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Expert Approaches to Communicating Violence Risk

Kirk Heilbrun

Melanie L. O' Neill

Lisa K. Strohman

Quinten Bowman

Judith Philipson

Department of Clinical and Health Psychology

MCP Hahnemann University

Abstract

There has been virtually no empirical study of the way in which evaluating clinicians communicate their conclusions about the risk of violence toward others. Risk communication has become particularly important in recent years, serving as the link between empirical data from recent studies and the understanding and use of such data by evaluators and decision-makers. The present study considered how psychologists and psychiatrists, identified as experts in violence risk assessment, responded to eight vignettes which systematically measured preferences for risk communication. The vignettes involved the presentation of the following factors in a 2 x 2 x 2 within-subjects design, counterbalanced for order: (1) risk model (prediction vs. management), (2) risk level (high vs. low risk of the individual being assessed), and (3) risk factors (the predominance of static vs. dynamic risk factors). A total of 71 individuals (43 psychologists and 28 psychiatrists) responded to a survey-mailed to 100 individuals, for a response rate of 71%. Participants were asked to rate the value of six forms of risk communication for each of the eight vignettes. There were few significant differences between the ratings assigned by psychologists and those assigned by psychiatrists. The most highly valued form of risk communication involved identifying risk factors applicable to the individual, and specifying interventions to reduce risk. A repeated-measures multivariate analysis of variance yielded a main effect for risk level and an interaction between risk level and risk factors. The implications of these findings for research and practice are discussed.

### Expert Approaches to Communicating Violence Risk

Recent theoretical and empirical advances in the assessment of the risk of violence among individuals with mental disorder have broadened and enriched the study of violent behavior. Studies employing an expanded range of risk markers, larger samples, and more sensitive outcome measures have provided important conceptual advances (e.g., the conceptual shift from violence prediction to risk assessment; see Monahan & Steadman, 1994) and promising new data (see, e.g., Hare, 1991; Harris, Rice, & Cormier, 1991; Klassen & O'Connor, 1988a; 1988b; 1988c; 1989; Lidz, Mulvey, & Gardner, 1993; Monahan & Steadman, 1994; Newhill, Mulvey, & Lidz, 1995; Otto, 1992; Rice, 1997; Steadman et al., 1998; Webster, Harris, Rice, Cormier, & Quinsey, 1994) for violence researchers. Studies involving the importance of the gradations in the scale used to assess risk (Slovic & Monahan, 1995) and the pattern of an evaluator in making false positive and false negative errors, measured using Receiver Operator Characteristics (Mossman, 1994) have also provided important information regarding how judgments of risk are made.

Such conceptual and empirical advances should also have significant implications for policy and practice related to violence risk assessment. Only recently, however, have violence risk researchers begun to consider the form of risk communication as well as the substantive content. This is an important consideration. Monahan (1993), in discussing risk assessment in the context of Tarasoff liability, identified four tasks which form the basis of any professionally adequate risk

assessment:

The clinician must be educated about what information to gather regarding risk, must gather it, must use this information to estimate risk, and, if the clinician is not the ultimate decision maker, must communicate the information and estimate to those who are responsible for making clinical decisions (1993, p. 242).

Here Monahan clearly underscores the importance of risk communication as a means of transmitting information obtained during the course of the risk assessment.

Theoretical and practical justifications for the study of risk assessment have more recently been elaborated (Heilbrun, Dvoskin, Hart, & McNiel, under review). A number of considerations were cited. First, *there is presently a very significant existing demand for risk assessment*. Risk assessment is relevant to a broad range of issues in criminal and civil law, and to a number of decisions regarding health care (e.g., civil commitment, child custody litigation, juvenile disposition, criminal sentencing, the therapist's duty to protect, the decisions of managed care companies regarding the authorization of treatment, potential workplace violence, and decisions regarding accommodations which may be required by the Americans with Disabilities Act). Second, *important conceptual and empirical advances in risk assessment in the last 10 years may increase the demand for this kind of professional activity in the future*. There are now risk assessment tools<sup>1</sup> that are better conceptualized, more reliably scored,

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<sup>1</sup> Such risk tools include the HCR-20 (Webster et al. 1995), the Sexual Violence Risk-20 (Boer, Hart, Kropp, & Webster, 1997), the Violence Prediction Scheme (Webster et al., 1994), the Violence Risk Appraisal Guide (Harris, Rice, & Quinsey, 1993), the Spousal Assault Risk Assessment Guide (SARA) (Kropp, Hart, Webster, & Eaves, 1994), the Level of Service Inventory-Revised (Andrews & Bonta, 1995), and the Youth Level of Service/Case Management Inventory (Hoge & Andrews, 1994). See Borum (1996) for a discussion of such tools. Also, with the publication of the results of the MacArthur Research Network on Mental Health and Law's Risk Assessment Study (see Steadman et al., 1998), there are important new data that could form the

and better validated. With these, and using statistical methods that summarize and highlight the practical importance of risk factors, the demand for risk assessment is likely to increase. Third, *risk communication has been identified as conceptually important*. The National Research Council (1989) identified risk communication as an important area in need of study, but this yielded very little subsequent research on the communication of the risk of violent behavior. The *American Psychologist* devoted an entire section to articles on risk communication in 1996. It contained important discussion of risk communication of violence compared with other areas, such as weather events (Monahan & Steadman, 1966), and scholarly analysis (Schopp, 1996). However, empirical research in this area was not cited, because fourth, *there is virtually no available empirical evidence about violence risk communication*. We have little empirical guidance in judging how to communicate violence risk, to whom, for what purpose, and in what contexts. Information is needed on the normative and desirable approaches to risk communication from those who provide, and those who receive, such information, in order to determine how risk-relevant information is most effectively communicated. Fifth, *risk communication is the link between risk assessment and decision-making about risk*. More accurate predictions or more effective risk reduction interventions will not yield better risk-related decision-making unless communication is effective. Sixth, *when there is a systematic attempt to link risk assessment to decisions about risk-reducing interventions, then risk communication is important at each of several stages*. These stages include the link between assessment results and

intervention-planning, between functioning in risk-relevant areas prior to, during, and following interventions, and between assessment, intervention, and decision-making. Risk relevant communication may occur in a variety of contexts (e.g., between an evaluator and a treatment team, an evaluator and a court, an evaluator and an agency, an evaluator and a company, or a therapist and a client). Risk communication can be used both to inform intervention decisions and to evaluate the efficacy of those interventions. Seventh, *better-informed legal decision-making about risk is an important goal*. The problems created by conclusory ultimate legal opinions as part of mental health assessments for the courts have long been debated (Melton et al., 1997; Rogers & Ewing, 1989; Slobogin, 1989). This problem is also evident when a potentially misleading form of risk communication is required in legal proceedings (e.g., when clinicians must indicate whether an individual is dangerous to others as one prong of civil commitment criteria). Risk communication should clearly describe the basis for an expert's opinion, something that helps the decision-maker and also protects the rights of the individual being evaluated. Finally, *risk communication can have serious consequences*. Risk-relevant decisions may involve liberty interests (as in civil commitment or sentencing), parenting interests (in child custody proceedings, for instance), possible harm to third parties (as in a *Tarasoff* warning), or even life itself (in capital sentencing proceedings, for instance). The actions following such decisions can often seriously affect not only the lives of those who are assessed, but those who are potentially the victims of violence as well.

Risk communication may also be affected by the decision-making context in

which it is practiced. One recent analysis (Heilbrun, 1997) suggested that *prediction-oriented* styles of risk communication are more appropriate in legal decision-making contexts that clearly call for predictions, while *management-oriented* styles seem better suited to circumstances in which the court (or other authority) retains some form of control over the individual, and hence is in a position to manage ongoing risk. However, the extent to which this (or other relevant considerations) are actually observed in practice is unknown; despite the recent proliferation of theoretical and empirical work in violence risk, it is difficult to identify any standards for practice in the professional literature (Borum, 1996).

The translation of nomothetic empirical data into idiographic conclusions regarding a single individual has proven one of the more difficult challenges in violence risk assessment, as well as for decision-making on other issues. One approach to addressing this challenge has been to consider the work done in other areas of risk communication (Chess, Salomone, Hance, & Saville, 1995; Fischhoff, 1995; National Research Council, 1989), typically with respect to communicating the risk of destructive weather or other natural disasters (see, e.g., Mileti & Fitzpatrick, 1991; Mileti & Fitzpatrick, 1992). The implications of weather risk communication for the communication of violence risk has been described (Monahan & Steadman, 1996) and discussed (Schopp, 1996) recently, as have relevant issues such as the preference for verbal or numerical probability estimates (Wallsten, Budescu, Zwik, & Kemp, 1993) and the need to clarify "unstated assumptions" in order to enhance the accuracy of predictions and reduce the reliance on cognitive biases (Nickerson, 1996).

In a recent study with implications for violence risk communication, Slovic and Monahan (1995) observed that probabilistic estimates of violence risk vary according to the metric of the scale being used. In particular, they reported that forensic evaluators tended to assign a higher risk to an individual in a case vignette when the scale ranged from 1-100 than when it ranged from 1-40. This has important implications for risk procedures in which the evaluator is required to provide a subjective estimate of risk, rather than rely on actuarially-developed risk levels.

In a recent preliminary study of risk communication practices, it was reported that practicing clinicians described being influenced by several factors, including the perceived shortcomings in the research literature and the sense of imprecision regarding the prediction of future violent behavior, in their preferences for risk communication style (Heilbrun, Philipson, Berman & Warren, 1996). This study reflected clinicians' consistent preferences against using numerical probabilities in communicating the risk of violence towards others, which has been reported by others (e.g., Lidz, Mulvey, & Gardner, 1993).

In order to address the empirical deficit on violence risk communication, it is important to obtain data on several questions. The first, concerning the ways in which practicing clinicians report communicating risk judgments, has been addressed in preliminary fashion with data from two recent samples of clinicians (see Heilbrun, et al., 1996).<sup>2</sup> A second question involves the various forms of risk communication identified

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<sup>1</sup> A related study, which would obtain data through observing clinicians' risk communication behavior (e.g., testimony) and rating relevant products (e.g., reports), has not yet been done.

in the first study, and the extent to which each form is valued (and under what circumstances) by individuals with expertise in risk assessment. A third question is more normative -- how would a much larger sample of practicing clinicians report valuing (and using) these different forms of risk communication under different circumstances?<sup>3</sup>

In the present study, we address the second of these questions. Six forms of risk communication, identified in the previous (Heilbrun et al., 1996) study, were considered. We incorporated three conditions (high vs. low risk, static vs. dynamic risk factors, and prediction vs. management legal context), each having a theoretical relationship with the preferred forms of risk communication (see, e.g., Carson, 1994; Heilbrun, 1997).

Participants were asked to rate the value of each of six different forms of risk communication. Three hypotheses were made. First, it was hypothesized that the forms of risk communication that involve providing a prediction would be more highly valued in legal contexts in which a prediction is indicated, while risk communication providing a contingent conclusion on risk, varying according to risk factors and relevant interventions, would be valued more highly in legal contexts calling for risk management- oriented conclusions. Second, it was hypothesized that prediction forms

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<sup>3</sup> The distinction between self-report and actual behavior is important. The normative questions cannot be adequately addressed until we have data on both self-report and observed risk communication behavior.

of risk communication would be preferred in vignettes using static risk factors (those with no potential for change through planned interventions, such as history of violence), while management-oriented forms of risk communication would be preferred for vignettes employing dynamic risk factors (those with the potential for change through planned interventions, such as substance abuse). Finally, it was hypothesized that prediction-oriented forms of risk communication would be preferred in high risk cases, while management-oriented forms of risk communication would be preferred in low risk cases. Such hypotheses were formulated in the absence of any relevant empirical data, however, and the present study should be considered as much exploratory as hypothesis-testing.

## Method

### Participants

A total of 100 subjects (50 psychiatrists, 48 psychologists, and two sociologists) were selected with expertise in risk assessment, as evidenced by a national reputation for research, training, and/or practice. Membership in the American Academy of Psychiatry and Law, diplomate status in forensic psychiatry, and publications were the criteria used to select the psychiatrist participants. Fellow status in the American Psychology-Law Society/APA Division 41, diplomate status with the American Board of Forensic Psychology, and publications were considered in identifying psychologist participants. The other two participants were identified from their professional publications and presentations in the area.

Responses were received from a total of 71 individuals, for an overall response

rate of 71%. Of those responding, 41 were psychologists, 28 were psychiatrists, and two were sociologists. A total of 90% of respondents were male. Participants reported a mean of 23 years of post-degree experience.

### Materials

Participants were presented with a total of eight short vignettes, in which three dichotomous variables were presented in all possible combinations in a 2 x 2 x 2 design.

The order of these vignettes was counterbalanced, with half of participants receiving surveys with the eight vignettes in reverse order. These variables included in the vignettes were (1) risk level (*low risk* vignettes, with no risk-relevant factors present, vs. *high risk*, with three risk-relevant factors incorporated into the description), (2) risk factors (*static* risk factors included younger age, a diagnosis of Antisocial Personality Disorder, and a positive history of violence, while *dynamic* risk factors were substance abuse, threat/control override delusions, anger, and -medication noncompliance) and (3) risk model (prediction, in which the legal decision was civil commitment, vs. management, in which the legal decision involved release from prison on parole).

The following six forms of risk communication conclusions were included in the survey: (1) the probability that Mr. X will commit a violent act toward others over the next  $y$  months is  $x$ ; (2) Mr. X (has risk factors with a certain status, e.g., A is a 45 year old male with no violence history, no substance abuse problem and is not psychopathic); (3) Mr. X's risk of committing a violent act toward other is (high vs. moderate vs. low); (4) Mr. X's risk of committing a violent act toward others is dependent upon (identified risk factors); to reduce risk, (specify intervention(s) to

address each risk factor); (5) Mr. X is (dangerous vs. not dangerous); and (6) Mr. X is  $x$  percent likely to commit a violent act toward others. Of these approaches to communicating risk, forms one, three, five and six represent prediction-oriented approaches; form four is a management- oriented approach, and form two is a descriptive approach. Participants were asked to rate each of the six approaches to risk communication on a 5-point Likert scale, ranging from 1 (not at all valuable) to 5 (extremely valuable) for each of the eight vignettes.

### Procedure

The survey was pilot-tested on five clinicians who provided feedback on the clarity of the instructions, ease of completing the survey, and length of time to complete the survey. None of the pilot subjects participated in the study proper.

Potential participants were sent a cover letter, a survey and a self-addressed stamped envelope. A follow-up postcard was sent as a reminder two weeks after the initial mailing. Those who had not responded after the first mailing and subsequent postcard were sent a second request for participation and a duplicate survey approximately two weeks later.

### Results

The most highly valued form of risk communication was that described as risk management oriented: “Mr. J’ s risk of committing a violent act toward others is dependent upon (*identified risk factors*); to reduce risk (*specify interventions to address each factor*)” (see Table 1). The next most highly valued form of risk communication differed according to

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Insert Table 1 About Here

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discipline. For psychologists, it was prediction oriented ( $X = 3.3$ ): “Mr. J’s risk of committing a violent act toward others is (high vs. moderate vs. low).” For psychiatrists, the second most valued approach ( $X=3.3$ ) was descriptive: “Mr. J, a 45 year old male with no violence history, has no substance abuse problems and is not psychopathic.” Both groups rated as least valuable ( $X=2.0$ ) the approach to risk communication in which Mr. J. was described in terms of “percentage of likelihood” to commit a violent act toward others. Psychologist and psychiatrist experts showed no significant difference in the overall pattern of their mean ratings of the different forms of risk communication, however ( $F(1,69) = 1.77, ns$ ). Therefore, these groups were merged for the remainder of the major analyses.

Using a multivariate analysis of variance (MANOVA), we found one significant main effect and one significant two-way interaction. The main effect was for risk level (high vs.

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Insert Table 2 About Here

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low). As may be seen in Table 2, experts valued one particular form of communication, involving specifying risk factors and recommending risk-reduction interventions (Form D) more highly in high risk cases, which produced enough of a difference to result in an

overall main effect for risk ( $F(6, 61) = 5.91, p < .0001$ ). When the effect of discipline was examined specifically, psychologists and psychiatrists differed only with respect to the value of the description of relevant clinical characteristics (Form B) in low risk cases ( $t(69) = -2.1, p < .05$ ) (see Table 3). This finding supported the first hypothesis, regarding the importance of risk level in how different forms of risk communication would be valued differently.

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Insert Table 3 About Here

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However, the significant interaction between risk level and risk factors ( $F(6, 61) = 2.72, p < .05$ ) suggested that the forms of risk communication are valued somewhat differently when dynamic risk factors are present in low risk cases, contrasted with high risk cases. When risk level is higher, the value of the communication form in which the evaluator specifies risk factors and describes risk-reduction interventions is greater than when risk is lower (see Table 2), and the tendency to use this form of communication is greater when the risk is high and the risk factors are dynamic.

There was not a main effect for either risk factors (static vs. dynamic) ( $F(6, 61) = 1.93, p < .09$ ) or risk model (prediction vs. management) ( $F(6, 61) = 1.14, p = ns$ ), although a trend was observed for the former. Neither the second nor the third hypotheses, concerning the respective impact of risk factors and risk model, was clearly supported, therefore. It would appear from these data that the way in which risk communication is valued by experts is more complex than “main effect” hypotheses

would suggest.

Further analysis using hierarchical multiple regression revealed that years of post-degree experience did not predict the values for the mean ratings of different risk conclusions. However, there was one significant difference in the value assigned to the form of risk communication involving identifying risk factors and recommending risk-relevant interventions. Experts in this sample who indicated that the majority of their time was involved with clinical and forensic practice rated the value of this form of communication significantly higher than the experts who said the majority of their time was involved with research ( $t(69) = 2.5, p < .05$ ).

#### Discussion

There is a good deal of value in the descriptive aspects of these data, given that the present study is apparently the first empirical effort to assess the risk communication preferences of experts in the field. It is noteworthy that the most preferred form of risk communication was consistent with the weather analogy described by Monahan and Steadman (1996). They noted that National Weather Service categorical messages for severe weather events provide more than risk level; in addition to the descriptive statement of risk, there is a prescriptive statement regarding the need for further information, and another prescriptive indication of risk management strategy.

In addition, the present results suggest that violence risk communication is valued by experts according to both the risk level of the individual being assessed and the nature of the risk factors that are present. Even though the risk-reduction form of

communication was highly valued, this was particularly true in the high risk vignettes. It may be that experts view predictive forms of communication in high risk cases as more likely to be interpreted as prejudicial in the context of legal proceedings (all vignettes used in this study involved a legal decision that would be informed in part by the risk assessment). Rather than concluding only that the individual is high risk, experts may prefer to convey the nature of the risk factors and the possible risk-reducing interventions in the attempt to avoid premature closure on the deliberation of the decision-maker.

The expert participants in this study provided useful information about the different forms of risk communication. However, the proportion of time spent in practice versus research was related to preference for the risk management conclusion, with a higher proportion associated with a greater value attributed to this form of communication.

In a very basic sense, the expert participants in this study provided valuable information about the different forms of risk communication. The two forms that were valued most highly relative to the others, and valued more highly than the scale midpoint, were the management-oriented form and the predictive form in which risk was described in one of three categories (high vs. moderate vs. low). This is consistent with the structure of some of the more recently-developed risk assessment tools (see, e.g., the Violence Prediction Scheme developed by Webster, Harris, Rice, Cormier, & Quinsey, 1994), which provide both an *a priori*, actuarial categorization of risk and a number of domains in which clinical and other dynamic risk factors can be described.

The present study provides support for this approach, suggesting that such a two-step procedure can help to structure risk communication in a valuable way as well as providing both predictive and management-oriented risk information.

Finally, there was remarkably good agreement between psychologist/sociologist experts and those in the field of psychiatry. This is encouraging, suggesting that there may be some consensus in relevant areas relating to risk assessment and risk communication that transcends disciplinary differences. It remains to be seen whether disciplinary differences would be more important in a broader sample of practicing psychologists and psychiatrists. Obtaining such a normative sample is an important next step in the investigation of risk communication practices and their relation to the larger areas of violence risk and the legal actions taken in response to information and data in this area.

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### Author Note

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Requests for reprints should be addressed to Kirk Heilbrun, Department of Clinical and Health Psychology, MCP Hahnemann University, MS 626, 245 N. 15<sup>th</sup> Street, Philadelphia, PA 19102-1192 (Kirk.Heilbrun@Drexel.Edu).

Table 1

Experts' Mean Ratings of the Values of Risk Communication Forms

Risk Communication Form*	Psychologists	Psychiatrists
	(N=43)	(N=28)
A	2.4	2.2
B	3.0	3.3
C	3.3	3.3
D	3.8	3.9
E	2.2	2.3
F	2.0	2.0
Total	2.8	2.8

\* A= Predict probability of violence (x over y months)

B=Describe relevant clinical characteristics

C= Categorize probability of violence (*high vs. moderate vs. low*)

D= Identify risk factors and specify risk reducing interventions

E= Categorize probability of violence (*dangerous vs. not dangerous*)

F= Summarize violence probability (x percent likely)

Table 2

Expert Mean Ratings of the Value of Risk Communication Form, by Risk Level

	LOW RISK		HIGH RISK		Total All (N=71)
	Psychologists <sup>+</sup> (N=43)	Psychiatrists (N=28)	Psychologists (N=43)	Psychiatrists (N=28)	
A	2.5	2.1	2.6	2.2	2.4
B	2.6*	3.3*	2.8	3.4	3.0
C	3.2	3.3	3.3	3.3	3.3
D	3.4	3.5	4.0	4.3	3.8
E	1.9	2.3	2.1	2.4	2.1
F	1.9	2.0	2.0	2.0	2.0
Total	2.6	2.7	2.8	2.9	2.8

\*  $p < .05$

A= Predict probability of violence ( $\underline{x}$  over  $\underline{y}$  months)

B= Describe relevant clinical characteristics

C= Categorize probability of violence (*high vs. moderate vs. low*)

D= Identify risk factors and specify risk reducing interventions

E= Categorize probability of violence (*dangerous vs. not dangerous*)

F= Summarize violence probability ( $\underline{x}$  percent likely)

<sup>+</sup> Participants who were neither psychologists or psychiatrists (N = 2) were included with psychologists in this table

Table 3

Experts Mean Ratings of the Value of Risk Communication Form, by Nature of Risk Factors

Category	STATIC RISK FACTORS		DYNAMIC RISK FACTORS		Total All (N=71)
	Psychologists <sup>+</sup> (N=43)	Psychiatrists (N=28)	Psychologists (N=43)	Psychiatrists (N=28)	
A	2.6	2.2	2.6	2.1	2.4
B	2.6*	3.3*	2.8	3.3	3.0
C	3.2	3.3	3.3	3.3	3.3
D	3.7	3.9	3.7	3.9	3.8
E	1.9	2.4	2.0	2.4	2.1
F	1.9	2.0	1.9	2.0	2.0
Total	2.7	2.9	2.7	2.8	2.8

A= Predict probability of violence (x over y months)

B= Describe relevant clinical characteristics

C= Categorize probability of violence (*high* vs. *moderate* vs. *low*)

D= Identify risk factors and specify risk reducing interventions

E= Categorize probability of violence (*dangerous* vs. *not dangerous*)

F= Summarize violence probability (x percent likely)

\*  $p < .05$

<sup>+</sup>The two participants who were sociologists were included with psychologists in this table

## Appendix A

Prediction-Oriented Vignette

Mr. Miller is a 23 year old male with a history of violent behavior toward others. He has been in and out of substance abuse treatment since he was 15, and continues to use cocaine and alcohol heavily on a daily basis. He has been diagnosed as having Antisocial Personality Disorder, and was recently administered the Psychopathy Checklist-Revised (scoring 32, or high, on psychopathy). He has not eaten for a week even though food has been available. He is being evaluated for violence risk as a standard part of a civil commitment decision in a state that allows commitment of both the mentally ill and substance abusers.

Management-Oriented Vignette

Mr. Holt is a 23 year old male with a history of violent behavior toward others. He has been in and out of substance abuse treatment since he was 15, and continues to use cocaine and homemade wine on a daily basis in prison. He has been diagnosed as having Antisocial Personality Disorder, and was recently administered the Psychopathy Checklist-Revised (scoring 32, or high, on psychopathy). He has not eaten for a week even though food has been available. He is being evaluated for violence risk to others as a standard part of a decision about parole from prison.