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WRITTEN TESTIMONY TO THE JOINT MEETING OF THE OREGON SENATE JUDICIARY AND HOUSE BEHAVIORAL HEALTH COMMITTEES

SB 187
[OPPOSED]
with Attachments

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My name is R Drake Ewbank, I am from Eugene Oregon, I am a credentialed qualified mental health associate, a working personal support worker to the autistic population, and I have a small service design consultancy. I have been significantly involved in establishing the training and protocols for peer specialists that are now being employed across the state and I have years of working, with documented success, in the crisis and other systems trying to help people cope, adapt, recover, and stay out of the acute care and hospital systems.

Exponential Costs of Hospitals, Continuing Underfunding of Community Based Care

First, I would like to make a financial point. The current general fund budget for the two state psychiatric hospitals (600-800 persons) exceeds the budget for all other preventative care, outpatient care, crisis services, community-based supports, housing, and all other non-Medicaid billable mental health services. When I was on the Oregon Health Authority's Addictions and Mental Health Planning and Advisory Council in 2014, my subcommittee sponsored a unanimously accepted recommendation to the state mental health division. This asked that the Division redirect its priorities so that the hundreds of millions of dollars in the state general fund mental health budget include *more* community-based care funding than money spent on the two state hospitals. This still has not happened as of six years later.

The current amendments to the commitment law in SB 187 will not help with this problem, it will exacerbate it.

In Portland Oregon in 1999, the National Summit put on by the Mental Health Association of America constructed a large consensus platform of constituent issues around mental health and mental health treatment. Under the "Forced Treatment" plank, there was an interesting consensus. While the subgroup could not establish an agreement as to whether force was or

was not appropriate in all cases. The one consensus element that did emerge, was that the use of force should be defined as a failure of the mental health system.

Trauma and Stigma

I would like folks, from a user perspective, and as well the committee to imagine for a moment:

A person has an extreme or life rending event, or other crisis, or critical loss of cognitive capacity or a failure to stay free of a disabling fear or apprehension. Subsequently, there is an adverse incident… or even several incidents over a number of weeks or days. The authorities become involved or a mental commitment investigator is called in.

Imagine, then, that what is being proposed as new law here will increase the likeliness of being humiliatingly forced into a dubious therapeutic mandate and regime, one with significant social status, health, and personal freedom concerns… IE having the molten raw force that frequently accompanies the use of an incarcerative or physical take down, forced drugging with powerful neuroactive chemical, the estrangement involved in the commitment process, and subsequent "trial" and fitness hearing that increases perpetuate the nightmare. All of this overheated agony is then poured into the extreme vulnerability and extreme state that the individual is experiencing.

It is an extraordinarily expensive and frequently brutalized road that can be a defining moment for the individual, and a catalyst for recovery or a catalyst for permanent harm. It also has the potential of causing am impact and stigma that is difficult, if not impossible, to eliminate in the life of the person.

The state is supposed to operate on a standard and policy of trauma informed care. It is conservatively estimated that somewhere between 60-80% of the persons with adult mental health labels. It has one of the first and most comprehensive trauma policies in the United States and trauma is recognized as a significant cause of mental illness and adverse outcomes, including shortened and unhealthy lives. The state's statutory definition of Trauma Informed Services is very particular about the use of coercion in treatment and went out of its way to identify the particular injuries involved in misapplication.

> OAR 309-18-105 "Definitions":
> *(82) "Trauma Informed Services" means services that are reflective of the consideration and evaluation of the role that trauma plays in the lives of people seeking mental health, substance use, or problem gambling services,* ***including recognition of the traumatic effect of misdiagnosis and coercive treatment****. Services are responsive to the vulnerabilities of trauma survivors and are delivered in a way that avoids inadvertent re-traumatization and facilitates individual direction of services.*

New Standards of Dangerousness *Bypassing* Medical Assessments

The current law defers to the opinion of medical professionals to assess the degree of mental deterioration.

I would like to point out what I think is an additional legal weakness that departs from reliance on personalized assessments of medical experts in favor of the application of a one size fits all standard implemented by relatively inexperienced judges operating to defeat appellate case law requiring "imminent risk of violence" by assuming those standards and those judges can predict the risk and suspend most if not all civil rights under commitment.

Section 1 (g) (C) (iv) of the current ORS 426.005 statute states how to get to the criteria of "dangerousness" – the revision under **Section 2** provides additional criteria for an untrained judge to determine along undifferentiated potential critical instances and/or hearsay around other elements of past behaviors.

I am not even a huge fan of the precision of psychiatric diagnostics, though an individual **"unless treated, will continue, to a reasonable medical probability, to mentally or physically deteriorate" so that they will be either dangerous to self or others or unable to meet basic needs** is better than the newer version. The former statute at least leaves the operation of the medical opinion as primary, instead of empowering a less expert judge who can essentially override the current statute to make what is an automated medical, and not legal evidentiary determination. The *medical condition* of the client is the current criteria, the new wording shifts a medical evidentiary assessment to the judge via an incomplete and provincial standard of law and not the opinions of the "expert examiners" in current statute per se. Medical testimony is evidence, and can be disputed, though the function of the law is served better by the criteria in the current statute.

Relying on a medical and clinical elements already in the law here is both essential and gives the person under commitment a chance to provide testimony from medical experts that can then be weighed by the judge.

Having the judge's role one of staying out of the business of adducing a hard criteria into a subjective science of trained medical experts gives the judge the flexibility to weigh the input to his court by folks that have a much greater ability to provide nuanced therapeutic information about the condition and prospects of the individual.

A little knowledge or a blunt force legal standard is a dangerous thing, and there are laws to deal with all of the behaviors that have been cited in the testimony supporting the new law. This means that the person has failed to be engaged with the system in public, and then would be failing to engage the system after being cited or arrested.

Two Possibly Helpful Attachments

I have included as attachments a Law Review Article discussing "risk and violence" and the relationship to the law, using the McArthur Foundation comprehensive violence risk assessment study. This study compared cohorts of persons that were closely paralleled. The populations were those that were diagnosed and were the one 1/1000th of the individuals exiting state psychiatric facilities along side those with the same demographics and cultural profiles in the community living normally.

One of the important conclusions is that the diagnosed population, absent substance abuse (which was in fact higher in the diagnosed population) was slightly LESS prone to violence than the corresponding "normal population". I have also included a study that shows that social attitudes and stigma towards the mentally ill as it affects the application of coercion under the most prominent Assisted Outpatient Treatment model, "Assertive Community Treatment" or ACT. Clearly the law runs the risk of being misapplied as has been evidenced in the past, and the new revisions no less reflect popular and stigmatizing regard for persons in crisis or at odds with the social and behavioral context.

This sort of therapeutic distortion results in an expensive and uneven application of civil liberties and justice, as well as the unique aspect of mental health, the pharmacological and biological imposition on the freedom of vulnerable individuals. Not to mention their increased traumatization and injury via what must be characterized by something akin to an incarcerative and absolute control.

Please support community based and integrated health care as an alternative. It works if given resources and a chance.

Thank you.

R. Drake Ewbank

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The MacArthur Risk Assessment Study: Implications for Practice, Research, and Policy

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THE MACARTHUR RISK ASSESSMENT STUDY: IMPLICATIONS FOR PRACTICE, RESEARCH, AND POLICY

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I. INTRODUCTION

The accurate assessment of the risk of violence by individuals with mental disorders is important for a number of reasons: public safety, better informed legal decision-making, the provision of appropriate interventions for those who are at risk, and respect for the liberty interests of those who are not are among the prominent considerations in this area.

There have been very significant theoretical and empirical advances in this area during the last decade. Among the most important have been those contributed by the MacArthur Research Network on Mental Health and the Law. This group has been responsible for designing and implementing the most important study ever conducted in this area.[1] The MacArthur Violence Risk Assessment Study (hereinafter the Study)[2] is the focus of the present Article, which has three purposes. First, the area of "risk assessment" will be described in its historical context to give the reader a sense of the available theoretical and empirical context in which the study can be judged. Second, the Study will be described and discussed. Finally, the implications of the Study will be described. This discussion of implications will include issues to which the Study is directly applicable, such as civil commitment, therapists' duty to

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1. *See* Henry J. Steadman et al., *Violence by People Discharged From Acute Psychiatric Inpatient Facilities and by Others in the Same Neighborhoods*, 55 ARCHIVES GEN. PSYCHIATRY 393 (1998).

2. *MacArthur Violence Risk Assessment Study*, MacArthur Research Network on Mental Health and the Law (last modified September 1998) <http://ness.sys.Virginia.edu/macarthur/violence.html>.

protect others from potential violence by patients, the design and implementation of interventions to reduce violence risk, and other decision-making involving the risk of violence by mentally disordered individuals. However, there are additional issues for which the Study has implications, although less directly. These include bail consideration, the commitment, treatment, and release of defendants following an insanity acquittal, and forensic mental health assessment generally.

II. NATURE AND HISTORY OF RISK ASSESSMENT

The potential for violent behavior committed by individuals with mental disorders is an issue that is raised frequently in legal decision-making, particularly in criminal and mental health law. There is significant literature in mental health and the behavioral sciences focused on violence among the mentally disordered and the assessment of "dangerousness" or violence risk. In this section, we will discuss the nature and relatively recent (within the last two decades) history of violence risk assessment, including many of the problems that plagued earlier research efforts and assessment procedures.

A. Uses of Risk Assessment

Whether an individual is likely to commit a future violent act is considered by legal decision-makers in a variety of criminal and civil contexts. The range of such decisions is important, both to demonstrate the potential frequency with which violence risk may influence decisions about broader legal questions,[3] and to gauge the extent to which the results of the MacArthur Risk Assessment Study may apply to legal decision-making.

The following are legal questions in which the issue of violence risk may be relevant:

3. For the purposes of this paper, we note a distinction between ultimate legal questions, which are those the court must answer (*e.g.*, "Does Mr. Jones meet the criteria for civil commitment?"), and forensic issues, which include abilities, capacities, and tendencies that are relevant to the larger legal issue but not equivalent to it. Violence risk is almost always considered a forensic issue, as a component of a larger legal question. The clearly emerging trend in the field of forensic mental health assessment is to focus on the measurement of capacities and abilities, making up the "forensic issues," but to avoid any attempt to measure the larger legal question and thereby interfere with the domain of the legal decision-maker. *See, e.g.*, THOMAS GRISSO, EVALUATING COMPETENCIES 9-10 (2d ed. 1986). *See also* GARY MELTON ET AL., PSYCHOLOGICAL EVALUATIONS FOR THE COURTS: A HANDBOOK FOR MENTAL HEALTH PROFESSIONALS AND LAWYERS 539-46 (1997).

1. Civil commitment

Laws on civil commitment typically contain two prongs: mental illness and "dangerousness." The latter prong may be satisfied if the individual being considered for civil commitment either presents a risk of harm to self or others through a direct act, or by "grave disability" (in which the individual, because of mental illness, is unlikely to perform the necessary acts that would meet the necessary requirements for food, clothing, shelter, and the like, and hence may present an "indirect threat" to his or her well-being).

2. Child custody/parental fitness

When a court considers parenting capacities and the "best interests of the child" in child custody litigation, the issue of violence risk may arise in several ways. First, there may be allegations of physical or sexual abuse by one parent toward one or more of the children. Second, there may be a history of violence by one spouse toward the other. Either would be relevant to a court's decision regarding the custody of the children, including whether custody were sole or joint, the nature of the visitation, and other contact between each parent and the children.

3. Malpractice

One of the most important ways in which violence risk must be addressed in the practice of psychiatry and psychology concerns the treating professional's recognition of a patient's potential risk of harm to an identifiable third party, and the duty to prevent such harm. In the 1976 *Tarasoff*[4] decision, the court held that when a mental health professional determines that a patient presents a serious risk of violence to a third party, or should have determined that pursuant to the standards of the profession, there is a duty to use reasonable care to *protect* the potential victim. The "duty to protect" is now recognized in some jurisdictions beyond California.[5] Other jurisdictions have declined to identify such a duty for mental health professionals when the potential victim is not readily identifiable.[6] The existence of any *Tarasoff* duty, whether nar-

4. Tarasoff v. Regents of Univ. of Calif., 551 P.2d 334, 340 (Cal. 1976).

5. *See, e.g.*, McIntosh v. Milano, 403 A.2d 500, 511 (N.J. Super. Ct. 1979); Peterson v. Washington, 671 P.2d 230, 237 (Wash. 1983); Lipari v. Sears, Roebuck & Co., 497 F. Supp. 185, 191 (D. Neb. 1980). These cases were decided in jurisdictions that recognize a broad "duty to protect," although the *Lipari* court focused on an identifiable "class" of victims rather than a specific victim. *See Lipari*, 497 F. Supp. at 185.

6. *See, e.g.*, Perreira v. State, 768 P.2d 1198, 1214 (Colo. 1989); Novak v. Rathnam, 505 N.E.2d 773, 776 (Ill. App. Ct. 1987); Jackson v. New Ctr. Community Mental Health Serv.,

row or broad, has been rejected in some jurisdictions.[7] Finally, in some jurisdictions neither courts nor legislatures have addressed the *Tarasoff* duty. Such variability notwithstanding, it is clear that a malpractice claim based on a therapist's abrogation of a duty to warn or protect in a *Tarasoff* jurisdiction must consider whether a therapist "should have known" that a patient presented a significant risk of violent behavior toward a third party. In order to assess this fairly, a court must consider both the prevailing standard of practice and the state of scientific knowledge in the area of risk assessment.

4. Sentencing

In the adult criminal system, the court must weigh aggravating and mitigating considerations about a defendant, at least in capital litigation, to satisfy the constitutional requirement that the sentence be sufficiently individualized.[8] This is sometimes considered in non-capital cases as well, particularly when there are particular clinical symptoms experienced by the defendant (*e.g.*, severe mental illness, mental retardation) or the offense is of a kind that may present a specialized rehabilitation need (*e.g.*, sexual offending). Public safety is considered in such cases in at least two ways: whether the defendant is likely to commit further offenses, particularly violent offenses, and whether relevant rehabilitation interventions are likely to lessen such reoffense risk. In the juvenile system, the issue of risk-relevant rehabilitation needs is even more prominent. For cases involving straightforward juvenile dispositions, others involving possible transfer from the juvenile to the criminal system, and still others in which the court must consider a possible "transfer back" from a directly filed juvenile case in the adult system back into the juvenile justice system, the questions of public safety and the availability, duration, and applicability of risk-relevant rehabilitation efforts are consistently considered.[9]

5. Criminal commitment

Individuals who are adjudicated as Not Guilty by Reason of Insanity

404 N.W.2d 688, 693 (Mich. Ct. App. 1987); Cairl v. State, 323 N.W.2d 20, 26 (Minn. 1982); Williams v. Sun Valley Hosp., 723 S.W.2d 783, 787 (Tex. App. 1987).

7. *See, e.g.*, Shaw v. Glickman, 415 A.2d 625, 630 (Md. Ct. Spec. App. 1980); Sharpe v. South Carolina Dep't of Mental Health, 354 S.E.2d 778, 780 (S.C. Ct. App. 1987).

8. *See* Woodson v. North Carolina, 428 U.S. 280, 304 (1976).

9. *See, e.g.*, THOMAS GRISSO, FORENSIC EVALUATION OF JUVENILES 159-226 (1998); Kirk Heilbrun et al., *A National Survey of U.S. Statutes on Juvenile Transfer: Implications for Policy and Practice*, 15 BEHAV. SCI. & L. 125, 126 (1997).

are typically considered for commitment to a secure forensic facility following the acquittal. In some jurisdictions, these commitment criteria may resemble those for civil commitment; in others, the language may be more limited (*e.g.*, hospitalize until "no longer dangerous"). Clearly, however, the role of public safety and the individual's risk of violence toward others, other kinds of crime,[10] or noncompliance with the conditions of conditional release[11] are important in the decision about hospitalization. If the court retains jurisdiction over the individual following commitment as Not Guilty by Reason of Insanity, then the issue of violence risk is also important in decisions that are part of hospitalization (*e.g.*, grounds privileges, community visits), and decisions concerning the release of the individual from secure hospitalization.

6. Correctional transfers

Defendants who are awaiting trial in a local jail, or offenders who have been convicted and sentenced to a correctional facility, may show symptoms of severe mental disorders that require psychiatric treatment. In some jurisdictions, one treatment option is to consider such individuals for transfer to a secure psychiatric facility for a certain period of time. However, the criteria for such "commitments" are typically twofold. In addition to symptoms of mental illness, the defendant or offender must also display behavior that cannot be managed in a jail or prison. Two manifestations of such behavior are suicide risk and violence risk toward others.

7. Sexual offender commitment, post-sentence

Under *Kansas v. Hendricks*,[12] a recent U.S. Supreme Court decision, it is constitutionally permissible to commit sexual offenders who have completed a criminal sentence for a further period of incarceration in which treatment will be delivered. While the appropriateness of this decision has been debated,[13] with some arguing that *Hendricks* results in further incarceration under the guise of treatment which could be delivered earlier in the offender's sentence,[14] the post-sentence commitment

10. *See* Jones v. United States, 463 U.S. 354 (1983).

11. *See* Kirk Heilbrun & Patricia Griffin, *Community Based Forensic Treatment, in* TREATMENT OF OFFENDERS WITH MENTAL DISORDERS 168 (Robert M. Wettstein ed., 1998).

12. Kansas v. Hendricks, 521 U.S. 346 (1997).

13. *See generally* 4 PSYCHOL. PUB. POL'Y & L. (June 1998) (special issue devoted to "Sex Offenders: Scientific, Legal, and Policy Perspectives").

14. *See* Kirk Heilbrun et al., *Sexual Offending: Linking Assessment, Intervention, and*

of sexual offenders now represents another context in which an offender's risk of violence toward others is a consideration in the legal decision regarding commitment. It is not yet clear whether offenders committed post-sentence under *Hendricks* will eventually be released, how long their *Hendricks*' commitments will be, or what criteria will be used to judge whether they would be appropriate for release. Should this process be shown to be comparable to other civil and criminal commitment procedures, however, we may expect that offenders will petition for release when they can demonstrate that their risk of sexual reoffending has been reduced to an acceptable level.

In addition to these legal questions, which include violence risk assessment as one important "included forensic issue," there is another way in which risk assessment may contribute to legal decision-making: by helping the court understand risk-relevant rehabilitation needs and make decisions in light of possible changes in risk status over time. Common examples include instances in which a defendant is required to participate in a certain kind of treatment to address a specific need; for instance, when a judge places an individual convicted of domestic violence on probation and requires that offender, as a condition of probation, to participate in specialized treatment for domestic violence. Further, the probation officer may receive periodic reports regarding the offender's participation and progress in treatment, and may recommend a change in the status of the probation depending, in part, on the progress made in such treatment and the associated risk of further violence. This approach to risk assessment, in which the assessment is used primarily for risk relevant intervention planning and risk status change assessment, rather than prediction, may actually apply to a number of legal questions in which violence risk is a consideration.[15]

B. "Dangerousness," "Violence Prediction," and "Risk Assessment"

One of the important conceptual changes promoted by the MacArthur Network has been in the name of the activity itself. Statutes and case law often use the terms "dangerous" or "dangerousness" with little

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Decision Making, 4 PSYCHOL. PUB. POL'Y & L. 138, 168 (1998).

15. *See, e.g.*, Kirk Heilbrun, *Prediction v. Management Models Relevant to Risk Assessment: The Importance of Legal Decision-Making Context*, 21 LAW & HUM. BEHAV. 347, 396 (1997); David Carson, *Dangerous People: Through a Broader Conception of "Risk" and "Danger" to Better Decisions*, 3 EXPERT EVIDENCE 51 (1994); John Monahan & Henry J. Steadman, *Designing a New Generation of Risk Assessment Research*, *in* VIOLENCE & MENTAL DISORDER: DEVELOPMENTS IN RISK ASSESSMENT 297 (John Monahan & Henry J. Steadman eds., 1994).

or no elaboration. As the National Research Council pointed out in 1989,[16] and Monahan and Steadman[17] underscored, the term "dangerousness" has three components which are conceptually distinct. These include (a) *risk factors* (the variables used to predict violence), (b) *harm* (the nature of the violence being considered, including its severity, frequency, and object), and (c) *risk level* (the probability that the specified harm will occur). Using the term "dangerousness" promotes the consideration of only two outcomes—an individual either is, or is not, dangerous. While this is consistent with the way in which a court must eventually make a decision, it is unfortunately clear that such consistency can have the effect of prematurely closing off the consideration of important questions. Many of these questions concern the nature of the harm being considered. For example, are threats to be considered differently than physical acts? How do we balance the severity of the harm with the probability of its occurrence, comparing, for instance, individuals who are at relatively high risk to commit minor acts of aggression, versus those at lower risk to commit very serious acts of violence? Using the term "dangerous" obscures such questions and the areas of risk factors, harm, and risk level. With "risk assessment," however, questions such as "risk of what?" (addressing the nature of the harm) and "how high is the risk?" (addressing relative probability) follow naturally.

C. *Theoretical and Empirical Advances in Risk Assessment*

There have been a number of theoretical and empirical advances in the area of risk assessment during the last two decades. A discussion of these changes will facilitate a better overview of the area, and allow a better appreciation of the ways in which the MacArthur Risk Assessment Study has contributed to these changes.

One of the seminal events in this area is John Monahan's publication of *The Clinical Prediction of Violent Behavior* in 1981.[18] Monahan's discussion encompassed the empirical literature, which suggested that clinical judgment was an inaccurate way of assessing the likelihood of an individual's future violent behavior, and that when clinicians predicted that an individual *was* likely to be violent, that prediction was wrong

16. NATIONAL RESEARCH COUNCIL, IMPROVING RISK COMMUNICATION (1989).

17. *See* John Monahan & Henry J. Steadman, *Toward a Rejuvenation of Risk Assessment Research*, *in* VIOLENCE & MENTAL DISORDER: DEVELOPMENTS IN RISK ASSESSMENT 1, 2 (John Monahan & Henry J. Steadman eds., 1994).

18. *See* JOHN MONAHAN, THE CLINICAL PREDICTION OF VIOLENT BEHAVIOR (1981).

more often than right. Two important advances were made in this book, however.

The first was an identification of clinical techniques that were likely to be relevant to violent behavior and would improve the accuracy of predictions (*e.g.*, a behavioral history of violence, psychological tests that were administered objectively and interpreted actuarially, particularly when such tests were bolstered by outcome data relevant to violence). The second was a critique of the scientific literature on violent behavior. Various problems were apparent with the research literature at that time. These included, for instance, a weak range of variables that researchers were using in an attempt to predict violence[19] and a remarkably insensitive approach to the measurement of violence as an outcome.[20] In a later discussion of these research problems, Monahan summarized four major problems with previous research on violence: (a) inadequate predictor variables, (b) poorly defined and inadequate measures of violence, (c) constricted samples, and (d) unsystematic and poorly organized research efforts.[21] Such identified problems were among those considered by those designing the MacArthur Risk Assessment Study.

Partly in response to these criticisms, researchers in the area of violence in the mentally disordered improved the quality of their studies. The so-called "second generation" of violence research, conducted in the 1980s, was reviewed by Otto,[22] who observed that most of the earlier studies had involved institution-based mental health professionals making predictions regarding the post-release adjustment of individuals who had been confined for extended periods of time. By contrast, a number of "second generation" studies either provided base rates of violent behavior among mentally ill persons (whether pre-hospitalization, during hospitalization, or following discharge from hos-

19. Some variables were apparently used primarily because they were convenient (*e.g.*, psychological test results that had been previously collected on inmates convicted of violent offenses) rather than because of their theoretical relevance to or empirical association with violent behavior.

20. Virtually all studies conducted at this time relied on official records to document whether violence occurred during a specified period of time. Using only records of rearrest for a violent offense, the most commonly-employed outcome variable for studies at this time, resulted in a significant underestimate of the frequency of violent behavior, as later research was to demonstrate.

21. *See* John Monahan, *Risk Assessment of Violence Among the Mentally Disordered: Generating Useful Knowledge*, 11 INT'L J. L. & PSYCHIATRY 249 (1988).

22. *See* Randy K. Otto, *Prediction of Dangerous Behavior: A Review and Analysis of "Second Generation" Research*, 5 FORENSIC REP. 103 (1992).

pitalization), or examined the methodology related to the capacity of mental health professionals to predict violent behavior accurately. Many of the studies discussed by Otto will be reviewed in the next section of this Article.

Important conceptual contributions to the risk assessment of violence have also been made by the MacArthur Research Network. Monahan and Steadman described four significant problems that have impaired research in risk assessment.[23] These problems include (a) impoverished predictor variables, (b) weak criterion variables, (c) constricted validation samples, and (d) unsynchronized research efforts. Noting the complexity of the phenomenon of violence, they observe that expanding the range of relevant variables that are empirically associated with violent behavior[24] would allow researchers to improve the accuracy of the violence predictions.

Monahan and Steadman also note that the inaccuracy of outcome measurement (violent behavior that is detected poorly or not at all) can be improved in several ways: (a) developing standardized instruments to measure specific types of self-reported violence, (b) testing new procedures for locating released patients in the community, (c) assessing subjects on all outcome measures at specified intervals over an extended period of time, and (d) recording rehospitalization for a violent act as well as re-arrest for a violent crime. When research samples are small, poorly representative of that class of individuals generally, or composed of individuals in an environment (such as a hospital) in which the frequency of violent acts is likely to be different than in the community, then the results of the study can be misleading if not carefully interpreted. Finally, the lack of coordination between different researchers in choosing, collecting, and analyzing the variables relevant to violence has meant that even similar variables have sometimes been defined and measured differently by different investigators. When common variables and a single research design are used by a single interdisciplinary team, it is argued, this problem disappears.

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23. *See* Monahan & Steadman, *supra* note 17, at 7-12.

24. Among the variables specified by Monahan and Steadman are psychopathy, anger, impulsiveness, substance abuse, threat/control override symptoms, delusions, hallucinations, personality disorders, demographic variables such as age and SES, and social support. *See generally* VIOLENCE & MENTAL DISORDER: DEVELOPMENTS IN RISK ASSESSMENT (John Monahan & Henry J. Steadman eds., 1994) (hereinafter VIOLENCE & MENTAL DISORDER).

III. RELEVANT RESEARCH ON VIOLENCE IN THE MENTALLY DISORDERED

This section will provide a brief review of many of the studies conducted during the last twenty years on violence among the mentally disordered. The main purpose of this review is to provide a context within which to judge the MacArthur Risk Assessment Study. The review will consider studies that have been conducted (a) in the community, with unselected populations,[25] (b) in the community, with individuals prior to mental health treatment, and (c) in the community, with individuals following release from hospitalization or other treatment. We will not address research that has focused on violence in the hospital, nor will we describe research on populations such as defendants acquitted by reason of insanity, nor mentally ill inmates. These exclusions are primarily for reasons of relevance. The MacArthur Risk Assessment Study was performed during and following treatment, focused on violent behavior in the community, and assessed individuals with mental disorders but without criminal involvement. We will review the research that is most similar.

A. Community Research on Unselected Populations

One of the more important studies on the relationship between violence and mental disorder involved a reanalysis of data that had been previously collected as part of the Epidemiologic Catchment Area Study (hereinafter "ECA Study").[26] The ECA Study encompassed five sites in the United States (New Haven, Baltimore, St. Louis, Durham, and Los Angeles) and included 19,182 participants who responded to an extensive number of questions regarding mental and emotional functioning.[27]

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25. One of the important methodological issues in research on violence among individuals with mental disorders concerns the nature of the group studied. Almost all research in this area has been conducted with selected populations—that is, those who have been hospitalized, treated in a community mental health center, or incarcerated in jail or prison. The results of such studies may be generalized to others in this particular population, if the study has been conducted well. However, they may not generalize well to other selected populations (*e.g.*, the results of a jail study may not generalize well to individuals on probation in the community). For this reason, it is important to consider which group was being studied when examining the results of a given research study.

26. *See generally* PSYCHIATRIC DISORDERS IN AMERICA: THE EPIDEMIOLOGIC CATCHMENT AREA STUDY (Lee N. Robins & Darrel A. Regier eds., 1991).

27. Participants were administered the Diagnostic Interview Schedule, a structured interview that yields a diagnosis consistent with the Diagnostic and Statistical Manual of the American Psychiatric Association. *See* Lee N. Robins et al., *National Institute of Mental Health Diagnostic Interview Schedule: Its History, Characteristics, and Validity*, 38 ARCHIVES GEN. PSYCHIATRY 381, 386 (1981).

Violence outcome was measured by self-reported behavior, occurring during the year prior to the study, including fighting with a spouse or partner, physically abusing a child, or fighting with a person who was not a spouse or partner.[28] When the ECA data were reanalyzed by Swanson and colleagues[29] to consider the relationship between diagnosis and self-reported violence, there were several major findings. First, the presence of a diagnosis of obsessive compulsive disorder, panic disorder, major depression, major depression with grief, bipolar disorder, schizophrenia, or schizophreniform disorder increased the frequency of violence from 2% (the rate observed for those with no diagnosis) to approximately 10-12%.[30] Second, substance abuse appeared to be a stronger risk factor for violence than mental disorder, as reflected by the respective rates of violence reported by those who abused marijuana (19%), alcohol (25%), or "other drug" (35%).[31] The study suggested a link between mental disorder and violence that was modest in size but statistically significant, and is particularly impressive because of the large sample size, multiple sites, and unselected population. Although the outcome variable (self-reported violence of several kinds during the past year) could have been more sensitive, this study was originally designed to assess the prevalence of various kinds of mental health disorders in the community, not specifically to examine the link between mental disorder and violence.

B. Violence Prior to Hospitalization

One of the clearest demonstrations of the importance of defining the outcome measure of violence carefully is seen in the differences in violence rates reported in studies using a narrow definition ("violence" being defined as "physical acts only"), contrasted with studies employing a broader definition (acts *and* threats). In one study, a total of 3% of 2,916 individuals evaluated for treatment at a university-based psychiatric service had been "physically assaultive" a few days prior to evaluation.[32] Two other studies cite base rates of pre-admission violent

28. *See id.*

29. *See* Jeffrey Swanson et al., *Violence and Psychiatric Disorder in the Community: Evidence from the Epidemiologic Catchment Area Surveys*, 41 HOSP. & COMMUNITY PSYCHIATRY 761, 763 (1990).

30. *See id.*

31. *See id.*

32. *See* Kenneth Tardiff & Harold W. Koenigsberg, *Assaultive Behavior Among Psychiatric Outpatients*, 142 AM. J. PSYCHIATRY 960 (1985).

acts between 10-12%.[33] These rates are generally consistent with those reported in earlier, "first generation" studies of violence among those with mental disorder.[34]

These rates increase, however, when researchers use a broader definition of violence that includes threats as well as acts. In one study, it was reported that 15% of 416 persons presenting in urban psychiatric emergency rooms had "violent ideation or violent acts in their clinical presentation."[35] Other researchers have reported even higher rates, with the range of frequencies of reported pre-hospitalization violence, such as threats or violent acts, between 20-36%.[36] More recently, it was observed that 17.8% of 331 involuntarily admitted inpatients with severe mental illness had committed a serious violent act (using a weapon against another person, threatening another person with a weapon, or injuring another person) prior to hospitalization, and that substance abuse was one of the factors most strongly associated with such violence among this sample of mentally disordered individuals.[37]

C. Violence Following Hospital Discharge

Several important studies also followed individuals with mental disorders after they were discharged from psychiatric hospitalization and returned to the community. Among a sub-group of patients who were considered by the hospital staff to be "potentially violent" during short-term hospitalization, a total of 25-30% were rearrested for a violent crime or rehospitalized following a violent act during the year following hospital discharge.[38]

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33. *See* Kenneth Tardiff, *Characteristics of Assaultive Patients in Private Hospitals*, 141 AM. J. PSYCHIATRY 1232, 1233 (1984); *see also* Thomas J. Craig, *An Epidemiologic Study of Problems Associated with Violence Among Psychiatric Inpatients*, 139 AM. J. OF PSYCHIATRY 1262, 1263 (1982).

34. Otto, *supra* note 22.

35. *See* Andrew E. Skodol & Toksoz B. Karasu, *Toward Hospitalization Criteria for Violent Patients*, 21 COMPREHENSIVE PSYCHIATRY 162, 163 (1980).

36. *See* Dale E. McNiel & Renee L. Binder, *Violence, Civil Commitment, and Hospitalization*, 174 J. NERVOUS & MENTAL DISEASE 107, 109 (1986). *See also* Dale E. McNiel & Renee L. Binder, *Relationship Between Preadmission Threats and Violent Behavior in Acute Psychiatric Inpatients*, 40 HOSP. & COMMUNITY PSYCHIATRY 605, 607 (1989); A. Michael Rossi, *Violent or Fear Inducing Behavior Associated with Hospital Admission*, 36 HOSP. & COMMUNITY PSYCHIATRY 643, 645 (1985); Kenneth Tardiff & Attia Sweillam, *Assault, Suicide, and Mental Illness*, 37 ARCHIVES GEN. PSYCHIATRY 164, 165 (1980).

37. *See* Marvin S. Swartz et al., *Violence and Severe Mental Illness: The Effects of Substance Abuse and Nonadherence to Medication*, 155 AM. J. PSYCHIATRY 226, 227 (1998).

38. *See* Deidre Klassen & William A. O'Connor, *Predicting Violence in Schizophrenic and Non-Schizophrenic Patients: A Prospective Study*, 16 J. COMMUNITY PSYCHOL. 217, 223

Another important study of violence committed by individuals in the community with mental disorders used a six month follow-up, employing self-reports and collateral reports.[39] The study involved 357 patients treated in an urban psychiatric emergency room and considered by clinicians to present higher violence potential, and 357 controls, assessed by clinicians *not* to be violent, matched for age, race, and sex.[40] Researchers found that violence, defined as touching another person with aggressive intent, or threatening another person with a weapon, occurred during the follow-up period in 36% of the controls and 53% of the "violence-concern" group.[41] They also reported that clinical judgment contributed modestly to the accuracy of the violence risk assessment beyond what was contributed by demographic variables or history for male patients, but not for females.[42] They attributed the latter finding in part to clinicians' underestimating the violence risk presented by female patients. The overall frequency of violence among women during the follow-up period was actually slightly higher than that among men (49% vs. 42%, respectively).[43] In further analyses[44] of these data, with some additions, a total of 812 patients evaluated in psychiatric emergency service (495 male, 317 female) and returned to the community were considered. Males and females did not differ significantly in the frequency or seriousness of post-hospital violence, but did differ in respect to the other person involved in the violent incident.[45] Family members were more frequently the target of violence by females (53% vs. 38%).[46]

(1988). *See also* Deidre Klassen & William A. O'Connor, *A Prospective Study of Predictors of Violence in Adult Male Mental Health Admissions*, 12 LAW & HUM. BEHAV. 143, 151 (1988); Deidre Klassen & William A. O'Connor, *Crime, Inpatient Admissions, and Violence Among Male Mental Patients*; 11 INT'L J.L. & PSYCHIATRY 305 (1988); Deidre Klassen & William A. O'Connor, *Assessing the Risk of Violence in Released Mental Patients: A Cross-Validation Study*, 1 PSYCHOL. ASSESSMENT: J. CONSULTING & CLINICAL PSYCHOL. 75, 79 (1989).

39. Collateral accounts are those provided by a collateral observer who was nominated in the beginning of the study by the participant as someone who had frequent contact with the participant in the community. In this study, a total of three collateral interviews were attempted on each patient following hospital discharge.

40. *See* Charles Lidz et al., *The Accuracy of Predictions of Violence to Others*, 269 J. AM. MED. ASS'N 1007 (1993).

41. *See id.*

42. *See id.*

43. *See id.*

44. *See* Christina E. Newhill et al., *Characteristics of Violence in the Community by Female Patients Seen in a Psychiatric Emergency Service*, 46 PSYCHIATRIC SERVICES. 785 (1995).

45. *See id.*

46. *See id.*

Males and females were comparable in the frequency with which acquaintances were targets (49% of males and 45% of females), and males were more likely to be violent toward strangers (13% of males and 2% of females).[47] They also differed somewhat in the location of the incident, with female violence occurring more often in the home (75%, compared to 57% for males), while male violence was more likely to be in a public place (43%, compared to 25% for females).[48]

D. Conclusions

Several conclusions may be drawn from this empirical literature. Historically, one of the problems with the accuracy of violence prediction has been the perception that violent behavior among those with mental disorders is a relatively rare event, and will therefore be subject to error in "overprediction" (predicting that an individual will become violent when, in fact, that individual will not). What the studies reviewed in this section demonstrate, however, is that violence among those with mental disorders is not so uncommon as was once thought. Particularly when the outcome of "violence" is defined more broadly to include threats, and is measured more sensitively, relying on records reflecting violent acts and collateral and self-reports of violence, as well as the traditional "arrest for a violent offense" criterion. Thereby, the "rare event" problem for prediction is less serious because the rates of violence are demonstrably higher. A related conclusion involves the importance of the outcome variable of violence. Clearly the trend is toward defining "violence" more broadly and measuring it more carefully. However, the studies reviewed typically do not reflect a careful description of different specific acts which could be combined differently or disaggregated if researchers wanted to answer questions about, for example, the correlation of violence at different levels of severity.

A third conclusion concerns the importance of substance abuse as a variable associated with elevated risk of violence. Given the association between substance abuse and elevated violence risk across different populations, there is an important question about whether the major risk factors for violence among those with mental disorders are significantly different from violence risk factors for those without mental disorders. This leads to the final conclusion: it is important to consider the violence committed by mentally disordered individuals in comparison with those without mental disorder, but sharing other common charac-

47. *See id.*
48. *See id.*

teristics (*e.g.*, socioeconomic status, neighborhoods), to make a reasoned judgment about the unique contribution of mental disorder to violence. Only the Swanson *et al.* study,[49] among those reviewed, has allowed such a comparison, which clearly represents a methodological advance on this issue.

IV. THE MACARTHUR RISK ASSSESMENT STUDY

The MacArthur Risk Assessment Study was carefully conceived and conducted over a period of approximately nine years, including pilot testing. The selection of variables that would be assessed for all participants was guided by a theoretical and empirical review of the existing literature,[50] as well as the results of pilot testing.[51] Participants included 1,136 male and female patients with mental disorders between the ages of 18 and 40 who had been hospitalized at one of three sites: Western Psychiatric Institute and Clinic in Pittsburgh, Pennsylvania, Western Missouri Mental Health Center in Kansas City, Missouri, and Worcester State Hospital in Worcester, Massachusetts. Following hospital discharge and return to the community, participants were assessed at ten week intervals over the course of a year, for a total of five post-discharge contacts. Violent acts were recorded when they were self-reported, described by a collateral observer, or reflected in agency records as rearrest or rehospitalization. Also recorded were the nature,[52] frequency, target, and location of the acts. These results were compared with violence toward others by a comparison group of 519 individuals who were randomly sampled from the same census tracts as the discharged patient group.

A. The Study Findings

The major findings of the study were as follows:

- Substance abuse was diagnosed as co-occurring with mental disorders in 40-50% of cases in the patient group.
- Adding self-report and collateral report to the determination of whether violence had occurred increased the frequency of such identi-

49. Swanson et al., *supra* note 29, at 764.

50. *See* VIOLENCE AND MENTAL DISORDER, *supra* note 24.

51. The Study included measures of anger, impulsivity, psychopathy, substance abuse, delusions, hallucinations, demographic and case history variables, and social support.

52. For the purpose of statistical analysis, "serious violence" was defined as battery that resulted in physical injury, sexual assaults, assaultive acts that involved the use of a weapon, or threats made with a weapon in hand, and "other aggressive acts" (battery that did not result in physical injury).

fied violence well beyond what was reflected in agency records, raising it from 4.5% to 27.5% for serious violence and from 8.8% to 56.1% for other aggressive acts during the index period.

- The presence of substance abuse increased the frequency of both serious violence and other aggressive acts.
- The patient group without substance abuse did not differ from the community control group without substance abuse in the frequency of either violence or other aggressive acts.
- Patients had symptoms of substance abuse more often than community controls.
- The patient group showed a greater risk of violence and other aggressive acts than the community controls when both experienced symptoms of substance abuse, particularly during the period immediately following hospital discharge.
- The frequency of violence decreased with time over the course of the one year post-hospitalization, except for the patients who did not abuse substances. This was not attributable to differential attrition (more patients who were violent dropping out of the study along the way), a shorter time at risk in the community (time at risk did not change the results with these samples), or response set (in which some patients might deny violence to terminate the interview more quickly).

B. Discussion and Critique of MacArthur Risk Assessment Study

For a number of reasons, the Study is the best that has ever been performed in the area of violence and mental disorder. One important reason involves the amount of planning that was entailed. The MacArthur Research Network on Mental Health and the Law was funded to allow an interdisciplinary team of researchers, scholars, and policy experts to meet regularly and design a study that would address many of the problems that had plagued previous research in this area. The research plan was developed so carefully that the investigators were able to publish descriptions of the relevant literature and its empirical and theoretical implications well before data were analyzed. In this case, the planning was exemplary, and the many strengths of the Study follow from such interdisciplinary collaboration and careful analysis and planning.

Several aspects of the design were also very strong. The large number of participants and the coordinated collection of data across multiple sites was extraordinary given the labor-intensiveness of collecting complete data on a single participant. Even though the collection of the

MacArthur Risk Assessment Study data has been completed, it is likely that the data analysis and publication of results will continue for several years. By comparison, the best previous study on community violence[53] had attempted to collect data at three follow-up times over six months, with over 800 patients. The Study obtained five follow-ups over twelve months, with over 1,100 patients. The reality that the Study, from first conceptualization to final data analysis, will probably take over fifteen years to complete is testimony in itself to the difficulty of this kind of research, and also to the way in which the MacArthur Network managed to overcome an enormous range of problems.

Several aspects of the variables used in the Study are noteworthy as well. The variables used to measure the potential risk factors for violence were carefully selected for their relevance and measured accurately. Thus, they are likely to provide some of the most useful information yet obtained in this area. The MacArthur Network has not yet published some of the major analyses, particularly those focusing primarily on the risk factors associated with violent behavior.

The detection and measurement of violent behavior in the Study also breaks new ground for sensitivity and detail. Because the behaviors were measured using accounts from multiple sources, and because they were recorded with such specificity, it is much more likely that any violent behavior that occurred will be detected. Moreover, recording the outcomes in this way provides researchers with additional options for analyzing the relationship between risk factors and outcomes of different kinds and at different levels.

Finally, a major strength of the Study involves the community comparison group. By matching the patient and the community group on certain dimensions relevant to environmental influences on violence, the researchers can reach more meaningful conclusions about the role of various kinds of mental disorder in violent behavior. The nature and frequency of violence within a group of mentally disordered individuals is most useful when compared with others with similar characteristics—but without mental disorders.

There are two ways in which the Study might have been even stronger. First, the community control group was assessed only once for reported frequency of violence, while the patient group was assessed five times over the duration of a year. The obvious reason for assessing the patient group on multiple occasions was the possibility of a change over time, which was indeed observed. There is no comparable reason

53. *See* Lidz et al., *supra* note 40.

to suspect that the community control group might also change over time. They were not hospitalized, nor undergoing other important life events—but it would, nevertheless, have been useful to consider the community control group over multiple assessments to rule out significant changes in reported violence levels over time. One of the findings about patient violence that will be most challenging to explain is *why* this group became less frequently violent over the course of a year. The explanation might be somewhat different if it had been determined, for example, that the community control group was also unstable in violence frequency over time.

The other way that the Study could have been even stronger is through the incorporation of a planned combination of interventions, delivered to some of the patient participants, that offered a strong theoretical possibility of violence risk reduction. Such possibilities might include, for example, substance abuse treatment combined with skills-based training in social and vocational functioning. However, in fairness to the MacArthur Network, this suggestion is made in perfect hindsight. We know far more today than we did ten years ago about potential interventions to reduce violence risk, and much of what we know comes directly from the Study. It remains for researchers today to develop further studies incorporating the methodological sophistication of the MacArthur Study combined with current experimental approaches to evaluating treatments, such as medications or psychotherapies, that will build upon the Study's results and provide us with empirical information about how violence among the mentally disordered can be effectively reduced.

V. IMPLICATIONS

In this section, we will address some of the implications of the MacArthur Study for clinical-legal practice. We divide this section into issues for which the Study has direct implications, and those for which the implications are more indirect. We will also comment on the implication of the MacArthur Study for policy and for future research.

A. Direct Implications for Practice

1. Civil commitment

The individuals with mental disorders who participated in the MacArthur Study were very close to a population that will be considered for involuntary civil commitment in the future, and the Study thus

has clear implications for the assessment and decision-making associated with civil commitment. First, the question of whether an individual is "dangerous to others," within the meaning of a civil commitment statute, can now be considered using the range of behaviors described in the Study's outcomes of violence. Second, the risk factors most strongly associated with violence in the community can receive greater emphasis by those performing risk assessments, and by judges making the decisions regarding commitment. Third, and most importantly, there must be a tool or formal decision-making strategy developed that integrates the Study data and yields risk-relevant conclusions that can assist evaluators and decision-makers. This kind of data combination is the most efficient and accurate way to use the kind of information collected in the Study. This remains one of the major tasks to be accomplished before the Study's data analyses can be considered complete.

2. *Tarasoff*

When there is a legal obligation for a treating mental health professional to warn, or more broadly, to protect identifiable third parties from potential patient violence, then accurate assessment of risk and intervention to reduce risk is clearly important. The Study has several important implications for such assessment and intervention. To the extent that more accurate identification of high risk individuals is facilitated by considering the MacArthur data or a "tool" that would facilitate the application of such data, it may become standard practice to incorporate the use of such data. When Monahan discussed strategies for mental health professionals to avoid *Tarasoff* liability,[54] one of his recommendations was to record the source, content, and date of significant information on risk, and the content, rationale, and date of all actions to prevent violence. In light of the data presented in the Study, this recommendation might be amended to include consideration of the person's level of risk in light of relevant research, which the MacArthur Study provides.

There is also an obligation under *Tarasoff* to protect third parties by intervening with the patient to reduce risk.[55] In this regard, Monahan also recommended "intensified treatment" in cases that raise particular concerns about violence.[56] This speaks to the related area of risk man-

54. *See* John Monahan, *Limiting Therapist Exposure to Tarasoff Liability: Guidelines for Risk Containment*, 48 AM. PSYCHOL. 242, 246 (1993).

55. *See* Tarasoff v. Regents of the Univ. of Calif., 551 P.2d 334 (Cal. 1976).

56. *See.* Monahan, *supra* note 54, at 245.

agement, for which the Study also has implications. These will be discussed in more detail in the next section.

3. Risk-Reducing Interventions

Several important considerations for risk-reducing interventions are suggested by the Study. The co-occurrence of substance abuse with a severe mental disorder is common in the patient group and clearly associated with violence risk. Accordingly, the first implication for risk reduction involves the planning and delivery of integrated treatment services emphasizing both substance abuse and symptoms of severe mental disorder. When such treatment is effective in helping individuals keep their symptoms of mental disorder in remission and avoid using alcohol and drugs, then significant risk reduction should result. The findings of recent research suggest that substance abuse treatment is effective in reducing both substance abuse and criminal conduct.[57] Substance abuse is a significant problem, and there is a clear need for specialized treatment services for persons with co-occurring mental disorder and substance abuse, delivered across the spectrum of care from inpatient to community settings.

The second implication involves the way in which treatment and other services for individuals with mental disorders are planned. Within certain identifiable sub-groups of the mentally disordered, the risk for violence is elevated. Conversely, within other sub-groups, the risk for violent behavior appears no higher than that of others in the community without mental disorders. The accurate identification of such subgroups will be facilitated by the Study data, particularly when the data are analyzed in a way that allows a "tool" or "decision strategy" to be applied to a single case. Individuals who present relatively higher risks for violent behavior should receive planning specifically for risk-relevant interventions, more intensive monitoring, and more frequent reassessment for risk status.

The third implication concerns how such intervention progress is evaluated by mental health professionals and, in some cases, administrative or legal decision-makers. When relative risk is assessed in the beginning, and an individualized plan is developed for the treatment of

57. *See* SAMHSA Study Confirms Substance Abuse Treatment Reduces Drug Use, Crime, U.S. NEWSWIRE, Sept. 9, 1998, at 1, available in 1998 WL 13605234. The study of 1,799 persons who had undergone treatment at a national random sample of treatment programs five years after treatment indicated that crime had been reduced between 23 and 38 percent. *See id.*

symptoms and the reduction of violence risk, then the individual must be periodically reassessed to determine how well the plan is working. The Study data suggest, for example, that abstinence from substance use and perhaps several other specific changes, when combined with the remission of symptoms for individuals with severe mental disorders, would effectively lower the risk of future violent behavior. When this approach is used for treatment planning and decision-making, it can address the need for risk management that is present in a number of legal contexts.[58]

4. Other Decision-Making Involving Violence Risk in Mentally Disordered

There are other legal decisions involving mentally disordered adults who are not involved in the criminal justice system, and for whom the question of violence risk might arise as part of the overall legal question. One important consideration about such decisions, and the other areas that have been discussed in this section, involves the current standard for the admission of expert evidence, which is described by *Daubert*[59] in some jurisdictions and remains under *Frye*[60] in others. It is expected that the results of the MacArthur Study, and any tool or decision-strategy that might be developed from these results, would be admissible under either standard when applied properly. Given the methodological sophistication and overall scientific strength of the MacArthur Study, a court applying the *Daubert* standard could easily and affirmatively answer the necessary questions about the existence of relevant, appropriate scientific data. The major question for a court to determine might involve applicability. If the MacArthur Study results are applied to other populations, such as mentally disordered offenders, or mentally disordered juvenile offenders, then it will be important to have that application guided by further research to determine how well the MacArthur results "fit" with the different population. Likewise, in a *Frye* jurisdiction, it is anticipated that the MacArthur Study results will be considered "generally accepted" in mental health and behavioral science, and their application even more so when a tool or decision strategy allows their use in a single case.

58. *See* Heilbrun, *supra* note 15.

59. *See* Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 587-96 (1993).

60. *See* Frye v. United States, 293 F. 1013, 1013-14 (D.C. Cir. 1923).

B. Indirect Implications for Practice

The MacArthur Study also has indirect implications for practice. Our judgment about the "directness" of implications is made primarily according to how closely the population and circumstances of the Study participants resemble those to whom the Study results might be generalized. In this section, we offer several examples of circumstances in which the MacArthur data might have some applicability, but needs to be applied with more caution.

1. Bail

In non-capital cases, defendants are entitled to consideration for reasonable bail.[61] The Bail Reform Act of 1984 provides guidelines to assist bail commissioners and magistrates in setting reasonable bail in accordance with the Supreme Court's mandate.[62] The last factor allows the decision-maker to consider the "nature and seriousness of danger to any person or the community that would be posed by the person's release."[63] The MacArthur Study results could be useful in making such a decision, in two respects. First, mental illness alone, in the absence of substance abuse, is not associated with a higher risk of violence than is presented by those without mental illness who live in similar neighborhoods. Second, substance abuse is associated with higher violence risk, whether present in an individual with mental disorder or without. The note of caution to be considered, of course, involves the extent to which the MacArthur Study findings will apply to individuals who are pre-trial criminal defendants. This question must be addressed through further research.

2. Criminal commitment

Individuals who have been acquitted of criminal charges by reason of insanity are typically committed for involuntary hospitalization until they are no longer mentally ill and dangerous,[64] with the "dangerous" standard interpreted quite broadly.[65] The MacArthur Study data have implications for the assessment, treatment, and decision-making for such individuals. The application of a range of potentially relevant risk factors in the Study could be replicated among insanity acquittees, al-

61. *See* Stack v. Boyle, 342 U.S. 1 (1951).
62. *See* 18 U.S.C. §§ 3141-50 (1994).
63. 18 U.S.C. § 3142 (g)(4) (1994).
64. *See* Foucha v. Louisiana, 504 U.S. 71, 73-88 (1992).
65. *See* Jones v. United States, 463 U.S. 354, 370 (1983).

though the number of participants would be considerably smaller from any jurisdiction requiring a multi-jurisdiction, coordinated project. Variables such as anger, impulsivity, and substance abuse are already considered in good treatment programs for insanity acquittees, but the MacArthur Study results strongly suggest that they be evaluated, treated, and monitored more formally. Also, the specificity of the different kinds of "violence" outcome could be quite helpful for hospital treatment teams and community treatment providers and case managers in targeting goals. When a jurisdiction has conditional release,[66] then a released insanity acquittee is likely to be monitored closely in the community. Through the consideration of the methodology and data from the MacArthur Study, it is quite possible that programs treating insanity acquittees can improve their assessment of violence risk, their delivery of relevant risk-reducing treatment, can carefully monitor the impact of changes in risk status, and can make more accurate decisions regarding an acquittee's release or transfer to a lower-security setting. Shorter hospitalization in expensive, maximum security forensic facilities is not necessarily a goal that legal decision-makers, policy-makers, or the general public will rush to endorse, but shorter hospitalization with enhanced public safety would be an outcome which many could endorse.

3. Forensic assessment generally

Mental health professionals who provide evaluations for the courts offer a service that is significantly different, in many respects, from that provided in a therapeutic context.[67] The MacArthur Study results can certainly inform forensic mental health assessment proceedings, and legal decision-making, on issues directly related to violence risk in the mentally disordered. Moreover, the Study also provides an important example of several procedures that are likely to result in accurate, comprehensive information in sensitive areas such as violence potential. In particular, the Study (a) used carefully selected, theoretically and empirically relevant tools to measure capacities relevant to the outcome of interest, (b) asked a series of specific, detailed questions regarding acts that did not rely on speculation or assumptions about what "might"

66. Conditional release is a release option for the decision-maker in some jurisdictions with insanity acquittees. It allows the release to be approved conditionally, subject to monitoring of the specified conditions in the community. If the conditions are not met, the decision-maker typically has a range of options, including rehospitalization of the individual. *See, e.g.*, Patricia Griffin et al., *Designing Conditional Release Systems for Insanity Acquittees*, 18 J. MENTAL HEALTH ADMIN. 231 (1991) for a fuller discussion.

67. *See* MELTON ET AL., *supra* note 3, at 542, 546.

have occurred, and (c) corroborated the self-report obtained in response to these questions with the accounts of a collateral observer and with official records. Mental health professionals performing forensic evaluations could use such procedures to great advantage in specific cases before a court. If most did so, the quality of the evaluations provided to various courts and attorneys in our society would very likely improve.

C. Implications for Policy

Public perceptions about the mentally disordered often have been influenced by fears and misunderstanding, well-publicized individual cases in which serious violence was committed by an individual with a mental disorder, and the limited availability of good empirical data with which to address particular questions about policy. The MacArthur Risk Study can change this, but only in part. A careful reading of the Study's results indicates that a serious mental disorder is, to some extent, related to violence risk, but only for the subgroup of mentally disordered individuals who also abuse drugs or alcohol. Law or policy that assumes a necessary connection between mental disorder and violence risk would be premised on a misreading of the MacArthur results. However, there are clearly variables (substance abuse being a prominent example) which should be targeted for assessment, intervention, and monitoring under circumstances in which there is legal jurisdiction and a primary goal is to reduce violence risk.

It is likely that the results of the MacArthur Study will be politicized by some seeking to use them for advocacy purposes. By arguing that all mentally ill people are potentially violent and need more services, for example, some may be promoting an admirable goal[68] such as increased funding for mental health services for the severely mentally ill, but doing so in a way that is not consistent with the MacArthur Study data. Such promotion may unfortunately reinforce public stereotypes concerning mental illness and violence. The Study was carried out at a very significant cost of time, energy, and funding. The results should be considered carefully, and in the complexity that the findings merit.

D. Implications for Scientific Research

The MacArthur Study, considered broadly to include its literature review, theoretical contributions, reconceptualizations, methodologies, and findings, has already had an enormous impact on the scientific in-

68. *See e.g.*, E. Fuller Torrey & Mary Zdanowicz, *Potentially Violent People Need More Help*, PHILADELPHIA INQUIRER, Dec. 3, 1998, at 27.

vestigation of violence risk assessment among the mentally disordered. It will serve as a model for future investigators, who can implement studies incorporating similar measures of risk factors and comparable approaches to measuring violence outcomes, but with somewhat different populations. In the measurement of outcome, it is particularly the level of specificity and the incorporation of both self-report and collateral observer accounts, that is so useful when researchers seek to avoid the problem of undetected violence.

In a recent review of the currently available risk assessment tools, Borum offered a cautiously optimistic view of the development of risk assessment tools, primarily during the last decade.[69] Such tools are more structured and relevant to violence than previous approaches to risk assessment. Researchers are in various stages of an effort to validate such tools through the collection of empirical outcome data. There are no violence data comparable to those obtained in the MacArthur Study, however, making it even more important that the MacArthur data be developed into a tool that can be applied in relevant cases and understood by clinicians, attorneys, judges, and policy-makers.

VI. CONCLUSION

The MacArthur Risk Assessment Study is the most important research study ever conducted on the risk of violence for individuals with mental disorders. It sets new conceptual and empirical standards for research in this area, and it has important implications for practice and policy as well. When the Study data have been analyzed to provide a tool or decision strategy for applying these results to individual cases, there will also be a new standard for the risk assessment of violence in those with mental disorders. The fields of law and of mental health, and indeed our entire society, stand to receive invaluable benefits from the results of this landmark effort.

69. Randy Borum, *Improving the Clinical Practice of Violence Risk Assessment: Technology, Guidelines, and Training*, 51 AM. PSYCHOL. 945, 954 (1996).

Use of Intervention Strategies by Assertive Community Treatment Teams to Promote Patients' Engagement

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Objective: **This study explored the range of interventions and the use of more intrusive techniques by staff of assertive community treatment (ACT) teams to promote engagement, manage problem behaviors, and reinforce positive behaviors among patients. Individual and organizational characteristics that may be associated with these practices were identified.** ***Methods:*** **Between January and March 2006, clinicians (N=239) from 34 ACT teams participated in a one-time survey about their intervention strategies with patients, perceptions about the ACT team environment, and beliefs about persons with severe mental illness.** ***Results:*** **Significant variation existed in the types of interventions employed across teams. The less intrusive strategies, including positive inducements and verbal guidance, were the most common. Other strategies that placed limits on patients but that were still considered less intrusive—such as medication monitoring and money management—were also common. Clinicians who reported working in more demoralized climates and having negative perceptions of mental illness were more likely to endorse leveraged or intrusive interventions.** ***Conclusions:*** **The findings of this study suggest significant variation across teams in the use of intervention strategies. Both perceptions of a demoralized organizational climate and stigmatizing beliefs about mental illness were correlated with the use of more intrusive intervention strategies. Future research on the role and appropriateness of more intrusive interventions in mental health treatment and the impact of such interventions on patient outcomes is warranted. (*Psychiatric Services* 64:579–585, 2013; doi: 10.1176/appi.ps.201200151)**

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Assertive community treatment (ACT) is a team-based approach to support successful integration of persons with severe mental illnesses into the community (1). ACT teams typically focus on patients who have failed to respond to less intensive treatments and utilize low staff-to-patient ratios, frequent contacts, and "active and persistent efforts to engage clients" (2). Despite the evidence base supporting its effectiveness (1), ACT has been criticized by both clinicians and patients as overly reliant on intrusive techniques that diminish patients' autonomy (2–5).

ACT teams have been reported to use access to money and housing as leverage to encourage patients to adhere to treatment plans and to enlist patients' family and friends to join in exerting pressure (3). Some experts have suggested that "ACT is largely a euphemistic label for coercion" (4), and the question has been raised whether an ethical clinician can participate in "treatment that won't go away" (5). ACT has been described as a model that may limit patients' privacy, violate patients' confidentiality, and give priority to societal interests—for example, maintaining safety and social order—over patients' needs (5). Similar concerns echo through the literature on community mental health (6–8).

Studies examining the intrusiveness of ACT teams' interventions, however, have been few and their findings limited. Interviews and surveys of patients generally show high degrees of satisfaction with ACT, although patients sometimes complain that staff members are overly controlling or intrusive (9–12). Focus groups of patients from four ACT teams supported this conclusion, and—with rare exceptions—participants generally noted the supportive and nondirective nature of staff interventions (13).

A recent study of interactions between ACT case managers and patients found that patients' reports of a negative relationship with the provider were significantly correlated with patients' perceptions of coercion but not with the actual use of coercive interventions. This finding suggested that more global aspects of the relationship may affect patients' perceptions of the acceptability of more intrusive interventions (14). Taken as a whole, studies of ACT patients do not provide support for considering ACT an intrinsically coercive intervention, although coercive techniques may sometimes be used.

A small number of studies have examined reports by ACT team clinicians about the interventions they use and their attitudes toward them. In a focus group study, ACT staff endorsed nondirective approaches and reported that more coercive techniques were incompatible with the ACT model (13). A survey of ACT case managers who worked in Department of Veterans Affairs programs examined the use of a range of techniques that constituted "therapeutic limit setting." The techniques spanned a continuum of increasingly more intrusive approaches, including verbal encouragement, contingent support, and money management, as well as informal (threats of involuntary hospitalization) and formal (civil commitment) coercion. The findings suggested that less intrusive approaches were used more often (although absolute frequencies of use were not reported) and that greater limit setting was associated with poorer patient outcomes at six months (15,16).

Observations of 45 interactions with patients by 15 ACT staff members in Chicago suggested that coercive measures were most likely to be used with patients whose treatment was court ordered but that they constituted only a small proportion of the approaches employed (17). A related study found that ACT providers employed varying levels of pressure to promote medication adherence and that the levels employed correlated with their perception of their patients' level of adherence (18). Data from staff members of 23 ACT teams in Indiana showed wide variability in the use of four specific forms of leverage, with representative payees and intensive medication monitoring used most frequently and involuntary outpatient commitment and placement in agency-supervised housing used much less commonly (19). Indeed, there are even suggestions that ACT teams use less intrusive techniques than ordinary community mental health teams, given that ACT team members are more focused on building trusting relationships, promoting self-determination, and using a nonjudgmental, patient-centered approach (13,20). Given the level of severity of symptoms among ACT patients, ACT team members often struggle to balance patients' self-determination and behavioral change strategies.

Relatively little is known about staff or program characteristics of ACT that may be associated with using intrusive approaches. The Indiana study described above did not detect a relationship between the types of leverage examined and overall measures of fidelity to the ACT model or to pessimistic attitudes among clinicians but showed that some leveraged interventions correlated with lower levels of staff education and lower quality of basic clinical services (19). Other studies have suggested that mental health staff harbor stigmatizing attitudes toward patients; such attitudes have important implications for quality of care and recovery outcomes (21–25). The culture and climate of ACT teams also may influence how team members deliver services. Indeed, organizational climate and culture have been linked to the quality of services in the child mental health service system (26). For example, team members who believe they work in a "demoralized environment" (emotional exhaustion, depersonalization, and role conflict) may use more stringent or leveraged interventions.

Whether denoted as "coercion," "leverage," or some other term, unnecessarily intrusive interventions involving ACT patients are undesirable for several reasons—they undercut the adaptive skills that patients need to learn to make decisions for themselves, lead to lower levels of satisfaction with treatment, and, potentially, restrict patients' exercise of their rights to guide their own lives. Given the limited data on the frequency of intrusive interventions and the factors that may correlate with their use, we undertook a cross-sectional survey of ACT staff members on 34 teams in New York State. Our goals were to further explore the range of interventions and the use of more intrusive techniques by ACT team staff and to identify individual and organizational characteristics that may be associated with these practices.

Methods

Sample

Staff members from a sample of ACT teams in New York City and neighboring areas were invited to participate in a self-administered survey regarding individual staff members' use of intervention strategies, perceptions of their organizations, and beliefs about persons with mental illnesses. Study enrollment occurred between January and March 2006. Teams were paid $250 for their members' participation. All 40 ACT teams in New York City and the downstate region were approached, and 34 agreed to participate. A majority (71%) of participating teams were located in New York City. All staff members of participating ACT teams (N=280) were invited to take part in the survey.

The final study group consisted of 239 ACT team staff members, an 85% participation rate. An average of seven ACT staff members per team participated. Oral consent was obtained from participants after an oral description was offered and a handout about the study was provided to each team member. Approval was obtained from the Central Office Institutional Review Board of the New York State Office of Mental Health.

Dependent measures

Dependent variables aimed at assessing the intrusiveness of therapeutic strategies used by ACT staff members were derived from the Limit-Setting and Engagement Strategies Scale, a 46-item scale with responses from 1 (never) to 4 (often). This scale was adapted from Neale and Rosenheck's therapeutic limit-setting scale (15,16), with additional items added to capture the full range of strategies used by ACT team staff to alter patients' behavior. The additional items include use of inducements, reminders, and assertive treatment strategies not included in the limit-setting scale.

We used principal-components factor analysis with varimax rotation to identify distinct strategies. On the basis of eigenvalues >1 and inspection of the scree plot, factor analysis of the ratings by participants in this study yielded seven discrete factors. In order of intrusiveness, the factors are positive inducements (α=.80), verbal guidance (α=.85), medication monitoring (α=.65), money management (α=.78), conditional involvement (α=.74), use of hospitalization (α=.72), and report to authorities (α=.61).

Organizational and individual variables

Demoralized organizational climate, which was hypothesized to correlate with greater use of more intrusive strategies, was measured by three subscales from Glisson and James's Organizational Climate Survey (OCS), a 115-item scale designed to assess employees' appraisal of the impact of their work environment on their own well-being and on the success of their work (27). The three subscales measure emotional exhaustion, depersonalization, and role conflict and contain 19 items. The standardized Cronbach's alpha for this measure is .91.

Stigmatizing beliefs of ACT staff members, another hypothesized correlate of use of intrusive approaches, were assessed by the Beliefs About Mental Illness Scale (28), a 12-item instrument. Items are rated on a 4-point Likert scale, from 1, strongly agree, to 4, strongly disagree. The standardized Cronbach's alpha for this measure is .81.

The analyses also included demographic characteristics of staff members, namely gender, race-ethnicity, age, education, staff role, and duration of tenure on the ACT team.

Statistical analyses

Because of the nested structure of the data, the data analysis needed to take into account the possibility that intervention practices were partly a function of team characteristics. Thus responses by staff members on a given team may not have been entirely independent of one another. To assess the degree of nonindependence, we first used one-way, random-effects analysis of variance models; intraclass correlation coefficients were calculated for each subscale to estimate the proportion of variance in the intervention strategies accounted for by teams. To account for the nested structure and nonindependence of the responses by individual staff members within teams, we used hierarchical linear modeling—also known as multilevel linear models—to estimate the effects of demoralized climate, stigmatizing beliefs, and demographic characteristics on intervention strategies.

Results

Characteristics of respondents

The mean±SD age of participants was 42±11 years, and a majority were female (Table 1). Most participants identified themselves as non-Hispanic Caucasian (46%) or non-Hispanic African American (32%). A majority of staff members had a graduate degree, and respondents represented a range of specialty roles on the ACT team. Respondents reported working on their teams for 27±28 months.

Use of intervention practices

ACT staff reported that, on average, less intrusive strategies for engaging patients were used more often than intrusive approaches (Table 2). Positive inducements (2.94±.58) and verbal guidance (2.94±.55) were used the most often, and hospitalization (2.43±.54) and report to authorities (2.02±.59) were used less often. The responses of staff members from each team showed significant variation in the use of intervention strategies at the organizational level. Significant intraclass correlation coefficients ($p<.05$) were found for all intervention strategies: positive inducements (.12), verbal guidance (.17), medication monitoring (.23), money management (.24), conditional involvement (.11), use of hospitalization (.08), and report to authorities (.17).

Table 1

Characteristics of 239 ACT staff[a]

Characteristic	N	%
Age (M±SD)	42±11	
Female	153	57
Race-ethnicity		
Caucasian, non-Hispanic	101	46
African American, non-Hispanic	72	32
Hispanic	25	11
Other, non-Hispanic	24	11
Graduate degree	119	53
Staff role		
Team leader	30	14
Psychiatrist	15	7
Nurse	36	17
Substance abuse specialist	26	12
Vocational specialist	24	11
Family specialist	22	11
Peer specialist	10	5
General staff	42	20
Tenure on team (M±SD months)	27±28	

[a] ACT, assertive community treatment

Correlates of intervention practices

Table 3 presents the results of multilevel linear models estimating the association between individual and organizational variables and intervention practices by staff. The results suggested both individual and organizational correlates of more intrusive intervention strategies. ACT staff who reported a demoralized organizational climate were more likely to use more intrusive approaches, including money management (b=.16, SE=.07, $p<.05$), hospitalization (b=.15, SE=.06, $p<.05$), and report to authorities (b=.19, SE=.07, $p<.01$). There was a strong positive association between stigmatizing beliefs and conditional involvement with patients (b=.35, SE=.09, $p<.001$) and report to authorities (b=.26, SE=.09, $p<.01$).

Few individual staff characteristics were associated with intervention strategies. Staff members with a graduate education were more likely to hospitalize patients (b=.21, SE=.09, $p<.05$),

Table 2

Use of therapeutic interventions by ACT staff members[a]

Intervention	M	SD	Cronbach's α
Positive inducements	2.94	.58	.80
Seek to engage patients who are refusing services (by calling on phone)	3.08	.86	
Seek to engage patients who are refusing services (by going to their home)	2.72	.93	
Seek to engage patients who are refusing services (by offering food, etc.)	2.21	.98	
Buy patients lunch, cigarettes to help build relationship	3.31	.93	
Buy patients lunch, cigarettes to reward them for making progress toward goals	2.06	.97	
Buy patients lunch, cigarettes as part of agreement with patients	3.70	.64	
Serve food during group activities to improve attendance	3.72	.59	
Provide metrocard or free pass for public transport	2.80	1.04	
Verbal guidance	2.94	.55	.85
Point out harmful behaviors	3.53	.60	
Point out harmful consequences	3.69	.51	
Remind patients to do certain things	3.47	.61	
Remind patients not to do certain things	3.05	.80	
Remind patients may relapse or be hospitalized	3.43	.74	
Remind patients may lose housing	2.97	.95	
Remind patients may lose or have difficulty regaining child custody	2.88	1.01	
Remind patients may need guardian	1.96	.95	
Remind patients may meet assisted outpatient treatment (AOT) criteria	2.14	1.02	
Remind patients of risk of incarceration	2.29	.99	
Medication monitoring	2.72	.83	.65
Watch patients take medications if they have trouble with medication adherence	3.00	.94	
Administer medications by injection for patients who have trouble with medication adherence	2.67	1.18	
Include medication injections in court-ordered treatment plan	2.48	1.10	
Money management	2.40	.60	.78
Believe patients need someone to control finances	2.80	.64	
Initiate procedures to have representative payee appointed	2.54	.88	
Tell patients they need someone to control spending	2.28	.84	
Suggest patients should have representative payee	2.68	.69	
Request representative payee dispense funds after or during treatment activity	1.97	1.02	
Ask representative payee what money will be used for	2.46	1.16	
If ACT team is representative payee, dispense funds only when patients have spending plan	2.00	1.05	
Report to authorities	2.02	.59	.61
Actually report patients' behavior to authorities	2.13	.84	
Consider reporting patients' behavior to authorities	2.20	.78	
Institute AOT proceedings	2.02	.83	
Initiate procedures to have guardian appointed	1.64	.78	
Use of hospitalization	2.43	.54	.72
Encourage patients to be admitted to hospital	2.62	.67	
Take patients to hospital	2.76	.70	
Request hospital commitment against patients' will	2.16	.79	
Commit patients to hospital against will	2.18	.77	
Conditional involvement	1.82	.55	.74
Tell patients, "I might have to stop working because of behavior."	1.41	.63	
Delay helping patients because of behavior, threat, or harm	1.78	.82	
Refuse to help patients because of behavior, threat, or harm	1.57	.74	
Tell patients, "I will help when you do that."	1.97	.83	
Impose conditions on patients who break rules	2.38	.85	

[a] ACT, assertive community treatment. Use of interventions was rated on a 4-point scale, from 1, never, to 4, often.

and those who identified as Hispanic were less likely than their white counterparts to use conditional involvement as an intervention strategy (b=–.34, SE=.13, p<.01). Use of positive inducements was more strongly endorsed by team leaders (b=.51, SE=.15, p<.001) and by specialty staff (b=.27, SE=.11, p<.05) than by general staff. Team leaders were also more likely than general staff to report the use of hospitalization (b=.32, SE=.13, p<.05). The likelihood among general ACT staff of using medication management was associated with being a psychiatrist (b=.63, SE=.24, p<.01) and a nurse (b=.69, SE=.17, p<.001). In addition, nurses were more likely than other staff to use verbal guidance (b=.25, SE=.12, p<.05).

Discussion

In this study of 239 clinicians from 34 ACT teams, we explored a range of interventions used by respondents and the individual and organizational characteristics associated with these practices. Consistent with previous research (15,16), we considered a continuum of interventions, ranging from less intrusive—for example, positive

Table 3

Estimated effects of characteristics of ACT staff on use of intervention strategies[a]

Characteristic	Positive inducements		Verbal guidance		Medication monitoring		Money management		Conditional involvement		Use of hospitalization		Report to authorities	
	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE	b	SE
Stigmatizing beliefs	.14	.10	.17	.09	–.02	.13	.14	.10	.35***	.09	.04	.09	.26**	.09
Demoralized climate	.10	.07	.12	.06	.12	.09	.16*	.07	.09	.06	.15*	.06	.19**	.07
Age	–.01	.00	–.00	.00	–.00	.01	–.00	.00	–.00	.00	–.00	.00	–.00	.00
Female	.17	.09	.01	.08	.11	.12	.09	.09	.06	.08	–.12	.08	–.04	.09
Graduate degree[b]	–.10	.10	.13	.09	.10	.12	–.05	.10	.11	.09	.21*	.09	.07	.09
Race-ethnicity[c]														
African American, non-Hispanic	.05	.10	.13	.09	–.25	.14	–.04	.11	–.08	.09	.01	.09	.10	.10
Hispanic	.07	.15	.08	.13	–.02	.18	.03	.15	–.34**	.13	–.18	.13	–.08	.14
Other, non-Hispanic	–.09	.16	.06	.14	.01	.20	–.07	.16	.02	.14	.05	.14	.11	.15
Staff role[d]														
Team leader	.51***	.15	.07	.13	.12	.18	.04	.14	.14	.13	.32*	.13	.10	.14
Psychiatrist	.25	.19	.23	.17	.63**	.24	.16	.19	.02	.17	.28	.17	.04	.18
Nurse	.18	.14	.25*	.12	.69***	.17	–.08	.14	–.08	.12	.16	.12	.001	.10
Specialty[e]	.27*	.11	.15	.10	–.09	.14	.07	.11	–.01	.10	.08	.10	.04	.10
Tenure on ACT team	.01	.02	.01	.02	–.001	.03	.002	.02	.01	.02	.03	.02	.001	.02

[a] ACT, assertive community treatment

[b] The reference group was staff with bachelor's and associate's degrees and some college and high school.

[c] The reference group was Caucasian, non-Hispanic staff.

[d] The reference group was general staff.

[e] Included family, employment, substance abuse, and peer specialists

*p<.05, **p<.01, ***p<.001

inducements—to more intrusive—for example, hospitalization and report to authorities. Even though we found variation across teams in the types of interventions used, less intrusive strategies were the most commonly endorsed by the study sample. Positive inducements and verbal guidance were the two most frequently endorsed interventions. Nevertheless, limit-setting strategies were not uncommon, which suggests the need for future research to assess the contexts in which these strategies are implemented and the circumstances in which they may be beneficial or harmful for ACT patients during their recovery.

Consistent with previous research (26,27), we found that ACT clinicians from more demoralized work environments were more likely to use intrusive intervention strategies. The culture and climate of an organization represent the beliefs, values, and meanings shared by its staff members. Clinicians who are more emotionally stressed, overly burdened, or dissatisfied at work may be more inclined to use intrusive interventions to promote treatment adherence. However, the relationship between the organizational climate and intervention strategies is complex and likely bidirectional. Teams working with a population with complex, challenging needs may be more likely to identify a demoralized climate.

Not surprisingly, stigma had a large impact on the types of interventions used by clinicians. Negative perceptions about mental illness are not limited to the general public (29); studies have shown that many mental health providers also endorse stigmatizing beliefs about mental illness (21–25). Clinicians in our study who held more stigmatizing beliefs about people with mental illnesses were more likely to use conditional involvement and to report patients to authorities. These results suggest that stigma continues to be a major challenge and that even mental health staff who provide care and support to patients share these views. Although the link between intrusive interventions and patient outcomes is not well understood, the negative impact of stigma on patients is well established (30,31).

Several limitations of this study are worth noting. First, the relationship between intrusive strategies and both demoralization and attitudes toward mental illness is associational, and the direction of the relationship is unclear. Although demoralization and negative attitudes might lead to greater use of intrusive strategies, it could also be that teams that frequently rely on such strategies are more likely to become demoralized and to harbor negative attitudes toward patients or may feel demoralized because of their patients' challenging and complex needs. In addition, without the benefit of random assignment, our models were unable to account for other variables—for example, level of severity of patients' symptoms—that may explain the relationship between organizational climate and staff attitudes and the use of intrusive strategies.

Second, the findings from this study pertain to members of ACT teams whose patients are among the most severely ill and the most difficult to treat in usual mental health settings; therefore, the results may not generalize to other treatment systems or populations. We also modified the limit-setting scale to include intervention strategies that were not addressed by the original version. Although our factor analysis produced seven factors with moderate to high Cronbach's alpha reliability estimates, formal psychometric testing of our instrument to further establish its reliability and validity as a standardized scale is warranted.

In addition, because of time and resource limitations, we used three subscales from the OCS rather than the full OCS to assess demoralized climate. However, these subscales have independently established psychometrics, including acceptable internal reliability and demonstrable construct validity (32). Further, we did not have information about the context in which the intervention strategies were delivered and thus were unable to determine if intrusive interventions were employed unnecessarily. Any of the intrusive interventions examined—for example, establishing a representative payee for an ACT patient—may have represented an intervention of last resort or an option preferred by an individual staff member or a team. In addition, we lacked information on how patients perceived this continuum of interventions, which may affect the impact of the interventions on therapeutic relationships. Indeed studies have revealed little evidence that patients perceive ACT to be overtly coercive (13,33).

Finally, the limit-setting and engagement measures were based on clinicians' self-reports of their own intervention practices and were subject to errors and biases associated with that data source.

Conclusions

This study extends what we know about the use of intrusive interventions by ACT clinicians. The findings indicated that teams significantly vary in their use of intrusive intervention strategies and that both perceptions of a demoralized organizational climate and stigmatizing beliefs about mental illness strongly predict the use of more intrusive intervention strategies. The results also suggested that ACT teams, as instruments of care, are not intrinsically coercive but rather that a variety of variables is associated with the degree of reliance on intrusive interventions. Given the growing emphasis on implementing services that promote patients' empowerment and self-determination, there is a need for research on the role and appropriateness of more intrusive interventions in mental health treatment and their impact on patients' outcomes.

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