Training for Public Health Emergencies

A bioterrorism preparedness exercise demonstrates the need for interagency collaboration.

Carl S. Osaki

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People have been enjoying a quiet, uneventful summer in a county of about 150,000 people. But during the first week of August, unusual events begin to happen. Health care providers in the county begin to see increasing numbers of people with gastrointestinal symptoms. On Friday evening health care providers become alarmed when 30 patients, all exhibiting similar symptoms, flock to area hospitals or medical clinics. Hospital authorities, realizing something unusual is happening, contact the local health department. Health authorities suspect a possible food-borne disease outbreak. The outbreak continues to grow over the weekend, and local public health authorities search for a common source of contamination. Then, terrorists call the mayor of the largest city in the county and claim responsibility for the outbreak. The terrorists threaten to continue making people sick until a major economic conference scheduled in two weeks is canceled.

Over the weekend, people from adjoining counties also appear to be affected by the disease outbreak. By Sunday, the source of the outbreak remains unknown, but appears to be associated with a number of restaurants and specialty grocery stores in two counties. The news media are notified. Restaurant and grocery store business plummets in the affected counties. Health Department and county phone lines are jammed on Monday morning. The news media request further information, particularly about what the public should do and how law enforcement and public health officials will respond.

By Monday afternoon, at the peak of the outbreak, more than 400 cases have been reported. An elderly woman who ate a meal at one of the restaurants dies, and family members threaten to bring legal action against the agency responsible for her death. Two weeks later, the outbreak seems to have abated, except for a number of secondary cases. No more is heard from the terrorists.

Practical Training Needed

This scenario was used in a bioterrorism tabletop exercise developed by the Northwest Center for Public Health Practice. It is both fact and fiction. Many of the elements actually occurred in previously reported communicable disease outbreaks. The Center combined them to make up a fictional story of a bioterrorist threat in a local community. Fact or fiction, the story raises interesting policy questions: Who is responsible for managing this problem? What are the communication channels? How and when is information disseminated? Who responds to the news media? Should the economic conference be canceled? A local community responding to public health emergencies needs to have the answers to these and many other policy questions.

An agency's ability to respond to new and emerging issues, such as bioterrorism, depends on the level of knowledge, skills, and abilities of its workers. Education and training remain the primary means for developing a responsive and competent workforce. However, because the public health workforce needs information that is useful, practical, and can be easily assimilated into practice, new training strategies, including distance learning, case study exercises, mentoring, networking, and on-site practicums must be developed to augment traditional classroom teaching. This tabletop exercise is an example of a practical training approach that can be used to prepare local communities for a large-scale communicable disease or bioterrorism event.

The Bioterrorism Tabletop Exercise

In the summer of 2000, the Washington State Department of Health asked the Northwest Center for Public Health Practice, a program of the University of Washington School of Public Health and Community

Medicine, to develop a training module for local public health personnel and their emergency counterparts to develop skills and knowledge needed to prepare for and respond to a large-scale communicable disease or bioterrorism event. The Health Alert Network and the Bioterrorism Preparedness and Response Program at the Centers for Disease Control and Prevention funded the project.

The Northwest Center designed a four-hour tabletop exercise simulating the policy problems inplicit in responding to a large-scale bioterrorism event. The exercise was aimed at helping participants identify policy questions that need to be considered in preparation for such an emergency. The lack of established and published policies and training for these kinds of events is a recognized problem. A survey conducted by the National Association of County and City Health Officials in March 1999, found that only 23% of local health departments had an emergency response plan that included bioterrorism.

Three pilot tests of this training exercise have been conducted in rural as well as urban communities, and participants have included a mix of staff from the local community health departments, emergency management, law enforcement agencies, emergency medical services, hospitals, and boards of health.

The exercise contained a scenario with a progression of 22 separate incidents similar to the scenario above. After each incident was described, the participants discussed how they would respond and what policies, if any, were already in place to support their responses. These discussions led participants to decide whether local policies were present, documented, understood, communicated, and followed. Participants also identified new policies their agencies should develop in order to respond effectively to the incident.

An instructor from the Northwest Center for Public Health Practice facilitated the exercise using a PowerPoint presentation and three "storyboards" that provided the context or setting for the incidents as the exercise unfolded. The storyboards enabled the participants to progress without having to make their own assumptions about events, such as time or place within the scenario.

Prepared to Prepare

At the end of the exercise participants assessed the practicality and usefulness of the exercise. They indicated that the exercise had successfully:

- Identified measures that can be performed at the local level
- Promoted interagency collaboration and coordination
- Recognized the roles of a variety of local public officials
- Illustrated the need for intense teamwork and communication
- Identified the gaps in local preparedness
- Identified additional resource or capacity needs
- Identified additional training needs

Each pilot community also held follow-up meetings to discuss the policy gaps identified through the exercise. (*See box on page 20 for some conclusions from the follow-up meetings.*)

Public health rat catchers attaching collection identification tags to their morning catch, San Francisco, c. 1907.

Next Steps

In the pilot exercises, the presenters received positive feedback about the value and need for such training. Also through the pilot exercises, the Northwest Center identified a number of future training needs, including basic epidemiology, dealing with the news media, effective communication across and among agencies, and writing clear policies. The pilot exercise also identified local strengths, particularly the ability to work in teams and make rapid decisions and the desire to assist colleagues and other agencies with resource or capacity needs related to emergency preparedness.

The ability of local health officials to quickly recognize a possible bioterrorism or communicable disease event depends, in large part, on the diagnostic capabilities of healthcare providers and clinical laboratories and their ability to communicate this information rapidly to public health officials. By the end of the exercise, participants recognized how important

it is to work with the medical community to ensure the presence of good reporting, recognition, and surveillance of unusual disease events in the community.

Public health agencies need to address rapidly changing public health issues and require practical, value-added training modules for developing a competent and responsive workforce. The positive response to this tabletop exercise demonstrates that this type of creative, interesting, hands-on learning activity should be considered an important addition to workforce training methods. The Northwest Center and the Washington State Department of Health will continue to use this exercise and its outcomes to enhance our region's preparation for public health emergencies.

Author

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For more information about the bioterrorism tabletop exercise, call Julie Wicklund, Washington Department of Health, at 206-361-2881, or e-mail her at julie.wicklund@doh.wa.gov.

Some Conclusions from the Bioterrorism Exercise

- Local policy makers (boards of health, county commissioners) may have an active interest in understanding and helping to define the public health emergency response policies.
- Local county emergency responders are very interested and willing to learn about their role in a large-scale communicable disease or bioterrorism events.
- Local health departments are good at responding to public health emergencies, but they lack written or documented policies.
- Each county had its own unique politics, personalities, and command structure. A policy for one county may not necessarily be appropriate or relevant for others.
- Local agencies, other than public health agencies, generally have written policies regarding emergency response, but these policies may not address or include public health emergencies.
- Existing communication policies are typically related to internal agency or county operations, and policies for communicating formally across county lines or with state or federal officials are generally limited. Informal communication often leads to confusion, misunderstandings of decisions and authority, and misinformation about where to go for technical assistance or advice.
- Emergency response policies are not always well communicated among all the agencies involved.
- Those outside of the health department typically do not have a basic understanding of public health roles and responsibilities.
- Communication is strained when public health officials assume that emergency responders understand basic public health terminology, particularly terms associated with diseases or symptoms.
- A self-reported assessment of a local health department's ability to respond to a bioterrorism event may not be consistent with its actual or observed performance.