State of Texas

An Assessment of Emergency Medical Services
NHTSA Technical Assistance Team Recommendations

January 16-18, 1990

Status of Recommendations

August 2001

Introduction: The Technical Assistance Team has performed a comprehensive analysis of the Texas EMS System. This analysis is based upon interviews conducted by the team. Pre-established standards and the combined experience of the members were applied to interview results and recommendations were formulated. All team members agree with the recommendations as presented.

This report is developed with the belief that Texas requires an integrated and comprehensive system in order to provide excellence of patient care. All elements of an EMS system much work in concert in order to provide a cost-effective and care-driven system. An EMS system that strives to provide excellence of care must have strong standards, medical direction, and a functional quality assurance program. Each component within an EMS system is important. No one component should overshadow the others. As the Texas EMS system continues with its efforts to develop excellence, attention needs to be given to basic structure and system function. A Statewide EMS data collection system is essential in order that analysis of the system can occur. This report is intended to provide insight into the current studies of EMS in Texas and should be utilized as support for programs that are designed to improve the system. Areas in *bold italics* represent priority areas identified by the Technical Assistance Team.

Category/1990 Standard	NHTSA Recommendations	Status	Comments
Regulation and Policy: To provide a quality effective system of emergency medical care, each EMS System must have comprehensive enabling legislation in place, as well as regulations, and operational policies and procedures.	***Adopt the comprehensive package of EMS rules currently pending before the Texas Board of Health (TDH Rules and Regulations Document 157.2. - 157.20.).***	Completed	
	The Chair of the Emergency and Disaster Committee of the Texas Board of Health should be a physician active in EMS.	Not Completed	There is no longer an Emergency and Disaster Committee of the Texas Board of Health. The Regulatory Committee currently reviews EMS rules.

Resource Management: The provision of centralized coordination to identify and categorize the resources necessary for overall system implementation and operation is essential to an effective EMS system. This is required to maintain a coordinated response and appropriate resource utilization throughout the State. It is essential that victims of medical or traumatic emergencies have equal access to basic emergency care, including the triage and transport of all victims by appropriately certified personnel (at a minimum, trained to the EMT basic level) in a licensed and equipped ambulance to a facility that is appropriately equipped and staffed, and ready to administer to the needs of the patient.	***Establish the Bureau of Emergency Management (BEM) as an organization level reporting directly to the State Commissioner of Health.***	Not Completed	This is not appropriate within the structure of TDH.
	Adopt basic EMT certified personnel as a component of the minimum staffing level for prehospital patient care. Recognize the unique and special requirements or rural EMS by incorporating necessary "Grandfather" and variance provisions.	Not Completed	Constituency concerns did not allow implementation. This would require a change in the current law.
	Require the state EMS office to develop a legislative budget request that reflects total implementation requirements for all assigned program responsibilities. Require that Board of Health to submit the full budget request to the legislature for consideration.	Completed	BEM has submitted a number of comprehensive budgets to TDH administration. Ultimately, it is the legislature's decision on how to appropriate state funds.
	Task TEMSAC to develop a comprehensive state EMS plan to be approved by the Board of Health and used by the legislature and state agencies in making resource allocation decisions and guiding the development of EMS in Texas.	Completed	Current plan needs to be updated/revised.
	Centralize policy interpretation at the state level and require the state EMS office to institute a procedure for issuing written policy interpretations that are distributed widely to all affected persons.	Completed	
	Institute a contractual relationship between the state and regional EMS programs to ensure that regional programs meet established performance standards and implement fully the spirit and specifics of state EMS program requirements.	Working	EMS Regional offices are developing annual management plans for FY02 in conjunction with the central office.

Manpower and Training: EMS personnel can perform their mission only if adequately trained and available in adequate numbers throughout the State. In addition, each prehospital training program should use a standardized curriculum for each level of EMT personnel. In an effective EMS system, training programs are routinely monitored, instructors must meet certain requirements, and the curriculum is standardized throughout the State. In addition, the State agency must provide a comprehensive plan for stable and consistent EMS training programs with effective local and regional support.	***Development of standards and rules relating to the requirements for and the responsibility of course coordinators and instructors.***	Completed	
	Implementation of standardized curriculum use statewide as well as audit of all levels of EMT training programs to ensure consistent delivery of the National Standard Curricula.	Completed	
	Consideration of the use of a national examination service rather than state-developed examinations.	Considered, but not implemented	Currently evaluating a proposal from the National Registry of EMTs.
	Consideration of American Medical Association (AMA) accreditation of all EMT- Paramedic training programs.	Considered, but not implemented	Paramedic Training programs may seek such accreditation, but it is not mandated.
	Consider the option of the development of an ambulance vehicle operator training and certification program.	Considered, but not implemented	These courses are an allowable expenditure of the EMS/Trauma systems grant funding provided to EMS Providers, EMS Education Programs, RACs, and Hospitals and some courses have been provided on local and regional levels. A certification program would require a change in the current law.

Transportation: Safe, reliable ambulance transportation is a critical component of an effective EMS system. Most patients can be effectively transported in a ground ambulance staffed by qualified emergency medical personnel. Other patients with more serious injuries or illnesses, particularly in remote areas, require rapid transportation provided by rotor craft or fixed wing air medical services. A routine, standardized method for inspection and licensing of all emergency medical transport vehicles is essential to main a constant state of readiness throughout the State.	***Board approval of the recommended rules and regulations for licensure of EMS providers.***	Completed	
	Develop standards and regulatory requirements for interhospital ground and air transfers.	Considered, but not implemented	Constituency concerns did not allow implementation. This would require a change in the current law.
	Increase the Medicaid reimbursements rate commensurate with the cost of delivering pre-hospital and interhospital transportation.	Working	BEM has worked with TDH program responsible for Medicaid reimbursement; however, state budgeting constraints have precluded implementation.
	Upgrade standards for helicopter programs utilizing ADAMS standards for medical crew, equipment, and aviation as minimum requirements for licensure.	Not implemented	Air Ambulance Providers may seek such CAEMS accreditation, but it is not mandated.
	Evaluate the availability of emergency pre-hospital air medical services across the state. Consider models other than hospital-based systems, i.e. Maryland.	Completed	Air ambulance is now available over the majority of the state, except extreme west Texas.

Facilities: It is imperative that the seriously ill patient be delivered in a timely manner to the closest appropriate facility. This determination needs to consider both stabilization and definitive care. This determination should be free of political considerations and requires that the capabilities of the facilities are clearly understood by pre-hospital personnel. Hospital resource capabilities must be know in advance, so that appropriate primary and secondary transport decisions can be made.	***The obligation of the 1989 Trauma System Law to designate Trauma Centers be fulfilled as soon as feasible.***	Completed	Currently, there are 184 designated trauma facilities (Level I – 10, Level II – 11, Level III – 34; Level IV – 129).
	The Texas Department of Health through the Bureau of Emergency Management should enhance the capability of the default hospitals to deal with pre-hospital firms and the EMS system. This applies to patients received as primary transports or inter-hospital transfers.	Working	EMS Providers are required by rule to leave a patient care form (run sheet) at a hospital upon delivery of a patient. Designated Trauma Facilities are required to include EMS in their QI programs. RACs, which are composed of all hospitals and EMS firms in a TSA, are required to evaluate patient care from a systems perspective.
	Establish a simplified system for transferring of patients from one hospital to another, which is consistent with current federal or state legislation, i.e. COBRA.	Working	A state standard of ED length of stay of <2 hours for critical patients has been established. Transfer times for trauma patients have been greatly decreased through the development of the Texas EMS/trauma system. Designated Trauma Facilities are required to accept the transfer of a patient from a lower level trauma facility. Additionally, federal laws have been greatly enhanced (EMTALA).
	Strengthen access-to-care laws to require hospitals to accept immediately all emergency patient referral regardless of whether the referral source is an EMS provider or another hospital.	Working	See above comment directly above.
	The Texas Department of Health through the Bureau of Emergency Management should acknowledge the resources in place throughout the state as they relate to an integrated system. This should be done in conjunction with the agency responsible for licensing hospitals.	Completed	

Communication: An effective communications subsystem is an essential component of an overall EMS system. Beginning with a universal system access number, such as 911, the communications network should provide for prioritized dispatch, dispatch to ambulances communication, ambulance to ambulance, ambulance to hospital, and hospital to hospital communication to ensure the receiving facility is ready and able to accept the patient.	***TEMSAC should develop a state EMS communications plan.***	Completed	Current plan needs to be updated/revised.
	The legislature should establish either a new state agency- - or assign to an existing agency- -the coordination management of all communication matters including 911.	Completed	The Texas Legislature established the State Commission on State Emergency Communications (aka 911 Commission).
	All pre-hospital providers should be required to have communication capabilities with hospitals and medical direction where indicated and available.	Completed	
Evaluation: A comprehensive evaluation program is needed to effectively plan and implement a Statewide EMS system. Each EMS system must be responsible for evaluating the effectiveness of services provided victims of medical- or trauma-related emergencies. The Statewide EMS system should be able to state definitively what impact has been made on the patients served by the system. EMS system managers must be able to evaluate resource utilization, scope of service, patient outcome, and the effectiveness of operational policies, procedures and protocols. An effective EMS system evaluates itself against pre-established standards and objectives so that improvements in service, particularly direct patient care can occur. These requirements are part of an ongoing quality assurance (QA) system to review system performance. The evaluation process should be educational and on going. QA reviews should occur at all phases if EMS system management so that needed policy changes or treatment protocol revisions can be made.	***Develop and implement a state-wide system to achieve data collection sufficient to define the level and impact of pre-hospital and hospital care.***	Working	Submission of a minimum data set has been mandated as a requirement for hospitals, including designated trauma facilities, and EMS Provider Licensing. However, it has not been strictly enforced to date for hospitals or EMS because the free CDC and TEXEMS software and the state registry, which resides in the Bureau of Epidemiology (EPI), are outdated. Currently, these issues are being addressed through a statewide EMS/trauma data project called TRAC-IT. A number of RACs have implemented regional registries.
	Develop a comprehensive trauma registry (as per Trauma System section).	Working	See above comment directly above.

Evaluation (continued):	***Mandate use of a minimum data set by all pre-hospital care providers.***	Completed	Submission of a minimum data set has been mandated as a requirement of EMS Provider Licensing; however, it has not been strictly enforced to date because TEXEMS and the state registry, which resides in the Bureau of Epidemiology (EPI), are outdated. Currently, these issues are being addressed through a statewide EMS/trauma data project called TRAC-IT.
	Achieve confidentiality protection of state agency acquired data.	Completed	
	Achieve a consistent quality assurance program.	Working	EMS/Trauma Systems, EMS Providers, and designated Trauma Facilities are required to have performance improvement programs in place. Many of these programs are immature, but rapid development is taking place.
	Develop performance standards compatible with the level of care provided.	Completed	TDH has adopted curricula and standards for each level of care provided. However, it is ultimately the responsibility of the EMS Provider's Medical Director to establish the standards for the medics that work in that system.
	Achieve resources sufficient to enable statewide EMS data management.	Working	BEM has submitted a number of comprehensive budgets to TDH administration. Ultimately, it is the legislature's decision on how to appropriate state funds.
	Assure delivery of ambulance trip report with the minimum data set to hospital at the time of delivery of the patient.	Completed	This is required by rule and compliance is increasing.

Public Information and Education: Public awareness and education about the EMS system is essential to a quality system and is often neglected. Public information and education efforts must service to enhance the public's role in the system, its ability to access the system, and the prevention of injuries. In many areas, EMS personnel provide system access information and present injury prevention programs which ultimately lead to better utilization of EMS resources and improve patient outcome.	EMS PI & E effort, including the identification of target audiences, should be linked with other overall EMS system development activities.	Working	BEM has developed materials such as A System to Save a Life, Don't Guess, Call EMS, and The Texas Trauma System however; resources to make these comprehensive statewide programs have not been available. RACs are required to develop programs to education the public in their TSAs about access to the system. BEM has also developed materials for such programs such as "Ready Teddy" and "Think Child Safety" however; resources to establish these as comprehensive statewide campaigns have not been available. RACs are required to target injury prevention activities/programs based on regional problems. Designated Trauma Facilities are required to implement RAC programs or conduct their own based on local problems. EMS Providers are encouraged to participate in regional programs or establish local programs.
Medical Direction: EMS is a medical care system that includes medical practice as delegated by physicians to non-physician providers who manage patient care outside the traditional confines of office or hospital. As befits this delegation of authority, it is the obligation of the physician to be involved in all aspects of the patient care system. Specific areas of involvement include: Planning and protocols On-line medical direction and consultation Audit and evaluation of patient care.	***Physician involvement in all aspects of EMS should be achieved.***	Working.	All EMS Providers are required to have a Medical Director (157.11) as they complete their new licensing cycle. Additionally, there are currently four physicians on the Governor's EMS and Trauma Advisory Council (GETAC) and the Medical Directors of Texas have organized and are developing strategies for education/technical assistance to their colleagues.
	A board-certified emergency medicine physician in active practice should be appointed as state EMS medical director.	Not Completed.	There is an emergency medicine physician position on GETAC.

Medical Direction (continued):	***The development of physician medical direction at the local level should be supported and nurtured. At a minimum, this should include the provision of educational and technical resources sufficient to equip the local physician for the task.***	Working.	The Medical Directors of Texas have organized and are developing strategies for education/technical assistance to their colleagues.
	Liability issues germane to the provision of medical direction should be addressed.	Evaluated.	To date, liability related to medical direction has not been a major concern in Texas.
	Rules and regulations mandating medical direction for the BLS level of care should be adopted.	Completed.	All EMS Providers are required to have a Medical Director (157.11) as they complete their new licensing cycle.
	Rules and regulations defining the requirements for and responsibility of physician medical directors should be encompassed within EMS statutes.	Not Completed.	The Board of Medical Examiners promulgates the medical director rules.
Trauma Systems: To provide a quality, effective system of trauma care, each State must have a fully functional EMS system in place. Enabling legislation should exist for the development of the trauma system component of the EMS system. This should include Trauma Center designation (using ACS-COT guidelines as a minimum), triage and transfer guidelines for trauma patients, data collection and trauma registry definitions and mechanisms, mandatory autopsies, system management and quality assurance for the systems affect on trauma patients.	***The State of Texas must develop a funding mechanism for system management support. Examples used by other government agencies include DWI fines, license plates fees and/or tax on beer or alcohol.***	Completed.	In 1997, the Texas Legislature provided for $2,000,000/year in 911 Funds for EMS/Trauma System development. These funds are allotted as follows: $250,000 extraordinary emergencies, 70% of remaining funds for EMS, 25% for RACs 2% for uncompensated trauma care, and 3% for administrative costs. In 1999, the Texas Legislature established a $100,000,000 EMS and Trauma Care endowment. For the FY00/01 biennium, up to 5% interest was appropriated for EMS/trauma system grants; for the FY02/03 biennium, up to 4.5% interest has been appropriated. Also in 1999, the Texas Legislature appropriated $2,500,000 in federal BAC funds for EMS/trauma system grants; however, these funds are being utilized for the TRAC-IT project.

Trauma Systems (continued):	***Conduct a study to evaluate the cost of undercompensated trauma care in Texas over the next six months. Use this data to develop a state mechanism for funding undercompensated trauma care. Evaluate the effect of current Texas auto insurance laws on the issue of under-compensated trauma care.***	Working.	The study was completed. Funding for un- and under-compensated and trauma care has been sought legislatively. To date, only a small amount of state funds have been provided. An evaluation of the auto insurance laws was not completed.
	Develop and implement mandatory autopsy law.	Not Completed.	Cost of such a law is prohibitive.
	Proceed with the development of the Trauma System Plan. Begin implementation of the plan immediately and irrespective of the status of funding support for undercompensated trauma care.	Completed.	All RACs have an approved regional EMS/trauma system plan in place.
	Develop a trauma registry for system use throughout the State. Be absolutely certain that pre-hospital data and hospital trauma data will be compatible and not require crossover programs. Hospital data should be collected from trauma center as well as non-trauma centers.	Working	Submission of a minimum data set has been mandated as a requirement for hospitals, including designated trauma facilities, and EMS Providers. However, it has not been strictly enforced to date for hospitals or EMS because the free CDC and TEXEMS software and the state registry, which resides in the Bureau of Epidemiology (EPI), are outdated. Currently, these issues are being addressed through a statewide data project called TRAC-IT.
	In developing the Trauma System plan, consider use of the California or Florida Trauma System concepts. These plans allow for delegation of plan development and implementation to local or regional agencies as long as they meet the minimum state standard for a Trauma System Plan.	Completed.	
	In developing the Trauma System Plan, consider use of the Oregon Trauma System Plan, which allows for the designation of Level IV Trauma Centers. Those Centers are essentially stabilization centers from which most patients are transferred to trauma centers with greater capability, i.e. Level I or Level II.	Completed	Currently, there are 129 designated basic (Level IV) trauma facilities.
	The TTAC membership should be addressed so as to confirm representation of greatest number of needed constituents.	Not Completed	The GETAC membership, which is defined by law, includes broad representation of EMS and trauma system constituents.