Implementation Plan on Health Care System Planning and Response Capabilities for Public Health Threats

As Required by
Senate Bill 969, Section 4(a)
87th Legislature, Regular Session, 2021

Department of State Health Services
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TEXAS
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Executive Summary

Senate Bill 969, Section 4(a), 87th Legislature, Regular Session, 2021, charged the Texas Department of State Health Services (DSHS) to evaluate the planning and response capabilities of the state health care system to respond to public health threats. DSHS, in partnership with the Health and Human Service Commission (HHSC), regional advisory councils (RAC), local health departments (LHD), and other health care system organizations utilized a two-part survey methodology as part of the evaluation of the state health care system.

Over 500 participants from the state health care system provided feedback to DSHS on the planning and response capabilities of the state health care system in light of the recent COVID-19 response. Guided by thematic framework principles, these responses generated themes for both strengths and areas of improvements.

DSHS is currently engaged in its after-action review (AAR) process for the COVID-19 pandemic. DSHS is using the information generated through this report to help inform the AAR findings and recommendations, which will benefit the state health care system planning and response capabilities as a whole. DSHS will continue to work collectively with statewide public health and medical partners to implement planning efforts to include addressing areas of improvement to better prepare for and respond to any future public health threats that may emerge.

1. Introduction

Senate Bill (S.B.) 969, Section 4(a), 87th Legislature, Regular Session, 2021, charged DSHS with evaluating the state health care system's capability to plan for and respond to public health threats. The bill requires DSHS to submit to the Legislature an implementation plan based on the findings of its evaluation by September 1, 2022.

The COVID-19 pandemic presented one of the greatest public health threats in Texas history. For this reason, DSHS used the COVID-19 pandemic response as a benchmark when seeking input from stakeholders to meet the intent of the bill. This evaluation will feed into the DSHS after-action review process for implementation efforts to guide future planning and response efforts of the state's health care system.

2. Background

DSHS serves as the primary state agency for Emergency Support Function (ESF) 8, Public Health and Medical Services. DSHS coordinates capabilities and resources to facilitate the delivery of services, technical assistance, expertise, resources, and other support for the public health and medical impact of emergencies and disasters. In disaster response, the agency's responsibility is as follows:

- Protect Texans from public health and medical threats,
- Maintain overall situational awareness and support local and state responses,
- Provide guidance to local jurisdictions,
- Coordinate, secure, and deploy state, federal, and other resources, if available, when state and local assets are insufficient to meet the need; and
- Support response partners in their efforts to mount an effective public health and medical response.

Additionally, during non-disaster response times, DSHS leads a continuous cycle of planning, organizing, training, equipping, exercising, and evaluating public health and medical emergency preparedness activities. The agency works with public health and medical partners at the local, regional, state, and federal levels to maintain preparedness plans, train staff needed to support and implement those plans, and exercise the plans to ensure the capability to carry out appropriate roles and responsibilities in the event a public health disaster occurs, or a public health threat is presented.

Following a disaster response incident, DSHS conducts a systematic after-action review (AAR) with partners to evaluate the response. The DSHS AAR evaluates ESF 8 response tied specifically to DSHS emergency planning and response responsibilities. The DSHS AAR identifies strengths and challenges, advises on strategies to preserve those strengths, and mitigates and improves identified challenges.

DSHS is currently engaged in its AAR process for the COVID-19 pandemic as of this report's publication date. DSHS' review efforts feed into other statewide evaluation efforts. The outcome of the evaluation conducted as charged by S.B. 969, Section 4(a), will inform DSHS efforts to identify ongoing strategies to maintain the strengths of the COVID-19 pandemic response and improve future health care system planning and response capabilities.

3. Assessment and Methodology

To analyze the state health care system's planning and response capabilities for public health threats, the DSHS performed two surveys in spring 2022. DSHS solicited information from a variety of public health and medical partners representing the Texas health care system. These included regional advisory councils (RAC), hospitals, long-term care (LTC) facilities, local health departments (LHD), emergency medical services (EMS) providers, public/private laboratories, and other local jurisdictions/entities.

Assessment and Methodology

DSHS conducted a qualitative survey in March 2022. Participants provided open-ended information about the top strengths and areas of improvement for the planning and response capabilities of the state health care system, in the context of their role and involvement with the COVID-19 response. This allowed participants an opportunity to narratively describe the strengths and areas for improvement of the planning and response capabilities of the state health care system.

DSHS also conducted a follow-up survey in May 2022 to determine which areas of the state health care system capabilities were most important to the stakeholder group for ongoing improvement. This survey provides greater insight into health care system stakeholder priorities and will inform DSHS' focus during planning for future public health threats.

Hotwashes provide a forum for all involved Emergency Services Function (ESF) 8 response partners to evaluate DSHS's performance during the COVID-19 pandemic.

4. Planning Capabilities: Strengths and Areas for Improvement

Through DSHS' evaluation of input of stakeholder responses about the planning capabilities of the state health care system, several themes emerged for both strengths and areas of improvement.

Strengths

- Preparedness – stakeholders indicated the importance of previous preparedness exercises and planning to prepare the system for response to the pandemic:
    - Through the "numerous scenarios and drills over the years... the state was as well set up for the COVID outbreak as it could be."
    - "The state has invested time and resources into disaster planning that has led to successful outcomes."
    - "The collaboration and the relationship developed during various response trainings have been indispensable. Training examples [include] the [Texas Division of Emergency Management] (TDEM) and/or South Texas All Hazards Conferences… regional training...."
- Incident Command System[1] and State of Texas Assistance Request (STAR)[2] process – stakeholders also noted the use of well-established emergency response mechanisms like the Incident Command System and STAR process were overall successful assets:
    - "The STAR request process was smooth...."
    - "The ease of using the STAR process...."

[1] An Incident Command System is the standardized system by which emergency management organizes emergency response activities and assets. This common structure allows multiple agencies to integrate emergency response through five functional areas: Command, Operations, Planning, Logistics, and Administration/Finance.

[2] The STAR process is a resource request and fulfillment process that entities can use in all phases of emergency management to obtain necessary resources from the state.

- "Since 9/11, H1N1 and other geopolitical [events, it] seems the state and systems were better prepared for an event such as this in regards to quickly connecting and communicating using the incident command system."
- "The hospital systems' incident command structure worked seamlessly to address rapidly changing patient care guidelines...."
- A "[s]trong incident command system that has been able to address COVID-19 surges as well as meeting the needs of the community and staff."

- Regional advisory councils (RAC)[3] and the Emergency Medical Task Force (EMTF)[4] – stakeholders widely acknowledged the vital role of RACs and the EMTF in ensuring communication and providing operational support to the system:
  - "The EMTF has been a tremendous asset during the past several years… [t]his is one of the greatest planning and response capabilities of the state health care system."
  - "The Emergency Medical Task Force and their ability and rapid response capabilities...."
  - "The Texas Emergency Medical Task Force has responded rapidly to our transfer and staffing needs."
  - "The RAC provided support and was the link between individual entities and the State, [including] resources, knowledge...."
  - "Well established trauma regions with fully developed leadership that could be relied on...."

[3] RACs are DSHS-contracted partners that facilitate coordinated and comprehensive regional planning and response for the trauma system, as well as for public health and medical response to public health threats.

[4] EMTF is a DSHS-contracted resource composed of one statewide coordinating entity and eight regional teams that can activate to mobilize targeted emergency public health and medical response in a public health threat event. EMTF assets are strategically prepositioned throughout the state and include mobile medical and ambulance physical assets as well as medical personnel strike teams to support those assets. Specialized EMTF functions include mass fatality response and infectious disease response teams.

- "Regionalized healthcare response between DSHS health service regions, Trauma Service Areas, and local healthcare systems allowed for more efficient communications, faster, response times and enhanced response capabilities."

Areas for Improvement

- Inadequate technology systems – the state health care system entities report into DSHS systems for laboratory, vaccine, hospital capacity, and Emergency Medical Services (EMS)/trauma data. Stakeholders noted the impact of antiquated information technology that took away the system's ability to respond to the pandemic effectively:
  - "[The state's immunization registry, ImmTrac] experienced widespread data and bandwidth issues."
  - "We need better data collection and sharing systems. We are siloed in terms of not having access to data...."
  - "Initially the state did not have an IT infrastructure to receive data directly from the hospitals to send to [U.S. Health and Human Services] ...."
  - "Our system dealt with up to 10 different health departments all with different infrastructures and ways to get information. We should have been able to send a feed to the STATE first and the state should have been able communicate with each health department instead of tasking the hospitals with that responsibility...further taxing our resources during a very strained time."
  - "The replacement or the enhancement of the National Epidemiological Disease Surveillance System (NEDSS)[5] at Texas DSHS is CRITICAL! This system or an improved system is essential to public health in Texas...."

[5] NEDSS is the primary statewide integrated infectious disease surveillance system used by Texas public health to monitor and respond to most notifiable infectious disease conditions. NEDSS facilitates the electronic exchange of public health laboratory and surveillance data from healthcare systems to local health departments and the Centers for Disease Control and Prevention (CDC).

- EMS and staffing shortages – stakeholders particularly from rural areas noted the impact of preexisting staffing limitations as a detriment to preparedness for a public health threat:
  - "… we don't have enough EMS personnel in the state of Texas to cover our local needs. The #1 improvement is establishing more EMS educational programs and ensure that those who graduate with an EMS license commit to EMS."
  - "Texas needs more nurses… there needs to be a way to encourage larger graduating classes of nurses to rectify the shortage."
  - "Rural EMS services were strained due to longer than usual transport destinations, at times leaving 911 calls with a prolonged response time."
  - "Rural EMS doesn't have the potential employee candidates that large urban areas have."
  - "…the shortage of Licensed Nurses…is still a big problem, especially for small rural hospitals."
  - "Transportation is difficult for patients in rural areas to get to medical facilities and to receive care."
- Patient transfer system – stakeholders noted that during COVID-19, beds were not available for placement of patients in need of transfer:
  - "Establish a statewide system that connects EMS and hospital systems to better communicate the availability of hospital beds and transport resources."
  - "We REALLY need a state/regional transfer center to help navigate appropriate and timely transfers."
  - "[Our RAC] set up a 'transfer hotline' when finding a bed or a patient became a struggle. Start this early and expand it past our region to include all states."

Initial Steps

Federal funding during the COVID-19 pandemic has allowed DSHS to make progress in planning capabilities. Specifically, DSHS has undertaken significant upgrades and rebuilding of technology systems that support response to public health threats. Federal funds have allowed DSHS to upgrade the state's electronic

laboratory reporting system, NEDSS, to the most recent version with increased availability of automated features for DSHS and data submitters. Similarly, DSHS used federal funds to stabilize the state's immunization registry, ImmTrac, which was suffering from regular downtimes at the beginning of the pandemic.

During the pandemic, DSHS implemented a system called Pulsara, which hospitals could voluntarily participate in related to patient transfer needs. Pulsara assists with matching available beds and patients across the state. Pulsara enables hospitals to see a patient transfer request instantly across the entire state, reducing the need for hospitals to make calls historically needed to determine where beds might be available. Because roll-out of the system began I the middle of the pandemic hospitals that participated in Pulsara voluntarily, and the state was not able to benefit from all of the capabilities of the system. Pulsara has been funded with federal COVID-19 response funds, and DSHS is evaluating ongoing strategies for preparing for and managing patient transfers in a statewide crisis.

Additionally, Senate Bill 8, 83rd Legislature, Third Called Session, 2021, appropriated federal American Rescue Plan Act (ARPA) funds for purposes specific to address EMS and rural hospital. The Health and Human Services Commission (HHSC) is administering a $75 million grant program for the purpose of providing funding to support rural hospitals that have been affected by the COVID-19 pandemic. DSHS is administering $21.7 million for programs to incentivize and increase the number of Emergency Medical Technicians (EMTs) and paramedics that provide care on an ambulance, through workforce development initiatives and EMS education programs, with a focus on rural communities.

5. Response Capabilities: Strengths and Areas for Improvement

Health care system stakeholders also provided feedback specific to the system's response capabilities. This feedback covered a wide range of activities and issues experienced by entities specific to their roles in the system. The Texas Department of State Health Services (DSHS) identified several themes concerning response capabilities of the state health care system for both strengths and areas of improvement.

Strengths

- Resource management and deployment – system partners noted the worldwide challenge of supply chain issues and consistently commended the state's ability to obtain, mobilize, and deploy a wide range of medical and public health resources during the pandemic, including personal protective equipment (PPE), medical equipment and therapeutics, vaccines, and test supplies:
  - "The state was very helpful in providing PPE and other equipment to first responders and hospitals."
  - "We have benefited from the State's combined resources to provide us with much-needed supplies when we were unable to procure for ourselves."
  - "Ability to think outside of the box. Fire departments helping with testing and vaccinating was a great idea! This was something that has not been done before."
  - "Our rural clinics and central supply department used the resources provided by the state for finding organizations that were able to help in locating many much-needed supplies- mask, antigen test kits, gowns, gloves, etc."
- Information sharing with system partners – partners also consistently noted communications and information sharing as an overall strength of the response.
  - "Communication to the entities, region, and state was open and efficient."

- "I would identify a strength as communication, as evidence[d] by the weekly calls held throughout the region that not only supplied important information and updates but also served as a platform for troubleshooting issues on the ground."
- "Communications between the State and [our agency] was a key strength in making everything we did successful."
- "Communication was provided via email correspondence, and as needed telephone support throughout the pandemic event. Updates and revisions were communicated as rapid changes were made via Federal government, and information was filtrated down to our facility."

- Regulatory waivers – partners emphasized the importance and success of the state and federal government removing barriers to response and patient care through regulatory waivers and flexibility:
  - "State leniency with Medicaid renewal policies throughout the COVID pandemic [has] been very appreciated...."
  - "… the seemingly rigid state [Emergency Medical Services (EMS)] rules on training and licensing were quickly amended to allow us to continue operating in a time where we were still trying to figure out the new reality."
  - "Waivers [were] put in place which eased restrictions that would otherwise potentially cause more harm to residents in facilities."
  - "State-issued licensing waivers (and extensions of waivers as the pandemic continued) and engagement with the federal government to secure [Federal Emergency Management Agency] (FEMA) assets were critical to maintaining Texas' EMS safety net.
- Public health and medical staffing – a key resource deployed during hospitalization surges was medical staffing for health care facilities, especially hospitals. System stakeholders consistently acknowledged the acute relief this asset provided during the heights of COVID-19 hospitalizations:
  - "We benefited from… the level of staff that [the state] provided to us during our most recent surges."
  - "Medical Staffing from the state level helped keep beds open at facilities."
  - "[A top strength was] addressing the staffing shortages at health care facilities."

- "The ability to obtain additional staffing resources through the state allow us to maintain staffing operations."

Areas for Improvement

- Reporting volume and changes – system stakeholders expressed frustration with the volumes of COVID-19 reporting requirements from the state and federal levels, and the difficultly keeping up with in some cases redundant or shifting requirements while maintaining patient care:
  - "Improve daily reporting by working with health systems to develop automated tools. Very labor intensive...."
  - "Decrease or streamline the daily reports – having multiple reports to submit while trying to manage the pandemic was overwhelming at times."
  - "Data collection process have been an ongoing challenge. The data requirements by the state and federal government do not align both with the data points collected, the frequency of reporting, and the submission process."
  - "The overwhelming amount of COVID-19 testing, data submission requirements, especially in complex, antiquated systems, has been and continues to be a huge burden on facilities. These requirements need to be removed and/or revised greatly to reduce the complexity and labor intensity of the reporting."
- Rule changes – similarly, stakeholders expressed frustration with the number changes in regulatory or public health guidance that took place throughout the pandemic.
  - "Too many system changes in the middle of an emergency for a facility...."
  - "The information kept changing from day to day… frequently there was no time for us to train before the rules changed again...."
  - "It has been extremely difficult keeping up with the frequency of the changes and having to constantly update our policies and then train our staff on the revisions."
- Communication – while stakeholders generally expressed that communication and information sharing was a response strength, they equally shared that the volume and redundancy of information sharing was difficult to keep up

with given the pressure that on-the-ground patient care and pandemic response entailed for their staff.

  - "Although there was an abundance of communication efforts and approaches, not all were effective or meaningful. Clear, precise and dependable communication is critical...."
  - "Too many emails"
  - "So many emails that are in regards to the same item...."
  - "Communications became overwhelming."

- Backend staffing issues – similarly, the state-provided staffing was indicated as a both a strength in the short term and an area of improvement related to the long-term impacts on the state's and nation's health care workforce.
  - "The much needed and appreciated staffing supplied by the state caused an even larger staffing issue as the wages increased… causing loss of employees and furthermore the inability to retain any new staff...."
  - "The state's ability to obtain and deploy additional staffing resources was listed as a strength [but] also created a staffing shortage...."
  - "The huge rise in the cost of agency staffing placed smaller hospitals in a position where they could not compete for nurses. It also raised expectations for future salaries so high it is not sustainable."

Initial Steps

In most cases, COVID-19 regulatory and reporting requirements have been driven by federal mandates or other requirements driven by the pandemic's status as a declared disaster. Over the course of the pandemic, DSHS sought to ease the burden of reporting through technology advances and by bringing on board a substantial temporary workforce for providing technical assistance for the DSHS reporting platforms. However, the majority of required reporting elements remains in place today due to ongoing federal requirements of COVID-19.

The state has also acknowledged the critical nature of state health care workforce issues in Texas, especially in rural areas of the state. Both the Texas Senate and Texas House of Representatives are studying these workforce issues in depth during the interim period and will report on their findings before the 88th Texas Legislature convenes.

6. Stakeholder Priorities

Through the information-gathering process for this analysis, DSHS sought to understand the system's priorities for improving planning and response capabilities. DSHS conducted a follow-up survey in May 2022 to determine which areas of the state health care system capabilities were most important to the stakeholder group for ongoing improvement. This survey provides greater insight into health care system stakeholder priorities and will inform DSHS' focus during planning for future public health threats.

Through this effort, DSHS learned that the system's greatest interest lies in maintaining strengths and leading improvements, primarily in communication and the availability of resources during a response.

For communications, the system emphasized two types of communication as most important during a public health threat. These two areas of communication were emphasized as both a strength to maintain and an area to constantly improve through planning and training for public health threats.

- Information sharing with health care system partners – this category is specific to big picture communications, including:
  - The situational status of the public health threat
  - The operational components of state resources or activities
  - Any federal or regulatory guidelines, rules, and requirements
- State and local coordination – this category is specific to response operations, including:
  - Communication and coordination within a region ahead of a threat on emergency response plans
  - Training availability for system partners as it relates to emergency response systems and processes
  - Meetings, calls, and information sharing during a response to coordinate and provide situational awareness of state, regional, and local efforts during a response
  - The ongoing importance of regional advisory councils (RAC) and DSHS offices as connection points both during and outside of a public health threat situation

Additionally, stakeholders emphasized repeatedly the importance of systems and processes for accessing scarce resources during a public health threat response. The COVID-19 pandemic highlighted the importance of this state level capability, and stakeholders consistently identified a need to ensure the ongoing maintenance of medical resources most likely to be needed during a future public health threat.

Finally, the system widely emphasized the need to prioritize long-term solutions for health care workforce supply and rural health care capacity, including Emergency Medical Services.

7. Next Steps and Implementation

DSHS leads a continuous cycle of planning, organizing, training, equipping, exercising, and evaluating public health and medical emergency preparedness activities. Ongoing and routine evaluations of the health care system preparedness and response capabilities is a key component of this continuous improvement cycle.

DSHS will work with its public health and medical partners to ensure the outcomes of this assessment are translated into actionable improvement items to be included in DSHS planning and response documents, as well as clear objectives for upcoming trainings and exercises with state and local public health, medical, and emergency management partners. Infusing the outcomes of this assessment into all aspects of planning, training, and exercises that DSHS participates in will help to build and expand capacity and capability across the state health care system, preparing the state for the next public health threat or disaster.

As of the writing of this report, DSHS is engaged in its AAR process. Many state health care system partners and stakeholders are participants in this process based on their emergency management and public health and medical roles during the response. The feedback received through this assessment will be incorporated into the comprehensive COVID-19 AAR. Similarly, the COVID-19 AAR Implementation plan will reflect issues identified through the AAR process as well as those identified as part of SB 969. The AAR is an intensive process that ensures ongoing improvement of public health preparedness for future emergency responses.

DSHS' assessment process gained valuable insights into the public health systems of the state, highlighting strengths, and uncovering areas of improvement when it comes to planning and responding to public health threats. COVID-19 presented challenges at many levels, that in turn, will be areas that DSHS will focus on for planning, training, and exercising to ensure future response capabilities. In several cases, these areas for improvement were evident. As the response evolved, DSHS adapted, and through experience gained, skill, and continuous coordination, improvements were made that will carry forward in preparation for future public threats.

8. Conclusion

Senate Bill 969, Section 4(a), 87th Legislature, Regular Session, 2021, charged DSHS to evaluate the planning and response capabilities of the state health care system to respond to public health threats. DSHS evaluated the health care system, that included hospitals, long-term care facilities, and laboratories, on its capabilities to respond to public health threats. This analysis produced valuable input on the system's strengths and areas of improvement that will feed into DSHS' AAR of the COVID-19 pandemic, and related implementation plans. DSHS will work collectively with statewide public health and medical partners to conduct planning efforts that bolster state strengths in emergency preparedness and response, while addressing areas of improvement to better prepare for and respond to any future public health threats that may emerge.

List of Acronyms

Acronym	Full Name
AAR	After-Action Review
ARPA	American Rescue Plan Act
CDC	Centers for Disease Control and Prevention
DSHS	Department of State Health Services
DME	Durable Medical Equipment
EMS	Emergency Medical Services
EMT	Emergency Medical Technician
ESF	Emergency Support Function
HHSC	Health and Human Services Commission
ICS	Incident Command System
LHD	Local Health Department
LHE	Local Health Entity
LTC	Long-Term Care
NEDSS	National Electronic Disease Surveillance System
PHR	Public Health Regions
PPE	Personal Protective Equipment
RAC	Regional Advisory Council
S.B.	Senate Bill
STAR	State of Texas Assistance Request