

Bioterrorism and the Vital Role of Family Physicians

MARK D. HARRIS, MD, MPH, *U.S. Army Medical Department Liaison to the U.S. Department of Health and Human Services, Washington, District of Columbia*

KEVIN YESKEY, MD, *Deputy Assistant Secretary for Preparedness and Response, U.S. Department of Health and Human Services, Washington, District of Columbia*

It has been almost a decade since the anthrax attacks of 2001. In response to that crisis, which began only one week after the 9/11 attacks, America has made major strides in protecting itself from a similar calamity in the future. The Public Health Security and Bioterrorism Preparedness and Response Act of 2002 and the Pandemic and All-Hazards Preparedness Act of 2006 created new capabilities for emergency preparedness and response. This resulted in a staff division within the U.S. Department of Health and Human Services, the Office of the Assistant Secretary for Preparedness and Response, which coordinates the medical aspects of disasters and emergencies, such as bioterrorism.

There have been many scientific advances, especially against category A bioterrorism agents (those that are relatively easily disseminated or transmitted from person to person and may lead to high mortality rates) including anthrax, botulism, plague, smallpox, tularemia, and viral hemorrhagic fevers. According to Military Vaccine Agency director Michael Krukar, COL, MS (personal conversation, February 2011), more than 2.6 million U.S. military personnel and civilians have been vaccinated against anthrax, and more than 2 million military personnel, in addition to many civilians, have been vaccinated against smallpox. Clinical and environmental bioterrorism surveillance systems are in place, and medical countermeasures, such as antimicrobials and vaccinations, have been developed and are more readily available through the Centers for

Disease Control and Prevention's (CDC's) Strategic National Stockpile. State health departments can rapidly perform diagnostic laboratory tests for category A agents as part of the CDC's Laboratory Response Network. Although these advances are part of a work in progress, our country is increasing its resistance to bioterrorism threats and its ability to respond when danger strikes.

Family physicians and other primary care physicians have a vital role in protecting our patients and our nation against bioterrorism. The first diagnosis of anthrax in the 2001 attack was in an emergency department.¹ A salmonella outbreak in Oregon in 1984 that was later found to be bioterrorism-related was discovered after primary care physicians reported to their health department large numbers of patients with diarrhea who had eaten at two local restaurants.² This type of passive surveillance is the early warning system for naturally occurring outbreaks, and for bioterrorism events. An astute physician who diagnoses a reportable illness and alerts the local health department may be detecting a bioterrorism attack, possibly saving his or her patient and many others.

The first step in bioterrorism preparedness is personal preparedness. This includes ensuring that your home and family are protected in case of an attack. Being up to date with CDC-recommended immunizations and practicing good hygiene are fundamental. The American Academy of Family Physicians (AAFP) has produced the Preparedness Manual for Disasters and Public Health Emergencies, which includes personal, practice, and community preparedness recommendations. It is available online to AAFP members at http://www.aafp.org/online/en/home/clinical/disaster_prep/manual.mem.html.

The second step is for physicians and office staff to become competent in the clinical aspects of bioterrorism. This includes diagnosing and treating conditions that may be caused by a bioterrorism attack, and being aware of postexposure ►

management, such as postexposure smallpox vaccination and anthrax antibiotic prophylaxis for asymptomatic patients who may have been exposed. It also includes offering counseling to patients to help prevent psychological consequences of bioterrorism. The CDC Web site provides useful bioterrorism information for physicians (<http://emergency.cdc.gov/bioterrorism>). Educational aids are available from other federal government organizations, such as the U.S. Army Medical Research Institute of Infectious Diseases (<http://www.usamriid.army.mil/education/instruct.cfm>) and professional societies, such as the AAFP (<http://www.aafp.org/online/en/home/clinical/disasterprep/prepare.html>).

The third step is preparing your office. This includes creating a convenient and reliable system to report disease to your state and local health departments. Getting to know the public health professionals in your area will make communication easier in case of disaster, whether bioterrorism or otherwise. You must also make sure that infection control practices in your office are up to standard (<http://www.cdc.gov/hai/>).

Bioterrorism events and natural disease outbreaks often exceed regular medical care capacity, and practices should be ready for the surge when necessary. Coordination among local practices, urgent care centers, and hospital emergency departments may help direct unscheduled patients to locations where they can get high-quality, reasonable-cost care without overcrowding, which was a problem during the novel influenza A (H1N1) virus pandemic in 2009. Use of electronic health records in conjunction with office Web sites and social media can help communicate with patients and other health professionals about changes in office hours,

self-treatment recommendations, and public health information.

The fourth and final step in bioterrorism preparedness is getting involved in community, state, and national initiatives. There are many ways to get involved. The Medical Reserve Corps uses volunteer health professionals to supplement local emergency and public health resources. The Emergency System for Advance Registration of Volunteer Health Professionals system keeps an up-to-date list of credentialed volunteers who can be deployed swiftly to assist with disaster relief. Disaster Medical Assistance Teams are composed of volunteer health care workers who are deployed in case of national emergencies. Because they are special government employees, they receive federal benefits such as pay, tort claims coverage, workers' compensation, and job protection.

Bioterrorism is a threat to all Americans. Family physicians, by preparing themselves, their families, their practices, and their communities, play a vital role in prevention and response.

The opinions and assertions contained herein are the private views of the authors and are not to be construed as official or as reflecting the views of the U.S. Army Medical Department or the U.S. Army at large.

Address correspondence to Mark D. Harris, MD, MPH, at mark.harris1@hhs.gov. Reprints are not available from the authors.

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