

**National Highway Traffic Safety Administration
Technical Assistance Program**



**STATEWIDE EMS
REASSESSMENTS**

Program Guide



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National Highway Traffic Safety Administration

EMS Technical Assistance Program

I. OBJECTIVES

The National Highway Traffic Safety Administration (NHTSA) believes that effective emergency medical services (EMS) programs should provide comprehensive, inclusive, and appropriate emergency health care for patients of all ages, adult and pediatric. The Technical Assistance (TA) Program offers States and communities a consistent tool to use over time in assessing the effectiveness of their EMS programs. The Re-Assessment process allows a State to assess and evaluate current EMS system effectiveness in relation to the original EMS assessment, subsequent EMS program modifications, and integration of new technology or nationally accepted standards. When asked by the requesting State, the TA Team will also review EMS areas of special interest (i.e., data linkage, pediatrics, disaster management) to further assist the State in making decisions concerning the evolution of their program.

II. BACKGROUND

NHTSA has developed a TA program that permits States to utilize highway safety funds, or other funds, to support the technical evaluation of existing and proposed EMS programs over a period of time. For the original assessment and re-assessment, NHTSA serves as a facilitator by assembling a team of individuals who have demonstrated expertise in EMS development and implementation. These experts have demonstrated leadership and expertise through involvement in national organizations committed to the improvement of emergency medical services throughout the country. In the re-assessment, NHTSA will make every attempt to include two members of the original EMS TA Team for continuity. Selection to the TA Team is also based on experience in special areas identified by the requesting State. Examples of specialized expertise include experience in the development of legislative proposals, data gathering systems, rural EMS delivery, integrated health systems, trauma systems, pediatrics, and disaster response systems. It is also essential that the members have experience in similar geographic and demographic situations.

The TA program is a public/private cooperative effort among the NHTSA Office of EMS, the NHTSA Regional Office, the Governor's Highway Safety Representative, the State EMS Office, and the public and private providers/administrators of the EMS community. The NHTSA Office of EMS coordinates and facilitates the assessment; the Regional Office provides administrative support; the State Highway Safety Office provides the funding (if requested) utilizing State and Community Highway Safety Grant monies (Section 402); the State EMS Office provides the background information and comprehensive briefings necessary for the TA Team to develop

their report, and NHTSA EMS selects nationally recognized TA team members.

In March 1994, NHTSA completed a formal evaluation of the EMS Technical Assessment Process to identify the strengths and weakness of the assessment process, to define the current national status of statewide EMS systems, and to analyze the overall impact of the assessment program. Results from this evaluation demonstrate that the States have utilized the assessment process to focus on key EMS issues within their State, to educate legislators and providers about EMS system needs, and to achieve significant improvements such as procuring more comprehensive EMS legislative authority and funding. The re-assessment process has been developed to offer continued support to States who wish to re-evaluate their current level of EMS system development, analyze the progress made since the original assessment, and focus on more specific areas for system improvement.

Although the EMS assessment evaluation revealed widespread fundamental problems in most areas, a common theme was the lack of quality management programs throughout all components of State EMS systems. Significant areas for improvement were noted by the lack of consistent quality management programs for training, transport services, communication systems, and medical direction. The majority of States do not have a statewide quality improvement program to evaluate patient care, methods for assessing the current level of system resources, or a mechanism to identify necessary system improvements. Therefore, the development of quality management programs will remain a priority focus during the re-assessment process, including technical assistance and emphasis on the establishment of reliable and valid EMS data collection systems.

III. CRITERIA FOR REQUESTING A RE-ASSESSMENT

Many of the proposed recommendations in the original EMS assessment involve changes that typically take several years to implement. The State EMS Director is in the best position to identify the appropriate time interval for a follow-up assessment, however NHTSA recommends that States schedule a re-assessment 3-5 years after the original assessment. To request a TA process for reassessment purposes, the State EMS Director should first identify specific needs to be met by a re-assessment, then request concurrence and financial assistance (Sec. 402) from the Governor's Highway Safety Office. Once agreement is reached, the State EMS Director and Governor's Representative should contact the appropriate NHTSA Regional Office in writing who in turn notifies NHTSA Office of EMS in Washington, DC. States might also consider independent funding should Section 402 funds be obligated to other projects. The Office of EMS will facilitate a pre-assessment discussion to present the re-assessment process, discuss potential dates and progress of the State since the original assessment, and additional needs of the State. Based on information provided, the Office of EMS agrees on dates for the State re-assessment and assembles an appropriate team. The requesting State is responsible for preparing a status report for the team members, outlining the accomplishments that have been achieved for each standard, as well as barriers to implementation of other recommendations. The requesting State

is responsible to provide for the cost of travel, per diem, administrative support and honoraria for the TA Team members. Each team member receives \$300 per day in honoraria, to include travel days. The average cost for a State EMS Reassessment is approximately \$25,000-30,000. This value represents the cost associated with the team and the administrative support for the assessment. Additional cost may include travel and lodging of State briefing participants as required.

IV. RE-ASSESSMENT PROCESS

As in the original EMS TA process, actual site visits to EMS services and facilities within a State are not practical. NHTSA will utilize a briefing and interview process similar to that of the original EMS assessment, to provide the necessary information from which to complete an evaluation. The State provides a comprehensive briefing that highlights the State's response and progress on the recommendations included in the original EMS assessment. The TA Team will review the Final Report from the original assessment and utilize the briefing book materials to formulate a preliminary appraisal of progress and the current level of EMS system effectiveness. Following each briefing the TA Team enters into a free and open conversation with each of the presenters so that the team can get as clear an understanding of the current status of each EMS system component as possible. The briefing should represent all the system components and include representatives from such sectors as private ambulance services, practicing emergency and trauma physicians, local EMS system managers, local trauma committees, or members of the local EMS advisory board. (See Section VIII) The TA Team determines additional presentations based on the information provided at the pre-evaluation visit and in the briefing materials.

Following the comprehensive briefing process, the TA Team convenes to analyze the information, develop its recommendations and write a draft final report. The TA Team bases its recommendations on a set of optimal guidelines. The TA Team compares the status of EMS in the State to those guidelines, reviews previous recommendations, subsequent EMS system modifications and makes new recommendations on how the State might achieve those optimal guidelines. Although the optimal guidelines are the same for all States, the TA Team recognizes that each State is unique and that an appropriate recommendation for a similar problem in one State may not be for another. The TA Team considers such things as unique political structure, demographic/geographic makeup, mortality and morbidity profiles, and institutional support, etc. On the final day the TA Team briefs the State EMS Director and other health and highway safety officials, and provides a verbal final report. The final document is a consensus report of the TA Team members. As such, neither NHTSA nor the State are involved in the content and do not review or approve the Final Report prior to its release. The Final Report as presented at the final briefing is printed and transmitted from the Director, Office of EMS, to the State EMS Director, the Governors Highway Safety Representative, and the Regional Administrator of the appropriate NHTSA Region within five to ten working days following the visit.

V. REPORT FORMAT

The following is the standard briefing outline, and general format of the final report. The re-assessment report will provide each standard, the progress to date (including obstacles to implementation) and new recommendations for the State to use in their long range planning efforts. The State EMS Director assures that those participating in the briefing process cover the issues identified under each of the ten components, and provide a synopsis of the progress made in each area. The State may also identify additional areas that they feel need attention.

A. Regulation & Policy

- ! Legislative Authority
- ! Lead Agency
- ! Operational Policies and Procedures
- ! Funding

B. Resource Management

- ! Central Coordination of System and Components
- ! Resource Assessment and Utilization
- ! Program Management at State, Regional, and Local Level (Structure)
- ! System Planning and Implementation
- ! Critical Incident Stress Management
Technical Assistance

C. Human Resources and Training

- ! Central Authority/Responsibility
- ! Out-of-hospital Training Programs
- ! Institutional Support
- ! Certification/Accreditation Programs
- ! Quality Management
- ! Special programs ATLS, PHTLS, BTLIS, PALS, etc.
- ! Critical Incident and Stress Management

D. Transportation

- ! Regional Plan/Needs Assessment
- ! Ground and Air Coverage
- ! Licensure and Inspection
- ! Evaluation Procedures

E. Facilities

- ! Categorization and Verification
- ! Specialty Care Designation
- ! Inter-facility Coordination

- ! Evaluation

F. Communication

- ! Statewide Coordination
- ! System Access
- ! Statewide Coverage and Linkages
- ! Dispatch Standards
- ! Quality Improvement

G. Public Information and Education

- ! Prevention Programs Based on Identified Need, e.g. Safety Belts, Speed,
- ! Public Awareness of EMS and Involvement
- ! Provider Involvement
- ! Cooperation/collaboration with other Public Service Agencies, Fire, Enforcement

H. Medical Direction

- ! Authority
- ! On-line/Off-line (Direct/Indirect) Standards
- ! Treatment Protocols
- ! Review and Evaluation of Patient Care

I. Trauma Systems

- ! Legislation
- ! Facility Designation
- ! Triage and Transfer Guidelines
- ! Data Collection/Trauma Registry
- ! Integration with EMS System

J. Evaluation

- ! Out-of-hospital Data Collection System/Ambulance Report Forms
- ! System Standards
- ! Medical Care Review
- ! Quality Improvement Programs
- ! Data Linkage
- ! Confidentiality Protection

K. Curriculum Vitae of Team Members

VI. RE-ASSESSMENT STANDARDS

A. REGULATION AND POLICY

To provide a quality, effective system of emergency medical care, each EMS system must have in place comprehensive enabling legislation with provision for a lead EMS agency. This agency has the authority to plan and implement an effective EMS system, and to promulgate appropriate rules and regulations for each recognized component of the EMS system (authority for statewide coordination; standardized treatment, transport, communication and evaluation, including licensure of out-of-hospital services and establishment of medical control; designation of specialty care centers; PIER programs). There is a consistent, established funding source to adequately support the activities of the lead agency and other essential resources that are necessary to carry out the legislative mandate. The lead agency operates under a single, clear management structure for planning and policy setting, but strives to achieve consensus among EMS constituency groups in formulating public policy, procedures and protocols. The role of any local/regional EMS agencies or councils who are charged with implementing EMS policies is clearly established, as well as their relationship to the lead agency. Supportive management elements for planning and developing effective statewide EMS systems include the presence of a formal EMS Medical Director, a Medical Advisory Committee for review of EMS medical care issues and an EMS Advisory Committee (or Board). The EMS Advisory Committee has a clear mission, specified authority and representative membership from all disciplines involved in the implementation of EMS systems.

B. RESOURCE MANAGEMENT

Central coordination and current knowledge (identification and categorization) of system resources is essential to maintain a coordinated response and appropriate resource utilization within an effective EMS system. A comprehensive State EMS plan exists which is based on a statewide resource assessment and updated as necessary to guide EMS system activities. A central statewide data collection (or management information) system is in place that can properly monitor the utilization of EMS resources; data is available for timely determination of the exact quantity, quality, distribution and utilization of resources. The lead agency is adequately staffed to carry out central coordination activities and technical assistance. There is a program to support recruitment and retention of EMS personnel, including volunteers.

C. HUMAN RESOURCES AND TRAINING

EMS personnel can perform their mission only if adequately trained and available in sufficient numbers throughout the State. The State EMS lead agency has a mechanism to assess current manpower needs and establish a comprehensive plan for stable and consistent EMS training programs with effective local and regional support. At a minimum, all transporting out-of-

hospital emergency medical care personnel are trained to the EMT-Basic level, and pre-hospital training programs utilize a standardized curriculum for each level of EMT personnel (including EMS dispatchers). EMS training programs and instructors are routinely monitored, instructors meet certain requirements, the curriculum is standardized throughout the State, and valid and reliable testing procedures are utilized. In addition, the State lead agency has standardized, consistent policies and procedures for certification (and re-certification) of personnel, including standards for basic and advanced level providers, as well as instructor certification. The lead agency ensures that EMS personnel have access to specialty courses such as ACLS, PALS, BTLS, PHTLS, ATLS, etc., and a system of critical incident stress management has been implemented.

D. TRANSPORTATION

Safe, reliable ambulance transportation is a critical component of an effective EMS system. The transportation component of the State EMS plan includes provisions for uniform coverage, including a protocol for air medical dispatch and a mutual aid plan. This plan is based on a current, formal needs assessment of transportation resources, including the placement and deployment of all out-of-hospital emergency medical care transport services. There is an identified ambulance placement or response unit strategy, based on patient need and optimal response times. The lead agency has a mechanism for routine evaluation of transport services and the need for modifications, upgrades or improvements based on changes in the environment (i.e., population density). Statewide, uniform standards exist for inspection and licensure of all modes of transport (ground, air, water) as well as minimum care levels for all transport services (minimum staffing and credentialing). All out-of-hospital emergency medical care transport services are subject to routine, standardized inspections, as well as "spot checks" to maintain a constant state of readiness throughout the State. There is a program for the training and certification of emergency vehicle operators.

E. FACILITIES

It is imperative that the seriously ill patient be delivered in a timely manner to the closest appropriate facility. The lead agency has a system for categorizing the functional capabilities of all individual health care facilities that receive patients from the out-of-hospital emergency medical care setting. This determination should be free of political considerations, is updated on an annual basis and encompasses both stabilization and definitive care. There is a process for verification of the categorizations (i.e., on-site review). This information is disseminated to EMS providers so that the capabilities of the facilities are known in advance and appropriate primary and secondary transport decisions can be made. The lead agency also develops and implements out-of-hospital emergency medical care triage and destination policies, as well as protocols for specialty care patients (such as severe trauma, burns, spinal cord injuries and pediatric emergencies) based on the functional assessment of facilities. Criteria are identified to guide interfacility transport of specialty care patients to the appropriate facilities. Diversion policies

are developed and utilized to match system resources with patient needs; standards are clearly identified for placing a facility on bypass or diverting an ambulance to another facility. The lead agency has a method for monitoring if patients are directed to appropriate facilities.

F. COMMUNICATIONS

A reliable communications system is an essential component of an overall EMS system. The lead agency is responsible for central coordination of EMS communications (or works closely with another single agency that performs this function) and the state EMS plan contains a component for comprehensive EMS communications. The public can access the EMS system with a single, universal phone number, such as 9-1-1 (or preferably Enhanced 9-1-1), and the communications system provides for prioritized dispatch. There is a common, statewide radio system that allows for direct communication between all providers (dispatch to ambulance communication, ambulance to ambulance, ambulance to hospital, and hospital to hospital communications) to ensure that receiving facilities are ready and able to accept patients. Minimum standards for dispatch centers are established, including protocols to ensure uniform dispatch and standards for dispatcher training and certification. There is an established mechanism for monitoring the quality of the communication system, including the age and reliability of equipment.

G. PUBLIC INFORMATION, EDUCATION AND PREVENTION

To effectively serve the public, each State must develop and implement an EMS public information and education (PI&E) program. The PI&E component of the State EMS plan ensures that consistent, structured PI&E programs are in place that enhance the public's knowledge of the EMS system, support appropriate EMS system access, demonstrate essential self-help and appropriate bystander care actions, and encourage injury prevention. The PI&E plan is based on a needs assessment of the population to be served and an identification of actual or potential problem areas (i.e., demographics and health status variable, public perceptions and knowledge of EMS, type and scope of existing PI&E programs). There is an established mechanism for the provision of appropriate and timely release of information on EMS-related events, issues and public relations (damage control). The lead agency dedicates staffing and funding for these programs, which are directed at both the general public and EMS providers. The lead agency enlists the cooperation of other public service agencies in the development and distribution of these programs, and serves as an advocate for legislation that potentially results in injury/illness prevention.

H. MEDICAL DIRECTION

EMS is a medical care system that involves 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, the system ensures that physicians are involved in all aspects of the patient care system. The role of the State Medical Director for EMS is

clearly defined, with legislative authority and responsibility for EMS system standards, protocols and evaluation of patient care. A comprehensive system of medical direction for all out-of-hospital emergency medical care providers (including BLS) is utilized to evaluate the provision of medical care as it relates to patient outcome, appropriateness of training programs and medical direction. There are standards for the training and monitoring of direct medical control physicians, and statewide, standardized treatment protocols. There is a mechanism for concurrent and retrospective review of out-of-hospital emergency medical care, including indicators for optimal system performance. Physicians are consistently involved and provide leadership at all levels of quality improvement programs (local, regional, statewide).

I. TRAUMA SYSTEMS

To provide a quality, effective system of trauma care, each State must have in place a fully functional EMS system; trauma care components must be clearly integrated with the overall EMS system. Enabling legislation should be in place for the development and implementation of the trauma care component of the EMS system. This should include trauma center designation (using ACS-COT, APSA-COT and other national standards as guidelines), triage and transfer guidelines for trauma patients, data collection and trauma registry definitions and mechanisms, mandatory autopsies and quality improvement for trauma patients. Information and trends from the trauma registry should be reflected in PIER and injury prevention programs. Rehabilitation is an essential component of any statewide trauma system and hence these services should also be considered as part of the designation process. The statewide trauma system (or trauma system plan) reflects the essential elements of the Model Trauma Care System Plan.

J. EVALUATION

A comprehensive evaluation program is needed to effectively plan, implement and monitor a statewide EMS system. The EMS system is responsible for evaluating the effectiveness of services provided victims of medical or trauma related emergencies, therefore the EMS agency should be able to state definitively what impact has been made on the patients served by the system. A uniform, statewide out-of-hospital data collection system exists that captures the minimum data necessary to measure compliance with standards (i.e., a mandatory, uniform EMS run report form or a minimum set of data that is provided to the state); data are consistently and routinely provided to the lead agency by all EMS providers and the lead agency performs routine analysis of this data. Pre-established standards, criteria and outcome parameters are used to evaluate resource utilization, scope of services, effectiveness of policies and procedures, and patient outcome. A comprehensive, medically directed statewide quality improvement program is established to assess and evaluate patient care, including a review of process (how EMS system components are functioning) and outcome. The quality improvement program should include an assessment of how the system is currently functioning according to the performance standards, identification of system improvements that are needed to exceed the standards and a mechanism to measure the impact of the improvements once implemented. Patient outcome data

is collected and integrated with health system, emergency department and trauma system data; optimally there is linkage to databases outside of EMS (such as crash reports, FARS, trauma registry, medical examiner reports and discharge data) to fully evaluate quality of care. The evaluation process is educational and quality improvement/system evaluation findings are disseminated to out-of-hospital emergency medical care providers. The lead agency ensures that all quality improvement activities have legislative confidentiality protection and are non-discoverable.

VII. BRIEFING PARTICIPANTS

The following is a list of presenters who have shown to be of great value in the briefing process in the original assessments. If possible those who presented in the original assessment should participate in the re-assessment. Each presenter should be fully briefed as to the goal of the re-assessment, have read the original report, be assigned one or part of one of the ten components, and comment on any significant change or progress. Two to four presenters are usually adequate for each component. It is helpful if each presenter prepares and leaves a written statement with the team. The statement should include the presenter's recommendations for change.

- ∅ American College of Surgeons, State Committee on Trauma
- ∅ American College of Emergency Physicians, State EMS Committee
- ∅ State Medical Director (if existing)
- ∅ Practicing emergency physician who provides medical control to a prehospital service
- ∅ Director of a local Trauma Service
- ∅ Representative of a local ALS EMS Service
- ∅ Representative of a local BLS EMS Service
- ∅ Representative of a local public/private EMS Service
- ∅ Regional Council Representative (if existing)
- ∅ Representative of Managed Care Organization, (if appropriate)
- ∅ State Highway Safety Office

VIII TYPICAL ASSESSMENT AGENDA

Agenda EMS REASSESSMENT

Monday Month XX, 2000

TRAVEL DAY

Tuesday Month XX, 2000

8:00-12:00 Introductions by NHTSA, State EMS, and State Highway Safety

AGENDA ITEMS I, II, IIIA AND IIIB MUST OCCUR IN ORDER. DISCUSSION OF OTHER COMPONENT AREAS MAY TAKE PLACE AT THE CONVENIENCE OF THE STATE EMS DIRECTOR.

State EMS Program Briefing

- I. Geographic/Demographic Overview of State
- II. General Overview of EMS System in State
- III. Comprehensive Discussion of State's EMS Components
 - A. Regulation and Policy
 - B. Resource Management
 - C. Human Resources and Training

12:00-1:00
1:00-4:30

Working Luncheon

- D. Transportation
- E. Facilities
- F. Communications
- G. Public Information & Education
- H. Medical Direction
- I. Trauma Systems
- J. Evaluation

7:00-9:00 Working Social with members of Team, NHTSA Region, and State EMS HSO, and presenters

Wednesday Month XX, 2000

8:00-12:00 Briefing Continued

12:00-1:30 Working Luncheon

1:30-4:30 Team Discussion and Formulation of Recommendations

Thursday Month XX, 2000

8:00-3:30 Team Discussion Cont., Draft Final Report

12:00-1:00 Team Working Luncheon

3:30-4:30 Debrief with State, Issue Final Report

Friday Month XX, 2000

TRAVEL DAY

IX. SUPPORT REQUIREMENTS

National Highway Traffic Safety Administration Emergency Medical Services Technical Assistance Program

MEETING ROOM REQUIREMENTS

The size of the meeting room is determined by how many participants the State EMS Director chooses to involve in the briefing at any one time. The team consists of at least five members and the Administrative Consultant who will require a separate desk or table to operate the word processor. Tables should be set up so as to allow informal discussion with the presenters. There should be ample room and chairs for any observers or other participants the State Director chooses to invite. Past experience has shown that a 25-30 person meeting room seems to be about right. **This room must be available to the team members 24 hours a day.**

LOGISTICAL SUPPORT

In order to prepare the final report at the conclusion of the visit the Technical Assistance Program **requires** the following technical support on site (this equipment is readily available from computer rental outlets if required):

- ! IBM Compatible Pentium PC, color monitor, with a hard drive loaded with Word software, one disc drive and CD Rom drive (must be set up first day);
- ! Five lap top computers, with one disc drive and CD Rom drive, loaded with Word software (needed last 1-2 days);
- ! A Hewlett Packard LaserJet Series IV or higher laser printer with Universal scalable font and paper;
- ! Access in the hotel to a FAX machine;
- ! A high speed collating photocopy machine in the meeting room. (The team will consume approximately 500 pages of copy paper during the preparation of the report.)
- ! A telephone in the meeting room;
- ! Flip chart paper (2 tablets), dry-erase markers, and 2 rolls of masking tape;
- ! A wall map of the State with major EMS Services and major hospitals marked;
- ! Nametags for the presenters and team members;
- ! Name tent cards for the team members.