Florida Department of Health Funded Hospital Disaster Exercises – *2002-2010*

Overview

Recognizing the critical role of hospitals in community preparedness, in 2002, the US Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA) began offering cooperative agreement funds to state health departments to increase hospital preparedness and response to man-made and natural disasters. As a part of the Florida Department of Health (FDOH) efforts to support statewide all hazards preparedness, the department has worked with hospitals to promote increased collaboration, partnerships, and progress toward common goals. Since 2002, more than $100 million of federal funding received from the U.S. Department of Health and Human Services (HHS) have been awarded to hospitals in the state by the Department of Health using a contractual process. These monies were awarded to hospitals for equipment, supplies, training and exercises. Roughly $6.6 million of that funding was used by hospitals to conduct exercises to test, evaluate, and improve response capacity. These exercises, along with the training, equipment, and supplies have greatly expanded hospital capacity to respond to actual disasters. This report summarizes this exercise history and the increasingly sophisticated capabilities hospitals have developed in the last decade.

History

Prior to September 11, 2001, the U.S. Department of Justice (DOJ) funded law enforcement and fire rescue units to increase their capabilities to respond to terrorist incidents involving chemical, biological and radiological agents. After September 11, DOJ expanded emergency response activities to include health and medical support.

Since 2002, hospitals have been funded by the Florida Department of Health through the U.S. Department of Health and Human Services' Hospital Preparedness Program (HPP). In 2007, the HHS Office of the Assistant Secretary of Preparedness and Response (ASPR) assumed responsibility for the program, previously administered by the HHS Health Resources and Services Administration. Initially there were substantial annual increases in funding for equipment, training and exercises. Over the past few years funding plateaued.

As a result of the changing health care environment, increased attention to hospital disaster response preparedness, and the growing need for effective partnerships, more well defined expectations and measures were included in changes to the hospital contracts for equipment funding, training and exercises. In addition, the creation of Target Capabilities and Universal Task Lists, as part of the U.S. Department of Homeland Security's National Response Framework (NRF), led to cooperative agreement guidance that increasingly asked hospitals to strengthen exercises and evaluate their performance in relation to these target capabilities. Florida hospitals have been making progress in their preparedness capabilities and objectives in each successive year.

During the last several years, efforts were made to align the ASPR capability based objectives with disaster preparedness requirements of Florida State licensure and Joint

Commission emergency management accreditation standards. This has led to a higher level of overall preparedness and aligned the various exercise requirements for hospitals.

Exercise Focus – The Evolution from PPE/Decon to Medical Surge Response

Initial funding was focused on purchasing personal protective equipment (PPE) and decontamination systems to respond, primarily, to a hazardous biological or chemical incident. As emergency response knowledge and expertise grew and target capabilities were developed, the focus shifted to creating the medical surge capacity to treat casualties from all hazards. These included mass casualty incidents (MCI) – including bombs, burns and blasts – as well as, pandemic preparedness and response. FDOH funded hospital preparedness projects that addressed exercises, plan development, training programs and "Toolkits." The toolkits included preparedness and emergency response resources for biological, chemical, radiological, and emergency evacuation incidents.

This history of changing grants and exercise requirements is outlined in Tables 1 and 2 below. The tables also reflect the level and range of participation and the type of exercises funded.

Table 1: History of Florida Hospital Preparedness Funding, Contracts, and Requirements

2001-2002 DOJ/Florida State Domestic Security Working Group

- 9/11 and anthrax attacks spurred funding beyond EMS and police
- Funds limited to bioterrorism hazard
- Included initial purchase and drop-shipment of PPE and decontamination equipment from DOJ to 21 hospitals
- No funding for training
- Initiation of Hospital Emergency Incident Command System (HEICS)

2002-2003 HRSA –Total Available to Hospitals $6.1m; Total Spent $4.3m

- Contracts issued from the Office of Public Health Preparedness to individual hospitals
- Limited to bioterrorism hazard
- Funds for equipment, training, exercises, medicines and vaccines, and communication equipment
- Florida Hospital Association provided guidance for hospital needs and priorities

2003-2004 HRSA – Total Available to Hospitals $11.5m; Total Spent $11.4m

- Funded more hospitals, including smaller community hospitals to purchase PPE and decontamination equipment
- Funds for increased decon teams' capability and exercise
- Supported equipment, training, exercises, laboratory equipment, burns equipment and supplies, burns education, pediatric triage and treatment equipment and training, and ventilators
- Initiated USF hospital exercise evaluation form

2004-2005 HRSA – Total Available to Hospitals $25.8m; Total Spent $17.6m

- Funded replacement of Decon tents to ones that could be setup quickly
- HEICS integrated with Decon exercises
- Hospitals did internal drills and began community exercise participation
- Florida experienced a series of hurricanes
- Supported installation of 57 negative pressure units, ICU equipment, trauma cart equipment, triage equipment, hospital preparedness training, communications equipment, ventilators, PPE and Decontamination equipment, PPE training, exercises, laboratory equipment, burns equipment and supplies, and burns education

2005-2006 HRSA – Total Available to Hospitals $34.8m; Total Spent $28.1m ('05-'06 and '06-'07 contracts were combined funding)

- Use of funds for an all-hazards approach allowed
- Hospitals continue to receive funding for ventilators, negative pressure units, burn surge equipment and training, trauma equipment, triage, laboratory equipment, ICU Equipment, and communications equipment
- Piloted a web-based Event Management System in three regions
- Florida again experienced several disaster events

2006-2007 HRSA – (See 2005-2006)

- All-hazards approach integrated into CEMP
- Florida experienced multi-county wildfires

2007-2008 ASPR – Total Available to Hospitals $19.6m; Total Spent $16.5m

- Reorganization of HRSA program to HHS's ASPR as part of the Hospital Preparedness Program
- Lessons learned from Katrina were integrated; hospitals asked to exercise and evaluate their evacuation plans, mass fatality plans, interoperable communications with emergency response partners, bed tracking systems, and volunteer registration and management systems
- Medical surge target capability served as the primary focus
- Florida Medical Surge Capability Team formed, including Hospital Surge and Community Surge Team Members
- Hospitals continue to receive funding for PPE equipment, laboratory equipment, triage equipment, negative pressure units, exercises, and ventilators
- Hospitals began receiving funding for Pan Flu equipment and supplies, operating room equipment, and hospital target hardening equipment
- HSEEP information and after-action reports included in exercise evaluations

2008-2009 ASPR – Total Available to Hospitals $10.4m; Total Spent $8.4m

- HSEEP compliant exercises required for hospitals
- Hospitals continue to receive funding for PPE and Decontamination equipment, PPE training, OR equipment, negative pressure units, and exercises
- Hospitals began receiving funding for web-based Event Management System and a new Telecommunications Service Priority project (as mandated in the ASPR cooperative agreement)

2009-2010 ASPR – Total Available to Hospitals $6.5m; Total Spent $6.1m

- Multi-year Training and Exercise Program required in evaluations
- Hospitals received funding for equipment previously approved from all categories (PPE, labs, triage, etc.), preparedness training, and exercises

CDC – Total Available to Hospitals $2.5m; Total Spent $2.5m

- H1N1 funds directed for a state ventilator cache

2010-2011 ASPR – Total Available to Hospitals $7.8m

- DOH Health and Medical and ASPR Approved Equipment and Supplies List Guiding Principles revised
- Hospital Exercise Tool revised to allow aggregate analysis for trending
- Hospital Equipment List reorganized and prioritized

Table 2: History of Exercise Capabilities for Florida Hospitals 2002-2010

Table Key: *Check marks [✓] indicate when a capacity was required to be exercised. An ✗ indicates that the exercise component was suggested, but optional.*

Funding and Participation	FY 02-03	FY 03-04	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11
Total HRSA/ASPR Federal Funding Available for Hospitals	$6.1m	$11.5m	$25.8m	$34.8m		$19.6m	$10.4m	$6.5m[1]	$7.8m
Total Funding Spent	$4.3m	$11.4m	$17.6m	$28.1m		$16.5m	$8.4	$6.1m	TBD
Total Exercise Funding Spent	$0.16m	$0.6m	$0.5m	$1.0m		$1.8m	$2.1m	$0.3m[2]	TBD
Number of Participating Hospitals	80	162	149	139		132	123	153	TBD
Participating Hospitals as Percentage all	39%	79%	73%	67%		63%	59%	73%	TBD
Kind of Exercises Funded									
• Table Top (TTX)	✗	✗	✗	✗	✗	✗	✗	✗	✗
• Functional (FX)	✗	✓	✓	✓	✓	✓	✗	✓	✓
• Full Scale Exercise (FSX)	✗	✗	✗	✗	✗	✗	✗	✗	✗
Hazards									
• Exercise addresses HVA[3]						✗	✗	✗	
• Chemical Agent	✓	✓	✓	✓	✓	✗	✗	✗	
• Biological Agent	✓	✓	✓	✓	✓	✗	✗	✗	
• Explosive		✗	✗	✗	✗	✗	✗	✗	
• Radiological		✗	✗	✗	✗	✗	✗	✗	
Capabilities Exercised									
Disaster Response Functions Exercised									
• PPE/Decontamination	✓	✓	✓	✓	✓	✗	✗	✗	
• Triage and/or Alternate Care Site		✗	✗						
• Trauma and Burns Treatment									
• Fatality Management[4]			✗	✗	✗	✓	✓		✗
• Medical Evacuation			✗			✓	✓		✗
• Vulnerable Populations		✗	✗	✓	✓	✓	✓	✓	✓
Organization									
• Emergency Plan – Staff Knowledgeable		✗	✗	✗	✗	✗	✗	✗	
• Incident Command				✓	✓	✓	✓	✓	
• Call Down and Knowledge of Roles		✗	✗				✗	✗	
• EOC Coordination		✗	✗	✗	✗	✗	✗	✗	
• Community-Wide Participation	✗	✓	✓	✓	✓	✓	✗	✓	✓
• Tracking of Bed Availability			✗						✗
• HAvBED Reporting							✗	✗	

[1] This does not include $2.5m from the CDC for purchase of ventilators.

[2] In FY 09-10 Training and exercise funds were combined. This figure is an average percent of the combined training and exercise funding in FY 07-08, the pervious year when each was funded.

[3] Hazard and vulnerability analysis which focuses emergency plan.

[4] In FY 10-11, two of these three Level 1 Sub-Capabilities were required Fatality Management, Medical Evacuation or Tracking of Bed Availability.

Funding and Participation	FY 02-03	FY 03-04	FY 04-05	FY 05-06	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11
Communication									
• Risk Communications		✗	✗	✓	✓	✓	✓	✗	
• Interoperable Communications		✗	✗	✗	✗	✗	✗	✗	✓
• Joint Information Center (JIC)		✗	✗	✓	✓	✗	✗	✗	
Security									
• Lock Down							✗	✗	
• Staff Credentialing							✗	✗	
Staff Responsibilities									
• Adequate Numbers		✗	✗	✗	✗	✗	✗	✗	
• Volunteers and/or ESAR-VHP							✗	✗	✓
Resources and Supplies									
• Mutual Aid or Partner MOUs				✗	✗	✗	✗	✗	✓
• Space and Supplies		✗	✗	✗	✗	✗	✗	✗	
Exercise Planning and Evaluation									
• Multi-Year Planning with Partners								✓	✓
• Simple Training Plan	✓	✓	✓	✓	✓	✓			
• HSEEP						✓	✓	✓	✓
• Multi-Year Training and Exercise Program							✓	✓	✓
• National Exercise Schedule (NEXS)							✓	✓	✓

Note that while changing grant requirements have required a somewhat narrow set of exercise components – indicated by the check marks (✓), more complex exercises have been encouraged. These are indicated by the ✗ marks. This broader scope is congruent with expectations from the State's Agency for Health Care Administration (AHCA) which licenses hospitals, as well as, Joint Commission accreditation requirements.

HSEEP as an Exercise Tool

Homeland Security Exercise Evaluation Program (HSEEP) is a Department of Homeland Security (DHS) exercise and design framework. The framework is adaptable to multiple settings and includes numerous resources to assist with the planning, execution, and evaluation of exercises. HSEEP provides:

- A multi-year training and exercise planning process
- Exercise design procedures and meeting materials to ensure that all of the relevant response partners and at risk populations are involved in exercise design
- Exercise objectives derived from the Target Capability Areas and the Universal Task List
- Exercise evaluation guidelines (EEGs) which measure Target Capabilities and their Universal Tasks so that exercises can measure important performance areas and produce meaningful data

- The National Exercise Schedule (NEXS) System, a secure national online toolkit where exercise after action reports and improvement plans can be shared
- A format for after action report improvement plans that are extremely useful to assign responsibilities and completion dates

Exercise Innovations and Future Directions

Cumulatively, over the period from 2002-2010, approximately 90% of Florida's 209 current acute care hospitals with emergency departments, have participated, at some point, in the opportunity to receive preparedness funds from DOH. The ongoing threat and occurrence of both natural and man-made events continues to reinforce the need to increase our capacity to respond and the importance of exercising specific skills, activities, and partnerships in order to increase statewide response effectiveness.

1. Increased Sophistication

As we continue to respond to events, we learn more and the skill set needed evolves. As noted above, the funding guidance has changed over the years from a fairly narrow focus on immediate decontamination of victims of hazardous biological incidents to triage, clinical treatment, and movement of disaster victims to appropriate sites of care. This has required participation from a broader set of responders, including clinical personnel within the hospital, as well as, clinicians in other organizations. It is anticipated that the level and scope of exercises will continue to advance and expand. This will require continued training and exercising for staff to acquire and maintain a high level of proficiency in incident management and emergency care.

2. Broader Participation

The range and scope of collaboration and cooperation necessary across private and public entities continues to expand. Engagement of all community response partners is essential to address immediate and post-event needs of vulnerable populations Exercise requirements and evaluation criteria reflect this trend.

3. Enhanced Communication

Efforts to support formal and informal systems of communications will need to be continued. Strategies to improve communication include updating interoperable communications equipment, shared and joint training procedures, and attention to documentation in order to identify corrective actions.

4. Ongoing Revision and Updating of Plans and Procedures

To be effective and functional, plans and procedures need to be regularly reviewed and updated to reflect continuous changes within the health care system and preparedness. Examples of information that requires routine updating include staffing and personnel changes within hospitals and community partners, accrediting requirements, and policy changes at the state and federal level. Edits or addendum can be made as changes become known with regularly scheduled revisions or updates made at least annually.

5. Sustained Role of the Hospital Surge Capability Team

Since 2002, a number of teams, workgroups and sub-committees have been formed that included hospital representatives and other stakeholders. One of the teams is the Hospital Surge Capability Team. Due to the scope and complexity of related tasks several sub groups have evolved to address specific issues and challenges. Examples include the Hospital Training Workgroup, the Hospital Advisory Group, the Hospital

Equipment Committee and others. A Medical Surge Capability Team was assembled in 2007 as part of Florida's Public Health and Medical Strategic Planning effort. The Medical Surge Team evolved into a composite of a Hospital Surge and a Community Surge Team. The focus on priority strategies and their associated critical tasks has been pivotal in improving the focus and quality of disaster exercises.

As the need to develop capacity in new areas becomes clear, similar, ad hoc teams or groups will be established to provide expertise and insure relevant exercise materials are developed. For example, in FY '10-'11 a group will focus on the security needs of hospitals during disasters.

6. Catastrophic Planning

Since 2005, hospital exercises have been shifting from small scale drills to planning for response to scenarios with larger numbers of casualties and fatalities and loss of critical infrastructure, both within the hospital and the surrounding community. The disasters associated with Hurricane Katrina and the Haiti Earthquake has brought new understanding and insights related to the need to be able to support vulnerable populations and crisis standards of care. Partnerships with governmental and non-governmental community organizations are necessary to address the needs of these populations. Participation in healthcare system coalitions with continuum of care representation to support patients in disasters is increasingly important in order to advance local, state, intrastate, and corporate system preparedness.

Conclusion

Many lessons have been learned over the years and in all likelihood new observations and recommendations will continue to emerge. The better the exercise and the exercise team the more we learn regarding both our strengths and needed improvements. Exercises will continue to influence, enrich, and advance ongoing hospital planning, preparedness, and response activities.