisions, including the involuntary commitment of patients to hospitals and those concerning child custody. In criminal cases, psychiatric judgments inform decisions concerning the placement of mentally disordered defendants prior to trial and the sentences the same defendants receive if convicted (4). Often, as with civil commitment proceedings and the appointment of a conservator, psychiatrists have to provide evidence on risk while continuing to provide care to the patient. As with other aspects of risk assessment in legal settings, the needs of courts can present ethical challenges to clinicians which are different from those encountered in other areas of psychiatric practice.

This document reviews the changes that have occurred since 1974 in the context in which psychiatric risk assessment is conducted, the processes by which risk is assessed, the accuracy that can be expected of psychiatrists seeking to assess risk and the ethics of risk assessment. The general principles outlined here are intended to provide a background to the detailed descriptions of risk assessment and management covering particular patient groups, such as children and adolescents, and particular areas of psychiatric practice, such as psychiatric report writing (5), that have been published since 1974.

2 The Changing Context of Violence Risk Assessment in Psychiatry

Temporal trends in the locus of psychiatric care in the United States have had a profound effect on the context of and demands on violence risk assessment (6). When most psychiatric care was provided in closed psychiatric institutions, much of the focus of violence risk assessment was on the risk of release of patients, risk of increasing freedom to leave restricted settings or the risk of violence perpetration within institutions. Risk assessment was grounded in the knowledge of the patient populations served, the staff capabilities and the hospital medical record—all imperfect, but, arguably, predictably so.

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As deinstitutionalization advanced with the depopulation of state hospitals from their peak census of 550,000 in 1955, patients moved from hospitals to the community or, as some have argued, were “trans-institutionalized” to other institutions such as adult care facilities and criminal justice settings (7,8). Community mental health centers were often unprepared to accept the responsibility for the most impaired patients. Many followed a demedicalized “social service model” with little capacity to provide comprehensive psychiatric evaluations or effective care. The staffing patterns of mental health centers reflected this medical de-emphasis, with marked reductions in psychiatrist and nursing manpower. This new context of violence risk assessment relied on information from a markedly de-professionalized workforce, found patients in largely poor, often criminogenic and predatory neighborhoods and relied on diffuse decentralized record keeping.

At the same time private and public hospital bed capacity continued to shrink—with state and public hospital capacity for a growing population declining to well under 100,000 beds by the turn of the 21st century. Indeed private psychiatric bed capacity also shrank as mental health managed care approaches dramatically reduced private insurance reimbursement and the demand for hospital admission (9). Hospital beds and reimbursement for all privately insured psychiatric care contracted. For example from 1988 to 1998 the portion of the insurance dollar spent on mental health care was dramatically reduced from roughly 6% to 3%. Limited access to hospitalization, fierce pressure to discharge and limit lengths of hospital stays and discharges to limited privately insured treatment all became critical features of this new risk assessment landscape.

The locus of psychiatric care has shifted also. The growing number of people with mental illness in the criminal justice system has expanded the role of the traditional “correctional psychiatrist.” Once focused on evaluation and treatment, psychiatrists in a range of criminal justice settings now increasingly contribute to diversion programs, including mental health courts, and to the mental health treatment of clients on parole and probation.

Starting in the 1960s, while many of the larger psychiatric hospitals were closing, involuntary commitment laws swung away from a “need for treatment” standard to a narrower “dangerousness” standard. In many states, “dangerous to self or others” became the sole or predominant justification for involuntary hospital commitment and, for a variety of reasons, involuntary commitment became a criterion for admission to both public and private psychiatric hospitals (10). Violence risk thus became a means of accessing services for patients, giving clinicians a reason to lower the threshold at which they detected it. At the same time, countervailing pressures

toward shorter hospital stays nudged those managing discharges to accept higher levels of risk for community placement. These countervailing pressures undoubtedly exerted a corrosive effect on the maintenance of consistent standards in violence risk assessment.

The California Supreme Court’s decision in *Tarasoff* (11) confirmed that harm caused by patients to third parties could result in judgments against psychiatrists, creating further pressure for risk assessments to prevent such harm. In the backdrop to these specific psychiatric legal concerns, the growing trend toward medical malpractice and other litigation, regulatory pressures related to disclosure of protected health information and other confidentiality constraints propelled medical practice toward growing risk aversiveness. Violence risk assessments by psychiatrists take place in a social climate where heightened scrutiny over all decision making is now the norm, a situation which is not set to change soon. One challenge for U.S. psychiatry in the first half of the 21st century is to respond to this climate in a way that continues to ensure the wellbeing of its patients.

3 The Process of Violence Risk Assessment

3.1 General

Much of violence risk assessment in psychiatry is invisible, carried out routinely by clinicians in the course of their work. Violence risk is one of many considerations that inform a range of decisions from admission to hospital to the most appropriate form of outpatient care. Even when risk of harm to others becomes a focus of the doctor’s interaction with his or her patient, the principles underlying its assessment are the same as those underlying psychiatric practice more generally. An evaluation will be based on the result of taking a history and examining a patient’s mental state.

Accurate assessment depends on the availability of accurate information. This will usually include information obtained from collateral sources, such as medical records, informants and, where the police have been involved, police reports. Assessments carried out at the point of admission to hospital are of necessity often limited in these respects, and unresolved issues of risk, like other clinical issues unresolved at the time the patient enters the hospital, require continued attention in the course of an admission. Additional investigation, including psychological testing, may be required. Particularly with regard to specialist areas of practice, such as assessing the risk of sexual offending, it may be appropriate to ask colleagues and specialist services to consult on the case.

Sometimes, psychiatric assessments of violence risk are conducted to address an explicit question, such as whether the risk to others can be managed in a community setting. In such instances the most useful assessments are usually conducted in response to questions that are clear, specific and clinically focused. People's mental states change, as do the circumstances in which they find themselves, and assessments that focus on the short term are less likely to be rendered irrelevant by subsequent changes in either of these. The most helpful risk assessments not only describe the situation at the time of the evaluation but what can be done to mitigate risk in the future.

3.2 Correlation and Cause in Assessing Risk

Psychiatrists assessing violence risk evaluate cases in several different ways. First, they look for the presence of factors associated with violence. Some of what clinicians know about the correlates of violence derives from empirical research. While empirical research can increase confidence that a risk factor is associated with violence, it cannot be relied upon to identify all such risk factors. To be confirmed empirically, risk factors have to occur frequently enough to be studied and be capable of being measured. Some reported risk factors, such as Capgras phenomena (12-14), are uncommon while others concern interpersonal relationships whose complexity renders them difficult to define for research purposes (15).

The correlation-based data available in the criminological and psychiatric literature suggest that risk factors for violence act differently in some respects among people with mental disorders compared with the general population. The tendency for violent acts to be conducted by men is still present but less strong, first offenses occur later and the likelihood of acting violently does not fall off so rapidly with advancing age (16). The protective effect of stable relationships may also be less (17,18), particularly where someone's social and occupational functioning is poor (19). In other respects, however, the correlates of violent offending in the general population apply also to people who suffer from mental disorders (20).

Thus crimes of violence are more often committed by younger males and recidivism for violent crimes is less than for property crime. Substance abuse is associated with both violent and nonviolent crime. The more serious the crime, generally speaking, the lower the risk of repetition, although the incapacitating effects of long sentences make direct comparisons of reoffending rates problematic. First offenders, on average, fare better, in terms of reconviction, following conviction than do people with extensive criminal records. Unemployment, living in a high-crime neighborhood and having antisocial peers all add substantially to risk (20).

The last 40 years has seen the publication of empirical studies describing in greater detail than was available previously the risk factors that apply in particular settings

and patient groups. Those that have been identified in general psychiatric settings (17, 21, 22) are listed in Table 1.

Table 1. Risk Factors for Violence in General Psychiatric Settings

Past history	Present circumstances and mental state
Prior violence	Male under 40
Prior arrest	Noncompliance with treatment
Young age at time of first arrest	Access to weapons
Drug and/or alcohol abuse	Role of significant other and/or caretaker (either provocative or not protective)
Cruelty to animals and people	Sees self as victim
Fire setting	Lack of compassion/empathy
Risk taking	Intention to harm
Behavior suggesting loss of control or impulsivity	Lack of concern over consequences of violent acts

In other settings additional factors may be important. In emergency rooms and inpatient units an aggressive attributional style (hostile, suspicious, or believing others intend harm), command hallucinations to harm others and a poor therapeutic alliance have been implicated (23-25). Some paraphilias are risk factors for sexual offending (26).

A second way in which psychiatrists assess risk, in addition to looking for risk factors, is by combining their understanding of the patient's personality, symptoms and environment with their understanding of the likely causes of violence. Where someone suffers from persecutory delusions that concern their spouse, for instance, there will usually be available no empirical data from research conducted on samples of similar patients demonstrating a correlation between continued cohabitation and violence. Yet the clinician's understanding of the likely causes of violence may still allow him or her to conclude that continued cohabitation presents a risk (27).

Pollock offers one description of the processes involved:

The skillful clinician assessing dangerous behavior formulates and tests a series of clinical hypotheses to define patterns of violence in the individual's history. Once defined, these patterns can be applied to the explanation and prediction of violence in that individual (28 at 105).

Approaches to risk assessment based on explanations of this type seem to rely heavily on induction, because they require the clinician to draw conclusions about the future from past observations. Future conditions will never exactly mimic the conditions in which behavior has occurred in the past, yet the circumstances of other episodes of

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violence, whether in the patient's case or more generally, will usually be relevant and sometimes be critical. Notwithstanding the uncertainty inherent in this process, one task of risk assessment is to determine the relevance of past patterns.

Clinicians trying to work out what might cause future violence are guided also by the understanding of patterns of behavior that they develop in their training and through clinical practice (29, 30). Claims that "causal" ways of thinking are better than correlation-based ones at predicting rare events (31) have not been confirmed by empirical research. Instead, the persistence of causal approaches when clinicians think about risk may relate to the fact that many of the other judgments required in medicine are causation-based also: establishing why someone has symptoms, for instance, or deciding which further investigations are needed to complete an evaluation. Because clinical practice requires each of these judgments to be integrated into a single plan, it may be that clinicians find it helpful to use the same causal heuristic in assessing risk that they use in other aspects of their work.

3.3 Structure in Risk Assessment

Both correlation- and cause-based approaches to risk assessment can be structured. Structure can be provided in more than one way. Actuarial instruments such as the VRAG (32) formalize the process by which the simultaneous presence of more than one correlate of violence increases the perception of risk. They do this by rating variables such as poor school adjustment and alcohol problems and combining these mathematically to generate an overall score or category. A different type of instrument relies on "structured professional judgment." The HCR-20 (33), for instance, encourages the clinician to assess the relevance of a list of pre-identified variables but also to take into account other information, including factors he or she considers unique to the case, before allocating a case to a risk category.

Structured approaches are sometimes treated as a distinct category within risk assessment but are better seen as differing from unstructured methods in degree rather than kind (34). Even in the absence of a structured instrument, clinicians use structures derived from their professional training to take a history and to examine the patient. Some of these structures appear in practice guidelines. Structure offers the same advantages to risk assessment that it offers to other areas of clinical practice. It is a means of integrating and communicating information (35). It can be a useful *aide memoir*, particularly when the clinical question being addressed is unusual (some risk factors apply particularly to sex offences, for instance: see page 3, column 2). Learning how to structure the clinical approach is a key aspect of clinical training (36).

Examples of structured instruments for the assessment of violence risk are listed in Table 2 (a).

Table 2. Structured Approaches to Violence Risk Assessment

<u>Name</u>	<u>Original Description</u>	<u>Information on use</u>	<u>Number of items</u>	<u>Form of result</u>
PCL-R	37	38	20	Score
HCR-20	33	39	20	Category derived from clinical interpretation of score
VRAG	40	41	12	Category derived from score
SIR	42	43	15	Category derived from score
Static-99	44	45	10	Category derived from score
LSI-R	46	47	54	Category derived from score
COVR	48	49	Variable ^b	Category derived from computer program

The time taken to complete these instruments varies with the amount of material reviewed. Further information on their use is provided in the references cited in the Table.

Although the majority of research on the Static 99 has been in relation to sexual offending, all of the instruments in Table 2 have been tested in a range of settings and found to predict violence in a range of patient groups. Different instruments have been developed to help assess risk in particular treatment settings, such as inpatient units (50), and specific patient groups (51). The number and scope of these structured approaches to risk assessment has increased substantially since the APA Task Force Report, "Clinical Aspects of the Violent Individual," was published in 1974 (52, 53). One recent review counted 126 (54).

When structured approaches combine those variables into risk assessment instruments they have the benefit of allowing the evaluator to make the results of his or her eval-

^aSix structured risk assessment instruments had been the subject of 50 or more articles in the psychiatric and psychological literature by March 10, 2011. Being the subject of an article is defined here as the simultaneous appearance of instrument's acronym and "risk assessment" in a search limited to peer-reviewed English language publications listed by *PsycINFO*, the abstract database administered by the American Psychological Association. Also included in Table 2 are details of an alternative approach to structured assessment, the COVR, which uses electronic software to guide the content of the interview.

^bThe "Variable" number of items in the COVR is the result of the software generating different questions depending on the answer given by the subject to a previous one.

uation transparent: with the necessary information on how items were completed and combined the reader can see how the conclusions were arrived at. Early suggestions that structured approaches are also more accurate (55,56) were initially criticized on the grounds that many of the predictions included in early comparisons did not concern violence (57). Subsequent research seemed to confirm, however, that structured approaches perform better, on average, than unstructured ones when violence risk is looked at separately (58), at least when the follow-up period covers months or years. Recent reviews have reached the same conclusion (53).

This combination of transparency and empirically demonstrated accuracy has contributed to an increased use of structured instruments since 1974, particularly by specialist services. The degree to which structured approaches will be used in the future will ultimately depend on whether they benefit care. Several issues warrant further investigation. First, the evaluations of risk that are required in hospital and outpatient practice frequently concern hours, days or weeks. There is a shortage of empirical data to indicate whether the long term accuracy of structured methods is matched by their accuracy over these shorter periods (59). Some of the reasons for the relative lack of research in this area are discussed in Section 4.

Second, researchers seek to limit the amount of missing data in follow-up studies. Clinicians have little option but to work with a lot of it. Their response to not having a collateral account of someone's criminal record, for instance, is presumably unstructured, yet the performance of clinicians in the emergency room seems not to be very different from that of structured instruments (60, 61). We do not yet know to what extent the performance of structured instruments is adversely affected by the absence of some of the information necessary to complete the items. Third, although the number of validations has grown rapidly in recent years, a clinician will not always have available an instrument that has been shown to be effective in measuring risk in the relevant patient group.

Fourth, events can make the results of using a rating scale no-longer applicable. Physical incapacity (the so-called "broken leg exception" (62) to using a score as an indicator of risk) is an unusual, though often quoted, example. More common events, such as placement in a supervised setting, can be equally important. Finally, structured instruments generate a risk category (typically, low, medium and high) or a score. Clinical risk assessments address aspects of clinical management, for instance whether someone's violence risk is sufficiently well managed for them to move to a supported apartment or whether it requires that they be admitted to the hospital. There is not yet available a tested and reliable means by which a score can be applied to decisions such as these. The process is further complicated by the fact that placement decisions are usually influenced by many

factors, not just risk. Not all services and not all neighborhoods have the resources to support the same type of psychiatric provision, making the treatment implications of a particular score or category still more difficult to describe consistently.

4 The Accuracy of Risk Assessment

4.1 Prediction and management

This section reviews the accuracy of violence risk prediction in mental health settings. Making predictions is not the same as managing violence risk. Managing violence risk involves a range of activities, from prescribing appropriate treatment to ensuring a safe environment, that have little to do with prediction. Studies of predictive accuracy are nevertheless important. They allow new approaches to violent risk assessment to be tested and offer some insight into the likely future role of risk assessment in clinical practice.

Studies of the predictive accuracy of all types of violence risk assessment face obvious methodological difficulties when they are conducted in treatment settings. The accuracy of a prediction is measured in terms of whether the subject of that prediction engages in violence or not. But when a clinician determines that there is a high risk of violence, there is an ethical and clinical obligation to intervene. To the extent to which the intervention is successful, the predictive accuracy will be diminished and the original assessment of high risk will appear to be a "false positive." (63) Most examinations of predictive validity, therefore, are follow-ups of groups of patients who have already been either admitted to or discharged from the hospital. This section reviews: i) what has been learned about the predictive accuracy of risk assessment since the American Psychiatric Association's Task Force report of 1974, ii) the practical implications of current levels of accuracy, and iii) the degree of deviation from this level of accuracy in particular situations and with particular patient groups.

4.2 Predictive Accuracy of Psychiatric Violence Risk Assessment

The accuracy of validated structured and clinical approaches to the prediction of violence in people suffering from mental disorders, as measured by the "Index of Effectiveness" (which derives from sensitivity and specificity), improved between 1970 and 2000. The improvement is shown in Figure 1 (*following page*).

The improvement was limited and characterized by a wide range in the published results.

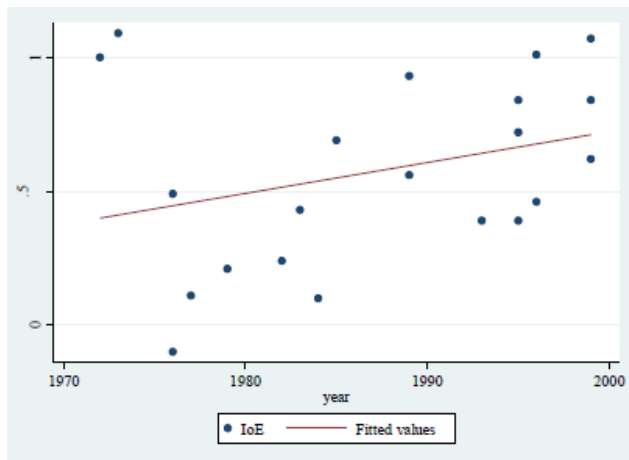
Research since 1974 has reduced the number of patient groups for whom no data are available regarding the accuracy of prediction and it is now clear that comparable levels of predictive accuracy occur in a wide range of

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circumstances. Thus the HCR-20 has an AUC (c) of 0.72 for men and 0.77 for women in nonforensic populations (65).

The accuracy of structured methods also generalizes outside of North America: a Danish validation of the VRAG

Figure 1. Indices of effectiveness (IoE) of validated structured and clinical prediction studies 1970-2000 (see Buchanan and Leese, 2001, 64)



reported an AUC of 0.73 (66). Newer instruments perform similarly to older ones (67). A replication of the iterative classification tree, the algorithm on which Classification of Violence Risk (COVR) software (48) operates, was published in 2005 and demonstrated an AUC of 0.63 and 0.70, depending on the outcome measure (68).

4.3 The Practical Implications of Current Levels of Accuracy

Translating these figures into numbers that are clinically meaningful is difficult, not least because the clinical judgments that they might inform, such as whether or not to admit a patient to the hospital, derive from many considerations, not just one. One approach is to ask, if a particular instrument was used as a screening test and those identified as likely to be violent were not discharged, over any given period how many patients would need to be detained to prevent one unwanted act?

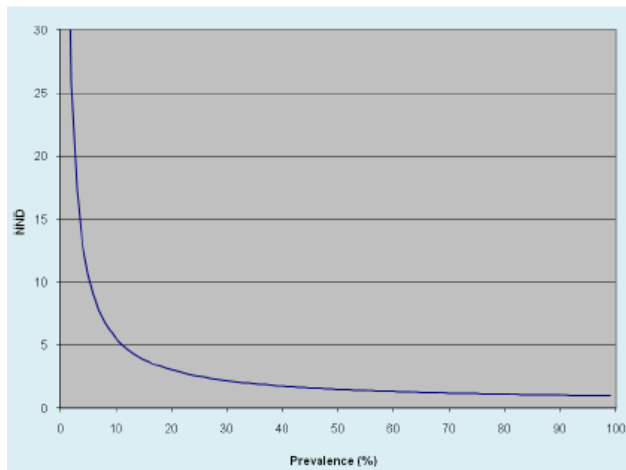
This statistic, the Number Needed to Detain (NND), is the inverse of positive predictive value (PPV) and analogous to “number needed to treat”. It derives from sensitivity, specificity and base rate (64). The VRAG has a sensitivity of 0.73 and a specificity of 0.63 (69). Used as a

^cThe AUC, or area under the Receiver Operating Characteristic curve, is a measure of the predictive accuracy of a screening test, in this case a screening test designed to detect violent offending. The AUC varies between 0.5 and 1 and is the probability that a randomly selected offender will have a higher score on the screening test than a randomly selected nonoffender.

screening test where the base rate of violence is 10% and where, as a result, an unselective approach would lead to the detention of 10 people in order to prevent one from acting violently, the VRAG would require the detention of 5 people to achieve the same end.

Assuming this level of predictive accuracy (in terms of sensitivity and specificity) from an instrument or a clinician making a prediction, the NND rises as the base rate of violence in the population falls (see Figure 2). This means that the number of mistakes is higher when the acts

Figure 2. Relationship between Number Needed to Detain (NND) and Prevalence at Fixed Sensitivity (0.73) and Specificity (0.63) (see Buchanan, 2008) (70).



that are sought to be prevented are unusual, as is the case with serious violence in most patient populations. At the base rate reported in the Epidemiologic Catchment Area (ECA) study, where 17% of the sample self-reported acting violently in the previous 12 months, the NND to prevent an act of violence is 3.5. Violence as defined by the ECA study did not require injury. When injury is required by a definition, the base rate of violence falls. In the CATIE study, the 6-month prevalence of assault with a weapon or causing serious injury was 3.6% (71). Here the NND at a sensitivity of 0.73 and a specificity of 0.63 is 15.

This is a different phenomenon from another noted for many years, that whereby clinicians tend to “overpredict” violence. Overprediction probably stems, not from knowledge of base rates, but from clinicians viewing different types of mistakes differently: they would rather keep someone in the hospital who would not act violently than release someone who would. Apart from having less serious consequences, admitting someone who would not act violently is amenable to review and correction. Because NND is usually calculated by treating both types of error equally and is lowest when this is done, any tendency to overpredict in clinical settings will raise the NND. In

everyday practice, the NND is probably higher than Figure 2 indicates also because admission to hospital, whether voluntary or compulsory, prevents only some violent incidents, not all of them. Inpatient violence remains a significant clinical problem.

An additional consequence of the relationship between NND and prevalence is that at low base rates prevalence becomes more important, and the psychometric qualities of a test less important, in determining the number of correct predictions. At the 3.6% base rate in the CATIE study a 20% increase in sensitivity, all other things being equal, reduces the NND from 15 only to 13.

4.4 Particular Situations and Particular Patient Groups

A single approach to risk assessment can have different predictive accuracy in different patient populations (72, 73), raising the possibility that higher levels of accuracy might be achieved if risk assessments were restricted to particular situations. A number of studies have investigated whether accuracy varies with the time over which violence is sought to be predicted and, in particular, whether short term predictions are more accurate than long term ones (74-76). The question is complicated by methodological factors: long term follow-up studies detect more violence and some measures of predictive accuracy, such as positive predictive value, rise with the base rate of violence in the population. Studies that measure predictive accuracy using techniques that are unaffected by base rates, such as the AUC, suggest that, at least for periods longer than three months, shorter term predictions are not more accurate than longer term ones (59).

From a clinical perspective, more important than predictive accuracy over months or years is the accuracy of risk assessments that cover the coming days or weeks (77, 78). There are no data from community settings to describe the accuracy of such assessments. This is partly a consequence of the relatively low incidence of serious violence over short time periods and the consequent need for very large samples in order to demonstrate statistically significant correlations. Hospital studies suggest that for inpatient settings the predictive accuracy of structured approaches is maintained when the risk period is reduced to weeks or months. They suggest also that symptoms of mental illness, including delusions and hallucinations, are then of particular importance (79).

It is possible also that particular types of offending might “breed true”, and that an individual’s behavior on one occasion can be used to predict the nature and severity of future violence. In principle, this could provide an opportunity to manage risk by identifying particular situations and potential victims. Criminological research demonstrates little of the “specialization” in offending that would allow this, however (80-82), and patients who offend after discharge from maximum secure hospitals seem to display the same differences in conduct over successive offenses as the general population (83). Finally, it is not

clear that the limited degree of specialization that does exist helps. While sexual offenders specialize more than most (84), the accuracy of risk assessments in this population is similar to that for other people who commit crimes (81).

5 The Ethics of Risk Assessment

Assessing the risk of violence is a common clinical task, particularly in the context of hospital admission and discharge. These areas of psychiatric practice can present distinct ethical challenges because they require clinicians simultaneously to take into account interests that sometimes conflict, such as encouraging patient autonomy and ensuring the safety of others. In many settings these challenges coincide with others that are also integral to the provision of quality care. In applying civil commitment criteria, for instance, clinicians are expected to take into account the wellbeing of both the patient and other people and to do so without unnecessarily restricting the patient’s freedom.

In some instances, however, violence risk assessments take place in settings different from those in which psychiatry is usually practiced. When risk assessments form part of court ordered evaluations they are often conducted without the consent of the person being evaluated and outside a therapeutic relationship. Even here, a risk assessment will sometimes be the first step toward someone receiving necessary treatment (85). At other times, as is the case in evaluations for sexually violent predator (SVP) commitment, the potential benefit to the individual will be less clear. Violence risk assessments are also requested as part of attempts to improve the health of high risk groups. These attempts include the making of residential services or financial support dependent on medication compliance. Here the ethical situation is complicated by the controversial nature of the balance that is being sought between clinical benefit and coercion.

The ethical dilemmas facing psychiatrists practicing in legal settings remain the subject of extensive debate (86-92). Important factors for the clinician to consider when asked to assess risk of harm to others in a legal environment include whether there is evidence that the person suffers from a mental disorder, how likely it is that the person will be able to receive treatment following the evaluation and whether this is a case where mental health variables, such as delusions, seem to contribute significantly to the possibility of violence. It will also usually be relevant whether anything can be done medically to ameliorate the risk (91, 93). Ethical guidelines do not preclude evaluations that may contribute to an outcome, such as a longer sentence, that the person being evaluated regards as unfavorable provided that the purpose of the evaluation has been explained to him or her in advance (94, 95). The task of showing proper respect for the person

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being evaluated demands careful reflection, however, and cannot be achieved solely by adherence to rules such as this (96, 97). The American Academy of Psychiatry and the Law publishes guidelines for forensic psychiatric practice that apply to risk assessment in legal settings (98).

In more traditional clinical settings a number of steps will usually assist the clinician seeking to meet his or her ethical obligations in the practice of violence risk assessment. First, he or she should be aware of the relevant literature, including that relating to the utility and limitations of structured instruments designed to help assess violence risk. Second, the clinician should conduct an appropriately thorough assessment, gathering all available relevant information. Third, he or she should approach the risk assessment with objectivity and honesty, showing proper respect for all of the parties involved. Finally, an ethical approach to risk assessment requires the clinician to demonstrate an appropriate degree of modesty regarding the level of accuracy that can reasonably be expected of psychiatric assessments of violence risk.

6 Conclusions

The increased prominence of violence risk assessment in psychiatry since the APA published its Task Force report in 1974 has not altered the need for risk assessment to be practiced in a way that respects other aspects of clinical care. Nor has the development of new methods of assessing risk removed some longstanding challenges faced by those seeking to manage risk. Predicting human behavior is in many respects difficult, and predicting violent behavior is not an exception to this rule.

This does not mean that no improvements to current practice are possible. Research identifying dynamic risk variables that are responsive to intervention has the potential to benefit patients (99, 100). It may also be that, in future, structured approaches will allow clinicians to develop treatment approaches that more effectively reduce risk and that changes measured using such instruments will be used to guide treatment and monitor progress (101, 102). At present, the principle challenges to the more widespread adoption of structured methods relate to clinicians' need to respond to changing circumstances and a changing clinical picture, as well as to the ability of instruments to provide information in a form that can be integrated into the complex judgments that inform clinical management.

While research will continue to advance, the pervasive influence of base rates means that, at the base rates of violence seen in most clinical settings and for the foreseeable future, no technique will be available to identify those who will act violently that will not

simultaneously identify a large number of people who would not. Ultimately, the criterion governing the adoption of new approaches to violence risk assessment in psychiatry should be the same as that governing the adoption of new approaches elsewhere in medicine: whether they benefit clinical care.

Disclosures

Dr. Schwarz is a consultant to Novartis Pharmaceuticals and receives research funding from Eli Lilly. All other authors report no financial relationships with commercial interests. Drs. Buchanan and Norko acknowledge salary support from the Connecticut Department of Mental Health and Addiction Services.

References

1. American Psychiatric Association: Task Force Report 8: Clinical Aspects of the Violent Individual. Washington, DC, American Psychiatric Association, 1974
2. Mossman D: Understanding risk assessment instruments, in Textbook of Forensic Psychiatry (ed 2). Edited by Simon RI, Gold LH. Washington, DC, American Psychiatric Press, 2010, pp 563-586
3. Shah S: Dangerousness: a paradigm for exploring some issues in law and psychology. *Am Psychol* 1978; 33:224-238
4. Hall R, Ebert R: Violence Prediction: Guidelines for the Forensic Practitioner (ed 2). Springfield, IL, Charles Thomas, 2000
5. Buchanan A, Norko M: Violence risk assessment, in The Psychiatric Report. Edited by Buchanan A, Norko M. Cambridge, Cambridge University Press, 2011, pp 224-239
6. Steadman HJ: From dangerousness to risk assessment of community violence: taking stock at the turn of the century. *J Am Acad Psychiatry Law* 2000; 28:265-271
7. Mechanic D: Mental health services then and now. *Health Affairs* 2007; 2:1548-1550
8. Grob G: Deinstitutionalization of the mentally ill. Policy triumph? *New Jersey Medicine* 2004; 101:19-30
9. National Association of Psychiatric Health Systems: Health Care Plan Design and Cost Trends-1988 through 1998 accessed at: <http://www.naphs.org/news/hay99/hay99.pdf>
10. Appelbaum P: Almost a Revolution: Mental Health Law and the Limits of Change. New York, Oxford University Press, 1994
11. Tarasoff v Regents of the University of California. 551 P 2d 334 (Cal 1976)
12. Christodoulou G: Syndrome of subjective doubles. *Am J Psychiatry* 1978; 135:249-251
13. Tomison A, Donovan W: Dangerous delusions: the Hollywood phenomenon. *Br J Psychiatry* 1988; 153:404-405
14. Silva J, Leong G, Weinstock R, Boyer C: Capgras syndrome and dangerousness. *Bull Am Acad Psychiatry Law* 1989; 17:5-14
15. Resnick P: Child murder by parents: a psychiatric review of filicide. *Am J Psychiatry* 1969; 126:325-334
16. Häfner H, Boker W: Crimes of Violence by Mentally Disordered Offenders. Cambridge, Cambridge University Press, 1973
17. McNiel D, Binder R, Greenfield T: Predictors of violence in civilly committed acute psychiatric patients. *Am J Psychiatry* 1988; 145: 965-970
18. Mullen P: Assessing risk of interpersonal violence in the mentally ill. *Advances in Psychiatric Treatment* 1997; 3:166-173
19. Swanson J, Swartz M, Estroff S, Borum R, Wagner R, Hiday V: Psychiatric impairment, social contact, and violent behavior: evidence from a study of

- outpatient-committed persons with severe mental disorder. *Soc Psychiatry Psychiatr Epidemiol* 1998; 33:S86-S94
20. Bonta J, Law M, Hanson K: The prediction of criminal and violent recidivism among mentally disordered offenders: a meta-analysis. *Psychol Bull* 1998; 123:123-142
 21. McNeil D, Binder R: Correlates of accuracy in assessing violence risk. *Am J Psychiatry* 1995; 152:901-906
 22. Monahan J, Steadman H, Silver E, Appelbaum P, Robbins P, Mulvey E, Roth L, Grisso T, Banks, S: *Rethinking Risk Assessment: The Macarthur Study of Mental Disorder and Violence*. New York, Oxford, 2001
 23. Beauford J, McNeil D, Binder R: Utility of the initial therapeutic alliance in evaluating patients' risk of violence. *Am J Psychiatry* 1997; 154:1272-1276
 24. McNeil D, Eisner J, Binder R: The relationship between command hallucinations and violence. *Psychiatric Serv* 2000; 51: 1288-1292
 25. McNeil D, Eisner J, Binder R: The relationship between aggressive attributional style and violence by psychiatric patients. *J Consult Clin Psychol* 2003; 71:399-403
 26. Hanson K and Bussière M: Predicting relapse: a meta-analysis of sexual offender recidivism studies. *J Consult Clin Psychol* 1998; 66:348-362
 27. Marra H, Konzelman G, Giles P: A clinical strategy to the assessment of dangerousness. *Int J Offender Ther Comp Criminol* 1987; 31:291-299
 28. Pollock N, McBain I, Webster C: Clinical decision making and the assessment of dangerousness, in *Clinical Approaches to Violence*. Edited by Howells K, Hollin C. Chichester, UK, John Wiley, 1989, pp 89-115
 29. Garb H: *Studying the Clinician: Judgment Research and Psychological Assessment*. Washington, DC, American Psychological Association, 1998
 30. Skeem J, Mulvey E, Lidz C: Building mental health professionals' decisional models into tests of predictive validity: the accuracy of contextualized predictions of violence. *Law Hum Behav* 2000; 24:607-628
 31. Sreenivasan S, Korkish P, Garrick T, Weinberger L, Phenix A: Actuarial risk assessment models: a review of critical issues related to violence and sex-offender recidivism assessments. *J Am Acad of Psychiatry Law* 2000; 28:438-448
 32. Harris G, Rice M, Quinsey V: Violent recidivism of mentally disordered offenders: the development of a statistical prediction instrument. *Crim Justice Behav* 1993; 20:315-335
 33. Webster C, Douglas K, Eaves D, Hart, S: *HCR-20: Assessing Risk for Violence (Version 2)*. Burnaby, BC, Canada, Mental Health, Law, and Policy Institute, Simon Fraser University, 1997
 34. Monahan J: Structured risk assessment of violence, in *Violence Assessment and Management*. Edited by Simon R, Tardiff K. Washington, DC, American Psychiatric Publishing, 2008, pp 17-33
 35. Skeem J, Golding S, Cohn N, Berge G: Logic and reliability of evaluations of competence to stand trial. *Law Hum Behav* 1998; 22:519-547
 36. McNeil D, Chamberlain J, Weaver C, Hall S, Fordwood S, Binder R: Impact of clinical training on violence risk assessment. *Am J Psychiatry* 2008; 165:195-200
 37. Hare R: *The Revised Psychopathy Checklist*. Toronto, Multi-Health Systems, 1991
 38. DeMatteo D, Edens J, Hart A: The use of measures of psychopathy in violence risk assessment, in *Handbook of Violence Risk Assessment*. Edited by Otto R, Douglas K. New York, Routledge, 2010, pp 19-40
 39. Douglas K, Reeves K: The HCR-20 violence risk assessment scheme: Overview and review of the research, in *Handbook of Violence Risk Assessment*. Edited by Otto R, Douglas K. New York, Routledge, 2010, 147-185
 40. Harris G, Rice M, Quinsey V: Violent recidivism of mentally disordered offenders: the development of a statistical prediction instrument. *Crim Justice Behav* 1993; 20:315-335
 41. Quinsey V, Harris G, Rice M, Cormier C: *Violent Offenders: Appraising and Managing Risk (ed 2)*. Washington, DC, American Psychological Association, 2006
 42. Nuffield J: The 'SIR Scale': some reflections on its applications. *Forum on Corrections Research* 1989; 1:19-22
 43. Bonta J, Harman W, Hann R, Cormier R: The prediction of recidivism among federally sentenced offenders: a re-validation of the SIR scale. *Can J Criminol* 1996; 38:61-79
 44. Hanson R, Thornton, D: (2000) Improving risk assessments for sex offenders: a comparison of three actuarial scales. *Law and Human Behavior* 24, 119-136
 45. Anderson D, Hanson R: Static-99: An actuarial tool to assess risk of sexual and violent recidivism among sexual offenders, in *Handbook of Violence Risk Assessment*. Edited by Otto R, Douglas K. New York, Routledge, 2010, pp 251-267
 46. Andrews D, Bonta J: (1995). *Level of Service Inventory-Revised*. Toronto: Multi-Health Systems
 47. Andrews D, Bonta J, Wormith J: The Level of Service (LS) assessment of adults and older adolescents, in *Handbook of Violence Risk Assessment*. Edited by Otto R, Douglas K. New York, Routledge, 2010, pp 199-225
 48. Monahan J, Steadman H, Appelbaum P, Grisso T, Mulvey E, Roth L, Robbins P, Banks S, Silver E: The classification of violence risk. *Behav Sci Law* 2006; 24:721-730
 49. Monahan J: The classification of violence risk, in *Handbook of Violence Risk Assessment*. Edited by Otto R, Douglas K. New York, Routledge, 2010, pp 187-198
 50. McNeil D, Binder R: Screening for risk of inpatient violence: validation of an actuarial tool. *Law Hum Behav* 1994; 18:579-586
 51. Doren D: *Evaluating Sex Offenders*. Thousand Oaks, CA, Sage, 2002
 52. Yang M, Wong S, Coid J: The efficacy of violence prediction: a meta-analytic comparison of nine risk assessment tools. *Psychol Bull* 2010; 136:740-767
 53. Singh J, Grann M, Fazel S: A comparative study of violence risk assessment tools: a systematic review and meta-regression analysis of 68 studies involving 25,980 participants. *Clin Psychol Rev*. 2011; 31:499-513
 54. Singh J, Fazel S: Forensic risk assessment. A meta-review. *Crim Justice Behav* 2010; 37:965-988
 55. Grove W, Meehl P: Comparative efficiency of informal (subjective, impressionistic) and formal (mechanical, algorithmic) prediction procedures: the clinical-statistical controversy. *Psychol Public Policy Law* 1996; 12:293-323
 56. Grove W, Zald D, Lebow B, Snitz B, Nelson C: Clinical versus mechanical prediction: a meta-analysis. *Psychol Assess* 2000; 12:19-30
 57. Hart S, Laws D, Kropp P: The promise and the peril of sex offender risk assessment, in *Sexual Deviance: Issues and Controversies*. Edited by Ward T, Laws D, Hudson S. Newbury Park, CA, Sage, 2003, pp 207-225
 58. Ægisdóttir S, White M, Spengler P, Mautherman A, Anderson L, Cook R, Nichols C, Lampropoulos G, Walker B, Cohen G, Rush J: The meta-analysis of clinical judgment project: fifty-six years of accumulated research on clinical versus statistical prediction. *Couns Psychol* 2006; 34:341-382
 59. Mossman, D: Assessing predictions of violence: being accurate about accuracy. *J Consult Clin Psychol* 1994; 62:783-792
 60. Lidz C, Mulvey E, Gardner W: The accuracy of predictions of violence to others. *JAMA* 1993; 269:1007-1011
 61. Mossman D: Assessing predictions of violence: being accurate about accuracy. *J Consult Clin Psychol* 1994; 62:783-792
 62. Quinsey V, Harris G, Rice M, Cormier C: *Violent Offenders: Appraising and Managing Risk (ed 2)*. Washington, DC, American Psychological Association, 2006
 63. Werner P, Rose T, Yesavage J, Seeman K: (1984) Psychiatrists' judgments of dangerousness on an acute care unit. *Am J Psychiatry* 141, 263-266
 64. Buchanan A, Leese M: Detention of people with dangerous severe personality disorders. *Lancet* 2001; 358:1955-1959
 65. Nicholls T, Ogloff J, Douglas K: Assessing risk for violence among male and female civil psychiatric patients: the HCR-20, PCL:SV, and VSC. *Behav Sci Law* 2004; 22:127-158
 66. Urbaniok F, Noll T, Grunewald S, Steinbach J, Endrass, J: Prediction of violent and sexual offences: a replication study of the VRAG in Switzerland. *J Forens Psychiatry Psychol* 2006; 17:23-31
 67. Grann M, Sturidsson K, Haggård-Grann U, Hiscoke U, Alm P, Dernevik M, Gumpert C, Hallqvist J, Hallqvist T, Kullgren G, Långström N, Lotterberg M, Nordström K, Ståhl B, Woodhouse A: Methodological development: structured outcome assessment and community risk monitoring (SORM). *Int J Law Psychiatry* 2005; 28:442-456
 68. Monahan J, Steadman H, Robbins P, Appelbaum P, Banks S, Grisso T, Heilbrun K, Mulvey E, Roth L, Silver E: An actuarial model of violence risk assessment for persons with mental disorders. *Psychiatric Serv* 2005; 56:810-815
 69. Rice M, Harris G: (1995) Violent recidivism: assessing predictive validity. *Journal of Consulting and Clinical Psychology* 63, 737-748

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70. Buchanan A: (2008) Risk of violence by psychiatric patients: beyond the "actuarial versus clinical" assessment debate. *Psychiatric Services* 59, 184-190
71. Swanson J, Swartz M, Van Dorn R, Elbogen E, Wagner R, Rosenheck R, Stroup S, McEvoy J, Lieberman J: A national study of violent behavior in persons with schizophrenia. *Arch Gen Psychiatry* 2006; 63:490-499
72. Mossman D: Another look at interpreting risk categories. *Sex Abuse* 2006; 18:41-63
73. Fujii D, Tokioka A, Lichten A, Hishinuma E: Ethnic differences in prediction of violence risk with the HCR-20 among psychiatric inpatients. *Psychiatric Serv* 2005; 56:711-716
74. Binder R: Are the mentally ill dangerous? *J Am Acad of Psychiatry Law* 1999; 27:189-201
75. Hoptman M, Yates K, Patalinjug M, Wack R, Convit A: Clinical prediction of assaultive behavior among male psychiatric patients at a maximum-security forensic facility. *Psychiatric Services* 1999; 50:1461-1466
76. Monahan J: The prediction of violent behavior: toward a second generation of theory and policy. *Am J Psychiatry* 1984; 141:10-15
77. Brizer D, Crowner M, editors. *Current Approaches to the Prediction of Violence*. Washington, DC, American Psychiatric Press, 1989
78. McNiel D, Binder R: Clinical assessment of the risk of violence among psychiatric inpatients. *Am J Psychiatry* 1991; 148: 1317-1321
79. McNiel D, Gregory A, Lam J, Binder R and Sullivan G: Utility of decision support tools for assessing acute risk of violence. *J Consult Clin Psychol* 2003; 71:945-953
80. Farrington D: Human development and criminal careers, in *The Oxford Handbook of Criminology* (ed 2). Edited by Maguire, M, Morgan, R, Reiner, R. Oxford: Oxford University Press, 1997, pp 511-584
81. Hanson R, Bussière M: Predicting relapse: a meta-analysis of sexual offender recidivism studies. *J Consult Clin Psychol* 1998; 66:348-362
82. Chaiken J, Chaiken M, Rhodes W: Predicting violent behavior and classifying violent offenders, in *Understanding and Preventing Violence*. Volume 4. *Consequences and Control*. Edited by Reiss A, Roth J. Washington, DC, National Academy Press, 1994, pp 217-295
83. Buchanan A, Reiss D, Taylor P: Does "like predict like" when patients discharged from high secure hospitals re-offend? An instrument to describe serious offending. *Psychol Med* 2004; 33:549-553
84. Stander J, Farrington D, Hill G, Altham P: Markov chain analysis and specialization in criminal careers. *Br J Criminol* 1989; 29:317-335
85. Enfield R: (1987) A model for developing the written forensic report, in *Innovations in Clinical Practice: A Sourcebook*, vol. 6. Edited by Keller PA, Heyman SR, Sarasota, FL: Professional Resource Exchange, Inc., pp 379-394
86. O'Grady J: (2002) Psychiatric evidence and sentencing: ethical dilemmas. *Criminal Behaviour and Mental Health* 12, 179-184
87. Griffith E: Ethics in forensic psychiatry: a response to Stone and Appelbaum. *J Am Acad of Psychiatry Law* 1998; 26:171-184
88. Griffith E: Personal narrative and an African-American perspective on medical ethics. *J Am Acad of Psychiatry Law* 2005; 33:317-81
89. Noriko M: Commentary: compassion at the core of forensic ethics. *J Am Acad of Psychiatry Law* 2005; 33:386-389
90. Martinez R, Candilis P: Commentary: toward a unified theory of personal and professional ethics. *J Am Acad of Psychiatry Law* 2005; 33:382-385
91. Mullen P, Ogloff J: Assessing and managing the risk of violence towards others, in *New Oxford Textbook of Psychiatry* (ed 2). Volume Two. Edited by Gelder MG, Andreasen NC, López-Ibor JJ, Geddes JR. Oxford, Oxford University Press, 2009 pp 1991-2002
92. Allnutt S, Chaplow D: General principles of forensic report writing. *Aust N Z J Psychiatry* 2000; 34:980-987
93. Mullen P: Forensic mental health. *Br J Psychiatry* 2000; 176: 307-311
94. American Psychiatric Association: *The Principles of Medical Ethics with Annotations Especially Applicable to Psychiatry* (ed 2009 rev.). Arlington, VA, American Psychiatric Association, 2009
95. Royal College of Psychiatrists: *Court Work*. College Report CR 147. London, Royal College of Psychiatrists, 2008
96. Appelbaum P: The parable of the forensic psychiatrist: ethics and the problem of doing harm. *Int J Law Psychiatry* 1990; 13:249-259
97. Appelbaum P: A theory of ethics for forensic psychiatry. *J Am Acad of Psychiatry Law* 1997; 25:233-247
98. American Academy of Psychiatry and the Law: *Ethics Guidelines for the Practice of Forensic Psychiatry*. Atlanta, AAPL, May 2005. Available at <http://aapl.org/ethics.htm>. accessed 3-23-11
99. Lindqvist P, Skipworth J: Evidence-based rehabilitation in forensic psychiatry. *Br J Psychiatry* 2000; 176:320-323
100. Douglas K, Skeem J: Violence risk assessment: getting specific about being dynamic. *Psychol Public Policy Law* 2005; 11: 347-383
101. Maden A: *Treating Violence: a Guide to Risk Management in Mental Health*. Oxford, Oxford University Press, 2007
102. Webster C, Hucker S: *Violence Risk: Assessment and Management*. Chichester, UK: John Wiley & Sons, 2007