

**2010 Strategic Vision  
Health and Medical Preparedness in Texas**

**Final Report to the Texas Department of State Health Services**

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# 1 Executive Summary

## 1.1 Background

Since 2001 the United States has faced a series of man-made and natural disasters. These disasters, ranging from terrorist attacks and anthrax mailings to hurricanes and potential infectious disease outbreaks, have exposed gaps in the nation's ability to provide health and medical services to its citizens. To close these gaps, federal legislation was enacted to provide funding to improve bioterrorism and all-hazards preparedness at all levels of government.

Texas strengthened its health and medical response capabilities statewide due largely to federal funding, most notably through the U.S. Centers for Disease Control and Prevention (CDC) and the U.S. Health Resources and Services Administration (HRSA). Funding from these agencies has helped facilitate public health preparedness and has improved the ability of hospitals and emergency medical services to provide care during a disaster. In 2005, after three years of capacity building, Hurricanes Katrina and Rita presented Texas with its first true opportunity to test these strengthened capacities.

The response to Hurricanes Katrina and Rita highlighted the positive aspects of the state's recent health and medical capacity building. For example, Texas was able to establish medical shelters and mass care facilities to care for more than 250,000 evacuees from Louisiana. In response to Rita, Texas also was able to evacuate hundreds of hospitalized patients from the Gulf coast to inland facilities and was able to provide mass care and medical shelters for Rita evacuees. An after action review of the health and medical response to these events indicated that Texas, in general, was able to meet the needs of storm victims.<sup>1</sup>

In the months after the storm, the Texas Department of State Health Services (DSHS) began to plan for future health and medical emergencies. In particular, DSHS decided that a comprehensive assessment and a strategic vision were needed to help guide the agency, public health partners, and other health and medical stakeholders in making future preparedness decisions. In May 2006, DSHS commissioned The Litaker Group, an Austin-based research consulting firm, through a competitive bidding process, to develop and assist in the implementation of such a vision. Implicit in this project was that health and medical preparedness in Texas should be considered a statewide activity and that the diverse geographic, social, and economic needs of Texas would be considered when creating a strategic vision for future preparedness.

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<sup>1</sup> Morrill JB, Litaker JR, Markovich RJ, *et al.* The Health and Medical Response to Hurricanes Katrina and Rita by the Texas Department of State Health Services: An After Action Assessment. June 2006. (Available at: <http://www.dshs.state.tx.us/DSHSAfterActionReport.pdf>)

## 1.2 2010 Strategic Vision

The strategic vision for health and medical preparedness in Texas for the year 2010 is:

**Texas will be prepared and ready to respond to a health and medical event due to either a man-made or natural disaster**

This vision is intended to promote and strengthen future health and medical preparedness activities in Texas. Its foundation is made up of eight strategic focus areas, which are based on input from nearly 350 stakeholders statewide. Associated with each strategic focus area is a goal to be achieved by the year 2010 as well as specific issues to be addressed. Table 1 provides a summary of the eight strategic focus areas.

**Table 1:** Summary of the eight strategic focus areas

Strategic Focus Area	Goal and Description	Identified Issues
<b>3.1.1 Human Resources</b>	<p><b>Goal:</b> To have appropriately trained and qualified individuals available to provide medical and mental health care to Texans during and after a disaster</p> <p><b>Description:</b> Medical and non-medical volunteers are a critical component of any disaster-related health and medical response effort. These individuals provide direct care and logistical support to individuals who require physical and mental health care.</p>	<ul style="list-style-type: none"> <li>• Volunteer recruitment</li> <li>• License and credential verification for medical practitioners</li> <li>• Volunteer management</li> <li>• Volunteer training</li> <li>• Malpractice liability protection for medical volunteers</li> <li>• Workers' compensation for all volunteers</li> <li>• Personal protective equipment</li> <li>• Healthcare responder prophylaxis</li> </ul>
<b>3.1.2 Material Resources</b>	<p><b>Goal:</b> To have material resources available to support the health and medical needs of individuals during a disaster</p> <p><b>Description:</b> Material resources are needed to provide medical care during a disaster. Such resources may range from basic medical supplies (e.g., bandages and over-the-counter medications) to durable medical equipment. Similarly, these resources must be available in the right quantity at the right place at the right time. For material resources to be available, coordination, pre-planning, and logistical management are required.</p>	<ul style="list-style-type: none"> <li>• Goods and services procurement</li> <li>• Availability of storage caches</li> <li>• Goods distribution</li> <li>• Goods and services funding</li> <li>• Sharing material resources</li> <li>• Requesting assets under the State Emergency Management Plan</li> </ul>
<b>3.1.3 Persons with Special Needs</b>	<p><b>Goal:</b> To provide effective, efficient, and compassionate treatment to individuals who require special accommodation or specialized care during a disaster</p> <p><b>Description:</b> Experience with previous disasters has identified certain populations who may require specific types of care during a disaster.</p>	<ul style="list-style-type: none"> <li>• Elderly</li> <li>• Children</li> <li>• Persons with disabilities</li> <li>• Persons with language barriers</li> <li>• Persons with medical special needs</li> <li>• Persons with mental health needs</li> </ul>

Strategic Focus Area	Goal and Description	Identified Issues
<b>3.1.4 Physical Infrastructure</b>	<p><b>Goal:</b> To have an appropriate physical infrastructure available to decontaminate, treat, and transport individuals who require medical care due to a disaster</p> <p><b>Description:</b> Appropriate physical infrastructure must be in place at locations expected to support patient care activities during surge conditions.</p>	<ul style="list-style-type: none"> <li>• Acute and long-term care facilities</li> <li>• Medical shelters</li> <li>• Reception / triage centers</li> <li>• Areas requiring decontamination</li> <li>• Patient transportation</li> </ul>
<b>3.1.5 Public Information</b>	<p><b>Goal:</b> To provide accurate, reliable, and informative public information regarding health and medical issues related to potential, imminent, or actual disasters</p> <p><b>Description:</b> Reliable public information is essential to keep the general public informed of health and medical concerns prior to, during, and after a disaster. Such information enables citizens to make decisions to enhance their safety. To have a maximum impact on the community such information should be objective, consistent, and truthful.</p>	<ul style="list-style-type: none"> <li>• Scenario-based public information</li> <li>• Independent school districts</li> <li>• 211 system</li> <li>• Information reliability</li> </ul>
<b>3.1.6 Systems Interoperability</b>	<p><b>Goal:</b> To allow voice and data systems to effectively exchange information across multiple platforms with minimal disruption caused by a lack of interoperability</p> <p><b>Description:</b> A variety of voice, Web, and emergency management software systems are used to support health and medical response efforts during a disaster. These systems must be interoperable to ensure that information is available no matter the platform from which data are collected or delivered. Systems interoperability, however, requires not only technical integration, but also involves understanding the requirements of end users.</p>	<ul style="list-style-type: none"> <li>• Systems identification and user requirements</li> <li>• Web-based information systems</li> <li>• Syndromic surveillance</li> <li>• Voice communication</li> </ul>
<b>3.1.7 Funding</b>	<p><b>Goal:</b> To optimize the allocation and use of all financial resources to support health and medical preparedness, response, and recovery activities</p> <p><b>Description:</b> Funding is critical to the development and sustainability of a viable, efficient health and medical infrastructure. Such an infrastructure requires funding to maintain both current response capacity and to support the development of new and / or previously unfunded capacities.</p>	<ul style="list-style-type: none"> <li>• Allocation and utilization of public health and medical preparedness funds</li> <li>• Strengthen public health preparedness capacity</li> <li>• Sustainability of current public health preparedness activities</li> </ul>

Strategic Focus Area	Goal and Description	Identified Issues
<p><b>3.1.8 Leadership and Direction</b></p>	<p><b>Goal:</b> To promote a positive, efficient public health preparedness program capable of meeting the health and medical needs of all Texans</p> <p><b>Description:</b> Leadership and direction are essential to meeting the health and medical needs of Texans during a disaster. Such leadership occurs at all levels of government and private industry and is necessary to coordinate preparedness, response, and recovery activities.</p>	<ul style="list-style-type: none"> <li>• Training</li> <li>• Exercises</li> <li>• Training and exercise vendors</li> <li>• Chain of command</li> <li>• Roles and responsibilities</li> <li>• Standards of care</li> <li>• Cross-border collaboration</li> <li>• Isolation and quarantine</li> <li>• Workforce development</li> </ul>

## 2 Introduction

Since 2001, the United States has faced a series of events that have uncovered gaps in the nation's ability to respond to health and medical disasters. As a result, the United States Congress passed the Public Health Security and Bioterrorism Preparedness and Response Act in 2002 and the Pandemic and All-Hazards Preparedness Act in 2006. These Acts authorized Congress to appropriate funds to augment public health preparedness at the local, state, and federal levels. The U.S. Centers for Disease Control and Prevention (CDC) and the U.S. Health Resources and Services Administration (HRSA) are primarily responsible for distributing these funds to states, including Texas.

Texas used these funds to develop a range of health and medical preparedness functions. In the fall of 2005, after three years of capacity building, Texas encountered Hurricanes Katrina and Rita – its first real disaster requiring a large-scale health and medical response. These storms, occurring in tandem, required an unprecedented level of response effort. While an after action review of storm-related activities generally showed the state met the health and medical needs of citizens during the disaster, it also revealed a number of areas for improvement.<sup>2</sup> In the months after the disaster, the Texas Department of State Health Services (DSHS) began a process to plan for future health and medical emergencies. As part of the planning process DSHS decided that a comprehensive assessment and strategic vision were needed to help guide the agency, public health partners, and other health and medical stakeholders in preparing for future disasters.

In May 2006, DSHS commissioned The Litaker Group, an Austin-based research consulting firm, through a competitive bidding process, to develop and assist in the implementation of this strategic vision. Implicit in this project was that health and medical preparedness in Texas should be considered a statewide activity and that the geographic, social, and economic factors unique to Texas be considered when developing the vision. Given the scope and purpose of this project, the intended audience for this report is all individuals, organizations, agencies, and entities responsible for providing health and medical care to Texans.

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<sup>2</sup> Morrill JB, Litaker JR, Markovich RJ, *et al.* The Health and Medical Response to Hurricanes Katrina and Rita by the Texas Department of State Health Services: An After Action Assessment. June 2006. Available at: <http://www.dshs.state.tx.us/DSHSAfterActionReport.pdf>

## 2.1 Potential Disaster Events

Texas is vulnerable to man-made and natural disasters because of its economic base, physical geography, and large population. From an industrial perspective, Texas supports petroleum, nuclear, chemical, and agricultural industries, each of which is susceptible to industrial accidents or terrorist attacks. The physical geography of Texas, with its varied topography, makes it vulnerable to natural disasters (e.g., hurricanes, floods, wildfires, etc.). The large population of some Texas cities makes them potential targets for a bioterrorism attack. Below are potential disasters that could impact Texas.<sup>3</sup>

- Agroterrorism
- Attacks on large gatherings
- Bi-national health threats
- Bioterrorism
- Commercial air disasters
- Hazardous material accidents
- Industrial accidents
- Infectious disease outbreaks
- Power grid failure
- Severe weather
- Terrorism
- Water system contamination
- Zoonotic disease outbreaks

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<sup>3</sup> These potential incidents are based on feedback from participants in 19 work group sessions held statewide in August and September 2006.

### 3 Vision for Health and Medical Preparedness in Texas

The 2010 Strategic Vision for Health and Medical Disaster Preparedness in Texas is:

**Texas will be prepared and ready to respond to a health and medical event due to either a man-made or natural disaster**

Eight strategic focus areas have been identified to serve as a framework for fulfilling this vision. They are:

1. Human resources
2. Material resources
3. Persons with special needs
4. Physical infrastructure
5. Public information
6. Systems interoperability
7. Funding
8. Leadership and direction

These eight strategic focus areas are based on feedback provided by nearly 350 participants at 19 work group sessions held throughout Texas in August and September 2006. In these sessions, participants were asked to provide input on health and medical preparedness activities that should be in place in Texas by the year 2010. These responses form the basis for the information in this report.

This document reports on these eight strategic focus areas, the respective goal for each focus area, and issues to be addressed for each focus area. It should be noted, however, that no assumption has been made about which strategic focus areas or issues take priority. Rather, prioritization is left to the discretion of health and medical stakeholders at the local, regional, and state levels.

### 3.1.1 Strategic Focus Area 1: Human Resources

#### **GOAL**

To have appropriately trained and qualified individuals available to provide medical and mental health care to Texans during and after a disaster

#### **BACKGROUND**

Medical and non-medical volunteers are a critical component of any disaster-related health and medical response effort. These individuals provide direct care and logistical support to individuals who require physical and mental health care. For Texas to have adequate human resources to support a health and medical response by the year 2010, the following issues must be addressed:

- Volunteer recruitment
- License and credential verification for medical practitioners
- Volunteer management
- Volunteer training
- Malpractice liability protection for medical volunteers
- Workers' compensation for all volunteers
- Personal protective equipment
- Healthcare responder prophylaxis

#### 3.1.1.1 Volunteer Recruitment

Medical and non-medical volunteers are currently recruited at the local level. These efforts, while somewhat successful, have not yet enlisted the number of volunteers needed to respond to a large-scale health and medical event (e.g., pandemic influenza). There are, however, opportunities to improve local-level recruiting by collaborating with state-level organizations. For example, the Texas Medical Association has an active, statewide membership that can be tapped to identify and recruit potential physicians interested in volunteering during a disaster. Similarly, the American Red Cross can assist with identifying and recruiting non-medical volunteers. To support recruitment, a method to record and catalog information about volunteers needs to be established. Ideally, a centralized, electronic database capable of recording / maintaining contact details, licensure and credential information, and other required data should be developed.

### 3.1.1.2 License and Credential Verification for Medical Practitioners

Verifying license and credential information of medical professionals before allowing them to provide patient care is standard operating procedure for most accredited hospitals, clinics, and nursing homes. Verification provides assurance that a practitioner has met minimum licensure and training requirements and is in good standing at current and previous practice locations.

For the safety of patients who receive medical care during a disaster, license and credential verification must be conducted for all medical practitioners who volunteer or work at a disaster-related health and medical facility. To perform license and credential verification for medical volunteers, Texas should work with state partners, state agencies, and independent licensure organizations. License verification and credential information should be stored electronically in a Web-based system accessible to appropriate personnel during a disaster.

### 3.1.1.3 Volunteer Management

Placement of medical and non-medical volunteers should be based on knowledge, skills, and abilities (KSA). As such, reliable methods to identify KSAs of each potential volunteer are needed. License verification and credentialing provide such an assessment for medical volunteers. For non-medical volunteers, skill sets must be evaluated separately. Methods to evaluate the KSAs of non-medical volunteers should be developed to assist with task or function placement. Information about KSAs should be stored electronically in a Web-based system accessible to appropriate personnel during a disaster.

### 3.1.1.4 Volunteer Training

All individuals should receive general emergency management training and scenario-specific training prior to deployment. Basic emergency management protocol training would include knowledge of the Incident Command System. Scenario-specific training would include knowledge related to a particular function (e.g., protocols associated with point of dispensing sites). Such training would ensure that all health and medical volunteers understand general and specific protocols associated with their particular duties.

### 3.1.1.5 Malpractice Liability Protection for Medical Volunteers

Personal malpractice liability insurance may not protect medical volunteers from being sued for treatment decisions made during a disaster.<sup>4</sup> As such, practitioners may be at risk of malpractice if treatment decisions inadvertently injure or harm a patient. The potential of being held personally liable for malpractice may discourage medically qualified professionals from volunteering during a disaster. Appropriate protection should be in place to prevent practitioners from being held professionally or personally liable for treatment decisions made during a declared disaster.

### 3.1.1.6 Workers' Compensation for all Volunteers

Workers' compensation coverage is generally unavailable to volunteers who provide health and medical assistance during a disaster. Individuals may be reluctant to volunteer if there is a potential for injury in which they would not receive medical and wage benefit compensation. Likewise, individuals may assume they are covered by workers' compensation because they are performing a duty normally performed in their paid employment. All volunteers should be provided medical and wage benefit compensation for injuries sustained while volunteering at designated medical shelter locations.

### 3.1.1.7 Personal Protective Equipment (PPE)

Medical and non-medical volunteers are at risk of illness and injury while providing disaster-related health and medical services (e.g., injuries from moving patients, risk of blood-borne pathogen exposure, and contamination with infectious agents.). To mitigate the risk of illness and injury, appropriate personal protective equipment should be provided to all volunteers. In addition, volunteers should be adequately trained to use assigned personal protective equipment.

### 3.1.1.8 Healthcare Responder Prophylaxis

Those who provide health and medical services during a disaster must be protected against illness and injury (e.g., exposure to anthrax). When treatments are available, healthcare responders should be among the first to receive such treatment. Providing prophylaxis may be accomplished either at the local, regional, or state level.

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<sup>4</sup> Good Samaritan laws are in place to protect healthcare providers from malpractice liability during specific circumstances. During a large-scale medical disaster, especially one of long duration, the circumstances or conditions of a Good Samaritan law may not be relevant.

### 3.1.2 Strategic Focus Area 2: Material Resources

#### **GOAL**

To have material resources available to support the health and medical needs of individuals in response to a disaster in the right quantity at the right place at the right time

#### **BACKGROUND**

Material resources are needed to provide medical care during a disaster. Such resources may range from basic medical supplies (e.g., bandages and over-the-counter medications) to durable medical equipment. Similarly, these resources must be available in the right quantity at the right place at the right time. For material resources to be available, coordination, pre-planning, and logistical management are required. In order for Texas to meet the state's material resource needs during a health and medical response by the year 2010, the following issues must be addressed:

- Goods and services procurement
- Availability of storage caches
- Goods distribution
- Goods and services funding
- Sharing material resources
- Requesting assets under the State Emergency Management Plan

#### 3.1.2.1 Goods and Services Procurement

Goods and services procurement must meet the needs of end users and represent best value for purchasers. An example is the need to purchase communication equipment that is interoperable with other areas of the state and to purchase communication equipment that will not become technologically obsolete soon after purchase. A need also exists to establish contracts pre-event rather than relying on spot purchasing and to promote optimal contract terms by coordinating procurement opportunities at the local, regional, and state level, as appropriate. This could result in greater purchasing power and better value for some purchases (e.g., increased bargaining power may be available if a contract is awarded at the state level rather than at the local level).

### 3.1.2.2 Availability of Storage Caches

Access to health and medical supplies beyond normal distribution channels during a disaster is needed. Texas should establish storage caches of appropriate health and medical supplies around the state to serve local populations during a disaster and to augment supply availability in case normal distribution channels are disrupted.

### 3.1.2.3 Goods Distribution

In order for goods to be distributed during an emergency, primary and secondary distribution channels should be maintained. In situations where primary or secondary distribution channels are not accessible, appropriate staging and transfer points should be designated in coordination with state and local authorities.

### 3.1.2.4 Goods and Services Funding

Most hospitals and pharmacies in Texas keep limited supplies and equipment in inventory. During a disaster, however, increased quantities of goods and supplies will be needed. Some health and medical providers, including local public health departments, which may serve in a logistical role during an event, lack financial resources to make such purchases. Similarly, some vendors will expect guarantee of payment at the time goods and services are rendered. A dedicated funding source is needed to purchase equipment and supplies during a health and medical disaster response.

### 3.1.2.5 Sharing Material Resources

During a disaster, jurisdictions may require additional equipment and supplies to support health and medical response efforts. Having mutual aid agreements in place is one way to access and share these additional resources during a disaster. In jurisdictions where this has not occurred, mutual aid agreements should be developed and implemented with neighboring communities.

### 3.1.2.6 Requesting Assets under the State Emergency Management Plan

Jurisdictions impacted by a disaster are likely to require additional health and medical supplies during a disaster once local assets are depleted. Such requests may require immediate assistance to prevent severe injury or death. To facilitate public asset requests, it is critical that all individuals in the private sector and in all layers of government understand and follow the State Emergency Management Plan for emergency asset requests (i.e., county judge to disaster district committee to state operations center). This process should include a method to ensure that “life and death” requests are noted and routed expeditiously.

### 3.1.3 Strategic Focus Area 3: Persons with Special Needs

#### GOAL

To provide effective, efficient, and compassionate treatment to individuals who require special accommodation or specialized care during a disaster

#### BACKGROUND

Experience with previous disasters has identified persons who may require specific types of care during a disaster. For Texas to meet the needs of all persons who require health and medical care due to a disaster by the year 2010, the needs of the following specific persons must be considered:

- Elderly
- Children
- Persons with disabilities
- Persons with language barriers
- Persons with medical special needs
- Persons with mental health needs

*(Note: While these populations are discussed under the category Persons with Special Needs, these populations should be considered an integral component of all eight strategic focus areas, as appropriate.)*

#### 3.1.3.1 Elderly

Unlike middle-aged adults, the elderly may require specific assistance due to age-related conditions – both physical and cognitive.<sup>5</sup> For example, the elderly may require assistance with eating, dressing, and bathing. They also may suffer from specific medical conditions (e.g., bladder problems, reduced mobility, etc.). Those with cognitive problems may be unable to articulate needs or understand instructions. A health and medical response should recognize and be responsive to these needs.

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<sup>5</sup> Dyer C, Festa NA, Cloyd E, *et al.* Recommendations for best practices in the management of elderly disaster victims. Baylor College of Medicine and the American Medical Association. 2006.

### 3.1.3.2 Children

Children are not small adults.<sup>6</sup> Indeed, there are “anatomic, physiologic, immunologic, developmental, and psychological considerations that potentially affect their vulnerability to injury and response in a disaster.”<sup>7</sup> Therefore, a health and medical response for children should:<sup>8</sup>

- Include physicians, nurses, and pharmacists trained in pediatric emergency care;
- Have access to local or regional pediatric subspecialties;
- Provide psychiatry, social work, and child protective services on site;
- Have age-appropriate supplies, medications, and equipment on hand; and
- Keep children together with their parents or caregivers.

### 3.1.3.3 Persons with Disabilities

Persons with disabilities (PWD) may require assistance and accommodation during a health and medical response. Such assistance and accommodation will vary according to the individual and the disability. It may include the need for sign language services for the hearing impaired, support to help navigate a medical care shelter for individuals with impaired vision, or the need to support individuals who are restricted to a wheelchair. Health and medical shelters should be aware of the needs that PWD may have and provide appropriate support to them when they seek medical care.

### 3.1.3.4 Persons with Language Barriers

Persons with language barriers may include those who do not speak English, who are illiterate, and those who have disabilities that hinder speech or reading ability. In order to provide medical care during a disaster, assistance should be provided to overcome language or communication barriers between an individual and the health care team. This may include providing translators, sign language interpreters, and other assistance as needed.

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<sup>6</sup> American Academy of Pediatrics. Pediatric Terrorism and Disaster Preparedness: A Resource for Pediatricians. Foltin GL, Schonfeld DJ, Shannon MW, editors. AHRQ Publication No. 06(07)-0056. Rockville, MD: Agency for Healthcare Research and Quality. October 2006.

<sup>7</sup> *Ibid.*

<sup>8</sup> Sirbaugh PE, Gurwitch KD, Macias CH, *et al.* Creation and implementation of mobile pediatric emergency response team: regionalized caring for displaced children after a disaster. *Pediatrics* 2006;117(5):S428-S438.

### 3.1.3.5 Persons with Medical Special Needs

Persons with special medical needs include individuals receiving care at home, individuals with chronic illnesses, and individuals receiving care in an institution. Individuals with chronic illnesses or who receive care at home may require care at a medical shelter. As such, medical shelters should recognize the range of conditions that may require treatment during or after a disaster.

Individuals who receive care at an institution (e.g., hospitals, nursing homes, assisted living facilities, or intermediate care facilities for the mentally retarded) should generally receive care at a like institution if evacuation is needed. However, should such institution-to-institution transfer not occur, medical shelters may need to provide care to these individuals until appropriate accommodation can be provided.

Also included in the category of persons with special needs are individuals who have substance abuse problems. While such individuals may not necessarily require accommodation at a medical shelter (except as needed to treat a specific injury or illness other than substance abuse), such individuals may require counseling or medication regardless of where they are sheltered. Treatment for substance abuse users should be available at either general shelters or medical shelters, as appropriate.

### 3.1.3.6 Persons with Mental Health Needs

During and after a disaster a considerable number of individuals may require mental health support. These individuals may include persons who have ongoing mental health problems exacerbated by the disaster, persons who have been impacted negatively by the disaster, and first responders who require Critical Incident Stress Management or other counseling services. Both medical shelters and general shelters should be able to provide appropriate accommodation to those persons who require mental health care. Individuals with advanced mental health needs may require acute, specialized treatment.

### 3.1.4 Strategic Focus Area 4: Physical Infrastructure

#### **GOAL**

To have an appropriate physical infrastructure available to decontaminate, treat, and transport individuals who require medical care due to a disaster

#### **BACKGROUND**

Appropriate physical infrastructure must be in place at locations expected to support patient care activities during surge conditions. In order for Texas to support surge conditions by the year 2010, the following should have appropriate physical infrastructure available:

- Acute and long-term care facilities
- Medical shelters
- Reception / triage centers
- Areas requiring decontamination
- Transportation

#### 3.1.4.1 Acute and Long-Term Care Facilities

Acute and long-term care facilities must be able to augment physical infrastructure during a disaster to support an increased number of patients. This includes supplementing supplies, equipment, and physical infrastructure (e.g., HVAC<sup>9</sup>, oxygen, and negative pressure rooms). It also includes identifying appropriate annex locations to provide medical treatment, as well as having adequate security in place to protect staff and property during a surge crisis. Plans and processes must be developed to ensure that a facility's physical infrastructure can support surge conditions.

#### 3.1.4.2 Medical Shelters

Medical shelters often are established ad hoc during a disaster. While specific needs will vary depending on the services rendered, most medical shelters will have minimum infrastructure requirements (e.g., waiting areas, treatment rooms, HVAC needs, pharmacy, security, etc.). Plans and processes must be in place to identify and implement medical shelter infrastructure requirements to support a disaster-related health and medical response.

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<sup>9</sup> HVAC is the abbreviation for heating, ventilation, and air conditioning.

#### 3.1.4.3 Reception / Triage Centers

Reception / triage centers provide central processing of individuals to an appropriate shelter. From a health and medical perspective such centers should have appropriate physical resources on hand to support intake activities, evaluation, and transfer to another facility.

#### 3.1.4.4 Areas Requiring Decontamination

Fixed and mobile units should be available to support decontamination activities related to surge conditions. Procedures must be developed to decontaminate individuals prior to their entering a treatment facility.

#### 3.1.4.5 Transportation

Transportation options, either by bus, ambulance, helicopter, or airplane must be available to transport individuals with health and medical needs away from a disaster area without exhausting medical transportation assets in unaffected areas.

### 3.1.5 Strategic Focus Area 5: Public Information

#### **GOAL**

To provide accurate and reliable information to the public regarding health and medical issues related to potential, imminent, or actual disasters

#### **BACKGROUND**

Reliable public information is essential to keep the general public informed of health and medical concerns prior to, during, and after a disaster. Such information enables citizens to make decisions to enhance their safety. To have a maximum impact on the community such information should be objective, consistent, and truthful. In order for Texas to help keep citizens informed about disasters and emergencies by the year 2010, the following issues must be considered:

- Scenario-based public information
- Independent school districts
- 211 system
- Information reliability

#### 3.1.5.1 Scenario-Based Public Information

Disaster-specific health and medical information should be made available to the public on an ongoing basis. Such information can be used to educate citizens on how to prevent illness and injury during a disaster and how to access care. Information distribution must consider the types of media outlets available, education and language barriers of citizens, and the health and medical needs of specific patient populations (e.g., the elderly, children, persons with disabilities, and individuals with medical special needs). Public information campaigns also should seek to define public expectations with regard to health and medical services during a disaster by outlining the roles and responsibilities of governmental agencies, private providers, and the public.

#### 3.1.5.2 Independent School Districts

Independent school districts (ISD) are an outlet to provide age-appropriate education to children on how to prepare and respond to a disaster. Such education, incorporated into routine learning activities, could promote interaction between children and parents regarding health preparedness activities.

### 3.1.5.3 211 System

The 211 system is the state's primary information and referral hotline for human services during normal and emergency conditions. In order for 211 to provide disaster-related public information, it must have access to reliable, up-to-date, and accurate information. In addition, awareness of 211 as a trusted source of disaster-related health and medical public information should be promoted.

### 3.1.5.4 Information Reliability

Citizens rely on public information to help them make appropriate decisions during a disaster. Such information can help them know when to evacuate, when to seek care at a hospital, and how to prevent illness pre- and post-disaster. However, citizens must be confident that information is from a trusted source. Texans expect disaster-related health and medical information to be objective, consistent, and truthful.

### 3.1.6 Strategic Focus Area 6: Systems Interoperability

#### **GOAL**

To allow voice and data systems to effectively exchange information across multiple platforms with minimal disruption caused by a lack of interoperability

#### **BACKGROUND**

A variety of voice, Web, and emergency management software systems are used to support health and medical response efforts during a disaster. These systems must be compatible to ensure that information is available to multiple end users no matter the platform from which data are collected or delivered. Systems interoperability, however, requires not only technical integration, but also involves understanding the requirements of end users. In order for Texas to attain systems interoperability by the year 2010, the following factors must be considered:

- Systems identification and user requirements
- Web-based information systems
- Syndromic surveillance
- Voice communication

#### 3.1.6.1 Systems Identification and User Requirements

Both private and public entities provide health and medical care in Texas. These entities include hospitals, public health departments, emergency medical services, private physician offices, laboratories, and state-level organizations. Each of these organizations uses its own systems to collect and report data on key critical service benchmarks. Some of this information is collected and reported to other end users (e.g., bed census information collected by EMS system is used by regional and state authorities to make decisions regarding patient evacuation and transfer during a disaster). Currently, there is no complete inventory of the available data collection systems in place in Texas and there has been no systematic effort to identify the data needs of end users. Conducting an inventory of these data collection systems and understanding the requirements of end users would be a first step in improving systems interoperability.

### 3.1.6.2 Web-Based Information Systems

Throughout Texas a variety of Web-based information systems are in place (e.g., WebEOC, EMSsystem, etc.). Some of these systems require specific information to be collected at the point of use, which is then aggregated at the regional or state level. To ensure that appropriate data are collected at point of use, local jurisdictions must understand the data needs of regional and state authorities.

In addition, Web-based data collection systems (e.g. WebEOC and EMSsystem) that support a health and medical response should be available to all appropriate health and medical response partners. Currently, these systems are available on a case-by-case basis, largely dependent on funding availability.

### 3.1.6.3 Syndromic Surveillance

Health and medical data are collected by a variety of sources throughout Texas. Such data include point of sales data for medication purchases, billing and claims data for services rendered, epidemiological data for surveillance activities, and laboratory data for diagnostic purposes. Together, these data can provide insight into current health and medical conditions being treated within a particular region.

### 3.1.6.4 Voice Communication

Health and medical responders must be able to communicate with one another during a disaster. Despite ongoing efforts to improve this capability, full interoperability of radio equipment between health and medical responders in all jurisdictions has not been achieved. Technical standards should be made available and implemented to promote consistent, reliable, and interoperable voice communication for all responders – both in the public and private sectors.

### 3.1.7 Strategic Focus Area 7: Funding

#### **GOAL**

To optimize the allocation and use of all financial resources to support health and medical preparedness, response, and recovery activities

#### **BACKGROUND**

Funding is critical to the development and sustainability of a viable, efficient health and medical infrastructure. Such an infrastructure requires funding to maintain both current response capacity and to support the development of new and / or previously unfunded capacities. In order for Texas to have a strong and efficient response system by the year 2010, the following funding issues must be considered:

- Allocation and utilization of public health and medical preparedness funds
- Strengthening public health preparedness capacity
- Sustainability of current public health preparedness activities

#### 3.1.7.1 Allocation and Utilization of Public Health and Medical Preparedness Funds

The allocation and use of public health preparedness funds is based on contracts established between the Texas Department of State Health Services and the local recipient (i.e., state to local). Despite best intentions, these contracts may hinder optimal use of these funds. For example, local jurisdictions may incur unexpected disaster-related expenses (e.g., due to spot purchasing) that are not reimbursable under current contract terms even though the purchase is specifically related to a health and medical response. Similarly, spending at the local may be based on contractual obligations rather than on demonstrated preparedness need. For funding to have a maximum, optimal impact at the community level, allocation and utilization of funds should be commensurate with the demonstrated programmatic and leadership abilities of each recipient organization.

### 3.1.7.2 Strengthening Public Health Preparedness Capacity

Public health preparedness capacity has increased dramatically since 2001 throughout Texas. However, based on changing threat assessments and improvements in technology, there may be a need to increase capacity to respond to new public health threats in the future. This will require funding to create new or expanded public health preparedness capacity. Such funding should be provided to appropriate health and medical partners when needed with an emphasis on capacity building and metric-based results.

### 3.1.7.3 Sustainability of Current Public Health Preparedness Activities

Since 2001, entities and jurisdictions throughout Texas have developed a health and medical infrastructure capable of providing services during a disaster. This infrastructure, now built, must be sustained over time. Entities and jurisdictions should be prepared to maintain this current level of infrastructure based on funding allocated at a sustainability level rather than at a capacity building level.

### 3.1.8 Strategic Focus Area 8: Leadership and Direction

#### **GOAL**

To promote a positive, efficient public health preparedness program capable of responding to the health and medical needs of all Texans

#### **BACKGROUND**

Leadership and direction are essential to meeting the health and medical needs of Texans during a disaster. Such leadership occurs at all levels of government and private industry and is necessary to coordinate preparedness, response, and recovery activities. In order for Texas to respond efficiently and effectively to a health and medical disaster by the year 2010, leadership and direction must be provided on the following issues:

- Training
- Exercises
- Training and exercise vendors
- Chain of command
- Roles and responsibilities
- Standards of care
- Cross-border collaboration
- Isolation and quarantine
- Workforce development

#### 3.1.8.1 Training

All health and medical personnel must be trained in how to respond to a health and medical emergency. Some training will be applicable to all health and medical response activities, while some will be scenario-specific. Despite considerable progress in developing and conducting training activities over the past five years, training must be ongoing and continue to educate medical and non-medical volunteer staff on how to react quickly in a disaster response. It also should provide individuals and organizations with a clear understanding of their roles and responsibilities.

### 3.1.8.2 Exercises

Exercises assess the ability of first responders and healthcare workers to provide medical care during an emergency and to test the ability of systems and infrastructure to support this response. They also provide an opportunity to identify strengths and weaknesses of current response capabilities. From the health and medical perspective, exercises should examine the ability of local jurisdictions to provide care from the point of injury up to and including treatment and eventual release from a hospital or medical shelter.

### 3.1.8.3 Training and Exercise Vendors

Training and exercises must meet the needs of health and medical stakeholders. As such, organizations conducting training and exercises must be experienced in both emergency management and health and medical preparedness. Current procurement options do not fully exploit the range of possibilities available to provide disaster-related health and medical training. Future training and exercise procurement should seek to identify multiple, experienced vendors with whom local jurisdictions can contract to provide training and exercise services (e.g., task order-type procurement). Likewise, competitive bidding should be encouraged and contracts should be awarded based on best value procurement.

### 3.1.8.4 Chain of Command

The State of Texas, through the State Emergency Management Plan, has a formalized emergency command structure. This structure identifies the emergency chain of command from the county level to the state level, including how to request assets during an emergency when local assets are exhausted. Currently, not all health and medical stakeholders consistently use this process. Health and medical asset requests must be incorporated into this chain of command. All response partners should recognize and utilize this framework for requesting assets (i.e., county judge to disaster district committee to state operations center). In addition, this framework should include a method to ensure that “life and death” requests are duly noted and routed expeditiously.

### 3.1.8.5 Roles and Responsibilities

All stakeholders should be aware of individual and collective roles and responsibilities during a health and medical disaster response. Such awareness will allow responders to know which entity or job function is responsible for specific aspects of a disaster response.

#### 3.1.8.6 Standards of Care

The goal of all medical professionals is to provide top-quality medical care no matter the circumstance. However, medical professionals recognize that meeting normal community care standards during a disaster may not be possible due to a lack of resources, facilities, or qualified medical personnel. In cases where community standards of care cannot be achieved, medical professionals must be guided on how to make appropriate, ethical treatment decisions.

#### 3.1.8.7 Cross-Border Collaboration

Texans have strong cultural and economic ties with Mexico. There are frequent crossings for both family and economic reasons. The majority of cross-border trade between the United States and Mexico occurs along the Texas-Mexico border. Geographically, a disaster on either side of the border could precipitate the need for a cross-border health and medical response. Therefore, cross-border collaboration must remain strong between health officials in Mexico and Texas.

#### 3.1.8.8 Isolation and Quarantine

Responders and the public alike must be prepared to respond to an isolation and quarantine event. Fortunately, large-scale isolation and quarantine actions have not been needed in Texas. However, future planning should consider the likelihood that a health and medical disaster may require large-scale isolation and quarantine actions (e.g., pandemic influenza). Future planning must include methods to educate stakeholders and the public about activities, roles, and responsibilities related to an isolation and quarantine event. Such planning will incorporate the four control measure applicable to Texas – people, property, common carriers, and areas. It also will focus on efforts to promote voluntary compliance, with mandatory control measures reserved for those not willing to comply otherwise.

#### 3.1.8.9 Workforce Development

For Texas to meet the disaster-related health and medical needs of its citizens before, during, and after a disaster, it must have a well-educated workforce. This workforce includes physicians, nurses, pharmacists, epidemiologists, sanitarians, other public health professionals, and allied health professionals. Currently, the demand for these trained individuals exceeds their availability. Future planning must promote workforce development activities that address recruitment, training, and pay / benefits to increase the number of trained health and medical professionals in Texas.

## **4 Next Steps**

This document outlined the 2010 strategic vision for health and medical preparedness in Texas. It identified the eight underlying strategic focus areas as well as issues and goals specific to each focus area. Together, this information provides a guide for activities to take place between now and 2010.