Technology Provides Opportunities for Coordinating Community Emergency Management

Rockford Memorial Hospital Works with Regional Organizations

When responding to an emergency such as a bioterrorist event, fire, or mass casualty incident, organizations should not operate independently. Fire departments, law enforcement agencies, emergency medical services (EMS) organizations, and health care organizations such as hospitals must all work together to respond effectively to the emergency and keep the community safe.

The Joint Commission addresses the need for community integration when planning for emergency management activities in its "Management of the Environment of Care" (EC) chapter, standard EC.4.10 (see the "Case at a Glance" box). Also, standard EC.4.20 requires organizations to conduct regular drills to evaluate the effectiveness of their planning efforts for emergency management and to test their response capabilities.

One of the elements of performance (EPs) for standard EC.4.20 requires organizations to participate in at least one communitywide practice drill a year relevant to the priority emergencies identified in the organization's hazard vulnerability analysis.

Conducting a communitywide emergency response drill can be challenging because geographic distances, conflicting time commitments, and limited staff availability can interfere with scheduling and implementation.

Rockford Memorial Hospital (RMH), a 396-bed tertiary care facility located in northern Illinois, conducted a communitywide emergency response drill using Internet, conference call, and fax technology. RMH serves as the Illinois EMS Region 1 "POD" hospital. The term *POD* is simply an Illinois Department of Public Health designation given to hospitals in each of 12 regions in Illinois. These hospitals function as "lead" facilities in the areas of emergency preparedness, care, and response. "Because of our role as a POD hospital we wanted to develop an integrated community emergency response drill that involved rural and urban organizations from all over our region," states George B. Beranek, M.D., M.B.A., Region 1 POD medical director and director of medical education for Rockford Health System. "Due to the 12 counties and 17 hospitals in our region, Internet and fax technology provided a good venue in which our organization could develop an exercise that involved multiple facilities, health departments, and agencies."

The Anatomy of the Drill

The drill was designed to test the community's public health department bioterrorism response plan. For the drill, a bioterrorism scenario was developed in which anthrax (*Bacillus anthracis*) was released at a large waterfront event over a holiday weekend. The multiple hospitals and agencies that participated in the drill logged on to a secure Web site where a PowerPoint presentation told the story of the scenario, presented x-rays of infected "patients," and offered continuous updates regarding the evolving situation. Each organization that participated in the drill was asked to respond to new developments as they unfolded. The scenario progressed over nearly two hours with interaction of participants over the phone lines.

After the scenario concluded, a 30-minute critique of the program was conducted. Participants were then encouraged to go back and evaluate their organization's participation in the drill at their respective sites. In addition, the community Bioterrorism plan was critiqued at the next meeting of the community health department.

"Facilities were advised that real patient care took priority and that organizations should suspend or discontinue play if the patient care demands became too much to safely continue in the exercise," states Dr. Beranek.

Advantages of the Drill

"One of the real benefits of the drill was that it allowed all the participants to stay at their facility and interact with the people they would be working with in a real disaster setting. It also allowed free discussion between facilities and agencies as the scenario evolved," states Dr. Beranek. "We encouraged hospitals in rural areas to have their local health department, EMS, and law enforcement agencies meet at a central location so that they could all participate in the drill together."

Many times communities host tabletop exercises to fulfill the requirement of a community drill. This involves bringing organization

leaders together around a table to discuss a potential scenario. "The advantage to using Internet and fax technology instead of a conventional tabletop drill is that the technology allows the people who would be directly involved in responding to an emergency to participate in the drill without having to leave their facility. Rockford's drill was very effective in involving all different levels of the organizations as well as the different community and state agencies," states John Fishbeck, associate director for the Joint Commission's Division of Standards and Survey Methods. "The drill also encouraged physician involvement which is not usually prevalent at a tabletop exercise. In this drill, physicians responded to the x-rays and patient updates presented via the Internet and became instrumental in the evolvement of the drill scenario."

Planning the Drill

"As part of the planning process, we wanted to include the larger hospitals as well as the smaller and rural hospitals in the exercise. There were many hospitals and agencies that had expressed an interest in the development of an integrated drill," says Dr. Beranek. RMH sent e-mails and placed telephone calls to the three larger hospitals in the Rockford area as well as to several smaller hospitals in the region. RMH also invited an Iowa hospital and a Wisconsin hospital that border the Rockford region to participate. Participation in the drill was voluntary. In hosting the drill, RMH offered organizations the option to be an active participant or to "listen only." Those organizations that chose to listen only had access to the PowerPoint presentation and listened in on the conference calls, but were not required to respond to the scenario. "To get the most benefit out of listening, we encouraged these organizations to involve their local EMS, law enforcement agency, and fire department so that they could play out the scenario for themselves," says Dr. Beranek.

Lessons Learned

"One of things that came out of this drill is the importance of communication. In order to function effectively in an emergency, organizations should have thorough and appropriate communication that moves up and down the command structure," says Dr. Beranek. In addition, it is important to communicate between facilities and across regions. The public health department increased the number of organizations receiving their public health alerts as a result of this drill. The department realized the value in communicating frequently with all organizations in the region including those organizations located in the contiguous states.

Continuing the Drill

After the conclusion of the community drill, four hospitals chose to take part in the next phase of the drill. This activity ran for nearly four hours and involved faxing simulated "paper" patients to the four participating hospitals. During this time the participating organizations were expected to process the paper patients through the system as though they were real. The "patients" were triaged, assigned an Emergency Department (ED) bed, evaluated with appropriate diagnostic studies, treated, and dispositioned. If a patient required admission, the paper was transported to the floor or unit where it occupied a bed. Periodic updates were faxed to each organization to indicate the deterioration of a patient's health or to inform the organization of a patient's death.

In addition to afflicted patients from the bioterrorism event, everyday problems such as pneumonia, pregnancy, and myocardial infarction were included in the paper patient population.

Case at a Glance

Main Challenge: To conduct an integrated community emergency response drill and involve rural and urban hospitals, health departments, and emergency response organizations.

Issues: In some cases, the distance between facilities in the community was significant. The organization needed to find a cost-effective way to bring everyone together.

Joint Commission EC Standards: EC.4.10, "The health care organization addresses emergency management." **EC 4.20**, particularly **EP 4**, which requires organizations to participate "in at least one communitywide practice drill a year (where applicable) relevant to the priority emergencies identified."

Outcomes: By using Internet, conference call, and fax technology, RMC was able to host a cost effective communitywide drill that allowed participating organizations and agencies to gain valuable experience with an emergency situation.