State of New Hampshire

Reassessment of Emergency Medical Services

September 11 - 13, 2018

National Highway Traffic Safety Administration Technical Assistance Team

Executive Summary

Compiled by The Bureau of Emergency Medical Services on 7 December, 2018

BACKGROUND

Injury is the leading cause of death for persons in the age group one through 44 as well as the most common cause of hospitalizations for persons under the age of 40. The financial costs of injuries are staggering: injuries cost billions of dollars in health care and social support resources.

In 2014, the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) reported the price tag for crashes was at $871 billion in economic loss and societal harm. This includes $277 billion in economic costs – nearly $900 for each person living in the United States - and $594 billion in harm from the loss of life and the pain and decreased quality of life due to injuries. Each year over 37,000 people lose their lives on the nation's roads. NHTSA is charged with reducing death and injury on the nation's highways. NHTSA has determined it can best use its limited Emergency Medical Services (EMS) resources if its efforts are focused on assisting States with the development of integrated EMS programs which include comprehensive systems of trauma care.

To accomplish this goal, in 1988 NHTSA developed a Technical Assistance Team (TAT) approach which permitted states to utilize highway safety funds to support the technical evaluation of existing and proposed emergency medical services programs. Following the implementation of the Assessment Program, NHTSA developed a Reassessment Program to assist those states in measuring their progress since the original assessment. The Program remains a tool for states to use in evaluating their statewide EMS programs. The Reassessment Program follows the same logistical process, and now uses the same ten component areas plus the area of preparedness with updated standards. The standards now reflect current EMS philosophy and allow for the evolution into a comprehensive and integrated health management system, with regional accountable systems of care, as identified in the 2006 Institute of Medicine (IOM) Report on the Future of Emergency Care. NHTSA serves as a facilitator by assembling a team of technical experts who demonstrate expertise in emergency medical services development and implementation. These experts demonstrate leadership and expertise through involvement in national organizations committed to the improvement of emergency medical services throughout the country. Selection of the Technical Assistance 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, and trauma systems. Experience in similar geographic and demographic situations, such as rural areas, coupled with knowledge in providing emergency medical services in urban populations is essential.

The New Hampshire Office of Highway Safety and the Division of Fire Standards and Training and Emergency Medical Services (the Division) requested NHTSA's assistance. NHTSA agreed to utilize its technical assistance program to provide a technical reassessment of the New Hampshire EMS program. NHTSA developed a format whereby the EMS staff coordinated comprehensive briefings on the EMS system.

The TAT assembled in Concord, New Hampshire, September 11 - 13, 2018. For the first day and a half, over 20 presenters from the State provided in-depth briefings on EMS and trauma care. Topics for review and discussion included the following:

- Regulation and Policy
- Resource Management

- Human Resources and Education
- Transportation
- Facilities
- Communications
- Trauma Systems
- Public Information and Education
- Medical Direction
- Preparedness
- Evaluation

The forum of presentation and discussion allowed the TAT the opportunity to ask questions regarding the status of the EMS system, clarify any issues identified in the briefing materials provided earlier, measure progress, identify barriers to change, and develop a clear understanding of how emergency medical services function throughout New Hampshire. The team spent considerable time with each presenter so they could review the status for each topic.

Following the briefings by presenters invited by the Division, public and private sector providers, and members of the medical community, the TAT sequestered to evaluate the current EMS system as presented and to develop recommendations for system improvements. When reviewing this report, please note the TAT focused on major areas for system improvement.

The statements made in this report are based on the input received. Pre-established standards and the combined experience of the team members were applied to the information gathered. All team members agree with the recommendations as presented.

REGULATION AND POLICY

Standard

Each state should embody comprehensive enabling legislation, regulations, and operational policies and procedures to provide an effective statewide system of emergency medical and trauma care and should:

- Establish the EMS program and designate a lead agency;
- Outline the lead agency's basic responsibilities and authorities including licensure and certification including the designation of emergency medical services regions;
- Require comprehensive EMS system planning;
- Establish a sustainable source of funding for the EMS and trauma system;
- Require prehospital data collection which is compatible with local, State and national efforts such as the National EMS Information System (NEMSIS) and evaluation;
- Provide authority to establish minimum standards related to system elements such as personnel, services, specialty care facilities and regional systems and identify penalties for noncompliance;
- Provide for an injury/trauma prevention and public education program;
- Integrate the special needs of children and other special populations throughout the EMS system; and
- Integrate pediatric EMS needs into State statutes, rules and regulations.

All of these components, which are discussed in different sections of this guideline, are critical to the effectiveness of legislation, regulations or policies/procedures which are the legal foundation for a statewide EMS system.

Recommendations

The Division should:

- Amend the New Hampshire Code of Administrative Rules to authorize the Division to sanction licensed EMS personnel for failing to comply with the standards of care.
- Work with elected officials to amend statute to enable electronic conferencing for board meetings in order to increase participation from stakeholders across the State.
- Work with elected officials to amend statute to include line of duty death benefits for all licensed EMS personnel including privately employed and volunteer personnel.

RESOURCE MANAGEMENT

Standard

Each State EMS lead agency should identify, categorize, and coordinate resources necessary for establishment and operation of regionalized, accountable EMS and trauma systems. The lead agency should:

- Maintain a coordinated response to day-to-day emergencies as well as mass casualty incidents or disasters and ensure that resources are used appropriately throughout the State;
- Have policies and regulations in place to assure equal access to basic emergency care for all victims of medical or traumatic emergencies;
- Provide adequate triage, including trauma field triage, and transport of all patients by appropriately certified personnel (at a minimum, trained to the emergency medical technician [EMT] level) in properly licensed, equipped, and maintained ambulances;
- Provide transport to a facility that is appropriately equipped, staffed and ready to administer to the needs of the patient including specialty care hospitals (section 4: Transportation);
- Appoint an advisory council, including pediatric EMS representation, to provide broad-based input and guidance to the State EMS system and to provide a forum for cooperative action and for assuring maximum use of resources; and
- Coordinate with State Highway Safety Agency and other State Agencies in the development of the Strategic Highway Safety .Plan to ensure that EMS system information is used to evaluate highway safety problems and to improve post- crash care and survivability.

Recommendations

The Division should:

- Pursue an agreement with the National Collaborative for Bio-preparedness as a potential solution for linking EMS and trauma data with the crash records system.
- Conduct a comprehensive statewide EMS workforce study to determine the status of the workforce, identify any gaps by geographical region, and if gaps exist, establish a workforce training and retention plan.
- Develop administrative rules that define authority and a recognition process for Critical Care Paramedics and services.

HUMAN RESOURCES AND EDUCATION

Standard

Each State should ensure that its EMS system has essential trained and certified/licensed persons to perform required tasks. These personnel include: first responders (e.g., police and fire), prehospital providers (e.g., emergency medical technicians and paramedics), communications specialists, physicians, nurses, hospital administrators, and planners. Each State should provide a comprehensive statewide plan for assuring a stable EMS workforce including consistent EMS training and recruitment/retention programs with effective local and regional support. The State agency should:

- Ensure sufficient availability of adequately trained and appropriately licensed EMS personnel to support the EMS system configuration;
- Assure an ongoing state EMS personnel needs assessment that identifies areas of personnel shortage, tracks statewide trends in personnel utilization and which establishes, in coordination with local agencies, a recruiting and retention plan/program;
- Establish EMT as the state minimum level of licensure for all transporting EMS personnel;
- Routinely monitor training programs to ensure uniformity, quality control and medical direction;
- Use standardized education standards throughout the State that are consistent with the National EMS Education Standards;
- Ensure availability of continuing education programs, including requirements for pediatric emergency education;
- Require instructors to meet State requirements;
- Assure statutory authority, rules and regulations to support a system of EMS personnel licensure that meets or exceeds the national EMS Scope of Practice Model, new National EMS Education Standards, as they are available, and other aspects of the EMS Education Agenda for the Future; and
- Monitor and ensure the health and safety of all EMS personnel.

Recommendations

The Division should:

- Conduct a comprehensive statewide EMS workforce study to determine the status of the workforce, identify any gaps by geographical region, and if gaps exist, establish a workforce training and retention plan.
- Establish an EMS Education Section within the Division and create an EMS Education Manager position.
- Require Advanced EMT Education to be conducted by professional education organizations such as training agencies, hospitals and post-secondary education institutions.
- Review and revise the standards for EMS instructors to include sanctions for instructors who consistently fail to meet educational standards.
- In conjunction with NREMT, establish a process for RN to EMT licensure.
- Utilize the excellent fire training and simulation facility for more EMS training programs, potentially including standardized programs such as PEPP/PALS, PHTLS, ACLS, etc.

TRANSPORTATION

Standard

Each State should require safe, reliable EMS transportation. States should:

- Develop statewide EMS transportation plans, including the identification of specific EMS service areas and integration with regionalized, accountable systems of emergency care;
- Implement regulations that establish regionalized, accountable systems of emergency care and which provide for the systematic delivery of patients to the most appropriate specialty care facilities, including use of the most recent Trauma Field Triage Criteria of the American College of Surgeons/Committee on Trauma;
- Develop routine, standardized methods for inspection and licensing of all emergency medical transport services and vehicles, including assuring essential pediatric equipment and supplies;
- Establish a minimum number of personnel at the desired lvel of licensure on each response and delineate other system configuration requirements if appropriate;
- Assure coordination all emergency transports within the EMS system, including public, private, or specialty (air and ground) transport and including center(s) for regional or statewide EMS transportation coordination and medical direction if appropriate; and
- Develop regulations to ensure ambulance drivers are properly trained and licensed.

Recommendations

The Division should:

- Prioritize the recommendations of the 2016 ACS Systems Report, building toward a statewide, mandated and inclusive trauma system.
- Develop a comprehensive and integrated transportation plan that supports time sensitive systems of care including trauma, stroke and STEMI.
- Continue to pursue compliance with existing statutes and administrative rules by air ambulance services to include patient reporting requirements.
- The Division should assign additional personnel to help process and investigate complaints received by the Division.
- Utilize staff members dedicated to quality improvement duties to analyze the data that is available to determine the current level of appropriate transportation.
- Amend administrative rules to remove ambiguity to include defining the term "appropriate facility."
- De-conflict and streamline equipment requirements to reduce costs and administrative burdens for multi-level EMS agencies.

FACILITIES

Standard

It is imperative that the seriously injured (or ill) patient be delivered in a timely manner to the closest appropriate facility. Each State should ensure that:

- Both stabilization and definitive care needs of the patient are considered;
- There is a statewide and medically accountable regional system, including protocols and medical direction, for the transport of patients to state-designated specialty care centers;
- There is state designation of specialty medical facilities (e.g. trauma, burns, pediatric, cardiac) and that the designation is free of non-medical considerations and the designations of the facilities are clearly understood by medical direction and prehospital personnel;
- Hospital resource capabilities (facility designation), including ability to stabilize and manage pediatric emergencies, are known in advance, so that appropriate primary and secondary transport decisions can be made by the EMS providers and medical direction;
- Agreements are made between facilities to ensure that patients, including pediatric patients, receive treatment at the closest, most appropriate facility, including facilities in other states or counties;
- Hospital 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 appropriate facilities.

Recommendations

The Division should:

- Require all New Hampshire hospitals to seek State trauma center designation at some level. Trauma patients should not be transported by EMS to non-designated hospitals.
- Require Level Ill trauma centers to be verified by the American College of Surgeons prior to designation by the State. The State should continue to designate and verify Level IV trauma centers.
- Clarify and standardize policies related to hospital diversion. Improve active monitoring and reporting of hospital diversion to State EMS officials.
- Define a clear chain of communication between oversight of hospitals (DHHS) and oversight of EMS (the Division) to facilitate overall trauma system oversight.
- Develop a State stroke verification and designation program. Encourage smaller facilities to meet ASRH (Acute Stroke Ready Hospitals) standards.
- Develop a State STEMI verification and designation program to assure facilities meet evidence-based cardiac care standards.

COMMUNICATIONS

Standard

An effective communications system is essential to EMS operations and provides the means by which emergency resources can be accessed, mobilized, managed, and coordinated. Each State should assure a comprehensive communication system to:

- Begin with the universal system access number 911;
- Strive for quick implementation of both wire line and wireless enhanced 911 services which make possible, among other features, the automatic identification of the caller's number and physical location;
- Strive to auto-populate prehospital patient care report (NEMSIS compliant) with all relevant times from the public safety answering point (PSAP);
- Provide for emergency medical dispatch training and certification for all 911 call takers and EMS dispatcher;
- Provide for priority medical dispatch;
- Provide for an interoperable system that enables communications from dispatch to ambulance, ambulance to ambulance, ambulance to hospital, hospital to hospital and ambulance to public safety communications;
- Provide for prioritized dispatch of EMS and other public safety resources;
- Ensure that the receiving facility is ready and able to accept the patient;
- Provide for dispatcher training and certification standards;
- The statewide communications plan includes effective, reliable interoperable communications systems among EMS, 911, emergency management, public safety, public health and health care agencies; and
- Each State should develop a statewide communications plan that defines State government roles in EMS system communications.

Recommendations

The Division should:

- Seek input and counsel from the Emergency Services Division with regard to successful strategies for implementation of other systems of care.
- Engage the Emergency Services Division as an advocate for the development of systems of care.
- Work with the Emergency Services Division to analyze available data to determine patient flow, transportation, and current EMS operations to gain situational awareness regarding the status of New Hampshire's system of care.

TRAUMA SYSTEMS

Standard

- Each State should maintain a fully functional trauma system to provide a high quality, effective patient care system. States should implement legislation requiring the development of a trauma system, including:
- Trauma center designation, using American College of Surgeons Committee on Trauma guidelines as a minimum;
- Trauma field triage and transfer standards for trauma patients;
- Data collection and trauma registry definitions for quality assurance, using American College of Surgeons Committee on Trauma National Trauma Data Standards, as soon as practicable;
- Systems management and quality assurance; and
- Statewide Trauma System Plan, consistent with the Health Resources and Services Administration Model Trauma System Planning & Evaluation Document.

Recommendations

The Division should:

- Continue to address the recommendations made by the ACS-COT during their review of the New Hampshire trauma system in 2016.
- Require all New Hampshire hospitals to be designated as trauma centers at some level through the State process.
- Develop a trauma system which ensures trauma patients are transported only to designated trauma centers.
- Develop a sustainable funding stream to support the trauma system.
- Fund and recruit a State trauma program manager (1.0 FTE) who would be responsible for oversight of the trauma system at the State level.
- Fund and recruit a State trauma registrar (1.0 FTE) who would be responsible for oversight, management and analysis of the State trauma registry data.
- Require State designated trauma centers to contribute trauma patient data to the State registry.

PUBLIC INFORMATION, EDUCATION AND PREVENTION

Standard

Public awareness and education about the EMS system are essential to a high quality system. Each State should implement a public information and education (Pl&E) plan to address:

- The components and capabilities of an EMS system;
- The public's role in the system;
- The public's ability to access the system;
- What to do in an emergency (e.g., bystander care training)°;
- Education on prevention issues (e.g., alcohol or other drugs, occupant protection, speeding, motorcycle and bicycle safety);
- The EMS providers' role in injury prevention and control; and
- The need for dedicated staff and resources for Pl&E.

Recommendations

The Division should:

- Continue to partner with the New Hampshire Office of Highway Safety to increase the role and visibility of the EMS and Trauma programs in the State Highway Safety Strategic Plan.
- Utilize its website to increase awareness and public engagement in various programs such as Stop the Bleed, the State AED Registry and the New Hampshire Project First.

MEDICAL DIRECTION

Standard

Physician involvement in all aspects of the patient care system is critical for effective EMS operations. EMS is a medical care system in which physicians oversee non- physician providers who manage patient care outside the traditional confines of the office or hospital. States should require physicians to be involved in all aspects of the patient care system, including:

- A State EMS Medical Director who is involved with statewide EMS planning, overseeing the development and modification of prehospital treatment protocols, statewide EMS quality improvement programs, scope of practice and medical aspects of EMS provider licensing/disciplinary actions;
- Online and off-line medical direction for the provision of all emergency care including pediatric medical direction, when needed and the authority to prevent and EMS provider from functioning based on patient care considerations; and
- Audit and evaluation of patient care as it relates to patient outcome, appropriateness of training programs and quality improvement.

Recommendations

The Division should:

- Outline responsibilities and authority of the State EMS Medical Director. This position should be adequately compensated. This position could be expanded to include Preparedness and other DHHS medical oversight activities. If done, the position should be shared between DHHS and the Division.
- Strengthen the Division's authority through statute or rule to discipline a provider when necessary.
- Provide (in rule or statute) legal protection for medical directors for their EMS activities.

PREPAREDNESS

Standard

EMS is a critical component in the systematic response to day-to-day emergencies as well as disasters. Building upon the day-to-day capabilities of the EMS system each State should ensure that EMS resources are effectively and appropriately dispatched and provide prehospital triage, treatment, transport, tracking of patients and documentation of care appropriate for the incident, while maintaining the capabilities of the EMS system for continued operations, including:

- Clearly defining the role of the State Office of EMS in preparedness planning and response including their relationship with the State's emergency management, public health and homeland security agencies;
- Establishing and exercising a means to allow EMS resources to be used across jurisdictions, both intrastate and interstate, using the Emergency Management Assistance Compact and the National Incident Management System;
- Identifying strategies to protect the EMS workforce and their families during a disaster;
- Written protocols, approved by medical control, for EMS assessment, triage, transport and tracking of patients during a disaster;
- A current statewide EMS pandemic influenza plan; and
- Clearly defining the role of emergency medical services in public health surveillance and response.

Recommendations

The Division should:

- Actively partner with DHHS on preparedness plans and activities. Appropriate HPP resources should be made available to the Division.
- Leverage and support the role of the State EMS Medical Director as it relates to State preparedness activities and responsibilities.
- Develop, in partnership with the Granite State Healthcare Coalition, a comprehensive State MCI plan.

EVALUATION

Standard

Each State should implement a comprehensive evaluation program to assess effectively and to improve a statewide EMS system. State and local EMS system managers should:

- Evaluate the effectiveness of services provided to victims of medical or trauma- related emergencies;
- Define the impact of the system on patient care and identify opportunities for system improvement;
- Evaluate resource utilization, scope of service, patient outcome, and effectiveness of operational policies, procedures, and protocols;
- Evaluate the operation of regional, accountable emergency care systems including whether the right patients are taken to the right hospital;
- Evaluate the effectiveness. of prehospital treatment protocols, destination protocols and 911 protocols including opportunities for improvement;
- Require EMS operating organizations to cpllect NEMSIS compliant data to evaluate emergency care in terms of the frequency, category, and severity of conditions treated and the appropriateness of care provided;
- Assure protection from discoverability of EMS and trauma peer review data;
- Ensure data-gathering mechanism and system policies that provides for the linkage of data from different data sources through the use of common data elements;
- Ensure compatibility and interoperability of data among local, State and national data efforts including the National EMS Information System and participation in the National EMS Database;
- Evaluate both process and impact measures of injury prevention, and public information and education programs; and
- Participate in the State Traffic Records Coordinating Committee (TRCC) - a policy-level group that oversees the State's traffic records system, to develop and update a Statewide Traffic Records System Strategic Plan that ensures coordination of efforts and sharing of data among various State safety data systems, including EMS and Trauma Registry data.

Recommendations

The Division should:

- Continue and expand the innovative Pl/CQI implementation efforts which support agency quality improvement.
- Improve statewide participation with trauma registry data submission to better support Pl/CQI programs.