Emergency Medical Services Plan

2023 - 2028

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Office of Emergency Medical Services (OEMS)

The Office of Emergency Medical Services, by delegation from the Commissioner of the The Department of Public Health is responsible for the planning, coordination, and administration of a state-wide emergency medical care service system and shall set policy and establish state-wide priorities for emergency medical services, including but not limited to:

- Proactive administration, oversight, and regulation of the statewide Emergency Medical Services (EMS) and the trauma system.
- Public education and information programs
- Training and education
- Regional council oversight
- Mobile Integrated Healthcare
- Providing staff support to the Connecticut Emergency Medical Services Advisory Board (CEMSAB)

Introduction & Authority

Connecticut General Statutes (CGS) 19a-18(b) requires the Office of Emergency Medical Services to create an EMS Plan every five years.

> *(b) The Office of Emergency Medical Services shall adopt a five-year planning cycle for the statewide plan for the coordinated delivery of medical emergency services required by subsection (a) of this section. The plan shall contain:*
>
> *(1) Specific goals for the delivery of such emergency medical services.*
>
> *(2) a time frame for the achievement of such goals.*
>
> *(3) cost data and alternative funding sources for the development of such goals; and*
>
> *(4) performance standards for the evaluation of such goals*

The first statewide EMS Plan was written in 1986, and subsequent plans have been updated continuously as required by statute. The last EMS plan was for the years 2015-2020. This present plan was delayed due to the COVID 19 pandemic response. Like the plans before it, this plan does not outline or recommend specific steps to be taken, rather it represents a roadmap, telling us where we want to go. This plan is meant to be dynamic, evolving as circumstances over time determine how we arrive at the destination of a sustainable, state-of-the-art EMS system.

What Is EMS?

Emergency Medical Services is a system that provides emergency medical care. Once it is activated by an incident that causes serious illness or injury, the focus of EMS is emergency medical care of the patient(s).

EMS is most easily recognized when emergency vehicles or helicopters are seen responding to emergency incidents. But EMS is much more than a ride to the hospital. It is a system of coordinated response and emergency medical care involving multiple people and agencies. A comprehensive EMS system is ready every day for every kind of emergency.

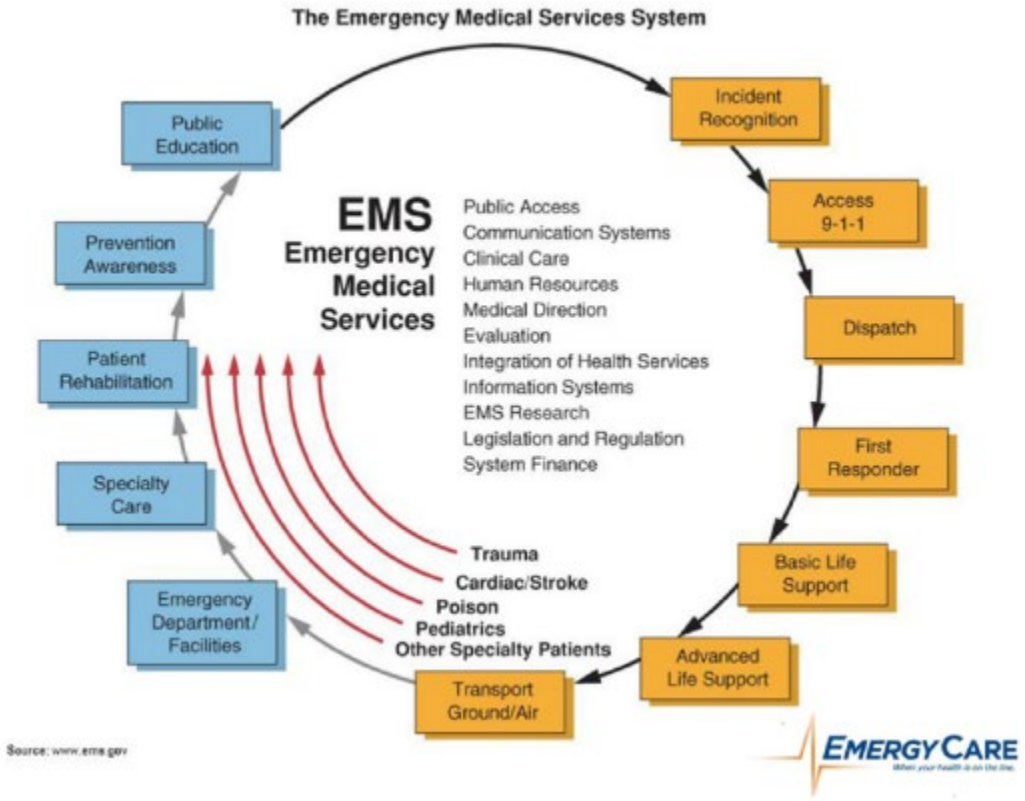
EMS is an intricate system, and each component of this system has an essential role to perform as part of a coordinated and seamless system of emergency medical care. An EMS system includes the following components:

- Agencies and organizations (both private and public)
- Communications and transportation networks
- Trauma systems, hospitals, recognized trauma centers, and specialty care centers
- Rehabilitation facilities
- Highly trained professionals
    - Volunteer and career prehospital personnel
    - Physicians, nurses, and therapists
    - Administrators and government officials
- An informed public that knows what to do in a medical emergency

EMS does not exist in isolation but is integrated with other services and systems intended to maintain and enhance the community's health and safety. As seen in the graphic on the next page, EMS operates at the crossroads between health care, public health, and public safety.

A combination of the principles and resources of each is employed in every EMS system. Since EMS providers work in the community, they are often the first to identify public health problems and issues. The emergence of significant health problems is often heralded by its arrival in the Emergency Department, and it arrives there via EMS. Since EMS providers respond to all kinds of emergencies and all kinds of hazards, they often work shoulder-to-shoulder with public safety colleagues in law enforcement and fire services with their primary mission being the emergency medical care of ill and injured people.

The organizational structure of EMS, as well as who provides and finances the services, varies significantly from community to community. Prehospital services can be based in a fire department, a hospital, an independent government agency, a non-profit corporation or be provided by commercial for-profit companies. But, regardless of provider, the essential components of an EMS System remain the same.



The diagram above illustrates the complexity of an EMS system. In the diagram, the large circle represents each system element as it is activated in response to an incident. The arrows within the circle represent the specialty care areas within EMS. The list within the circle represents the elements acting behind the scenes to support the system. In order to be "ready every day for every kind of emergency," an EMS system must be as comprehensive as the one pictured above. Developing and maintaining such a system requires thoughtful planning, preparation, and dedication from EMS partners at the local, State, and Federal levels

Model EMS System

The National Highway Traffic Safety Administration (NHTSA) has created a model plan for states to use as guidance for creating statewide EMS plans. This model from NHTSA, the EMS Agenda 2050, has been used in the creation of this EMS plan for Connecticut.

The EMS Agenda 2050 describes a vision for the nation's EMS systems. This new EMS agenda envisions a people-centered EMS system, built around principles that should guide the advancement of EMS even as technologies and best practices evolve. Those principles were the result of a collaborative and inclusive effort to create a plan created by and for the EMS community, according to the EMS Agenda 2050, the following should be components of an EMS System:

EMS Administrative Structure

Connecticut Department of Public Health, Commissioner

The Connecticut Department of Public Health Commissioner has overall authority and responsibility for the EMS System in Connecticut. (CGS Sec. 19a-176)

Office of Emergency Medical Services

The Office of Emergency Medical Services is part of the Healthcare Quality and Safety Branch at DPH, and under the Commissioner is responsible for the coordination, administration, and enforcement of the state's EMS statutes, regulations, programs, and policies. (CGS Sec. 19a-178)

Connecticut Emergency Medical Services Advisory Board (CEMSAB)

The EMS Advisory Board, utilizing its committees, serves as an advocate for EMS system development. The Board advises the Commissioner on EMS issues, assists with regulation review and process, and develops program standards for the EMS system for approval by the Commissioner. Advisory Board Members serve in voluntary positions appointed by the Governor and State Legislators. (CGS 19a-178a)

Connecticut EMS Medical Advisory Committee (CEMSMAC)

The Connecticut EMS Medical Advisory Committee is representative of the pertinent statewide physician community. It provides both the Advisory Board and the Commissioner with advice regarding medical policy and protocols for the EMS system. (CGS 19a-178a(c))

Regional EMS Councils

The five Regional EMS Councils function serve a statutory role in implementing and evaluating state policy and programs at the regional and local level in concert with OEMS. They develop regional plans in conformance with the state EMS Plan, coordinate and evaluate the delivery of EMS in their regions and serve as a voice for the local communities in recommending continued development of the EMS system. (CGS 19a-183)

Regional Council membership consists of representatives of local government, fire service, law enforcement, medical and nursing professions, certified and licensed ambulance providers, educational institutions, and consumers.

Council of Regional Presidents

The Council of Regional Presidents (CORP) serves as an advocate for the EMS system development. CORP Presidents are elected by their regional councils and serve in a voluntary capacity. (CGS 19a-184)

Sponsor Hospitals

According to state regulation, Section 19a-179-12, mobile intensive care (MIC) activities, or the provision of advanced life support (ALS), including automated defibrillation, and other "advanced" skills performed by basic life support (BLS) personnel, are subject to medical oversight by sponsor hospitals. Almost every acute care hospital in the state is a sponsor hospital for at least one, local EMS service.

There are twenty-seven Acute Care Hospitals, thirteen of which are designated as trauma centers; these include five level one centers, seven level two centers, one level three center, and two pediatric trauma centers. Sponsor Hospitals establish and enforce continuing medical education (CME) requirements for MIC personnel between recertification periods and must provide copies to OEMS of their prehospital treatment protocols. To be approved by the OEMS as a sponsor hospital, a hospital must fulfill objectives focused on MIC personnel, performance, and quality control. Sponsor hospitals appoint an MIC physician medical director from their emergency department staff who has the ultimate responsibility for indirect medical oversight functions, such as maintenance of protocols, training, and CME. Direct medical oversight is generally provided to MIC personnel by an emergency physician at the destination hospital and is accessed through the local Coordinated Medical Emergency Dispatch (CMED) by radio or telephone.

Emergency Telecommunicators

Training and certification are referenced in the Department of Emergency Services and Public Protection Regulations Connecticut General Statutes Sections 28-30-1 through 28-30-10.

EMS Agenda for the Future:

The Vision

The entire EMS system, from how care is accessed to how it is delivered, is designed to be inherently safe and to minimize exposure of people to injury, infections, illness, or stress. Decisions are made with the safety of patients, bystanders, the public, and practitioners as a priority, from how people are moved to hygiene practices in the field and in the ambulance. Clinical care, operations, and other aspects of the system are based on the best evidence in order to deliver the most effective service, with a focus on outcomes determined not only by the EMS service but by the entire community and the individuals receiving care.

(NHTSA EMS Agenda 2050 at EMS.gov)

Priority Areas: Status, Goals and Objectives

Regulation and Policy

Where we are:

The Office of Emergency Medical Services resides within the Department of Public Health (and is the lead agency for EMS in Connecticut). OEMS is tasked by statute with:

- Providing public education and information programs.
- Administering the EMS equipment and local system development grant program.
- System planning.
- Regional council oversight, training.
- Providing staff support to the Advisory Board.

OEMS has significant regulatory authority in terms of responsibility to administer, oversee, and regulate the statewide EMS and Trauma System. Important areas include:

- Ambulance rate setting authority.
- Assignment of specific primary service areas (PSA's), from first response through basic ambulance to advanced life support functions.
- Implementation of statewide treatment protocols; and
- Data collection
- Provision of Regional EMS Coordinators
- Oversight of licensure and certification of EMS clinicians
- Establishing EMS vehicle standards.

The EMS regulations further define these duties and roles throughout the system. These regulations are currently undergoing review to be updated, as many date from 1995.

There is an active Connecticut Emergency Medical Services Advisory Board. There are many prevention and public education programs in place and there is an active Emergency Medical Services for Children program within the state that tends to the unique needs of children in the EMS system. OEMS works with the Advisory Board regarding various administrative issues surrounding the functioning of the Board.

Where we want to be:

EMS in Connecticut will have comprehensive, up to date legislation, regulation, and operational policies and procedures.

Specifically:

OEMS should review the regulations as they pertain to the EMS system and update where needed. In particular in those areas where they are silent on contemporary EMS system issues, examples of which include but are not limited to: Management Services Organizations, and Emergency Vehicle Operator training.

DPH should work with the Connecticut Governor's Office and the Legislature to improve the appointment process and the composition of the EMS Advisory Board and ensure that the Board members represent the EMS community and the public.

DPH should also work with the Governor's Office, the Legislature, and the CT EMS Advisory Board to review the rate setting process and its need.

Resource Management

Where we are:

Since the National Highway Traffic Administration's (NHTSA) system review report in 2013, the Connecticut EMS and Trauma System has continued to evolve and build upon recommendations in that report and incorporate many contemporary standards and guidelines that have been adopted throughout the industry. The statewide plan was updated in 2015 pursuant to statutory requirements.

The Connecticut EMS system relies on five EMS regions and their coordinators. The system of regionalization is a key link between DPH and the 169 municipalities. Three regional coordinators are presently employed by DPH and are part of the OEMS staff.

The concept of primary service areas (PSA's) is a process where DPH grants sole response authority and responsibility to a single entity to provide a specific level of service for a specific geographic area.

The provision of EMS care and transportation, along with the assurance that trauma, stroke and ST elevation myocardial infarction patients (STEMI) are transported to the most appropriate facility in a timely manner is a fundamental component of the statewide health system.

Connecticut has significant EMS system resources with approximately 24,000 EMS clinicians of various levels handling 934,642 ambulance requests per year.

A Statewide data collection system for both EMS and Trauma exists, and a full-time data manager has been hired. EMS organization submission has improved dramatically.

The CEMSAB was developed in statute in 1997 and has numerous active committees. The board consists of 41 members, serving in voluntary positions appointed by the Governor and State Legislature. This board has evolved into a robust body with an active exchange of ideas.

Where we want to be:

The EMS system of 2030 has the ability to identify, categorize, and coordinate resources necessary for establishment and operation of regionalized, accountable EMS and Trauma systems. With an expanded and enhanced EMS and Trauma data collection system.

Specifically:

OEMS and DPH should ensure data is readily available to system policy makers, service agencies, hospitals, and the public on a regular basis. They should also encourage the development of a regionalized system of emergency care. While this is the purview of local government, smaller services working together can potentially achieve economies of scale by working together to pursue purchasing and funding opportunities.

To ensure financial sustainability, DPH and OEMS should continue identifying resources that can support EMS on a statewide basis and to help address any gaps in care.

The statewide EMS plan should continue to be updated every five years to remain consistent with current practice and industry standards, providing a contemporary plan to support these activities for the next five years.

Human Resources and Education

Where we are:

OEMS has adopted the NHTSA National Scope of Practice standards as the minimum requirements for EMS education programs and courses in Connecticut. Successful certification through the National Registry is required for initial certification of Emergency Medical Responders, Emergency Medical Technicians, Advanced Emergency Medical Technicians, and licensure of Paramedic candidates.

OEMS has transitioned to a two-year certification cycle for all levels of certification. Paramedics are licensed annually. The antiquated refresher system has been replaced by a national continuing education system.

OEMS certifies EMS Instructors as well as approves all EMS courses across the state on an individual basis. These courses are conducted in a variety of venues, as dictated by local educational needs and traditions. The number of certified or licensed providers consistently increases year to year. As of 2023 there were approximately 24,000 certified or licensed EMS providers. However, in the last calendar year, the number of providers actively practicing has been 11,332.

Clinical training is readily available across the state and issues with personnel shortages likely stem from causes other than shortages in training opportunities.

There is active ongoing oversight and quality assurance evaluation of EMS education courses.

Presently the processing time for certification of EMS providers is approximately 14 days. The process has been updated and is digitally driven and automated, eliminating duplication of effort and improving efficiency.

Where we want to be:

The EMS system has trustworthy EMS clinicians providing high quality patient care. There will be an identified Quality Assurance/Improvement process. EMS Education will expand beyond clinical and operational topics to business management and leadership.

Specifically:

OEMS should improve the quality improvement process for EMS education and training, allowing for appropriate steps to be taken to strengthen programs where necessary.

DPH should explore and consider a criminal background check system, to ensure that all EMS providers are appropriately screened prior to authorization to practice. Consideration should be given to the fiscal impact of such a program to the state and / or individual EMS clinicians.

DPH and OEMS should ensure that quality and access to emergency care are standard criteria for PSA assignments.

OEMS should update and publish the standardized operating procedures manual for training.

OEMS should encourage stakeholders to create and share educational offerings in leadership and business management for EMS chief officers. These topics have been identified as one of the most significant educational shortcomings of the EMS workforce in Connecticut. Most leaders have had access to quality clinical training and experience. Unfortunately, that does not necessarily translate to successful skill sets of managing and directing the business components of modern EMS systems.

Transportation

Where we are:

Connecticut issues licenses and certifications to EMS services to operate within specific geographic areas. OEMS has utilized a Geographic Information System (GIS) mapping system to demonstrate the levels of care being provided within each PSA.

Specific consideration for determining service areas include population size, effect of proposed service on other services in the area, response and activation times and level of service. The OEMS also seeks advice from the affected municipalities and regional council. Cost and access to emergency care are considered in determining the PSAs. Patient care data is available for analysis of the quality of care provided within PSAs, however it has not been acted upon at this time.

There are 169 municipalities in Connecticut and there are 399 EMS organizations, of which 159 are certified, 20 are licensed, 122 are first responder, and 98 are supplemental first responder recognitions. Licenses and certificates are issued annually, and vehicles are inspected biennially. There are 750 ambulances, 114 invalid coaches, 4 helicopters, and 250 mobile intensive care paramedic non-transport (MICP) vehicles. To add a vehicle, a service must submit a certificate of need application to OEMS demonstrating a valid need.

Licensed services are charged a $200 license fee. Certified services are not charged for the issuance of a certificate. The Department of Motor Vehicles (DMV) inspects the vehicles for road safety, and OEMS inspects the vehicles for medical requirements. A single staff member from OEMS conducts vehicle inspections and OEMS has investigative staff to address complaints.

There are two hospital-based air ambulance services, with helicopters strategically based throughout the State. LifeStar is based at Backus, Midstate Hospitals in Connecticut and Noble Hospital in Massachusetts and has been nationally accredited since 2004 to provide service statewide. Their critical care transport teams are trained to manage neonatal, pediatric, cardiac, and trauma patients. They provide rapid transport to definitive care from the scene and

interfacility transport. SkyHealth, which began operations in late 2014, operates two helicopters in a joint venture between Yale New Haven Health System and North Shore – LIJ Health System, in partnership with Med-Trans Corporation. They are staffed by highly skilled medical professionals, including critical care flight nurses and paramedics.

OEMS has established regulatory standards defining the minimum equipment and staffing resources for ambulance services – the minimum equipment lists are reviewed on an annual basis and modified as appropriate. There are no requirements currently within the regulatory standards for emergency vehicle operators to have emergency vehicle operations training.

Where we want to be:

EMS in Connecticut will have safe, reliable EMS transportation, including the identification of EMS service areas and integration with hospitals and CMEDs. It will also have routine, standardized methods for inspection and licensing of all emergency medical transport services and vehicles.

Specifically:

Every emergency vehicle operator should successfully complete an Emergency Vehicle Operations Course, which is approved by the State Office of Emergency Medical Services.

DPH should review the need to be involved in the certificate of need process and rate setting.

OEMS will complete the process of integrating electronic ambulance inspection records.

Facilities

Where we are:

Connecticut has 27 acute care hospitals with hospital-based emergency departments distributed primarily based on population density. There are two veterans' hospitals, one of which is a federal facility. Additionally, there are free standing Emergency Departments affiliated with existing hospitals and there are four urgent crisis centers for children aged 4 to 18 years old with depression, anxiety, emotional and behavioral dysregulation, substance abuse, self-injurious behavior not requiring medical intervention, and homicidal/suicidal ideation.

Designated Trauma Centers

Type	**Level I**	**Level II**	**Level III**
Pediatric	2	0	0
Adult	3	7	3

DPH Regulation 19a-177 allows for Level IV trauma centers within Connecticut; however, there is neither a state process nor a current American College of Surgeons (ACS) process to verify Level IV trauma centers. The same 1995 Regulation (19a-177) includes Trauma Field Triage Protocols that require severely injured patients be taken to a Level I or Level II trauma center. EMS providers across the state follow these requirements.

Each of the Level I pediatric trauma centers is also a full-service children's hospital. Trauma field protocols instruct that severely injured children younger than 13 years of age be taken to a Level l or Level II facility with pediatric resources including a pediatric ICU.

There is one accredited burn center in the state, Bridgeport Hospital, and three surrounding states have additional burn center capacity. Twenty-five acute care hospitals are designated as Primary Stroke Centers by the state, and by The Joint Commission.

All acute care hospitals within the state are required to submit trauma patient care data to the state trauma registry housed in OEMS. Currently, only the 14 designated trauma centers submit data to this system.

Where we want to be:

The EMS system will have an adequate number of designated emergency facilities and specialty care centers to meet the needs of the system.

Specifically:

OEMS should publish on the OEMS website the capabilities of each hospital in the state and provide updates as necessary.

OEMS should explore the use trauma registry data to provide blinded comparative outcomes to each trauma hospital.

DPH and OEMS should ensure that all acute care hospitals, rehabilitation services, and EMS services submit trauma patient data to the state trauma registry, as described in regulation, to inform performance improvement activities.

Communications

Where we are:

Connecticut was one of the first states in the country to implement a statewide 9-1-1 system. The enhanced E 9-1-1 system facilitates a prompt and accurate response by EMS providers. The system is in place within the 107 Public Safety Answering Points (PSAPs) and 12 regional CMEDs. The CMEDs connect communications for ambulances to all the hospitals for medical oversight. All ambulances and hospitals are equipped with narrow-band ultra-high-frequency (UHF) radios and some hospitals are also equipped with satellite phones.

DPH has capabilities on the Connecticut State Police communications system and has created statewide DPH talk groups. EMS services are required to have a minimum of 256 channels programmed to a standardized list provided through OEMS, on radios in ambulances and paramedic intercept vehicles.

All public safety telecommunications personnel answering 9-1-1 calls are required by statute to take an approved training course on Emergency Medical Dispatch (EMD). EMD training and certification is done under the authority of the Division of Statewide Emergency Communications (DSET), housed within the Department of Emergency Services and Public Protection (DESPP). EMD was implemented in 2000.

Recently the use of communications apps such as Twiage, and e-Bridge have been implemented by hospitals and EMS services within the state to streamline communication between the field and hospital.

Discussion continues regarding the consolidation of PSAPs and the CMEDS. The CMEDs are experiencing varying levels of financial distress and have varying degrees of volume, and some have no hospitals within their area.

Where we want to be:

EMS in Connecticut will have a technologically effective and comprehensive communications network to facilitate rapid access to care and provide communication pathways between the field and emergency medical facilities necessary to ensure on-line medical control.

Specifically:

DPH and OEMS, along with the Division of Statewide Emergency Telecommunications (DSET), should identify which executive branch agency should have ultimate authority of EMS communications.

DPH in collaboration with DSET should review the need for consolidation of CMEDs and PSAPs within the state.

In conjunction with the Department of Emergency Services and Public Protection (DESPP), OEMS should collaborate on the development of a comprehensive State EMS Communications Plan. The plan should address coordination issues and provide standards and operating procedures for the EMS communications system. This would include supporting the efforts of the State 9-1-1 Commission, DSET in updating the capabilities of the statewide E 9-1-1 system and maintaining representation on the Statewide Interoperability Emergency Communications (SIEC) committee.

DPH and OEMS should consider the need for a recertification process for EMD telecommunicators as well as establishing guidelines for quality assurance based on patient outcomes.

Public Information and Education

Where we are:

Operating on very limited budgets, varying degrees of emergency medical services public information campaigns, and education activities have been conducted across the state. There continues to be statewide activities related to public awareness and education specific to pediatrics through the EMS for Children program.

The OEMS website is continually updated, and pertinent information is available to providers on a regular basis. There are established links on the website to other EMS related programs and resources. OEMS also participates in the annual EMS recognition awards.

OEMS has successfully implemented the HeartSafe program and actively supports new designations and renewals. Efforts continue to support this program.

The EMS data collection system is functional, and information from the database can be used to support EMS decision-making and initiatives.

Where we want to be:

There will be more robust methods to provide information and educational programs concerning all aspects of the EMS system to the public and EMS providers.

Specifically:

DPH and OEMS should encourage the CEMSAB to reinvigorate the Public Information and Education committee and search for funding to support such a program.

OEMS should utilize resources to enhance the development of reports and fact sheets that educate system partners, legislators, and the public about the emergency health care system.

OEMS should evaluate the effectiveness of the HeartSafe program and share success stories during EMS week activities and throughout the year.

EMS for Children

Where we are:

Early EMS systems were designed to provide rapid intervention for sudden cardiac arrest in adults and transportation for motor vehicle accident victims, but children did not receive a commensurate level of attention as the system developed.

Each year, more children aged between one- and 14-years old die from unintentional injuries than from all childhood diseases combined. In addition, childhood illness resulting from respiratory, circulatory or neurological crises account for a significant percentage of hospital admissions.

In 1984, federal legislation established the Emergency Medical Services for Children (EMSC) Program. Since then, EMSC grant funds have improved the availability of child-appropriate equipment in ambulances and emergency departments, supported injury prevention programs, and provided pediatric-specific training to EMS providers and other emergency caregivers.

In 1994, OEMS received federal grant funding to assist in the enhancement of the EMS system to provide optimal care to children. As a result, the EMSC program provides outreach education, and participates with partners on prevention activities. PEPP (Pediatric Education for the Prehospital Provider) and PALS (Pediatric Advanced Life Support) courses are conducted as necessary.

There are continued statewide activities related to injury prevention, public awareness and education through the Emergency Medical Services for Children Program (EMSC). The program is currently contracted through the federal government and provides its own staff independent of the OEMS.

There are free standing Emergency Departments affiliated with existing hospitals and there are four urgent crisis centers for children aged 4 to 18 years old with depression, anxiety, emotional and behavioral dysregulation, substance abuse, self-injurious behavior not requiring medical intervention, homicidal/suicidal ideation.

Where we want to be:

EMS in Connecticut will optimize emergency care for children within the existing structure of the statewide EMS system.

Specifically:

OEMS should collaborate with EMSC to develop a comprehensive plan that will address the needs of children within the EMS system.

Trauma Systems

Where we are:

Fourteen hospitals are designated as trauma centers. The two pediatric Level I, three adult Level I, seven Level II, and one Level III have been verified by the American College of Surgeons. Both of the two Level I pediatric trauma centers are also full-service Children's hospitals.

The current Connecticut trauma system has many of the necessary components and appears to function well. The trauma centers submit trauma data to a state trauma registry and beginning in 2023 an aggregate data report will be available to contributing hospitals as part of the EMS annual report.

Where we want to be:

The Trauma system in Connecticut will continue to evolve as an organized statewide system of trauma care. Implementation of the necessary components of such a system to ensure that the performance of the trauma system is effective, efficient, and provides the appropriate level of care to patients with major injuries. This will be coupled with a robust injury prevention program.

Specifically:

Pre-hospital and hospital care providers should be educated regarding the trauma system, policies, procedures, and protocols.

Statewide information related to trauma is currently collected and should be analyzed, de-identified and made available to the public and the contributing hospitals as per 19a-177(d).

DPH and OEMS should participate in the development of an updated Statewide Trauma Plan revision process led by the Trauma Committee and the American College of Surgeons Connecticut Committee on Trauma.

DPH and OEMS should encourage academic research into preventable mortality, as well as into system quality, and efficiency.

DPH and OEMS should explore resource opportunities to fund support for a trauma care system function and maturation, including hospital verification and system performance improvement/assurance, as guided by statewide EMS and trauma registry data.

DPH should identify all injury prevention programs within the State and work with them in an effort to provide effective and consistent injury prevention programming based on state and regional needs. DPH should explore using the data gathered from the statewide trauma registry and whether it can be used to assess the nature of injuries, with the goal of creating new injury prevention programs within DPH.

DPH and OEMS should work to establish a process to verify Level IV trauma centers within the state.

Mass Casualty Care

Where we are:

The State of Connecticut utilizes the principles of the National Incident Management System (NIMS), which provides a common language and procedures for all responders to follow when operating on a scene where different agencies are operating. The establishment of an Incident Commander, Unified Command, and a Command Post as soon as possible along with several other positions such as a safety officer help to ensure the safety of the scene and are one of the first interventions of responding EMS providers.

Where we want to be:

Mass casualty care in Connecticut will ensure that the appropriate resources are allocated during an incident in which patient load exceeds the capacity of the local EMS system. A well-designed and well-practiced system will provide for both the safety of the responders and the efficient triage, treatment and transportation of victims. It is the goal of the EMS system to limit the morbidity and mortality of all patients.

Specifically:

100% of all Connecticut municipalities should have a current written EMS plan including a formal mutual aid pact, written protocols, and procedures governing the response to a mass casualty incident (MCI), and a formal definition of what constitutes an MCI for the locality.

All EMS responders should have a working understanding of the incident command framework and basic Incident Command System (ICS) concepts, which include medical staging, triage, treatment, and transport of the patients. This is achieved by mandating that all personnel be trained in NIMS and the SMART Triage System.

An evaluation tool should be developed and implemented, such as an after-action plan, to review all MCI drills and events, and determine weaknesses and areas for improvement.

An EMS Branch within the incident command structure should be established in 100% of all declared MCIs.

Data and Evaluation

Where we are:

All licensed and certified services are required by statute to collect and submit electronic data to OEMS. The current model OEMS uses allows EMS organizations to choose their electronic Patient Care Report (ePCR) software solution.

In 2023, Connecticut became the 13th state to transition to NEMSIS 3.5. In 2023, 934,642 ePCRs were submitted to the State data registry. Inclusion in NEMSIS is critical to a standardized, best-practices approach to EMS data, and will enable OEMS to use data to drive evidence-based patient care.

The state trauma registry exists in the state's trauma regulations and all acute care hospitals are required by statute to submit trauma data. The state has no registries for specific illnesses such as stroke, and ST-elevation myocardial infarction (STEMI), however individual services do participate in the American Red Cross' CARES data collection program for cardiac arrest.

Data in the registries is owned by the state. There appears to be no legislation or rule that protects the databases from legal discovery. There is a data subcommittee of the CEMSAB, and they have recently established performance measures for services to be able to compare themselves to the aggregate. All QA/QI activities occur at the local level between the sponsoring hospital's EMS director and the agencies.

The OEMS has continued to be involved with the Traffic Records Coordinating Committee (TRCC).

Where we want to be:

Connecticut has designed, implemented, and maintained a functional system for collecting data and evaluating system components to ensure the ongoing quality and integrity of the EMS and Trauma systems. This system should include visual analytics, and GIS mapping capabilities to analyze geographic trends. A public access portal where the public can easily query de-identified EMS and Trauma data on the OEMS website exists.

Specifically:

OEMS should work with the CEMSAB Data Committee as well as the Trauma committee to implement a State EMS Data Plan.

OEMS should utilize partners and CEMSAB to establish performance measures that assess the provision of EMS.

DPH and OEMS should remind all acute care hospitals, the Office of the Chief Medical Examiner, and providers of rehabilitation services of their obligations to report trauma data to the trauma registry according to 19a-177-77

Medical Direction

Where we are:

EMS is a delegated medical practice from physicians to non-physician medical providers who manage patients outside the traditional confines of a physician's office or healthcare facility.

Medical oversight and authorization to practice, (known in Connecticut as medical control) is provided through the sponsor hospital system. Each agency that provides EMS care is required to have a signed medical control agreement with a sponsor hospital. Each sponsor hospital is currently required to provide an EMS Medical Director and EMS Coordinator. Direct medical oversight is not frequently utilized as most systems are protocol driven. When needed, Online Medical Control, also known as Direct Medical Oversight or DMO, is provided from the sponsor hospital through a CMED. There is variability in the sponsor hospital provision of medical oversight services regarding physician involvement, quality management expertise and EMS education.

The State EMS Medical Director is a contracted consultant who provides advice to OEMS regarding clinical and EMS system issues, but the consultant does not have any individual authority. Under the current State EMS Director's leadership of the Connecticut EMS Medical Advisory Committee (CEMSMAC), the state has completed a statewide guideline/protocol project, which has developed into a New England regional protocol project.

There is quality improvement within the system, at the local level.

Where we want to be:

Emergency medical care in Connecticut will be consistent with standards of quality practice through involvement of physicians in the design, implementation, management, and provision of emergency care.

Specifically:

OEMS should ensure that revised regulations require all levels of EMS and EMD providers to have at least indirect medical oversight from an EMS Medical Director.

The CEMSAB should identify potential funding opportunities for appropriate compensation for medical oversight activities.

OEMS should investigate the provision of regular education/training opportunities for EMS Medical Directors throughout the state.

OEMS should establish requirements for both initial and ongoing training of EMS medical directors.

DPH and OEMS should consider streamlining the authorization to practice process for paramedics and advanced EMTs within the state and explore if there would be advantages to centralizing the process.

Preparedness

Where we are:

The relationship between OEMS and the Office of Public Health Preparedness and Response (OPHPR) is well established. Connecticut has experienced an unusually high number of real-world events in recent years, and these events have tested and improved the coordination of EMS emergency response. These events include a power plant explosion, severe hurricanes, a train crash, multi-fatality shooting incidents, and a pandemic response. There have also been incidents that brought about evacuation of long-term care facilities.

Mutual aid agreements, the ability to participate in the Emergency Management Assistance Compact, and use of National Incident Management System is prevalent. There are considerations for EMS in the pandemic planning for the state.

EMS organizations should be prepared for disaster events, and there are mechanisms in place for events requiring the extended use of personal protective equipment (PPE) as well as events that create healthcare system surge conditions.

There is a protocol on EMS Crisis Standards of Care and there is evidence of past execution of altered dispatch protocols, and alternative destinations for patients.

Emergency Management Agency response is distributed among the 169 municipalities in Connecticut. Department of Emergency Management and Homeland Security (DEMHS) regions and the EMS regions are consistent with each other, and it may be productive to consider regionalization of EMS disaster response as a way of streamlining readiness of capability and readiness cost.

There are many opportunities available for EMS and Public Health Preparedness to collaborate. Preparedness funding for EMS positions in the EMS regions could potentially improve both EMS care and statewide preparedness.

Where we want to be:

EMS resources are effectively and appropriately dispatched and provide prehospital triage, treatment, transport, tracking of patients, and documentation of care appropriate to an incident, while maintaining the capabilities of the EMS system for continued operations.

Specifically:

OEMS should work with OPHPR to identify and close preparedness gaps that may exist with EMS agencies, specifically in the areas of PPE stockpile, preparedness training, and planning and exercises.

DPH should continue to strengthen collaboration between the OEMS and DPH Office of Public Health Preparedness and Response (OPHPR) programs and work to more effectively leverage developed capabilities and resources.

Preparedness planning should include representatives from the EMS profession as part of the planning process.

Funding

Where we are:

While the OEMS is funded by DPH for staff salaries, there is no dedicated funding source for development, implementation, and maintenance of the Connecticut EMS system at the local level. Local EMS funding can depend on general tax revenues and is subject to fluctuations of that source. Further, municipalities in the state are not required to fund EMS.

Where we want to be:

There is an established stable source of funding for local EMS systems for development, implementation, and maintenance.

Specifically:

DPH and OEMS should identify potential funding mechanisms that pertain to local EMS programs.

Conclusion

In Connecticut, EMS is viewed as a primary entryway into the healthcare system.

Areas of strength in the Connecticut EMS System include Statewide EMS Treatment Protocols, improvement in data collection and management, and an involved EMS Advisory Board.

Potential threats and areas that need to be strengthened include the permanent funding of the EMS within the state, consolidated communication systems, and regional collaboration.

Stability of the EMS in Connecticut relies on adequate funding, regionalization, and collaboration to build a strong foundation for the system to improve and be a model for the rest of the country.