

# Alcohol Abuse in Posttraumatic Stress Disorder: Identification and Intervention

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There's general agreement that screening for alcohol abuse or dependence is an important part of PTSD treatment, but is the screening occurring—and are patients who screen positive receiving appropriate referral?

Over the past decade, research has demonstrated strong links between trauma exposure, posttraumatic stress disorder (PTSD), and alcohol use disorders.<sup>1-5</sup> PTSD, a psychiatric disorder that follows trauma exposure, is characterized by symptoms that may be chronic and include re-experiencing of the traumatic event, avoidance of reminders of that event, general emotional withdrawal, numbing, intense anxiety, and hyperarousal.<sup>6</sup> Alcohol use disorders include both alcohol abuse (characterized by significant impairment as a result of repeated alcohol use) and alcohol dependence (a pattern of continued alcohol use, tolerance, or withdrawal in spite of

substantial negative consequences).<sup>6</sup> The National Comorbidity Survey found that 27.9% of women and 51.9% of men diagnosed with PTSD also met the criteria for lifetime alcohol abuse or dependence.<sup>3</sup> Moreover, the frequency of PTSD in conjunction with a substance use disorder (SUD) is considerably higher among combat veterans than among other PTSD patient populations. Data from a small sample of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) veterans suggest that this most recent generation of combat veterans continues to be at risk for drinking problems,<sup>7</sup> and a comprehensive literature review by Stewart and colleagues revealed that between 64% and 84% of veterans who met the criteria for PTSD also met the criteria for comorbid alcohol abuse.<sup>5</sup>

Several interventions have been found to be effective in treating patients with PTSD and comorbid SUD. These include Seeking Safety<sup>8</sup> and Transcend,<sup>9</sup> two cognitive-behavioral programs designed to address PTSD and SUD simultaneously. In a randomized clinical trial, Seeking Safety was shown to reduce substance use and trauma symptoms at three-month follow-up among patients who completed at least six sessions of care.<sup>8</sup> Transcend, which is tailored

to the needs of combat veterans, significantly decreased PTSD symptoms (as indicated by overall Clinician-Administered PTSD Scale scores at discharge and at six and 12 months postdischarge) in Vietnam veterans being treated in a residential setting.<sup>9</sup> Participants also demonstrated a significant decrease in their Addiction Severity Index scores at six and 12 months.<sup>9</sup> For either intervention to be employed, however, it is necessary for patients to be accurately diagnosed and referred for comorbid PTSD-SUD treatment.

Unfortunately, despite the evident comorbidity of PTSD and alcohol abuse, some studies have found that alcohol and drug treatment centers do not consistently assess patients for PTSD.<sup>10</sup> For example, Young and colleagues examined PTSD identification practices within substance abuse programs at six VA medical centers.<sup>11</sup> Fewer than 20% of clinicians used validated questionnaires to assess trauma exposure, almost none conducted structural diagnostic interviews for PTSD, and only 35% to 60% routinely referred patients with PTSD for care at specialized treatment centers. Furthermore, over the two-year study period, referral declined substantially.

Just as clinicians have called for PTSD screening to be implemented in alcohol and drug treatment programs,

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**Table 1. Frequency of documentation of alcohol problems in medical records, by AUDIT<sup>a</sup> status (N = 121)**

Alcohol-related documentation in medical record	AUDIT drinking status		
	Normal (n = 77)	Hazardous (n = 14)	Harmful (n = 30)
Alcohol use disorder diagnosed by clinician, no. (%)	18 (23.4)	8 (57.1)	21 (70.0)
Alcohol problem addressed on treatment plan, no. (%)	7 (9.1)	5 (35.7)	17 (56.7)

<sup>a</sup>AUDIT = Alcohol Use Disorder Identification Test.

there is a broad consensus that screening patients for alcohol use, abuse, or dependence is an important component of PTSD treatment,<sup>12,13</sup> although screening is only the first step.<sup>14,15</sup> It is equally important to assess the extent to which patients who screen positive for alcohol use disorders actually receive indicated treatment.

The current study examined the rates of diagnosis, planned treatment, and actual treatment of alcohol use disorders in an outpatient PTSD clinic that routinely screens for alcohol abuse and dependence. We compared data on patients who did and did not screen positive for alcohol problems on the following clinical outcomes: (1) diagnosis of alcohol abuse or dependence during routine clinical care; (2) documentation of alcohol abuse or dependence in the treatment plan; and (3) receipt of alcohol-related treatment services. In addition, we examined whether screening positive for harmful alcohol use (a pattern that is damaging to physical or mental health) or hazardous alcohol use (a pattern that carries a risk of harmful consequences, either health-related or social) appeared to affect these three clinical outcomes.

## METHODS

We recruited 121 participants from 144 consecutive patients enrolled in

a multidisciplinary, VA mental health clinic that provides treatment for trauma-related disorders. As part of the standard clinic intake procedures, all patients were asked to complete the Alcohol Use Disorder Identification Test (AUDIT),<sup>16</sup> a widely used, 10-item, self-report questionnaire, developed by the World Health Organization to measure the severity of problem drinking. Scores can range from 0 to 40, with scores between 8 and 15 indicating hazardous levels of drinking, and scores of 16 or higher indicating harmful levels of drinking. The AUDIT is publicly available, easy to administer in a clinical setting (typically taking two to four minutes to complete), and useful in identifying likely alcohol problems. The test performs well as a screen for alcohol dependence, with most studies finding it to have a very favorable sensitivity and a lower, but still acceptable, specificity for *International Statistical Classification of Diseases and Related Health Problems, 10th Revision* (ICD-10) alcohol use disorders at the recommended cutoff scores.<sup>16</sup> The psychometric properties of the AUDIT have been well established, with studies showing high test-retest reliability and good concurrent validity for the English version.<sup>17</sup>

Approximately one year after intake, patients were asked to complete

a self-report questionnaire that included questions about the receipt of alcohol-related treatment within the VA and in the community over the preceding year. Of the original 121 participants, 68 (56.2%) returned the questionnaires. We reviewed electronic medical records of the respondents to determine the extent to which these patients were diagnosed with alcohol abuse or dependence during routine clinical care and the frequency with which such diagnoses were addressed in patient treatment plans.

We hypothesized that patients whose AUDIT scores were above 8 would be more likely than those whose AUDIT scores were below 8 to: (1) receive a diagnosis of alcohol abuse or dependence during routine clinical care; (2) have the diagnosis documented in the treatment plan; and (3) have received alcohol-related treatment services from either the VA or a non-VA source.

## RESULTS

### Demographics of the sample

Of the 144 consecutive patients enrolled in the mental health clinic, 121 had completed the AUDIT and, thus, were eligible for enrollment in the study. Of these 121 participants, 104 (86%) were white, five (4.1%)

**Table 2. Alcohol treatment received by respondents to the one-year follow-up questionnaire (N = 68)**

Alcohol treatment received	AUDIT <sup>a</sup> drinking category at intake		
	Normal (n = 42)	Hazardous (n = 8)	Harmful (n = 18)
Any alcohol treatment services, no. (%)	5 (11.9)	1 (12.5)	8 (44.4)
VA alcohol treatment services, no. (%)	2 (4.8)	1 (12.5)	8 (44.4)
Non-VA alcohol treatment services, no. (%)	5 (11.9)	1 (12.5)	2 (11.1)

<sup>a</sup>AUDIT = Alcohol Use Disorder Identification Test.

were black, five (4.1%) were Native American, and two (1.7%) were another ethnicity. Five participants did not have sufficient information about ethnicity documented in their chart for a determination. Most of the sample (65; 53.7%) were married, while 28 (23.1%) were separated or divorced, and another 28 (23.1%) were single (never been married). Six participants (5%) were female and 116 (95.9%) were male. Mean (SD) age for the sample was 48.8 (14.7) years.

Medical record review indicated that the participants who had completed the AUDIT had undergone a number of different types of trauma, including: combat trauma (104; 86%); military sexual trauma (five; 4.1%); nonmilitary sexual trauma (two; 1.7%); noncombat military trauma, as might occur in training or while deployed in a noncombat capacity (three; 2.5%); and nonmilitary, nonsexual trauma, such as motor vehicle accidents, childhood trauma, or nonmilitary physical assaults (31; 25.6%). Through structured clinical interviews, clinic providers had diagnosed 70 patients (57.9%) with PTSD; 22 (18.2%) with subthreshold, or “rule-out,” PTSD; and 29 (24%) with some other disorder. The 121 participants (who completed the AUDIT) did not differ from the 23

ineligible patients (who did not complete the AUDIT) in terms of marital status, rates of PTSD diagnosis, age, ethnicity, or combat versus noncombat presenting trauma.

### AUDIT scores

Among the 121 study participants, the mean (SD) AUDIT score was 7.8 (8.5), which fell slightly below the cutoff for hazardous drinking. Using the AUDIT scoring criteria described previously, 77 (63.6%) of the participants were categorized as normal drinkers, 14 (11.6%) as hazardous drinkers, and 30 (24.8%) as harmful drinkers.

As predicted, patients' AUDIT scores were positively associated with a diagnosis of alcohol dependence or abuse (point biserial  $r = .43$ ,  $P < .001$ ) and to the documentation of an alcohol problem in the treatment plan (point biserial  $r = .48$ ,  $P < .001$ ). Of the 14 patients who had been categorized as hazardous drinkers, eight (57.1%) were currently diagnosed with an alcohol problem and five (35.7%) had alcohol problems addressed in their treatment plans (Table 1). Of the 30 patients who had scored in the harmful drinking range, 21 (70%) were diagnosed with an alcohol problem, and 17 (56.7%) had a treatment plan that addressed this problem.

### Alcohol treatment questionnaire results

Among the 68 respondents to the one-year follow-up questionnaire, AUDIT scores on intake were significantly associated with receipt of alcohol-related services (VA or non-VA) within the study period (point biserial  $r = .35$ ,  $P < .001$ ). Only one (12.5%) of the eight hazardous drinkers reported receiving alcohol treatment over the past year (from both the VA and a non-VA source), but eight (44.4%) of the 18 harmful drinkers reported being treated within the VA, while two (11.1%) also accessed community-based treatment (Table 2). Interestingly, five (11.9%) of the 42 participants who had scored in the normal drinking range upon intake and provided treatment information also accessed alcohol treatment services within the study period—all five accessed community services and two of the five received VA alcohol services as well.

### DISCUSSION

The current study is the first to investigate substance abuse screening practices of a VA PTSD treatment clinic. Findings indicate that patients who screen positive on intake for hazardous or harmful patterns of drinking are more likely than those who report normal drinking patterns to receive

a diagnosis of alcohol abuse or dependence, have this diagnosis documented in their treatment plans, and receive treatment.

Although these findings coincide with our hypotheses, the actual rates at which hazardous or harmful drinkers were diagnosed and treated were lower than expected. Despite the routine use of a standardized screening tool, a positive screen did not always lead to the diagnosis, targeting, or treatment of alcohol problems. While it could be argued that not all elevated alcohol use requires formal referral to a specialty SUD program, the fact that a substantial proportion of self-reported hazardous or harmful drinking was reflected neither in patients' diagnoses nor treatment plans suggests that such behavior may receive inadequate clinical attention within PTSD clinics.

Possible implications of these findings include that clinicians may: (1) not be making use of, or following up on, the information provided by such standardized screening tools as the AUDIT; (2) be unaware of how best to interpret the measure; or (3) find it difficult to integrate information from the AUDIT into treatment plans within the context of PTSD management. Clearly, instituting a screening program for problem drinking is only a first step in assuring that patients with PTSD and comorbid alcohol abuse or dependence receive the care that they need to address both conditions.

Our results are consistent with studies analyzing the use of substance abuse and mental health screening tools in primary care and obstetric health care settings. For example, in a large study of primary care patients, only 33% of patients screening positive for mental health or substance abuse disorders received any specific treatments for those problems

either in a primary care or specialty care setting.<sup>14</sup> In another study, only 2% of depressed patients and 12% of patients expressing suicidal ideation were referred for mental health treatment from an obstetric clinic.<sup>15</sup>

Obstacles to appropriate specialty referral within various treatment contexts have been studied. The patient's insurance status, the clinician's educational background,<sup>18</sup> and the severity of the disorder<sup>19</sup> all influence whether positive screens result in referral. Upon referral, other factors may interfere with enrollment into treatment, including stigma associ-

it is possible that other important but unmeasured variables influenced response rates.

Finally, like the majority of studies in this field, this study used a self-report measure to gauge the alcohol use of its participants. Although self-reports have been found to be highly valid,<sup>21</sup> the results of this study would be strengthened by replication, using structured interviews or other means of assessment.

Our study findings suggest a need for further research in the area of substance abuse screening practices at VA mental trauma clinics and raise

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ated with the problem<sup>14,19</sup> and the debilitating nature of addiction and mental illness.<sup>14,19,20</sup>

### Study limitations and future research directions

When interpreting results from the current study, it is important to keep in mind that these data represent the practices of one large VA treatment program. While there is no obvious reason to suspect that this particular clinic deviates widely from general VA practice, the degree to which these findings may be generalized is an empirical question.

Additionally, fully completed questionnaires were returned by only 56.2% of the 121 participants one year after intake. Post-hoc analyses revealed no differences between respondents and nonrespondents to the follow-up questionnaire in terms of drinking or other study variables, but

questions about the nature and outcome of substance abuse screening throughout the VA health care system. A multisite study would elucidate these issues and help refine clinical practice. Future studies should incorporate a more objective measure of substance use, such as a structured clinical interview. Both VA and non-VA mental health clinics may benefit from such investigation.

### CONCLUSION

The earlier comorbid alcohol abuse is identified in patients with PTSD the sooner they may be able to access effective treatment. With the imminent return of a large number of combat troops from OEF and OIF, it is essential that clinicians recognize the association between trauma and alcohol abuse and be well informed as to how to appropriately screen and refer patients who are affected by both. ●

Continued on next page

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**Author disclosures**

The authors report no actual or potential conflicts of interest with regard to this article.

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