Outcome of Intensive Inpatient Treatment for Combat-Related Posttraumatic Stress Disorder

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Objective: This study analyzed the outcome of a 4-month intensive inpatient program for combat-related posttraumatic stress disorder (PTSD) among Vietnam veterans. Method: The subjects were 51 male veterans with PTSD who completed the inpatient treatment program. Comprehensive measures of PTSD and psychiatric symptoms, as well as social functioning, were assessed at admission, discharge, and 6, 12, and 18 months after discharge. Results: The overall study group showed an increase in symptoms from admission to follow-up and a decrease in violent actions and thoughts and legal problems. Family and interpersonal relationships and overall morale were improved at discharge but then returned to pretreatment levels at 18 months. Patient evaluations also indicated that the program affected morale and interpersonal relationships but not symptoms. Conclusions: The chronic nature of combat-related PTSD among Vietnam veterans is evident. The study raises the possibility that long-term intensive inpatient treatment is not effective, and other forms of treatment should be considered after rigorous study of such variables as length of stay, trauma versus rehabilitation focus, and patient characteristics.

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Since 1978, 26 specialized inpatient posttraumatic stress disorder (PTSD) units have been established at Department of Veterans Affairs (VA) hospitals. These units have attempted to provide a comprehensive and intensive therapeutic milieu for Vietnam veterans suffering from PTSD (1–4). A wide range of modalities are offered: trauma groups, exposure therapies, psychoeducation, family therapy, creative arts therapies, medication, and rehabilitation. Length of stay is typically 90–100 days, and both cohort (in which eight to 15 veterans are admitted as a group) and continuous admissions models are used.

There have been a number of clinical descriptions of these programs and impressionistic reports of their effectiveness (3–12). However, there have been only a few empirical studies of these units (13–18), most of which have used questionnaires sent to graduates, with low return rates and incomplete measures. Boudewyns et al. (13), for example, found that patients rated by their staff as successes or failures could not be differentiated on any clinical outcome measure at 3-month follow-up. Patients who had received an exposure-based treatment tended to show greater improvement than those who did not. Scurfield et al. (15) found improvement in the areas of self-esteem, interpersonal relationships, numbing, and arousal, but no change on the Mississippi Scale for Combat-Related Posttraumatic Stress Disorder, among graduates of a PTSD unit program. However, a response rate of 48% and widely varied follow-up intervals make interpretation of these data difficult. Hammarberg and Silver (18) found that at 1-year follow-up after a 90-day PTSD unit treatment, PTSD symptoms were unchanged from admission levels, and level of anger had increased. Perconte (14), assessing a partial hospital program, also found that at 1-year follow-up significant symptom relapse had occurred, although employment and rehospitalization rates showed improvement. Overall, the data from these initial studies of inpatient treatment suggest few sustained improvements. Even outpatient treatment may have limited effects (19, 20). Frueh et al. (19), for example, found no change in symptoms of 39 veterans in outpatient treatment over a 3-year period. Fontana and Rosenheck (20) found no symptom improvement in veterans in outpatient treatment after 4 months through a 2-year follow-up.

Special problems for current treatment efforts include the fact that 1) intervention occurs more than 20 years after the war trauma; 2) many other problems such as

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substance abuse, homelessness, poverty, unemployment, and associated psychiatric conditions have developed that complicate the condition (21–23); and 3) availability of VA service-connected disability payments may confound motivation for treatment. Several reports indicate that morale and social support may be the most amenable to inpatient treatment, while the other outcome domains remain essentially unchanged (14, 15, 18).

The inpatient setting has nevertheless been viewed by many experts as the best opportunity to address core PTSD symptoms in a relatively safe environment (2, 3, 9). The exploration of traumatic experiences, both in individual and group therapy, has long been viewed as an essential component of PTSD treatment (1). Intense states of anxiety and arousal occasioned by such review are often assumed to be best managed in inpatient settings with sufficient length of stay to allow the working through and integration phases of treatment to begin. An inpatient stay may also be the best place to deliver comprehensive services, such as family therapy, vocational guidance, and rehabilitation.

Nevertheless, these assumptions need to be tested. Long-term stays in hospitals remove patients from their social context. Direct exploration of traumatic material may cause increased distress or divert attention from current life problems (e.g., unemployment, family crises). Clinical observations indicate that some patients may get worse after intensive inpatient treatment, either because they are generally on a downward course or because they are overwhelmed by the direct confrontation with their symptoms and history (14, 16). Brief inpatient treatment focused on stabilization rather than exploration may be a preferable alternative for many PTSD patients.

The purpose of this study was to assess treatment outcome at regular intervals, from admission through discharge to 18-month follow-up, in a group of patients who entered one PTSD unit. Standardized measures of a broad range of symptoms and social functioning were assessed through both clinical interview and self-report questionnaires at all time points.

METHOD

Setting

This study was conducted on a multidisciplinary, specialized inpatient treatment program for Vietnam veterans. Veterans were admitted in cohorts of 14 every 4 months for a 15-week program. Rigorous screening procedures were employed before admission in order to identify veterans with PTSD, according to DSM-III-R criteria, through clinical interviews and review of medical records. Combat experience was confirmed by review of their military files. Generally, veterans were required to have achieved a degree of stability in their symptoms (e.g., no suicidal ideation for 60 days, sobriety for 90 days), social functioning (e.g., established living arrangement, family involvement in program), and previous outpatient treatment. Because the program was oversubscribed, veterans waited 4 months on average before being admitted. Written informed consent was obtained from each patient after all the procedures were fully explained. All procedures were approved by the hospital human investigation committee. Upon admission, medication regimens were stopped for most patients in order to assess their baseline clinical state and to conduct a number of neuropsychiatric, psychophysiological, and psychological studies. With few exceptions, their symptoms had had no or only partial response to medication. At the conclusion of the program, most patients had been placed on the best possible medication regimen as determined by their attending psychiatrist.

The treatment program aimed to facilitate the reintegration of the Vietnam veteran into American society, his family, and veterans groups rather than an intensive exploration of his Vietnam experience. This approach has been called a second generation program (24). The program consisted of three phases. The first phase prepared the veteran to examine his traumatic experiences through relaxation, sleep, and anger management training and allowed the staff to conduct a fairly extensive review of his life and illness. Creative arts therapies were used to increase his expressiveness and comfort with emotion. The second phase focused on review of the traumas in both group and individual therapy and then employment of cognitive restructuring techniques to alter the veteran's attitudes toward them. The aim was to make the veteran aware of the degree to which he continued to live in the past and to redirect his attention toward meaningful relationships and activities in the present. The third phase focused on engagement with the community, family therapy, and planning for the future. Volunteer service in community agencies as well as family meetings provided opportunities for the veteran to work on his relationships with people other than his veteran cohort. During each week patients attended approximately 32 hours of mandatory groups and several hours of individual therapy, conducted within a tightly structured schedule.

Comparison of the treatment program with other PTSD units was made possible by a national survey of PTSD units, which assessed each treatment modality offered in these programs by method and content area (7). Time spent in various treatment modalities in this PTSD unit was balanced among exploratory-expressive (34%), behavioral practice (32%), and educational (15%) methods. Content areas (by percentage of program time spent) included current relationships (44%), life skills (25%), war zone experiences (16%), and PTSD symptoms (11%). These percentages are largely comparable with national means for VA PTSD units (7), with exceptions being greater emphasis in this program on behavioral practice and current relationships and less emphasis on PTSD symptoms, consistent with the philosophy of the unit (24).

Particular aspects of this PTSD unit that may differ from other PTSD units include the following: 1) the unit also housed general psychiatric patients who participated in some unit-wide groups with the PTSD patients; 2) individual therapy was provided by both permanent staff clinicians and trainees in psychiatry and psychology; 3) the staff included only one nurse who had served in Vietnam; 4) most PTSD patients participated in research studies, some of which involved intense, if brief, exposure to combat-related stimuli; and 5) the staff composition of the unit had remained extremely stable over the course of 10 years and through the period of this study.

Subjects

Subjects consisted of male Vietnam war zone veterans diagnosed with PTSD (determined by a cutoff score of 107 on the Mississippi PTSD scale [25]) who were consecutively admitted to the specialized inpatient unit over the course of six cohorts, from September 1989 to September 1991. A total of 74 veterans were admitted during this time. Ten dropped out or were expelled from the program. Thirteen veterans did not complete the follow-up evaluations. Therefore, a total of 51 veterans form the subject pool for this analysis. Comparison of the 23 excluded veterans with the remaining 51 on demographic and symptom variables (age, marital status, education, employment, income, and PTSD and psychiatric symptoms) showed no significant differences.

Measures

The War Stress Interview (7) is a 2-hour structured clinical interview consisting of a battery of established scales relevant to the study of PTSD and combat-related trauma. Among the standard interviews

and scales incorporated into the War Stress Interview are the Mississippi Scale for PTSD (25), the Structured Clinical Interview for DSM-III (26), the Revised Addiction Severity Index (27), the Combat Exposure Scale (28), the Brief Symptom Inventory (29), the Laufer-Parson Guilt Inventory (30), measures of violent behavior and ideation (e.g., criminal charges, destruction of property, domestic violence, desire to hurt others) (31), contact with intimates and participation in social activities (32), a survey of pre- and postmilitary traumas, and prior use of VA and non VA treatment services and satisfaction with those services.

In addition, patient self-evaluations were administered at discharge and at follow-up. These consisted of 5-point Likert scales used to rate improvement (score=1) or worsening (score=5) in 14 symptom and functional domains.

Data Collection

Assessments were conducted by research assistants not associated with the clinical program and occurred within 1 week of admission, at discharge (4 months later), and at 6, 12, and 18 months after discharge.

Data Analysis

Any attempt to track adjustment over time is subject to the problem of missing data at one or more of the time points. Recent developments in statistical research have given rise to random regression modeling for use with missing data for repeated measurements (33). The random regression approach uses the available data from each individual, augmented by data from all other individuals, to estimate the trend line across all time points for each individual. In this way, the maximum amount of information in the data set is used in the analyses, thus avoiding distortion due to selective dropping of cases or time points. We have adopted the approach developed by Jennrich and Schluchter (34) for modeling missing data for repeated measures through use of structured covariance matrices. The particular software employed in this study was the 5V program of the BMDP statistical package (35).

The analytic strategy consisted of assessing differences during treatment (admission to discharge) and over the posttreatment period (discharge, 6-month, 12-month, and 18-month time points) and, finally, overall change (admission to 18-month follow-up). Student's t tests were used on the patient evaluations to test the item means against the null hypothesis (i.e., no change). All tests were corrected for multiple comparisons by the Bonferroni correction.

RESULTS

Table 1 presents baseline information about the study group, which shows significant illness and disability. Mean age was 42.7 years (SD=2.3), and educational level averaged 12.9 years (SD=2.3). Approximately three-fourths of the subjects were unemployed, and 78% were applying for either an increase in or the establishment of service-connected disability payments. Mean total monthly income was $1,099 (SD=$1,130). All subjects met DSM-III-R criteria for PTSD, averaging three intrusion, five avoidance, and four hyperarousal symptoms. The mean Mississippi scale score was 130.0 (SD=15.9), well above the cutoff of 107. We found that the subjects suffered a marked number of noncombat traumas before (mean=3.9, SD=4.0), during (mean=2.0, SD=1.9), and after (mean=6.4, SD=3.7) the war, such as child abuse, witnessing deaths, disasters, or criminal violence. In fact, 45% reported being abused as children, beginning at the mean age of 7; however, no independent confirmation was obtained. In addition to PTSD, most had several comorbid psychiatric disorders (table 1). Half had attempted suicide, and 39% had overdosed on drugs in their lifetime. On average, each veteran had had 7.2 (SD=7.4) previous hospitalizations, and 50% were currently taking psychotropic medications. They had spent, on average, 38.1 days (SD=52.4) in the hospital during the previous 6 months. Half had received previous inpatient treatment for PTSD, and 62% were in outpatient treatment at the time of admission, averaging one visit every 2 weeks.

TABLE 1. Characteristics of 51 Male Veterans With Combat-Related PTSD at Admission

Variable	N	%
Caucasian	44	86
Service-connected disability	21	41
Marital status		
Married	20	39
Separated or divorced	23	45
Single	8	16
Branch		
Army	29	57
Marines	16	31
Navy	3	6
Air Force	3	6
Employed	14	27
Living arrangement		
Private home	34	67
Hospital	14	27
Homeless	3	6
Psychiatric symptoms		
Serious depression (lifetime)	50	98
Attempted suicide (lifetime)	26	51
Severe suicidal thoughts (past 30 days)	16	31
Attempted suicide (past 30 days)	2	4
Drug overdose (lifetime)	20	39
Current problems with alcohol	31	61
Current problems with drugs	18	35
Physical or sexual abuse as child	23	45
Current comorbid disorders		
Major depression	37	73
Anxiety disorder	18	35
Personality disorder	33	65
Substance abuse	42	82
Psychotic disorder	6	12

Table 2 presents the results of outcome measures from admission, discharge, and the three follow-up points. Between admission and discharge, veterans reported improvement in psychological distress (Addiction Severity Index), family problems, violence, and the number of people they felt close to. The number of days worked decreased because subjects were in the hospital. Between discharge and 18-month follow-up, veterans reported fewer legal problems and increases in service-connected disability payments and days worked. However, they reported worse outcomes on psychiatric symptoms, personal and survivor guilt, suicide attempts, family problems, and the number of people they felt close to.

Between admission and 18-month follow-up, the study group showed increases in PTSD symptoms and other psychiatric symptoms and improvement in prob-

TABLE 2. Measures of Changes in Symptoms and Social Functioning Over Time for 51 Male Veterans With Combat-Related PTSD at Admission

	Inpatient Phase					Follow-Up Phase							Difference Between Admission and 18 Months:
	Admission		Discharge			6 Months		12 Months		18 Months			
Measure	Mean	SD	Mean	SD	χ^2 (df=1)[a]	Mean	SD	Mean	SD	Mean	SD	χ^2 (df=1)[a]	χ^2 (df=1)[a]
Mississippi PTSD scale	129.50	15.39	132.69	16.30	n.s.[b]	135.06	14.79	132.80	19.18	134.87	17.07	n.s.	7.83*[b]
Brief Symptom Inventory	2.17	0.69	2.23	0.70	n.s.[b]	2.56	0.64	2.46	0.72	2.49	0.63	13.14**	9.36*[b]
Guilt Inventory	3.08	0.85	3.07	0.88	n.s.[b]	3.27	0.82	3.35	0.86	3.37	0.84	9.21*	n.s.[b]
Addiction Severity Index													
Psychiatric problems	0.64	0.14	0.52	0.15	25.59***	0.63	0.15	0.67	0.13	0.63	0.16	24.21***[b]	n.s.
Alcohol problems	0.17	0.23	0.19	0.23	n.s.	0.20	0.17	0.15	0.18	0.18	0.13	n.s.[b]	n.s.
Drug problems	0.10	0.14	0.13	0.16	n.s.	0.10	0.11	0.09	0.10	0.08	0.11	n.s.[b]	n.s.
Medical problems	0.46	0.43	0.37	0.27	n.s.	0.46	0.30	0.37	0.37	0.28	0.36	n.s.[b]	n.s.
Legal problems	0.21	0.32	0.24	0.25	n.s.	0.13	0.20	0.11	0.21	0.11	0.24	7.95*[b]	9.34*
Family problems	0.28	0.32	0.10	0.18	15.08**	0.26	0.24	0.21	0.26	0.19	0.24	9.64*[b]	n.s.
Violent actions or thoughts[c]	14.00	6.37	11.46	4.50	11.73**	11.51	6.21	11.48	5.06	10.23	5.50	n.s.[b]	16.58***
Suicide attempt (past 30 days)	0.04	0.20	0.05	0.21	n.s.	0.00	0.00	0.13	0.30	0.09	0.30	9.91*[b]	n.s.
Number of people close to subject	10.64	9.19	16.51	8.84	11.26**	11.54	7.86	11.09	8.26	12.47	8.62	14.53**[b]	n.s.
Social participation[c]	10.20	5.01	9.41	4.77	n.s.	9.49	4.48	9.69	4.78	11.14	4.51	n.s.[b]	n.s.
Days worked in last month	2.74	6.38	0.03	0.14	8.72*	3.26	6.09	2.48	5.84	3.63	7.42	12.02**[b]	n.s.
Service-connected disability[d]	1.66	1.33	1.69	1.23	n.s.[b]	2.36	1.16	2.42	1.29	2.11	1.49	17.11***[b]	11.43**[b]

[a]All p values have been corrected for multiple comparisons with the Bonferroni correction.
[b]N=50.
[c]Scale scores ranged from 0 to 32.
[d]Scale scores ranged from 0 to 4.
*p<0.05. **p<0.01. ***p<0.001.

lems related to legal matters and violence. In addition, reduction in violence was significantly correlated with decrease in family problems (r=0.57, N=51, p<0.001), increase in the number of people the subject felt close to (r=–0.41, N=51, p<0.01), and decreased employment (r=0.42, N=51, p<0.01). Employment showed a continuous decline from 3 years before admission (55% employed), to admission (27% employed), to 18-month follow-up (20% employed). Veterans were receiving significantly more VA service-connected disability payments at follow-up (35% received more than a 50% disability rating, compared to 24% at admission). Participation in outpatient treatment, however, increased. At 18-month follow-up, 88% were in outpatient treatment, compared to 62% at admission. The frequency of outpatient visits increased significantly, from 17.6 visits (SD=17.5) in the 6 months before inpatient treatment to 31.7 visits (SD=24.7) in the 6 months before the 18-month follow-up (t=3.29, df=49, p<0.01).

At discharge, veterans identified family relationships, substance abuse, self-esteem, hope, and feeling that one had come home as areas improved by the program. Symptoms such as anxiety, flashbacks, depression, and sleep disturbances were least affected (table 3). Anxiety was, in fact, reported to have significantly worsened at discharge. These rankings were significantly stable 18 months later (r=0.91, N=14, p<0.001); however, all measures were rated as significantly less improved than at discharge, indicating that the veterans perceived some deterioration in their condition. At follow-up, ability to relax, depression, flashbacks, sleep problems, and anxiety were rated as having significantly worsened as a result of the program.

DISCUSSION

Overall, the major positive impact of this inpatient PTSD program appears to have been on interpersonal and morale elements, rather than on core PTSD symptoms, substance abuse, or the capacity to work. Levels of violence and violent thoughts and legal problems showed sustained improvement. The significant decrease in family problems and increase in the number of people the veterans felt close to at the time of discharge suggests that the veterans showed an improvement in relating to others, which, being significantly correlated with reduction in violence, may be associated with a diminution of anger or aggression. Unfortunately, these measures returned to previous levels at follow-up, despite continued outpatient treatment. In addition, the positive changes appear to be accompanied by in-

creased internal distress, as indicated by the rise in scores on the Brief Symptom Inventory, Mississippi scale, and Guilt Inventory from admission to follow-up. It is possible that the program challenged the largely externalizing defenses of the veterans, which improved their capacity for relating to others, yet increased their affective distress.

Work-related factors generally showed continued worsening after inpatient treatment. Only receipt of service-connected disability payments increased. Of interest is that reduction in violence from admission to 18-month follow-up was closely associated with decreased employment, which suggests that the most positive finding in the study, reduction in violence, may be a secondary effect of decrease in job-related stress and not a primary effect of the treatment. These results collectively suggest the lack of sustained improvement in PTSD symptoms in this population and as addressed by this treatment program.

TABLE 3. Self-Report Ratings of Effectiveness of Inpatient Treatment, at Discharge and Follow-Up, by 51 Male Veterans With Combat-Related PTSD

	Discharge			Follow-Up		
	Score[a]			Score[a]		
Measure	Mean	SD	Rank	Mean	SD	Rank
Family relationships	2.29[b]	1.04	1	2.70	1.20	1
Drug or alcohol problems	2.45[b]	1.04	2	2.80	1.31	2
Self-esteem	2.47[b]	1.04	3	2.98	1.19	3
Hope	2.48[b]	1.04	4	3.44	1.26	9
Feeling that one had come home	2.60[b]	1.10	5	3.30	1.22	4
Ability to express love	2.66	1.06	6	3.30	1.20	5
Sense of control	2.83	1.04	7	3.32	1.12	7
Energy	2.87	1.09	8	3.32	1.13	6
Anger	3.11	1.06	9	3.42	1.28	8
Ability to relax	3.13	1.04	10	3.68[b]	1.10	12
Depression	3.14	1.17	11	3.64[b]	1.12	11
Flashbacks	3.16	1.14	12	3.50[b]	1.06	10
Sleep	3.26	1.29	13	3.72[b]	1.25	13
Anxiety	3.56[b]	1.04	14	3.92[b]	1.14	14

[a]Scale scores ranged from 1 (much improved) to 5 (much worse).
[b]$p<0.05$ (significantly greater or less than no change [value of 3.00]; student's t tests with Bonferroni correction for multiple comparisons).

One possible explanation for the worsening of symptoms is regression to the mean, due to the selection bias built into the admission criteria for the PTSD unit, which required veterans to have achieved a degree of stability in their PTSD symptoms, suicidality, sobriety, and living arrangements before admission. At admission the group was therefore less symptomatic than the overall population mean of treatment-seeking veterans. Evidence for this is suggested by comparing the admission Mississippi scale scores for the study group (mean=130.0, SD=15.9) and the next six cohorts admitted to the PTSD unit (mean=132.4, SD=14.2) with those of a group of 45 patients consecutively admitted to the brief treatment program for PTSD veterans in crisis (mean=141.1, SD=16.3). The study group's mean Mississippi scale scores increased to 133.2 (SD=13.8) at discharge and to 135.3 (SD=13.6) at 18-month follow-up. Scores on the Combat Exposure Scale were the same for all three groups (mean=31.1, SD=8.0). Regression to the mean as a factor could be investigated by a study that compared outcomes from PTSD units with those from brief programs for veterans in crisis.

A second explanation could involve idiopathic reporting bias. Because the attention of treated veterans was focused on their symptoms through illness education, psychotherapy, and group support, they may have become highly sensitized to and have more closely monitored their symptoms, leading to a tendency to overestimate their symptoms on self-report measures. This possibility could be further studied by comparing self-report measures with clinical interviews in symptom assessment.

A third possibility is secondary gain due to veterans' application for or receipt of disability payments, which required them to continue to report high levels of symptoms. Nearly 80% of the group was subject to these influences. However, in post hoc analyses no significant differences in outcome were revealed between veterans with or without disability payments, between veterans applying for or not applying for payments, or by level of disability awarded. Nevertheless, the possible confounding effects of the disability system on the treatment variables with this population need to be considered.

The fourth possible explanation of the results is that intensive inpatient treatment programs in general may exacerbate PTSD symptoms by uncovering traumatic memories and stimulating a chronic condition that is highly sensitized. If the veteran's acute distress is initiated largely by current life stresses (e.g., unemployment, family tension, substance abuse), exploration of past traumas may miss the mark and contribute to symptom expression. Solomon and her colleagues reported results very similar to those of the present study in their extensive treatment effort with combat-related PTSD in Israel (36). Despite clinical impressions of success, psychometric data consistently showed that Israeli veterans who received intensive residential treatment were doing worse, in terms of both symptoms and social functioning, at 9-month follow-up than an untreated control group (36). Similarly, in a study of 554 veterans in VA outpatient treatment, Fontana and Rosenheck (20) found that contrary to expectations, there was a tendency for veterans at less intensive treatment sites to do better than those at more intensive sites.

If intensive treatment may exacerbate symptoms, then shorter term inpatient stays that attempt to stabilize and support veterans and return them as quickly as possible to the community may be more beneficial, or as beneficial but less costly. Rehabilitation-oriented partial hospital treatment may be preferable, as has been discovered for other chronic conditions, notably schizophrenia (37). Perhaps the findings of numerous

studies in the 1970s concerning inpatient treatment of general psychiatric conditions are also true of this population with chronic PTSD: that long-term inpatient treatment is no more effective than shorter term or less intensive interventions (38–41).

The limitations of this study include 1) small group size, 2) reliance on data from only one program, 3) lack of treatment control subjects, and 4) reliance on self-report measures. Nevertheless, this study raises sobering possibilities: that the current PTSD unit model within the Department of Veterans Affairs may not result in sustained improvement or that the fundamental assumptions underlying treatment philosophy (trauma-focused exploration within a homogeneous, sanctuary-type environment) are incorrect. Before such conclusions can be drawn, however, comparative studies and cost analyses need to be conducted with larger groups and across different types of programs varying in intensity, length of stay, treatment modalities, and focus on trauma versus rehabilitation. In addition, comparative analysis of treatment responders and nonresponders on relevant patient variables may lead to the development of treatment matching strategies. The specialized inpatient PTSD programs are a part of our country's belated response to the psychiatric needs of Vietnam veterans. However, it is important that good intentions be balanced with rigorous assessment of efficacy, or our promise to veterans will remain an empty one.

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