

A Strategic Plan  
for the  
Texas EMS/Trauma System

December 2002

Developed by the  
Governor's EMS and Trauma  
Advisory Council



## Governor's EMS and Trauma Advisory Council

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December 2002

The Governor's Emergency Medical Services (EMS) and Trauma Advisory Council (GETAC) is pleased to present the attached document, "A Strategic Plan for the Texas EMS/Trauma System," for your consideration. The 77th Texas Legislature passed House Bill (HB) 2446 regarding EMS. Section 2 of that 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."

The members of GETAC, GETAC committees, task forces and stakeholder groups from around the state welcomed the opportunity to perform a comprehensive assessment of our emergency health care needs, particularly given the dramatic events of September 11 and the significant changes in demands on Emergency Medical Services and Trauma Systems throughout the state. From the beginning of the process, a concerted effort was made to solicit maximum participation and explore every possible issue identified in order to develop a strong consensus for the plan.

We hope that you find this plan useful and informative. It is our collective desire to use this plan as our statewide roadmap; a "living" document that will be evaluated and updated on an on-going basis. The strategic relationships we have developed over the past several years are stronger than ever and we remain collectively committed to decreasing death and disability from sudden illness and injury.

We appreciate your dedication and support of emergency and trauma care in our great state. Please feel free to contact me at 512/972-7250 if we can answer any questions or be of any additional assistance.

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

A handwritten signature in black ink, appearing to read "Ed Racht".

Ed Racht, MD, Chair  
Governor's EMS and Trauma Advisory Council

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# A Strategic Plan for the Texas EMS/Trauma System

## How The Texas Emergency Medical Services and Trauma Care System Should Work

The fictional story below illustrates how a fully functioning Emergency Medical Services and Trauma Care System (EMS/Trauma System) should work:

*One Saturday in May, the Martinez family awoke to a booming thunderstorm and a steady rain. Their bags were already packed, however, and they headed out for a two-week vacation on the Texas Gulf Coast. Shortly after their SUV merged with traffic on a heavily traveled highway, an inexperienced teen-age driver hydroplaned on the wet asphalt and slammed into the Martinez vehicle, knocking it into a concrete barrier.*

*The Martinez family was fortunate. The crash occurred within the service area of a well-developed regional EMS and trauma care system. A passing motorist dialed 9-1-1 on his cell phone, and within minutes the local volunteer fire department—a Texas Department of Health (TDH) registered first responder organization (FRO) with care standards developed by its medical director—arrived on the scene. Sara and Cameron Martinez, secured in car seats appropriate for their age and size in the back seat of the vehicle, were screaming in terror but suffered only minor cuts and bruises. Mr. Martinez, however, suffered a life-threatening laceration to his liver and a torn spleen and was bleeding internally. Mrs. Martinez was unconscious in the front-seat passenger section after her head had hit the windshield.*

*Through rapid and trained medical intervention, each family member's medical condition was competently assessed. Regional EMS and trauma care system guidelines for critically injured*

*Shortly after their SUV merged with traffic on a heavily traveled highway, an inexperienced teen-age driver hydroplaned on the wet asphalt and slammed into the Martinez vehicle, knocking it into a concrete barrier.*

*patients called for bypass of a nearby community hospital and transport by medical helicopter to a TDH-designated trauma facility with surgical capabilities, where a team of specialists was on call and ready to rapidly respond. Mr. Martinez was taken to surgery where his liver was repaired and his spleen removed. Mrs. Martinez was evaluated by a neurosurgeon who was on-call and promptly available. The extent of her head injury was determined, and she was admitted to a critical care unit staffed by nurses and technicians with additional training in the care of traumatic injuries. The children were carefully examined in the ED and eventually released to the care of extended family.*

*In this case, the system worked: the right care, at the right place, in the right amount of time. Mr. Martinez was at home within nine days, and was back on the job by the end of his two-week “vacation.” Mrs. Martinez eventually made a full recovery after an extended hospitalization followed by several months of rehabilitation.*

### **What is an EMS/Trauma System?**

An EMS/Trauma System coordinates resources for the effective delivery of emergency health care services in geographic regions. The purpose of the system is to ensure that critically injured or ill persons will get the right care, at the right place, in the right amount of time. The system works when representatives of local EMS and trauma care entities, working through Regional Advisory Councils (RACs), develop, implement and continually evaluate a coordinated regional plan (see box on this page for System Plan Components). This plan is then executed by adequately trained and appropriately-equipped emergency health care professionals. The scenario above describes how the ideal system should work. If any of the components are missing or not implemented appropriately, the result may be death or permanent disability for the patient. TDH both regulates EMS and fosters the development of the Texas EMS/Trauma System.

### **EMS Regulation**

Texas EMS is regulated under Chapter 773 of the Health and Safety Code (HSC) [[www.capitol.state.tx.us/statutes/he/he0077300toc.html](http://www.capitol.state.tx.us/statutes/he/he0077300toc.html)] and rules adopted by the Texas

### **System Plan Components**

- a. Injury Prevention
- b. Access to the System
- c. Communications
- d. Medical Oversight
- e. Pre-Hospital Triage Criteria
- f. Diversion Policies
- g. Bypass Protocols
- h. Regional Medical Control
- i. Regional Trauma Treatment Protocols
- j. Facility Triage Criteria
- k. Inter-Hospital Transfers
- l. Trauma Facilities
- m. Performance Improvement Program

Board of Health [[www.tdh.state.tx.us/hcqs/ems/ruladopt.htm#EMS](http://www.tdh.state.tx.us/hcqs/ems/ruladopt.htm#EMS)] through the TDH Bureau of Emergency Management (TDHBEM) [[www.tdh.state.tx.us/hcqs/ems/ems](http://www.tdh.state.tx.us/hcqs/ems/ems)]. Regulatory activities include licensure of EMS firms, registration of FROs, certification/licensure of EMS individuals, approval of EMS education programs, investigation of complaints, and enforcement activities (a synopsis of the history of EMS regulation in Texas can be viewed at [www.tdh.state.tx.us/hcqs/ems/emshistory.pdf](http://www.tdh.state.tx.us/hcqs/ems/emshistory.pdf)).



## EMS/Trauma System Development

HSC Chapter 773 also mandates that TDHBEM develop, implement and evaluate a state EMS/Trauma System, including the integration of emergency pediatric care standards. TDHBEM develops standards; facilitates regional EMS/Trauma System development; designates trauma facilities; evaluates the system; and distributes statewide grant funds (a synopsis of the history of system development in Texas can be viewed at [www.tdh.state.tx.us/hcqs/ems/traumahistory.pdf](http://www.tdh.state.tx.us/hcqs/ems/traumahistory.pdf)). TDHBEM is also working with the TDH Bureau of Epidemiology (TDHEPI) to establish a state EMS/Trauma Registry for the collection of patient and system data and data evaluation [[www.tdh.state.tx.us/injury/trauma/trauma.htm](http://www.tdh.state.tx.us/injury/trauma/trauma.htm)]. Other state statutes that impact the Texas EMS/Trauma Systems may be found at [www.tdh.state.tx.us/hcqs/ems/RelevantLaws0602.PDF](http://www.tdh.state.tx.us/hcqs/ems/RelevantLaws0602.PDF).

## Governor's EMS and Trauma Advisory Council

The Governor's EMS and Trauma Advisory Council (GETAC) was legislatively established in 1999 under HSC Chapter 773 [see <http://www.tdh.state.tx.us/hcqs/ems/governor.htm> for a list of GETAC members, meeting information, etc.]. GETAC provides recommendations on EMS and trauma regulations to the Texas Board of Health and expert input on EMS/Trauma Systems to TDH staff.

## Challenges

Unfortunately, not every emergency call in Texas evolves in an organized, integrated fashion with all the elements present and effective. Additionally, since September 11, 2001, all public safety providers have experienced a dramatic increase in response and preparedness needs. Now, more than ever before, the importance of the emergency health system as a "safety net" applies to all individuals, not only to those that can't afford alternate health care. It becomes the clinical and operational safety net for every individual in a community facing an increasing threat of medical catastrophe and a growing need for reassurance and a sense of preparedness. The system faces significant challenges in both the regulation and system development aspects, as well as a major crisis in funding. The funding crisis, in turn, affects the

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*The 77<sup>th</sup> Texas Legislature passed HB 2446 regarding emergency medical services, which mandated GETAC to develop a strategic plan to refine educational requirements and develop emergency medical services and trauma care systems.*

availability of emergency medical care. Approximately 25 percent of Texas EMS firms and certified/licensed EMS individuals provide pre-hospital care to their communities with little or no compensation, and little or no funding from other sources. Many of these volunteers lack the resources and knowledge to run complex and expensive organizations, and are struggling to continue providing these services. Even emergency health care providers supported by tax dollars are finding their services stretched as the number of calls goes up and funding shrinks. Trauma systems, including designated trauma facilities, face emergency departments forced into frequent diversion by patient overload, and decreasing funding along with an increase in the number of uninsured patients and uncompensated trauma care. While the terror events of the last year have shown that Texas has come a long way since the idea of an EMS/Trauma System began in the late 1980s, a long road still lies ahead before coordinated responses to emergency medical situations throughout the state are fully realized.

### **GETAC's mandate**

In 2001, the 77<sup>th</sup> 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.” The full text of HB-2446 may be viewed at [www.capitol.state.tx.us/tlo/billnbr.htm](http://www.capitol.state.tx.us/tlo/billnbr.htm).

### **Strategic Plan Development**

The members of GETAC, GETAC committees, task forces and stakeholder groups (see box on page 14 for a list of EMS/Trauma System Stakeholder Groups) welcomed the opportunity to perform a comprehensive assessment of the emergency health care needs of our state. From the beginning of the process, a concerted effort was made to solicit maximum participation and explore all issues identified. A plan of action was developed by September 1, 2001. Open public comment periods specifically related to the strategic planning process were placed on the agendas of all GETAC meetings, including standing committees and task forces. In late 2001, comprehensive surveys developed by the GETAC Rural Task Force and reviewed by the entire council were sent to all Texas EMS providers, EMS medical directors, first responder organizations (FROs) and hospitals. There was an overall return rate for all four surveys of 30 percent. Individual survey response rates were as follows: EMS providers—51 percent; EMS medical directors—17 percent; first responder organizations—23 percent; and hospitals—61 percent (see [www.tdh.state.tx.us/hcqs/ems/StratPlanBetween.htm](http://www.tdh.state.tx.us/hcqs/ems/StratPlanBetween.htm) for survey result summaries). In spring 2002, public hearings were held in six areas of the state: Amarillo, Corpus Christi, El Paso, Harlingen, Nacogdoches, and San Angelo. More than 235 individuals signed in at these hearings, with many commenting on the plan (see [www.tdh.state.tx.us/hcqs/ems/StratPlanBetween.htm](http://www.tdh.state.tx.us/hcqs/ems/StratPlanBetween.htm) for a summary of the public hearings). The summary documents from the surveys and hearings were publicly posted for review and comment. Information was posted on the TDHBEM website and distributed at GETAC meetings.



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GETAC also held multiple strategic planning sessions that were open to the public, including a weekend retreat and full day sessions in Austin and Dallas. Throughout the progress, GETAC invited comment from the stakeholders in hopes of building a strong consensus for the plan. It was also decided at these meetings to broaden the focus beyond just rural areas because the Texas EMS/Trauma System is facing difficulties across the state. Additionally, in exploring the challenges of EMS and trauma care in the rural and frontier areas of Texas, potential solutions may be found in the suburban and urban centers and vice-versa. In an effort to integrate with activities at the federal level as well as “benchmark” our Texas assessment with other states, GETAC chose to use the national “EMS Agenda for the Future” model (see [www.nhtsa.dot.gov/people/injury/ems/agenda](http://www.nhtsa.dot.gov/people/injury/ems/agenda)), which utilizes 14 major goal areas (see box on page 15 for Texas EMS/Trauma System Goal Areas). See also “Other References” at the end of this document to see a list of additional references that were used in the development of this plan.

There are several very important common themes and principles that the reader will see throughout this document:

- All potential patients (e.g., age extremes, special needs, cultural, ethnic, geographically-specific) are included; unexpected illness or injury is an equal opportunity problem.
- There was on-going, unwavering commitment to the development of consensus on the inclusions in the plan (there should be no “voting” in decisions regarding appropriate medical care).
- Decisions were not made in isolation; all stakeholders were encouraged to participate and results posted regularly on the TDHBEM website, e-lists and in printed formats.
- EMS/Trauma Systems should be fully integrated. They cannot exist separately and be effective.
- Whenever possible throughout the assessment and in formulating recommendations, the intent was to evaluate applicability of national standards, while assuring that the needs of Texas are met (this strategy will also enhance the state’s ability to participate in federal grant programs).
- As the strategies/objectives are met, it is the intent of GETAC that the results and any identified “best practices” be widely published.

GETAC intends this plan to be a “living” document that will be evaluated and updated on an on-going basis. It will be a regular GETAC meeting agenda item with reports provided by the responsible committees/task forces, stakeholder groups and TDH staff tasked with implementing the strategies. Reports will be developed that delineate progress and strategies will be revised or new ones established as needed.

## **Where We Are - Current Status of the Texas EMS/Trauma System**

From a beginning in 1970 of 326 certified individuals, EMS has grown into a major component of the health care system with almost 50,000 certified/licensed pre-hospital individuals, 728 EMS firms with 3,300 vehicles, 22 developing systems, and 190 designated trauma facilities in Texas as of September 2002. The structure of EMS in

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Texas is as diverse as the state's geography. EMS firms range from small rural/frontier volunteer organizations to large corporate or municipal providers. The majority of transfers between facilities are conducted by private, non-emergency services that must meet the same licensing requirements as EMS providers conducting 9-1-1 calls. With the identification of 22 Trauma Service Areas (TSAs) [www.tdh.state.tx.us/hcqs/ems/Etsa.htm] and provision for the establishment of Regional Advisory Councils (RACs) in 1992 [www.tdh.state.tx.us/hcqs/ems/Etracac.htm], Texas began a transition into an integrated system for emergent patient care. While the RACs have taken a lead role in developing regional plans, there is still much to be accomplished in integrating all the elements of a patient's care into a coordinated, efficient system.

### **Where We Are Going - The Future of the Texas EMS/Trauma System**

The EMS /Trauma System of the future will be a multiple component, community-based emergency health management system that is fully integrated into the overall health care system. It will have the ability to identify risks of illness and injury and, through public education, modify those risks; provide acute illness and injury care and follow-up; and contribute to treatment of chronic conditions and community health monitoring. This will be accomplished by evaluating existing

#### **Texas EMS/Trauma System Stakeholder Organizations**

GETAC appreciates the many people who participated in the development of this strategic plan, either as individuals or as members of some of the following statewide organizations. Any omissions from this list are inadvertent and we sincerely apologize.

- American College of Surgeons - Texas Chapters
- Brain Injury Association of Texas
- Children's Hospitals and Related Institutions of Texas
- Conference of Urban Counties
- Commission on State Emergency Communications
- EMS Association of Texas, Inc
- EMS Educators Association of Texas
- EMS Physicians of Texas
- Mothers Against Drunk Driving
- Office of Rural Community Affairs
- State Firemen's and Fire Marshal's Association
- Texas Academy of Family Physicians
- Texas Ambulance Association
- Texas Association of Air Medical Services
- Texas Association of Counties
- Texas Association of EMTs
- Texas Association of Trauma Regional Advisory Councils
- Texas College of Emergency Physicians
- Texas Commission on Fire Protection
- Texas Department of Health
- Texas Department of Transportation
- Texas Emergency Nurses Association
- Texas Fire Chiefs Association
- Texas Health Care Information Council
- Texas Higher Education Coordinating Board
- Texas Hospital Association
- Texas Medical Association (EMS and Trauma Committee)
- Texas Municipal League
- Texas Nurses Association
- Texas Organization of Rural and Community Hospitals
- Texas Osteopathic Medical Association
- Texas Pediatrics Society
- Texas State Association of Fire Fighters
- Texas Trauma Coordinators Forum
- Texas Traumatic Brain Injury Advisory Council

health care resources and forging a system that includes health care providers, public health organizations and public safety agencies. The system will improve community health and result in more appropriate use of acute health care resources. Through interaction with other agencies, it will have the ability to respond appropriately to multiple casualty incidents (MCIs). EMS will remain the public's emergency medical safety net.

As mentioned earlier, challenges to overcome in order to attain a fully integrated EMS /Trauma System in Texas are lack of operational funding, decreasing reimbursement for patient care, personnel shortages, inadequate information systems for use in evaluation and research, outdated communication systems, hospital diversions, an uninformed/poorly educated public with regards to EMS and trauma care issues, non-standard dispatch, and the continual rise in health care costs.

## Vision and Mission for the Texas EMS/Trauma System

### *Vision*

*A unified, comprehensive, and effective EMS/Trauma System for a healthy, safe Texas.*

### *Mission*

*To promote, develop, and maintain a comprehensive EMS/Trauma System that will meet the needs of all patients and that will raise the standards for community health care by implementing innovative techniques and systems for the delivery of emergency care for the entire population.*

## How We Will Get There - Objectives and Strategies for the Texas EMS/Trauma System

### INTEGRATION

The concept of integration is simple: the more resources that health care providers can call upon, the better the quality of the care. Until the creation of TSAs and RACs in 1992, Texas EMS provided care in relative isolation from other health care and community resources. RACs now take a lead role in developing regional trauma system plans that integrate the many system components and coordinate them to promote cost-effective services for injury prevention and patient care. Integration occurs when emergency/trauma health care organizations in an area actively participate on the RAC that is working on a coordinated regional plan. Full

### Texas EMS/Trauma System Goal Areas

Integration	Medical Oversight
Clinical Care	Education Systems
Communication Systems	Research
Public Access	Information Systems
Public Education	Evaluation
Prevention	Legislation and Regulation
Human Resources	System Finance

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## **INTEGRATION**

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integration of pre-hospital providers and hospital providers into a unified EMS/Trauma System results in faster access, better pre-hospital care and more seamless patient care continuing through rehabilitation.

### **Objectives:**

1. Integrate all EMS and trauma services within health care systems and provider networks; local, regional, and state public health agencies; public safety agencies; and any other appropriate agencies/systems to deliver quality care.
2. Identify and incorporate health systems within EMS/Trauma Systems that address and reflect all segments of the population (age extremes, special needs, cultural, ethnic, geographic specifics, etc.).
3. Achieve universal EMS and hospital participation in the EMS/Trauma System.
4. Assure that EMS and trauma care entities/systems are considered stakeholders in all policy decisions related to all aspects of the disaster network, including the recent emphasis on planning for a bioterrorism event.
5. Increase involvement of EMS in community health activities, including surveillance and prevention programs.

### **Strategies:**

- a. EMS/Trauma System stakeholder groups (e.g., Texas Hospital Association, Texas Ambulance Association) will educate all health care payers who reimburse for emergency/trauma care in Texas about the EMS/Trauma System beginning *immediately* and in an ongoing manner, as needed. These groups will collaborate and utilize creative methods (e.g., partnering and seeking grant funding) to disseminate a unified message to relevant groups/organizations (e.g., health care information and marketing leaders).
- b. GETAC, with stakeholder input, will develop recommendations related to uniform, enforceable criteria/standards for what constitutes an EMS/Trauma System *by 4/1/03*.
- c. GETAC and the RACs, with stakeholder input, will develop recommendations related to the roles of TDH and the RACs in system development, implementation, and evaluation *by 4/1/03*.
- d. TDHBEM will adopt essential criteria/standards for the operations/processes of the RACs *by 10/1/03*.
- e. GETAC, with stakeholder input, will develop universal definitions regarding the categorization of emergency/trauma patients for use statewide *by 10/1/03*.
- f. TDHBEM will implement a best practices website for systems/clinical care issues *by 10/1/03*.
- g. GETAC, with stakeholder assistance, will promote innovative partnerships (e.g., Texas Parks and Wildlife, Department of Public Safety, police) to provide first responder activities for underserved and difficult-to-access areas *by 10/1/03*.
- h. GETAC, with stakeholder assistance, will educate governing bodies (e.g., commissioners' courts, judges) regarding the criticality of an EMS/Trauma System to all citizens/visitors of their communities (e.g., an essential service, standards of care, impact of EMS/trauma care on illness/injury morbidity and mortality) *by 10/1/04*.

- i. GETAC, with stakeholder input, will review and consider adopting the principles of the National Trauma Systems Agenda **by 10/1/04**.
- j. GETAC, with stakeholder input, will review the Emergency Medical Services for Children (EMSC) legislation and develop recommendations for full implementation, if funding is appropriated, **by 10/1/04**.

### **CLINICAL CARE**

Clinical care, the direct care given a patient in an EMS/Trauma System, has evolved significantly over the past 30 years. By capitalizing on the availability of new pharmacological agents and technology, developing means to deliver life-saving care faster (e.g., lay-person CPR, use of automated external defibrillators (AEDs) by lesser trained personnel and dispatch life support), and beginning to systematically address the needs of specific groups of patients, outcomes of patients who have faced an emergency health care situation have dramatically improved.

However, care can differ immensely between localities due to variations in the availability of local resources, differences in accepted medical standards, and expectations of communities. TDH has established minimum performance standards for hospitals that offer specialized trauma care and has recognized four levels of trauma facility care with a formal designation process. However, inconsistencies in trauma care for adult and pediatric patients in Texas hospitals still exist and can be attributed to the voluntary nature of hospital participation in the EMS/Trauma System.

The goal of a sophisticated clinical care system is to standardize treatment based on solid medical evidence so that patients can expect quality care no matter where they are in the state. This can be accomplished, in large part, by providing educational opportunities to increase knowledge of standard treatments; and by working to facilitate the designation of trauma facilities to ensure that care for seriously ill patients is delivered in a timely fashion at the most appropriate facility for their injuries.



### **CLINICAL CARE**

Clinical care, the direct care given a patient in an EMS/Trauma System, has evolved significantly over the past 30 years. By capitalizing on new pharmacological agents and new technology, outcomes of patients who have faced an emergency health care situation have dramatically improved.

### **Objectives:**

1. As an essential service, the Texas EMS/Trauma System will commit to a common standard of baseline community emergency and trauma care services for all adult and pediatric patient populations.
2. Reduce time from onset of illness/injury to definitive care.
3. Apply an evidence-based approach to all EMS and trauma patient clinical care.

### **Strategies:**

- a. GETAC, with stakeholder input, will identify high priority clinical areas (initially and on an ongoing basis), and assist TDH in collation and dissemination of current information/standards/opportunities for education (TDHBEM website, *Texas EMS Magazine*, Texas EMS Conference, etc.) **by 10/1/03** and annually thereafter.
- b. GETAC, with stakeholder assistance, will make recommendations for a plan to address the specific needs of the pediatric patient population **by 10/1/03**.
- c. GETAC, with stakeholder input, will develop recommendations related to standards for baseline integrated emergency and trauma care services to minimize the time from incident to definitive care **by 10/1/05**.

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## COMMUNICATION SYSTEMS

In Texas, the number 9-1-1 is available to emergency callers across the entire state. However, many areas of Texas still lack adequate 9-1-1 dispatching services.



- d. TDHBEM will implement the Comprehensive Clinical Management Program (CCMP) *by 10/1/05*.

## COMMUNICATION SYSTEMS

In Texas, the number 9-1-1, is available to emergency callers across the entire state. 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 E9-1-1.

Even though all of Texas has 9-1-1 access, several communications issues still must be overcome. Callers without E9-1-1 or those making -calls from cell phones must give an exact location or the response time for the emergency provider is delayed. Although the Texas Legislature mandated that wireless companies incorporate technology that allows location of wireless calls to be determined, this has yet to be realized statewide.

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 greatly 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 EMS/Trauma System, will ensure fast access to 9-1-1, including the location of the call; qualified communications operators able to assist the caller before EMS arrives; equipment that enables prioritized dispatch; and adequate real-time communication between first responders, EMS personnel and hospital staff.

### **Objectives:**

1. Promote implementation of universal addressing and enhanced 9-1-1 services statewide to ensure that all emergency calls, including those initiated by wireless mediums, are routed to the appropriate PSAP, regardless of call origin, so that appropriate resources are made available to emergency medical and injury patients in the minimum time possible within local resources.
2. Develop, and commit to, a common standard of what constitutes a minimal, baseline EMS dispatching protocol.
3. Explore and implement real-time patient data transfer and telemedicine, where appropriate, with an emphasis on rural and medically underserved areas.
4. Promote the establishment of robust fault-tolerant communication systems statewide that result in seamless communications between public safety and health care agencies in any situation.

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### **Strategies:**

- a. GETAC, with stakeholder assistance, will meet with the Commission on State Emergency Communications (9-1-1 Commission) to discuss the current status of the statewide 9-1-1 system and other issues (i.e., cell phone positioning, addressing, appropriate use of decommissioned cell phones, etc.) and develop joint strategies *by 10/1/03*.
- b. TDHBEM will complete the EMD Resource Center pilot required by Texas Health and Safety Code, Chapter 771, Sections 101 - 108, evaluate the results, and develop recommendations *by 4/1/04*.
- c. GETAC, with stakeholder input, will develop recommendations for baseline/minimum state EMS pre-arrival standards (call-taking, interrogation, dispatching, pre-arrival instructions) *by 10/1/04*.

### **PUBLIC ACCESS**

Public access is the ability to secure prompt and appropriate care regardless of socioeconomic status, age or special need. Many issues related to public access are outside the purview of an EMS/Trauma System, such as the inability to pay for a phone line so that 9-1-1 can be accessed, availability of low-cost health insurance or the willingness of insurance companies to pay for medical procedures.

However, some issues can be brought to the public's attention, even if they cannot be solved by an EMS/Trauma System alone. Public access is jeopardized when callers jam the lines to 9-1-1 centers with non-emergency calls. In turn, EMS units responding to these non-emergencies are unable to answer true emergency situations. When hospital resources become overwhelmed, requests for ambulance diversion may be made.

A public educated about the appropriate use of an EMS/Trauma System, including accessing 9-1-1, EMS and a hospital emergency department, will improve access to the system and will allow all the partners in the system to focus on providing vital care to those that need it most in the least amount of time.

### **Objectives:**

Achieve universal access for emergency and trauma care in Texas, including appropriate health care during multi-casualty/disaster situations.

### **Strategies:**

GETAC, with stakeholder input, will identify and evaluate existing public information programs and advocate statewide adoption of proven activities *by 10/1/04*.

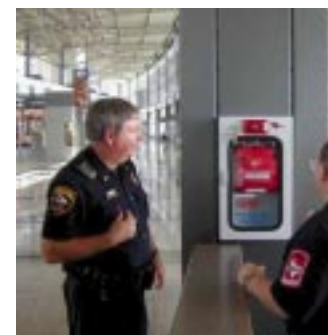
### **PUBLIC EDUCATION**

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 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. For example, fire

### **PUBLIC ACCESS**

Public access is the ability to secure prompt and appropriate care regardless of socioeconomic status, age or special need.



### **PUBLIC EDUCATION**

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*EMS personnel and Bearamedic Ready Teddy teach local children about staying safe during Texas EMS Week 2001.*

service campaigns stress the importance of smoke detectors, and police departments conduct public education on impaired driving dangers and personal safety. Likewise, EMS/Trauma Systems, including the 22 RACs, must work together to educate the public on prevention issues and on proper access and use of the health system. EMS/Trauma Systems have been strong advocates for injury prevention education and continue to educate the public about issues such as bicycle safety and seatbelt use.

However, there is a profound lack of public awareness about the scope of the EMS/Trauma System and how the system is funded. Unfortunately, most of what the public knows about emergency medical and injury care comes from the media, where shows such as “ER” and “Third Watch” portray a less-than-realistic picture of the true nature of EMS and trauma care. Significantly, this entertainment media rarely shows the less glamorous side of appropriate access to health care, and does not address the issue of funding for EMS and trauma care.

Public information and education must focus on encouraging the public’s role as a key partner in the system. Demonstrating access to the system and the capability of local health care entities allows citizens to understand that choices and personal responsibility regarding injury prevention can directly impact their lives and the lives of their loved ones. Public education should ultimately lead to better utilization of system resources and improved patient outcome.

### **Objectives:**

1. Assure that future generations will be much more cognizant of the EMS/Trauma System, including the appropriate use of these resources.
2. Promote public education as a critical activity for the EMS/Trauma System.
3. Explore new techniques and technologies for providing collaborative, targeted public education that is accessible to the appropriate audience.

### **Strategies:**

- a. GETAC, TDH, EMS, hospitals, and other appropriate stakeholder groups will appropriately educate state, regional, and local decision-makers and the public regarding EMS/Trauma Systems beginning *immediately* and in an ongoing manner.
- b. GETAC will increase consumer participation in its activities *immediately*.
- c. GETAC, TDH, and stakeholders will promote the continued appropriate implementation of automatic external defibrillators (AEDs), including requisite education, in appropriate public places *immediately*.
- d. GETAC, with stakeholder input, will evaluate existing media messages and either adopt them or develop new messages to educate the public as consumers of emergency/trauma care *by 10/1/04*.
- e. Stakeholders will develop partnerships with schools to implement targeted education programs *by 10/1/04*.

## **PREVENTION**

Injury is the third leading cause of death and disability in all age groups in the United States, accounting for millions of dollars in treatment and disability costs, and more years of potential life lost than any other health problem. *The solution is to prevent injury or death from occurring in the first place.*

## **PREVENTION**

Injury is the third leading cause of death and disability in all age groups in the United States, accounting for millions of dollars in treatment and disability costs, and more years of potential life lost (YPLL) than any other health problem. The solution is to prevent injury or death from occurring in the first place. The most successful injury prevention messages



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are frequent, coordinated and disseminated through a variety of outlets to the appropriate target audiences. Currently, most injury prevention efforts in Texas are carried out on a local level through individual health care entities or RACs, with no harmonious statewide effort and no systematic approach to educating the public with regards to the prevention of illnesses. Prevention programs are often created on demand (e.g., based on a single incident) rather than on a methodical analysis of actual injury data. In many cases, programs on similar topics are being conducted by various organizations in the same community without the benefit of coordination.

By making prevention a coordinated effort, the EMS/Trauma System can provide a central point for resources and develop a plan which targets injuries that most affect Texans.

### **Objectives:**

1. Advocate for state policy that promotes the prevention of injury and illness.
2. Establish routine and timely surveillance of major injury and illness in Texas.
3. Support and participate in evidence-based successful community injury and/or disease prevention programs (i.e., Safe Communities/Safe Nation).
4. Include principles of prevention's role in improving community health, such as the ability to recognize and document potential precipitating factors, as part of EMS and trauma care education core curricula.
5. Reduce occupational-related illnesses/injuries in emergency and trauma care professionals through education, engineering, immunizations, etc.
6. Develop strategic alliances to develop community prevention strategies in cases of natural or man-made outbreaks.

### **Strategies:**

- a. GETAC, with stakeholder input, will develop a prevention resource manual for statewide distribution (i.e., public website, RACs, etc.) *by 4/1/03*.
- b. GETAC, with stakeholder input, will develop a strategic plan for injury prevention and control in Texas *by 10/1/04*.

## **HUMAN RESOURCES**

Human resources are the dedicated team of competent, compassionate individuals with complementary skills and expertise who provide quality medical care. As in many areas across the country, Texas is facing a critical shortage of medical personnel both in pre-hospital and hospital settings. Stress and low wages are driving pre-hospital personnel and nurses into other professions and liability and workload concerns are driving physicians away from provision of emergency care.

GETAC received more than thirty comments regarding the problems of recruitment/retention and EMS personnel shortages during the public hearings. A scarcity of volunteers, who provide EMS coverage for a large area of the state (mainly rural & frontier areas), are also part of the challenge. Small rural/frontier communities are finding it more and more difficult to recruit and retain personnel because the potential pool of volunteers shrinks as the population ages and/or the younger people move away. Many of those remaining in these communities simply do not have the time or money required to become trained and then volunteer for an EMS service. EMS personnel who are compensated face challenges of relatively low pay and underfunded systems that can leave medics without adequate tools and equipment to

## **HUMAN RESOURCES**

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improve patient care and keep rescuers safe. There are currently few incentives, financial or other, for pursuing a specialty that frequently involves commitment away from one's family on nights, weekends, and holidays, in addition to the increased personal risk of exposure, injury or stress. Hospitals share this staffing challenge. Seventy-five percent of the hospitals returning surveys indicated they were experiencing a shortage of personnel. The well-publicized shortage of hospital staffing affects both hospitals and EMS because EMS may have to transport patients extended distances while attempting to locate a facility that is not on diversion status due to limited hospital staffing.

Victims of medical or trauma emergencies must have rapid access to emergency care. To accomplish this, Texas needs sufficient numbers of appropriately-trained providers in both the pre-hospital and hospital settings. RACs can provide the centralized coordination needed to identify and categorize the human resources necessary for overall effective EMS and trauma care system operations.

**Objectives:**

Assure the availability of an adequate, appropriately-trained, and diverse emergency and trauma care workforce.

**Strategies:**

- a. Stakeholders will advocate for appropriate immunity for volunteer medical directors *immediately* and explore the possibility of innovative approaches (e.g., a physician being integrated into a local governmental program that would provide some form of liability limitation for EMS activities) *by 10/1/03*.
- b. GETAC, with stakeholder assistance, will identify reasons why emergency/trauma care professionals are leaving the emergency care field and recommend strategies to address those issues *by 10/1/03*.
- c. GETAC, with stakeholder input, will explore the concept of utilizing state EMS grant funds for direct financing of EMS education and training programs *by 10/1/03*.
- d. TDHBEM (or other appropriate entity) will implement a website for scholarships/funding availability and vacancies/job opportunities *by 10/1/03*.
- e. GETAC, with stakeholder assistance, will encourage communities to directly communicate with appropriate governmental entities to implement innovative recruitment and retention incentives (e.g., wages/compensation packages, retirement benefits, insurance benefits, tax abatement, education, continuing education, workforce stress reduction strategies) for volunteer and career emergency and trauma care professionals *by 10/1/04*.
- f. GETAC will advocate for the adoption of statewide guidelines for personal protection and safety (i.e., exposure management, infection control, immunizations, etc.) of EMS and trauma care providers personal protection and safety *by 10/1/04*.
- g. EMS providers and hospitals will assure that appropriate services for dealing with stressful events are available to all emergency and trauma care providers *by 10/1/04*.
- h. Stakeholders will work with appropriate entities/organizations (i.e., Texas Education Agency, scouts, Explorer Posts, high school clubs, etc.) to encourage health care occupations in primary/middle schools and the inclusion of actual pre-hospital courses in high school curricula *by 10/1/04*.



**MEDICAL OVERSIGHT**

Strong physician leadership and medical oversight based on current standards of care are essential to the success of the Texas EMS/Trauma System. Medical oversight involves granting authority and accepting responsibility for patient care, and includes participation in all aspects of that care to ensure maintenance of accepted standards of medical practice.

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care are essential to the success of the Texas EMS/Trauma System. Medical oversight involves granting authority and accepting responsibility for patient care, and includes participation in all aspects of that care to ensure maintenance of accepted standards of medical practice.

The medical director delegates professional practice and skills to non-physician providers who manage patient care outside the traditional setting of hospitals or medical offices, including both ground and air ambulances. The legal ability to delegate authority carries with it the responsibility of physicians to be actively involved in all appropriate aspects of the EMS/Trauma 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. Unfortunately, a large number of Texas medical directors serve in an informal advisory role and participate on a limited basis only to meet state regulatory requirements.

Ideally, the medical director is involved in system planning; development of system patient care protocols; on-line medical consultation and direction; auditing of patient care documentation; evaluation of patient care; and recommendations for improvement of patient care practices. The medical director is also responsible for coordinating with other community physicians to ensure that their patients' issues and needs are understood and adequately addressed by the system. The EMS/Trauma System should be responsible for promoting appropriate credentialing of medical oversight physicians, providing education, and for support on issues that improve medical directors' abilities to provide care.

### **Objectives:**

1. Require appropriate curriculum, education and credentialing process for physicians providing medical oversight (indirect and direct).
2. Provide initial and ongoing education regarding the roles/responsibilities of EMS medical oversight in Texas.
3. Explore initiatives to address medical oversight liability issues.

### **Strategies:**

- a. GETAC, the Texas College of Emergency Physicians (TCEP), the Texas Medical Association (TMA) and the Board of Medical Examiners (BME), with input from other appropriate stakeholders, will develop a Texas EMS Medical Directors Course, which includes minimum standards for EMS medical oversight (e.g., infield oversight, protocol development/review, quality improvement, etc.) *by 10/1/03*.
- b. GETAC, TCEP, TMA, BME, with input from other appropriate stakeholders, will explore the establishment of a medical director peer review process to address concerns or facilitate resolution of conflict between medical directors and providers *by 10/1/03*.
- c. TDHBEM (or other appropriate stakeholder) will include a Medical Directors Forum on a website *by 10/1/04*.
- d. All Texas EMS Medical Directors will successfully complete an approved EMS Medical Director course *by 10/1/05*.

## **EDUCATION SYSTEMS**

As EMS care in Texas continues to evolve and become more sophisticated, the

## **EDUCATION SYSTEMS**

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## RESEARCH

Research in any medical field is critical to making the best decisions regarding patient care. This concept is termed “evidence-based medicine” and refers to managing a patient’s care based on scientific studies that validate the benefits of specific interventions.

need for quality education for EMS personnel increases. Education programs must meet the needs of both new providers and seasoned professionals who need to maintain skills and familiarity with advancing technology and the scientific basis for their practice. Programs must also provide training regarding special populations (e.g., pediatrics, geriatrics) for EMS/Trauma System personnel.

Currently, EMS education programs prepare those who are interested in certification in EMS at five levels: Emergency Care Attendant, Emergency Medical Technician, Emergency Medical Technician-Intermediate, Emergency Medical Technician-Paramedic and Licensed Paramedic. These programs also provide continuing education (CE) classes and specialty courses such as Pre-Hospital Emergency Pediatric Provider (PEPP), Advanced Trauma Life Support (ATLS), Advanced Cardiac Life Support (ACLS), Basic Trauma Life Support (BTLS), and Pre-Hospital Trauma Life Support (PHTLS). Settings for EMS education include hospitals, community colleges, universities, technical centers, private institutions, and fire and EMS departments.

As indicated from the 45 comments gathered during the public hearings, advanced training and CE opportunities for many rural EMS systems are limited by distances to major training centers located in more urban areas. This is a problem that appears to be more prevalent in West Texas and the Panhandle region of the state. Texas EMS, in conjunction with the RACs, should explore innovative ways to educate health care professionals using technology to bridge the distances and time constraints that are significant barriers to EMS and trauma care education.

### **Objectives:**

1. Create, implement, and maintain an effective EMS education system that utilizes innovative processes (i.e. webcasts, telemedicine, patient simulation) to address individual unique needs (i.e. shift workers) for initial and continuing education for EMS certificants/licensees/providers in all areas of the state.
2. Ensure that alterations in expectations of EMS personnel to provide health care services are preceded by adequate notice and preparation.

### **Strategies:**

- a. TDHBEM will monitor the implementation of National Registry testing and report to GETAC *immediately*, and on a quarterly basis.
- b. GETAC, with stakeholder input, will review and make recommendations regarding the scope of practice, curriculum and educational process for the EMT-Intermediate level *by 10/1/04*.
- c. GETAC, with stakeholder input, will review and make recommendations regarding the scope of practice, curriculum and educational process for the Emergency Care Attendant level *by 10/1/04*.
- d. GETAC, with stakeholder input, will review and make recommendations regarding the scope of practice, curriculum and educational process for the Licensed Paramedic level *by 10/1/04*.
- e. GETAC, with stakeholder input, will review and consider adoption of the principles of the *National EMS Education and Practice Blueprint by 10/1/04*.

## RESEARCH

Research in any medical field is critical to making the best decisions regarding patient

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care. This concept is termed “evidence-based medicine” and refers to managing a patient’s care based on scientific studies that validate the benefits of specific interventions. While EMS has evolved rapidly over the past 30 years, progress has been slow in developing EMS-related research. Research is frequently isolated to a single EMS system, is component-based, focuses on a single intervention or health problem, and/or has not adequately addressed the complexities of the entire EMS system and its diverse patient population. Trauma-related research does exist, but study methods have not been extensively developed, and those study designs often limit the ability to reach meaningful conclusions. Other clinical conditions have not been scientifically studied with a systems approach. Changes in care/interventions frequently prompt research efforts to prove a difference is made rather than the more appropriate sequence of using research findings as a basis for making the change. Thus, in many cases, a poor understanding of systems research models has led to the development of wrong assumptions with regard to pre-hospital care. The lack of a comprehensive statewide data collection system further limits the ability to conduct significant research. A focus on research means that the EMS/Trauma System will be able to rely on solid research in making decisions concerning appropriate emergency patient care, and that the system itself will be seen as a vital element of the overall health care system.

**Objectives:**

1. Subject EMS and trauma clinical care to scientific evaluation to determine the impact on patient outcomes.
2. Promote participation in multi-center, high quality, scientifically sound, applicable EMS research.

**Strategies:**

- a. TDHBEM will explore the potential for a process to approve variances to current regulations that are based on scientifically sound research principles (e.g., a licensed Physician’s Assistant as the second provider on an ambulance) *immediately*.
- b. GETAC, with stakeholder input, will develop recommendations for EMS research priorities (e.g., skills degradation, cost effectiveness of EMS interventions) *by 10/1/04*.
- c. TDHBEM (or an appropriate stakeholder organization) will disseminate information (e.g., website, *Texas EMS Magazine*) on the establishment of an appropriate institutional review board (IRB) to interpret informed consent rules to allow for the clinical and ethical circumstances inherent in conducting credible EMS research *by 10/1/04*.
- d. GETAC, with stakeholder input, will review and consider adoption of the principles of the *National EMS Research Agenda Blueprint by 10/1/04*.

**INFORMATION SYSTEMS**

The purpose of collecting EMS and trauma care data is to evaluate the emergency medical care of individuals with illnesses and injuries 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 EMS/Trauma System currently exist in disparate databases of EMS agencies, emergency departments, hospital medical records, other public safety agencies, rehabilitation facilities and vital statistics offices; however, in most cases, meaningful links between such sites are nonexistent.

EMS Rule 157.11 (Requirements for an EMS Provider License), Section (I)(14), requires all EMS firms to submit run response data to TDH, which is currently

**INFORMATION SYSTEMS**

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implementing improvements to the EMS/Trauma Registry.

In 2001, TDHEPI processed more than 275,000 records with approximately 200,000 relating to pre-hospital EMS services. Upon full implementation of the new Texas EMS/Trauma Registry, it is estimated that approximately 1.75 million records will be processed on an annual basis.

Reliable data that is readily accessible to appropriate stakeholders will provide roadmaps to prudent use of resources. Information management should be a cornerstone of the EMS/Trauma System to promote appropriate research, patient care management and performance improvement. It allows for evaluation of the state and regional systems, as well as the individual components of the systems.

### **Objectives:**

1. Develop and maintain information systems to generate and transmit data that are valid, reliable, accurate and secure; are able to track an entire patient encounter, from incident through rehabilitation; minimize redundancy; identify costs of patient care; and provide linkage between various public safety services and other health care providers.
2. Improve the ability of the EMS/Trauma System to document and report injury and illness data and potential precipitants.

### **Strategies:**

- a. GETAC will recommend to TDH that the current organizational placement of the Texas EMS/Trauma Registry be evaluated for appropriateness *immediately* (i.e., Should the registry be placed within TDHBEM since original legislation directed TDHBEM be responsible for this activity and TDHBEM deals with the constituency on a daily basis? Does it better coalesce with the mission of the new TDH Center for Health Statistics?, etc.).
- b. TDHEPI will maintain uniform data elements and definitions and review periodically, with stakeholder input, to incorporate these data elements and definitions into information systems *immediately*, and in an ongoing manner.
- c. TDHEPI will assure that all EMS/Trauma System entities will have had the opportunity to sign on to the new EMS/Trauma Registry program and be able to successfully transmit EMS and trauma care data to the state EMS/Trauma Registry *by 10/1/03*.
- d. TDHEPI will implement training aids to assist in data reporting *by 10/1/03*.
- e. TDH and RACs will provide feedback (validation, data quality, standard/ad hoc reports) to those who generate data *by 10/1/03*.
- f. TDHEPI will develop information systems that are able to describe an entire EMS event *by 10/1/04*.
- g. EMS providers and hospitals will develop mechanisms to generate and transmit data that are valid, reliable and accurate *within three years* of successful implementation of the new EMS/Trauma Registry program.

### **EVALUATION**

Continuous evaluation, an essential tool for the EMS/Trauma System, is vital to good patient care. Regular evaluation will determine what is working in an organization and what must be improved

### **EVALUATION**

Continuous evaluation, an essential tool for the EMS/Trauma System, is vital to good patient care. Regular evaluation will determine what is working in an organization and what must be improved, be it an administrative process or a medical procedure. Improvement in any area will positively affect patient outcomes.

While the majority of the regional EMS/Trauma Systems in Texas have processes in place for system evaluation, often these processes are inadequate due to the lack of reliable data. Many rural/frontier EMS providers have minimal performance improvement (PI) programs in place that review only a few key components of their operations. Even systems with more comprehensive programs often fail to follow-up on patient outcomes. Comprehensive evaluation programs are needed to effectively plan and implement both the statewide and 22 regional EMS/Trauma Systems. All systems must be responsible for evaluating the effectiveness of services provided to victims of medical or trauma-related emergencies. Evaluation must include resource utilization, scope of service, patient outcome and the effectiveness of operational and clinical policies, procedures and protocols.

Effective statewide and regional systems must evaluate against pre-established standards and objectives so that improvements in service—particularly better patient care—can be achieved. This occurs through an ongoing PI program to review systems performance. These ongoing evaluation processes should be focused on provider education, performance improvement and risk management.

#### **Objectives:**

Develop comprehensive processes to evaluate the effectiveness of EMS/Trauma Systems at the local, regional, and state level.

#### **Strategies:**

- a. GETAC, with stakeholder input, will develop EMS/Trauma System indicators that represent current emergency patient care standards for evaluation of the effectiveness of the EMS/Trauma System *by 10/1/04*.
- b. Stakeholders will implement the evaluation principles of the Comprehensive Clinical Management Program (CCMP) *within three years of implementation of CCMP*.
- c. Each individual EMS/Trauma System provider and the RACs will incorporate consumer input, as appropriate by law, in evaluation processes *by 10/1/05*.

#### **LEGISLATION & REGULATION**

A variety of laws and regulations are central to the provision of appropriate EMS and trauma care services on the public's behalf. Texas has statutory authority for regulating the EMS/Trauma System. TDH is responsible for personnel certification/licensing, training program approval, EMS provider licensing, first responder organization registration and trauma facility designation. Comprehensive legislation for development, implementation and evaluation of a statewide EMS/Trauma system, to include appropriate pediatric standards, is also in place. Additionally, some local governments have passed ordinances that delineate additional EMS standards to ensure the provision of appropriate emergency health care services to their citizens. However, the public does not have adequate access to EMS and trauma care in many parts of Texas because there is no state statutory requirement to provide these services.

#### **Objectives:**

1. Establish EMS and trauma care services as essential services such that all residents and visitors to Texas have appropriate access to basic emergency medical services in a timely fashion following injury or onset of illness.

#### **LEGISLATION & REGULATION**

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## SYSTEM FINANCE

While exact figures are unknown, the cost of emergent care in Texas reaches into the hundreds of millions of dollars each year.

2. Pass and periodically review enabling legislation/regulations that support innovation and integration of EMS and trauma services.
3. Explore initiatives to address emergency health care liability issues (i.e., insurance coverage/rates, tort reform, etc.) issues.

### **Strategies:**

- a. Stakeholders will explore and promote the passage of legislation that will mandate EMS and trauma care services as “Essential Services” *immediately*.
- b. GETAC, with stakeholder assistance, will advocate for the profession of EMS to be represented at the Health Professions Council *immediately*.
- c. GETAC, with stakeholder input, will review 9-1-1/non-9-1-1 EMS licensed provider and non-licensed provider issues and make recommendations *by 10/1/03*.
- d. GETAC, with stakeholder input, will review the current Subscription Services statute and regulations and make recommendations *by 10/1/03*.
- e. GETAC, with stakeholder input, will periodically review the current state structure supporting the EMS/Trauma System and develop appropriate recommendations in an *ongoing* manner.
- f. TDH, with GETAC and stakeholder input, will review and revise, as needed, its regulations *per state-mandated timeframes*.

## SYSTEM FINANCE

While exact figures are unknown, the cost of emergent care in Texas reaches into the hundreds of millions of dollars each year. EMS expenses include well-maintained ambulances and medical equipment; trained and certified/licensed EMS personnel; communications capabilities; medical direction; fuel; and supplies and insurance. Other expenses can include dispatching; administrative staffing; equipment and supplies; housing; utilities; ambulance/supply storage; back-up vehicles; training/continuing education; and billing services. Funding for all these expenses must be available for a service to survive. There are a variety of funding strategies utilized by EMS providers to finance their operations, including tax revenues, billing, subsidies, grants, and donations.

The federal government contributes to the financing of the EMS/Trauma System through patient care reimbursement programs, such as Medicare, as well as occasional federal grant opportunities, usually for equipment and education programs. The state government contributes through patient care reimbursement programs such as Medicaid and the Indigent Care Fund. State grant programs such as TDHBEM’s EMS Local Projects Grants program are available for the purchase of ambulances, equipment, education, training and injury prevention/public information projects. Generally, state programs do not provide funding for EMS/Trauma System operating costs.

However, those funding programs do not begin to cover the true cost of providing EMS and trauma care in a community, much less the development of a system that can coordinate efforts. In fact, because EMS is not a mandated service, many communities choose to avoid the cost of providing any kind of emergency medical services, instead depending on volunteer EMS services.

Forty-five percent (99 of 223) of the comments gathered at the statewide public hearings were related to system funding issues. This is a significant issue for the state EMS/Trauma System — and all Texans.



### **Objectives:**

1. Achieve adequate, long-term, and sustainable funding for all components of local, regional and state emergency/trauma care services and systems, including TDH as the oversight agency.
2. Assure that health care payment policies do not adversely affect emergency medical or trauma patient care.
3. Assure that public safety EMS personnel receive the same benefits as their police and fire counterparts.

### **Strategies:**

- a. TDH will explore methodologies to provide “upfront” monies to grantees that find it difficult to raise funds to purchase awarded items before receiving reimbursement *immediately*.
- b. Stakeholders will evaluate and promote the passage of the TDH exceptional item that will provide additional grant funds for EMS/Trauma Systems, enhance TDH’s ability to provide technical assistance/a comprehensive data system, and provide resources to implement the EMSC program *immediately*.
- c. Stakeholders will promote the passage of legislation to fund uncompensated EMS/trauma care *immediately*.
- d. Stakeholders will promote the appropriation of all EMS fees to TDHBEM *immediately*.
- e. Stakeholders (e.g., TAA) will request an evaluation of health care payer policies (i.e. Medicare, Medicaid, insurance companies, etc.) and recommend that patient transport not be a criterion for compensating EMS providers for emergency care (i.e., treat and release, response during MCIs, etc.) *immediately*.
- f. Stakeholders will recommend the establishment of appropriate benefits for EMS that are congruent with their police and fire counterparts *immediately*.
- g. GETAC, with stakeholder assistance, will recommend that the state establish Medicaid EMS reimbursement rate schedules that are congruent with the national Medicare reimbursement rate schedules *immediately*.



### **GLOSSARY**

**Advanced Life Support (ALS):** Emergency pre-hospital or interfacility care that uses invasive medical acts. The provision of advanced life support shall be under the medical supervision and control of a licensed physician.

**Basic Life Support (BLS):** Emergency pre-hospital or interfacility care that uses noninvasive medical acts. The provision of basic life support shall be under the medical supervision and control of a licensed physician.

**Bureau of Emergency Management (TDHBEM):** The Bureau of Emergency Management of the Texas Department of Health.

**Bureau of Epidemiology (TDHEPI):** The Bureau of Epidemiology of the Texas Department of Health.

**Bypass:** Direction given to a prehospital emergency medical services unit, by direct/on-line medical control or predetermined triage criteria, to pass the nearest hospital for the most appropriate hospital/trauma facility. Bypass protocols should have local physician input into their development and should be reviewed through the regional performance improvement process.

**Department (TDH):** The Texas Department of Health.

**Designation:** A formal recognition by the department of a hospital’s trauma care capabilities and commitment.

**Diversion:** A procedure put into effect by a trauma facility to insure appropriate patient care when that facility is unable to provide the level of care demanded by a trauma patient’s injuries or when the facility has temporarily exhausted its resources.

**Emergency Care Attendant (ECA):** An individual who is certified by the department as minimally

proficient to provide emergency pre-hospital care by providing initial aid that promotes comfort and avoids aggravation of an injury or illness.

**Emergency Medical Dispatch (EMD):** The delivery of emergency medical information to members of the public during medical emergencies.

**Emergency Medical Services (EMS):** Services used to respond to an individual's perceived need for immediate medical care and to prevent death or aggravation of physiological or psychological illness or injury.

**EMS/Trauma Registry:** A statewide database that documents and integrates medical and system information related to the provision of emergency medical and trauma care by health care entities.

**Emergency Pre-Hospital Care:** Care provided to the sick and injured before or during transportation to a medical facility, including any necessary stabilization of the sick or injured in connection with that transportation.

**EMS:** See Emergency Medical Services.

**EMS/Trauma System:** See Emergency Medical Services and Trauma Care System.

**EMS Medical Director:** The licensed physician who provides medical supervision to the EMS personnel of a licensed EMS provider under the terms of the Medical Practices Act (Chapter 6, Texas Civil Statutes 4495b) and rules promulgated by the Texas State Board of Medical Examiners. Also may be referred to as off-line medical control.

**EMS Provider:** A person or entity that uses, operates or maintains EMS vehicles and EMS personnel to provide emergency medical services.

**Emergency Medical Services and Trauma Care System (EMS/Trauma System):** An arrangement of available resources that is coordinated for the effective delivery of emergency health care services in geographical regions consistent with planning and management standards. The state EMS/Trauma System is comprised of twenty-two regional EMS/Trauma Systems.

**Emergency Medical Technician-Basic (EMT-B):** An individual who is certified by the department as minimally proficient to perform emergency pre-hospital care that is necessary for basic life support and that includes the control of hemorrhaging and cardiopulmonary resuscitation.

**Emergency Medical Technician-Intermediate (EMT-I):** An individual who is certified by the department as minimally proficient in performing skills required to provide emergency pre-hospital or interfacility care by initiating and maintaining under medical supervision certain procedures, including intravenous therapy and endotracheal or esophageal intubation or both.

**Emergency Medical Technician-Paramedic (EMT-P):** An individual who is certified by the department as minimally proficient to provide emergency prehospital or interfacility care by providing advanced life support that includes initiation and maintenance under medical supervision of certain procedures, including intravenous therapy, endotracheal or esophageal intubation or both, electrical cardiac defibrillation or cardioversion, and drug therapy.

**First Responder Organization (FRO):** individuals or organizations that:

- (1) routinely respond to emergency situations;
- (2) utilize EMS personnel certified by the Texas Department of Health;
- (3) provide on-scene patient care; and
- (4) do not transport patients.

**GETAC:** See Governor's EMS and Trauma Advisory Council.

**Governor's EMS and Trauma Advisory Council (GETAC):** Created by 76<sup>th</sup> legislature: An Advisory Council appointed by the Governor to advise the Texas Board of Health regarding matters related to the responsibilities of the Board, the Commissioner of Health and the Department concerning EMS and trauma care services and systems.

**Governmental entity:** A county, a city or town, a school district, or a special district or authority created in accordance with the Texas Constitution, including a rural fire prevention district, an emergency services district, a water district, a municipal utility district, and a hospital district.

**Lead Trauma Facility:** A designated trauma facility that has made an additional commitment to its trauma service area. This commitment, which usually is offered by the highest level of trauma facility in a given trauma service area, includes receipt of major and severe trauma patients transferred from lower level trauma facilities. It also includes on-going support of the regional advisory council and the provision of regional outreach, prevention, and trauma educational activities to all trauma care providers in the trauma service area, regardless of health care system affiliation.

**Licensed Paramedic (LP):** A licensed paramedic is determined by the department to be minimally proficient to provide advanced life support that includes initiation under medical supervision of certain procedures, including intravenous therapy and endotracheal or esophageal intubation, electrical cardiac defibrillation or cardioversion, and drug therapy. In addition, a licensed paramedic must complete a curriculum that includes college-level course work in accordance with the rules adopted by the board.

**Major trauma patient:** A person with injuries, or potential injuries, severe enough to benefit from treatment at a trauma facility. These patients may or may not present with alterations in vital signs or level of consciousness or obvious significant injuries (see severe trauma patient), but have been involved in an incident that results in a high index of suspicion for significant injury and/or disability. Co-morbid factors such as age and/or the presence of significant medical problems should also be considered. These patients should initiate a system's or health care entity's trauma response, including pre-hospital triage to a designated trauma facility. For performance improvement purposes, these patients are also identified retrospectively by an injury severity score (ISS) of 9 or above.

**Medical control:** The supervision of pre-hospital emergency medical service providers by a licensed physician. This encompasses on-line (direct voice contact) and off-line (written protocol and procedural review).

**Medical Director:** See EMS Medical Director.

**Medical Direction:** Direction given to emergency medical services personnel by a licensed physician under the terms of the Medical Practice Act, (Texas Civil Statutes, Chapter 6, Article 4495b) and rules promulgated by the Texas State Board of Medical Examiners pursuant to the terms of the Medical Practice Act.

**Medical Intensive Care Unit (MICU):** A vehicle that is designed for transporting the sick or injured and that meets the requirements of the advanced life support vehicle and has sufficient equipment and supplies to provide cardiac monitoring, defibrillation, cardioversion, drug therapy, and two-way communication.

**RAC:** See Regional Advisory Council.

**Regional Advisory Council:** An organization comprised of EMS and trauma care providers that has been recognized by TDH whose purpose is to develop, implement, and evaluate a regional EMS/Trauma System within its trauma service area (TSA).

**Regional EMS/Trauma System:** An EMS and trauma care system that has been developed by a RAC in a multi-county area. The Texas EMS/Trauma System is a network of the regional EMS/trauma systems.

**Specialty centers:** Entities that care for specific types of trauma patients such as pediatric hospitals and burn units that have received certification, categorization, verification or other form of recognition by an appropriate agency regarding their capability to definitively treat these types of patients

**Specialty Care Transport:** The interfacility transfer of a critically ill or injured patient requiring specialized interventions, monitoring and/or staffing.

**Standard of care:** Care equivalent to what any reasonable, prudent person of like certification/licensure level would have given in a similar situation, based on local/regional/state adopted health care standards.

**TSA:** See Trauma Service Area.

**TDH:** The Texas Department of Health.

**TDHBEM:** The Texas Department of Health's Bureau of Emergency Management.

**TDHEPI:** The Texas Department of Health's Bureau of Epidemiology.

Texas Emergency Medical Services and Trauma Care System: See Emergency Medical Services and Trauma Care System.

**Transport:** The transport of an ill or injured patient from a pre-hospital setting to a medical facility.

**Transfer:** a patient transport from one medical facility to another facility or to a residence or physician's office.

**Trauma:** An injury or wound to a living body caused by the application of an external force or violence, including burn injuries. Poisonings, near-drownings and suffocations, other than those due to external forces are to be excluded from this definition.

**Trauma facility:** A hospital that has successfully completed the state designation process, is capable of stabilization and/or definitive treatment of critically injured persons and actively participates in a regional EMS/Trauma System. There are four levels of trauma facilities in Texas:

**Level I (Comprehensive Trauma Facility)** - provides a full range of services for the treatment of critical trauma patients, including a research program.

**Level II (Major Trauma Facility)** - provides a full range of services for the treatment of critical trauma patients, but may not provide some subspecialties (the component of research provided in Level I facilities is not required in Level II facilities).

**Level III (General Trauma Facility)** - provides a broad spectrum of services, including the prompt availability of general surgeons, orthopedic surgeons (in lead Level III facilities), and 24/7 coverage by emergency physicians.

**Level IV (Basic Trauma Facility)** - provides trauma-trained physicians and nurses who provide resuscitation and stabilization services, as well as rapid transfer arrangements of critical trauma patients to a higher level of care.

**Trauma patient:** Any critically injured person who has been evaluated by a physician, a registered nurse, or emergency medical services personnel, and found to require medical care in a trauma facility.

**Trauma Service Area:** A multi-county area established based on patient care patterns and available resources for descriptive planning purposes.

#### **OTHER REFERENCES:**

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[[www.cmanet.org/upload/ERWhitePaper.pdf](http://www.cmanet.org/upload/ERWhitePaper.pdf)]

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"National EMS Education and Practice Blueprint"

[[www.cdph.state.co.us/em/download/medicare/EMTPPracticeBlueprint.pdf](http://www.cdph.state.co.us/em/download/medicare/EMTPPracticeBlueprint.pdf)]

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"National EMS Research Agenda" [[www.researchagenda.org/](http://www.researchagenda.org/)]

"Iowa's EMS Agenda for the Future" [[www.idph.state.ia.us/pa/ems/pdf/ems\\_agenda.pdf](http://www.idph.state.ia.us/pa/ems/pdf/ems_agenda.pdf)]

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"Texas EMS State Plan (1992 – 1996) - Status of Objectives (August 2001)" [[www.tdh.state.tx.us/hcqs/ems/1992-1996EMSSStatePlan.PDF](http://www.tdh.state.tx.us/hcqs/ems/1992-1996EMSSStatePlan.PDF)]

Texas EMS/Trauma Registry Strategic Planning Documents [[www.tdh.state.tx.us/injury/reports/strat1/](http://www.tdh.state.tx.us/injury/reports/strat1/)]

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Texas 76<sup>th</sup> Legislature's Senate Intergovernmental Relations Committee Interim Report [[www.senate.state.tx.us/75r/senate/Commit/archive/c520/pdf/Exsumigr.pdf](http://www.senate.state.tx.us/75r/senate/Commit/archive/c520/pdf/Exsumigr.pdf)]

"Trauma System Agenda for the Future" [[www.nhtsa.dot.gov/people/injury/ems/TRAUMA\\_SYSTEM](http://www.nhtsa.dot.gov/people/injury/ems/TRAUMA_SYSTEM)]

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