STRATEGIC PLAN FOR THE TEXAS EMERGENCY HEALTHCARE SYSTEM

Developed by the

Governor's EMS and Trauma Advisory Council

Governor's EMS and Trauma Advisory Council

1100 West 49th Street
Austin, Texas 78756-3199

August 2015

The Governor's Emergency Medical Services and Trauma Advisory Council (GETAC) is pleased to present the attached document, "Texas Emergency Healthcare Strategic Plan," for your consideration. This document is a revision and update to "A Strategic Plan for the Texas EMS/Trauma System," released by GETAC in December 2002.

The members of GETAC, its committees, task forces and stakeholder groups have worked diligently to refine and modernize this Emergency Healthcare Strategic Plan. The current iteration is reflective of the significant evolution of emergency healthcare in Texas since 2002. The value of the GETAC process was recognized by the ## Legislature in 20## when they added a Stroke Committee to the areas of GETAC responsibility. Additionally, the need for attention to all time dependent emergency medical care highlighted the importance of cardiac care. As a result, the name and scope of this document has expanded to consider not only Trauma, but all types of emergency health issues faced by Texans.

We hope that you find this plan useful and informative. It is our collective desire to use this plan as our statewide emergency healthcare roadmap. GETAC has pledged to make this a living document and update it on a 5 year's schedule. GETAC and all stakeholders are dedicated to make our emergency healthcare system stronger than ever and to reduce death and disability from sudden illness and injury in our Great State.

Your support of our emergency health care system is very much appreciated. If we can be of any assistance or answer any questions at any time, please contact any of the Council members at https://www.dshs.state.tx.us/emstraumasystems/GETACCouncil.shtm.

On behalf of the Governor's EMS &Trauma Advisory Council, and the many participants involved in developing this plan and our stakeholders, we thank you.

Vance L. Riley, MPA, Chair
Governor's EMS and Trauma Advisory Council.

Table of Contents

4. *Vision and Mission for the Texas Emergency Healthcare System*
5-6. *Definitions and History of Plan*
7. *Emergency Healthcare Overview*
8. *Burden of Disease in Texas Injury*
9. *Burden of Disease in Texas Ischemic Cardiac Disease*
10. *Burden of Disease in Texas Stroke*

Clinical Elements

11-12. *Prevention*
13. *Clinical Care*
14-15. *Medical Direction*
16-17. *System Integration*
18. *Emergency Preparedness*
19-20. *Performance Improvement*

Infrastructure

21-22. *Communication Systems*
23-24. *Information Systems*

System Support

25-26. *Public Education*
27. *System Legislation and Regulation*
28. *System Funding*

Vision and Mission for the Texas Emergency Healthcare System

Vision

A unified, comprehensive, and effective
Emergency Healthcare System for a healthy and safe
Texas.

Mission

To promote, develop, and maintain a comprehensive data driven
Emergency Healthcare System that will meet the needs of all patients
And
will raise the standards for high quality community health care by implementing innovative techniques and accountable systems for the delivery of emergency care for the entire population.

What is an Emergency Healthcare System?

An emergency healthcare system refers to the care rendered to patients immediately after traumatic injury or illness, where TIME is a critical determinant of outcome. The system coordinates resources from the onset of the injury or illness through hospital discharge back to the community, to promote optimal outcomes for all individuals in Texas. The purpose of the system is to ensure that critically injured or ill persons will get to the right place, in the right amount of time in order to receive optimal care. The system only works when representatives of EMS, cardiac, stroke, and trauma care entities, working through Regional Advisory Councils (RACs), develop, implement and continually evaluate and improve a coordinated regional plan of care. If any of the components of the system are ineffective, the system as a whole is less effective and as a result the patient care may not be optimal.

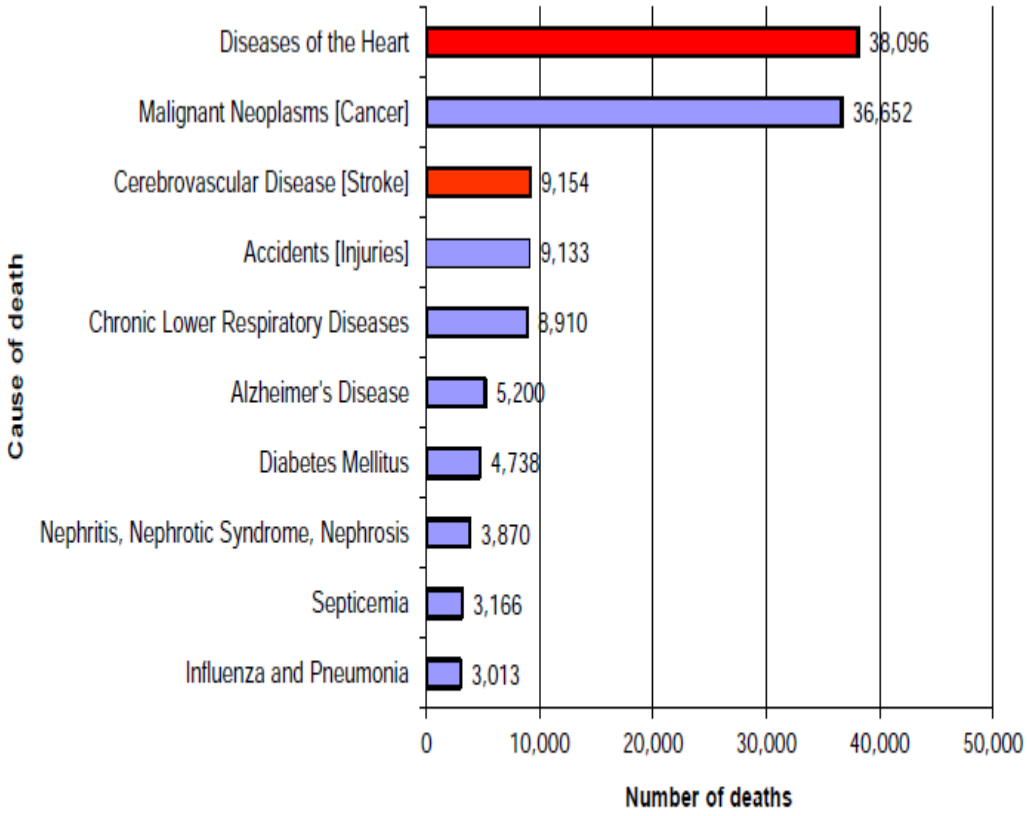
System History

The Texas Emergency Healthcare System began with HSC Chapter 773 which mandated that the Texas Department of Health Bureau of Emergency Management (TDHBEM) develop, implement and evaluate a state EMS and Trauma System, including the integration of emergency pediatric care standards. TDHBEM developed basic standards and facilitated regional EMS/Trauma System development, including designation of trauma facilities.

In 1999, the Governor's EMS and Trauma Advisory Council (GETAC) was legislatively established. Since its inception, GETAC has provided recommendations on emergency health services to the Texas Department of State Health Services and served as subject matter experts on EMS/Trauma

Systems. In 2001, the 77th Texas Legislature passed House Bill (HB) 2446 regarding emergency medical services. Section 2 of this bill mandated GETAC to "assess the need for emergency medical services in the rural areas of the state" and to "develop a strategic plan for refining the educational requirements for certification and maintaining certification as emergency medical services personnel and developing emergency medical services and trauma care systems." In 2002, the GETAC Council developed the first iteration of the "Strategic Plan for the Texas EMS / Trauma System" which is the predecessor to the current document. Since the development of the initial strategic plan for trauma, experience has also borne out the value of systems based practice for other time dependent pathologies such as ischemic cardiac disease and stroke. The 2015 iteration of the "Strategic Plan for the Texas Emergency Healthcare System" considers the composite integrated emergency healthcare response system for Texas.

Burden of Emergency Healthcare in Texas



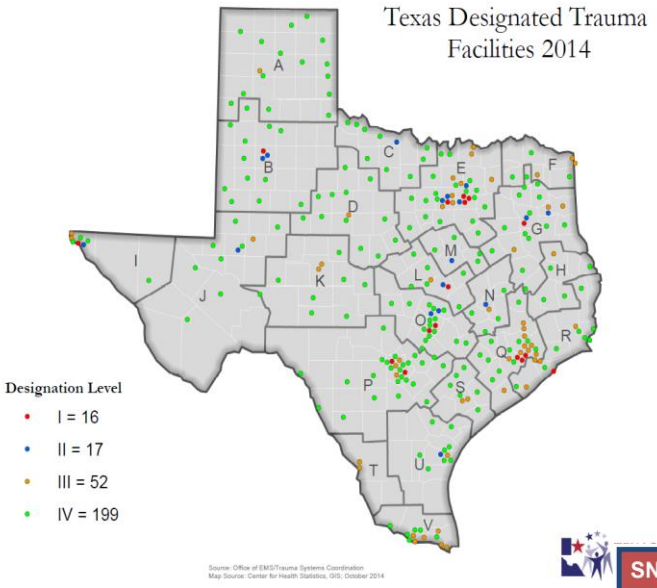
Data Source: Texas Vital Statistics Unit, DSHS

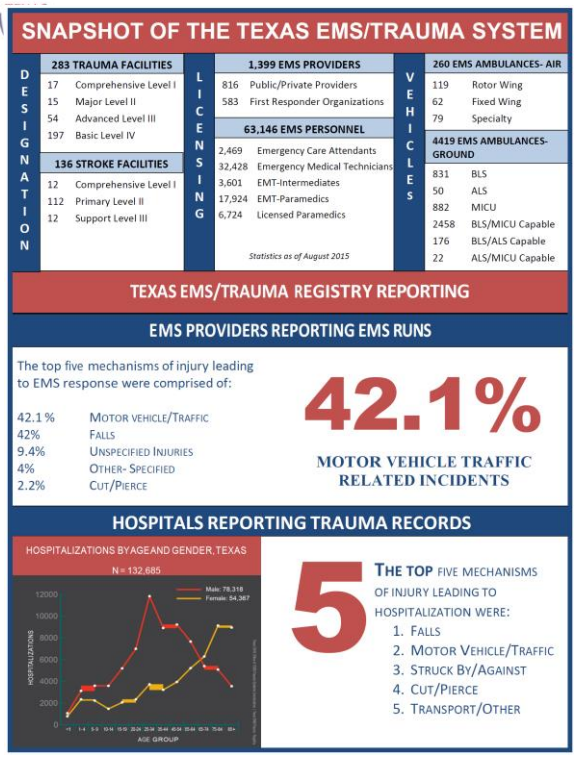
Burden of Trauma in Texas

Trauma is the leading cause of death for Texans under the age of 44.

25 years of evolution since 1989, Texas has developed a strong trauma system consisting of EMS providers, hospitals, physicians, nurses and Trauma Regional Advisory Councils (RACs).

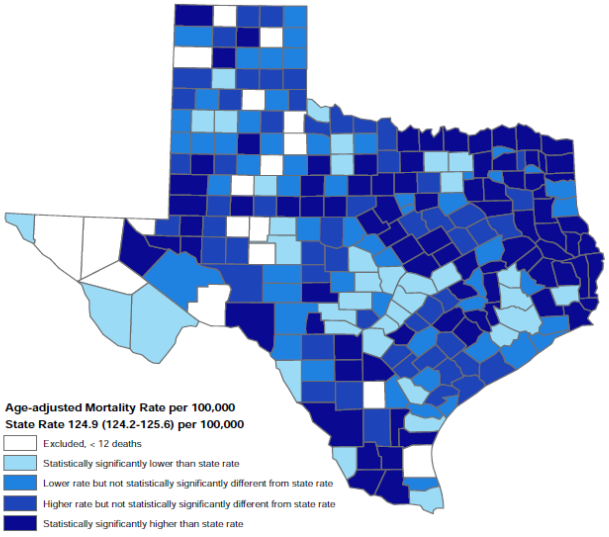
Texas has a case fatality rate of 2.96 % (1.5 % below the national average)





Burden of Ischemic Cardiac Disease in Texas

Over 4% of adult Texans have had a heart attack

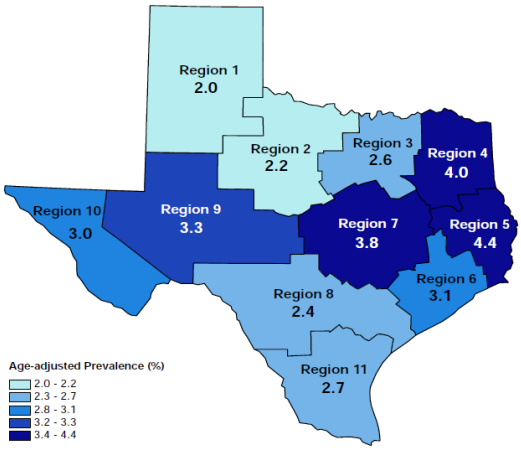


Data Source: Texas Vital Statistics Unit, DSHS
Created by: GIS, Center for Health Statistics, DSHS

Cost 6,000,000,000/year

Data Source: Texas Health and Human Services Commission

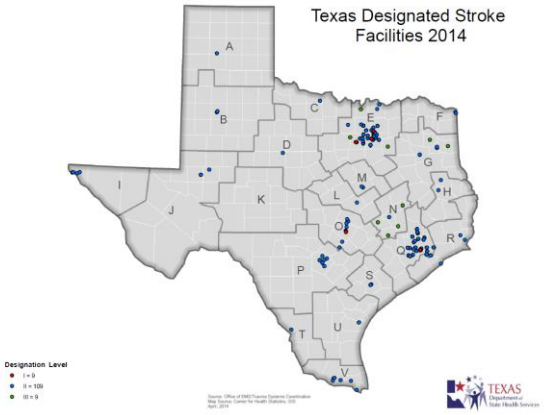
Burden of Stroke in Texas

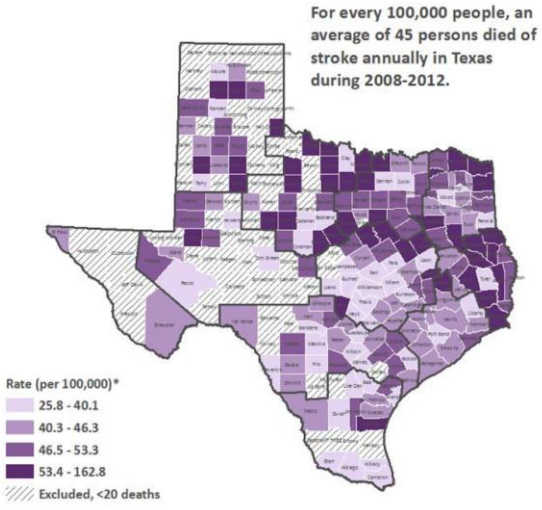


Data Source: Texas Behavioral Risk Factor Surveillance System, DSHS
Created by: GIS, Center for Health Statistics, DSHS

Affects nearly 3% of all adult Texans

Cost $3,000,000,000 /year





Age-adjusted average annual number of deaths due to stroke per 100,000 people of all ages during 2008-2012, by county, in Texas

CLINICAL ELEMENTS

PREVENTION

Heart disease is the leading cause of death in the United States. Injury is the leading cause of death for individuals up to the age of 45 and is the third leading cause of death and disability for the overall population, accounting for millions of dollars in treatment and disability costs, and more years of potential life lost (YPLL) than any other healthcare problem, in a large part due to the number of children and young adults who represent the highest risk population. Stroke is the fourth largest cause of death. One possible mitigation strategy to combat these disease processes is prevention. The central tenet of prevention is education in order to manage the factors which lead to the undesirable outcomes. The most successful prevention messages are focused, frequent, coordinated and disseminated through a variety of outlets to the directed target audiences. Making prevention a coordinated effort, the Emergency Healthcare System can be a focal point for resources and development of prevention plans for a broad range of emergency healthcare conditions which affect Texans.

Objectives:

* Identify opportunities to reduce or prevent injuries within the state of Texas.
* Incorporate safety and injury prevention into the fabric of organizational culture and operations.
* Enhance the knowledge and skills of the Texas injury prevention work force.
* Provide access to best practice injury prevention strategies to increase an individual's capacity for a safe and healthy lifestyle in Texas.

* Provide evidence-based, culturally appropriate strategies for the identification and mitigation of risk factors for heart disease and stroke.

Strategies:

* Develop and track an injury prevention agenda.
* Cultivate an online injury prevention resource that allows organizations to share information.
* Create and disseminate an annual resource guide/fact sheet for policy makers and other stakeholders that includes the following:
    - Pertinent injury data
    - Status of current injury prevention efforts in Texas;
    - Benchmarking Texas against other state and national initiatives
    - Evidence-informed strategies to prevent injuries.
* Develop a designated injury prevention division within DSHS.
* Align goals and unify efforts of injury prevention professionals and advocates.
* Develop broad, interactive and timely data based social media campaigns to address specific injury issues to be used on a regular and opportunistic basis.
* Facilitate collaboration among injury prevention professionals and advocates in the state.
* Encourage health systems and care providers to risk stratify and educate at risk patients in order to mitigate risk factors for heart disease and stroke.

CLINICAL CARE

Clinical care, the direct care provided to a patient in an Emergency Healthcare System, has evolved significantly over the past two decades. By capitalizing upon technology and contemporary medical literature, better means have been developed to resuscitate patients leading to markedly improved patient outcomes. Despite these advances, without an effective emergency healthcare system, these clinical gains are limited by practice variability, lack of resources, and inefficient processes. The goal of this sophisticated clinical care system is to provide high quality emergency healthcare throughout Texas.

Objectives:

* Identify high priority clinical areas for dissemination of current information, standards, and opportunities for education
* Advocate for the designation of Emergency Medical Services (EMS) as an essential public service.
* Reduce time from onset of illness / injury to definitive care
* Deliver the highest quality care across the continuum of the Emergency Healthcare System
* Utilize evidence-based / best practice metrics to assess all elements of the Emergency Healthcare System.

Strategies:

* Disseminate current information on best practices and educational opportunities to fill knowledge gaps
* Develop standards for integrated emergency healthcare services to minimize the time from onset of illness / injury to definitive care including the care provided in the interim.
* Define data elements necessary to evaluate Emergency Healthcare System effectiveness
* Refine criteria for state designated facilities

MEDICAL DIRECTION

Strong physician leadership and medical control predicated upon contemporary evidence based standards of care are essential to the success of the Texas Emergency Healthcare System. Medical direction as defined in Texas Medical Board Rule 197 involves granting authority, providing supervision and accepting responsibility for patient care provided by prehospital personnel, and includes participation in all aspects of that care to ensure maintenance of accepted standards of medical practice. The medical director delegates authority for professional practice and procedures to non-physician providers who manage patient care. With the delegation of authority, it is incumbent upon the medical director to be actively involved in all appropriate aspects of the Emergency Healthcare System. Currently, physicians affiliated with EMS providers serve with varying levels of involvement, from informal medical advisors to full-time medical directors and system administrators. The medical director should be involved in system planning; development of patient care protocols; on-line medical consultation and direction; auditing of patient care documentation; evaluation of patient care; and performance improvement of EMS clinical practices. The Emergency Healthcare System should provide support on issues that improve medical directors' abilities to provide care.

Objectives:

* Provide a robust, responsive and flexible Emergency Healthcare System with medical oversight integrating all system elements.
* Support and develop medical oversight of nontraditional roles for EMS personnel.
* Increase meaningful participation of medical directors in all aspects of EMS practice

Strategies:

* Develop mechanisms to educate local medical communities about EMS capabilities.
* Participate in initial and ongoing education regarding the roles / responsibilities of EMS medical oversight in Texas.
* Recommend appropriate education and credentialing for physicians providing medical direction.
* Increase involvement of EMS in community health activities including surveillance and prevention programs.

SYSTEM INTEGRATION

System integration is a process in which different stakeholders cooperate and build upon shared ideology to enhance performance. The coordinating entities are the Regional Advisory Councils (RAC) serving their designated State Trauma Service Areas (TSA). Integration (Too many uses) occurs best when emergency healthcare organizations actively participate in any RAC where they provide service. The full integration of the emergency healthcare system results in more rapid access, better care and improved patient outcomes.

Objectives:

* Develop a formal process of sharing best practices
* Integrate all emergency health services within the emergency health care system to deliver quality care.
* Assure that stakeholders are involved in strategic discussions
* Identify and incorporate all patient populations into system design.

Strategies:

* Develop uniform performance standards for an Emergency Healthcare System
* Develop recommendations related to system development, implementation, and evaluation.
* Adopt essential standards for the operations and processes of the RACs
* Implement a best practices website for emergency healthcare systems and clinical care issues.

* Promote innovative partnerships to provide first response availabilities for underserved and difficult to access areas.
* Educate local and regional governing bodies regarding the vital nature of an Emergency Healthcare System to all of their communities.

EMERGENCY PREPAREDNESS

Disaster can strike at any time. Texas has had more federally declared disasters than any other state. The Emergency Healthcare System plays an integral role in emergency preparedness and response during times of disaster. Mass threats to the public health may derive from a variety of sources including natural and man-made. Prominent natural threats in Texas are tornados, hurricanes, floods, and infectious disease outbreaks. Likewise a number of man-made disaster liabilities exist in Texas such as directed violence, explosions (fertilizer, chemical, oil / gas), radiological events, and terrorism. A strong emergency preparedness plan is a required element of any Emergency Healthcare System.

Objectives:

* Develop a comprehensive disaster / mass casualty preparedness contingency plan for Texas.
* Integrate the resources that will address the needs of age extreme populations in all disaster preparedness planning.
* Integrate Emergency Healthcare System elements which are functional and operational in the context of local, regional and statewide preparedness plans.

Strategies:

* Promote the effective use of preparedness resources to increase the capacity and capabilities of the Emergency Healthcare System to respond and support all hazards contingencies.
* Foster routine all hazards exercises that test the preparedness and liabilities of the Emergency Healthcare System
* Refine and sustain the Emergency Medical Task Force as an alternate acute care capacity for contingency mobilization for a large mass-casualty event, pandemic response or any other event that requires surge capacity and capability.

PERFORMANCE IMPROVEMENT

Continuous introspection and critical evaluation are essential tools, vital to optimal patient care in the Emergency Healthcare System. The strength of any performance improvement program is predicated upon timely and accurate data. Comprehensive performance improvement programs are needed to effectively plan, implement, and operate Emergency Healthcare Systems. All components of the system must be responsible for evaluating the effectiveness of services provided. The value of performance improvement in all areas of the Emergency Healthcare System is realized in optimized patient outcomes.

Objectives:

* Reduce the disability and mortality from time sensitive medical conditions in the state of Texas.
* Develop comprehensive processes to enhance performance improvement of Emergency Healthcare Systems.

.

Strategies:

* Develop and track Emergency Healthcare System core measures or defined events that represent current emergency patient care standards.
* Utilize iterative measurement, analysis, and dissemination of the incidence and outcomes through the PI process.
* Develop a system for measuring implementation and impact of the Emergency Healthcare Strategic plan.
* Each RAC should develop performance improvement capabilities for components of the Emergency Healthcare System that address resource utilization, scope of service, population outcomes and the effectiveness of operational and clinical policies.

* Develop standardized evidence based Texas Emergency Healthcare System performance improvement plans.
* Ensure broad representation of emergency healthcare stakeholders to maximize opportunities for system improvement.
* Provide rural provider education to augment system effectiveness

INFRASTRUCTURE

COMMUNICATION SYSTEMS

9-1-1, is available to emergency callers across the entire state of Texas. One of the most important pieces of information provided during an emergency call is the location of the person requiring help. At many 9-1-1-communication centers, call-takers are automatically provided with the caller's telephone number and location through automatic number identity (ANI) and automatic location identity (ALI). Such systems are known as enhanced 9-1-1 or E 9-1-1. Many areas of Texas still lack adequate 9-1-1 dispatching services. Within public safety answering points (PSAPs), calls for EMS are answered by personnel with varying levels of education, experience, ability to provide potentially life-saving instructions via telephone and medical direction. While emergency medical dispatchers (EMDs) have been advocated as essential personnel, a vast number of the state's EMS firms are dispatched by local law enforcement agencies with no direct connection to EMS; dispatching EMS may be a secondary function to the routine dispatching of law enforcement personnel.

An effective statewide communication system, which is an essential component of an Emergency Healthcare System, will ensure expeditious access to 9-1-1, including the location of the call; qualified call takers able to assist the caller before EMS arrives; processes that enable prioritized dispatch; and adequate real-time communication between first responders, EMS personnel and hospital staff.

Objectives:

* Promote implementation of universal enhanced 9-1-1 services statewide to ensure that all emergency calls and requests are routed to the appropriate PSAP in order to minimize time access care.
* Designate standard EMS dispatching protocols.
* Develop and implement real-time patient data transfer

* Promote the establishment of robust fault-tolerant communication systems statewide that provides seamless communications between public safety and health care agencies in all situations.
* Encourage the development and implementation of telemedicine capabilities to optimize patient care in rural and medically underserved areas of Texas.

Strategies:

* Develop joint strategies with the Commission on State Emergency Communications (9-1-1 Commission) to improve the current status of the statewide 9-1-1 system and other emergency communication issues.
* Develop recommendations for minimum state EMS pre-arrival standards

INFORMATION SYSTEMS

The purpose of collecting data is to evaluate care in an effort to improve access and reduce morbidity and mortality. Data that completely describe a patient's encounter with the continuum of providers in an Emergency Healthcare System currently exist in disparate databases. However, meaningful links between such sites do not functionally exist. Reliable data that is readily accessible will provide roadmaps to prudent use of resources. Information management should be a cornerstone of the Emergency Healthcare System to promote appropriate research, patient care management and performance improvement.

Objectives:

* Develop and maintain information systems to generate and transmit data that are valid, reliable, accurate and secure
* Develop unified systems which are able to track an entire patient encounter, from incident through rehabilitation; identify costs of patient care; and provide linkage between various public safety services and other health care providers.
* Improve the ability of the EMS/Trauma System to document and report injury and illness data and potential associated factors.
* Define and disseminate the statutory requirement for information exchange Enhance and integrate a unified EMS and emergency healthcare registry
* Encourage real time, 2-way health data exchange among EMS, hospitals and other healthcare providers.
* RACs should evaluate region specific data in order to improve patient outcomes
* Develop specific user defined standard reports and compare with national benchmarks for quality improvement

Strategies:

* Develop analytic data tools for stakeholder defined data queries
* Develop systems to accommodate ICD 10 taxonomy
* Develop and maintain data dictionary and operational use guidance for emergency healthcare data.
* Encourage hospitals within the Emergency Healthcare System to submit data to a state data repository
* Monitor compliance with Texas data reporting standard and have compliance integrated into system designation process.
* Exploit data linkage tools to optimize utility of data to healthcare providers and appropriate emergency response organizations

.

SYSTEM SUPPORT

PUBLIC EDUCATION

Successful health education provides a combination of learning experiences that encourage actions leading to better health and facilitates a better understanding of how health systems function. Education can be beneficial by facilitating development of knowledge, skills and motivation that may lead to the reduction of behavioral risks; providing an understanding of how emergency health systems work that may lead to responsible use of the system, and engendering greater advocacy for the overburdened health care system. Education can also help local communities understand the needs and limitations of their own local health care systems. Public education has often been a focus of public safety entities. However, there is a profound lack of public awareness about the scope of the Emergency Healthcare System and how the system is funded. Public information and education must focus on encouraging the public's role as a key partner in, and consumer of the system. Illustrating the capability of local health care entities allows citizens to understand the values and liabilities of their emergency healthcare system. Public education should ultimately lead to better utilization of system resources and improved patient outcomes.

Objectives:

* Promote public awareness of the Emergency Healthcare System, including the appropriate use of these resources.
* Explore new techniques and technologies for providing interactive, collaborative, targeted public education.

Strategies:

* Educate community leaders and the public regarding Emergency Healthcare Systems.

* Disseminate media messages to educate the public as consumers of emergency healthcare regarding death, disability and costs of care.
* Promote the continued implementation of bystander initial interventions.

SYSTEM LEGISLATION & REGULATION

DSHS has the statutory authority for regulating the Emergency Healthcare System and is responsible for certifying, licensing, and designation of emergency healthcare entities. Texas law provides no state statutory requirement to provide emergency healthcare services, and as a consequence there is differential access to emergency healthcare across the state.

Objectives:

* Support legislative advocacy of the Emergency Healthcare System
* Establish Emergency Healthcare services as essential public services such that all residents and visitors to Texas have appropriate access to basic emergency medical services in a timely fashion.
* Encourage periodic review of enabling legislation/regulations that support innovation and integration of emergency healthcare services.

Strategies:

* Raise public awareness for the need to establish emergency healthcare services as "Essential Services".
* Provide evidence-based recommendations to guide regulatory and legislative decision making relevant to the Emergency Healthcare System.

SYSTEM FUNDING

The survival of the Emergency Healthcare System in Texas and the optimal care of Texans with time dependent disease and injury is dependent upon adequate funding. In an era of healthcare cost containment and dwindling payment, the current Emergency Healthcare System is dependent upon funding from state and federal governments. These dollars do not encumber the full financial burden of the Emergency Healthcare System to include system readiness. Since there is no state mandate to provide these as "essential public services", the system is left to rely for sustenance upon contingency revenue sources available from the state. This is a significant issue for the Emergency Healthcare System — and all Texans.

Objectives:

* Achieve adequate and enduring funding for all components of Emergency Healthcare Systems.

Strategies:

* Provide evidence-based recommendations.to guide regulatory and legislative decision making relevant to funding the Texas Emergency Healthcare System.
* Evaluate alternative system funding strategies.