

MEETING REPORT

ROUNDTABLE: PROMOTING PARTNERSHIPS FOR REGIONAL HEALTHCARE PREPAREDNESS AND RESPONSE

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ON APRIL 4, 2007, THE CENTER FOR Biosecurity of the University of Pittsburgh Medical Center (UPMC) convened an invitational meeting to examine the critical elements of regional healthcare partnerships for emergency preparedness and response and to facilitate communication among the federal officials, regional healthcare leaders and institutions, and other stakeholders. Participants included senior officials from the Department of Health and Human Services (HHS), the Department of Homeland Security (DHS), and state and local leaders in regional healthcare preparedness from hospitals, public health agencies, and dedicated independent nonprofit organizations. A list of participants can be found in the sidebar. Individual comments were not for attribution in order to foster a frank and open discussion.

Participants in the meeting were asked to discuss strategies for improving regional healthcare response to disasters in order to (1) facilitate a coordinated response to mass casualty disasters (involving more than one hospital); (2) enable consistent planning; (3) more efficiently use limited preparedness funds; and (4) to provide the building blocks for a response to disasters that affect more than one region.

The meeting was prompted by a converging national focus on a regional approach to healthcare response to disasters by local leaders, JCAHO requirements, the National Bioterrorism Hospital Preparedness Program, Hurricane Katrina, pandemic flu preparedness, and the Pandemic and All Hazards Preparedness Act, which was passed in December 2006. The agenda for the meeting was derived from the results of a study of 13 regional hospital preparedness efforts,¹ as well as discussions held with federal officials and

congressional staff and a thorough review of the peer-reviewed literature on this topic. This report is a synopsis of the meeting presentations and group discussions.

STATUS REPORT

The Office of the Assistant Secretary for Preparedness and Response (ASPR) in HHS provided an overview of the National Hospital Bioterrorism Preparedness Program (NBHPP). Key points from that presentation included:

- The goal of the NBHPP is to prepare hospitals and supporting healthcare systems, in collaboration with other partners, to deliver coordinated and effective care to victims of terrorism and other public health emergencies.
- The NBHPP was created via the Public Health Security and Bioterrorism Preparedness and Response Act of 2002. The program has been dedicated to building hospital capacity to respond to increased numbers of patients.
- In FY2006, the NBHPP has focused activities on building the capability to respond to the unique needs of victims and creating a multitiered medical response system with an emphasis on pandemic influenza and explosions.
- On December 19, 2006, the President signed the Pandemic and All Hazards Preparedness Act, which moved the NBHPP from the Health Resources and Services Administration (HRSA) to the Office of the ASPR in HHS.
- Title III of the Pandemic and All Hazards Preparedness Act also transfers the National Disaster Medical System

Roundtable Participants: Promoting Partnerships for Regional Healthcare Preparedness and Response

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(NDMS) from DHS to HHS. In addition, Section 305 of Title III provides funding for building “Partnerships for State and Regional Hospital Preparedness to Improve Surge Capacity.” This section instructs HHS to provide competitive grants to eligible partnerships that consist of: one or more hospitals (one of which is a trauma center), one or more healthcare facilities, and one or more political subdivisions, one or more states, or one or more subdivisions plus one or more states.

- The legislation states a clear preference for partnerships that demonstrate regional coordination, contain NDMS hospitals are in a high-risk geographic region, and have a significant need for funds to achieve preparedness goals. In addition, the legislation calls for partnership activities to be coordinated and consistent with state and local plans.

REGIONAL HEALTHCARE PARTNERSHIPS

Key Elements and Functions

Meeting participants agreed that, at minimum, regional healthcare partnerships should include the majority of hospitals in a region and public health agencies should be involved. There was also wide agreement that membership would logically include other community partners, such as EMS, fire departments, police departments, hospital associations, nursing homes, home care associations, clinics, the Red Cross, and critical infrastructure businesses (e.g., in Palm Beach County, Florida Power and Light is included in the partnership).

Meeting participants agreed that regional healthcare partnerships should be neutral entities for collaborative planning, working on behalf of the group and not any one individual hospital or agency. The partnerships should have the situational awareness to be able to share the critical information necessary to coordinate medical assets, patients, and staff during an emergency. Many of these partnerships have taken on planning responsibilities, such as developing memoranda of agreement (MOAs) to facilitate the sharing of equipment and staff; joint training and exercises; and group purchasing, thus leveraging economies of scale to obtain equipment at a lower price and facilitate standardization of equipment and interoperability.

The role of these partnerships in responding to disasters has been less well defined and more varied. Some partnerships have not yet developed operational capacities for responding to a disaster. However, some partnerships have taken on responsibility for obtaining situational awareness; managing healthcare assets, staff, and patients; serving as an information clearinghouse; acting as advisors to outside groups, including state emergency operations centers (EOCs); and assuming hands-on operational authority.

Most participants believed that these regional healthcare partnerships should serve as a structure for healthcare organizations to work together to prepare for emergencies, including determining how they will manage and coordinate delivery of regional health care, communicate, provide situational awareness, optimize staff and resources, coordinate with public health agencies, and prioritize regional healthcare issues. This same structure should be used to respond to emergencies. It is critical that these relationships be built in advance of the emergency and that the partnership serve as a neutral entity to bring competing healthcare organizations and agencies to the table. In addition to preparedness and response, it is important for these regional healthcare partnerships to plan for recovery, which, as has been seen in New Orleans and other areas devastated by Hurricane Katrina, will likely rest on the shoulders of the local community.

Participants agreed that the regional healthcare partnerships should play a critical role in responding to emergencies. In an effort to develop this capacity, some have created regional medical operations centers that are staffed by as many as 40 or 50 people during emergencies; others have a permanent seat for a hospital representative in the regional or state EOC alongside the Emergency Support Function (ESF) #8 representative.* This facilitates hospital participation in the operational decision making and assures that accurate information about hospital assets and needs is available within the EOC. However, many regional healthcare partnership coordinators are funded year-to-year rather than continuously. This makes it difficult for ongoing incorporation and acceptance of the partnership in an operational role, because emergency managers do not want to rely on entities that may not exist the next year. Additionally, in most cases, this operational role has not been formally designated by the federal, state, or local governments, further hindering integration of these regional healthcare partnerships.

If regional healthcare partnerships are to assume this operational response role of managing healthcare assets, staff, and medical volunteers and providing “one-stop shopping” for public health and medical information for the state or regional EOC, then this capability must be built to work on a daily basis. Without daily use, this response role will not be trusted during a crisis.

*ESF #8—“Health and Medical Services provides coordinated Federal assistance to supplement State and local resources in response to public health and medical care needs following a major disaster or emergency, or during a developing potential medical situation. Assistance provided under ESF #8 is directed by the Department of Health and Human Services (HHS) through its executive agent, the Assistant Secretary for Health (ASH). Resources will be furnished when State and local resources are overwhelmed and public health and/or medical assistance is requested from the Federal Government.” <http://www.au.af.mil/au/awc/awcgate/frp/frpesf8.htm>

Internal Organization and Administration

The entity coordinating the regional healthcare partnership differs from region to region. In some areas it is a lead regional hospital (often a trauma hospital) that coordinates the regional healthcare partnership. In others it is a public health department or a dedicated independent, nonprofit organization. The structure differs based on local circumstances. There was wide agreement among meeting participants that whatever the structure, executive leadership and participation from area hospitals and public health agencies is critical for success. In addition, for the partnerships to be effective, they will need to be integrated into the local Incident Command System (ICS).

DEFINITION OF REGIONS

The first challenge of defining “regions” is that natural metropolitan regions may not be the same as government jurisdictions. For example, the National Capital Region includes Washington, DC, northern Virginia, and suburban Maryland, and the Kansas City metropolitan area includes Kansas City, Kansas, and Kansas City, Missouri. Regions that cross state lines, like the National Capital Region, also pose particular legal and funding challenges, because states frequently do not have compatible medical licensure or worker compensation laws, and states are often unable or unwilling to spend federal grant funds outside of their own jurisdiction. In addition to inconsistent jurisdictional boundaries, partnership members (e.g., public health agencies, EMS, police and fire departments) may have different geographic boundaries that may or may not overlap. This may result in members belonging to more than one “region” and more than one partnership.

Most participants agreed that, in most cases, regions must be (or already are) self-defined. As regional planning evolves, state validation of the regions would be needed to address interstate regional agreements and to assure that every area, hospital, agency, and person in the state is covered by a functional regional healthcare partnership. Without this kind of state participation, “orphan” areas or hospitals could result.

Participants believed that there should be significant input in the determination of regional boundaries. They suggested that healthcare entities in the state as well as other stakeholders, such as public health agencies, emergency management, fire and police departments, and hospital associations, should be involved in defining these healthcare regions. In most places, these regions will end up being smaller than a state, and they will be required to work with other regions, in a state or metropolitan area, in a coherent, functional way.

Integrating Regional Healthcare Partnerships

Ideally, healthcare regions would be the same as the regions defined by EMS, public health, police, fire, and so on. However, often these existing regions do not align. Many in the meeting agreed that states should consider the possibility of reforming existing regions, perhaps to align regional boundaries according to the healthcare infrastructure. A major pragmatic consideration is that hospitals have existing patient referral patterns that will likely mirror the flow of patients in a disaster.

If disaster response regions do not align with regional healthcare partnerships, the healthcare region will have to span several existing geopolitical boundaries; this may involve multiple county emergency management agencies, multiple public health agencies, and the like, further complicating the planning and response. In most cases, existing public health regions were not set up for the purpose of emergency preparedness or response. For example, one participant reported that her regional healthcare partnership crossed three emergency management jurisdictions and had therefore been required to participate in three separate emergency management pandemic drills over the past year. In addition, it would be very difficult for a regional healthcare partnership to coordinate with multiple EOCs during an emergency.

A number of participants commented on the need to modify the Incident Management System to better align with the needs of health care. It was suggested that incident management may be the wrong system for managing medical emergencies. U.S. health care does not routinely work in a command and control model, and some at the meeting thought this model would be unlikely to work effectively in a crisis. One participant commented that during an emergency her hospital was required to pass requests for material assets through numerous chains of command, resulting in a significant delay in the receipt of essential items such as a ventilators and nurse augmentation. More direct communication between the people with operational responsibilities and expertise would have been more effective.

Hospitals need direct access to each other and to the state EOC. A model similar to air traffic control, in which there are decentralized nodes of communication, was discussed at the meeting. That is, hospitals would have the capacity to communicate efficiently and directly, coordinated by their partnership. If assistance from outside the region is needed, regional healthcare partnerships (on behalf of hospitals within the region) would be able to speak directly to each other in order to share equipment and staff or to transfer patient overflow, for example. Horizontal communication between partnerships would facilitate rapid response. The regional healthcare partnerships would also communicate with the state EOC to provide status updates, receive infor-

mation, and ask for assistance (on behalf of its members) on issues that cannot be handled by other healthcare facilities within the region.

Participants also discussed the concept of a medical multi-agency coordination center (MACC), which would be solely dedicated to coordinating operations in a regional healthcare partnership during an emergency. In this model, the MACC does not serve a command and control function; rather, it is a coordination point where hospital information would be analyzed and decisions would be made collaboratively. A MACC, ideally organized by the regional healthcare partnerships themselves, would involve healthcare personnel and executives, including hospital CEOs and medical directors, coordinating with each other and with public health agencies.

Funding of Partnerships

Changes in the funding structure of the NBHPP, per the Pandemic and All Hazards Preparedness Act, are widely believed to have been precipitated by feedback from the hospitals. In the first years of the NBHPP, some hospitals reported that states withheld too much money and that funding was slow and administratively complicated. As a consequence, the new act seeks to provide direct funding to healthcare partnerships. However, with these changes to the program, state health departments are concerned that although their responsibilities remain the same they will have decreased funding and may lose leverage over the hospitals, thus impairing the state's ability to coordinate preparedness and response.

Many participants around the table were not in favor of direct federal funding to hospitals, fearing that this would remove the incentive for hospitals to come to the planning table. In addition, many of the participants were not in favor of direct funding to partnerships because of the added administrative burden of grants management and funds distribution that would fall to the regional healthcare partnership. Most around the table seemed to prefer that funding continue to be funneled through the state health department. The state could then contract with regional healthcare partnerships. This would keep the state health department engaged and also facilitate coordinated regional use of funds.

Part of the problem with funding for hospital preparedness is that there is no state or federal advocate for hospitals. Whereas local public health departments can refer to the state and state health departments can refer to the CDC, hospitals and healthcare systems do not have a state or federal equivalent to coordinate and advocate for funding and other needs. Some participants suggested that hospital associations should play a stronger role in advocating for the needs of hospital preparedness, and many suggested that the needs of the health and medical sector are getting lost at the state and federal levels.

The biggest operating expense for regional healthcare partnerships is funding of full-time staff. The number and level of staff depends in part on the number and geographic distribution of member institutions and on the responsibilities of the partnership. According to participants around the table, these partnerships require, at a minimum, a training and exercise coordinator, a resource management position, and an administrative position to manage funds, contracting, and meetings. Estimates of operating expenses within the group ranged from approximately \$100,000 per year to \$600,000 per year (for staff time alone).

To further leverage available funds, a number of participants commented on the importance of sharing systems built within different regions; they noted the absence of any means to share lessons or best practices. For example, if one area has built a successful patient tracking system with these federal funds, the information about this system, and potentially the system itself, should be shared with other regions. This will reduce redundancy and waste.

MEASURES OF EFFECTIVE PARTNERSHIPS

Most participants agreed that measurements to guide the assessment of regional healthcare partnerships should include, at a minimum:

- memoranda of understanding between members;
- membership that includes most hospitals, public health agencies, and emergency management;
- defined governance structure (e.g., process for decision making, strategic plan);
- evidence that organization leaders are participating;
- shared communication system to manage assets, patients, and staff;
- joint training, drills, and evaluation;
- interoperable equipment; and
- a written concept of operations for response.

Other criteria for measuring successful partnerships might include: having membership from other types of healthcare organizations, participation in bed tracking, and routine roll call for hospitals to test their communications as well as performance during an emergency and after-action reports. Some suggested that the best outcome measures of effective partnerships will be the evaluation of responses to real emergencies, including small incidents. After-action reports for both real emergencies and drills could be used for education and assessment.

In order to show progress in the evaluation of partnerships, it will be important to start capturing deficiencies and to have a method for collecting them. To do this successfully will require an atmosphere where participants can be honest about their deficiencies as well as their progress.

For those who need help initiating a partnership or are not showing improvement, there should be technical assistance available for both state and local partners.

Criteria for the measurement of the performance and improvement of regional healthcare partnerships would logically depend on location (urban vs. rural) and stage of partnership development. The experience of meeting participants suggests that it will take approximately 18 months to get all the primary partners to the table and develop a functioning entity for preparedness and response.

Although participants commended the previous NBHPP benchmarks, they suggested that they are not aimed at building “systems.” Many felt that these benchmarks could be easily met through buying materials and are not necessarily building an integrated system that can respond to the medical and public health needs of an emergency.

Some suggested that benchmarks should be used to assess progress of an individual partnership compared to itself over time. Others argued that there still needs to be some relative evaluation to determine progress compared to other regional partnerships.

Some participants suggested that funding for hospital preparedness should be tied to benchmarking and assessment. A “pay for preparedness” carrot might, for example, encourage a hospital ranked 437th to build capacity so they can move to number 200. Others suggested that this would penalize the worst performers, which are often the regions most in need of assistance.

ROLE OF REGIONAL PARTNERSHIPS IN RESPONDING TO A NATIONAL EVENT

For the purposes of this particular discussion, the participants were asked to consider disasters in three categories: (1) a disaster that is manageable within the *region*—for example, Hurricane Andrew or the Rhode Island nightclub fire; (2) a *large-scale* single disaster that overwhelms regional

healthcare capability, such as Hurricane Katrina, a major earthquake, a large bioterror attack, or detonation of a single 10-kiloton nuclear device; and (3) a *national-scale* disaster that affects and overwhelms the entire country simultaneously—for example, multiple bioterror or nuclear attacks or an influenza pandemic. Participants were asked whether and how regional healthcare partnerships would be useful in the third category national-scale disaster.

Participants suggested that regional healthcare partnerships would have real value in an event of national scope, when the capacity of federal assets would be overwhelmed by a widespread emergency. Localities and regions would not be able to rely on federal assets because these assets, which are limited, would be needed everywhere simultaneously. Because the federal government, including the military, would be stretched extremely thin in a national emergency, regional healthcare partnerships will need to harness the capacity of local volunteers, organizations, and businesses to do what they can to manage the medical and public health needs of the region.

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REFERENCE

1. Maldin B, Lam C, Franco C, et al. Regional approaches to hospital preparedness. *Biosecur Bioterror* 2007;5(1):43–54.