

Emergency Mental Health After a Suicide Bombing

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INSTRUCTIONS

The questions that appear throughout this case are intended as a self-assessment tool. For each question, select or provide the answer that you think is most appropriate and compare your answers to the key at the back of this booklet. The correct answer and a discussion of the answer choices are included in the answer key.

Note: These self-assessment questions are not intended for CME credit. To apply for CME credit, you must complete the CME Test at the back of this booklet and submit it according to the directions provided.

In addition, a sign is provided in the back of this booklet for posting in your office or clinic. Complete the sign by adding your local health department's phone number.

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INTENDED AUDIENCE

Mental health professionals including psychiatrists, psychologists, social workers, hospital chaplains, and other physicians who will provide evaluation and care in the aftermath of a terrorist attack or other public health disaster

EDUCATIONAL OBJECTIVES

Upon completion of this case, participants will be able to:

- Describe the different groups of people at risk for injury and traumatic response to a suicide bombing.
- Discuss the common psychological sequelae to those exposed to the direct and indirect effects of a suicide bombing.
- Describe the expectations for recovery, change, and growth to those directly and indirectly exposed to a suicide bombing.
- List the recommended early psychological interventions for suicide bombing victims, their family and friends.
- Explain the controversy regarding debriefing for recent victims of trauma.

CASE SUMMARY

You are a psychiatrist reporting to the Emergency Department (ED) of your county's general hospital shortly after hearing of an explosion at a nearby government office building. You are confronted with a room crowded with people identified by ED physicians as "no admission, may need psych help." You must develop a strategy to assess the mental health needs of this group, initiate treatment as necessary, and ensure appropriate follow-up where indicated.

CASE HISTORY

Early one morning as you drive to the county hospital for routine morning rounds on your psychiatric inpatients, you are shocked to hear that an explosion has occurred in front of a government office building just six blocks from your hospital. While the news reports indicate no evidence of a chemical or radiological threat, terrorism is suspected. Although your first instinct is to drive to the scene of the explosion, you recall that the county's disaster response plan calls for your presence at the hospital's ED.

As you approach the hospital, the continuous wail of sirens alerts you to the likelihood that significant numbers of seriously injured people are arriving for evaluation and treatment. The large number of cars entering the hospital parking lot suggests that other people are responding to the disaster, leading to a log-jam of cars in the parking structure. As you search for a parking spot radio news stations provide updates — as many as 15 are feared dead, upwards of 60 are wounded. These casualties and other victims are transported to local hospitals and trauma centers.

COMMENT: This case illustrates the importance of knowing the details of one's local emergency preparedness plan. Physicians responding to a disaster should be aware of their assigned roles, responsibilities, and duty locations. They should have participated in realistic training exercises prior to an actual disaster.

When you arrive at the ED, a nurse wearing an Emergency Response Team Vest is providing instructions: "Nurses — report to the labor pool, Room 1-B, ER Docs to triage — right outside. Surgeons to the surgery conference room. Mental Health — report to Room 1-C. ICU personnel to the ICU Annex."

You recognize Room 1-C as the ED's conference room, a medium sized classroom with seating and desk space for 30 people, but without medical supplies or examination rooms. As you head for Room 1-C, you glance at your watch and are surprised that it has already been 45 minutes since you learned of the explosion, closer to an hour and a half since it likely occurred.

Outside Room 1-C, a nurse informs you that the conference room has about "25 to 30 people in the room, but more are coming." She tells you that the group includes people who received only minor injuries from the blast and have already been treated, others who did not appear to be injured, but were brought or presented to the ED due to their proximity to the blast, and still others that "the ER docs said seemed really shaken up and needed psych." The nurse explains that all patients not admitted to the hospital will eventually be directed to Room 1-C for wound care and follow-up instructions, but that many are still waiting to be seen by the ER physicians. She says that a chaplain and a psychologist "are in there talking to folks. Go in and ask them how you can help."

COMMENT: In most mass casualty situations, initial ED triage will identify patients in critical need of medical or surgical intervention and hospital admission. Minor injuries will be stabilized. Persons not requiring hospital admission will be directed to waiting areas for follow-up assessments and discharge instructions, but this process may be delayed as life-saving interventions are implemented for others. Such holding areas are likely to include patients who do not appear to warrant psychiatric admission, but may require psychological assessment and supportive care.

You recall that the Diagnostic Statistical Manual of Mental Disorders (DSM-IV-TR) differentiates between transient responses to minimal stressors (eg, adjustment disorders) and more significant social, occupational, or interpersonal impairment following an event. Examples of these more significant impairments include acute stress disorder (ASD), beginning within 2 days of the event and lasting up to 4 weeks, and posttraumatic stress disorder (PTSD), persisting more than 30 days after exposure or occurring after a delay of months to years. You quickly become concerned about the well-being of the family members of those killed in the explosion. You remember that significant stressors may exacerbate pre-existing psychiatric disorders, that depression

or anxiety disorders (eg, panic disorder) may follow traumatic events, and that somatic complaints without clear medical explanation can occur in the aftermath of disaster.¹ You begin to wonder about how members of the community will be functioning months or years from now.

Table 1. Community Response to Traumatic Events

Immediate phase	<ul style="list-style-type: none"> • strong emotions • disbelief • numbness • fear • confusion accompanied by symptoms of autonomic arousal and anxiety
Delayed phase	<ul style="list-style-type: none"> • persistence of autonomic arousal • intrusive recollections • somatic symptoms • combinations of anger, mourning, apathy, and social withdrawal
Chronic phase	<ul style="list-style-type: none"> • continued intrusive symptoms and arousal • disappointment • resentment • sadness for others • re-focusing on new challenges • rebuilding of lives

COMMENT: Studies have described the range of emotional response to disaster in the context of a multi-phasic traumatic stress response (Table 1). Prospective studies suggest that symptomatic distress peaks in the days and weeks following traumatic exposure and then gradually declines over the course of the year after injury. In the National Comorbidity Survey, the prevalence of PTSD² was 7.8%, but it is estimated to be considerably higher in primary care-seeking populations and those exposed to mass-violence.³⁻⁵ Surveys of traumatically exposed populations suggest that natural recovery over the first 3 to 6 months is the general rule. In those who develop PTSD, symptoms decrease most rapidly in the first 12 months.² However, one-third of people who develop PTSD experience chronic symptoms that do not remit. Some exposed patients develop long-lasting personality changes, impaired affect modulation, self-destructive behavior, shame, despair, hopelessness, impaired interpersonal functioning, or a loss of previously held supportive beliefs. Some remain relatively symptom-free and have little or no lasting impairment associated with trauma exposure. Still others report interpersonal growth experiences as a result of their traumatic exposure.

QUESTION 1

List 4 possible psychiatric sequelae in the immediate aftermath of a traumatic event. (Write your answer in the space provided.)

Reminder: You can find the Answer Key & Discussion on page 8.

Table 2. Psychiatric Diagnoses Often Applicable to Injured Trauma Survivors Treated in the Acute Care Medical Setting*.[†]

Diagnosis	Symptomatic Criteria	Functional Criteria	Time Course
Posttraumatic stress disorder	A. Exposure to a traumatic event in which the person experienced or witnessed a life-threatening event that was associated with intense emotions (eg, physical injury) B. The event is persistently re-experienced C. Persistent avoidance of reminders of the event D. Persistent arousal symptoms	Symptoms are associated with clinically significant impairments in social, occupational, or even physical function.	Diagnosis must be made at least 1 month after the event.
Acute stress disorder	A. Exposure to a traumatic event in which the person experienced or witnessed a life threatening event that was associated with intense emotions (eg, physical injury) B. Either while experiencing the event or after, the person experiences 3 or more dissociative symptoms, eg, numbing, reduced awareness of surroundings, derealization, depersonalization, dissociative amnesia C. The event is re-experienced D. Avoidance of reminders of the event E. Symptoms of arousal	Symptoms are associated with clinically significant impairments in social, occupational, or even physical function.	Diagnosis can be made between 2 and 30 days after the event.
Major depressive episode	Five or more of the following [‡] : depressed mood, diminished interest in pleasurable activities, weight loss or gain, insomnia or hypersomnia, agitation or retardation, fatigue or energy loss, feelings of worthlessness, poor concentration, and suicidal ideation	Symptoms are associated with clinically significant impairment in social, occupational, or even physical function.	Symptoms must be present for 2 weeks.
Traumatic grief	Distressing thoughts and experiences related to reunion, longing, and searching for the deceased loved one (non-DSM-IV).	The disturbance causes clinically significant impairment in social, occupational, or other important areas of functioning.	Duration of disturbance is at least 2 months.
Adjustment disorder	A. Development of emotional or behavioral symptoms in response to an identifiable stressor. Symptoms can include depression, anxiety, conduct disturbance, or other emotional disturbance. B. The symptoms or behaviors are clinically significant as evidenced by marked distress.	Emotional or behavioral symptoms are associated with marked impairment in social, role, or even physical function.	Onset of stressor occurs within 3 months after the traumatic injury. Symptoms do not persist longer than 6 months once stressor has terminated.

* Adapted from DSM-IV and Zatzick D.⁶

[†] Posttraumatic symptoms may be present that are insufficient to meet criteria for the above diagnoses. In such cases, DSM IV-TRV Code Diagnoses would be indicated, as would continued monitoring for the development of further psychiatric disorder(s). Other mood and anxiety disorders may occur, or be exacerbated by traumatic exposures.

[‡] At least one of the five symptoms must be either depressed mood or diminished interest in pleasurable activities.

As you enter Room 1-C, a chaplain appears to be addressing a group of about 9 patients whose chairs are arranged in a circle, partitioned off from the rest of the room by an office divider. Approximately 20 patients are sitting at 2 conference tables and appear to be filling out paperwork. Many look somewhat dazed, some are crying. You recognize a psychologist from the inpatient unit who is interviewing one individual at a time in another corner of the room. Not certain of where you fit in to this situation, you approach the psychologist when he is between patients. He explains the nurses are assessing each patient to insure that they are stable, everyone is filling out insurance paperwork, and the chaplain made an announcement that anyone who wanted to participate in a group, and discuss how they are feeling should join him, and they've been going for about 20 minutes. "I'm just seeing if anyone is suicidal, homicidal, or psychotic. What else should we be doing?"

COMMENT: Treatment in the immediate aftermath of trauma should aim to reduce current distress. Ideally, it should prevent future disorders. Small controlled trials support the efficacy of cognitive behavioral approaches, but in the first hours or even days after an event people may not be able to listen attentively or absorb new information in a manner that promotes recovery. Data from controlled studies of medication interventions are lacking. Recent pilots of propranolol and imipramine suggest these may be beneficial in reducing posttraumatic symptoms in specific populations in small controlled trials. While benzodiazepines reduce immediate anxiety and improve sleep, they may also increase the likelihood of subsequent development of PTSD symptoms.

Supportive interventions and psycho-education appear to be helpful as early interventions. When access to expert care is limited, rapid dissemination of educational fact sheets may reassure many with sub-syndromal manifestations, provide guidance for self-help, and outline additional means for obtaining assistance. Such materials describe expected physiological and emotional responses to traumatic events, stress reduction techniques, the utility of remaining mentally active, concentrating on self-care tasks, effects of decreasing or continued exposure, and referral recommendations for seeking consultation if symptoms persist. Because symptoms develop over time and patients may be reluctant to seek mental health assistance, efforts should also focus on identifying persons at risk and mechanisms that facilitate follow-up assessment. Examples of these educational fact sheets can be found at: <http://www.usuhs.mil/psy/disasteresources.shtml>.

QUESTION 2

List interventions that are generally recommended in the acute aftermath of a disaster for victims who do not require immediate medical or surgical intervention. (Write your answer in the space provided.)

COMMENT: Recommendations for Psycho-Social Intervention

1. Brief exposure assessment. Screening evaluation for severe symptoms (agitation, disorientation, dissociation)
2. Address basic needs, (eg, might identify patient who will not be able to pick up food stamps since government office building has been destroyed)
3. Provide psycho-educational materials regarding the range of expected responses to traumatic exposures (including ASD, PTSD) and points of contact should worrisome symptoms develop.
4. Record contact information and permission to follow-up with exposed persons, so that status may be monitored over time.
5. Sedative-Hypnotic medications for acutely agitated individuals may reduce immediate agitation and anxiety and promote sleep, but do not prevent development of PTSD.

You remember from the last disaster drill that the educational handouts are located in the Behavioral Health disaster preparedness box. Along with these handouts are phone numbers for the outpatient behavioral health clinic and other support agencies. You ask a member of the disaster response team to get the box of handouts. When he returns with the box you ask the nurse who appears to be in charge of activities in Room 1-C to begin distributing these materials along with other discharge instructions.

QUESTION 3

List populations considered to be at greater risk for the development of psychiatric disorders in the aftermath of a terrorist bombing. (Write your answer in the space provided.)

A nurse asks you to identify people who may be at greater risk of developing complications of psychiatric disorder in response to this event and to note this risk on their hospital record. You assess their current mental health status and ability to understand discharge instructions/follow-up recommendations that will be provided to them soon by the nursing staff. Additionally, you assure them that their immediate concerns about food, shelter, as well as questions about the status of their loved ones will be addressed.

The chaplain announces that he is ready to speak with another group. You are concerned that the chaplain is conducting single-session critical incident debriefing intervention in an effort to prevent the development of PTSD or ASD. The literature suggests that such interventions do not prevent these illnesses and may be harmful to some people by increasing their exposure to trauma. You ask the chaplain about the nature of his discussions with patient groups and he informs you that he has been reminding patients to seek strength in their own spirituality if this has been helpful in the past, and on request has led some in prayer. The chaplain states that he has never

THE DEBRIEFING DEBATE

Psychological debriefing is a staged, semi-structured intervention that addresses both facts and emotions related to a particular traumatic event. Although it was developed as an intervention to prevent the negative emotional sequelae including ASD and PTSD, well-controlled studies of debriefing as a single session individual or group intervention have not demonstrated efficacy. Although some participants have reported that they experience debriefings as helpful,⁷ there is no evidence at present that establishes debriefing as an effective prevention strategy.^{8,9} In some settings it has been shown to increase symptoms.^{10,11}

been trained in Critical Event Debriefing or Critical Incident Stress Debriefing and asks if you should begin conducting such a group with the people in the room. Instead, you inform him of your concerns about these sessions. Since it is clear many in the room are looking to the chaplain for guidance, you encourage him to continue to educate groups on the importance of using support sources, such as religion, that have worked for them during difficult times in the past. You ask him to identify people who are concerned about their loved ones, and you help them establish liaisons with others who may know more about the health and safety status of their family members.

QUESTION 4

Which of the following statements is incorrect about the single-session group interventions in the period immediately following a traumatic event?

- Most well-controlled studies of single session individual or group debriefings in the immediate aftermath of traumatic events have demonstrated efficacy at preventing the development of PTSD.
- Some studies suggest that psychological debriefings may, in some instances, be harmful
- There is limited evidence that debriefings may be helpful to some individuals under specific circumstances.
- Psychological debriefing is a staged, semi-structured intervention that addresses both facts and feelings related to a trauma.

Patients who have received their educational materials are being discharged and more patients continue to arrive in Room 1-C. Realizing that the psychiatric and psychological burden of this event will not become clear for weeks or months you return to your desk to assist in the screening process. Although natural recovery over the next 3 to 6 months is the general rule, you are reassured by the fact that your hospital disaster plan includes having other clinicians in the intensive care units, surgical suites, recovery rooms, and the visitor center identifying individuals at increased risk for developing post-traumatic sequelae over time so that follow-up may be provided as necessary.

ANSWER KEY & DISCUSSION

QUESTION 1

List 4 possible psychiatric sequelae in the immediate aftermath of a traumatic event.

POSSIBLE ANSWERS INCLUDE:

- No Axis I Diagnosis (V codes)
- Adjustment Disorders
- Acute Stress Disorder (later, PTSD)
- Panic Disorder, Generalized Anxiety Disorder, and Phobias
- Mood Disorders
- Disorders secondary to general medical conditions (including delirium)
- Multiple somatic symptoms, fatigue, insomnia (Somatization Disorder)
- Exacerbation of pre-morbid mood, affective, or thought disorders.
- Factitious Disorder or malingering

Although natural recovery over 3 to 6 months in the aftermath of traumatic exposure is the general rule, depressive disorders and anxiety disorders including, but not limited to, ASD or PTSD, may result. Head injury suffered as a result of blast or missile may also precipitate mood or anxiety disorder as well as altered mental status. Somatic symptoms not fully explained by physical injury or illness may increase following disaster or trauma. When additional attention or compensation is provided to disaster victims, people may consciously or unconsciously feign or exaggerate symptoms. Table 2 provides an overview of psychiatric diagnoses often applicable to trauma survivors.

QUESTION 2

List interventions that are generally recommended in the acute aftermath of a disaster for victims who do not require immediate medical or surgical intervention.

POSSIBLE ANSWERS INCLUDE:

- Brief initial assessment to identify degree of exposure. Screening evaluation for severe symptoms (agitation, disorientation, dissociation)
- Supportive interventions to address basic needs, (eg, might identify patient who will not be able to pick up food stamps since government office building has been destroyed)
- Provide psycho-educational materials to patients, families, and staff
- Record contact information and permission to follow-up, so that status may be monitored over time
- Sedative-hypnotic medications for acute agitated individuals may reduce immediate agitation and anxiety and promote sleep, but do not prevent development of PTSD

QUESTION 3

List populations considered to be at greater risk for the development of psychiatric disorders in the aftermath of a terrorist bombing.

POSSIBLE ANSWERS INCLUDE:

- elderly
- children
- those with impairing physical injuries
- those with pre-morbid psychiatric conditions
- family members of those significantly injured or killed

Since healthy coping includes reliance on others for support, those with limited psycho-social support or poor access to medical care, such as the elderly, are at risk for developing psychiatric disorders in the aftermath of disaster. The loss or debilitating injury of a parent may be particularly difficult for children, shattering basic assumptions about the world as a safe and just place. The incidence of anxiety disorders (including ASD/PTSD) and depression in persons with serious physical injuries also increases, in part, as a patient confronts barriers imposed on normal activity (eg, work, recreation, exercise) by these injuries. Highly stressful situations can exacerbate many pre-morbid psychiatric conditions including mood, anxiety, and psychotic disorders, and the loss or injury of loved ones.

QUESTION 4

Which of the following statements is incorrect about the single-session group interventions in the period immediately following a traumatic event?

ANSWER: The correct answer is a. Randomized controlled studies and meta-analyses have not demonstrated efficacy of debriefing in preventing PTSD.

In one study,¹⁰ randomly selected victims who received debriefings 24-48 hours after motor vehicle crashes demonstrated either similar or worsened symptomatic outcomes compared with controls at 4 months.

While debriefing does not appear to prevent the development of PTSD, participants often acknowledge that they feel the debriefing is helpful in some manner. Open trials have demonstrated improvement in self-efficacy and reduced anxiety in the short term.⁷

REFERENCES

1. Benedek DM, Ursano RJ. Military and disaster psychiatry. In: Smelser NJ, Baltes PB, eds. *International Encyclopedia of the Social and Behavioral Sciences*. Oxford, UK: Elsevier Press; 2001:9850-9857.
2. Kessler RC, Sonnega A, Bromet, E, Hughes M, Nelson CB. Posttraumatic Stress Disorder in the National Comorbidity Survey. *Arch Gen Psychiatry*. 1995;52:1048-1060.
3. Stein MB, Mcquaid JR, Pedrelli P, Lenox R, McCahill ME. Posttraumatic Stress Disorder in the primary care medical setting. *Gen Hosp Psychiatry*. 2000;22:261-269.
4. Schlenger WE, Caddell JM, Ebert L, et al. Psychological reactions to terrorist attacks: findings from the National Study of Americans' Reactions to September 11. *JAMA*. 2002;288:581-588.
5. Weine SM, Becker DF, McGlashan TH, et al. Psychiatric consequences of 'ethnic cleansing': clinical assessments and trauma testimonies of newly resettled Bosnian refugees. *Am J Psychiatry*. 1995;152:536-542.
6. Zatzick D. Posttraumatic stress, functional impairment, and service utilization after injury: a public health approach. *Semin Clin Neuropsychiatry*. 2003;8: 149-157.
7. Shalev AY, Peri T, Rogel-Fuchs Y, Ursano RJ, Marlowe D. Historical group debriefing after combat exposure. *Mil Med*. 1998;163:494-498.
8. van Emmerik A, Kamphuis JH, Hulsbosch AM, Emmelkamp PM. Single session debriefing after psychological trauma: a meta-analysis. *Lancet*. 2002;360:766-771.
9. Rose S, Bisson J. Brief early psychological interventions following trauma: a systematic review of the literature. *J Trauma Stress*. 1998;11:697-710.
10. Hobbs M, Mayou R, Harrison B, Worlock P. A randomized controlled trial of psychological debriefing for victims of road traffic accidents. *BMJ*. 1996;313:1438-1439.
11. Rose S, Bisson J, Wessely S. Psychological debriefing for preventing post traumatic stress disorder (PTSD). *Cochrane Database Syst Rev*. 2001;3:CD000560.

SUGGESTED READING

1. Ursano RJ, McCaughey BG, Fullerton CS, eds. *Individual and Community Responses to Trauma and Disaster: The Structure of Human Chaos*. New York, NY: Cambridge University Press; 1994.
2. Vlahov D, Galea S, Resnick H, et al. Increased use of cigarettes, alcohol, and marijuana among Manhattan, New York, residents after the September 11th terrorist attacks. *Am J Epidemiol*. 2002;155: 988-996.
3. Shuster MA, Stein BD, Jaycox LH, et al. A national survey of stress reactions after the September 11, 2001, terrorist attack. *N Engl J Med*. 2001;345:1507-1512.