

**TEXAS PUBLIC HEALTH AND MEDICAL
EMERGENCY MANAGEMENT
5-YEAR STRATEGIC PLAN
2012 – 2016**



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Executive Summary

Texas has made significant progress in public health and medical emergency management. The accomplishments made over the past ten years are largely due to a more integrated approach among all partners involved in mitigating, preparing for, and responding to the health consequences of manmade or natural disasters. Recently, public health and medical emergency management partners have begun to focus more on assisting communities in their response and recovery efforts. In the future, these activities will be augmented further through assisting communities in building community resilience, or the capability to successfully rebound from a disaster.

In October 2010, the Department of State Health Services, Community Preparedness Section embarked on a formal planning process to develop the Department's first comprehensive Public Health and Medical Emergency Management Strategic Plan. This process included an assessment of the current status in relation to 15 health and medical target capabilities identified as priorities by the Centers for Disease Control and Prevention. A literature review was conducted and the information was used to identify and prioritize gaps in Texas' public health and medical emergency management system. The traditional strategic planning process was modified so that ongoing activities and potential activities could help identify a vision and mission for public health and medical emergency management in Texas.

Partners in emergency management were asked to self-evaluate their strengths and weaknesses within each of the 15 target capabilities as well as where Texas should be in the next five years and what strategies should be considered. Over 150 individuals responded representing regional and local health departments, Regional Advisory Councils, hospitals, Council of Governments, businesses, federal entities, school/universities, non-profits organizations, city/county government, and other state agencies. Their input combined with the initial Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis resulted in the development of the vision and mission as well as strategies. These strategies link to sub-goals with measurable outcome objectives. The strategies and outcome objectives were compared to national guidance and federal funding documents to ensure alignment with federal direction.

To be effective, a strategic plan must be linked to tactical and operational planning. Therefore, a Tactical Guide companion document to the Texas Public Health and Emergency Management 5-year Strategic Plan was also developed.

The next step will be to incorporate adopted strategies into one-year implementation plans at the state, regional, and local levels. A review of the strategic and implementation plans as well as the Tactical Guide will be conducted annually to incorporate lessons learned and new initiatives.

Accomplishments and Challenges

Introduction

Meeting the community preparedness needs and challenges of Texas requires consideration of the diverse demography and geography of the state. Texas is the second most populous state with approximately 24 million people. As the largest of the contiguous states in the US, the state covers more than 268,000 square miles, or seven percent of the total land mass of the United States. Texas also shares a 1,255 mile border with Mexico.

Texas is a home rule state. As such, all emergency preparedness, response, and recovery activities are local responsibilities. When a disaster occurs, it begins at the local level, with regional, state, and federal entities providing support when requested.

Texas has had more federal disaster declarations than any other state, with 84 declarations between 1953 and 2010. Between 2005 and 2010, these declarations have included floods, hurricanes, tropical storms, tornadoes, and wildfires.

Texas also has critical infrastructure and key resources, including agricultural, oil and natural gas production systems, hospitals, public water systems, nuclear plants, and governmental facilities. Possible threats and disasters capable of affecting public health in Texas include natural disasters, disease outbreaks, radiological accidents, chemical spills, international threats and terrorist acts. Figure 1 includes a listing of major threats to the State of Texas.

The Texas Department of State Health Services (DSHS) is the lead agency for Emergency Support Function (ESF) #8. As such, DSHS provides funding to conduct public health and medical services through the Centers for Disease Control and Prevention (CDC) Public Health Preparedness Program (PHEP) and the Office of the Assistant Secretary for Preparedness and Response (OASPR) Hospital Preparedness Program (HPP).

Additional federal funds are provided for specific programmatic activities, such as the Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP). In addition, resources are provided to address specific threats. The most recent example of this is the 2009-2010 Public Health Emergency Response (PHER) Grant which provided states with additional support for H1N1 response activities.

Figure 1: Major Threats to Texas

Natural Disasters	Man-made or Infrastructure Disasters
Hurricane	Terrorist Act
Tornado	Power Outage
Flood/Flash Flood	HazMat or Chemical
Winter Storm	Hostage/Stand-off
Wildfire	Oil Spill
Water Shortage	Urban Fire
Drought	Building Collapse
Disease/Human/Animal	Utility Outages
Oil Spills	Bridge Collapse
Sink Holes	Explosions
Animal Die Offs	Cyber Attack
Pandemic Flu	Rail/Pipeline
Earthquake	Border Security

Funding

To date, DSHS has received over \$856 million from federal funding sources to support public health, hospital, and other health care system preparedness efforts in Texas. Figure

2 summarizes the types of federal preparedness funding provided to DSHS from state fiscal years 2002 to 2010.

Figure 2: Federal Preparedness Funding Provided to DSHS (2002-2010)

Fiscal Year	Base Funding (includes Set Aside / Dedicated Funding)	Set Aside (Dedicated) Funding Priorities*
2000	<ul style="list-style-type: none"> • PHEP: \$1.16 million 	<ul style="list-style-type: none"> • Surveillance and Epidemiology • Laboratory – Biologic Agents • Health Alert Network
2001	<ul style="list-style-type: none"> • PHEP: \$1.1 million 	<ul style="list-style-type: none"> • Surveillance and Epidemiology • Laboratory – Biologic Agents • Health Alert Network
2002/2003	<ul style="list-style-type: none"> • PHEP: \$54.0 million • HPP: \$8.3 million 	<ul style="list-style-type: none"> • Not specified
2004	<ul style="list-style-type: none"> • PHEP: \$68.9 million • HPP: \$35.1 million 	<ul style="list-style-type: none"> • PHEP – Border preparedness • PHEP – Smallpox • PHEP – Strategic National Stockpile • HPP – Hospital support for Dallas, Houston and San Antonio
2005	<ul style="list-style-type: none"> • PHEP: \$67.2 million • HPP: \$33.5 million 	<ul style="list-style-type: none"> • PHEP – CRI • PHEP – EWIDS • HP – ESAR-VHP
2006	<ul style="list-style-type: none"> • PHEP: \$78.1 million • HPP: \$34.0 million 	<ul style="list-style-type: none"> • PHEP – CRI • PHEP – EWIDS • PHEP – Pandemic Influenza
2007	<ul style="list-style-type: none"> • PHEP: \$66.96 million • HPP: \$37.9 million 	<ul style="list-style-type: none"> • PHEP – CRI • PHEP – EWIDS • PHEP – Pandemic Influenza • HPP – Pandemic Influenza
2008	<ul style="list-style-type: none"> • PHEP: \$74.9 million • HPP: \$30.3 million 	<ul style="list-style-type: none"> • PHEP – CRI • PHEP – EWIDS • PHEP – Pandemic Influenza • PHEP – Real-time disease detection
2009	<ul style="list-style-type: none"> • PHEP: \$58.94 million • HPP: \$28.9 million • Competitive Pan-Flu (Lab only): \$0.8 million 	<ul style="list-style-type: none"> • PHEP – CRI • PHEP – EWIDS
2010	<ul style="list-style-type: none"> • PHEP: \$49.7 million • PHER: \$93.3 million • HPP: \$26.2 million • Improvements: \$6.9 million 	<ul style="list-style-type: none"> • PHEP – CRI • PHEP – ESAR-VHP • PHEP – EWIDS • HPP – ESAR-VHP • HPP – Pandemic Flu Health Care Preparedness • PHER – Novel H1N1 Influenza Response

Source: DSHS, Division of Prevention and Preparedness Services, June 2010

* CRI: Cities Readiness Initiative; ESAR-VHP: Emergency System for the Advance Registration of Volunteer Health Professionals; EWIDS: Early Warning Infectious Disease; HPP: Hospital Preparedness Program; PHEP: Public Health Emergency Preparedness; Public Health Emergency Response

PHEP funds are distributed to the local public health system, while HPP funds are allocated to local health care system partners. These funds have been used at local, regional, and state levels to build public health and hospital capacity, as well as to build or enhance

preparedness capabilities. Figure 3 outlines the percentages of current Federal Fiscal Year (FFY)2011 funds allocated by funding source for DSHS Central Office, DSHS Health Service Regions, local health departments, and regional hospital preparedness contractors.

Figure 3: FFY2011 PHEP and HPP Funding Allocation

Public Health Emergency Preparedness (PHEP)	
Local Health Department	51%
DSHS Central Office	24%
DSHS Health Service Region Offices	20%
Texas Laboratory Response Network (TxLRN)	5%
Hospital Preparedness Program (HPP)	
Regional HPP contractors	80%
DSHS Central Office	20%

Accomplishments

1. Greater Program Collaboration and Service Integration

Collaboration between public health and medical emergency management staff at the state and local level has increased as more cross-cutting activities are pursued together. Accomplishments within this arena include:

- **Medical Countermeasures Distribution**
 - Pharmaceutical cache
 - State agency partners for distribution
- **Non-pharmaceutical Interventions**
 - Personal Protect Equipment (PPE)
 - Emergency contracting with pharmacies for anti-viral dispensing
- **Planning**
 - Needs of at-risk individuals
- **Emergency Operations**
 - Near-real-time electronic nationwide public health situational awareness/ Hospital Available Beds for Emergencies and Disasters (HAvBED)
 - Texas Disaster Medical System
- **All-hazards Medical Surge Capacity**
 - Analysis of community health care facilities
 - Capabilities-based planning & gap analysis
- **Volunteer Management**
 - ESAR-VHP
 - Medical Reserve Corps (MRC)
 - Community Emergency Response Team (CERT).
- **Workforce Development**
 - Education and Preparedness Training
- **Exercises, Evaluation and Corrective Actions**
 - Statewide exercises
 - Regional exercises

- Cities Readiness Initiative (CRI) exercises

Local partners have accomplished greater public health and medical integration through increased participation in joint meetings and activities focused on planning, training, and exercise.

2. Partnerships

DSHS has established partnerships with over 45 local health departments, 500 hospitals, 16 state agencies, and many non-profit, business, professional, and federal organizations. At the state, regional, and local levels, collaborative partnerships with multiple disciplines, jurisdictions, agencies and sectors have been essential to effective public health and medical emergency response.

- Each level of disaster response (local, county, regional, state, and federal) has a variety of interoperable emergency response resources that must be



Reed Arena during Hurricane Ike, 2008
Photo courtesy of Brazos County Health Department

deployed rapidly and efficiently during an emergency

- There are often great distances between an area of need and the area in which a resource resides (e.g., ambulances, medical staff, and other resources from the Texas Panhandle region may deploy to a coastal area affected by a hurricane)

Additionally, because DSHS is responsible for coordinating resources to meet medical functional needs during a public health emergency, ensuring individuals who need medical transportation to evacuate safely and/or shelter appropriately in the face of a disaster requires statewide resource coordination.

Local health departments, hospitals, and regional emergency planners report an improving sense of collaboration among partners. Establishment and sustainment of collaborative relationships between partner response agencies and stakeholders is seen as one of the greatest accomplishments over the last five years.

3. Medical Countermeasure Distribution

The State of Texas received the maximum score possible on the 2009 Technical Assistance Review (TAR) of the Texas system for managing Strategic National Stockpile (SNS) assets. The TAR evaluates thirteen elements of overall readiness to manage, distribute, and dispense SNS materiel during a public health emergency. The three largest Metropolitan Statistical Areas (MSA) in Texas (Dallas, Houston, and San Antonio) averaged an 86% on the 2009 TAR.

The most recent success of mass prophylaxis was the creation of the Texas Antiviral Distribution Network during the Novel H1N1 Pandemic Influenza response that included:

- 1,431 retail pharmacies,
- 76 Federally-Qualified Health Centers,
- 54 local health departments,
- 8 regional health departments, and
- Numerous other entities.

The network provided access to medication across the state allowing uninsured and underinsured individuals access to antiviral medication at no cost, except for the payment of a small dispensing fee.

The Cities Readiness Initiative (CRI) is funded by a portion of the PHEP funding and focuses on increasing and enhancing readiness in selected Metropolitan Statistical Areas (MSAs). Through CRI, the largest metropolitan public health departments have developed plans to respond to a large-scale bioterrorist event by dispensing antibiotics to the entire population within 48 hours. CRI cities are selected by the CDC and in Texas this program currently serves Dallas, Houston, and San Antonio.

Local stakeholders report that the H1N1 incident was a learning opportunity that strengthened mass dispensing capabilities by allowing plans to be put into use.

Innovative processes were developed around drive-through protocols for distribution rather than relying on traditional Points of Dispensing (PODs) as the primary method.

4. Volunteer Management

Texas currently has 35 Medical Reserve Corps (MRC) teams or units, representing approximately 12,000 local volunteers. Each

MRC team is considered a local asset and works under the direction of their respective jurisdiction's local health department or local office of emergency management. Local entities have been able to recruit volunteers through various partnerships established with faith-based organizations, school districts, and businesses. One innovation has been to coordinate a volunteer program with other programs such as Meals on Wheels and home owners associations.

5. Laboratory Capability

The DSHS Austin Laboratory is the second largest public health laboratory in the United States, second only to the Centers for Disease Control and Prevention laboratory in Atlanta. The DSHS Austin Laboratory is the leader of Texas Laboratory Response Network (TxLRN), which includes ten public health laboratories. The geographic distribution of these laboratories allowed the states' metropolitan areas to more quickly transport specimens to a local laboratory and increased testing capacity. All Texas LRN laboratories maintain 24/7/365 capabilities for response to FBI requests for "white powder" testing and for potential bioterrorism agents and the

proximity to these labs enhances the capacity for rapid testing.

The TxLRN played a crucial role in the response to the 2009 H1N1 Influenza outbreak. The geographic distribution of these laboratories allowed the states' metropolitan areas to transport more quickly specimens to a local laboratory for timelier testing, whereas other states had to rely on a single state public health laboratory that could perform testing. All Texas LRN laboratories maintain 24/7/365 capabilities for response to FBI requests for "white powder" testing and for public health emergencies.

6. Medical Surge

A robust hospital system that is preparing for a major disaster includes local medical operations centers, interoperable communications systems with local and state partners, and individual hospital preparations (including identification of alternate care sites). The Hospital Preparedness Program has established the following infrastructure:

- A statewide communication system for hospitals, EMS providers, and dialysis



Medical Surge Exercise, 2008
Source Texas Department of State Health Services

units through an annual subscription to EMResource funded by DSHS. This system allows for communication between hospitals and EMS during local events on a day-to-day basis and during statewide events.

- The reporting of hospital bed availability statewide.
- A statewide volunteer registration/credentialing system that meets the ESAR-VHP requirements.
- The ability to track Texas persons with medical needs evacuees and patient/evacuee tracking.
- WebEOC supported through the Texas WebEOC Interoperable Project (TWIRP) for statewide resource tracking. TWIRP was initially created to increase situational awareness at hospitals and enhance the capability of Texas hospitals to communicate with each other during disasters. Project personnel create a variety of tracking boards to monitor availability of ambulances, pharmaceuticals and hospital beds. These boards enhance situational awareness and tracking of requests for resources and can be monitored regardless of the size of an event. The project benefits Texas hospitals, public health and emergency management.
- State caches of 428 respiratory ventilators.
- Ten regional caches of Personal Protection Equipment (PPE), surge beds, bariatric equipment and supplies.

In addition, hospital coordination has improved through the establishment of Medical Operation Centers (MOC) and the development of regional surge plans, mobile medical resources, and regional mass fatality

plans. A total of 84 medical mobile units have been purchased statewide for use as alternate care sites.

In response to the 2009 H1N1 influenza pandemic, the U.S. Department of Health and Human Services (DHHS) expanded HAvBED, to report initial HAvBED data elements (bed counts and ventilators), and additional data elements (rescue therapies and facility stress) related to the pandemic. Texas submitted data during the twelve week HAvBED activation reporting period, from October 2, 2009 to January 22, 2010, in response to H1N1. The overall average response rate was 102.6%, which exceeded the national average response rate of 62.8%. Texas had a reporting average of 102.6% for initial data elements, and an average of 101.5% for additional data elements during the twelve week reporting period. Response rates were higher than 100 percent because the U.S. Department of Health and Human Services received data on more Texas hospitals than it had originally included in the tracking system.

Local accomplishments include field hospitals and triage resources added to local area medical centers. Also some jurisdictions have been able to establish agreements to assist with medical surge coordination with long term care and homecare hospice agencies.

7. Public Information

Stakeholders at the local level report that receiving regular updates and information from DSHS strengthens their ability to quickly and effectively disseminate important information to local stakeholders. Also, the use of a shared regional information management system allows immediate regional notification to selected groups of responders to events or incidents for which they need to be aware.

Texas legislation requires DSHS to educate Texans about all-hazards preparedness, response and recovery. DSHS's successful "Ready or Not?" media campaign originally began in 2007 and was renewed for 2010-11. The renewed campaign continues to provide the English and Spanish language websites (TexasPrepares.org and TexasPrepara.org) that share information about common threats to Texas and provides information on how to make personal and family emergency plans. Several additional components of the two-year-long program include statewide advertising, outreach events, and a multi-level train-the-trainer program targeting community leaders and organizations.



Source Texas Department of State Health Services

Recently, the Texas media campaign during H1N1 response was recognized at the national level as an effective risk communication program because it pulled together several stand alone communications entities. Market penetration for this campaign was 93% of the Texas population.

8. Epidemiology and Surveillance

During the 2009 pandemic, DSHS enhanced the existing influenza surveillance system to provide additional data on the novel strain of influenza A (pH1N1) to monitor the severity and impact of pH1N1 on the Texas population. DSHS also created the Austin

Clinical Epidemiology (ACE) Team to act as the key group responsible for coordinating epidemiological information and surveillance with epidemiologists at the local, regional and state level during the pH1N1 response. The success of the ACE team in communicating with our epidemiology partners lead to the formalization of the ACE team as a permanent part of the Planning and Intelligence Section of the DSHS MACC that can be activated for any public health emergency needing epidemiological insight.

Influenza surveillance continues to recruit more providers in additional counties which has lead to a greater sense of situational awareness during seasonal flu activity.

A major strength in this capacity stems from dedicated epidemiological staff at the local level that have fostered relationships with providers. By taking the initiative to stress to providers the importance of disease surveillance, the quantity and timing of reporting has improved.

The DSHS Epidemiology Response Team (ERT) continues to play a lead role in public health preparedness and response. Members of the ERT created the Disaster Surveillance Workgroup in 2007 which developed the shelter surveillance tools used in shelters across Texas during Hurricane Ike. The ERT also provided the mechanism to fill immediate epidemiology surge capacity needs by Health Service Region 8 during the investigation of the initial cases of pH1N1.

Routine epidemiology and surveillance capacity is exemplified by the salmonellosis outbreak that occurred in the summer of 2008. Texas staff, CDC, other states, and the FDA investigated an outbreak that affected 1442 cases nationwide, with 585 cases in

Texas distributed over 83 counties. DSHS EAIDB coordinated with laboratory partners to identify cases, with DSHS regulatory to investigate potential food sources, and with regional and local health departments to conduct hypothesis generating interviews and two case-control studies that ultimately implicated jalapeno and Serrano peppers as the cause of the Salmonella Saintpaul illness outbreak. This successful investigation utilized and enhanced epidemiologic capacity around the state. It also increased awareness about the threats of contaminated produce, as well as the challenges of investigating illnesses caused by hidden food vehicles that case-patients often don't recall consuming.

9. Response

The response to a public health or medical emergency must be timely, efficient, and reactive to the needs of the community. Since 2006, Texas has improved both response capacity and capability at the local, regional, and state levels to provide a

coordinated response effort to meet the health care needs of individuals during a disaster. Some of the accomplishments related to improving response capacity are:

- Integration of both hospitals and local health departments into the local emergency management system.
- Development of the DSHS State Medical Operations Center (SMOC) (formerly referred to as DSHS MACC) to be the operational arm for ESF8 support functions that require coordination, control, and response assets beyond the capability of local or regional jurisdictions (e.g., identifying and providing equipment to areas impacted by a disaster, coordinating patient transfer and hospital evacuations, and providing operational support for flooded cemetery recovery operations).
- Storage and maintenance of critical supply, equipment, and pharmaceutical caches at the state level that can be quickly deployed to supplement local or



Crystal Beach after Hurricane Ike, 2008
Source Associated Press

regional needs. This could include ventilators, antiviral medications, or other critical supplies.

- Development of the Texas Disaster Medical System (TDMS) system to facilitate the planning and activation of public health and medical resources during a disaster requiring health and medical support.
- Implementation of public health strike teams that can be deployed by DSHS in support of response and recovery operations. These teams include a Rapid Assessment Team (RAT), Command Assistance Team (CAT), and Diversified Occupation Group (DOG). A RAT provides an initial, quick assessment of public health needs in a community and the resources and response needs. A CAT is an 18-person incident management team that is deployed to a specific jurisdiction to assist or supplement the regional or local public health response structure. A DOG is a specialized team that is deployed to provide subject matter expertise at the local or regional level. Typical DOG teams include epidemiologists, sanitarians, nurses, physicians, or may include functional components like logistics support.
- Just-in-time procurement and delivery of specific products in support of an incident. This may include purchase and delivery of chemicals to support vector control efforts after flooding.
- Sheltered of thousands of medically dependent evacuees from numerous hurricanes that have impacted the Texas and Louisiana gulf coasts.
- Established medical shelters that provided needed medical care and support to evacuees arriving by ambulance, chartered bus, private

vehicles, and in some cases, military aircraft.

An emerging and successful component of response used in Texas is the Community Assessment for Public Health Emergency Response (CASPER). The CASPER capability at the state, regional, and local levels has been integrated with the Incident Command System (ICS) and is recognized as a valuable resource. This technique includes assembling teams to go to impacted communities and interview persons about their public health needs using a set of tools (household sampling, GIS, epidemiology software, interviewing, and analysis). The CASPER assessments provide reliable information to public health officials and emergency managers in order to improve response and recovery.

10. Recovery

DSHS continues to provide support to local jurisdictions and businesses during the recovery phase of a disaster. DSHS assists local and regional health departments and other local government agencies with environmental and food safety teams to help re-open retail and wholesale food establishments such as restaurants, food stores, and food manufacturing plants. DSHS also assists damaged hospitals with architectural and engineering guidance to assure compliance with state and federal regulations.

DSHS provides public health and medical assessments regarding health infrastructure, public health door-to-door assessments, first responder vaccinations, such as tetanus and hepatitis, and medical countermeasures for affected citizens.

11. Disaster Behavioral Health Services

DSHS created the Disaster Behavioral Health Services (DBHS) Branch in October 2009 to lessen the adverse behavioral health effects of trauma for victims, survivors and responders of traumatic events, whether those events are natural or man-made. This mission is accomplished by taking an all-hazards approach to planning, a proactive approach to response and a collaborative approach to recovery. DBHS coordinated disaster behavioral health services to a variety of man-made and natural events including the following events:

- Border Violence at Ft Hancock
- Shooting at Ft Hood
- British Petroleum Oil Spill in the Gulf of Mexico off the coast of Louisiana
- Hurricane Ike
- Hurricane Alex

DBHS has also been heavily involved in the development of a Crisis Counseling Program and ancillary response and recovery training programs and support materials which will significantly aid in the provision of Disaster Behavioral Health Services including:

- A Disaster Behavioral Health Response and Recovery Tool Kit
- Critical Incident Stress Management (CISM) Training
- Psychological First Aid (PFA) Training
- Social Services Block Grant (SSBG) Training (emergency response training given to 206 service providers)

Strategic Planning Efforts (2006-2011)

In May 2006, DSHS commissioned The Litaker Group, an Austin-based research consulting

firm, to develop and assist in the implementation of a vision for public health and medical preparedness. The vision was:

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

Within the past five years, Texas has made significant progress to advance public health and medical emergency management. Much more work still remains.

The vision was intended to promote and strengthen future health and medical preparedness activities in Texas.

Progress has been made in each of the following areas identified in this report, and significant progress has been made in the following five focus areas:

1. Human Resources: Appropriately trained and qualified individuals are available to provide medical and mental health care to Texans during and after a disaster.
2. Material resources: Pre-positioned caches are available to support the health and medical needs of individuals during a disaster.
3. Public Information: Accurate, reliable, and informative public information is provided regarding health and medical issues related to potential, imminent, or actual disasters.
4. Systems Interoperability: User-friendly data systems have been expanded to effectively exchange information across multiple platforms with minimal disruption due to lack of interoperability.

5. Leadership and Direction: All levels (state, regional, local) have planned, trained, exercised, and participated in real incidents. Chain of command has been refined and roles and responsibilities have been outlined.

To continue the momentum toward reaching optimal public health and medical emergency management, DSHS embarked on a strategic planning process in October 2010 to clearly define the purpose and to establish realistic goals and objectives consistent with the vision and mission.

Challenges

The goal of the strategic planning process was to:

Three challenges remain:

1. Funding
2. Maintaining appropriate level of infrastructure, including personnel as well as systems and equipment resources
3. Sustained development and training of public health/medical staff, other personnel, and volunteers who will be available for emergency management functions

1. Provide a basis from which progress can be measured and to establish a mechanism for informed change when needed.
2. Develop a sense of ownership of the strategic plan among all internal and external stakeholders.
3. Consider stakeholder opinions to build consensus about where we should be going.
4. Ensure the most effective use of resources by focusing on key priorities.

Strategic Planning Process

In October 2010, the DSHS Community Preparedness Section established a strategic planning work group to begin the process of drafting the Public Health and Medical Emergency Management 5-Year Strategic Plan. To develop this plan, the work group used a modified issues-based planning approach. The sequential steps used in this modified approach were to:

- Conduct an external/internal assessment of strengths, weaknesses, opportunities, and threats (SWOT)
- Identify potential strategies to address the SWOT (Note: this is a modification from normal strategic planning)
- Develop the vision and mission
- Establish strategies
- Identify possible tactics to implement each strategy

Instead of a linear approach, this modification allowed for more circular view of the steps needed in the planning process. This provided a greater opportunity to "think outside of the box" when identifying potential strategies and tactical operation activities.

The planning process consisted of 5 phases.

Phase 1: SWOT Analysis

15 of the targeted capabilities identified in the Targeted Capabilities List version 2.0 the companion document to the National Preparedness Guidelines (NPG) were initially used as potential issues to discuss. The 15 target capabilities were deemed primary responsibilities for public health and medical – Emergency Support Function #8. The

Centers for Disease Control and Prevention also outlined these capabilities in their publication *Public Health Preparedness Capabilities: National Standards for State and Local Planning*.

To identify external opportunities and threats, the strategic planning work group examined the literature to determine current and potential legislative and political, economic, social and demographic, and technological developments that may influence public health and medical emergency management over the next five years. Gathered information was then organized and documented in separate strengths, weaknesses, opportunities, and threats (SWOT) matrices - one for each selected target capability. SWOT matrices allowed the work group to visualize external opportunities and threats alongside internal strengths and weaknesses for improved situational awareness. A list literature used for the SWOT analyses has been provided in Appendix A.

Expert opinion is often used to identify, monitor, forecast, and assess environmental trends. Fifteen focus groups comprised of more than 40 DSHS staff for each of the capabilities were consulted to confirm researched external trends and brainstorm strengths and weaknesses of Texas' public health and medical emergency management system. By brainstorming strengths and weaknesses in light of the external environment, focus groups were able to consider how Texas' resources, competencies, and capabilities relate to developments in public health and medical

emergency management. The focus groups also helped modify the definitions for use in Texas for each of the Target Capabilities. Appendix B lists the modification by both CDC and DSHS compared to the Targeted Capabilities List generated by FEMA.

The next step in Phase 1 was to identify all possible strategies. Focusing on strategies first instead of vision, mission, goals, and objectives allowed for the identification of alternative strategies that may not have been considered.

A recognized method for developing alternative strategies is to conduct a threats, opportunities, weaknesses, and strengths (TOWS) analysis. The TOWS matrix, which builds on the result of the SWOT analysis, matches relevant strengths with opportunities, strengths with threats, relevant weaknesses with opportunities, and weaknesses with threats. The interactions between the four variables suggest adaptive alternative strategies. The work group chose to complete TOWS analyses on all of the preparedness capabilities to address the external environment, draw on internal strengths and weaknesses, and move the organization toward the new vision and mission.

Phase 2: Preparedness Coordinating Council

TOWS matrices were presented to the DSHS Preparedness Coordinating Council (PCC), Texas' version of the Senior Advisory Committee, to obtain strategic planning advice. At their quarterly meeting, PCC members had the opportunity to support strategies the work group developed and propose alternatives. This group activity

allowed for dialogue among PCC members to determine the best course of action for Texas over the next five years.

Public health and medical emergency management in Texas did not have a unified vision or mission which are both essential in determining strategic direction. Recognizing this gap, the work group considered vision and mission statements from the Department of State Health Services (DSHS), the National Health Security Strategy (NHSS), and several other previous documents.

Potential statements were presented to the Preparedness Coordinating Council (PCC) for review and selection. After consensus was achieved from the PCC on a draft vision and mission, the statements were included in the stakeholder survey for comment.

Phase 3: Stakeholder Input

A survey was developed to obtain information and input from organizations with an interest in public health and medical emergency management. Respondents were asked to comment first on the proposed vision, mission, and goals. Then for each of the selected target capabilities, respondents were asked to list three actions that strengthened the capability, three weaknesses/barriers that hindered attainment, where Texas should be in 5-years, and potential strategies for implementation.

The survey was developed through QuestionPro™ and sent to local health departments, DSHS health service regions, hospitals, regional area councils, city/county government, schools/universities, emergency management, business, non-profit organizations, professional organization, and

federal entities. Out of 208 surveys started, 148 were partially completed (71%). Although it was not expected that a respondent would complete all sections due to the length of the survey, 54/148 (36%) did complete all questions. Appendix C provides a summary of the survey respondents by organization affiliation and health service region. The number of responses received for each of the 15 selected Target Capabilities by organization is included in Appendix D.

The results of the survey were useful in validating SWOT analyses and identifying additional strategies from a variety of perspectives.

Phase 4: Drafting of the Strategic Plan

Vision and Mission: Comments from the survey were incorporated into a final vision and mission for Texas. The vision and mission align with the vision of the National Health Security Strategy which will guide public health and medical preparedness and response nationwide. Simultaneously, the vision and mission statements are unique to the realities of Texas. The vision and mission for public health and medical emergency management in Texas are as follows:

Vision

A Prepared Texas able to effectively respond to and recover from a public health and medical disaster

Mission

To lead Texas in building a robust public health and medical emergency management system in support of

community efforts that foster resilience

Strategy Formulation: To summarize all possible strategies, suggestions were sorted into the four quadrants of the TOWS matrix: the future quadrant (strengths and opportunities), the internal fix-it quadrant (weaknesses and opportunities), the external fix-it quadrant (strengths and threats), and the survival quadrant (weaknesses and threats). By implementing this process, the work group could clearly demonstrate how the proposed strategies minimize external threats and internal weaknesses while maximizing on successes and external opportunities. This process ultimately aided in the evaluation and selection of strategies to move Texas toward the mission and vision

The final selection of strategies was determined through an extensive analysis of all internal and external stakeholder input.

Goals: To align Texas with the National Health Security Strategy (NHSS) both internal and external stakeholders agreed to adopt the two goals of the Biennial Implementation Plan (BIP) of the NHSS. These strategic goals will provide direction, yet are broad enough to allow for considerable discretion at all levels of government.

Strategic Goals for Texas Public Health and Medical Emergency Management

- Build community resilience
- Strengthen and sustain health and emergency response systems

Sub-Goals and Outcome Objectives: After strategies were selected and refined, the strategic planning work group held several meetings to craft sub-goals and measurable

outcome objectives. During these meetings suggestions from the stakeholder survey, PCC meeting, and focus groups were taken into consideration. Benchmarks outlined in the Biennial Implementation Plan (BIP) were also considered.

Plan Development: Responses from DSHS Staff, PCC members, and the stakeholder survey were carefully analyzed, and the collective voice of these stakeholders confirmed the vision, mission, goals, outcome objectives, and selected strategies for Texas over the next five years.

Tactical Guide: The strategic planning process uncovered diverse and innovative tactics. The work group used these proposed tactics to support the development of sub-goals and outcome objectives. These tactics have been included in a supplemental Tactical Guide to assist local and regional partners in developing their one-year implementation plans to support the sub-goals and outcome objectives of the 5-year Strategic Plan.

Phase 5: Strategic Plan Concurrence

A stakeholder meeting was held on May 17, 2011 to present the 5-Year Strategic Plan. Approximately 150 stakeholders representing health service regions, local health departments, regional advisory councils, non-profit organizations, hospitals, emergency management, academia, federal entities, and professional organizations attended. All stakeholders supported the plan and agreed to focus on 2-3 strategies each year.

Conclusion

The challenge in building an integrated and coordinated strategic plan is to identify a common approach for Texas at all levels of government. The sub-goals, outcome objectives, and strategies presented in this plan provide a unified, common approach that goes beyond conventional thinking and the status quo. The hope is that the vision, mission, goals, objectives, and strategies will put Texas on a collaborative path towards effectively preparing for, responding to, and recovering from public health and medical emergencies.

Vision, Mission, Goals, Objectives, and Strategies

This section outlines the vision, mission, goals, outcome objectives, and strategies identified by stakeholders as the most important to Texas for the next five years. The sub-goals, outcome objectives, and strategies are outlined as they relate to the broader strategic goals. In parentheses, the preparedness capabilities are listed to represent which capabilities the strategies most relate to. The strategies are cross-cutting; therefore there may be more than one capability that applies to each. A listing of the capabilities and their full definition can be found in Appendix B.

Vision

A Prepared Texas able to effectively respond to and recover from public health and medical disasters

Mission

Lead Texas in building a robust public health and medical emergency management system in support of community efforts that foster resilience

Strategic Goals

Build Community Resilience

Community resilience is the sustained ability of communities to withstand and recover—in both the short and long terms—from adversity, such as an influenza pandemic or terrorist attack. Resilient communities are prepared to take deliberate, collective action in the face of an incident and have developed material, physical, social, and psychological resources that function as a buffer to these incidents and help protect people’s health.

Strengthen and Sustain Health and Emergency Response Systems

Services provided by public health, health care delivery, and emergency response systems complement efforts to build community resilience. Strong public health, health care delivery, and emergency response systems can help minimize and/or prevent some incidents from occurring; facilitate rapid detection and characterization of a health incident; provide care to those affected; reduce the effects of the incident on the community; and help a community recover after an incident.

Build Community Resilience

Sub-Goal 1

Resilient communities

Community resilience involves the empowerment of individuals to address unique physical, social, and environmental determinates of health which influence a community's ability to take deliberate, collective action in the face of an incident. Tactics such as coalition building, social networking, fostering situational awareness, and education and training can be implemented to enhance resilience. Resilient communities are aware of potential risks as well as what is expected from community members before, during, and after an incident and, in turn, what they can expect from government.

Outcome Objective 1.1

70% of communities are able to withstand and recover from an event/incident impacting health and return to a state of self-sufficiency with limited external support.

- **Strategy 1.1.1**
Improve a community's ability to mitigate and absorb health incidents. *(Link to Preparedness Capability 1: Community Preparedness and Preparedness Capability 2: Community Recovery)*
- **Strategy 1.1.2**
Enhance a community's ability to recover. *(Link to Preparedness Capability 2: Community Recovery)*
- **Strategy 1.1.3**
Incorporate evaluation of post incident recovery operations into preparedness. *(Link to Preparedness Capability 2: Community Recovery)*

Outcome Objective 1.2

70% of communities can access a sufficient number of trained staff to support an incident.

- **Strategy 1.2.1**
Develop and maintain state and local workforce. *(Link to Preparedness Capability 1: Community Preparedness)*



Volunteers in Galveston, 2008
Source Associated Press

Strengthen and Sustain Health and Emergency Response Systems

Sub-Goal 1

Coordinated response across and throughout all jurisdictional levels (federal, state, and local)

A coordinated response is fundamental in supporting an event or incident with public health and/or medical implications. An effective response involves the application of a scalable system to direct and support activities, the sharing of critical information through interoperable communication systems, and the use of partnerships and collaborations to coordinate response at all levels of government.

Outcome Objective 1.1

100% of public health and medical responses to a natural/man-made incident are consistent with regional/local standards/ practices within National Incident Management System (NIMS).

- **Strategy 1.1.1**
Enhance capacity to use NIMS to direct and support an incident with public health and medical service implications. *(Link to Preparedness Capability 3: Emergency Operations Coordination)*

Outcome Objective 1.2

90% of response partners will use current/emergent technology to gather and share information from medical, public health, and other health security stakeholders to maintain situational awareness.

- **Strategy 1.2.1**
Manage situational awareness among response partners across jurisdictions. *(Link to Preparedness Capability 4: Emergency Public Information and Warning and Preparedness Capability 6: Information Sharing)*

Outcome Objective 1.3

90% of fatality management activities will be coordinated within an Incident Command System.

- **Strategy 1.3.1**
Enhance support of mass fatality activities. *(Link to Preparedness Capability 5: Fatality Management)*

Outcome Objective 1.4

90% of public information is developed, coordinated, and disseminated in a timely manner through an integrated joint information system.

- **Strategy 1.4.1**
Enhance collaboration and coordination with partners. *(Link to Preparedness Capability 6: Information Sharing)*

Outcome Objective 1.5

100% of affected persons with medical needs and their companion animals being sheltered are provided timely functional needs support services.

- **Strategy 1.5.1**
Support regional mass care activities. *(Link to Preparedness Capability 7: Mass Care)*

Strengthen and Sustain Health and Emergency Response Systems

Sub-Goal 2

Timely detection and evaluation of adverse health outcomes in the population

Timely detection and evaluation of adverse health outcomes includes ongoing surveillance, epidemiological investigations, confirmatory testing, data reporting, investigative support, laboratory networking, and sharing of information. The expansion and integration of systems and processes used to prevent and mitigate environmental and other emerging health threats will enhance situational awareness and detection.

Outcome Objective 2.1

90% of identified adverse health outcomes will be detected within established timeframe for the causation of the event

■ **Strategy 2.1.1**

Improve systems to timely detect, identify, confirm, and report agents. *(Link to Preparedness Capability 12: Public Health Laboratory Testing and Preparedness Capability 13: Public Health Surveillance and Epidemiological Investigation)*

■ **Strategy 2.1.2**

Further integrate laboratory diagnostic reporting systems to enhance routine and real-time surveillance reporting. *(Link to Preparedness Capability 12: Public Health Laboratory Testing)*

■ **Strategy 2.1.3**

Monitor the health of mass care populations. *(Link to Preparedness Capability 7: Mass Care)*



CASPER Interview, 2008

Source Texas Department of State Health Services

Strengthen and Sustain Health and Emergency Response Systems

Sub-Goal 3

Reduce the predicted rate of incidence and or mortality in a community throughout a public health emergency

The ability implement control measures, such as non pharmaceutical intervention or to dispense appropriate medical countermeasures to the identified population and recommend (and implement if applicable) strategies for disease, injury, and exposure control are essential in reducing the rate of incidence and/or mortality throughout an incident. An effective countermeasure and non-pharmaceutical intervention enterprise involves participation from support agencies and volunteers at the community level.

Outcome Objective 3.1

100% of the identified population access to appropriate medical countermeasures.

- **Strategy 3.1.1**
Expand medical countermeasure delivery systems to reach all populations. (*Link to Preparedness Capability 9: Medical Material Management and Distribution*)
- **Strategy 3.1.2**
Enhance capability for medical countermeasure dispensing. (*Link to Preparedness Capability 8: Medical Countermeasure Dispensing*)

Outcome Objective 3.2

Increase by 20% use/access of non-pharmaceutical interventions.

- **Strategy 3.2.1**
Facilitate community behavior change. (*Link to Preparedness Capability 11: Non-Pharmaceutical Interventions*)
- **Strategy 3.2.2**
Enhance coordination and collaboration with partners and stakeholders for non-pharmaceutical interventions. (*Link to Preparedness Capability 11: Non-Pharmaceutical Interventions*)



State Medical Operations Center during H1N1 Pandemic, 2009
Source Texas Department of State Health Services

Strengthen and Sustain Health and Emergency Response Systems

Sub-Goal 4

Consistent, real-time statewide awareness of medical supplies/materiel and equipment purchased for public health and medical incidents

The management of medical supplies/materiel entails the ability to acquire and maintain medical materiel; to transport, distribute, and track medical materiel during an incident; and to recover and account for unused medical materiel, as necessary, after an incident. These functions will be accomplished through the use of an integrated inventory management system.

Outcome Objective 4.1

90% of all medical supplies/materiel and equipment purchased for public health and medical incidents will be managed through the integrated inventory system.

- **Strategy 4.1.1**

Develop a statewide medical supply management and distribution tracking

system. (*Link to Preparedness Capability 9: Medical Material Management and Distribution*)

- **Strategy 4.1.2**

Strengthen local capacity to manage and distribute medical supplies. (*Link to Preparedness Capability 9: Medical Material Management and Distribution*)



CDC Warehouse, 2011

Source Centers for Disease Control and Prevention

Strengthen and Sustain Health and Emergency Response Systems

Sub-Goal 5

Effectively manage, from a systems approach, the health care surge needs of the community resulting from a public health emergency.

Rapidly expanding the capacity of the existing healthcare system in order to provide triage and subsequent medical care includes providing definitive care to individuals at the appropriate clinical level of care, within sufficient time to achieve recovery and minimize medical complications. This sub-goal uses a systems approach to manage events or incidents that overwhelm the day-to-day acute-care medical capacity.

Outcome Objective 5.1

The health care system will manage an increase of 20% of the population impacted during an incident.

- **Strategy 5.1.1**
Expand treatment capacity. ([Link to Preparedness Capability 10: Medical Surge](#))
- **Strategy 5.1.2**
Establish a coordinated approach to addressing altered standards of care. ([Link to Preparedness Capability 10: Medical Surge](#))



Disaster Medical Assistance Team
Source IA1 DMAT Team

Strengthen and Sustain Health and Emergency Response Systems

Sub-Goal 6

Protect the safety and health of public health and medical responders/receivers

Responder safety and health includes protecting the safety and health of first responders, hospital/medical facility personnel (first receivers), and skilled support personnel, through the creation and maintenance of an effective safety and health program.

Outcome Objective 6.1

Protect 100% of responders from adverse safety and health concerns.

- **Strategy 6.1.1**

Create systems to prevent, mitigate, and monitor adverse health events for responders during response and recovery. (Link to Preparedness Capability 14: Responder Safety and Health)



La Grange CBRNE Exercise, 2010
Photo courtesy of Texas Department of State Health Services

Sub-Goal 7

Current and emergent technology is used to disseminate information to the public

Rapid advancements in communication methods require the continuous development and enhancement of public information systems in close coordination with emergency management officials. Sub-goal 7 focuses on the dissemination of information, alerts, warnings, and notifications to the public.

Outcome Objective 7.1

90% of the public is targeted through multiple communication mechanisms.

- **Strategy 7.1.1**

Expand public information and warning dissemination systems. (Link to Preparedness Capability 4: Emergency Public Information and Warning)



Photo courtesy of TexasPrepares.org

Strengthen and Sustain Health and Emergency Response Systems

Sub-Goal 8

A robust volunteer system that can support public health and medical response and recovery

Volunteers are a valuable asset in any emergency. Coordinating the identification, recruitment, registration, credentialing, training, and engagement of volunteers to support public health and medical response will be accomplished through an integrated system that addresses affiliated and unaffiliated (spontaneous) volunteers.

Outcome Objective 8.1

Increase by 20% the number of registered/credentialed volunteers

- **Strategy 8.1.1**
Integrate new and existing volunteer opportunities. *(Link to Preparedness Capability 15: Volunteer Management)*

Next Steps

Implementation Planning

The next step in the strategic planning process is the formulation of a comprehensive implementation plan.

All entities directly affected by this Strategic Plan are encouraged to develop an implementation plan that includes operational action plans. This will transform the vision of the strategic plan into reality.

Suggested Use of the Tactical Guide

The Tactical Guide, a companion document to the Texas Public Health and Medical 5-year Strategic Plan, is a compilation of current and potential activities identified through the recent strategic planning process. Although not meant to be prescriptive, the Guide provides suggested activities/functions for

each strategy that may be implemented to achieve desired outcomes. The purpose of this Guide is to stimulate discussion of potential activities that may not have been previously considered.

Review and Evaluation of the Strategic Plan

The Texas Public Health and Medical Emergency Management 5-year Strategic Plan will be reviewed annually to determine if the implemented strategies remain responsive to the current situation. An annual strategic planning stakeholder meeting will be held to evaluate the plan and revise if needed.

The Tactical Guide will be updated annually to include updates in technology and inclusion of new initiatives/best practices.

Appendix A: Literature for SWOT Analyses

- Aakko E, Weed N, Konrad R, Wiesman J. (2008). Rethinking volunteer management using a centralized volunteer staging and training area. *Disaster Med Public Health Prep*, 2(2):127-9.
- Arnold J, Levine B, Manmatha R, Lee F, Shenoy P, Tsai MC, Ibrahim T, O'Brien D, Walsh D. (2004). Information-sharing in out-of-hospital disaster response: the future role of information technology. *Pre-hospital and Disaster Medicine*, July-September 2004.
- Barsky LE, Trainor JE, Torres MR, Aguirre BE. (2007). Managing volunteers: FEMA's Urban Search and Rescue programme and interactions with unaffiliated responders in disaster response. *Disasters*, 31(4):495-507.
- Biddinger PD, Savoia E, Massin-Short SB, Preston J, Stoto MA. (2010). Public Health Emergency Preparedness Exercises: Lessons Learned. *Public Health Rep*, 125(5):100-106.
- Bryson JM. (2005). Creating and implementing your strategic plan: A workbook for public and non-profit organizations. John Wiley and Sons.
- California Emergency Management Agency. (2006). State of California coroner's mutual aid plan. Mather, CA.: Law Enforcement Branch. Retrieved from:
[http://www.calema.ca.gov/Operational/OESHome.nsf/0d737f261e76eeb588256b27007ac5ff/a3f586fd13d795c788256b7b0029bbff/\\$FILE/CoronersMutualAidPlan2006.pdf](http://www.calema.ca.gov/Operational/OESHome.nsf/0d737f261e76eeb588256b27007ac5ff/a3f586fd13d795c788256b7b0029bbff/$FILE/CoronersMutualAidPlan2006.pdf).
- Carpenter M, Hodge JG Jr, Pepe RP. (2008). Deploying and using volunteer health practitioners in response to emergencies: proposed uniform state legislation provides liability protections and workers' compensation coverage. *Am J Disaster Med*, 3(1):17-23.
- Chandra A, Acosta J, Meredith L, Sanches K, Stern S, Uscher-Pines L, Williams M, Yeung D. (2010) Understanding community resilience in the context of national health security. RAND. Retrieved from:
http://www.rand.org/pubs/working_papers/WR737.html.
- Centers for Disease Control and Prevention. (2004) Medical examiners, coroners, and biologic terrorism: a guidebook for surveillance and case management. *MMWR*, 53(NO.RR-8): 1-3, 24.
- Centers for Disease Control and Prevention. (2007). Interim pre-pandemic planning guidance: Community strategy for pandemic influenza mitigation in the United States. Author. Retrieved from:
http://www.pandemicflu.gov/professional/community/community_mitigation.pdf.
- Centers for Disease Control and Prevention. (2011). Public health preparedness capabilities: National standards for state and local planning. Retrieved from:
http://www.cdc.gov/phpr/capabilities/Capabilities_March_2011.pdf.
- Chen R, Sharman R, Hao HR, Uupadhyaya S. (2008). Coordination in emergency response management. *Communications of the ACM*, 51(5).
- Clizbe JA (2004). Challenges in managing volunteers during bioterrorism response. *Biosecur Bioterror*, 2(4):294-300.
- Cutter SL, Barnes L, Berry M, Burton C, Evans E, Tate E, Webb J. (2008). A place-based model for understanding community resilience to natural disasters. *Global Environmental Change*, 18, 598-606.
- Dantas A, Seville E, Nicholson A. (2006). Information sharing during disaster: can we do better? *Resilient Organziations Research Report*, 2006/2 Retrieved from:
<http://ir.canterbury.ac.nz/handle/10092/2843>
- Dausey DJ, Buehler JW, Lurie N. (2007). Designing and conducting tabletop exercises to assess public health preparedness for manmade and naturally occurring biological threats. *BMC Public Health*, 7:92.

- Dearinger AT, Howard A, Ingram R, Wilding S, Scutchfield D, Pearce KA, Hall B. (2011). Communication efforts among local health departments and health care professionals during the 2009 H1N1 outbreak. *J Public Health Manag Pract*, Jan-Feb; 17(1):45-51.
- Downes FP, Ridderhof JC. (2010). The evolving public health laboratory system. *Public Health Rep*, May-Jun;125 Suppl 2:1-3
- Epstein RH, Ekbatani A, Kaplan J, Shechter R, Grunwald Z. (2010). Development of a staff recall system for mass casualty incidents using cell phone text messaging. *Anesth Analg*, Mar 1;110(3):871-8.
- Fernandez LS, Barbera JA, Van Dorp JR. (2006). Strategies for Managing Volunteers during Incident Response: A Systems Approach. *Homeland Security Affairs* II, 3, (October 2006). Retrieved from: <http://www.hsaj.org/index.php?article=2.3.9>.
- Fothergill A, Palumbo MV, Rambur B, Reinier K, McIntosh B. (2005). The volunteer potential of inactive nurses for disaster preparedness. *Public Health Nurs*, 22(5):414-21.
- Glassman ES, Parrillo SJ. (2010). Use of alternate healthcare facilities as alternate transport destinations during a mass-casualty incident. *Prehosp Disaster Med*, Mar-Apr;25(2):178-82.
- Grier NL, Homish GG, Rowe DW, Barrick C. (2011). Promoting information sharing for multijurisdictional public health emergency preparedness. *J Public Health Manag Pract*, Jan-Feb;17(1):84-9.
- Hamilton DR, Gavagan TF, Smart KT, Upton LA, Havron DA, Weller NF, Shah UA, Fishkind A, Persse D, Shank P, Mattox K. (2009). Houston's medical disaster response to Hurricane Katrina: part 1: the initial medical response from Trauma Service Area Q. *Ann Emerg Med*, Apr;53(4):505-14.
- Hayden RT, Wick MT, Rodriguez AB, Caliendo AM, Mitchell MJ, Ginocchio CC. (2010). A survey-based assessment of United States clinical laboratory response to the 2009 H1N1 influenza outbreak. *Arch Pathol Lab Med*, Nov;134(11):1671-8.
- Helsloot I, Ruitenberg A. (2004). Citizen Response to Disasters: a Survey of Literature and Some Practical Implications. *Journal of Contingencies and Crisis Management*, 12(3), 98-111.
- Hoard ML, Tosatto RJ. (2005). Medical Reserve Corps: strengthening public health and improving preparedness. *Disaster Manag Response*, 3(2):48-52.
- Hodge JG, Gable LA, Calves S. (2005). The Legal framework for meeting surge capacity through the use of volunteer health professionals during public health emergencies and other disasters. *The Catholic University of America Journal of Contemporary Health Law & Policy*, 1-47.
- Hooft PI, Noji E, Van de Voorde H. (1989). Fatality Management in Mass Casualty Incidents. *Forensic Science International*, 40, 3-14.
- Inhorn SL, Astles JR, Gradus S, Malmberg V, Snippes PM, Wilcke BW Jr, White VA. (2010). The state public health laboratory system. *Public Health Rep*, May-Jun;125 Suppl 2:4-17.
- Jackson B. (2006). Information sharing and emergency responder safety management. Testimony presented before the House Government Reform Committee on March 30, 2006. Retrieved from: <http://www.rand.org/pubs/testimonies/CT258.html>
- James JJ, Subbarao S, Lanier WL. (2008). Improving the Art and Science of Disaster Medicine and Public Health Preparedness. *Mayo Clinic Proceedings*, May;83(5):559-562.
- Khan AS, Fleischauer A, Casani J, Groseclose SL. (2010). The next public health revolution: public health information fusion and social networks. *Am J Public Health*, Jul;100(7):1237-42.
- Litaker JR, Chou JY, Morrill JB. (2007) An assessment of current health and medical capabilities in Texas; A state-level review. Retrieved from: http://www.litakergroup.com/2_Litaker_Group_Current_H&M_Capabilities_Texas_State_Level_July_2007.pdf.
- Litaker JR, Chou JY, Morrill JB. (2007). 2010 Strategic vision: Health and medical preparedness in Texas. Retrieved from: http://www.litaker.com/2010_Strategic_Vision_H&M_Preparedness_in_Texas_Final_Report.pdf.

- Magsino S. (2009). Applications of social network analysis for building community disaster resilience. *National Research Council*. Washington D.C. Retrieved from: <http://www.nap.edu/catalog12706.html>.
- Marincioni F. (2007) Information technologies and the sharing of disaster knowledge: the critical role of professional culture. *Disasters*, 31(4):459-476.
- Mason B. (2006). Community disaster resilience. *Workshop of the Disasters Roundtable*. Retrieved from: <http://www.nap.edu/catalog/11769.html>.
- McCabe OL, Barnett DJ, Taylor HG, Links JM. (2010). Ready, Willing, and Able: A Framework for Improving the Public Health Emergency Preparedness System. *Disaster Medicine and Public Health Preparedness*, 4: 161-168.
- Meltzer MI, McNeill KM, Miller JD. (2010). Laboratory surge capacity and pandemic influenza. *Centers for Disease Control and Prevention*, PMID: 20031064.
- Millitello L, Patterson E, Bowman L, Wears R (2006). Information flow during crisis management: challenges to coordination in the emergency operations center. *Cognitive Tech Work*, 9:25-31. Doi: 10.1007/s10111-006-0059-3.
- Milne KC, Milne TL. (2010). Public Health Laboratory System Improvement Program: development and implementation. *Public Health Rep*, May-Jun;125 Suppl 2:31-9.
- Miniati R, Dori F, Iadanza E, Lo Sardo M, Boncinelli S. (2010). Longitudinal expandable shelter for medical response during disasters. *Am J Disaster Med*, Jul-Aug;5(4):221-7.
- Morgan, Oliver—ed, Management of dead bodies after disasters: a field guide for first responders. Washington, D.C., PAHO. 2006.
- Nager AL, Khanna K. (2009). Emergency department surge: models and practical implications. *J Trauma*, Aug; 67(2 Suppl):S96-9.
- Nelson C, Lurie N, Wasserman J. (2007). Assessing Public Health Emergency Preparedness: Concepts, Tools, and Challenges. *Annual Review of Public Health*, Apr;28: 1-18.
- Norris FH, Steven SP, Pfefferbaum B, Wyche KF, Pfefferbaum RL. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *Am. J. Community Psychol*, 41:127-150.
- Nuzzo JB, Mair M, Franco C. (2009). Preserving Gains from Public Health Emergency Preparedness Cooperative Agreements. *Biosecurity and Bioterrorism*, 7(1).
- Paturas, JL, Smith D, Smith S, Albanese J. (2010). Collective response to public health emergencies and large-scale disasters: Putting hospitals at the core of community resilience. *J Bus Contin Emer Plan*, 2010 Mar;4(3):286-95.
- Peleg K, Kellermann AL. (2009). Enhancing hospital surge capacity for mass casualty events. National Center for Trauma & Emergency Medicine Research, *JAMA*, Aug 5;302(5):565-7.
- Pribble JM, Fowler EF, Kamat SV, Wilkerson WM, Goldstein KM, Hargarten SW. (2010). Communicating emerging infectious disease outbreaks to the public through local television news: public health officials as potential spokespeople. *Disaster Med Public Health Prep*, Oct;4(3):220-5.
- Qureshi K, Gershon RM, Conde F. (2008). Factors that influence Medical Reserve Corps recruitment. *Prehosp Disaster Med*, 23(3):s27-34.
- Richmond A, Hostler L, Leeman G, King W. (2010). A Brief History and Overview of CDC's Centers for Public Health Preparedness Cooperative Agreement Program. *Public Health Rep*, 125(Suppl 5): 8–14.
- Roszak AR, Jensen FR, Wild RE, Yeskey K, Handrigan MT. (2009). Implications of the Emergency Medical Treatment and Labor Act (EMTALA) during public health emergencies and on alternate sites of care. *Disaster Med Public Health Prep*, Dec;3 Suppl 2:S172-
- Schoch-Spana, M, Courtney, B., Franco, C., et.al. (2008). Community resilience roundtable on the implementation of homeland security presidential directive 21 (HSPD-21). *Biosecurity and Bioterrorism*:

Biodense, Strategy, Practice, and Science, 6(3):269-278.

Schultz CH, Stratton SJ. (2007) Improving hospital surge capacity: a new concept for emergency credentialing of volunteers. *Ann Emerg Med*, 49(5):602-9. Epub 2006 Nov 15.

Shephard EM, Klein EJ, Koelemay KG, Thompson J. (2009). Disaster preparedness: are retired physicians willing to help? *Am J Disaster Med*, 4(5):279-86.

Stroud C, Altevogt BM, Goldfrank LR. (2010). Institute of Medicine's Forum on Medical and Public Health Preparedness for Catastrophic Events: current initiatives. *Disaster Med Public Health Prep*, Jun;4(2):174-7.

Subbarao I, Lyznicki JM, Hsu EB, Gebbie KM, Markenson D, Barzansky B, Armstrong, JH, Cassimatis EG, Coule PL, Dallas CE, King RV, Rubinson L, Sattin R, Swienton RE, Lillibridge S, Burkle FM, Schwartz RB, James JJ. (2007). A Consensus-based Educational Framework and Competency Set for the Discipline of Disaster Medicine and Public Health Preparedness. *Am J Disaster Med*, 2(1):57-68.

Texas Office of the Governor (2010). Texas homeland security strategic plan. Retrieved from: <http://governor.state.tx.us/files/homeland/HmLndSecurity StratPlan2015.pdf>.

The National Academies Collection: Reports funded by National Institutes of Health. (2010) Forum on Medical and Public Health Preparedness for Catastrophic Events. *Institute of Medicine* (US) Washington (DC): National Academies Press (US).

Texas Workforce Commission. (2005). Strategic planning: Managing strategically. Retrieved from: http://www.twc.state.tx.us/boards/board_plan/strat_planning.pdf.

US Department of Health and Human Services (2009). National health security strategy of the United States of America. Washington D.C. Author. Retrieved from: <http://www.phe.gov/Preparedness/planning/authority/nhss/strategy/Documents/nhss-final.pdf>.

US Congress. (2006). Pandemic and All Hazards Preparedness Act. Retrieved from:

<http://www.govtrack.us/congress/billtext.xpd?bill=s109-3678>.

US Department of Health and Human Services. (2010). Biennial Implementation Plan to the national health security strategy. (DRAFT). <http://www.phe.gov/Preparedness/planning/authority/nhss/bip/Pages/default.aspx>.

US Department of Health and Human Services. (2007). Medical Surge Capacity Handbook, 2nd Ed. Retrieved from: <http://www.phe.gov/preparedness/planning/mscc/handbook/pages/default.aspx>.

US Department of Homeland Security. (2007). Homeland security presidential directive 21. Retrieved from: http://www.dhs.gov/xabout/laws/gc_1219263961449.shtm.

US Department of Homeland Security. (2007). Targeted capabilities list: A companion to the national preparedness guidelines. Retrieved from: <http://www.fema.gov/pdf/government/training/tcl.pdf>.

US Department of Homeland Security. (2008). National response framework. Retrieved from: http://www.fema.gov/pdf/emergency/nrf/about_nrf.pdf.

US Department of Homeland Security. (2007). National preparedness guidelines. Retrieved from: <http://www.dhs.gov/xlibrary/assets/National Preparedness Guidelines.pdf>.

Wilcke BW Jr, Inhorn SL, Astles JR, Su B, Wright A, White VA. (2010). Laboratory services in support of public health: a status report. *Public Health Rep*, May-Jun; 125 Suppl 2:40-6.

Wood CM (2010). Modeling the processing of mass fatalities. Public Health Preparedness Summit. Atlanta, Ga. Retrieved from [http://www.phprep.org/2010/Agenda/upload/InterActive-206.pdf](http://www.phprep.org/2010/Agenda/upload/Interactive-206.pdf).

Yeager VA, Menachemi N, McCormick LC, Ginter PM. (2010) The Nature of the Public Health Emergency Preparedness Literature 2000-2008: A Quantitative

Analysis. *Journal of Public Health Management & Practice*, Sept-Oct; 16(5): 441–449.

Younge, O, Rosychuk RJ, Bailey TM, Lake R, Marrie TJ. (2010). Willingness of university nursing students to volunteer during a pandemic. *Public Health Nursing*, 27(2):174-80.

Appendix B: Target Capability Comparison

National Preparedness Guideline Targeted Capability Name	National Preparedness Guidelines Targeted Capabilities List Definition	CDC/DSHS Targeted Capability Name	CDC Targeted Capabilities Definition	DSHS Targeted Capabilities Definition
<p>Community Preparedness and Participation</p>	<p>The Community Preparedness and Participation capability provides that everyone in America is fully aware, trained, and practiced on how to prevent, protect/mitigate, prepare for, and respond to all threats and hazards. This requires a role for citizens in personal preparedness, exercises, ongoing volunteer programs, and surge capacity response. Specific capabilities for UNIVERSAL preparedness, including knowledge of all-hazards (technological, natural, and terrorist incidents) and related protective measures, skills, and supplies, will be determined through a collaborative process with emergency responders.</p>	<p>Community Preparedness</p>	<p>Community preparedness is the ability of communities to prepare for, withstand, and recover — in both the short and long terms — from public health incidents.</p>	<p><i>The community preparedness capability is the sustained ability of communities to prepare for, withstand, and recover—in both the short and long terms—from public health incidents.</i></p>
		<p>Community Recovery</p>	<p>Community recovery is the ability to collaborate with community partners, (e.g., healthcare organizations, business, education, and emergency management) to plan and advocate for the rebuilding of public health, medical, and mental/behavioral health systems to at least a level of functioning comparable to pre-incident levels, and improved levels where possible.</p>	<p><i>The community recovery capability is the ability to implement sustainable short and long term recovery and adaptation processes during and after an incident. This capability encompasses the rebuilding of public health, medical and mental health systems to at least a level of functioning comparable to pre-incident levels, and improved levels where appropriate.</i></p> <ul style="list-style-type: none"> • Resilience — resilience is the pliability, flexibility, or elasticity of the population/environment to absorb, buffer, and/or manage the event/damage.

National Preparedness Guideline Targeted Capability Name	National Preparedness Guidelines Targeted Capabilities List Definition	CDC/DSHS Targeted Capability Name	CDC Targeted Capabilities Definition	DSHS Targeted Capabilities Definition
Intelligence and Information Sharing	The Intelligence and Information Sharing and Dissemination capability provides necessary tools to enable efficient prevention, protection, response, and recovery activities. Intelligence/Information Sharing and Dissemination is the multi-jurisdictional, multidisciplinary exchange and dissemination of information and intelligence among the Federal, State, local, and tribal layers of government, the private sector, and citizens. The goal of sharing and dissemination is to facilitate the distribution of relevant, actionable, timely, and preferably declassified or unclassified information and/or intelligence that is updated frequently to the consumers who need it.	Information Sharing	Information sharing is the ability to conduct multijurisdictional, multidisciplinary exchange of health-related information and situational awareness data among federal, state, local, territorial, and tribal levels of government, and the private sector. This capability includes the routine sharing of information as well as issuing of public health alerts to federal, state, local, territorial, and tribal levels of government and the private sector in preparation for, and in response to, events or incidents of public health significance.	<i>The ability for multi-jurisdictional, multi-disciplinary exchange of health related information and situational awareness data among federal, state, local, territorial, and tribal layers of government, and the private sector. This capability includes the routine sharing of information as well as issuing of public health alerts to federal, state, local, territorial and tribal layers of government and the private sector in preparation for, and in response to, events or incidents of public health significance.</i>
Responder Safety and Health	Responder Safety and Health is the capability that ensures adequate trained and equipped personnel and resources are available at the time of an incident to protect the safety and health of on scene first responders, hospital/medical facility personnel (first receivers), and skilled support personnel through the creation and maintenance of an effective safety and health program.	Responder Safety and Health	The responder safety and health capability describes the ability to protect public health agency staff responding to an incident and the ability to support the health and safety needs of hospital and medical facility personnel, if requested.	<i>Responder safety and health is the capability that addresses adequately trained, deployment-ready, and equipped personnel and resources are available at the time of an incident to protect the safety and health of first responders, hospital/medical facility personnel (first receivers), skilled support personnel, and, if necessary, their families through the creation and maintenance of an effective safety and health program.</i>
Isolation and Quarantine	Isolation and Quarantine is the capability to protect the health of the population through the use of isolation and/or quarantine measures in order to contain the spread of disease. Isolation of ill individuals may occur in homes, hospitals, designated health care facilities, or alternate facilities. Quarantine refers to the separation and restriction of movement of persons who, while not yet ill, have been exposed to an infectious agent and may become infectious.	Non-pharmaceutical Interventions	Non-pharmaceutical interventions are the ability to recommend to the applicable lead agency (if not public health) and implement, if applicable, strategies for disease, injury, and exposure control. Strategies include isolation and quarantine, restrictions on movement and travel advisory/warnings, social distancing, external decontamination, hygiene, and precautionary protective behaviors	<i>The ability to recommend (and implement if applicable) strategies for disease, injury, and exposure control including:</i> <ul style="list-style-type: none"> – <i>isolation and quarantine</i> – <i>restrictions on movement, travel advisory/warnings</i> – <i>social distancing/closures</i> – <i>External decontamination</i> – <i>Hygiene</i> – <i>Healthy behaviors</i>

National Preparedness Guideline Targeted Capability Name	National Preparedness Guidelines Targeted Capabilities List Definition	CDC/DSHS Targeted Capability Name	CDC Targeted Capabilities Definition	DSHS Targeted Capabilities Definition
				<ul style="list-style-type: none"> – <i>Over the counter (OTC) – (Link to Countermeasure Distribution)</i> – <i>Personal protective behaviors</i>
Medical Surge	Medical Surge is the capability to rapidly expand the capacity of the existing healthcare system (long term care facilities, community health agencies, acute care facilities, alternate care facilities and public health departments) in order to provide triage and subsequent medical care.	Medical Surge	Medical surge is the ability to provide adequate medical evaluation and care during events that exceed the limits of the normal medical infrastructure of an affected community. It encompasses the ability of the healthcare system to survive a hazard impact and maintain or rapidly recover operations that were compromised.	<p><i>Medical Surge is the capability to rapidly expand the capacity of the existing healthcare system (long-term care facilities, community health agencies, acute care facilities, alternate care facilities and public health departments) in order to provide triage and subsequent medical care.</i></p> <p><i>This includes providing definitive care to individuals at the appropriate clinical level of care, within sufficient time to achieve recovery and minimize medical complications (right person, right care, and right time). The capability applies to an event resulting in a number or type of patients that overwhelm the day-to-day acute-care medical capacity.</i></p>
Medical Supplies Management and Distribution	Medical Supplies Management and Distribution is the capability to procure and maintain pharmaceuticals and medical materials prior to an incident and to transport, distribute, and track these materials during an incident.	Medical Materiel Management and Distribution	Medical materiel management and distribution is the ability to acquire, maintain (e.g., cold chain storage or other storage protocol), transport, distribute, and track medical materiel (e.g., pharmaceuticals, gloves, masks, and ventilators) during an incident and to recover and account for unused medical materiel, as necessary, after an incident.	<i>The medical supplies management and distribution capability is the ability to acquire and maintain (including warehousing, repackaging, replacing, maintaining equipment, rotating) medical materiel (e.g., pharmaceuticals to include over the counter (OTC), supplies and equipment); to transport, distribute, and track medical materiel during an incident; and to recover and account for unused medical materiel, as necessary, after an incident.</i>
Mass Prophylaxis	Mass Prophylaxis is the capability to protect the health of the population through the administration of critical interventions in response to a public health emergency in order to prevent the development of disease among those who are	Medical Countermeasure Dispensing	Medical countermeasure dispensing is the ability to provide medical countermeasures (including vaccines, antiviral drugs, antibiotics, antitoxin, etc.) in support of treatment or prophylaxis (oral or vaccination) to the	<i>The medical countermeasures dispensing capability is the ability to dispense appropriate medical countermeasures (including prophylaxis, vaccination and treatment) to the identified population within</i>

National Preparedness Guideline Targeted Capability Name	National Preparedness Guidelines Targeted Capabilities List Definition	CDC/DSHS Targeted Capability Name	CDC Targeted Capabilities Definition	DSHS Targeted Capabilities Definition
	exposed or are potentially exposed to public health threats. This capability includes the provision of appropriate follow-up and monitoring of adverse events, as well as risk communication messages to address the concerns of the public.		identified population in accordance with public health guidelines and/or recommendations.	<i>the appropriate public health guidelines and timelines.</i>
Fatality Management	Fatality Management is the capability to effectively perform scene documentation; the complete collection and recovery of the dead, victim's personal effects, and items of evidence; decontamination of remains and personal effects (if required); transportation, storage, documentation, and recovery of forensic and physical evidence; determination of the nature and extent of injury; identification of the fatalities using scientific means; certification of the cause and manner of death; processing and returning of human remains and personal effects of the victims to the legally authorized person(s) (if possible); and interaction with and provision of legal, customary, compassionate, and culturally competent required services to the families of deceased within the context of the family assistance center.	Fatality Management	Fatality management is the ability to coordinate with other organizations (e.g., law enforcement, healthcare, emergency management, and medical examiner/coroner) to ensure the proper recovery, handling, identification, transportation, tracking, storage, and disposal of human remains and personal effects; certify cause of death; and facilitate access to mental/behavioral health services to the family members, responders, and survivors of an incident.	<i>The ability to coordinate with other organizations (e.g. law enforcement, healthcare, emergency management, medical examiner/coroner) to ensure the proper recovery, handling, identification, transportation, tracking, storage, and disposal of remains and personal effects, and facilitate access to mental health services to the family members, responder, and survivors of an incident.</i>
Emergency Operations Center Management	Emergency Operations Center (EOC) Management is the capability to provide multi-agency coordination (MAC) for incident management by activating and operating an EOC for a pre-planned or no-notice event. EOC management includes EOC activation, notification, staffing, and deactivation; management, direction, control, and coordination of response and recovery activities; coordination of efforts among neighboring governments at each level and among local, regional, State, and Federal EOCs; coordination public information and warning; and maintenance of the information and communication necessary for coordinating	Emergency Operations	Emergency operations coordination is the ability to direct and support an event ³⁸ or incident ³⁹ with public health or medical implications by establishing a standardized, scalable system of oversight, organization, and supervision consistent with jurisdictional standards and practices and with the National Incident Management System.	<i>The emergency operations coordination capability is the ability to direct and support an event or incident with public health and medical service implications by establishing a standardized, flexible system of oversight, organization, coordination, and supervision consistent with regional and/or local standards/practices and with the National Incident Management System.</i>

National Preparedness Guideline Targeted Capability Name	National Preparedness Guidelines Targeted Capabilities List Definition	CDC/DSHS Targeted Capability Name	CDC Targeted Capabilities Definition	DSHS Targeted Capabilities Definition
	response and recovery activities.			
Mass Care	Mass Care is the capability to provide immediate shelter, feeding centers, basic first aid, bulk distribution of needed items, and related services to persons affected by a large-scale incident. Mass Care is usually provided by nongovernmental organizations (NGOs), such as the American Red Cross, or by local government.	Mass Care	Mass care is the ability to coordinate with partner agencies to address the public health, medical, and mental/behavioral health needs of those impacted by an incident at a congregate location. This capability includes the coordination of ongoing surveillance and assessment to ensure that health needs continue to be met as the incident evolves.	<i>Mass care is the capability to provide immediate shelter, feeding centers, basic first aid, bulk distribution of needed items, and related services to persons affected by a large scale incident. this capability does cover those individuals who have disabilities that can be accommodated in general population shelters.</i>
Volunteer Management and Donations	Volunteer Management and Donations is the capability to effectively coordinate the use of volunteers and donations in support of domestic incident management.	Volunteer Management	Volunteer management is the ability to coordinate the identification, recruitment, registration, credential verification, training, and engagement of volunteers to support the jurisdictional public health agency's response to incidents of public health significance.	<i>Volunteer management is the ability to coordinate the identification, recruitment, registration, credential verification, training, and engagement of volunteers [1] to support the jurisdictional public health agency's response to incidents of public health significance.</i> <i>[1] Throughout the document, the term "volunteer" refers only to individuals or groups volunteering in support of the public health agency's response, including public health, medical and non-medical personnel.</i>
Epidemiology Surveillance	The Epidemiological Surveillance and Investigation capability is the capacity to rapidly conduct epidemiological investigations. It includes exposure and disease (both deliberate release and naturally occurring) detection, rapid implementation of active surveillance, maintenance of ongoing surveillance activities, epidemiological investigation, analysis, and communication with the public and providers about case definitions, disease risk and mitigation, and recommendation for the implementation of control measures.	Public Health Surveillance and Epidemiological Investigation	Public health surveillance and epidemiological investigation is the ability to create, maintain, support, and strengthen routine surveillance and detection systems and epidemiological investigation processes, as well as to expand these systems and processes in response to incidents of public health significance.	<i>The epidemiology capability is the ability to create, maintain, support and strengthen routine surveillance and detection systems and epidemiologic investigation processes, as well as to expand these systems and processes in response to natural or man-made threats, incidents, or situations.</i>
Emergency Public	The Emergency Public Information and Warning	Emergency Public	Emergency public information and warning is	<i>The emergency public information and Warning</i>

National Preparedness Guideline Targeted Capability Name	National Preparedness Guidelines Targeted Capabilities List Definition	CDC/DSHS Targeted Capability Name	CDC Targeted Capabilities Definition	DSHS Targeted Capabilities Definition
Information and Warning	capability includes public information, alert/warning and notification. It involves developing, coordinating, and disseminating information to the public, coordinating officials, and incident management and responders across all jurisdictions and disciplines effectively under all hazard conditions.	Health and Warning	the ability to develop, coordinate, and disseminate information, alerts, warnings, and notifications to the public and incident management responders.	<i>capability includes public information, alert/warning and notification. It involves developing coordinating, and disseminating information to the public, coordinating officials, and incident management and responders across all jurisdictions and disciplines effectively under all hazard conditions.</i>
Laboratory Testing	The Laboratory Testing capability is the ongoing surveillance, rapid detection, confirmatory testing, data reporting, investigative support, and laboratory networking to address potential exposure, or exposure, to all-hazards which include chemical, radiological, and biological agents in all matrices including clinical specimens, food and environmental samples, (e.g., water, air, soil). Such all-hazard threats include those deliberately released with criminal intent, as well as those that may be present as a result of unintentional or natural occurrences.	Public Health Laboratory Testing	Public health laboratory testing is the ability to conduct rapid and conventional detection, characterization, confirmatory testing, data reporting, investigative support, and laboratory networking to address actual or potential exposure to all-hazards. Hazards include chemical, radiological, and biological agents in multiple matrices that may include clinical samples, food, and environmental samples (e.g., water, air, and soil). This capability supports routine surveillance, including pre-incident or pre-exposure and post-exposure activities.	<i>The laboratory testing capability is the ongoing surveillance, rapid detection, confirmatory testing, data reporting, investigative support, and laboratory networking to address potential exposure, or exposure, to all-hazards which include chemical, radiological, and biological agents in all matrices including clinical specimens, food and environmental samples (e.g., water, air, soil). Such all hazard threats include those deliberately released with criminal intent, as well as those that may be present as a result of unintentional or natural occurrences.</i>

Appendix C: Number of Respondents by Organization and Health Service Region

	Vison (Yes)	Mission (Yes)	Goals (Yes)	Preparedness	Recovery	Medical Surge	Medical Supplies	Volunteers	Emergency Operations
Regional Advisory Council (RAC)	7	7	7	7	7	7	4	5	6
Health Service Region (HSR)/DSHS	12	11	12	11	9	9	9	9	8
Local Health Department	34	34	38	28	23	21	10	14	10
Hospital	20	22	23	15	13	15	8	9	10
City/County Government	7	7	7	7	7	3	3	4	3
School/University	4	5	5	3	3	1	1	0	0
Non-Profit Organization	9	8	10	7	5	0	2	3	1
State	2	2	2	0	0	1	0	0	0
Federal	8	8	10	8	6	4	1	0	2
Council of Governments	7	5	7	5	2	0	0	4	4
Fire Department	1	2	2	0	0	1	0	0	0
Other	0	0	1	1	1	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0
Column Total	111	111	124	92	76	62	38	48	44
Column Percent	77.62%	77.62%	86.71%	64.34%	53.15%	43.36%	26.57%	33.57%	30.77%

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	Responder Health	Counter measures	Fatality	Nonpharmaceuticals	Mass Care	Surveillance	Laboratory	Public Information	Information Sharing
Regional Advisory Council (RAC)	4	3	4	1	3	0	1	3	3
Health Service Region (HSR)/DSHS	5	7	2	6	5	9	2	6	6
Local Health Department	15	16	11	11	8	15	8	15	16
Hospital	7	8	9	8	8	6	6	9	6
City/County Government	3	4	4	3	4	2	2	4	4
School/University	0	0	0	0	0	1	0	0	0
Non-Profit Organization	1	0	0	0	1	0	0	0	2
State	0	0	0	0	0	0	0	0	0
Federal	2	0	1	1	2	1	0	3	2
Council of Governments	0	1	0	0	0	0	0	2	3
Fire Department	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	1	0
Unknown	1	1	1	0	0	0	0	0	0
Column Total	38	40	32	30	31	34	19	43	42
Column Percent	26.57%	27.97%	22.38%	20.98%	21.68%	23.78%	13.29%	30.07%	29.37%

Appendix D: Number of Responses to Target Capabilities by Type of Organization

	Regional Advisory Council (RAC)	Health Service Region (HSR)- DSHS	Local Health Department	Hospital	City/County Government	School/ University	Non-profit organization	State
Region 1	1	2	7	2	0	0	0	0
	7.13%	14.29%	50.00%	14.29%	0.00%	0.00%	0.00%	0.00%
Region 2/3	1	0	13	6	2	0	1	0
	4.00%	0.00%	52.00%	12.00%	8.00%	0.00%	4.00%	0.00%
Region 4/5N	1	1	2	1	0	0	1	0
	16.67%	16.67%	33.32%	16.67%	0.00%	0.00%	16.67%	0.00%
Region 6/5S	1	0	10	5	2	0	2	0
	4.00%	0.00%	40.00%	20.00%	8.00%	0.00%	4.00%	0.00%
Region 7	1	1	5	1	0	0	1	0
	11.11%	11.11%	55.56%	11.11%	0.00%	0.00%	11.11%	0.00%
Region 8	0	0	2	0	0	0	0	0
	0.00%	0.00%	100.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Region 9/10	4	3	13	8	2	4	2	2
	8.51%	8.51%	27.66%	17.02%	4.26%	8.51%	4.26%	4.26%
Region 11	0	6	2	0	1	2	2	0
	0.00%	42.86%	14.29%	0.00%	7.14%	14.29%	14.29%	0.00%
Unknown Region	0	0	0	0	0	0	2	0
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	50.00%	0.00%
Unknown	0	0	0	0	0	0	0	0
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Column Total	9	13	54	23	7	6	11	2
Column Percent	6.08%	8.78%	36.49%	15.54%	4.73%	4.05%	7.43%	1.35%

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	Federal	Business	Council of Government	Fire Department	Other	Unknown	Total
Region 1	0	0	2	0	0	0	14
	0.00%	0.00%	14.29%	0.00%	0.00%	0.00%	9.46%
Region 2/3	0	0	2	0	0	0	22
	0.00%	0.00%	8.00%	0.00%	0.00%	0.00%	12.84%
Region 4/5N	0	0	0	0	0	0	6
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.05%
Region 6/5S	4	0	2	0	0	0	26
	16.00%	0.00%	8.00%	0.00%	0.00%	0.00%	17.57%
Region 7	0	0	0	0	0	0	9
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	6.08%
Region 8	0	0	0	0	0	0	2
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.35%
Region 9/10	4	0	2	2	0	1	47
	8.51%	0.00%	4.26%	4.26%	0.00%	2.12%	31.76%
Region 11	0	0	0	0	1	0	14
	0.00%	0.00%	0.00%	0.00%	9.10%	0.00%	8.78%
Unknown Region	2	0	0	0	0	0	4
	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.70%
Unknown		0	0	0	0	1	2
	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%	2.03%
Column Total	10	0	8	2	1	2	148
Column Percent	6.76%	0.00%	5.41%	1.35%	0.68%	01.35%	