

## Screening Instruments for Post-Traumatic Stress Disorder

MARK H. EBELL, MD, MS, *Athens, Georgia*

This guide is one in a series that offers evidence-based tools to assist family physicians in improving their decision making at the point of care.

A collection of Point-of-Care Guides published in *AFP* is available at <http://www.aafp.org/afp/poc>.

### Clinical Question

Do practical, accurate screening tools exist to help primary care physicians evaluate patients for post-traumatic stress disorder (PTSD)?

### Evidence Summary

PTSD is a relatively common and disabling psychiatric condition with a lifetime prevalence of about 8 percent.<sup>1</sup> The condition is not only triggered by combat, but also by natural disasters, accidents, and physical assault such as rape. Although a detailed diagnostic interview is the reference standard for diagnosis, this is impractical in primary care and emergency department settings.

The Davidson Trauma Scale (DTS) has been prospectively validated; however, with 17 items rated on a five-point Likert scale, it is too long to be a practical screening instrument.<sup>2</sup> Therefore, several short screening instruments have been developed to assist physicians in identifying patients with PTSD.

The four-item Startle, Physiological arousal, Anger, and Numbness (SPAN) instrument was derived from the DTS.<sup>3</sup> Meltzer-Brody and colleagues identified groups of patients from several different studies (including victims of physical assault, such as rape, natural disaster, and combat) who had completed the DTS and a detailed psychiatric interview as the reference standard. The four best predictors of PTSD were identified using one half of the patients; this four-item scale, making up the SPAN instrument, was then tested using the remaining patients. The SPAN instrument performed well, with a sensitivity of 77 percent and specificity of 82 percent in the validation sample using a cutoff of five points or more.<sup>3</sup>

Breslau and colleagues developed a short screening scale for PTSD using a survey of young and middle-aged adults in the

Detroit, Mich., area.<sup>4,5</sup> The scale includes seven yes or no questions. The positive predictive value of this scale was 71 percent, and the negative predictive value was 98 percent using a cutoff of four points or more. This scale was recently prospectively validated in a Veteran's Affairs (VA) primary care clinic. The mean age of participants was 51 years, and 61 percent were women. Outcomes for three groups of scores were reported rather than a single cutoff, providing physicians with more detailed information.<sup>4</sup>

The four-item primary care PTSD (PC-PTSD) screening instrument is even simpler.<sup>6</sup> It was developed using data from 188 patients in a VA primary care clinic. With a cutoff of three or more points, the PC-PTSD instrument was 78 percent sensitive and 87 percent specific using the more extensive Clinician Administered Scale for PTSD as the reference standard.<sup>6</sup> The PC-PTSD instrument is now required in the assessment of veterans returning from combat in Iraq and Afghanistan.

A subsequent validation study of the PC-PTSD instrument used data from 11,620 veterans. Those with a diagnosis of PTSD or a history of PTSD treatment were excluded, leaving 11,230 veterans for analysis. Within the following four months, 637 of these patients were diagnosed with PTSD. The study showed a lower sensitivity than the initial validation study (40 versus 78 percent), but this is partially because the study was limited to new cases of PTSD.<sup>7</sup>

To use the PC-PTSD instrument, ask the patient, "In your life have you ever had any experience that was so frightening, horrible, or upsetting that in the past month you:

- Have had nightmares about it or thought about it when you did not want to?
- Tried hard not to think about it or went out of your way to avoid situations that reminded you of it?

- Were constantly on guard, watchful, or easily startled?
- Felt numb or detached from others, activities, or your surroundings?

Three or more "yes" answers to these questions represent a positive result for PTSD.<sup>6</sup>

Finally, another four-item screening instrument was validated in a group of veterans with symptoms of depression. The instrument consists of an initial question ("Have you witnessed or experienced an event that involved threatened or actual serious injury or death?"), followed by three additional questions about symptoms (i.e., troubling memories, feeling distant or cutoff, and feeling "super alert" or on guard). The overall likelihood of PTSD for patients experiencing trauma was 37 percent. The likelihood was 11 percent for those with none of the three symptoms, 27 percent for those with one symptom, 45 percent for those with two symptoms, and 71 percent for those with all three symptoms.<sup>8</sup>

Among the four instruments discussed above, Breslau's short screening scale and the PC-PTSD instrument have been validated in representative populations and can be recommended for use in the primary care setting.

### Applying the Evidence

A survivor of a recent hurricane presents with difficulty sleeping. How likely is it that this is a symptom of PTSD?

*Answer:* You ask the patient to answer the four questions in the PC-PTSD instrument

described above. The patient answers "yes" to only two questions. The patient's score of 2 shows that PTSD is unlikely. Therefore, you focus on other possible causes of sleep difficulty, such as depression, anxiety disorders, situational stress, or pain.

EDITOR'S NOTE: The PC-PTSD and Breslau screening instruments are not published here because we could not secure appropriate permission from the rightsholders.

*Address correspondence to Mark H. Ebell, MD, MS, at mebell@mcg.edu. Reprints are not available from the author.*

---

### REFERENCES

1. Kessler RC. Posttraumatic stress disorder: the burden to the individual and to society. *J Clin Psychiatry* 2000;61(suppl 5):4-12.
2. Davidson JR, Book SW, Colket JT, et al. Assessment of a new self-rating scale for post-traumatic stress disorder. *Psychol Med* 1997;27:153-60.
3. Meltzer-Brody S, Churchill E, Davidson JR. Derivation of the SPAN, a brief diagnostic screening test for post-traumatic stress disorder. *Psychiatry Res* 1999;88:63-70.
4. Kimerling R, Ouimette P, Prins A, et al. Brief report: utility of a short screening scale for DSM-IV PTSD in primary care. *J Gen Intern Med* 2006;21:65-7.
5. Breslau N, Peterson EL, Kessler RC, Schultz LR. Short screening scale for DSM-IV posttraumatic stress disorder. *Am J Psychiatry* 1999;156:908-11.
6. Prins A, Ouimette P, Kimerling R, et al. The primary care PTSD screen (PC-PTSD): development and operating characteristics. *Prim Care Psych* 2004;9:9-14.
7. Ouimette P, Wade M, Prins A, Schohn M. Identifying PTSD in primary care: comparison of the Primary Care-PTSD Screen (PC-PTSD) and the General Health Questionnaire-12 (GHQ). *J Anxiety Disord* [In press].
8. Gerrity MS, Corson K, Dobscha SK. Screening for posttraumatic stress disorder in VA primary care patients with depression symptoms. *J Gen Intern Med* 2007;22:1321-4. ■

Copyright of American Family Physician is the property of American Academy of Family Physicians and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.