

VIEWPOINT

The 2014 Ebola Outbreak and Mental Health Current Status and Recommended Response

James M. Shultz, MS, PhD

Center for Disaster and Extreme Event Preparedness, University of Miami Miller School of Medicine, Miami, Florida.

Florence Baingana, MB, ChB, MMed (Psychiatry), MSc (HPPF)

Makerere University School of Public Health, Kampala, Uganda.

Yuval Neria, PhD

New York State Psychiatric Institute, Departments of Psychiatry and Epidemiology, Columbia University Medical Center, New York, New York.

Corresponding

Author: Yuval Neria, PhD, New York State Psychiatric Institute, Unit 69, 1051 Riverside Dr, New York, NY 10032 (ny126@columbia.edu).

The World Health Organization (WHO) Ebola Response Roadmap declared that the affected West African countries of Guinea, Liberia, and Sierra Leone are “struggling to control the escalating outbreak” because of limited health system capacity and “rampant fear.”¹ The WHO director-general subsequently described how fear behaviors have propelled Ebola virus transmission,² citing symptomatic patients escaping from treatment units, families concealing sick relatives at home, preferential use of traditional healers, and physical contact with infectious corpses. Nevertheless, the Roadmap includes few recommendations to alleviate fear behaviors and address mental health needs in Ebola-affected communities.

In West Africa, Ebola virus disease arouses fear behaviors, in part because many have witnessed the graphic hemorrhagic manifestations of those infected and the bodies of those who have died. The corpses and bedding of patients who have died pose infection hazards to health care workers and family members. As of December 14, 2014, 649 front-line health care workers have become ill and 365 have died.³ At the peak of the epidemic, Ebola treatment units were full and many family members had the risky role of being primary caregivers for those infected without any protection. The already resource-poor health care systems have been further challenged by myths and misinformation, often driven by erroneous news reports and inadequate public health messaging. For example, rumors have circulated that international medical teams were intentionally spreading Ebola. The fact that only half of the patients admitted to Ebola treatment units survive to be discharged has raised suspicion that treatment personnel are harming patients. A health education team in Womey, Guinea, was attacked and 8 health care workers and journalists were killed.⁴ Fearful patients have fled care centers, carrying disease back into the community. Some families have harbored their symptomatic relatives at home rather than transport them to Ebola treatment units; others have performed secret burials, preparing the bodies of deceased loved ones, and have become infected.

Ebola can affect many segments of a functional society. What started as a public health emergency has been officially declared a global threat to international security by the United Nations (UN) Security Council.⁵ Outbreak-affected nations have been stigmatized and labeled “infected countries.” Neighborhood quarantines, nighttime curfews, and states of emergency have been imposed. In these poverty-burdened countries, economies are declining, borders and markets have been closed, travel to and from West Africa has been curtailed, trade and agricultural production have faltered,

and hunger is widespread, creating cascades of losses and psychological stress above and beyond the fear-provoking consequences of the disease itself.

In contrast to the population-wide direct exposure in West Africa, in the United States, the Ebola epidemic has been experienced through a fear-riddled media portrayal of the public health emergency. The emergence of 4 cases during 1 month, including the first case to be diagnosed inside the United States and the first acquired cases to be transmitted to health care workers in a US hospital, disturbed the illusion of safety. The susceptibility of health care workers to infection prompted circular accusations, directed variously at breached protocols, lack of Ebola training, and ambiguous guidelines for personal protective equipment. Medical centers nationwide rapidly improvised Ebola virus disease policies, staff trainings, and patient screenings. Further promoting public anxiety, politicians called for travel bans and several governors issued executive orders to quarantine travelers.

Mental Health and Psychosocial Support

In the outbreak-affected nations of West Africa, common mental disorders (eg, anxiety and depressive disorders, posttraumatic stress disorder) are to be expected. Risk factors for common mental health problems include population-wide exposures to trauma such as witnessing and caring for individuals who are severely ill, perceived life threat, substantial mortality and bereavement, orphaning of children, the deaths of trained health care workers, food and resource insecurity, discrimination against affected families, and national stigma. The absence of mental health and psychosocial support systems and the lack of well-trained mental health professionals in these countries have amplified the risks of enduring psychological distress and progression to psychopathology. Liberia and Sierra Leone each has only a single practicing psychiatrist, only several dozen mental health nurses, and about 100 trained paraprofessionals who assess and manage common mental disorders.⁶ Given the significant risk of Ebola virus infection, international aid organizations are only beginning to prioritize mental health and psychological support programs.

In West Africa, a proactive response should include several key elements. First, a rapid assessment of outbreak-associated psychological stressors, for both civilians and health care workers, is needed. One option is to use trauma signature analysis, an evidence-based method that assesses a population exposure to an extreme event, providing actionable guidance for highly targeted support programs.⁷ Trauma signature analysis, which previously has been used in a series of

major disasters, including the 2011 Japan tsunami,⁸ aims to identify unique characteristics of an event, create a hazard profile, enumerate event-specific stressors, and estimate the severity of exposure and related psychological risk factors. Second, an intervention, consistent with the Inter-Agency Standing Committee (IASC) guidelines on mental health and psychosocial support in emergency settings,⁹ and adapted to the unique features of the Ebola virus outbreak, is needed to be rapidly implemented and maintained throughout the recovery process. The IASC guidelines are organized around a 4-tiered intervention pyramid: (1) restoring basic services and security for the affected population, (2) strengthening family and community networks, (3) providing distressed individuals with psychosocial support, and (4) providing specialized mental health intervention for severely affected survivors.⁹ Such a system of support has been previously used for Syrian war refugees, Philippine typhoon survivors, and Nepalese survivors of political violence. Third, the intervention should specifically target high-risk subpopulations such as stigmatized survivors, bereaved family members, ostracized orphans, and health care and burial workers who have witnessed extreme morbidity and mortality.

In the United States, public health planning is also warranted despite the very low number of Ebola cases. First, the development of a science-based risk communications strategy is critical to counteract the tendency for fear messaging and political agendas to dominate the media. The US public has been only indirectly exposed to the Ebola virus through the media. Research has confirmed that indirect exposure to extreme events, such as the September 11 and Boston marathon terrorist attacks, through repeated presentation of the news media, apart from direct experi-

ence, may be sufficient to create distress and elevate risks for common mental health disorders.¹⁰ In the case of Ebola virus disease in the United States, examples of accurate and reassuring public health messages may include the very low number of infected patients, high recovery rates, and the fact that no family contacts and no persons who shared public spaces or mass transit with the 4 individuals with Ebola virus disease have become infected. Second, psychological support is needed for patients with active, transmissible, life-threatening disease; patients' family members; other hospital inpatients; and disease survivors following discharge. Third, support is also needed for health care workers and their family members. Attentive management to diminish worker stress and enhance performance includes effective incident management, safety briefings, and available mental health care.

Conclusions

Fear reactions are predictable and pervasive and may exacerbate disease spread in pandemic areas. Efforts to develop effective treatments and vaccines should be coupled with a response to help with efforts to control preventable viral transmission and support the psychological needs of the public overall as well as infected patients, family members, health care workers, and other responders. The West Africa pandemic provides insights into the psychological consequences associated with a "worst case scenario" event involving a highly virulent infectious disease. An effective response is essential both in West Africa to address the psychosocial needs associated with population-wide direct exposure to disease, death, and distress; and in the United States, to counterbalance fear-driven behaviors and policy making with prudent and effective preparedness for emerging infectious diseases.

ARTICLE INFORMATION

Published Online: December 22, 2014.
doi:10.1001/jama.2014.17934.

Conflict of Interest Disclosures: All authors have completed and submitted the ICMJE Form for Disclosure of Potential Conflicts of Interest and none were reported.

REFERENCES

1. World Health Organization. Ebola response roadmap. August 28, 2014. <http://www.who.int/csr/resources/publications/ebola/response-roadmap/en/>. Accessed December 6, 2014.
2. Chan M. Ebola virus disease in West Africa—no early end to the outbreak. *N Engl J Med*. 2014;371(13):1183-1185.
3. World Health Organization (WHO). Ebola response roadmap situation report. December 17, 2014. http://apps.who.int/iris/bitstream/10665/145679/1/roadmapsitrep_17Dec2014_eng.pdf?ua=1. Accessed December 18, 2014.
4. News BBC. Ebola outbreak. Guinea health team killed. <http://www.bbc.com/news/world-africa-29256443>. September 19, 2014. Accessed December 6, 2014.
5. United Nations Security Council. Resolution 2177 (2014). Security Council 7268th Meeting, September 18, 2014. [http://www.un.org/en/ga/search/view_doc.asp?symbol=S/RES/2177%20\(2014\)](http://www.un.org/en/ga/search/view_doc.asp?symbol=S/RES/2177%20(2014)). Accessed December 6, 2014.
6. Levin A. Response to Ebola crisis will require attention to MH needs. *Psychiatric News*. October 2014;49(20):1.26. <http://psychnews.psychiatryonline.org/doi/full/10.1176/appi.pn.2014.10b14>. Accessed December 6, 2014.
7. Shultz JM, Neria Y. Trauma signature analysis: state of the art and evolving future directions. *Disaster Health*. 2013;1(1):4-8.
8. Shultz JM, Forbes D, Wald D, et al. Trauma signature of the Great East Japan Disaster provides guidance for the psychological consequences of the affected population. *Disaster Med Public Health Prep*. 2013;7(2):201-214.
9. Inter-Agency Standing Committee. *IASC Guidelines on Mental Health and Psychosocial Support in Emergency Settings*. Geneva, Switzerland: Inter-Agency Standing Committee; 2007.
10. Neria Y, Sullivan GM. Understanding the mental health effects of indirect exposure to mass trauma through the media. *JAMA*. 2011;306(12):1374-1375.