# Developing Effective Treatments for Posttraumatic Disorders Among People With Severe Mental Illness

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*Dedicated to Evidence-Based Psychiatry*

***Objective:*** **The purpose of the study was to examine strategies for developing effective interventions for clients who have both serious mental illness and posttraumatic symptoms.** ***Methods:*** **The authors conducted searches for articles published between 1970 and 2000, using MEDLINE, PsycLIT, and PILOTS. They assessed current practices, interviewed consumers and providers, and examined published and unpublished documents from consumer groups and state mental health authorities.** ***Results and conclusions:*** **Exposure to trauma, particularly violent victimization, is endemic among clients with severe mental illness. Multiple psychiatric and behavioral problems are associated with trauma, but posttraumatic stress disorder (PTSD) is the most common and best-defined consequence of trauma. Mental health consumers and providers have expressed concerns about several trauma-related issues, including possible underdiagnosis of PTSD, misdiagnosis of other psychiatric disorders among trauma survivors, incidents of retraumatization in the mental health treatment system, and inadequate treatment for trauma-related disorders. Despite consensus that trauma and PTSD symptoms should be routinely evaluated, valid assessment techniques are not generally used by mental health care providers. PTSD is often untreated among clients with serious mental illness, or it is treated with untested interventions. It is important that policy makers, service system administrators, and providers recognize the prevalence and impact of trauma in the lives of people with severe mental illness. The development of effective treatments for this population requires a rational, orderly process, beginning with the testing of theoretically grounded interventions in controlled clinical trials. (*Psychiatric Services* 52:1453–1461, 2001)**

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This series has highlighted the importance of implementing evidence-based practices in the treatment of people who have severe mental illness (1,2). Effective, replicable interventions are available in key areas of need: medications prescribed within specific parameters, self-management of illness, assertive community treatment, family psychoeducation, supported employment, and the integration of substance abuse and mental health treatments. Often, however, these tested treatments are not provided to clients of the public mental health system (3). At the same time, resources are being deployed toward services for which empirical support is lacking.

In decisions about the investment of scarce resources in the development of newer interventions, problems and outcomes of particular importance to consumers should receive priority, as should outcomes with strong relationships to the primary symptoms and disabilities associated with severe mental illness (1). In this article, we review evidence that suggests that trauma and posttraumatic stress disorder (PTSD) qualify as priority areas on both counts, and we propose a strategy for developing evidence-based treatments.

A traumatic event involves a direct threat of death, severe bodily harm, or psychological injury that the per-

son finds intensely distressing at the time (4). Common examples of trauma are combat exposure and violent victimization, such as rape and assault. Until recently, exposure to trauma was thought to be relatively rare and to be linked to high-risk experiences, such as wartime military service. However, a series of community studies in the 1990s (5–8) provided evidence that trauma exposure was common, even in middle-class populations. Fifty-six percent of adult respondents in a large, representative national sample reported having experienced at least one traumatic event during their lives (9). These studies also confirmed that many forms of victimization, particularly sexual assault, are greatly underreported (10–12). A few small, early studies (13,14) also suggested that trauma was even more common among people who were in treatment for serious psychiatric illness.

As these findings emerged, a number of conferences were convened to consider the issue of trauma and abuse as it related to clients of the public mental health system (15–17). A major theme was that the abuse of women, particularly sexual abuse, had been ignored or misunderstood by mental health care providers, leaving clients without appropriate care. In the worst cases, female clients were subjected to mental health treatments that exacerbated their posttraumatic symptoms, leading to a negative spiral. That is, coercive interventions, such as involuntary hospitalization and the use of restraints, could worsen posttraumatic symptoms, leading to more prolonged and restrictive care.

In 1994 Jennings (18) published an account of her daughter's tragic experiences dealing with untreated sequelae of trauma in the context of having a serious mental illness. She emphasized the importance of recognizing and treating the effects of childhood sexual abuse among clients with severe mental illness to avoid such spirals and to better help survivors deal with and overcome posttraumatic symptoms. Multiple accounts by trauma survivors with serious mental illness have indicated their dissatisfaction with traditional mental health treatments. Consumers have described episodes of retraumatization and exacerbation of symptoms due to encounters in the treatment system, such as violence by other clients or forcible restraint by male attendants (15,16).

Harris (19) was one of the first clinicians to publish recommendations for modifying services for women with severe mental illness who were also survivors of sexual abuse trauma. She called for more systematic assessment of trauma history; better staff training; modification of standard services to recognize particular safety, control, and boundary issues facing these clients; and coordination of care across multiple presenting symptoms—for example, substance abuse, psychotic disorder, and PTSD.

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This growing movement drew attention to trauma and helped stimulate research and programs. Several state-level initiatives were launched to respond to the problems of persons with both severe mental illness and a history of abuse and to address several priorities and perspectives. These initiatives had some important commonalities, including an emphasis on sexual victimization of women and a primary focus on childhood sexual abuse rather than trauma that may have occurred in adulthood (16,17).

Another important thrust was an emphasis on victimization or retraumatization at the hands of providers or the mental health system itself, including events that served as triggers, reevoking memories of trauma. Providers were often seen as insensitive or demeaning in their responses to trauma survivors. Consumers suggested that clinicians needed to be more aware of trauma-related difficulties and that the treatment system should develop better mechanisms to ensure that trauma survivors receive humane treatment and that their personal rights are respected.

Consumers, advocates, clinicians, and policy makers noted a wide range of trauma-associated problems they wanted to address, including empowerment and recovery; multiple disorders, including acute stress reactions, PTSD, dissociative identity disorder, and disorders of extreme stress not otherwise specified; and general symptoms associated with trauma survivors, such as self-harming behaviors and dissociation. An additional concern was that many clients were misdiagnosed as having major mental illnesses, such as schizophrenia, but were actually trauma survivors with severe or complex PTSD, dissociative identity disorder, and related syndromes.

The concept of trauma-sensitive services was a common component of several state initiatives but had varying definitions. In New York State, emphasis was placed on the identification and acknowledgment of trauma, on recognition of the potential for inadvertent harm to trauma survivors as a result of standard mental health care practices, and on the recovery process of trauma survivors, including the need to enhance their sense of safety and control (17). A Massachusetts Department of Mental Health task force emphasized a specific set of guidelines for assessing clients' history of trauma and to alter restraint and seclusion policies to reduce retraumatization (20). Some consumer-survivors defined trauma-sensitive services more broadly as an

antidote to "oppression and injustice within the mental health system" and advocated for more radical reform of the mental health system, with an emphasis on consumer control and challenges to current psychiatric paradigms (21).

The early evidential base for the state trauma initiatives was largely anecdotal, and systematic data for determining priorities and solutions either were inadequate or were not considered in the design of programs. For example, the emphasis on childhood sexual abuse overlooks the most frequent types of trauma reported by people who have severe mental illness (22) and does not consider male clients, who also have high levels of exposure to trauma. In the largest study of trauma exposure among clients with serious mental illness, both men and women were more likely to report having experienced physical abuse than sexual abuse during childhood, and both reported higher overall rates of victimization in adulthood than childhood (unpublished data, Mueser KT, Salyers MP, Rosenberg SD, et al, 2001).

Similarly, data on traumatic events that occur in the treatment setting are scarce. The authors of a recent review were unable to locate published data on either the incidence or the impact on clients of trauma and other harmful events in mental health treatment settings (23). No studies have been published on treatment system modifications that can reduce retraumatization, and rigorous evaluation of such programs would be challenging. Nonetheless, preventing retraumatization of previously abused clients in the mental health treatment system became a major objective of several states (16,20,24).

There is considerable evidence that trauma, abuse, and their effects on people who have serious mental illness are urgent concerns. It is also clear that these issues are highly complex and that the field lacks sufficient information about trauma, PTSD, and effective interventions for this population. Clearer conceptualizations and treatment models—based on sound data—are needed before mental health care providers can implement effective services to address the consequences of trauma. Following recommendations of the National Association of State Mental Health Program Directors (25), we reviewed the available literature on the prevalence, correlates, service use patterns, and assessment issues in relation to trauma exposure and PTSD as well as the published literature on effective interventions for PTSD (26,27).

## Methods

For our literature reviews we conducted online searches for articles published between 1970 and 2000 by using MEDLINE, PsycLIT, and PILOTS. Details of these searches can be found in articles by Foa and associates (26,27), Goodman and associates (28), and Mueser and Rosenberg (29). To supplement the literature available through standard online searches, we interviewed consumers and providers and examined published and unpublished documents, from both consumers and state mental health authorities, about current initiatives and recognized needs in relation to trauma and PTSD.

Our consumer informants were a convenience sample of individuals who were active in the recovery movement in New Hampshire and Vermont and consumers and family members who had published in the area of trauma and serious mental illness. Reports of state mental health authorities were obtained only from the eight states that were represented at the National Think Tank hosted by South Carolina in 2000—Connecticut, Maine, Massachusetts, Missouri, New Hampshire, Oregon, South Carolina, and Vermont (30). These states are probably not an unbiased sample of the states as a whole.

## Results

### *Trauma exposure and correlates*

People with severe mental illness have a markedly elevated risk of exposure to trauma. About 90 percent of clients with severe mental illness have been exposed to trauma, and most have had multiple exposures (22). Between 34 and 53 percent of clients with severe mental illness report childhood sexual or physical abuse (14,31–33), and 43 to 81 percent report having experienced some type of victimization during their life (13, 34–37). Episodically homeless women with severe mental illness report rates of victimization of 77 to 97 percent (38,39).

Many psychiatric and behavioral difficulties are correlated with trauma exposure in the general population, although specific causal links are not clear. For example, exposure to trauma has been correlated with depression, substance use disorders, eating disorders, personality disorders, chronic pain, somatization, greater use of medical and mental health services, and noncompliance with treatment (40–49).

The correlates of violent victimization among clients with severe mental illness appear to be multifaceted and to affect both the severity of preexisting psychiatric symptoms and clients' use of acute mental health care services. Trauma exposure in psychiatric populations is related to more severe symptoms, such as hallucinations and delusions, depression, suicidality, anxiety, hostility, and dissociation (50–53). Exposure to interpersonal violence is also correlated with more frequent hospitalizations, more time in the hospital, more visits to the emergency department, and nonadherence to treatment (34,50,54,55).

### *PTSD and correlates*

In community studies, PTSD is the most common psychiatric disorder related to trauma exposure and is characterized by three symptom clusters: reexperiencing, avoidance, and hyperarousal (4). About 25 percent of persons who are exposed to trauma develop PTSD, and the disorder is often chronic. The risk of PTSD is related to both the amount and the type of exposure. Recent estimates of the lifetime prevalence of PTSD in the U.S. population range from 8 percent to 12 percent (5,8,9), and the point prevalence is about 2 percent (2.7 percent for women and 1.2 percent for men) (56,57).

People with severe mental illness have high rates of trauma exposure generally and have particularly elevated exposure to the specific types of trauma that carry the highest risk of PTSD—for example, childhood abuse and sexual assault (58–63). Multiple

studies of PTSD in this population suggest that current rates of PTSD are in the range of 29 to 43 percent, far in excess of the rates reported in community studies (20,21,51,64–66). Interpretation of these results may be complicated by psychometric issues, particularly symptom overlap. That is, psychotic symptoms have been reported among clients who have a primary diagnosis of PTSD (67), and symptoms of schizophrenia may be confused with or contribute to symptoms of PTSD—for example, hallucinations may be confused with flashbacks, and negative symptoms of schizophrenia may be confused with avoidant symptoms of PTSD (68).

However, there is evidence that PTSD can be diagnosed reliably among clients who have severe mental illness. Although determining the validity of a diagnosis of PTSD is more complex, it has been shown that the severity of PTSD symptoms among clients who have severe mental illness is related to the severity of trauma exposure, as it is in community samples (22,64). It is also possible that persons with severe mental illness have an elevated risk of developing PTSD if they are exposed to a traumatic event. PTSD, like exposure to trauma, is related to worse functioning among clients who are severely mentally ill, including more severe psychiatric symptoms, worse health, and higher rates of psychiatric and medical hospitalization (66).

*Effective treatments for PTSD*

A growing body of evidence shows that well-delineated, theoretically based interventions are effective in the treatment of PTSD. However, there is little evidence to support the effectiveness of any treatment for the broader set of trauma-related difficulties we have summarized—for example, depression, personality disorders, and substance use disorders (26). In addition, non-PTSD trauma-related disorders are diffuse, vary from one person to another, and have less clear relationships to traumatic events, making measurement more difficult and less reliable. For these reasons we have concluded that developing effective treatments for PTSD per se should be a high priority in the development of trauma services for people with severe mental illness.

Evidence-based treatment guidelines for PTSD are available (26,27). Multiple controlled trials have shown that the most effective interventions for PTSD are those based on cognitive-behavioral therapy approaches, including exposure therapy and cognitive restructuring (26,69). Exposure therapy helps clients decrease avoidance of trauma-related stimuli by encouraging them to confront feared thoughts, feelings, and memories. However, none of the controlled studies of exposure therapy included clients with current, active psychotic illness. Exposure therapy may be limited by high dropout rates (70) and could precipitate relapses of symptoms among vulnerable clients.

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Cognitive restructuring, on the other hand, is well tolerated and has been used successfully in trials involving the treatment of other symptoms, such as delusions, with severely mentally ill clients. Cognitive restructuring for PTSD is aimed at helping clients identify distorted or self-defeating thoughts that are often related to traumatic experiences, such as "no one can be trusted"; evaluating whether evidence supports these beliefs; and, if not, altering the beliefs accordingly. Moreover, cognitive restructuring has been proved effective for clients who have experienced a variety of types of trauma and clients who met criteria for other disorders, such as alcohol abuse and depression (71).

Evidence for the effectiveness of pharmacotherapy for PTSD is mixed. A few controlled trials have shown significant effects for either monoamine oxidase inhibitors (MAOIs) or selective serotonin reuptake inhibitors (SSRIs) in alleviating PTSD symptoms. In the largest studies, effect sizes were modest. The most comprehensive review noted that "dramatic responses to medication have been the exception rather than the rule. MAOIs and SSRIs have been more successful than other drugs" (72). Other PTSD treatments, such as inpatient treatment, psychological debriefing, and group therapy, were judged not to be well supported by research.

*Assessment and treatment*

Many providers and researchers have been concerned that persons with serious mental illness, whose psychotic distortions or delusions may involve themes of sexual or physical abuse (73), may be unable to provide reliable and valid responses to questions about trauma. Caution is also needed in differentiating symptoms of PTSD from those of clients' primary or coexisting psychiatric disorder. However, several recent studies have shown that trauma exposure and PTSD among clients who have serious mental illness can be reliably assessed with standard instruments (65,74,75).

A study currently under way is investigating the use of computer-assisted interviewing to enhance disclosure and to standardize assessment of trauma and screening for PTSD in this population. Results for more than 150 clients suggest that inpatients receiving acute care as well as outpatients with serious mental illness can respond to assessments of trauma and PTSD reliably and without psychotic distortions that would invalidate their responses (unpublished data, Wolford GL, Rosenberg SD, 2001).

Mueser and Rosenberg (29) also

conducted a computerized search of the literature from the past 31 years on PTSD treatment for people with severe mental illness, including the currently used techniques for treating PTSD: psychoeducation, stress management and relaxation, cognitive restructuring, exposure-based treatments, supportive interventions, skills training, pharmacologic treatment, and interpersonal or psychodynamic psychotherapy. Their search located four single-case studies and six open trials but no randomized clinical trials of PTSD interventions for people with possible severe mental illness (76–83).

The open trials were generally reported without quantitative pre-post measures, and none met recommended criteria for treatment outcome studies of PTSD (84)—that is, specified target symptoms, reliable outcome measures, clear inclusion and exclusion criteria, and manual-based, replicable treatment programs. Targeted treatment outcomes were variable and included PTSD symptoms, multiple symptoms associated with adult survivors of childhood sexual abuse, and problems associated with homelessness, substance abuse, poverty, domestic abuse, and mental illness.

Participating clients appeared to be diagnostically heterogeneous, and no data were reported on differential response. Almost no males participated in these trials, and it is not clear whether survivors of nonsexual abuse, such as physical assault, were included. Also, most of the interventions described were multifaceted and complex, and the degree to which they could be adapted to a manual, assessed for model fidelity, or exported to other service settings was unclear.

Two single-case design studies of cognitive-behavioral therapy for women with severe mental illness and PTSD showed improvement in symptoms of PTSD and in psychotic and affective symptoms after treatment (78,79). Contrary to concerns expressed in the literature (85), both of these clients were able to tolerate the PTSD intervention and experienced no other exacerbation of symptoms. If we use standard criteria for determining empirically supported treatments (86), few conclusions about efficacious trauma treatments for people with serious mental illness can be drawn from this review.

However, some consensus about potentially useful interventions can be inferred from these few published studies. First, extensive literature reviews did not locate a single published report that provided evidence that addressing the correlates or sequelae of trauma among persons with severe mental illness, including PTSD, was unsafe or clinically harmful. Second, even critics of state trauma initiatives (87) argue for the use of well-defined, evidence-based interventions for seriously mentally ill clients with posttraumatic symptoms.

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Third, trauma treatments for clients with serious mental illness should take place in a context of comprehensive services, such as case management, medication management, and integrated dual diagnosis treatment when substance abuse problems are present (77,88,89). Finally, the clinical reports in the literature support the hypothesis that trauma interventions are feasible, even in the context of acute or chronic psychotic illness and comorbid substance use disorders (80–82,90).

A number of investigators are currently attempting to develop and evaluate effective treatments for people with serious mental illness who also exhibit posttraumatic symptoms. Two basic types of approaches are used. The first derives from established community mental health interventions and targets adjustment broadly; the second adapts established PTSD interventions for this population and targets PTSD symptoms specifically. In the best-known example of the first type, Harris (89) has developed a multipronged approach for female survivors of trauma who have severe mental illness—the trauma recovery and empowerment model.

The trauma recovery and empowerment model adds a 33-week group intervention to a comprehensive community support and case management approach. Clients are provided with psychoeducation and are taught reframing and problem-solving skills. In the middle stages of the intervention, clients are helped to address trauma experiences more directly, to experience validation from others, and to develop greater self-trust and a greater sense of competence. This intervention is undergoing quasi-experimental evaluation in the Substance Abuse and Mental Health Services Administration Cooperative, a multisite study of women and violence. Fallot and Harris (91) have developed a separate treatment manual for men. The trauma recovery and empowerment model is directed at the broad range of trauma sequelae and does not specifically address PTSD.

As for the second type of intervention, several established PTSD interventions for persons with severe mental illness are being adapted (92–94). These interventions include a three-session psychoeducational intervention, a 12- to 16-session individual cognitive-behavioral treatment, and a 21-session cognitive-behavioral group treatment. The psychoeducational intervention is based on videotapes about trauma and PTSD. The cognitive-behavioral interventions are adapted directly from standard protocols for female survivors of childhood sexual abuse (95) by eliminating the exposure-based elements of treatment and adapting the cognitive restructuring elements (96).

### *Current trauma services and policy issues*

What, then, are public-sector mental health providers doing in this vacuum of empirical data on effective treatments? Because there are no published surveys of current provider practices, this summary is based on reports and other documents from state mental health authorities and on interviews with administrators and providers. Unfortunately, this information is fragmentary and is related primarily to the eight states that reported at the National Association of State Mental Health Program Directors' Think Tank on statewide initiatives that address trauma and PTSD in mental health departments. To the extent that the participants were representative, it appears that service development is in a very early stage. A number of providers have innovated treatments for women that address issues associated with sexual abuse trauma but have not yet subjected these interventions to systematic evaluation. Overall, there is little evidence that empirically based practices are being instituted in routine mental health service settings or even that interventions are being systematically benchmarked in a way that can guide future implementation.

Although a number of state mental health authorities have called for uniform assessment of trauma exposure (24,97), the procedures and methods used to gather these data have often lacked specification and uniformity, and no effort to assess their reliability and validity has been documented. Providers do not appear to have adopted research-based procedures or instruments for screening and assessment. Some states have asked providers to rate clients' history of abuse, but it appears that standardized, reliable techniques are not being used to elicit such a history (20,98).

It is clear from the proceedings of the National Think Tank and interviews with providers and system administrators that consumer demand and providers' concerns are driving efforts to treat the sequelae of trauma among clients with severe mental illness in the absence of data on what constitutes effective treatment. Inpatient and outpatient treatments—in both individual and group formats and with a variety of treatment goals—are being offered to trauma survivors from multiple diagnostic groups. New York State, which has been a leader in this area, has collated the reports of trauma work groups established in 1995 at each state mental health facility in the *Resource Book on Trauma Assessment and Treatment* (99).

In addition, some states are beginning to train providers in a variety of PTSD treatment models, including the "seeking safety" group approach, which has shown efficacy in a small trial involving women with substance use problems and PTSD (100). The trauma recovery and empowerment model (89) is being introduced or adapted by several states. It appears that women with a history of childhood sexual abuse are often the primary consumers of these treatments.

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Numerous authors (77,101–104), national conferences (15), state mental health authorities (16,17,97–99), the National Association of State Mental Health Program Directors (25), and consumer groups (17) have made recommendations similar to those of the participants in the National Think Tank. All agree on the need for evidence-based clinical guidelines for the assessment and treatment of clients who have a history of abuse and trauma (103,104). Most also argue for the rapid implementation of trauma services. The problem, of course, is that it is impossible to deploy evidence-based treatments when there is no evidence base. Moreover, premature policy decisions often have undesirable unintended consequences.

One danger is that providers may feel pressure to try unproven interventions that could be ineffective and could even exacerbate symptoms. Another potential problem is that the resources spent on deployment of these interventions may be needed for other evidence-based services that are inadequately funded. In addition, providers may become invested in standard practices and resist change, even when such a practice is shown to be ineffective and an effective practice becomes available.

## Discussion

There is consensus that the field needs to develop effective interventions for people who have severe mental illness and a history of trauma. This situation is analogous to other areas in which effective interventions are lacking. A clear clinical need exists; consumers are demanding these services, and clinicians and mental health administrators are interested in providing them. And although several treatment approaches are available, no empirical evidence of effectiveness is available. There is some urgency to this problem. Clients have a legitimate need for services; providers feel pressure to offer trauma interventions, even in nonstandardized and untested forms; and policy makers feel compelled to establish policies.

Developing effective treatments as rapidly and efficiently as possible requires an orderly, rational process involving contributions from researchers, administrators, providers, and consumers. As we have mentioned, several investigators are conducting pilot studies of interventions adapted from

the field of severe mental illness or the field of trauma and PTSD. Both are valid approaches. Small pre-post studies should be conducted to show the feasibility, safety, and potential benefits of treatments and to identify the most appropriate clients for participation. These interventions must also have a reasonable cost and must fit well with current community-based services. Standardized procedures for delivering and measuring the interventions—for example, manuals and fidelity measures—are also needed before clinical trials are conducted.

In proceeding from pilot studies to controlled trials, researchers often prefer to conduct well-designed experiments under carefully controlled conditions—for example, using highly trained clinicians in a university setting with diagnostically homogeneous and uncomplicated patients. They then proceed to studies that use frontline clinicians, routine settings, and more typical community mental health patients. This approach can be useful in many situations, particularly when the intervention needs a great deal of refinement before it can be tested in routine mental health settings. However, this approach does impose the requirement of an extra step before an intervention is ready for broad dissemination, delaying the availability of an effective treatment by at least several years. In addition, some interventions that have been developed in this way have proved too complicated for general adoption or have required resources that are not available at many treatment settings, limiting the impact on routine mental health care.

Thus, to ensure ecological validity, there are advantages to developing and testing psychiatric rehabilitation interventions in the context of standard practice settings. That is, useful interventions must be learned and delivered by a large variety of clinicians and designed to fit into routine mental health programs and settings to apply to the more usual community mental health clients, who often have comorbid disorders and multiple psychosocial problems. These issues can be assessed only through controlled clinical trials under conditions of routine care. Once evidence-based treatments are documented, the final piece of evidence would come from more widespread implementation showing that outcomes can be improved in a large system of care.

## Conclusions

It is important that policy makers, service system administrators, and providers recognize the prevalence and impact of trauma in the lives of people who have severe mental illness. In many states, this issue has begun to receive attention, but the treatments offered have not been evidence based and have not been implemented in a way that will lead to cumulative learning for the field. Improving services for clients who have both severe mental illness and PTSD will require the collaboration of consumers, providers, policy makers, and researchers in systematically developing and testing effective treatments that can be broadly disseminated to providers of mental health services. We strongly urge policy makers to support a diversity of approaches and research on effective treatments rather than prematurely establishing policies that are likely to have unintended consequences. ♦

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