needed during the crisis, the information needed to make those decisions, and timely availability of that critical information. In April, 2009, the United States experienced a late-season outbreak of a novel H1N1 influenza virus that led to a full-scale national response. An in-process-review of the performance of biosurveillance efforts at the Centers for Disease Control and Prevention (CDC) was conducted for the first three months of the response.

Methods: Four types of engagement were held to collect information regarding systems, methods, and tools for biosurveillance: (1) a one-hour meeting with senior Agency response leaders; (2) a series of in-person interviews with CDC subject-matter experts; (3) a focus group with CDC responders; and (4) a focus group with a convenience sample of state and local public health epidemiology practitioners.

Results: Seasonal surveillance systems were the most central to regular reporting and were flexible to the time and volume demands primarily because of the dedication of public health professionals at local, state, and federal levels. Staff-intensive manual collection and reporting efforts degraded as the volume increased. Familiarity with data was important to inclusion in reports. Many critical information requirements were filled from investigation; timeliness and exchange of this information and sharing improved with ability to have federal staff in the field. Quality staff, quality relationships, and effective partnerships were central to effective information sharing domestically and internationally.

Conclusions: Overall, the information exchange was deemed to have been timely and effective. The clarity of critical information requirements was central to the adaptability and efficiency of biosurveillance efforts. The success of information exchange was more a result of the expertise, dedication, and adaptability of staff than the technology. Efforts are underway to increase the coverage and automation of surveillance for the fall.

Keywords: biosurveillance; exchange; expertise; information; response; US

Prehosp Disaster Med

"Orange Flame" Project: An Integrative Approach to Building Capacity for an Unusual Biological Event

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Preparedness for an unusual biological event (UBE) comprises capacity and capability (know-how and integrative response). Traditional methods for preparing the healthcare system for a biological event fail to achieve real capability for a UBE, as they disregard the unknown agent. Furthermore, they ignore many inherent uncertainties present following event detection.

The most problematic response time to a UBE are the first 48 hours following the event: the greatest uncertainties are definitive agent identification, the scope of the event, and its origin. No governmental directives are expected at this time.

We have developed a model—and a system to implement it—to prepare all responders, mainly on a regional level, to identify and react to a UBE in an integrative and generic way. Consequently, this model transforms them to a *modus operandi* of an outbreak while the command and control is moved to a national level.

Necessary components of this model are:

1. Setting a generic national doctrine for an unknown agent, by default, a contagious airborne transmissible disease. This doctrine is translated by each agency and institution—civilian or military—to relevant standing orders;
2. Setting a date for a drill—defining an annual timeline for a structured process of planning and training culminating in regional, two-days drills for all participants;
3. Integrating national medical assets, non-medical actors, and decision-makers in the process;
4. A single, multi-organizational, small group that prepares the various agencies, plans and executes the drill, and implements the lessons learned into the doctrine and standard operating procedures; and
5. Peer review of the trainees by veterans of previous drills.

Three "Orange Flame" drills succeeded in building regional capability for UBE, which also serves well for pandemic preparedness.

Keywords: biological event; capacity building; Orange Flame; preparedness

Prehosp Disaster Med

Methods of Training and Programs to Enhance Preparedness

Disaster Preparedness 101: Preparing Nursing Students for Action

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Introduction: As a result of recent disasters and emerging threats, it is imperative that nurse educators provide students with the foundations to be able to respond to a disaster situation equipped with the tools for action. The purpose of this presentation is to describe the lessons learned from a partnership between a school of nursing and a rural, federally-qualified community health center. Nursing students gained first-hand experience performing a risk assessment—developing, implementing, and evaluating the agencies' ability to manage a large, multi-victim disaster simulation exercise. In addition, this immersion method emphasized the interface relations and collaboration needed between emergency agencies and academic health partners.

Methods: The immersion method of teaching the concepts of disaster nursing was applied while partnering with a rural, federally-qualified, community health center and a group of community health students. This immersion allowed the students to work with the agency to plan, implement, and evaluate surge capacity. In planning and implementing the disaster exercise, students partnered with local agencies to enhance the reality of the exercise. Following the disaster exercise, students conducted a series of focus groups aimed at identifying the agencies' strengths and opportunities for improvement in the event of a disaster; these were shared with the agency.