ANNEX I: Health and Medical

ESF #8
Health and Medical Services Delivery

Introduction

ESF #8 is responsible for the coordination services pertaining to health and medical issues during an emergency event or catastrophic incident. Additionally, it oversees the preparedness, recovery, mitigation, and response with all agencies and organizations that are direct providers of health and medical services including primary care physicians, hospitals, clinics, urgent care centers, ambulatory surgical centers, and other ancillary health and medical providers.

Emergency medical professionals play a crucial role in natural disasters and other catastrophic events. These individuals include medical first responders, such as emergency medical technicians (EMTs), and also emergency department clinicians (also called first receivers), such as emergency medicine physicians, physician assistants, and nurse practitioners. By responding rapidly to potential injury-creating events, triaging medical care needs, and initiating treatment, emergency medical professionals can substantially reduce mortality and morbidity.

Ensuring an adequate capacity of well-trained EMTs and emergency medicine physicians falls within the areas of interest of the U.S. Department of Homeland Security (DHS). DHS Secretary Janet Napolitano recently announced an action directive on first-responder health surge capacity that involves reviewing the capacity for communities to handle large-scale health emergencies (DHS, 2009). This directive also affirmed that "DHS plays a critical role in enhancing emergency medical response capabilities at all levels of government." Further, Homeland Security Presidential Directive 21: Public Health and Medical Preparedness states the following:

> *"It is the policy of the United States to plan and enable provision for the public health and medical needs of the American people in the case of a catastrophic health event through continual and timely flow of information during such an event and rapid public health and medical response that marshals all available national capabilities and capacities in a rapid and coordinated manner"* (DHS, 2007).

Despite the importance of ensuring an adequate supply of EMTs and emergency medicine physicians, only limited information is available on the supply of trained emergency medical professionals and the demand for their services during both normal conditions and following disasters or other similar events.

Limited information is available on the current and future adequacy of the EMT workforce although more data are available regarding the emergency medicine physician workforce than for the emergency medical technician workforce. The available information from both groups indicates that neither workforce is adequate for current demands. EMT shortages appear to reflect high turnover rates and retention difficulties due to difficult work conditions, limited career opportunities, low salary, and poor benefits. EMT shortages will likely be more pronounced in rural areas, which have greater dependence on both paid and volunteer EMTs.

Clear shortages exist among emergency medicine physicians in almost all states, and current predictions likely underestimate these shortages, because the predictions are based on staffing of hospital-based EDs only. Emergency medicine physician shortages will be even greater during radiological, biological, or chemical events, because many physicians are unwilling to work at those times.

More data are needed for both groups of emergency medical professionals, particularly on factors that influence recruitment and retention and on their availability to provide optimal emergency medical care services. Limited data will hinder the development of programs and policies designed to address shortages and to enhance the adequacy of emergency medical professionals in responding to catastrophic events.

Additional data are needed to develop programs and policies that will ensure adequate EMT and emergency medicine physician workforce capabilities for both standard and surge scenarios. For EMTs, better information is needed on the number, level of training, and location of volunteer and paid professionals to accurately assess shortages. For both EMTs and emergency medicine physicians, well-designed surveys that collect information from representative samples of workforce members (including volunteers and inactive individuals) and incorporate collaborations with key professional societies (to encourage responses) are needed to assess factors associated with career choices, job satisfaction, and retention/turnover, including factors affecting willingness to work during potential terrorist events and other high-demand conditions. Other data collection activities are also needed to determine projected staffing needs for both groups of emergency medical professionals during catastrophic events.

Workforce models (i.e., computer projections of workforce size and adequacy based on available current data and expected trends) are an important tool to predict workforce shortages. These models can be developed quickly and inexpensively, incorporate data from a broad range of sources, and project workforce adequacy under differing conditions (e.g., standard vs. surge events) and varying assumptions. As discussed in this research brief, models have been used to estimate the adequacy of the emergency medicine physician workforce (Sullivan et al., 2009). However, essentially no information is available on the adequacy of the EMT or emergency medicine physician workforces to provide appropriate medical care during catastrophic events.

Updated modeling is needed to assess the adequacy of the EMT and emergency medicine physician workforces to respond to mass casualty incidents and biological, chemical, or radiological attacks, both now and in the future. This type of modeling can identify predicted shortages in personnel and equipment at local, state, regional, and national levels and suggest steps to prevent such shortages. These models can also explore the impact of emergency medical professionals' reluctance to work during terrorist or infectious disease events and evaluate the effects of programs, such as preferential receipt of medical prophylaxis or treatment, to encourage emergency medical professionals to work during these events. Combined with representative survey data, models can be used to develop new policies that will enhance preparedness and resilience by addressing shortages among emergency medical care workforces.

Immediately following a catastrophic event or after emergency conditions subside, ESF 8 should deploy impact assessment teams into the disaster area(s) to assess impacts on health and medical facilities and report the results of these assessments to the Pasco County EOC. Based on these assessments, ESF 8 will identify specific health and medical needs and priorities for the community to include those of residents, Special Needs populations, and first responders.

ESF 8 will coordinate with the Florida Department of Health (DOH) on the dispatching of epidemiological teams needed to monitor trends in the general population and high-risk groups and carry out field studies to assess health and medical needs, potable water, wastewater and solid waste disposal issues, and the threat of vector-borne diseases.

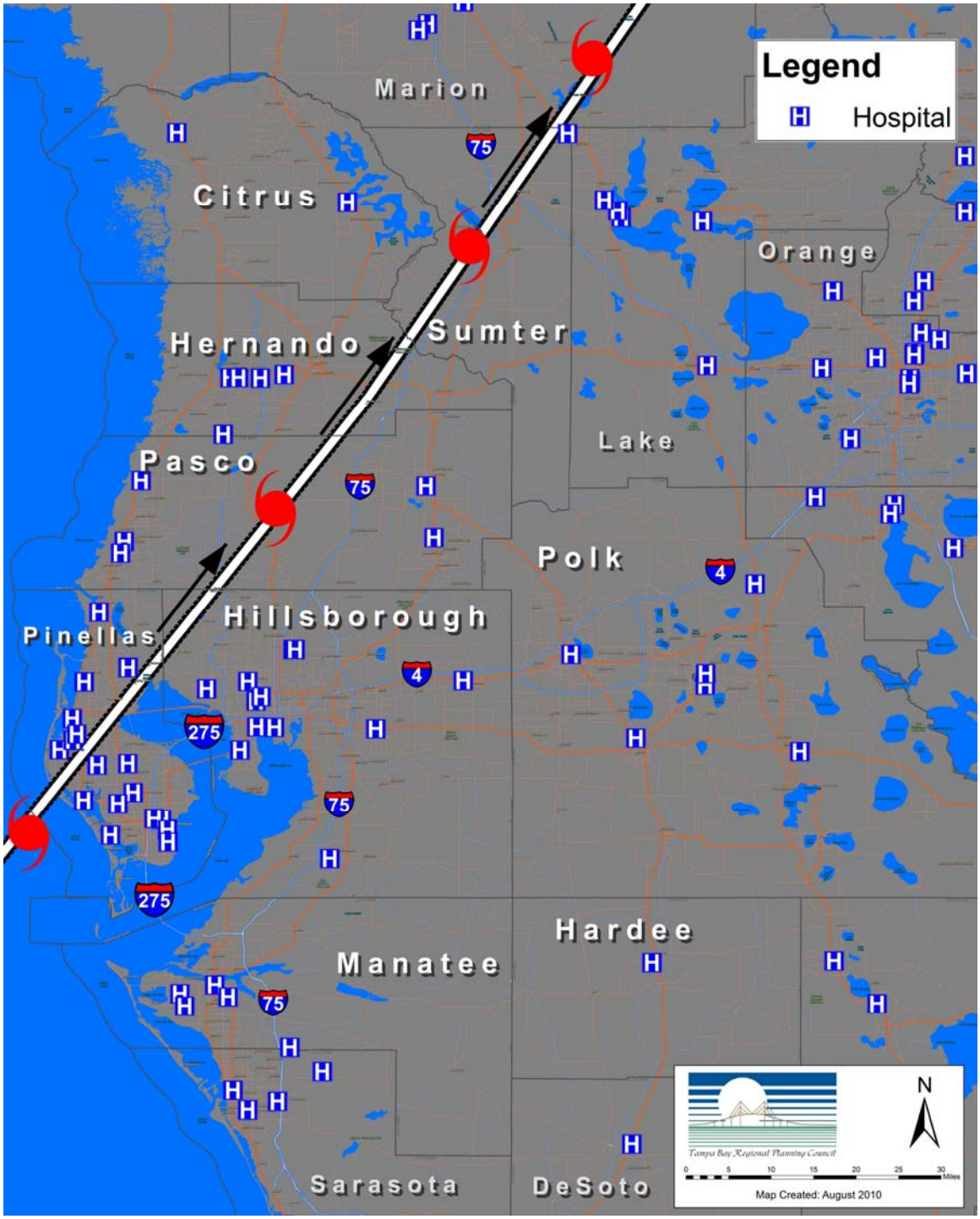
With support from the Florida DOH's Bureau of Water Programs, ESF 8 will work closely with ESF 3 (Public Works & Engineering) to conduct bacterial testing of all potable water sources. ESF 8 will also offer testing to private well owners and assist local public health officials in the issuance and lifting of boil water advisories.

ESF 8 will arrange with Florida DOH for the deployment of the Florida Medical Reserve Corps (MRC), consisting of specialized teams with clinical health and medical care personnel who can assist in providing care for disaster victims. ESF 8 will establish mobile field hospitals as needed and coordinate with its state and federal counterparts to locate and secure Disaster Medical Assistance Teams (DMATs) from the NDMS. DMATs are capable of providing triage, medical and surgical stabilization, and continued monitoring and care of patients until more suitable facilities become available.

ESF 8 will also collaborate with local officials to assist in establishing victim identification and mortuary services. During a mass casualty incident, ESF 8 will work closely with the Florida Emergency Mortuary Operational Response Team (FEMORT) and its Federal counterpart, the Disaster Mortuary Operational Services Teams (DMORTs) through the NDMS. FEMORTs and DMORTs are capable of assisting the local Medical Examiner's office in victim identification, forensic dental and pathology, and processing, preparing and disposing of human remains. Please refer to the map regarding the placement of hospital facilities and/or emergency medical treatment facilities as a supplement to this discussion.

Roles and Responsibilities

- ☐ Assessments of health and medical needs.
- ☐ Coordinate the procurement of health and medical resources.
- ☐ Provide nursing staff at special needs shelters.
- ☐ Arrange for the provision of medical personnel, equipment, and supplies as needed to health and medical facilities.
- ☐ Assist with patient evacuation and relocation.
- ☐ Identify hospital and nursing home bed vacancies statewide.


Legend
Hospital
Marion
Citrus
Hernando
Sumter
Pasco
Lake
Orange
Polk
Hillsborough
Pinellas
Hardee
Manatee
Sarasota
DeSoto
75
275
4
N
Tampa Bay Regional Planning Council
Map Created: August 2010

Basic Health and Medical Functions and Responsibilities

The basic health and medical functions that are required during a catastrophic event or incident are based upon the following types of operational conditions that are specific to this to the delivery of health and medical services.

- ☐ Local healthcare facilities will not likely consider large-scale pre-landfall evacuations until approximately 48 hours prior to onset of tropical storm force winds. Mandatory local evacuation orders or normally issued approximately 36 hours prior to the onset of tropical storm force winds. Large-scale State and/or Federal assistance with pre-landfall patient movement must be initiated approximately 96-72 hours prior to onset of tropical storm force winds. Hence, local healthcare facilities will not conduct large scale pre-land evacuations, but will likely make smaller-scale movements as protective actions.
- ☐ The public health and medical system will be unable to deliver critical services to vulnerable populations in facilities and in the impact area.
- ☐ Medical surge issues will begin appearing in nearby cities, counties, and states as a result of general population evacuations prior to landfall and will increase following landfall.
- ☐ There will not be adequate resources available nationally to replace damaged or destroyed public health and medical infrastructure in major metropolitan areas.
- ☐ Any patient movement should be coordinated with general population movement and should include adequate provisions for patient tracking, temporary sheltering, adequate receiving facilities, and either the final return to Florida, to the community of origin, or positive information of final disposition.
- ☐ In a catastrophic event, population reception centers (city, county, state, etc.) will be considered response areas of operations, including receiving states.
- ☐ In order to return the impacted community to sound behavioral health, provide adequate delivery of healthcare services, and begin economic recovery, local healthcare workers will be utilized in any temporary medical structures established to support the event whenever possible.
- ☐ The initial response phase of a catastrophic event will likely result in an extended search and rescue phase, long-term congregate sheltering, and a greater need for other emergency response functions, thereby stretching the State's capacity to deliver these services in appropriate quantities over an extended timeframe.
- ☐ In the initial days of response, vulnerable populations will be triaged by life threatening injury or illness, need for external oxygen supply, drinking water availability, medications needed, shelter, need for dialysis, and current chemo-therapy status.
- ☐ Certain elements of the general population have been identified during past events as less likely to evacuate. Among these populations, those who are 65+ are historically least likely to evacuate, so re-entry plans, congregate sheltering, and other services should reflect the needs of this population.
- ☐ Parents with children are most likely to heed pre-landfall evacuation orders, so pediatric needs in host shelters and communities should be supplemented.
- ☐ Nursing homes will evacuate their patients along with beds, mattresses, medication carts, food, records, and supplies to an alternate location.

- ☐ Patients may be relocated to NDMS Definitive Care facilities, which are coordinated through NDMS Federal Coordinating Centers (FCC). Once alternate facilities are defined, facilities would coordinate the transfer of patient records prior to evacuation as well.

Each level of government, in partnership with the healthcare systems, performs vital roles in the pre- and post-catastrophic event response effort. The impacted healthcare facilities at the local level of government, supported by the local emergency operations center, are the first line of defense for disaster response and recovery actions related to health and medical care within their local jurisdiction. Despite a continuity of care requirement, a catastrophic event will overwhelm local health and medical response capabilities and will mandate State and Federal support.

Local healthcare facility owners, in cooperation with local decision makers, have the authority to determine if advance patient relocation triggers are applicable within their community and may request evacuation support. However, in the post-disaster environment, local facility owners and decision makers may either not be able to communicate with the State Emergency Operations Center or lack the ability to monitor post-disaster conditions. Under catastrophic conditions, when the lives of residents are threatened, the State Emergency Operations Center, in coordination with Federal partner agencies, will activate the relocation mission in support of local government response activities.

Basic Planning Assumptions – Health and Medical[1]

1. A catastrophic incident may result in large numbers of casualties and/or displaced person, possibly in the tens to hundreds of thousands.
2. The nature and scope of a catastrophic incident will immediately overwhelm State and Local response capabilities, this requires that counties understand and be able to clearly articulate their resource needs.
3. A detailed and credible common operating picture reflecting critical, urgent needs, and requirements may not be achievable for 24 to 48 hours after the incident. Accordingly, county response activities must begin without the benefit of a d
4. Mass field triage will be required.
5. During a catastrophic incident, medical support will be required not only at medical facilities, but in large numbers at casualty evacuation points, evacuee and refugee points, and shelters as well as to support field operations.
6. Loss of city power will only be partially met by auxiliary power sources.
7. The response capabilities and resources of the local jurisdiction (to include mutual aid from surrounding jurisdictions and response support from the State) may be insufficient and quickly overwhelmed. Local emergency personnel who normally respond to incidents may be among those affected and unable to perform their duties.
8. The assets outlined in response strategies may not be available at the time of a catastrophic event due to needs at their home institution, family requirements, etc.
9. A catastrophic incident will present a dynamic response and recovery environment requiring that response plans and strategies be flexible enough to effectively address emerging or transforming needs and requirements.

[1] Catastrophic Incident Supplement to the National Response Plan (2005)

Additional Issue Points[2]

- ☐ What is the current mechanism used to track patients? Are systems interoperable?
- ☐ How will current tracking systems be impacted during a catastrophic event?
- ☐ What is the mechanism for credentialing out of state providers? Who is responsible for this effort?
- ☐ Are all resources that would be requested available through the Emergency Management Assistance Compact (EMAC)?
- ☐ What is the existing surge capacity for the medical examiners office and/or coroners office?
- ☐ What are the standard protocols for handling contaminated bodies? Are all staff aware of the existing protocol?

[2] ***Failure of Initiative****: Final Report of the Select Bipartisan Committee to Investigate the Preparation for and Response to Hurricane Katrina,* 2007 and the ***Florida Catastrophic Plan*** *(Draft)* 2008

Operations: Roles and Responsibilities

ESF #8 (Health and Medical)

Level	Primary Agency	Support Agencies
National	Department of Homeland Security/Emergency Preparedness and Response/Federal Emergency Management Agency	Department of Agriculture Department of Commerce Department of Defense Department of Education Department of Energy Department of Health and Human Services Department of Homeland Security Department of Housing and Urban Development Department of the Interior Department of Justice Department of Labor Department of State Department of Transportation Department of the Treasury Department of Veterans Affairs Environmental Protection Agency Federal Communications Commission General Services Administration National Aeronautics and Space Administration Nuclear Regulatory Commission Office of Personnel Management Small Business Administration Tennessee Valley Authority U.S. Postal Service American Red Cross
State	Division of Emergency Management	Department of Military Affairs, Florida National Guard, the Florida Wing of the Civil Air Patrol, Florida Department of Transportation, and the Florida Fish and Wildlife Conservation Commission.
Regional		
Citrus	Citrus County Health Department	Nature Coast Emergency Medical Services Citrus County Department of Public Works Citrus County Transit Citrus County School Board Home Health Care Agencies Citrus Memorial Hospital

Level	Primary Agency	Support Agencies
		Seven Rivers Regional Medical Center
Hardee	Hardee County Health Department	Hardee County Fire/Rescue Hardee County Chapter of the American Red Cross Hardee County Sheriff's Office Hardee County Office of Emergency Management Hardee County School Board Hardee County Ministerial Association Florida Hospital Wauchula Hardee County Purchasing Office
Hernando	Hernando County Health Department	American Red Cross Hernando County School Board Hernando County Sheriff's Office Hernando County Fire Rescue EMS Spring Hill Fire Rescue EMS Medical Examiner
Hillsborough	Hillsborough County Health Department	Medical Director for Mass Casualty Planning American Red Cross Aging Services Health & Social Services County Fire Rescue Medical Examiner Water Resource Services Public Works Department Solid Waste Management Municipal Fire/Fire Rescue Departments Commercial ambulance companies
Manatee	Manatee County Health Department	Manatee County Emergency Medical Services Manatee County Rural Health Services, Inc Manatee County Medical Examiners Office Manatee County Mosquito Control Manatee County Environmental Management Department Manatee County Department of Agricultural and Natural Resources Manatee County Public Safety Department Manatee County School Board Manatee County Sheriff Office Manatee County Solid Waste Division Manatee County Transit Manatee County Utility Operations

Level	Primary Agency	Support Agencies
		Department Hospice of Manatee County
Pasco	Pasco County Health Department (Pasco CHD) Pasco County Emergency Services Department (PCESD)	American Red Cross (ARC) Hospitals Hospice Agencies Medical Examiner/Funeral Directors (Fatality Management) Pasco County Public Transportation (PCPT)
Pinellas	County Health Department	County's Emergency Medical Services Fire Administration Department
Polk	Polk County Health Department	Public Safety Department (Emergency Management Division) (Emergency Medical Services Division) (Fire Services Division Human Services Department (Community Health And And Social Services Division) Medical Examiner Polk County Sheriff's Office Public Works Department (Natural Resources Division) (Solid Waste Division)