2021

NATIONAL EMERGENCY MEDICAL SERVICES

EDUCATION STANDARDS

NHTSA
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION

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National EMS Education Standards 2021. Washington, DC: National Highway Traffic Safety Administration.

Technical Report Documentation Page

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Executive Summary

In 2009, the EMS community came together to create the original *National EMS Education Standards (*the *Standards)*. This represented a major step toward realizing the vision put forth in the 1996 *EMS Agenda for the Future* and was further outlined in the *EMS Education Agenda for the Future: A Systems Approach* four years later. This new version of the *Standards* builds on the foundation created by those landmark documents and other achievements of the last quarter-century, including *EMS Agenda 2050* and the *National Scope of Practice Model*.

The *National EMS Education Standards* outline the minimal competencies for entry-level EMS clinicians to perform their roles as outlined in the 2019 and 2021* updated *National EMS Scope of Practice Model*. The *Standards*, while a national effort, were intentionally created in a way that allows for diverse implementation methods to meet local needs and evolving educational practices. This less prescriptive format of the *Standards* allows for ongoing revision of EMS educational content consistent with scientific evidence, educational practices, and community standards of care.

Noteworthy revisions found in the 2021 edition of the *Standards* are based upon input and considerations obtained from numerous sources. These include stakeholder and public comments, national guidance documents (the original 2009 *National EMS Education Standards, EMS Agenda 2050,* and the 2019 and 2021* updated *National Scope of Practice Model*), the National Registry of EMT's practice analysis, technological advances, known and evolving best practices, and evidence-based medicine.

* As a result of the 2020-21 public health emergency, several changes were made under the urgent update process to the 2019 National EMS Scope of Practice Model which are reflected in these education standards.

The following areas within the *Standards* had notable revisions: public health; pediatrics; geriatrics, behavioral/psychiatric; cultural humility; EMS operations; pharmacology; and EMS safety, wellness and resilience. Input was provided and every suggestion or recommendation was considered. Revision and adjustments were based on a team discussion, with expert consultation when needed.

When applying the *Standards* to individual programs and classes, EMS educators have the freedom to develop their own curricula or use any of the wide variety of lesson plans and instructional resources that are available. This ensures that each program can specifically address individual and community needs.

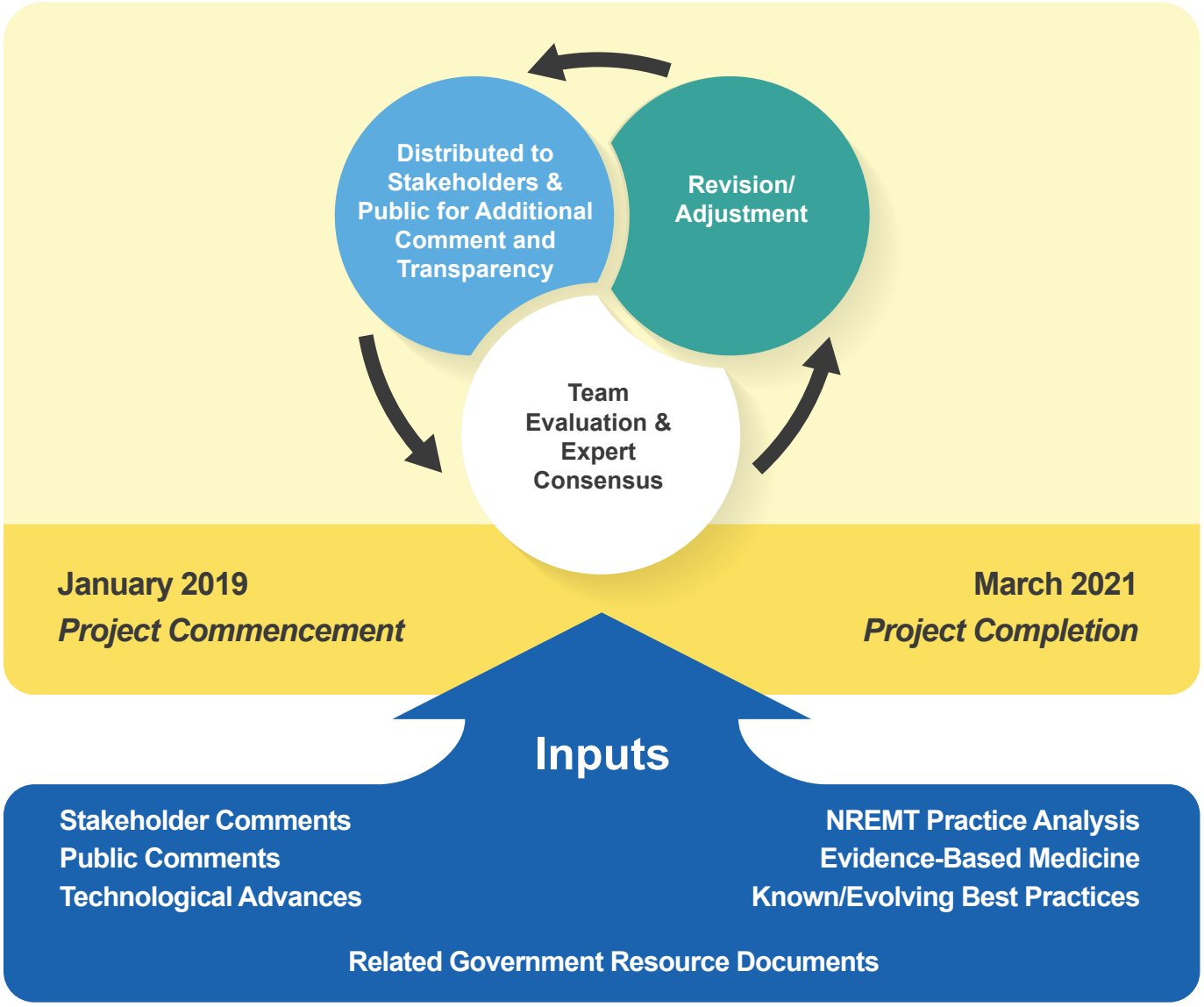
The *Standards* are not intended to stand as a comprehensive document guiding the entire development of EMS clinicians, but rather one part of a comprehensive system. EMS education programs will incorporate each element of the education system proposed in the *Education Agenda*.

These elements include:

- National EMS Core Content
- National EMS Scope of Practice Model
- National EMS Education Standards
- National EMS Certification
- National EMS Program Accreditation

This integrated system approach to EMS education is essential to achieving the goal of developing EMS clinicians across the country who are competent in the appropriate knowledge, skills, and abilities for their licensure level.

Revision Process



Introduction and the Evolution of EMS in the United States

EMS has evolved and grown significantly since the first organized, national effort to develop EMS systems began in the 1960s. Compared to colleagues in health care and public safety, EMS remains a young profession and continues to advance as we further define and enhance our structure, oversight and organization.

As EMS system operations have developed, so has EMS education. In the early 1970s, registered nurses and physicians taught most EMS programs. Few student and instructor resources related directly to prehospital emergency care. No standards existed to define what EMS clinicians should know and what they should be able to do. By the early 2000s, most of this original framework was being replaced, and national education standards and a scope of practice were defined for the first time. Today, the profession has become more sophisticated, and community expectations have increased. With health care, technology and science evolving faster than ever, it is also important to revisit these topics and update these guidelines more frequently.

EMS Agenda for the Future

In August 1996, the *EMS Agenda for the Future* (the *Agenda*) was published. Developed with funding from the National Highway Traffic Safety Administration and the Health Resources and Services Administration, and led by the National Association of EMS Physicians and the National Association of State EMS Directors, the *Agenda* brought together stakeholders from throughout EMS to create a unifying vision for emergency medical services in the United States.

The *Agenda* was designed to guide government and private organizations in EMS planning, development, and policymaking at the national, state and local levels. It addressed 14 attributes of EMS, including the EMS education system, and defined a vision for EMS education "based on research" and "conducted by qualified instructors" while employing "sound educational principles."

EMS Education Conference

Soon after publication of the *Agenda,* representatives of 30 EMS-related organizations met at an EMS Education Conference sponsored by NHTSA to identify the necessary steps for implementing that vision.

The EMS Education Conference resulted in several recommendations, including:

- *The National EMS Education and Practice Blueprint* (the *Blueprint*) is a valuable component of the EMS education system. A multidisciplinary panel, led by NHTSA, to identify core educational content more explicitly for each licensure level, should revise it.
- National EMS Education Standards are necessary but need not include specific declarative material or lesson plans. NHTSA should support and facilitate the development of national EMS Education Standards.
- The *Blueprint* and national EMS Education Standards should be revised periodically, with major revisions occurring every 5 to 7 years, and minor updates made every 2 to 3 years.

EMS Education Agenda for the Future

In 1998, NHTSA convened a group of educators who developed a document titled *EMS Education Agenda for the Future: A Systems Approach* (the *Education Agenda*). The EMS education system envisioned in the *EMS Agenda for the Future* was further defined and articulated in the *Education Agenda* (see Figure 1). The *Education Agenda*'s authors also stated that, to be most effective, each component in the EMS education system should be structured, coordinated and interdependent.

National EMS Core Content

The *National EMS Core Content* was published in 2005. Core Content defines the entire domain of out-of-hospital practice and identifies the universal body of knowledge and skills for EMS clinicians who do not function as independent practitioners.

Funded by NHTSA and HRSA, this project was led by the National Association of EMS Physicians and the American College of Emergency Physicians.

EMS Education Agenda for the Future: A Systems Approach

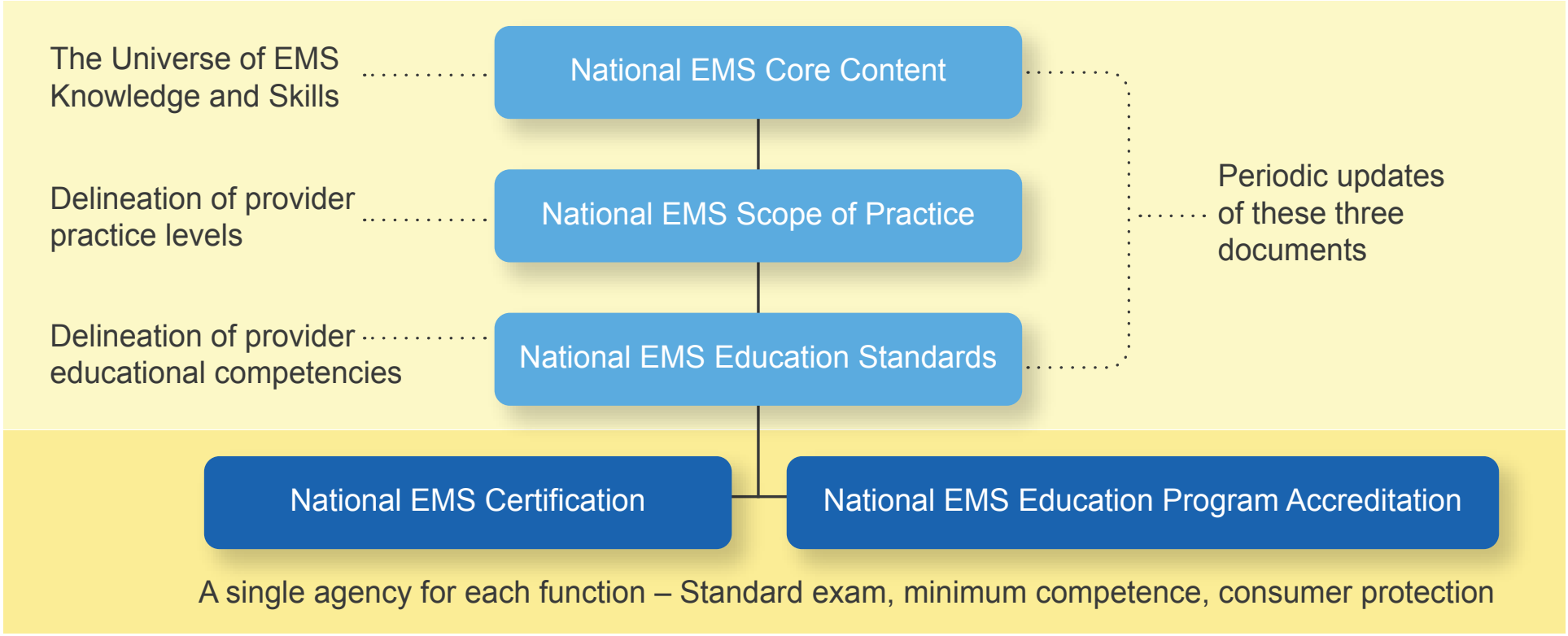


Figure 1: Model EMS System

National EMS Scope of Practice

The *National EMS Scope of Practice Model* (the *Scope of Practice*) is a consensus document that was published in 2007 and revised in 2019. This document defines four levels of EMS licensure—emergency medical responder (EMR), emergency medical technician (EMT), advanced emergency medical technician (AEMT) and paramedic—and delineates the practices and minimum competencies for each level. The *Scope of Practice* does not have regulatory authority but provides guidance to states. Adherence to the *Scope of Practice* would increase uniformity in EMS practice throughout the U.S. and facilitate reciprocity between states. Leadership for this project was delegated to the National Association of State EMS Officials and funded by NHTSA and HRSA.

The *Scope of Practice* further defines practice, suggests minimum educational preparation, and designates appropriate psychomotor skills at each level of licensure. Further, the document describes each level of licensure as distinct and distinguished by unique "skills, practice environment, knowledge, qualifications, services provided, risk, level of supervisory responsibility, and amount of autonomy and judgment/critical thinking/decision-making."

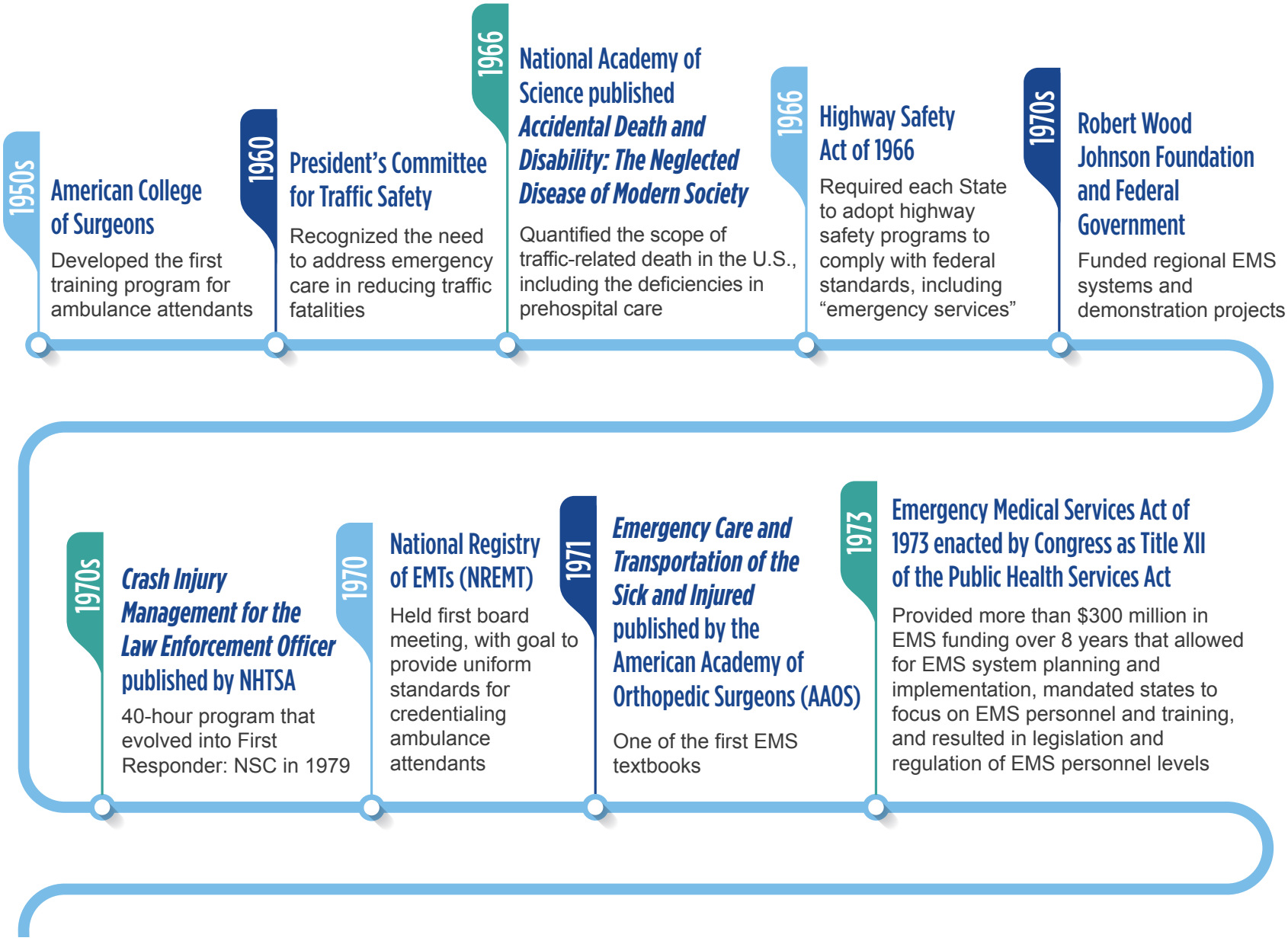
National EMS Education Standards

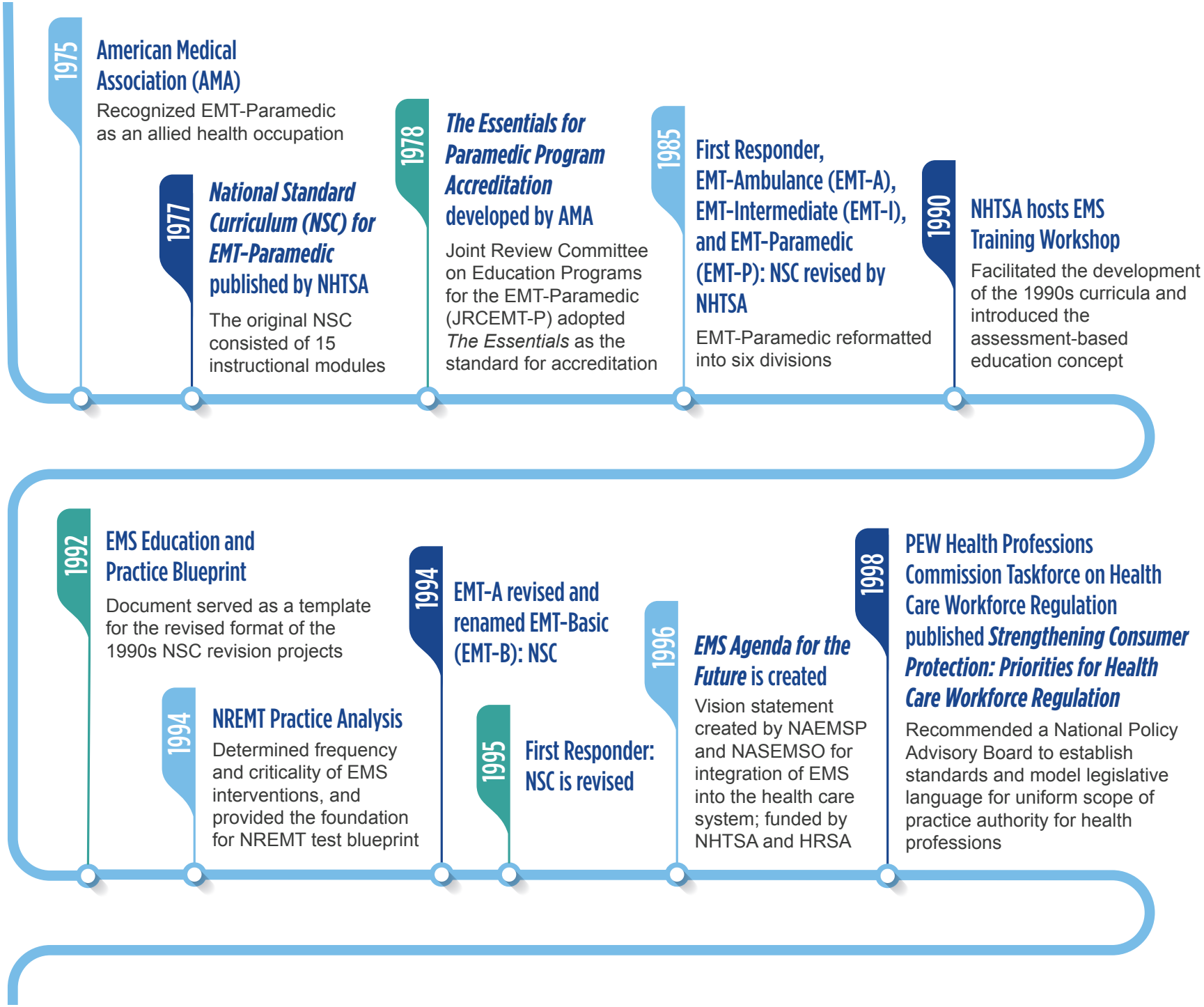
The *National EMS Education Standards* replaced the NHTSA National Standard Curricula at all licensure levels when first published in 2009. The *Standards* define the competencies, clinical behaviors, and judgments that should be met by entry-level EMS clinicians to meet practice guidelines defined in the *Scope of Practice*. Content and concepts defined in the *National EMS Core Content* are also integrated within the *Standards*. Leadership for this project was delegated to the RedFlash Group and National Association of EMS Educators, and funded by NHTSA and HRSA. With input from a large number of stakeholders, the team chose not to update the separate Instructional Guidelines for each clinician level originally published as companion documents to the 2009 Standards. Instead, the Instructional Guidelines have been incorporated within the *Standards*, replacing the need for those supplemental materials.

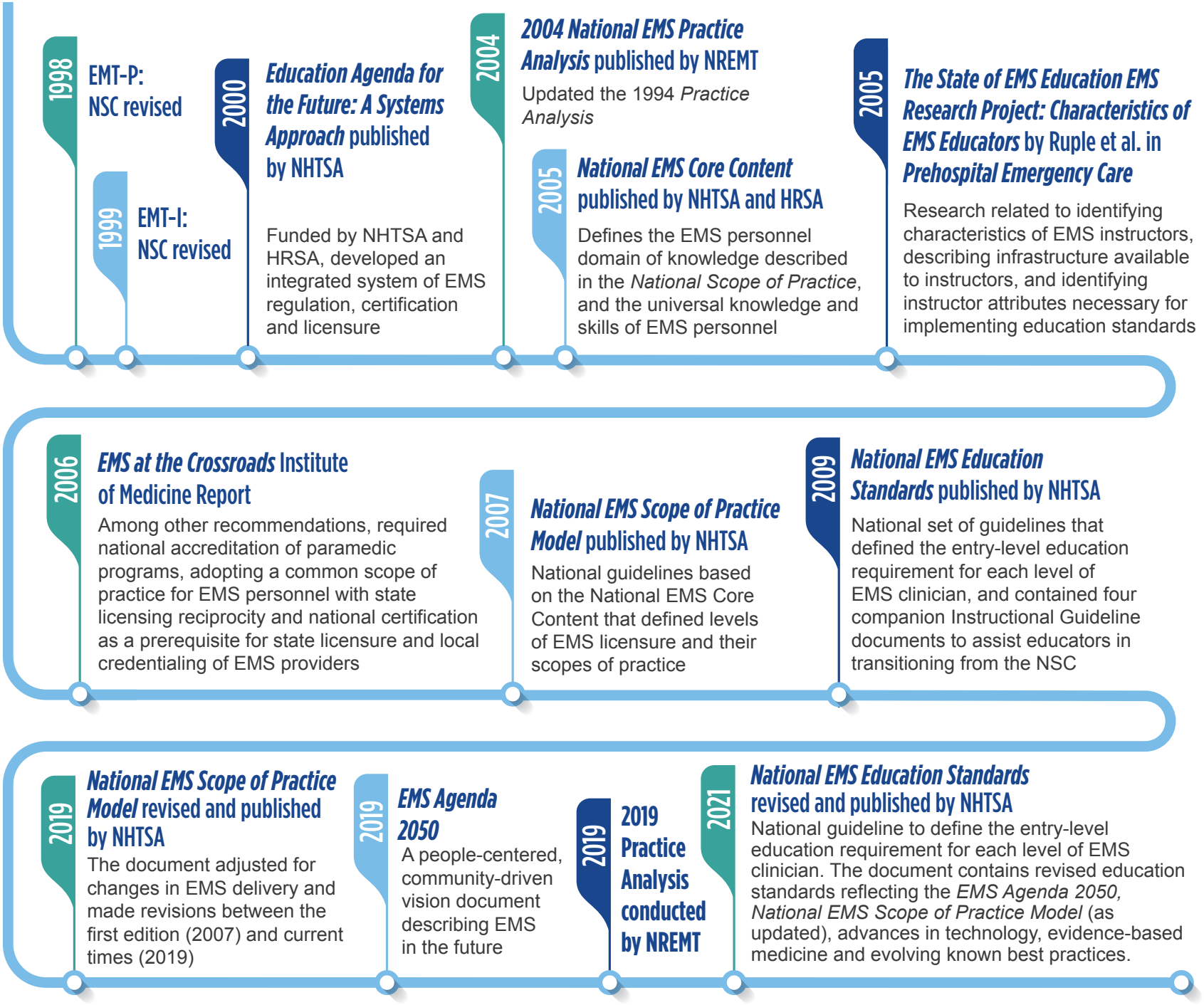
National EMS certification and national EMS education program accreditation are the "bookends" that support the other key elements of the system. The *Education Agenda* recommended an individual should graduate from a nationally accredited EMS education program to be eligible for National EMS Certification. Essential components of the *EMS Agenda* include a single National EMS Accreditation Agency and a single National EMS Certification Agency to ensure consistency and quality of EMS personnel.

A Brief History of EMS Education in the United States

This timeline outlines key events in the development of EMS education in the United States from the 1950s to the present.




1975
American Medical Association (AMA)
Recognized EMT-Paramedic as an allied health occupation
1977
National Standard Curriculum (NSC) for EMT-Paramedic published by NHTSA
The original NSC consisted of 15 instructional modules
1978
The Essentials for Paramedic Program Accreditation developed by AMA
Joint Review Committee on Education Programs for the EMT-Paramedic (JRCEMT-P) adopted The Essentials as the standard for accreditation
1985
First Responder, EMT-Ambulance (EMT-A), EMT-Intermediate (EMT-I), and EMT-Paramedic (EMT-P): NSC revised by NHTSA
EMT-Paramedic reformatted into six divisions
1990
NHTSA hosts EMS Training Workshop
Facilitated the development of the 1990s curricula and introduced the assessment-based education concept
1992
EMS Education and Practice Blueprint
Document served as a template for the revised format of the 1990s NSC revision projects
1994
NREMT Practice Analysis
Determined frequency and criticality of EMS interventions, and provided the foundation for NREMT test blueprint
1994
EMT-A revised and renamed EMT-Basic (EMT-B): NSC
1995
First Responder: NSC is revised
1996
EMS Agenda for the Future is created
Vision statement created by NAEMSP and NASEMSO for integration of EMS into the health care system; funded by NHTSA and HRSA
1998
PEW Health Professions Commission Taskforce on Health Care Workforce Regulation published Strengthening Consumer Protection: Priorities for Health Care Workforce Regulation
Recommended a National Policy Advisory Board to establish standards and model legislative language for uniform scope of practice authority for health professions


1998
EMT-P: NSC revised
1999
EMT-I: NSC revised
2000
Education Agenda for the Future: A Systems Approach published by NHTSA
Funded by NHTSA and HRSA, developed an integrated system of EMS regulation, certification and licensure
2004
2004 National EMS Practice Analysis published by NREMT
Updated the 1994 Practice Analysis
2005
National EMS Core Content published by NHTSA and HRSA
Defines the EMS personnel domain of knowledge described in the National Scope of Practice, and the universal knowledge and skills of EMS personnel
2005
The State of EMS Education EMS Research Project: Characteristics of EMS Educators by Ruple et al. in Prehospital Emergency Care
Research related to identifying characteristics of EMS instructors, describing infrastructure available to instructors, and identifying instructor attributes necessary for implementing education standards
2006
EMS at the Crossroads Institute of Medicine Report
Among other recommendations, required national accreditation of paramedic programs, adopting a common scope of practice for EMS personnel with state licensing reciprocity and national certification as a prerequisite for state licensure and local credentialing of EMS providers
2007
National EMS Scope of Practice Model published by NHTSA
National guidelines based on the National EMS Core Content that defined levels of EMS licensure and their scopes of practice
2009
National EMS Education Standards published by NHTSA
National set of guidelines that defined the entry-level education requirement for each level of EMS clinician, and contained four companion Instructional Guideline documents to assist educators in transitioning from the NSC
2019
National EMS Scope of Practice Model revised and published by NHTSA
The document adjusted for changes in EMS delivery and made revisions between the first edition (2007) and current times (2019)
2019
EMS Agenda 2050
A people-centered, community-driven vision document describing EMS in the future
2019
2019 Practice Analysis conducted by NREMT
2021
National EMS Education Standards revised and published by NHTSA
National guideline to define the entry-level education requirement for each level of EMS clinician. The document contains revised education standards reflecting the EMS Agenda 2050, National EMS Scope of Practice Model (as updated), advances in technology, evidence-based medicine and evolving known best practices.

The National EMS Education Standards

Each statement in the *Standards* presumes that the expected knowledge and behaviors are within the scope of practice for that EMS licensure level, as defined by the *National EMS Scope of Practice Model.* Each competency applies to patients of all ages.

The *Standards* also assume there is a progression in practice from the emergency medical responder level to the paramedic level. That is, licensed personnel at each level are responsible for all knowledge, judgments, and behaviors at their level and at all levels preceding their level. For example, a paramedic is responsible for the knowledge and tasks described for the paramedic as well as the other three levels of licensure.

The National EMS Education Standards is comprised of four components (Table 1):

1. **Competency** (yellow) – This statement represents the minimum competency required for entry-level clinicians at each licensure level.
2. **Knowledge** (blue) – This represents an elaboration of the knowledge within each competency (when appropriate) that entry-level clinicians would need to master to achieve competency.
3. **Clinical Behaviors/Judgments** (green) – This section describes the clinical behaviors and judgments essential for entry-level EMS clinicians at each licensure level.
4. **Educational Infrastructure** (gray) – This section describes the support standards necessary for conducting EMS training programs at each licensure level.

Table 1: Format of National EMS Education Standards

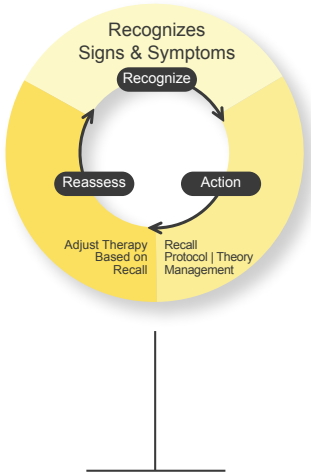
	EMR	EMT	AEMT	Paramedic
Content Area	Competency	Competency	Competency	Competency
Elaboration of Knowledge	Additional knowledge related to the competency	Additional knowledge related to the competency	Additional knowledge related to the competency	Additional knowledge related to the competency
	Clinical behaviors and judgments	Clinical behaviors and judgments	Clinical behaviors and judgments	Clinical behaviors and judgments
	Educational Infrastructure	Educational Infrastructure	Educational Infrastructure	Educational Infrastructure

The descriptors used to illustrate the increasing complexity of knowledge and behaviors through the progression of licensure levels originate, in part, from the *National EMS Scope of Practice Model*. These terms reflect the differences in the breadth, depth and actions required at each licensure level (Figures 2 and 2.1).

The *depth* of knowledge is the amount of detail a student needs to know about a particular topic. The *breadth* of knowledge refers to the number of topics or issues a student needs to learn in a particular competency. For example, EMS instructors need to ensure the emergency medical responder has a thorough understanding of how to use the bag valve mask (BVM) safely and effectively. The amount of detail the instructor provides about how to use that BVM represents the depth of knowledge. Some instructors might adjust their specific curriculum to provide slightly more information about the BVM compared to other instructors, but every graduating EMR will know how to use the device.

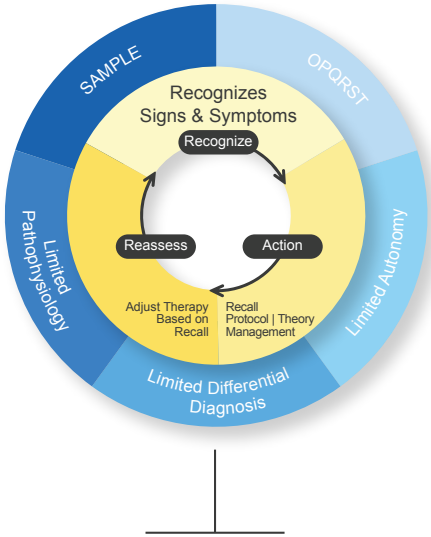
Figure 2: Depth/Breadth Terminology

Simple Breadth/ Simple Depth



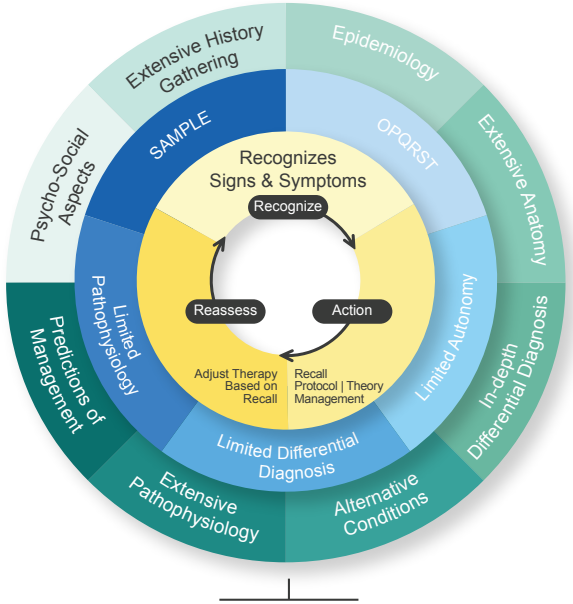
- Minimal Knowledge
- Minimal Range of Skills or Tasks

Foundational Breadth/ Fundamental Depth



- Elemental Knowledge
- Increased Range of Skills or Tasks

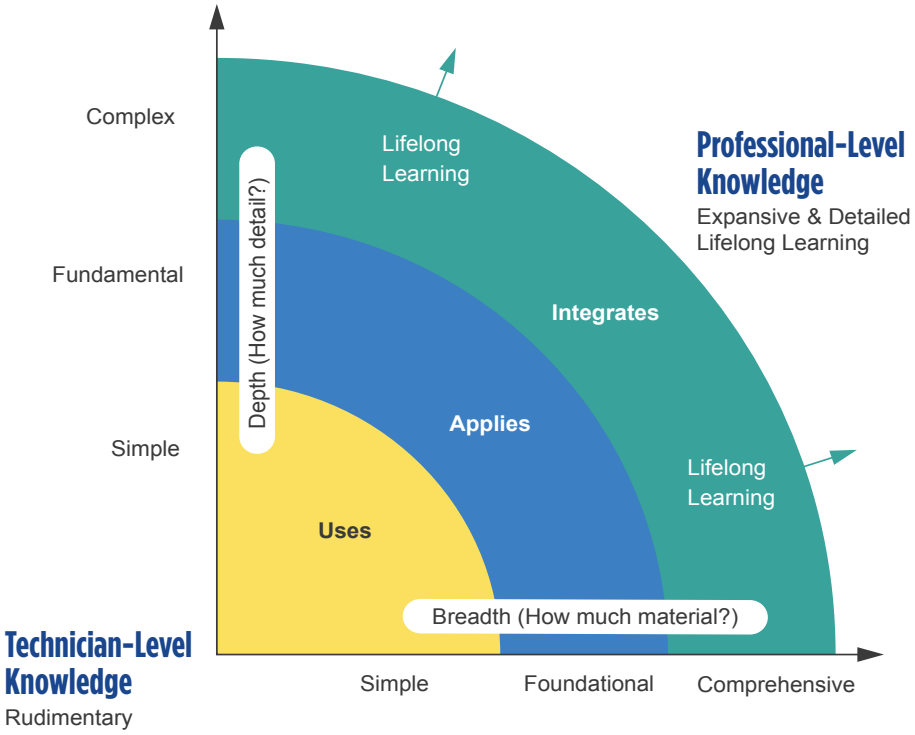
Comprehensive Breadth/ Complex Depth



- Deep Level of Knowledge
- Wide-Ranging, Broad and Extensive Skills or Tasks
- Lifelong Learning

Because of the limited scope of practice for the EMR (fewer tools in the airway box), the instructor may supplement BVM education with a few additional concepts (breadth) surrounding management of a patient's airway, such as airway anatomy and assessment. Supplementing the education with additional concepts adds to the breadth of the material, with each concept having its own level of detail (depth) limited only by the amount of the time the instructor has to teach the material. As more airway management tools are added to the toolbox for each licensure level (EMT, AEMT, paramedic), the level of detail will also change, and curriculum length will need to reflect this increased depth.

Figure 2.1: Depth/Breadth Terminology



To describe the intended depth of knowledge of a particular concept within a provider level, the revision team uses the terms *simple, fundamental* and *complex*. These terms can seem ambiguous and confusing when used in isolation (e.g., learning to correctly use a BVM is not a "simple" task). Instead, the meaning of each term is relative to the other terms. For example, knowledge that is categorized as "simple" is only simple relative to another curriculum that provides more detail, such as when comparing EMT to AEMT. EMT students may need a greater level of airway anatomy detail because the scope of practice is different. Scope of practice is even more different for the AEMT and paramedic student, who will need increasingly greater levels of airway anatomy detail (complex). Course directors, instructors, medical directors and local stakeholders can decide the precise level of detail based on community and student needs rather than establishing a single prescriptive curriculum for the entire nation.

Similarly, the intended breadth of knowledge surrounding a concept is reflected in the terms *simple, foundational* and *comprehensive*. As curricula include an increasing level of detail about the use of the BVM, airway assessment and airway anatomy, the increasing size of the toolbox reflected by the increased scope of practice necessitates a broader list of related subjects. For example, the addition of CPAP, nasopharyngeal airway and oxygen delivery devices at the EMT level broadens the curriculum for the EMT instructor. For instructors teaching paramedic students, the increased scope of practice broadens the knowledge base even more. Clearly, the use of CPAP requires the EMT to have an increased depth and more complex breadth of knowledge than the EMR, but not nearly as much as the paramedic.

EMS Personnel Licensure Levels

These licensure levels are from the *National EMS Scope of Practice Model.* Each educational level assumes mastery of previously stated competencies. Every clinician must demonstrate each competency within their scope of practice and for patients of all ages.

Emergency Medical Responder	Emergency Medical Technician	Advanced Emergency Medical Technician	Paramedic
The emergency medical responder (EMR) is an out-of-hospital practitioner whose primary focus is to initiate immediate lifesaving care to patients while ensuring patient access to the emergency medical services system. EMRs possess the basic knowledge and skills necessary to provide lifesaving interventions while awaiting additional EMS response and rely on an EMS or public safety agency or larger scene response that includes other higher-level medical personnel. When practicing in less populated areas, EMRs may have a low call volume coupled with being the only care personnel for prolonged periods awaiting arrival of higher levels of care. EMRs may assist, but should not be the highest-level person caring for a patient during ambulance transport. EMRs are often the first to arrive on scene. They must quickly assess patient needs, initiate treatment and request additional resources.	An emergency medical technician (EMT) is a health professional whose primary focus is to respond to, assess and triage emergent, urgent and non-urgent requests for medical care, and to apply basic knowledge and skills necessary to provide patient care and medical transportation to/from an emergency or health care facility. Depending on a patient's needs and/or system resources, EMTs are sometimes the highest level of care a patient will receive during an ambulance transport. EMTs often are paired with higher levels of personnel as part of an ambulance crew or other responding group. With proper supervision, EMTs may serve as a patient care team member in a hospital or health care setting to the full extent of their education, certification, licensure and credentialing. In a community setting, an EMT might visit patients at home and make observations that are reported to a higher-level authority to help manage a patient's care. When practicing in less populated areas, EMTs may have low call volume coupled with being the only care personnel during prolonged transports. EMTs may provide minimal supervision of lower-level personnel. EMTs can be the first to arrive on scene; they are expected to quickly assess patient conditions, provide stabilizing measures and request additional resources as needed.	The advanced emergency medical technician (AEMT) is a health professional whose primary focus is to respond to, assess and triage non-urgent, urgent and emergent requests for medical care; apply basic and focused advanced knowledge and skills necessary to provide patient care and/or medical transportation; and facilitate access to a higher level of care when the needs of the patient exceed the capability level of the AEMT. The additional preparation beyond EMT prepares an AEMT to improve patient care in common emergency conditions for which reasonably safe, targeted and evidence-based interventions exist. Interventions within the AEMT scope of practice may carry more risk if not performed properly than interventions authorized for the EMR/EMT levels. With proper supervision, AEMTs may serve as a patient care team member in a hospital or health care setting to the full extent of their education, certification, licensure and credentialing. In a community setting, an AEMT might visit patients at home and make observations that are reported to a higher-level authority to help manage a patient's care.	The paramedic is a health professional whose primary focus is to respond to, assess and triage emergent, urgent and non-urgent requests for medical care; apply basic and advanced knowledge and skills necessary to determine patient physiologic, psychological, and psychosocial needs; administer medications, interpret and use diagnostic findings to implement treatment; provide complex patient care; and facilitate referrals and/or access to a higher level of care when the needs of the patient exceed the capability level of the paramedic. Paramedics often serve as a patient care team member in a hospital or other health care setting to the full extent of their education, certification, licensure and credentialing. Paramedics may work in community settings where they take on additional responsibilities monitoring and evaluating the needs of at-risk patients, as well as intervening to mitigate conditions that could lead to poor outcomes. Paramedics help educate patients and the public in the prevention and/or management of medical, health, psychological and safety issues.

About the Revised EMS Education Standards

2019 National EMS Scope of Practice Model Relationship

The recently released 2019 *National EMS Scope of Practice Model,* funded by NHTSA and HRSA, assembled experts to evaluate the scope of EMS practice for each of the four national practitioner levels (EMR, EMT, AEMT and paramedic). The 2019 *Scope of Practice Model* is the launching pad and guide for this revision of the *National EMS Education Standards*. The *Education Standards* reflect the 2019 and 2021 updated *Scope of Practice Model* and ensure practitioners receive the education and training they need to perform within their scopes and best serve their patients and communities.

The revision of the *National EMS Scope of Practice Model* and *National EMS Education Standards* are naturally interrelated, as one informs the other. As such, the team brought together to lead the revision of the *National EMS Education Standards* was funded by NHTSA and HRSA, and included 10 proven and renowned EMS educators. The *National EMS Scope of Practice Model,* recommendations from *EMS Agenda 2050*, known best practices, emerging technology, evidence-based medicine, information from the National EMS Database and societal issues were all considered. EMS stakeholder input and public comment were solicited and received multiple times throughout the revision process. The National Registry of EMTs also provided its Practice Analysis findings.

NREMT Practice Analysis

Several members of the EMS Education Standards Revision Team were involved in the NREMT's practice analysis working group. This process has informed the team regarding the most encountered EMS emergencies, according to the National EMS Database, made possible by the National EMS Information System (NEMSIS). In addition, the project revision team has reached out to NREMT throughout the revision project to obtain input and feedback. NREMT's practice analysis has been one of many critical resources consulted by the revision team.

Domains of EMS: Learning, Competency, Authorization and Operational/Local Qualification

The 2019 *National EMS Scope of Practice Model* identifies four domains within the "Professional Scope of Practice" and provides a structure for the differences between education, certification, licensure and credentialing (see definitions below). The EMS Education Standards Revision Team focused on education, or the learning domain.

- **Education, the learning domain** – This domain includes all didactic, psychomotor, and affective learning that an EMS learner should be taught during an EMS course to become an entry-level apprentice.

- **Certification, the competency verification domain** – This domain includes all external evaluation and verification processes that are led by an outside entity to ensure that a learner has achieved competency to be safe and effective when conducting duties as an entry-level EMS clinician. In most states, National Registry certification is used to verify competency.

- **Licensure, the legal authorization domain** – Licensure refers to the legal authority, granted by a state, to an individual to perform certain defined and restricted duties. The clinical duties usually vary from one state to the next. The term is not to be confused or referred to as "certification." As defined in the 2019 *Scope of Practice*

Model, certification and licensure are independent yet related processes. When state requirements are met, a state license is issued along with the legal authority to perform a role at the appropriate level of licensure.

- **Credentialing, the operational/local qualification domain** – Credentialing is the responsibility of the individual EMS organization and, in most cases, the medical director. Being that a learner has been educated, certified and licensed, the duty falls to the organization and local community to ensure that the EMS clinician is able to operate safely by following appropriate clinical and operational guidelines and philosophies set forth by the physician EMS medical director. Typically, this involves orientation courses with an evaluation and structured operational and clinical training programs. Credentialed providers have been taught and assessed on skills and actions that are beyond the entry-level education and training of an EMS school. For instance, if allowed by the state, ultrasound may be a role performed after proper credentialing by the local EMS medical director and jurisdiction, even though ultrasound is not included in the *National EMS Scope of Practice Model* or the *National EMS Education Standards*.

Because most EMS education programs teach students who will not all practice in the same organization, communities or even states, a one-size-fits-all education is not possible. The writing of a detailed national curricula for each of the four levels would be problematic. No educational institution can teach a learner every possible clinical or operational guideline or associated philosophy, nor can an educational entity train an individual about every clinical device used by EMS services across the nation. As a result, the credentialing process is a critical piece of preparing EMS clinicians to practice in their respective organizations after the completion of initial education and certification.

When a learner successfully concludes coursework and has satisfied a program's identified terminal requirements (Education Domain), the apprentice can then sit for an evaluation that provides verification of competency (Certification Domain). After successfully navigating the Licensure Domain with a state, a learner is deemed "entry-level." Finally, the entry-level clinician is ready for the Credentialing Domain of an employer, after which the learner is "job-ready." The term "entry-level" indicates that a learner has completed the education, certification, and licensure domains. "Job-ready" indicates that a learner has been credentialed by an employer and the local medical director, and is competent in the system's operational and clinical guidelines, policies and philosophies.

Common comments and recommendations that were received by the revision team addressed content areas that clearly did not apply to the entry-level education of an apprentice EMS clinician. Many suggestions fit within the credentialing domain and are not appropriate for national adoption at this time. The team worked hard to stay within the education domain for entry-level EMS clinicians.

Education Standards vs. Instructional Guidelines vs. Curriculum

The *National EMS Education Standards* outline the minimal competencies for entry-level EMS clinicians to achieve within the parameters outlined in the 2019 and 2021 updated *Scope of Practice Model*. Education programs should contemplate the *Standards* when developing curricula for national consistency. The *Standards'* format will allow diverse implementation methods to meet local needs and evolving education practices. The less prescriptive format of the *Standards* will also allow for ongoing revision of content consistent with scientific evidence, advances in technology, known "best practices" and community standards of care.

In general, the content of education standards can range from largely non-prescriptive to detailed and very prescriptive.

Non-Prescriptive Education Standards:

- increase teacher autonomy
- increase instructional flexibility
- increase responsiveness to student learning needs
- increase responsiveness to local needs and situations
- increase responsiveness to national trends

Prescriptive Education Standards:

- improve education consistency
- protect from societal harm that may result from low education expectations and/or low-quality instruction
- have been labeled as “burdensome checklists” by some educators and are problematic in medicine due to rapid changes in technology, scientific evidence and best practices

The *National EMS Education Standards* are not meant to stand as a comprehensive document guiding all of the development of EMS clinicians, but rather one part of a comprehensive system (Figure 3). EMS education programs will incorporate each element of the education system proposed in the *Education Agenda*. These elements include:

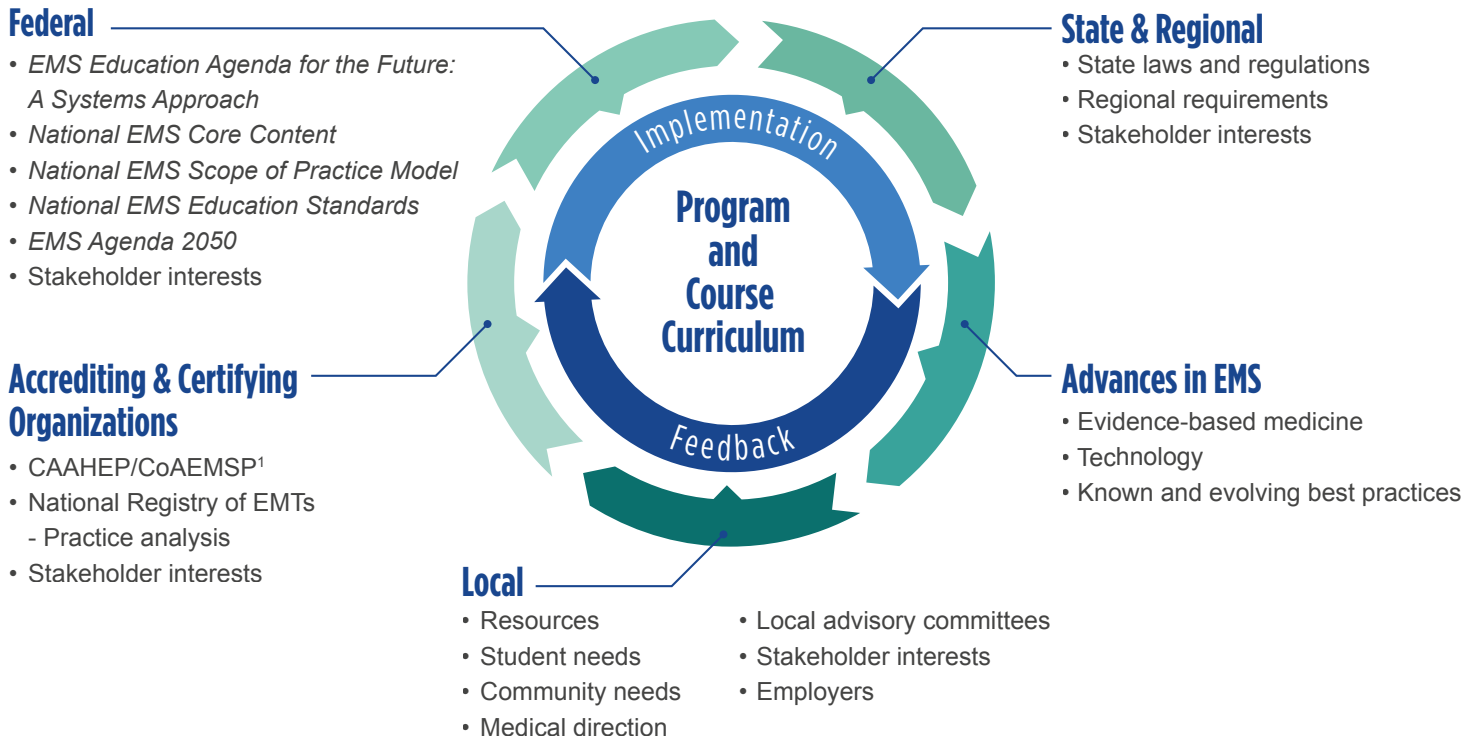
- National EMS Core Content
- National EMS Scope of Practice
- National EMS Education Standards
- National EMS Certification
- National EMS Program Accreditation

This integrated system is essential to achieving the goals of program efficiency, consistency of instructional quality and student competence as outlined in the *Education Agenda*.

While the *Education Standards* are developed at the national level, each state retains the right to wholly adopt the *Standards* or adopt and modify the *Education Standards* to fit a state’s unique needs. The *National EMS Education Standards* have been created to provide states with a vetted, consensus-driven foundation for EMS education. They also benefit clinicians by paving the way for national certification and easier transition from one locality or state to another.

Individual EMS educators and local communities select or create curricula based on a multitude of curriculum influencers. These influencers can also be strong mechanisms for education program accountability. Regional needs, accreditation standards and state and local policies and regulations are a few examples. Curricula design, implementation and adjustment are complex processes. Specific curricular content, instructional strategies and competency evaluation processes should be resolved at the education program level through implementation and feedback. Regulatory rules must be adhered to as well. Decisions on curriculum implementation are based on local situations, students’ needs and available resources. Figure 3 illustrates numerous inputs and points for accountability when curricula are designed, implemented and adjusted. Program directors, faculty and education institutions would be wise to consider each influence.

Figure 3: Influences on EMS Education Curriculum Development



1 CAAHEP: Commission on Accreditation of Allied Health Education Programs, CoAEMSP: Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions

Where are the Instructional Guidelines?

The 2009 instructional guidelines (IGs) were originally designed to help educators transition from the *National Standard Curricula* developed in the 1990s to the 2009 *Education Standards*.

When the revision team met, a discussion ensued regarding the ongoing usefulness of the IGs in their current form. It was agreed that the addition of the existing four IGs (EMR, EMT, AEMT and paramedic) to the *Education Standards* made the documents too cumbersome to be easily useful.

It was also evident that, while much of the IGs remained relevant, several sections had become outdated because of changes in evidence-based medicine, best practices or technology. Simultaneously, it was felt that it would be useful to have a level of specificity within the *Education Standards* rather than require educators to look in multiple places when seeking guidance to create curricula.

The resulting document combined elements of the IGs with the overarching principles of the *Education Standards*. A level of knowledge depth and breadth is provided for each section

of the *Standards*. At a glance, trained educators will be able to determine the extent of information to be provided to their students. The result is an enriched blueprint of the education and training of today's EMS clinicians.

Beyond the Scope of the Project

There are four areas that were frequently brought up by stakeholders but not part of the project. Specialty certification education (critical care paramedic, community paramedic, tactical medic); degree requirements at any clinician level; nomenclature of the EMS profession and clinicians; and continuing education requirements were beyond the scope of this effort. Instead, the focus was to align the *Education Standards* with the newly released 2019 *Scope of Practice Model*.

Degree Requirements

The revision team heard numerous comments regarding degree requirements. Clearly, some parties strongly desire degree requirements for paramedics. Others strongly oppose them. Currently, there is not an industry consensus for degree requirements for EMS personnel. In many cases, several significant EMS stakeholders and the "larger" EMS community take a more neutral position. Time will allow for further discussion and debate on the topic. Early in the process, the team was advised that the debate for or against degrees was beyond the scope of the project as the 2021 *National EMS Education Standards* do not address degree requirements.

The team also received recommendations for education related to deeper clinical subject matter, leadership and management, public health, education, social work, research, and other areas related to EMS systems. One national stakeholder called for courses in health systems science and value-based care. Suggested courses included:

- Health care system structure and processes
- Health care policy, economics, and management
- Clinical informatics and health information technology
- Public/population health
- Health system improvement and person-centered care
- Structure and processes beyond EMS
- Health care reimbursement and finance
- Health care quality and safety

AEMT Accreditation

The 2019 *National EMS Scope of Practice Model* subject matter expert panel recommended requiring AEMT program accreditation by January 1, 2025. The panel deliberated and came to a consensus on the matter with the involvement of 13 stakeholders and various independent contributors. Despite this understanding in 2019, the topic continues to be passionately debated. The *Education Standards* revision team supports this recommendation. The revision team deliberated the topic and concluded that accreditation is an original and identified goal of the *2000 EMS Education Agenda*. Through the use of collegial evaluation practices and the identification of recognized routines for establishing sound EMS education programs, program accreditation is expected to promote clinical and educational excellence by ensuring the availability of adequate resources and services for educators and their students.

Portable Technologies

During the public comment periods, many participants identified the need for education standards that covered new and

emerging technologies. There were specific and repeated recommendations for Point-of-Care Ultrasound (POCUS); the 2019 *Scope of Practice Model* subject matter experts directly addressed this skill and have determined that "portable technology" (which includes POCUS) has been left to the "credentialing" process of the EMS organization and medical director. The *Standards* revision team believes that the ideal time for use of these technologies is when a person has been educated, deemed competent, licensed and credentialed with knowledge and skill. The local EMS medical director should be involved in the selection of technologies. Widespread education based on specific technologies should be decided at the local or state level. Only after national adoption and inclusion in a practice analysis should technologies be included in the *National EMS Education Standards* and *National EMS Scope of Practice Model.*

Instructional Practices: Simulation, Shadowing & Interprofessional Education

Because education standards are not intended to be a curriculum, the instructional strategies of simulation, shadowing and interprofessional education are addressed here but not in the *Standards* themselves. The team does believe that an education program should implement numerous instructional techniques to accommodate the diversity of student learning needs inside and outside the EMS classroom. Using numerous instructional strategies will help reach every learner. A heavy reliance on the traditional lecture is not ideal and is not equitable, as some students learn better in different settings and every student benefits from experiencing other methods of instruction. Three types of instructional practices were identified by the public and various stakeholders: simulation, shadowing and interprofessional education. The team believes that each practice has merit and should be considered as an additional instructional strategy.

Simulation

EMS simulation begins in the classroom with educators creating realistic scenarios to train all levels of EMS personnel. The practice of allowing students to memorize and verbalize a check sheet is no longer acceptable and should be changed. Simulation has proven to increase critical thinking skills and reduce medical errors in our health care system. Simple to complex simulation comes in many forms, from table-top exercises and practicing intramuscular injections on an orange to standardized live patients and high-fidelity manikins. Cost will vary, but simulation does not have to be expensive to be successful. Simulation in EMS can achieve:

- The creation of a "safe-to-fail" environment in which students can make mistakes without dire consequences and learn from those mistakes
- Higher success rates on the NREMT psychomotor exams
- Enhanced understanding and more robust therapeutic communication
- Increased understanding and demonstration of affective domain competencies
- Improvement in critical thinking skills of entry-level personnel
- Improved safety, effectiveness and efficiency of services
- Substitution for infrequent or unattainable clinical scenarios

Shadowing

Shadowing a practicing clinician offers students experiential, hands-on learning opportunities, and many learners have a special affinity for it. Shadowing affords a prospective EMS

professional the chance to be immersed in the actual job environment, making it possible to see an experienced worker apply the skills and traits needed to accomplish the work.

Interprofessional Education

Health care is best when delivered in a cooperative team environment; collaboration can result in improved communications, thus reducing medical errors, reducing costs for patients and improving patient outcomes. Interprofessional Education is a proven instructional method that results in positive outcomes in clinical preparation, health care profession education and public safety. Interprofessional Education helps a learner realize how EMS fits into the larger "continuum of care" and plays a role in critical "systems of care." Learning how patients move through the health care system, from dispatch to discharge to follow-up care, plays a critical role in patient safety. Interaction with other health care providers and first responders during initial education will mutually enhance an understanding of everyone's roles in the system.

Out-of-hospital care is becoming more diverse and complex. As a result, individual EMS instructors may not possess the expertise or knowledge to teach all subjects within the revised *Standards*. When this occurs, a subject matter expert should be enlisted for the given topic. For instance, the public health section has been expanded and it would be a "best practice" to bring in a qualified content expert to cover the topic. Many areas related to EMS operations would also require a qualified content expert. Rescue operations have become extremely broad and specialized. Bodies of knowledge such as incident command, hazardous materials and other unique topics require experience and specialized knowledge for quality instruction. The instructor should have a proper background, relevant knowledge and a degree or a recognized and credible credential in the topic. It is recommended that the EMS educator work with the subject matter experts to ensure relevance of the content to the practice of prehospital medicine.

Eminence of the Affective Domain

Competence in the affective domain of learning is critical to the success of EMRs, EMTs, AEMTs and Paramedics. The *National EMS Education Standards* focus on the knowledge and skills that an entry-level practitioner needs to treat sick or injured patients. The third dimension needed for any skilled EMS clinician is related to values, attitude, professional behavior, compassion and a willingness to serve. Values provide the foundation for decisions, and attitudes reflect values and influence interpersonal dynamics. Professional behavior is a key component of medical practice, and compassion is a required characteristic of medical professionals supporting clinical knowledge and skill. A willingness to serve underlies all that a health care provider does.

The importance of affective domain competence cannot be overstated. Every EMS education program director and faculty member should consider this aspect of medical practice. Modeling and setting professional-level expectations for affective domains are part of the educational duty of an educator within career and technical school. From the very first day of class until course conclusion, the importance of teaching and evaluating affective domain competency to ensure graduates are fully prepared for professional practice should be identified as a high priority and a universal goal.

Sequence of Instruction

The order of the *National EMS Education Standards* does not imply any particular sequence of instruction. For example, some topics, such as public health, could be taught early on or later in a course, despite appearing early in these *Standards*. Other topics, such as basic assessment skills, would likely

come early in the clinician's education and precede concepts that build upon them. Curricular flow should be determined by the education program director, with input from faculty, medical direction and advisory committees.

Locally Identified Topics

The revision team recognized and heard numerous comments regarding clinical content that is of great local need and yet may not be essential as an item for the entire nation. As a result, the team believed it would be best to include a statement that some content should be locally determined and developed at the simple depth, simple breadth level (or higher when desired). This content should be identified, developed and implemented using a program medical director, advisory boards, the larger medical community or faculty judgement.

Implicit Expectations

For a given illness, condition, or traumatic injury, the implicit expectation is that an educational program will include instruction of the relevant anatomy, physiology, pathophysiology, assessments and accepted treatments. The team determined that this expectation is known by educators and repeating the statement in each section of the document is not required or desired.

Additional Resources

It is impossible for EMS instructors to know everything about the profession, and trying to stay up to date on the latest evidence-based guidelines, best practices, industry standards and research is a very difficult task. The resources found in Appendix A are intended as tools for educators to use as needed to remain current on changes in the field.

Two critical sources that educators should consider referencing as they create learning content are the National Model EMS Clinical Guidelines, maintained by the National Association of State EMS Officials (NASEMSO), and pre-hospital evidence-based guidelines, many of which are produced through the efforts of The Prehospital Guidelines Consortium, maintained by the National Association of EMS Physicians (NAEMSP). The guidance provided by these sources is a result of collaboration among many national EMS stakeholders intent on promoting consensus and evidence to inform a general standard of prehospital care.

Summary of Significant Changes to the EMS Education Standards

Behavioral/Psychiatric

Many, if not most EMS systems have seen a steady rise in behavioral emergencies and patients experiencing acute and chronic manifestations of psychiatric illnesses. Moreover, a lack of available in-patient beds at mental health facilities has resulted in EMS clinicians needing to manage these patients for longer periods of time and over longer distances.

As a result, the behavioral/psychiatric section of the *Education Standards* was revised to include more information regarding acute behavioral crisis and mental health disorders. Greater depth and breadth of knowledge were recommended for areas involving potential safety hazards to patients and EMS clinicians. Conversely, certain psychiatric disease and syndrome areas were revised and simplified.

Cultural Humility

Throughout health care and related fields, there has been a recognition of the importance of maintaining an awareness of the assumptions and biases related to cultural issues and how they may affect our patients, co-workers and students. Cultural humility is a lifelong, ongoing process of self-reflection and self-critique in which one learns about others' cultural identities and looks at how one's own background and social environment have shaped the individual. Cultural humility in EMS should address:

- **Education:** Are our EMS educators diverse? Does our student population reflect the community? Are our classrooms free of stereotypes? Do we understand our own biases and the differences between all of our students?
- **EMS workforce:** Are we creating a diversified and equitable workforce reflective of our population? Promoting cultural humility can help strengthen relationships among staff, leadership, patients and families and other health care personnel we interact with on a daily basis.
- **Patient care:** Are we teaching cultural competency and humility to our EMS students? After graduation, can our students provide culturally competent, equitable and medically appropriate prehospital care to each and every patient no matter their background? Cultural humility leads to higher-quality care and better communication and trust between patients and clinicians.

EMS Operations

EMS operations, while extremely important, are determined by a variety of factors, including the setting, the clinician's role and the EMS system design. Therefore, it is not possible to provide strict and straightforward training requirements that would be appropriate across these diverse settings. Next is a summary of the intent of each section of the EMS operations education standards. EMS educators and EMS institutions need to be able to work with local and state agencies to determine the appropriate level of knowledge that providers need to perform their duties safely and efficiently.

- **Principles of Safely Operating EMS Emergency Response Vehicles**

  The intent of this section is to give an overview of emergency response to ensure the safety of EMS personnel, patients and others during EMS response vehicle operations. This does not prepare the entry-level student to be an experienced and competent driver. Appropriate driver training designed for the entry-level provider must be completed as required by state and local regulations and is not intended to be part of a requirement to achieve national certification as an emergency medical responder. Information related to the clinical management of the patient during emergency response is found in the clinical sections of the *National EMS Education Standards* for each personnel level.

- **Incident Management**

  Information related to the clinical management of the patient within components of the Incident Management System is found in the clinical sections of the *National EMS Education Standards* for each licensure level. The material presented in this section should be delivered by an individual who has been trained and has the proper credentials to educate students in these areas. The material may be obtained in-person or through distance learning as determined by state and local requirements.

- **Mass Casualty Incidents**

  The intent of this section is to give an overview of operating during a mass casualty incident when a multiple casualty incident plan is activated. Information related to the clinical management of the patients during a multiple casualty incident is found in the clinical sections of the *National EMS Education Standards* for each licensure level. The depth and breadth of training that must be achieved by clinicians at each level should be determined by state and local requirements.

- **Landing Zone Operations**

  The intent of this section is to give an overview of operating safely in and around a landing zone during air medical operations and transport. The safety considerations of setting up and operating in a landing zone should be taught by properly trained experts who have the proper knowledge and experience in the area of air medical transportation. The depth and breadth of information that is needed by each level of clinician should be determined by state and local regulations. Information related to the clinical management of the patient being cared for during air medical operations is found in the clinical sections of the *National EMS Education Standards* for each licensure level.

- **Rescue Operations**

  The intent of this section is to provide an overview of rescue operations including, but not limited to, vehicle extrication, low/high angle, water, trench and confined space to ensure the safety of EMS personnel and patients during these events. This does not prepare the entry-level student to become competent or qualified to work in these rescue environments. Information related to the clinical management of the patient being cared for during rescue incidents is found in the clinical sections of the *National EMS Education Standards* for each personnel level.

- **Hazardous Materials**

  Information related to the clinical management of the patient exposed to hazardous materials is found in the clinical sections of the *National EMS Education Standards* for each personnel level. This information may be done as a corequisite or prerequisite, or as part of the entry-level course as determined by state and local requirements.

Training in this area should only be done by those properly trained and credentialed to provide the required training. Federal regulations require that, at a minimum, EMS personnel must be trained at the Hazardous Materials Awareness level. State and local regulations may have additional requirements that are above and beyond federal regulations. EMS educators should work in collaboration with local fire or emergency management authorities to determine the proper training level required and assuring that properly credentialed instructors are providing the training. The information contained in the hazardous materials awareness programs are above and beyond the scope of national EMS programs for the entry-level provider.

- **Mass Casualty Incidents Due to Active Threats and Disaster**

  The intent of this section is to give an overview of operating during a terrorist event or during a natural or man-made disaster. Instruction in this area should be done by properly trained and knowledgeable individuals in this area. State and local regulations may have additional requirements that are above and beyond federal regulations. Information related to the clinical management of patients exposed to a terrorist event or involved in a disaster is found in the clinical sections of the *National EMS Education Standards* for each personnel level.

Public Health

Since the release of the original *National EMS Education Standards* in 2009, EMS has made substantial progress from being viewed as simply a provider of medical transport to a true out-of-hospital health care resource. The changes to the public health section of the *Standards* reflect this evolution in EMS. Public health prevention and pandemic preparedness efforts are essential functions in the future as EMS continues to be at the crossroads between health care, public health and public safety. The EMS clinician of the future will be expected to integrate into pandemic plans, assist in vaccinations and act as the initial point of entry into robust community health programs.

The new standards are intended to prepare the entry-level provider to work alongside and collaboratively with specially trained community paramedics, social workers, public health organizations, health care entities, emergency management agencies and non-governmental organizations in their day-to-day duties, and lay the foundation for advancement into specialized roles.

Pharmacology

An EMS culture of safety is a universal goal within the industry. A key area for safety is the administration of medications in the prehospital setting. The lack of desired pharmacology competency among EMS program graduates was identified by the *EMS Scope of Practice* subject matter experts, in EMS evidenced-based literature and numerous other sources. When it comes to pediatric populations, EMS for Children identified a significant need for additional training in this area and called for specific teaching for pediatric dosing and troubleshooting abnormal situations. As a result, the pharmacology section has been expanded for EMR, EMT, AEMT and paramedics. It is not enough to solely teach pharmacology in a traditional didactic manner. This skill should include didactic, psychomotor and affective instruction. There should be significant opportunities to practice the skill before leaving the education program. Simulation and, ideally, actual patient encounters should be offered to students. Emphasis and specific focus should be given to psychomotor practice of adult, pediatric and geriatric medication administration due to the complexity of drug dosing and the chance of error.

EMS Safety, Wellness and Resilience

Workforce safety and wellness has been expanded to reflect principles of stress management, responder mental health, resilience and suicide prevention across all levels. With greater number of responders reporting thoughts of suicide, and suicide rates among first responders significantly exceeding those of the general population, a foundational level of knowledge is crucial to addressing this professional and occupational crisis. An overall greater emphasis on mental health resources is also recommended.

Standard safety precautions, use of personal protective equipment, illness and injury prevention, and lifting and moving patients continue to be emphasized at all levels of emergency responders. Other areas that have been added include crew resource management across all levels and disease transmission in the EMT, AEMT and paramedic curricula.

Pediatric and Geriatric Content Competencies

Individual sections for pediatrics and geriatrics have been removed, with education content addressing these special populations now incorporated throughout the education standards. This change is based on recommendations from pediatric-focused stakeholders, scientific evidence and consensus among clinical partners.

Concepts related to geriatric and pediatric patients deserve equitable attention and should be taught repeatedly throughout every section of a course resulting in an earlier assimilation of the content. Pediatric stakeholders reported that anxiety, unfamiliarity with pediatric patients and equipment, and discomfort on the part of rescuers calls for aggressive remedies. These findings may be associated with the low frequency and high acuity of pediatric encounters.

The need for better EMS assessment, diagnosis, treatment, safe medication administration, airway management and appropriate pain management has been identified. In every aspect of education, troubleshooting and critical thinking are required when clinical situations are confusing or problematic. As students acquire knowledge, skills and abilities, opportunities to compare and contrast pediatric, adult and geriatric populations will enhance and deepen learning.

During each section of the *Standards*, relevant pediatric and geriatric content should be discussed in detail as they aren't covered in a separate section. Incorporation of this special population information into the general content should improve the comfort level of students by making the care of these patients part of everyday operations.

EMS education should include knowledge from the cradle to the grave. Pediatric and geriatric topics should no longer be minimized, in comparison to "adult" topics, or relegated to an isolated component of an EMS course, which can create a perception that the content is somehow less important.

EMS education and care should be family-centered. Family-centered care is a clinical methodology for the planning, delivery and evaluation of health care which is established in an affirming partnership that collaboratively involves patients, families and the health care providers. Family-centered care represents a significant transition away from paternalistic medicine to that which is founded on pillars of respect, collaboration, information sharing and shared decision-making.

While family-centered care is often taught as an area of focus for children with special needs, it should be integrated into the care of all patients. In the case of children with special health care needs, the family's knowledge of a child's condition can be immensely valuable. Yet, even among children with

simple, acute medical emergencies, families and children often experience high levels of stress. Family-centered care seeks to help patients and families retain a sense of control. This includes providing opportunities for family members to be present during medical transport and invasive procedures. The approach recognizes that each family is unique, integral and essential for health care safety and quality. The values of collaboration, responsiveness and united decision-making are at the forefront of treatment. The beliefs, desires, and values from cultural backgrounds of the family and patient are considered and respected. Health care workers communicate with complete information and in an unbiased and respectful manner. When choices are made, decision-making involves all parties as coequal parts and decision-makers are known and informed, and health care clinicians listen to and honor patient and family choices. When family-centered care is optimal, there is high-quality care with safety, and family and patient satisfaction are achieved.

The reader will find phrases such as “include age-related variations in pediatric and geriatric patients” and “include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients.” These phrases are intended to remind and direct EMS educators to elevate the importance of geriatric and pediatric education within each section.

National EMS Education Standards

LEGEND

The first letter refers to **Breadth**, which can be:
- Simple (S)
- Foundational (F)
- Comprehensive (C)

The second letter refers to **Depth**, which can be:
- Simple (S)
- Fundamental (F)
- Complex (C)

For more information refer to Fig. 2 and Fig. 2.1 (Depth/Breadth Terminology) on p.11-12.

		EMR	EMT	AEMT	Paramedic
Preparatory	**Preparatory**	**Uses knowledge of the EMS system, safety/well-being of the EMR, medical/legal issues and ethical issues at the scene of an emergency while awaiting a higher level of care.**	**Applies knowledge of the EMS system, safety/well-being of the EMT, medical/legal and ethical issues to the provision of emergency care.**	**Applies knowledge of the EMS system, safety/well-being of the AEMT, medical/legal and ethical issues to the provision of emergency care.**	**Integrates knowledge of EMS systems, the safety/well-being of the paramedic, and medical/legal and ethical issues intended to improve the health of EMS personnel, patients and the community.**
	EMS Systems	• EMS systems (S,S) • Roles, responsibilities and professionalism of EMS personnel (S,S) • Quality improvement vs. quality assurance (S,S) • Role of medical oversight (S,S) • Culture of safety / patient safety (S,S) • Continuum of care (S,S)	• EMS systems (S,F) • Roles, responsibilities and professionalism of EMS personnel (F,F) • Quality improvement vs. quality assurance (S,F) • Role of medical oversight (S,S) • Culture of safety / patient safety (S,F) • Continuum of care (S,F) • History of EMS (S,F) • Systems of care, e.g., Stroke, STEMI, Trauma, Pediatrics (S,F) • MIH/CP and other EMS-related specialty roles (S,S)	• EMS systems (S,F) • Roles, responsibilities and professionalism of EMS personnel (F,F) • Quality improvement vs. quality assurance (F,F) • Role of medical oversight (F,F) • Culture of safety / patient safety (F,F) • Continuum of care (F,F) • History of EMS (S,F) • Systems of care, e.g., Stroke, STEMI, Trauma, Pediatrics (F,F) • MIH/CP and other EMS-related specialty roles (F,F)	• EMS systems (C,C) • Roles, responsibilities, and professionalism of EMS personnel (C,C) • Quality improvement vs. quality assurance (C,C) • Role of medical oversight (C,C) • Culture or safety / patient safety (C,C) • Continuum of care (F,F) • History of EMS (F,F) • Systems of care, e.g., Stroke, STEMI, Trauma, Pediatrics (C,C) • MIH/CP and other EMS-related specialty roles (F,F)

		EMR	EMT	AEMT	Paramedic
Preparatory	Workforce Safety and Wellness	• Standard safety precautions (S,S) • Personal protective equipment (S,S) • Lifting and moving patients (S,S) • Crew resource management (S,S) • Stress management (F,F) • Prevention of work-related injuries and illnesses (F,F) • Responder mental health, resilience and suicide prevention (F,F) • Wellness principles (F,F) • Disease transmission (S,S)	• Standard safety precautions (F,F) • Personal protective equipment (F,F) • Lifting and moving patients (F,F) • Crew resource management (F,F) • Stress management (F,F) • Prevention of work-related injuries and illnesses (F,F) • Responder mental health, resilience and suicide prevention (F,F) • Wellness principles (F,F) • Disease transmission (F,F)	• Standard safety precautions (F,F) • Personal protective equipment (F,F) • Lifting and moving patients (F,F) • Crew resource management (F,F) • Stress management (F,F) • Prevention of work-related injuries and illnesses (F,F) • Responder mental health, resilience and suicide prevention (F,F) • Wellness principles (F,F) • Disease transmission (F,F)	• Standard safety precautions (C,C) • Personal protective equipment (C,C) • Lifting and moving patients (C,C) • Crew resource management (F,F) • Stress management (C,C) • Prevention of work-related injuries and illnesses (C,C) • Responder mental health, resilience and suicide prevention (C,C) • Wellness principles (C,C) • Disease transmission (C,C)
	Research	• Impact of research on EMR care (S,S) • Data collection (S,S)	• Impact of research on EMT care (S,S) • Data collection (S,S) • Evidence-based decision making (S,S)	• Impact of research on AEMT care (S,S) • Data collection (S,S) • Evidence-based decision making (S,S)	• Impact of research on Paramedic care (S,S) • Data collection (S,S) • Evidence-based decision making (S,S) • Research principles to interpret literature and advocate evidence-based practice (F,F)
	Documentation	• Recording patient findings (S,S)	• Recording patient findings (S,S) • Principles of medical documentation and report writing (F,F) • Supporting medical necessity (S,S)	• Recording patient findings (S,S) • Principles of medical documentation and report writing (C,F) • Supporting medical necessity (S,S)	• Recording patient findings (S,S) • Principles of medical documentation and report writing (C,C) • Supporting medical necessity (S,S)
	EMS System Communication	• Call for resources (S,S) • Transfer care of the patient (S,S) • Interact within the team structure (S,S)	• EMS communication system (S,S) • Communication with other health care professionals to include cohesive and organized patient handoff (S,S) • Team communication and dynamics (S,S) • Telemetric monitoring devices and transmission of clinical data, including video data (S,S)	• EMS communication system (F,F) • Communication with other health care professionals to include cohesive and organized patient handoff (F,F) • Team communication and dynamics (F,F) • Telemetric monitoring devices and transmission of clinical data, including video data (S,S)	• EMS communication system (C,C) • Communication with other health care professionals to include cohesive and organized patient handoff (C,C) • Team communication and dynamics (C,C) • Telemetric monitoring devices and transmission of clinical data, including video data (S,S)

		EMR	EMT	AEMT	Paramedic
Preparatory	Therapeutic Communication	• Health care literacy (S,S) • Interviewing techniques (S,S) • Verbal defusing strategies (S,S) • Managing communication challenges (S,S) • Family centered care (S,S)	• Health care literacy (S,S) • Interviewing techniques (F,F) • Verbal defusing strategies (F,F) • Managing communication challenges (F,F) • Family centered care (F,F) • Adjusting communication strategies for age, stage of development, patients with special needs (S,S) • Non-discriminatory communication that addresses inherent or unconscious bias, is culturally aware and sensitive, and intended to improve patient outcome (S,S)	• Health care literacy (F,F) • Interviewing techniques (F,F) • Verbal defusing strategies (F,F) • Managing communication challenges (F,F) • Family centered care (F,F) • Adjusting communication strategies for age, stage of development, patients with special needs (S,S) • Non-discriminatory communication that addresses inherent or unconscious bias, is culturally aware and sensitive, and intended to improve patient outcome (S,S)	• Health care literacy (C,C) • Interviewing techniques (C,C) • Verbal defusing strategies (F,F) • Managing communication challenges (C,C) • Family centered care (F,F) • Adjusting communication strategies for age, stage of development, patients with special needs (C,C) • Non-discriminatory communication that addresses inherent or unconscious bias, is culturally aware and sensitive, and intended to improve patient outcome (C,C)
	Medical/Legal and Ethics	• Consent/refusal of care (S,S) • Confidentiality (S,S) • Advanced directives (S,S) • Tort and criminal actions (S,S) • Evidence preservation (S,S) • Statutory responsibilities (S,S) • Mandatory reporting (S,S) • Ethical principles/moral obligations (S,S) • End-of-life issues (S,S)	• Consent/involuntary consent/ refusal of care (F,F) • Confidentiality (F,F) • Advanced directives (F,F) • Tort and criminal actions (F,F) • Evidence preservation (F,F) • Statutory responsibilities (F,F) • Mandatory reporting (F,F) • Ethical principles/moral obligations (F,F) • End-of-life issues (S,S) • Patient rights/advocacy (S,S)	• Consent/involuntary consent/ refusal of care (F,F) • Confidentiality (F,F) • Advanced directives (F,F) • Tort and criminal actions (F,F) • Evidence preservation (F,F) • Statutory responsibilities (F,F) • Mandatory reporting (F,F) • Ethical principles/moral obligations (F,F) • End-of-life issues (S,S) • Patient rights/advocacy (S,S)	• Consent/involuntary consent/ refusal of care (C,C) • Confidentiality (C,C) • Advanced directives (C,C) • Tort and criminal actions (C,C) • Evidence preservation (F,F) • Statutory responsibilities (C,C) • Mandatory reporting (C,C) • Ethical principles/moral obligations (C,C) • End-of-life issues (C,C) • Health care regulation (C,C) • Patient rights/advocacy (C,C) • Ethical tests and decision making (C,C)

	EMR	EMT	AEMT	Paramedic
Anatomy and Physiology	Uses knowledge of the anatomy and function of the upper airway, heart, vessels, blood, lungs, skin, muscles and bones as the foundation of emergency care.	Applies knowledge of the anatomy and function of all human systems to the practice of EMS.	Integrates knowledge of the anatomy and physiology of the airway, respiratory and circulatory systems to the practice of EMS.	Integrates knowledge of the anatomy and physiology of all human systems

	EMR	EMT	AEMT	Paramedic
Medical Terminology	Uses medical and anatomical terms.	Uses anatomical and medical terms and abbreviations in written and oral communication with colleagues and other health care professionals.	Same as EMT Level	Integrates anatomical and medical terminology and abbreviations into written and oral communication with colleagues and other health care professionals.

	EMR	EMT	AEMT	Paramedic
Pathophysiology	Uses knowledge of shock and respiratory compromise to respond to life threats.	Applies knowledge of the pathophysiology of respiration and perfusion to patient assessment and management.	Applies knowledge of the pathophysiology of respiration and perfusion to patient assessment and management.	Integrates knowledge of pathophysiology of major human systems.

	EMR	EMT	AEMT	Paramedic
Life Span Development	Uses knowledge of age-related differences to assess and care for patients.	Applies knowledge of life span development to patient assessment and management.	Same as EMT Level	Integrates knowledge of life span development.

		EMR	EMT	AEMT	Paramedic
Public Health	**Public Health**	**Has an awareness of local public health resources and their role in public health.**	**Applies knowledge of the principles of public health epidemiology including public health emergencies, public health monitoring, health promotion and illness and injury prevention.**	**Same as EMT level**	**Applies knowledge of principles of public health and epidemiology including public health emergencies, health promotion and illness and injury prevention.**
	Public Health Overview	• EMS roles in public health (S,S) • Infection prevention and control (S,S) • Human trafficking (S,S)	• EMS roles in public health (S,S) • Infection prevention and control (S,S) • Human trafficking (S,S) • EMS EHR reporting and data collection (S,S) • Governmental/ nongovernmental roles & resources (S,S) • Public health mission and goals (S,S) • Social, geographic, economic, demographic determinants of health (S,S) • Patient and community education (S,S) • Injury prevention and wellness (S,S) • Unique pediatric, geriatric and special populations public health concerns (S,S) • Screenings and vaccinations/ immunizations (S,S)	• EMS roles in public health (S,S) • Infection prevention and control (S,S) • Human trafficking (S,S) • EMS EHR reporting and data collection (S,S) • Governmental/ nongovernmental roles & resources (S,S) • Public health mission and goals (S,S) • Social, geographic, economic, demographic determinants of health (S,S) • Patient and community education (S,S) • Injury prevention and wellness (S,S) • Unique pediatric, geriatric and special populations public health concerns (S,S) • Screenings and vaccinations/ immunizations (F,F) • Impacts of political, social and economic issues (F,F) • Infectious disease (F,F)	• EMS roles in public health (C,F) • Infection prevention and control (F,F) • Human trafficking (S,S) • EMS EHR reporting and data collection (S,S) • Governmental/ nongovernmental roles & resources (S,S) • Public health mission and goals (S,S) • Social, geographic, economic, demographic determinants of health (S,S) • Patient and community education (S,S) • Injury prevention and wellness (S,S) • Unique pediatric, geriatric and special populations public health concerns (S,S) • Screenings and vaccinations/ immunizations (C,F) • Impacts of political, social and economic issues (F,F) • Infectious disease (C,F) • Patient disposition, selecting destination, ambulance transport (C,F) • Bioinformatics (C,F)

		EMR	EMT	AEMT	Paramedic
Pharmacology	**Pharmacology**	**Uses knowledge of the medications that the EMR may administer in an emergency.**	**Applies knowledge of the medications the EMT may administer to a patient during an emergency and chronic or maintenance medications the patient may be taking.**	**Applies (to patient assessment and management) knowledge of the medications carried by AEMTs that may be administered to a patient during an emergency and chronic or maintenance medications the patient may be taking.**	**Integrates knowledge of pharmacology to formulate a treatment plan intended to mitigate emergencies and improve the overall health of the patient.**
	Principles of Pharmacology	• Medication safety (S,S) • Kinds of medications used during an emergency (S,S)	• Medication safety (F,F) • Medication legislation (F,F) • Naming (F,F) • Classifications (F,F) • Storage and security (F,F) • Medication interactions (S,S) • Adverse drug reactions (S,S) • Metabolism and excretion (F,F) • Mechanism of action (F,F) • Medication response relationships (F,F)	• Medication safety (C,C) • Medication legislation (C,C) • Naming (C,C) • Classifications (C,C) • Storage and security (C,C) • Medication interactions (C,C) • Adverse drug reactions (C,C) • Pharmacokinetics (C,C) • Pharmacodynamics (C,C) • Schedules (C,C)	• Medication safety (C,C) • Medication legislation (C,C) • Naming (C,C) • Classifications (C,C) • Storage and security (C,C) • Medication interactions (C,C) • Adverse drug reactions (C,C) • Pharmacokinetics (C,C) • Pharmacodynamics (C,C) • Schedules (C,C)
	Medication Administration	• Use a Medication Cross Check procedure (S,S) • Use an autoinjector (S,S) • Use a unit-dose, premeasured intranasal device (S,S) • Use of tools/resources to facilitate safe administration of weight-based dosing.	• Use a Medication Cross Check procedure (F,F) • Use an autoinjector (S,S) • Use a unit-dose, premeasured intranasal device (S,S) • Administer medications to a patient (F,F) • Provide pain management, including ethical and safety considerations (F,F) • Routes of administration (S,S)	• Use a Medication Cross Check procedure (F,F) • Use an autoinjector (S,S) • Use a unit-dose, premeasured intranasal device (S,S) • Administer medications to a patient (C,C) • Provide pain management, including ethical and safety considerations (C,C) • Routes of administration (C,C) • Resources for safe administration of weight-based dosing (F,F)	• Use a Medication Cross Check procedure (F,F) • Use an autoinjector (S,S) • Use a unit-dose, premeasured intranasal device (S,S) • Administer medications to a patient (C,C) • Provide pain management, including ethical and safety considerations (C,C) • Routes of administration (C,C) • Resources for safe administration of weight-based dosing (F,F)

		EMR	EMT	AEMT	Paramedic
Pharmacology	Acute Medications	• Names (S,S) • Effects (S,S) • Indications (S,S) • Contraindications (S,S) • Side effects (S,S) • Routes of administration (S,S) • Dosages (S,S)	• Names (F,S) • Effects (S,S) • Indications (F,S) • Contraindications (F,S) • Side effects (F,S) • Routes of administration (F,S) • Dosages (F,S) • Actions (F,S) • Complications (F,S) • Interactions (F,S)	• Names (C,C) • Effects (C,C) • Indications (C,C) • Contraindications (C,C) • Side effects (C,C) • Routes of administration (C,C) • Dosages (C,C) • Actions (C,C) • Complications (C,C) • Interactions (C,C)	• Names (C,C) • Effects (C,C) • Indications (C,C) • Contraindications (C,C) • Side effects (C,C) • Routes of administration (C,C) • Dosages (C,C) • Actions (C,C) • Complications (C,C) • Interactions (C,C)
	Chronic or Maintenance Medications	No knowledge related to this competency is applicable at this level.	Specific medication classes to be determined locally • Class names (S,S) • Class indications (S,S) • Class complications (S,S) • Class side effects (S,S) • Polypharmacy (S,S)	Specific medication classes to be determined locally • Class names (S,S) • Class indications (S,S) • Class complications (S,S) • Class side effects (S,S) • Polypharmacy (S,S)	Specific medication classes and examples to be determined locally • Class names (F,S) • Class indications (F,S) • Class complications (F,S) • Class side effects (F,S) • Polypharmacy (F,S)

		EMR	EMT	AEMT	Paramedic
Airway Management, Respiration and Ventilation	**Airway Management, Respiration and Ventilation**	**Applies knowledge of anatomy and physiology to assure a patent airway, adequate mechanical ventilation and respiration while awaiting additional EMS response for patients of all ages.**	**Applies knowledge of anatomy and physiology to patient assessment and management in order to assure a patent airway, adequate mechanical ventilation and respiration for patients of all ages.**	**Applies knowledge of upper airway anatomy and physiology to patient assessment and management in order to assure a patent airway, adequate mechanical ventilation and respiration for patients of all ages.**	**Integrates knowledge of anatomy, physiology and pathophysiology into the assessment to develop and implement a treatment plan with the goal of assuring a patent airway, adequate mechanical ventilation and respiration for patients of all ages.**
	Airway Management (Include age-related variations in pediatric and geriatric patients)	• Airway anatomy (F,S) • Airway assessment (F,S) • Techniques of assuring a patent airway (F,S)	• Airway anatomy (F,F) • Airway assessment (F,F) • Techniques of assuring a patent airway (F,F)	• Airway anatomy (F,F) • Airway assessment (F,F) • Techniques of assuring a patent airway (F,F)	• Airway anatomy (C,C) • Airway assessment (C,C) • Techniques of assuring a patent airway (C,C)
	Respiration (Include age-related variations in pediatric and geriatric patients)	• Anatomy of the respiratory system (F,S) • Physiology and pathophysiology of respiration (F,S) - Pulmonary ventilation - Oxygenation - Respiration • External • Internal • Cellular • Assessment and management of adequate and inadequate respiration (F,S) • Supplemental oxygen therapy (F,S)	• Anatomy of the respiratory system (F,F) • Physiology and pathophysiology of respiration (F,C) - Pulmonary ventilation - Oxygenation - Respiration • External • Internal • Cellular • Assessment and management of adequate and inadequate respiration (F,C) • Supplemental oxygen therapy (F,C)	• Anatomy of the respiratory system (C,F) • Physiology and pathophysiology of respiration (F,C) - Pulmonary ventilation - Oxygenation - Respiration • External • Internal • Cellular • Assessment and management of adequate and inadequate respiration (F,C) • Supplemental oxygen therapy (F,C)	• Anatomy of the respiratory system (C,C) • Physiology and pathophysiology of respiration (C,C) - Pulmonary ventilation - Oxygenation - Respiration • External • Internal • Cellular • Assessment and management of adequate and inadequate respiration (C,C) • Supplemental oxygen therapy (C,C)
	Ventilation (Include age-related variations in pediatric and geriatric patients)	• Assessment and management of adequate and inadequate ventilation (F,S) • Effect of ventilation on cardiac output (F,S)	• Assessment and management of adequate and inadequate ventilation (F,F) • Effect of ventilation on cardiac output (F,F)	• Assessment and management of adequate and inadequate ventilation (C,F) • Effect of ventilation on cardiac output (C,F)	• Assessment and management of adequate and inadequate ventilation (C,C) • Effect of ventilation on cardiac output (C,C)

		EMR	EMT	AEMT	Paramedic
Assessment	**Assessment**	**Use scene information and patient assessment findings to identify and manage immediate life threats and injuries within the scope of practice of the EMR.**	**Applies scene information and patient assessment findings (scene size up, primary and secondary assessment, patient history and reassessment) to guide emergency management.**	**Same as EMT Level**	**Integrate scene and patient assessment findings with knowledge of epidemiology and pathophysiology to form a field impression. This includes developing a list of differential diagnoses through clinical reasoning to modify the assessment and formulate a treatment plan.**
	Scene Assessment	• Scene safety/situational awareness (C,C) • Scene management (F,F) • Impact of the environment on patient care (F,F) • Addressing hazards (F,F) • Violence (F,F) • Need for additional or specialized resources (F,F) • Standard precautions (F,F) • Multiple patient situations (F,F)	• Scene safety/situational awareness (C,C) • Scene management (F,F) • Impact of the environment on patient care (F,F) • Addressing hazards (F,F) • Violence (F,F) • Need for additional or specialized resources (F,F) • Standard precautions (F,F) • Multiple patient situations (F,F)	• Scene safety/situational awareness (C,C) • Scene management (F,F) • Impact of the environment on patient care (F,F) • Addressing hazards (F,F) • Violence (F,F) • Need for additional or specialized resources (F,F) • Standard precautions (F,F) • Multiple patient situations (F,F)	• Scene safety/situational awareness (C,C) • Scene management (C,C) • Impact of the environment on patient care (C,C) • Addressing hazards (C,C) • Violence (C,C) • Need for additional or specialized resources (F,F) • Standard precautions (F,F) • Multiple patient situations (C,C)
	Primary Assessment (Include age-related variations in pediatric and geriatric patients)	• Primary assessment (S,S) • Begin interventions needed to preserve life (S,S)	• Primary assessment (F,S) • Integration of treatment/ procedures needed to preserve life (F,S)	• Primary assessment (F,F) • Integration of treatment/ procedures needed to preserve life (F,F)	• Primary assessment (C,C) • Integration of treatment/ procedures needed to preserve life (C,C)

		EMR	EMT	AEMT	Paramedic
Assessment	History Taking (Include age-related variations in pediatric and geriatric patients)	• Determining the chief complaint (S,S) • Mechanism of injury/ nature of illness (S,S) • Associated signs and symptoms (S,S)	• Investigation of the chief complaint (F,F) • Mechanism of injury/nature of illness (F,F) • Associated signs and symptoms (F,F) • Past medical history (F,F) • Pertinent negatives (F,F)	• Investigation of the chief complaint (F,F) • Mechanism of injury/nature of illness (F,F) • Associated signs and symptoms (F,F) • Past medical history (F,F) • Pertinent negatives (F,F)	• Investigation of the chief complaint (C,C) • Mechanism of injury/nature of illness (C,C) • Associated signs and symptoms (C,C) • Past medical history (C,C) • Pertinent negatives (C,C) • Interviewing techniques (C,C) • Therapeutic communication and adaptive interview techniques (C,C)
	Secondary Assessment (Include age-related variations in pediatric and geriatric patients)	• Assessment of vital signs (S,S) • Assessment of pain (S,S) • Performing a rapid full body scan (S,S)	• Assessment of vital signs (F,F) • Assessment of pain (F,F) • Techniques of physical examination (F,F) - Respiratory system including breath sound quality - Cardiovascular system - Neurological system - Musculoskeletal system - Major anatomical regions	• Assessment of vital signs (C,F) • Assessment of pain (C,F) • Techniques of physical examination (C,F) - Respiratory system including breath sound quality - Cardiovascular system - Neurological system - Musculoskeletal system - Major anatomical regions	• Assessment of vital signs (C,C) • Assessment of pain (C,C) • Techniques of physical examination (C,C) - Respiratory system including breath sound quality - Cardiovascular system - Neurological system - Musculoskeletal system - Major anatomical regions
	Monitoring Devices	No knowledge related to this competency is applicable at this level.	• Pulse oximetry (S,S) • Non-invasive blood pressure (S,S) • Cardiac monitoring – 12 lead ECG acquisition and transmission (S,S) • Blood glucose determination (S,S)	• Pulse oximetry (S,S) • Non-invasive blood pressure (S,S) • Cardiac monitoring – 12 lead ECG acquisition and transmission (S,S) • Blood glucose determination (S,S) • End tidal CO_2 monitoring and interpretation of waveform capnography (S,S) • Venous blood sampling (S,S)	• Pulse oximetry (S,S) • Non-invasive blood pressure (S,S) • Cardiac monitoring – 12 lead ECG acquisition and transmission (F,F) • Blood glucose determination (S,S) • End tidal CO_2 monitoring and interpretation of waveform capnography (F,F) • Venous blood sampling (S,S) • 12-lead ECG interpretation (F,F) • Blood chemistry analysis (F,F)
	Reassessment (Include age-related variations in pediatric and geriatric patients)	• How and when to reassess patients (S,S)	• How and when to reassess patients (F,F)	• How and when to reassess patients (F,F)	• How and when to reassess patients (C,C)

		EMR	EMT	AEMT	Paramedic
Medicine	**Medicine**	**Recognizes and manages life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response.**	**Applies knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.**	**Applies knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for an acutely ill patient.**	**Integrates assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a treatment/ disposition plan for a patient with a medical complaint.**
Medicine	Medical Overview (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/ or emergencies associated with pediatric and geriatric patients)	• Assessment and management of a medical complaint (S,S)	• Pathophysiology, assessment, and management of a medical complaints to include (S,F) - Transport mode - Destination decisions	• Pathophysiology, assessment, and management of a medical complaints to include (F,F) - Transport mode - Destination decisions	• Pathophysiology, assessment, and management of a medical complaints to include (C,C) - Transport mode - Destination decisions
Medicine	Abdominal and Gastrointestinal Disorders (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/ or emergencies associated with pediatric and geriatric patients)	• Anatomy, presentations and management of shock associated with gastrointestinal bleeding (S,S)	• Acute and chronic gastrointestinal hemorrhage (F,F) • Other gastrointestinal disorders to be determined locally (S,S)	• Acute and chronic gastrointestinal hemorrhage (F,F) • Other gastrointestinal disorders to be determined locally (S,S)	• Acute and chronic gastrointestinal hemorrhage (C,C) • Bowel obstruction (C,C) • Liver and biliary tract disorders (F,F) • Pancreatitis (S,S) • Inflammatory disorders (S,S) • Peritonitis (S,S) • Other gastrointestinal disorders to be determined locally (S,S)

		EMR	EMT	AEMT	Paramedic
Medicine	**Cardiovascular** (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Chest pain (S,S)	• Acute coronary syndrome (F,F) • Hypertensive emergencies (S,S) • Aortic aneurysm/dissection (F,F) • Thromboembolism (F,F) • Heart failure (F,F) • Other cardiovascular disorders to be determined locally (S,S)	• Acute coronary syndrome (C,F) • Hypertensive emergencies (F,S) • Aortic aneurysm/dissection (F,F) • Thromboembolism (F,F) • Heart failure (F,F) • Other cardiovascular disorders to be determined locally (S,S)	• Acute coronary syndrome (C,C) • Hypertensive emergencies (C,C) • Aortic aneurysm/dissection (F,F) • Thromboembolism (F,F) • Heart failure (C,C) • Non-traumatic cardiac tamponade (C,C) • Cardiogenic shock (C,C) • Vascular disorders (C,C) • Cardiac rhythms (C,C) • Conditions that predispose patients to cardiac rhythm disturbances including WPW, Brugada, long QT syndrome and others (C,C) • Infectious diseases of the heart: endocarditis, myocarditis, pericarditis (F,F) • Congenital heart disease (F,F) • Hypertrophic cardiomyopathy (F,F) • Other cardiovascular disorders to be determined locally (S,S)
	Disorders of the Eyes, Ears, Nose, and Throat (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Epistaxis (S,S)	• Epistaxis (S,S) • Other eye, ear, nose and throat disorders to be determined locally (S,S)	• Epistaxis (F,F) • Post-surgical oropharyngeal hemorrhage (F,F) • Other eye, ear, nose and throat disorders to be determined locally (S,S)	• Epistaxis (F,F) • Post-surgical oropharyngeal hemorrhage (F,F) • Common or major diseases of the eyes, ears, nose and throat (F,F) • Other eye, ear, nose and throat disorders to be determined locally (S,S)

		EMR	EMT	AEMT	Paramedic
Medicine	**Endocrine Disorders** (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Awareness that diabetic emergencies cause altered mental status (S,S)	• Diabetic emergencies (F,F) • Other endocrine disorders to be determined locally (S,S)	• Diabetic emergencies (C,F) • Other endocrine disorders to be determined locally (S,S)	• Diabetic emergencies (C,C) • Chronic diabetes (C,C) • Adrenal disease (S,S) • Pituitary and thyroid disorders (S,S) • Inborn errors of metabolism (S,S) • Other endocrine disorders to be determined locally (S,S)
	Genitourinary/Renal (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Blood pressure assessment in hemodialysis patients (S,S)	• Complications related to renal dialysis (S,S) • Complications related to urinary catheter management (not insertion) (S,S) • Kidney stones (S,S) • Sexual assault (Female and Male) (F,F) • Other GI/Renal to be determined locally (S,S)	• Complications related to renal dialysis (F,S) • Complications related to urinary catheter management (not insertion) (S,S) • Kidney stones (F,S) • Sexual assault (Female and Male) (F,F) • Other GI/Renal to be determined locally (S,S)	• Complications of dialysis (C,C) • Complications related to urinary catheter management (not insertion) (S,S) • Renal calculi (C,C) • Sexual assault (Female and Male) (C,C) • Acute/chronic renal failure (C,C) • Acid base disturbances (C,C) • Fluid and electrolytes (C,C) • Infection (F,F) • Male genital tract conditions (F,F) • Other GI/Renal to be determined locally (S,S)
	Hematology (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	No knowledge related to this competency is applicable at this level.	• Sickle cell crisis (S,S) • Clotting disorders (S,S) • Other hematologic disorders to be determined locally (S,S)	• Sickle cell crisis (F,F) • Clotting disorders (S,S) • Other hematologic disorders to be determined locally (S,S)	• Sickle cell disease (C,C) • Coagulopathies (F,F) • Blood transfusion complications (F,F) • Hemostatic disorders (F,F) • Red blood cell disorders (F,F) • White blood cell disorders (F,F) • Other hematologic disorders to be determined locally (S,S)

		EMR	EMT	AEMT	Paramedic
Medicine	**Immunology** (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Anaphylactic reactions (S,S)	• Allergic and anaphylactic reactions (F,F) • Other immunological disorders to be determined locally (S,S)	• Allergic and anaphylactic reactions (C,C) • Systemic Inflammatory Response Syndrome (SIRS) (C,C) • Other immunological disorders to be determined locally (S,S)	• Allergic and anaphylactic reactions (C,C) • Systemic Inflammatory Response Syndrome (SIRS) (C,C) • Hypersensitivity (C,C) • Anaphylactoid reactions (C,C) • Collagen vascular disease (F,F) • Transplant-related problems (F,F) • Immunodeficiency syndromes (acquired or congenital) (F,F) • Other immunological disorders to be determined locally (S,S)
	Infectious Diseases (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Awareness of patient who may have an infectious disease (S,S) • How to disinfect and decontaminate equipment after treating a patient (S,S)	• Assessment and management of a patient who may have an infectious disease (S,S) • How to decontaminate the ambulance and equipment after treating a patient (S,S) • Sepsis and septic shock (S,S) • Other infectious diseases to be determined locally (S,S)	• Assessment and management of a patient who may have an infectious disease (S,S) • How to decontaminate the ambulance and equipment after treating a patient (S,S) • Sepsis and septic shock (F,F) • HIV (F,F) • Hepatitis B (F,F) • Antibiotic resistance (F,F) • Current infectious diseases prevalent in the community (F,F) • Vaccine-preventable diseases (F,F) • Other infectious diseases to be determined locally (S,S)	• Assessment and management of a patient who may have an infectious disease (S,S) • How to decontaminate the ambulance and equipment after treating a patient (S,S) • Sepsis and septic shock (C,C) • HIV-related disease (C,C) • Hepatitis (C,C) • Meningitis (C,C) • Antibiotic resistance (F,F) • Current infectious diseases prevalent in the community (F,F) • Vaccine-preventable diseases (C,C) • Viral diseases: RSV, Herpes zoster (F,F) • Sexually transmitted infections (F,F) • Tetanus (S,S) • Vector-borne diseases (S,S) • Tuberculosis (S,S) • Emerging infectious disease (S,S) • Other infectious diseases to be determined locally (S,S)

		EMR	EMT	AEMT	Paramedic
Medicine	**Neurology** (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Decreased level of responsiveness (S,S) • Seizure (S,S) • Stroke (S,S)	• Decreased level of responsiveness (S,S) • Seizure (F,F) • Stroke (F,F) • Dementia vs. delirium (S,S) • Alzheimer's disease (S,S) • Headache (F,F) • Brief Resolved Unexplained Event (BRUE) (F,F) • Other neurological disorders to be determined locally (S,S)	• Decreased level of responsiveness (F,F) • Seizure (C,F) • Stroke (F,F) • Dementia vs. delirium (S,S) • Alzheimer's disease (S,S) • Headache (F,F) • Brief Resolved Unexplained Event (BRUE) (F,F) • Parkinson's disease (S,S) • Other neurological disorders to be determined locally (S,S)	• Decreased level of responsiveness (C,C) • Seizure (C,C) • Stroke (C,C) • Dementia vs. delirium (S,S) • Alzheimer's disease (S,S) • Headache (C,C) • Brief Resolved Unexplained Event (BRUE) (F,F) • Parkinson's disease (S,S) • Hydrocephalus – CSF diversion devices or shunts (F,F) • Other neurological disorders to be determined locally (S,S)
	Non-Traumatic Musculoskeletal Disorders (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Non-traumatic fractures (S,S)	• Non-traumatic fractures (F,F) • Other non-traumatic musculoskeletal disorders to be determined locally (S,S)	• Non-traumatic fractures (F,F) • Other non-traumatic musculoskeletal disorders to be determined locally (S,S)	• Non-traumatic fractures (F,F) • Disorders of the spine (F,F) • Joint abnormalities (F,F) • Muscle abnormalities (F,F) • Overuse syndromes (F,F) • Rhabdomyolysis (F,F) • Other non-traumatic musculoskeletal disorders to be determined locally (S,S)

		EMR	EMT	AEMT	Paramedic
Medicine	Psychiatric or Behavioral Emergencies (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Recognition of behaviors that pose a risk to the EMR, patient or others • Recognition of suicide risk	• Basic principles of the mental health system (S,S) • Patterns of violence, abuse and neglect (S,S) • Acute psychosis (F,F) • Suicide ideation (F,F) • Excited delirium (F,F) • Anxiety (F,F) • Depression (F,F) • Medical fear (F,F) • Substance use disorder (F,F) • PTSD (F,F) • Other psychiatric/behavioral disorders to be determined locally (S,S)	• Basic principles of the mental health system (S,S) • Patterns of violence, abuse and neglect (F,F) • Acute psychosis (F,F) • Suicide ideation (C,C) • Excited delirium (F,F) • Anxiety (F,F) • Depression (F,F) • Medical fear (F,F) • Substance use disorder/ addictive behavior (C,C) • PTSD (F,F) • Other psychiatric/behavioral disorders to be determined locally (S,S)	• Basic principles of the mental health system (S,S) • Patterns of violence, abuse and neglect (C,C) • Suicide ideation (C,C) • Excited delirium (C,C) • Anxiety (C,C) • Depression (C,C) • Medical fear (F,F) • Substance use disorder/ addictive behavior (C,C) • PTSD (C,C) • Acute psychosis (C,C) • Cognitive disorders (F,F) • Thought disorders (F,F) • Mood disorders (F,F) • Neurotic disorders (F,F) • Somatoform disorders (F,F) • Factitious disorders (F,F) • Personality disorders (F,F) • Other psychiatric/behavior disorders to be determined locally (S,S)

		EMR	EMT	AEMT	Paramedic
Medicine	**Respiratory** (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Respiratory distress/failure/arrest (F,F) • Upper airway obstruction (S,S) • Lower airway disease: Asthma, bronchiolitis, pneumonia, chronic obstructive pulmonary disease (COPD) (S,S)	• Respiratory distress/failure/arrest (F,F) • Upper airway obstruction (F,F) • Lower airway disease: Asthma, bronchiolitis, pneumonia, chronic obstructive pulmonary disease (COPD) (F,F) • Spontaneous pneumothorax (F,F) • Pulmonary edema (F,F) • Other respiratory disorders to be determined locally (S,S)	• Respiratory distress/failure/arrest (F,F) • Upper airway diseases: foreign body, croup, epiglottitis (C,F) • Lower airway disease: Asthma, bronchiolitis, pneumonia, chronic obstructive pulmonary disease (COPD) (C,F) • Spontaneous pneumothorax (F,F) • Pulmonary edema (C,F) • Other respiratory disorders to be determined locally (S,S)	• Respiratory distress/failure/arrest (F,F) • Upper airway diseases: foreign body, croup, epiglottitis (C,C) • Lower airway disease: Asthma, bronchiolitis, pneumonia, chronic obstructive pulmonary disease (COPD), bronchopulmonary dysplasia (C,C) • Spontaneous pneumothorax (C,C) • Pulmonary edema (C,C) • Other respiratory disorders to be determined locally (S,S)
	Toxicology (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Carbon monoxide poisoning (S,S) • Nerve agent poisoning (S,S) • Opioid toxicity (S,S) • How and when to contact a poison control center (S,S)	• Carbon monoxide poisoning (S,S) • Nerve agent poisoning (S,S) • Opioid toxicity (S,S) • How and when to contact a poison control center (S,S) • Poisons (inhaled, ingested, injected, absorbed) (F,F) • Alcohol intoxication and withdrawal (F,F) • Other toxicological disorders to be determined locally (S,S)	• Carbon monoxide poisoning (S,S) • Nerve agent poisoning (S,S) • Opioid toxicity (F,F) • How and when to contact a poison control center (S,S) • Poisons (inhaled, ingested, injected, absorbed) (F,F) • Alcohol intoxication and withdrawal (F,F) • Other toxicological disorders to be determined locally (S,S)	• Carbon monoxide poisoning (C,C) • Nerve agent poisoning (S,S) • Opioid toxicity (F,F) • How and when to contact a poison control center (S,S) • Poisons (inhaled, ingested, injected, absorbed) (F,F) • Alcohol intoxication and withdrawal (C,C) • Toxidromes (C,C) - Cholinergic - Anticholinergic - Sympathomimetic - Sedative/hypnotics - Opioid - Corrosive - Knockdown • Chronic or maintenance medications (C,C) • Drugs of abuse (C,C) • Non-FDA approved medications and supplements (C,C) • Serotonin Syndrome (C,C) • Malignant Hyperthermia (C,C) • Other toxicological disorders to be determined locally (S,S)

		EMR	EMT	AEMT	Paramedic
Shock and Resuscitation	**Shock and Resuscitation**	**Uses assessment information to recognize shock, respiratory failure or arrest, and cardiac arrest based on assessment findings and manages the emergency while awaiting additional emergency response.**	**Applies knowledge of the causes, pathophysiology and management of shock, respiratory failure or arrest, cardiac failure or arrest, termination of resuscitative efforts and post resuscitation management.**	**Applies knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for a patient in shock, respiratory failure or arrest, cardiac failure or arrest, termination of resuscitative efforts and post resuscitation management.**	**Integrates knowledge of causes and pathophysiology into the management of cardiac arrest and peri-arrest states.**
	Shock (Include psychosocial aspects of age-related assessment and treatment modifications for pediatric and geriatric patients)	• Definition (S,S) • Physiologic response (S,S)	• Essential components in normal perfusion (F,S) • Physiologic response (S,S) • Types of shock (S,S) • Treatment of shock (S,S)	• Essential components in normal perfusion (F,F) • Physiologic response (F,F) • Types of shock (F,F) • Treatment of shock, hypoperfusion and dehydration (C,C) • Complications of shock (F,F) • Circulatory assist devices (F,F)	• Essential components in normal perfusion (C,C) • Physiologic response (C,C) • Types of shock (C,C) • Treatment of shock, hypoperfusion and dehydration (C,C) • Complications of shock (C,C) • Circulatory assist devices (C,C)
	Resuscitation from Cardiac Arrest (Include psychosocial aspects of age-related assessment and treatment modifications for pediatric and geriatric patients)	• Ethical issues in resuscitation (S,S) • CPR physiology (S,S) • Resuscitation system components (S,S) • Special arrest and peri-arrest situations (S,S)	• Ethical issues in resuscitation (C,C) • CPR physiology (F,F) • Resuscitation system components (F,F) • Special arrest and peri-arrest situations (F,F) • Postresuscitation support (F,F) • Termination of resuscitation (F,F)	• Ethical issues in resuscitation (C,C) • CPR physiology (F,F) • Resuscitation system components (F,F) • Special arrest and peri-arrest situations (F,F) • Postresuscitation support (C,C) • Termination of resuscitation (C,C)	• Ethical issues in resuscitation (C,C) • CPR physiology (C,C) • Resuscitation system components (C,C) • Special arrest and peri-arrest situations (C,C) • Postresuscitation support (C,C) • Termination of resuscitation (C,C) • Premorbid conditions (C,C)

		EMR	EMT	AEMT	Paramedic
Trauma	**Trauma**	**Uses assessment information to recognize shock, respiratory failure or arrest and cardiac arrest based on assessment findings and manages the emergency while awaiting additional emergency response.**	**Applies knowledge of the causes, pathophysiology and management of shock, respiratory failure or arrest, cardiac failure or arrest, termination of resuscitative efforts and post resuscitation management.**	**Applies knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for a patient in shock, respiratory failure or arrest, cardiac failure or arrest, termination of resuscitative efforts and post resuscitation management.**	**Integrates knowledge of causes and pathophysiology into the management of cardiac arrest and peri-arrest states.**
	Trauma Overview (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	No knowledge related to this competency is applicable at this level.	• Trauma scoring (F,F) • Transport and destination issues (F,F) • Transport mode (F,F)	• Trauma scoring (F,F) • Transport and destination issues (F,F) • Transport mode (F,F)	• Trauma scoring (C,C) • Transport and destination issues (C,C) • Transport mode (F,F)
	Abdominal and Genitourinary Trauma (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Blunt versus penetrating mechanisms (S,S) • Evisceration (S,S) • Impaled object (S,S)	• Blunt versus penetrating mechanisms (F,S) • Evisceration (S,S) • Impaled object (S,S) • Solid and hollow organ injuries (F,S) • Injuries to the internal or external genitalia (F,S)	• Blunt versus penetrating mechanisms (F,F) • Evisceration (S,S) • Impaled object (S,S) • Solid and hollow organ injuries (F,F) • Injuries to the internal or external genitalia (F,F) • Vascular injury (F,F) • Retroperitoneal injuries (F,F)	• Blunt versus penetrating mechanisms (F,F) • Evisceration (S,S) • Impaled object (S,S) • Solid and hollow organ injuries (F,F) • Injuries to the internal or external genitalia (F,F) • Vascular injury (F,F) • Retroperitoneal injuries (F,F)
	Bleeding (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Bleeding (S,S)	• Bleeding (F,F)	• Bleeding (F,F) • Fluid resuscitation (C,C)	• Bleeding (F,F) • Fluid resuscitation (C,C)

		EMR	EMT	AEMT	Paramedic
Trauma	**Chest Trauma** (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Blunt versus penetrating mechanisms (S,S) • Open chest wound (S,S) • Impaled object (S,S)	• Blunt versus penetrating mechanisms (F,S) • Open chest wound (S,S) • Impaled object (S,S) • Hemothorax (F,S) • Pneumothorax (F,S) • Cardiac tamponade (F,S) • Rib fractures (F,S) • Flail chest (F,S) • Commotio cordis (F,S)	• Blunt versus penetrating mechanisms (F,S) • Open chest wound (S,S) • Impaled object (S,S) • Hemothorax (F,F) • Pneumothorax (F,F) • Cardiac tamponade (F,F) • Rib fractures (F,F) • Flail chest (F,F) • Commotio cordis (F,S) • Traumatic aortic disruption (F,F) • Pulmonary contusion (F,F) • Blunt cardiac injury (F,F) • Traumatic asphyxia (F,F)	• Blunt versus penetrating mechanisms (F,S) • Open chest wound (S,S) • Impaled object (S,S) • Hemothorax (C,C) • Pneumothorax (C,C) • Cardiac tamponade (C,C) • Rib fractures (C,C) • Flail chest (C,C) • Commotio cordis (F,S) • Traumatic aortic disruption (C,C) • Pulmonary contusion (C,C) • Blunt cardiac injury (C,C) • Traumatic asphyxia (C,C) • Tracheobronchial disruption (C,C) • Diaphragmatic rupture (C,C)
	Environmental Emergencies (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Drowning (S,S) • Temperature-related illness (S,S) • Bites and envenomations (S,S) • Lightning injury (S,S) • Other environmental emergencies to be determined locally (S,S)	• Drowning (F,F) • Temperature-related illness (F,F) • Bites and envenomations (F,F) • Lightning injury (F,F) • Other environmental emergencies to be determined locally (S,S)	• Drowning (F,F) • Temperature-related illness (F,F) • Bites and envenomations (F,F) • Lightning injury (F,F) • Other environmental emergencies to be determined locally (S,S)	• Drowning (C,C) • Temperature-related illness (C,C) • Bites and envenomations (C,C) • Lightning injury (C,C) • Other environmental emergencies to be determined locally (S,S)

		EMR	EMT	AEMT	Paramedic
Trauma	**Head, Facial, Neck, and Spine Trauma** (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Life threats (S,S) • Spine trauma (S,S)	• Life threats (S,S) • Spine trauma (F,F) • Penetrating neck trauma (F,F) • Laryngotracheal injuries (F,F) • Shaken Baby Syndrome (F,F) • Facial fractures (S,S) • Skull fractures (S,S) • Foreign bodies in the eyes (S,S) • Globe rupture (S,S) • Dental trauma (S,S) • Severe epistaxis (S,S)	• Life threats (S,S) • Spine trauma (F,F) • Penetrating neck trauma (F,F) • Laryngotracheal injuries (C,F) • Shaken Baby Syndrome (F,F) • Facial fractures (C,F) • Skull fractures (S,S) • Foreign bodies in the eyes (S,S) • Globe rupture (S,S) • Dental trauma (S,S) • Severe epistaxis (S,S)	• Life threats (S,S) • Spine trauma (C,C) • Penetrating neck trauma (C,C) • Laryngotracheal injuries (C,C) • Shaken Baby Syndrome (F,F) • Facial fractures (C,F) • Skull fractures (C,C) • Foreign bodies in the eyes (S,S) • Globe rupture (S,S) • Dental trauma (S,S) • Severe epistaxis (S,S) • Unstable facial fractures (F,F) • Orbital fractures (F,F) • Perforated tympanic membrane (F,F) • Mandibular fractures (C,C)
	Multi-System Trauma (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Multi-system trauma (S,S)	• Multi-system trauma (F,F) • Blast injuries (F,F)	• Multi-system trauma (C,F) • Blast injuries (F,F)	• Multi-system trauma (C,C) • Blast injuries (C,C)
	Nervous System Trauma (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Traumatic brain injury (S,S)	• Traumatic brain injury (F,F) • Spinal cord injury (F,F)	• Traumatic brain injury (C,F) • Spinal cord injury (F,F)	• Traumatic brain injury (C,C) • Spinal cord injury (C,C) • Spinal shock (C,C) • Cauda equina syndrome (F,F) • Nerve root injury (F,F) • Peripheral nerve injury (F,F)

		EMR	EMT	AEMT	Paramedic
Trauma	**Orthopedic Trauma** (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Open fractures (S,S) • Closed fractures (S,S) • Dislocations (S,S) • Amputations (S,S)	• Open fractures (F,F) • Closed fractures (F,F) • Dislocations (F,F) • Amputations/replantation (F,F) • Upper and lower extremity orthopedic trauma (F,F) • Sprains/strains (F,F) • Pelvic fractures (F,F)	• Open fractures (F,F) • Closed fractures (F,F) • Dislocations (F,F) • Amputations/replantation (C,F) • Upper and lower extremity orthopedic trauma (F,F) • Sprains/strains (F,F) • Pelvic fractures (C,F)	• Open fractures (C,C) • Closed fractures (C,C) • Dislocations (C,C) • Amputations/replantation (C,F) • Upper and lower extremity orthopedic trauma (C,C) • Sprains/strains (F,F) • Pelvic fractures (C,F) • Pediatric fractures (F,F) • Tendon laceration/ transection/ rupture (Achilles and patellar) (F,F)
	Soft Tissue Trauma (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Wounds (avulsion, bite, laceration, puncture, incision) (S,S) • Burns (electrical, chemical, thermal) including inhalation injury (S,S) • Chemicals in the eye and on the skin (S,S)	• Wounds (avulsion, bite, laceration, puncture, incision) (F,F) • Burns (electrical, chemical, thermal, radiation) including inhalation injury (F,F) • Chemicals in the eye and on the skin (S,S) • Crush/compartment syndrome (S,S) • High-pressure injection injury (S,S)	• Wounds (avulsion, bite, laceration, puncture, incision) (F,F) • Burns (electrical, chemical, thermal, radiation) including inhalation injury (F,F) • Chemicals in the eye and on the skin (S,S) • Crush/compartment syndrome (F,S) • High-pressure injection injury (S,S)	• Wounds (avulsion, bite, laceration, puncture, incision) (C,C) • Burns (electrical, chemical, thermal, radiation) including inhalation injury (C,C) • Chemicals in the eye and on the skin (S,S) • Crush/compartment syndrome (C,C) • High-pressure injection injury (S,S)
	Special Considerations in Trauma	• Pregnant patient (S,S) • Pediatric patient (S,S) • Geriatric patient (S,S)	• Pregnant patient (F,F) • Pediatric patient (F,F) • Geriatric patient (F,F) • Cognitively impaired patient (F,F)	• Pregnant patient (C,F) • Pediatric patient (C,F) • Geriatric patient (C,F) • Cognitively impaired patient (C,F)	• Pregnant patient (C,C) • Pediatric patient (C,C) • Geriatric patient (C,C) • Cognitively impaired patient (C,C)

		EMR	EMT	AEMT	Paramedic
Special Patient Populations	**Special Patient Populations**	**Recognizes and manages life threats based on simple assessment findings for a patient with special needs while awaiting additional emergency response.**	**Applies knowledge of growth, development and aging and assessment findings to provide basic emergency care and transportation for a patient with special needs.**	**Applies knowledge of growth, development and aging and assessment findings to provide basic and selected advanced emergency care and transportation for a patient with special needs.**	**Integrates assessment findings with principles of pathophysiology and knowledge of psychosocial needs to formulate a field impression and implement a treatment/disposition plan for patients with special needs.**
	Gynecology (Include psychosocial aspects of age-related assessment and treatment modifications for the major or common diseases and/or emergencies associated with pediatric and geriatric patients)	• Shock associated with vaginal bleeding (S,S)	• Vaginal bleeding (F,F) • Infections (S,S) • Other gynecological disorders to be determined locally (S,S)	• Vaginal bleeding (F,F) • Infections (S,S) • Other gynecological disorders to be determined locally (S,S)	• Vaginal bleeding (C,C) • Infections (F,F) • Ovarian emergencies (F,F) • Vaginal foreign body (F,F) • Other gynecological disorders to be determined locally (S,S)
	Obstetrics	• Normal delivery (S,S) • Vaginal bleeding in the pregnant patient (S,S)	• Normal delivery (F,F) • Vaginal bleeding in the pregnant patient (S,S) • Normal pregnancy (anatomy and physiology) (F,F) • Pathophysiology of complications of pregnancy (F,F) • Assessment of the pregnant patient (F,F) • Abnormal delivery (nuchal cord, prolapsed cord, breech, shoulder dystocia, prematurity, multiparity) (F,F) • Third trimester and antepartum bleeding (placenta previa. placental abruption) (F,F) • Spontaneous abortion/ miscarriage (F,F) • Ectopic pregnancy (F,F) • Preeclampsia/eclampsia (F,F) • Postpartum complications (S,S)	• Normal delivery (F,F) • Vaginal bleeding in the pregnant patient (S,S) • Normal pregnancy (anatomy and physiology) (F,F) • Pathophysiology of complications of pregnancy (F,F) • Assessment of the pregnant patient (F,F) • Abnormal delivery (nuchal cord, prolapsed cord, breech, shoulder dystocia, prematurity, multiparity) (F,F) • Third trimester and antepartum bleeding (placenta previa. placental abruption) (F,F) • Spontaneous abortion/miscarriage (F,F) • Ectopic pregnancy (F,F) • Preeclampsia/eclampsia (F,F) • Postpartum complications (C,C)	• Normal delivery (C,C) • Vaginal bleeding in the pregnant patient (S,S) • Normal pregnancy (anatomy and physiology) (C,C) • Pathophysiology of complications of pregnancy (C,C) • Assessment of the pregnant patient (C,C) • Abnormal delivery (nuchal cord, prolapsed cord, breech, shoulder dystocia, prematurity, multiparity) (C,C) • Third trimester and antepartum bleeding (placenta previa. placental abruption) (F,F) • Spontaneous abortion/miscarriage (C,C) • Ectopic pregnancy (C,C) • Preeclampsia/eclampsia (C,C) • Postpartum complications (C,C) • High-risk pregnancy (C,C) • Complications of labor (fetal distress, premature rupture of membranes, rupture of uterus) (C,C) • Hyperemesis gravidarum (S,S) • Postpartum depression (S,S)

		EMR	EMT	AEMT	Paramedic
Special Patient Populations	Neonatal Care	• Newborn stabilization (S,S) • Neonatal resuscitation (S,S)	• Newborn stabilization (F,F) • Neonatal resuscitation (F,F)	• Newborn stabilization (F,F) • Neonatal resuscitation (F,F)	• Newborn stabilization (C,C) • Neonatal resuscitation (C,C) • Anatomy and physiology of neonatal circulation (C,C)
	Pediatrics	The Education Standards now integrate assessment, diagnostic, treatment and disposition modifications for pediatric-specific diseases and emergencies into each section of the document.			
	Geriatrics	The Education Standards now integrate assessment, diagnostic, treatment and disposition modifications for geriatric-specific diseases and emergencies into each section of the document			
	Patients with Special Challenges	• Recognizing and reporting abuse and neglect (S,S)	• Recognizing and reporting abuse and neglect (S,S) • Abuse/Intimate partner violence (S,S) • Neglect (S,S) • Child/dependent adult maltreatment (S,S) • Homelessness (S,S) • Poverty (S,S) • Bariatrics (S,S) • Technology dependent (locally determined) (S,S) • Hospice/ terminally ill (S,S) • Tracheostomy care/dysfunction (S,S) • Homecare (S,S) • Sensory deficit/loss (S,S) • Developmental disability (S,S) • Autism Spectrum Disorder (S,S) • Orthotics/prosthetics (S,S)	• Recognizing and reporting abuse and neglect (S,S) • Abuse/Intimate partner violence (F,F) • Neglect (F,F) • Child/dependent adult maltreatment (F,F) • Homelessness (F,F) • Poverty (F,F) • Bariatrics (F,F) • Technology dependent (locally determined) (F,F) • Hospice/ terminally ill (F,F) • Tracheostomy care/dysfunction (F,F) • Homecare (F,F) • Sensory deficit/loss (F,F) • Developmental disability (F,F) • Autism Spectrum Disorder (F,F) • Orthotics/prosthetics (S,S)	• Recognizing and reporting abuse and neglect (S,S) • Abuse/Intimate partner violence (C,C) • Neglect (C,C) • Child/dependent adult maltreatment (C,C) • Homelessness (F,F) • Poverty (C,C) • Bariatrics (C,C) • Technology dependent (vagal nerve stimulators, CSF diversion devices or shunts, VAD, pacemakers, gastric tubes and others to be locally determined) (C,C) • Hospice/ terminally ill (C,C) • Tracheostomy care/dysfunction (C,C) • Homecare (F,F) • Sensory deficit/loss (F,F) • Developmental disability (F,F) • Autism Spectrum Disorder (F,F) • Orthotics/prosthetics (S,S)

		EMR	EMT	AEMT	Paramedic
EMS Operations	**EMS Operations**	**Knowledge of operational roles and responsibilities to ensure patient, public and personnel safety**	**Same as EMR Level**	**Same as EMR Level**	**Same as EMR Level**
	Emergency Response Vehicles	• Risks and responsibilities of emergency response and radio communications (S,S) • Risks and responsibilities of operating emergency vehicles (S,S)	• Risks and responsibilities of emergency response and radio communications (S,S) • Risks and responsibilities of operating emergency vehicles (S,S) • Pediatric transport considerations (F,F) • Risks and responsibilities of transport (F,F)	• Risks and responsibilities of emergency response and radio communications (S,S) • Risks and responsibilities of operating emergency vehicles (S,S) • Pediatric transport considerations (F,F) • Risks and responsibilities of transport (F,F)	• Risks and responsibilities of emergency response and radio communications (S,S) • Risks and responsibilities of operating emergency vehicles (S,S) • Pediatric transport considerations (F,F) • Risks and responsibilities of transport (F,F)
	Incident Management (The extent of information presented in this area will vary at the regional and local level.)	• Establish and work within the incident management system (S,S)	• Establish and work within the incident management system (F,F) • Understand the principles of Crew Resource Management (F,F)	• Establish and work within the incident management system (F,F) • Understand the principles of Crew Resource Management (F,F)	• Establish and work within the incident management system (F,F) • Understand the principles of Crew Resource Management (F,F)
	Multiple Casualty Incidents (The extent of information presented in this area will vary at the regional and local level.)	• Operational goals (F,F) • Field triage (F,F)	• Operational goals (F,F) • Field triage (F,F) • Destination determination (F,F) • Treatment principles (F,F)	• Operational goals (F,F) • Field triage (F,F) • Destination determination (F,F) • Treatment principles (F,F)	• Operational goals (F,F) • Field triage (F,F) • Destination determination (F,F) • Treatment principles (F,F)
	Air Medical (The extent of information presented in this area will vary at the regional and local level.)	• Safe air medical operations (S,S) • Criteria for utilizing air medical response (S,S) • Medical risks/needs/advantages (S,S)	• Safe air medical operations (S,S) • Criteria for utilizing air medical response (S,S) • Medical risks/needs/advantages (F,F)	• Safe air medical operations (S,S) • Criteria for utilizing air medical response (S,S) • Medical risks/needs/advantages (F,F)	• Safe air medical operations (S,S) • Criteria for utilizing air medical response (S,S) • Medical risks/needs/advantages (F,F)

		EMR	EMT	AEMT	Paramedic
EMS Operations	Rescue Operations (The extent of information presented in this area will vary at the regional and local level.)	• Safety principles of rescue operations (S,S)	• Safety principles of rescue operations (S,S)	• Safety principles of rescue operations (S,S)	• Safety principles of rescue operations (S,S)
	Hazardous Materials (The extent of information presented in this area will vary at the regional and local level.)	• Risks and responsibilities of operating on the scene of a hazardous materials incident (S,S)	• Risks and responsibilities of operating on the scene of a hazardous materials incident (S,S)	• Risks and responsibilities of operating on the scene of a hazardous materials incident (S,S)	• Risks and responsibilities of operating on the scene of a hazardous materials incident (S,S)
	Mass Casualty Incidents due to Terrorism and Disaster (The extent of information presented in this area will vary at the regional and local level.)	• Risks and responsibilities of operating on the scene of a natural or man-made disaster (F,F)	• Risks and responsibilities of operating on the scene of a natural or man-made disaster (F,F)	• Risks and responsibilities of operating on the scene of a natural or man-made disaster (F,F)	• Risks and responsibilities of operating on the scene of a natural or man-made disaster (F,F)

Clinical Behavior/Judgment

	EMR	EMT	AEMT	Paramedic
Assessment	• Perform a simple assessment to identify life threats, identify injuries requiring spinal motion restriction and conditions requiring treatment within the scope of practice of the EMR:	• Perform a basic history and physical examination to identify acute complaints and monitor changes. • Formulate a field diagnosis based upon an actual and/or potential illness or injury.	• Perform a basic history and physical examination to identify acute complaints and monitor changes. • Formulate a field diagnosis based upon an actual and/or potential illness or injury.	• Perform a comprehensive history and physical examination to identify factors affecting the health and health needs of a patient. • Relate assessment findings to underlying pathological and physiological changes in the patient's condition. • Integrate and synthesize the multiple determinants of health and clinical care. • Formulate a field diagnosis based on an analysis of comprehensive assessment findings, anatomy, physiology, pathophysiology and epidemiology. • Perform health screening and referrals.
Therapeutic Communication and Cultural Humility	• Effectively communicates in a non-discriminatory manner that addresses inherent or unconscious bias, is culturally aware and sensitive, and intended to improve patient outcome.			
Psychomotor Skills	• Safely and effectively perform all psychomotor skills within the *National EMS Scope of Practice Model* AND state Scope of Practice at this level.			

Clinical Behavior/Judgment

	EMR	EMT	AEMT	Paramedic
Professionalism	Demonstrate professional affective domain behaviors including but not limited to: • Integrity • Empathy/compassion • Self-motivation • Appearance/personal hygiene • Self-confidence • Communications • Time management • Teamwork/diplomacy • Respect • Patient advocacy • Careful delivery of service • Lifelong learning			Is a role model of exemplary professional affective domain behaviors including but not limited to: • Integrity • Empathy/compassion • Self-motivation • Appearance/personal hygiene • Self-confidence • Communications • Time management • Teamwork/diplomacy • Respect • Patient advocacy • Careful delivery of service • Lifelong learning
Decision Making	• Initiates simple interventions based on assessment findings.	• Initiates interventions based on assessment findings intended to provide symptom relief (within the provider's scope of practice) while providing access to definitive care • Evaluates the effectiveness of interventions and modifies treatment plan accordingly.		• Performs interventions as part of a treatment plan intended to provide symptom relief and improve the overall health of the patient. • Evaluates the effectiveness of interventions and modifies treatment plan accordingly. • Evaluates decision making strategy for cognitive errors to enhance future critical thinking skills (metacognition)
Record Keeping	• Report and document assessment findings and interventions performed.	• Report and document assessment findings, interventions performed, and clinical decision making		
Team Dynamics	• Manage the scene until care is transferred to an EMS team member licensed at a higher level arrives.	• The entry-level clinician serves as a team member, while gaining the experience necessary to function as the team leader.		
Safety	• Ensure the safety of the rescuer, other public safety personnel, civilians and the patient.			

Educational Infrastructure

	EMR	EMT	AEMT[2]	Paramedic
Educational Facilities	• Facility sponsored or approved by sponsoring agency • Sponsoring agency commitment to diversity, equity and inclusion • ADA compliant facility • Sufficient space for class size • Controlled environment			Reference Committee on Accreditation for EMS Professions (CoAEMSP) Standards and Guidelines (www.coaemsp.org)[1]
Student Space	• Provide space sufficient for students to attend classroom sessions, take notes, and participate in classroom activities • Provide space for students to participate in kinematic learning and practice activities			
Instructional Resources	• Provide basic instructional support material • Provide audio, visual, and kinematic aids to support and supplement didactic instruction			
Instructor Preparation Resources	• Provide space for instructor preparation • Provide support equipment for instructor preparation			
Storage Space	• Provide adequate and secure storage space for instructional materials			

[1] *The National EMS Education Agenda for the Future*: A Systems Approach (2000) calls for national accreditation of Paramedic programs. The Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredits programs upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP). CAAHEP is the only national agency that offers Paramedic educational programmatic accreditation and is used or recognized by most states. Recognition of national accreditation remains the responsibility of each state.

[2] The 2019 and 2021 updated *National Scope of Practice Model* call for national accreditation of AEMT programs. The target for full implementation of AEMT program accreditation is January 1, 2025. Until that date, AEMT programs should reference the existing infrastructure suggestions within this document. The Commission on Accreditation of Allied Health Education Programs (CAAHEP) accredits programs upon the recommendation of the Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP).CAAHEP is the only national agency that offers EMS programmatic accreditation and is used or recognized by most states. Recognition of national accreditation remains the responsibility of each state.

Educational Infrastructure

	EMR	EMT	AEMT	Paramedic
Sponsorship	Sponsoring organizations shall be one of the following: • Accredited educational institution • Public safety organization • Accredited hospital, clinic or medical center, or • Other state approved institution or organization			Reference Committee on Accreditation for EMS Professions (CoAEMSP) Standards and Guidelines (www.coaemsp.org)[1]
Programmatic Approval	• Sponsoring organization shall have programmatic approval by authority having jurisdiction for program approval (state)			
Faculty	Course primary instructors should: • Be educated at a level higher than they are teaching; however, as a minimum, they must be educated at the level they are teaching • Have completed an approved instructor training program or equivalent			
Medical Director Oversight	• Provide medical oversight for all medical aspects of instruction			
Hospital/Clinical Experience	• None required at this level	• The student must demonstrate the ability to perform an adequate assessment and implement an adequate treatment plan. - These can be performed in an emergency department, ambulance, clinic, nursing home, doctor's office, on a standardized patient or in an alternative clinical environment when clinical access is not available.	• The student must demonstrate the ability to perform an adequate assessment and implement an adequate treatment plan.	

Educational Infrastructure

	EMR	EMT	AEMT	Paramedic
Field Experience	• None required at this level	• The student should participate in and document patient contacts in a field experience in an ambulance, mobile health care experience, or simulated environment when ambulance experience is not available as approved by the medical director and program director. This may occur in an ambulance, ambulance experience, or simulated environment when ambulance experiences are not available.	• The student must participate in and document both patient contacts and team leadership roles in a field experience approved by the medical director and program director.	Reference Committee on Accreditation for EMS Professions (CoAEMSP) Standards and Guidelines (www.coaemsp.org)[1]
Course Length	• Instructors may use a variety of formats to deliver content including but not limited to: - Independent student preparation - Synchronous or asynchronous instruction - Face-to-face instruction - Pre- or co-requisites • **Course length should be based on competency, not hours** - Consensus opinion is that students should need a minimum of 48 didactic and laboratory clock hours to cover the material.	• Instructors may use a variety of formats to deliver content including but not limited to: - Independent student preparation - Synchronous or asynchronous instruction - Face-to-face instruction - Pre- or co-requisites • **Course length should be based on competency, not hours** - Consensus opinion is that students should need a minimum of 150 clock hours including the four integrated phases of education (didactic, laboratory, clinical and field) to cover the material	• Instructors may use a variety of formats to deliver content including but not limited to: - Independent student preparation - Synchronous or asynchronous instruction - Face-to-face instruction - Pre- or co-requisites • **Course length should be based on competency, not hours** - Consensus opinion is that students should need a minimum of 200 clock hours beyond EMT requirements including the four integrated phases of education (didactic, laboratory, clinical and field) to cover the material	
Course Design	• Provide the following components of instruction: - Didactic instruction - Skills laboratories	• Provide the following components of instruction: - Didactic instruction - Skills laboratories - Hospital/clinical experience - Field experience		
Student Assessment	• Perform knowledge, skill and professional behavior evaluation based on educational standards and program objectives • Provide several methods of assessing achievement • Provide assessment that measures, as a minimum, entry-level competency in all domains			
Program Evaluation	• Provide evaluation of program instructional effectiveness • Provide evaluation of organizational and administrative effectiveness of program			

Glossary

Academic institution – Body or establishment instituted for an educational purpose that provides college credit or awards degrees.

Accreditation – The granting of approval by an official review board after meeting specific requirements. Typical requisites may cover areas such as program structure, processes, resources and student evaluation. The review board is nongovernmental and the review is collegial and based on self-assessment, peer assessment and judgment. The purpose of accreditation is student protection and public accountability. Additionally, accreditation can provide consistent quality education evaluation for a program's continual improvement and provides for a more consistent and uniform graduate competency.

Advanced-level care – Care that has greater potential benefit to the patient, but also greater potential risk to the patient if improperly or inappropriately performed. It is more difficult to attain and maintain competency in and requires significant background knowledge in basic and applied sciences. This level of care includes invasive and pharmacological interventions.

Affective domain – Describes learning in terms of feelings/emotions, attitudes and values. Additionally, the affective domain covers many professional behaviors that are required by an EMS clinician to perform his or her role as a health care provider. (NAEMSE, 2020)

Asynchronous instruction/learning – An instructional method that allows the learner to use a self-directed and self-paced learning format to move through the content of the course. In this type of instruction, learner-to-learner and learner-to-instructor interactions are independent of time and place. Communications and submission of work typically follow a schedule while learners and instructors do not interact at the same time.

Certification – The issuing of a certificate by a private agency based upon deemed competency established through standards adopted by that agency and met by the individual.

Cognitive domain – Describes learning that takes place through the process of thinking—it deals with facts and knowledge. (NAEMSE, 2020)

Competency – Expected behavior or knowledge to be achieved within a defined area of practice.

Credential – Generic term referring to all forms of professional qualification.

Credentialing – The umbrella term that includes the concepts of accreditation, licensure, registration and professional certification. Credentialing can establish criteria for fairness, quality, competence, and/or safety for professional services provided by authorized individuals, for products or for educational endeavors. Credentialing is the process by which an entity, authorized and qualified to do so, grants formal recognition to or records the recognition status of individuals, organizations, institutions, programs, processes, services or products that meet predetermined and standardized criteria. (NOCA, 2006)

Credentialing agency – An organization that certifies an institution's or individual's authority or claim of competence in a course of study or completion of objectives.

Curriculum – A particular course of study, often in a specialized field. For EMS education, it has traditionally included instructional techniques, detailed lesson plans with identified objectives and

numerous forms of learner evaluation. Curriculum is developed and adopted at the education program based upon National EMS Education Standards and state and local regulatory requirements. The use of local advisory groups can help tailor education to a local community's needs.

Didactic – The instructional theory, the lesson content. (NAEMSE, 2020)

Distributive education – A generic term used to describe a variety of learning delivery methods that attempt to accommodate a geographical separation (at least for some of the time) of the instructor and learners. Distributed education includes computer and web-based instruction, distance learning through television or video, web-based seminars, video conferencing and electronic and traditional educational models.

Domains – A category of learning. (See Affective domain, Cognitive domain, and Psychomotor domain.) (NAEMSE, 2020)

Entry-level competence – The level of competence expected of an individual who is about to begin a career. The minimum competence necessary to practice safely and effectively.

Health screening – A test or exam performed to find a condition before symptoms begin. Screening tests may help find diseases or conditions early when they may be easier to treat. (Medline Plus definition)

Instructional Guidelines – An emeritus resource document that provided crossover guidance for instructional content within the 2009 National EMS Education Standards.

Licensure – The act of granting an entity permission to do something that the entity could not legally do without such permission. Licensing is generally viewed by legislative bodies as a regulatory effort to protect the public from potential harm. In the health care delivery system, an individual who is licensed tends to enjoy a certain amount of autonomy in delivering health care services. Conversely, the licensed individual must satisfy ongoing requirements that ensure certain minimum levels of expertise. A license is generally considered a privilege, not a right.

Medical oversight – Physician review and approval of clinical content and matters relevant to medical authority.

National EMS Core Content – The document that defines the domain of out-of-hospital care.

National EMS Education Program Accreditation – The accreditation process for institutions that sponsor EMS educational programs.

National EMS Education Standards – The document that defines the entry-level terminal knowledge content (depth and breadth), clinical behavior/judgement, and educational infrastructure for each licensure level.

National EMS Scope of Practice Model – The document that defines the scope of practice of the various levels of EMS licensure.

Patient simulation – An alternative to a human patient to help students improve patient assessment and management skills; a high-fidelity patient simulator provides realistic simulation that responds physiologically to student therapies. These simulators have realistic features such as chests that rise and fall with respirations, pupils that react to light, pulses that can be palpated, etc.

Post-graduate internship and/or experience – Experience gained after the student has completed and graduated from school.

Practice analysis – A study conducted to determine the frequency and criticality of the tasks performed in practice.

Preceptor – A clinical teacher or instructor who is responsible for evaluating and ensuring student progress during hospital and field experiences. This individual typically has training to be able to function effectively in the role.

Primary instructor – A person who possesses the appropriate academic and/or allied health credentials and understanding of the principles and theories of education, and the required instructional experience necessary to provide quality instruction to students. (NAEMSE, 2020)

Program director – The individual responsible for an educational program or programs.

Psychomotor domain – Describes learning that takes place through the attainment of skills and bodily or kinesthetic movements. (NAEMSE, 2020)

Registration agency – An agency that is traditionally responsible for providing a product used to evaluate a chosen area. States may voluntarily adopt this product as part of their licensing process. The registration agency is also responsible for gathering and housing data to support the validity and reliability of its product.

Regulation – A rule or a statue that prescribes the management, governance or operation parameters for a given group; tends to be a function of administrative agencies to which a legislative body has delegated authority to promulgate rules and regulations to "regulate a given industry or profession." Most regulations are intended to protect public health, safety and welfare.

Scope of practice – The description of what a licensed individual legally can and cannot perform.

Standardized patient – An individual who has been thoroughly trained to accurately simulate a real patient with a medical condition; a standardized patient plays the role of a patient for students learning patient assessment, history taking skills, communication skills and other skills.

Standard of care – The domain of acceptable practice, as defined by scope of practice, current evidence, industry consensus and experts. Standard of care can vary depending on the independent variables of each situation.

Synchronous instruction – Instructional method whereby learners and instructors interact at the same time, either in the classroom or via a computer-driven course. This method allows for more immediate learner guidance and feedback using face-to-face, instant text-based messaging or real-time voice communications.

Team leader – Someone who leads the call and provides guidance and direction for setting priorities, scene and patient assessment and management. The team leader may not actually perform all the interventions but may assign others to do so.

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American Ambulance Association

American College of Emergency Physicians

American College of Surgeons Committee on Trauma

Association of Air Medical Services

Association of Critical Care Transport

Commission on Accreditation of Ambulance Services

Commission on Accreditation of Medical Transport Systems

Committee on Accreditation of Educational Programs for the EMS Professions/Commission on Accreditation of Allied Health Education Programs

Congress of Mobile Medical Professionals

EMS for Children (Health Resources and Services Administration, Maternal Child and Health Bureau)

EMS for Children Innovation & Improvement Center

Emergency Nurses Association

Georgia Department of Public Health

International Association of EMS Chiefs

International Association of Fire Chiefs

International Association of Fire Fighters

International Association of Flight & Critical Care Paramedics

State of Minnesota EMS Regulatory Board

National Association of EMS Physicians

National Association of EMTs

National Association of State EMS Officials

National EMS Management Association

National Fire Protection Agency

National Registry of EMTs

National Volunteer Fire Council

New Hampshire Department of Safety, Division of Fire Standards and Training and EMS

New Jersey State EMS Council, 17th District

North Carolina Office of EMS

US Army

US Air Force

Project Meetings

- First Development Meeting – May 2-3, 2019, Pittsburgh, PA
- Association Liaison/Stakeholder Call – July 15, 2019
- Second Development Meeting – October 3-4, 2019, Washington, DC
- Instructional Guideline Revision Meeting – January 30-February 1, 2020, Hurst, TX
- Association Liaison/Stakeholder Call – August 11, 2020
- Revision Meeting (virtual) – October 9, 2020
- Third Development Meeting (virtual) – January 28, 2021

Public Comment Periods

- August 16-September 20, 2019
- February 17-March 17, 2020
- November 13-December 14, 2020

Appendix A: Resources for EMS

National Organizations:

American Academy of Emergency Medicine (AAEM): https://www.aaem.org/

American Academy of Pediatrics (AAP): https://www.aap.org/en-us/Pages/Default.aspx

American Academy of Orthopedic Surgeons (AAOS): https://www.aaos.org/

American Ambulance Association (AAA): https://ambulance.org

American College of Emergency Physicians (ACEP): https://www.acep.org/

American College of Surgeons Committee on Trauma (ACS COT): https://www.facs.org/Quality-Programs/Trauma

American Medical Association (AMA): https://www.ama-assn.org/

American Public Health Association (APHA): https://www.apha.org/

American Trauma Society (ATS): https://www.amtrauma.org/

Association of Air Medical Services (AAMS): https://aams.org/

Association of State and Territorial Health Officials (ASTHO): https://www.astho.org/

Center for Disease Control: https//www.cdc.gov/

Commission on Accreditation of Allied Health Education Programs (CAAHEP): https://www.caahep.org/

Commission on Accreditation of Ambulance Services (CAAS): https://www.caas.org/

Commission of Accreditation of Medical Transport Systems (CAMTS): https://www.camts.org/International

National Organizations:

Commission of Accreditation of Medical Transport Systems (CAMTS): https://www.camts.org/International

Committee on Accreditation of Educational Programs for the Emergency Medical Services Professions (CoAEMSP): https://coaemsp.org/

Emergency Nurses Association (ENA): https://www.ena.org/

International Academies of Emergency Dispatch (IAED): https://www.emergencydispatch.org/home

International Association of Emergency Managers (IAEM): https://www.iaem.org/

International Association of EMS Chiefs (IAEMSC): https://www.iaemsc.org/

International Association of EMTs and Paramedics (IAEP): https://www.iaep.org/

International Association of Fire Chiefs (IAFC): https://www.iafc.org/

International Association of Firefighters: https://www.iaff.org/

International Association of Flight & Critical Care Paramedics (IAFCCP): https://www.iafccp.org/

National Association of County & City Health Officials (NACCHO): https://www.naccho.org/about

National Association of EMS Educators (NAEMSE): https://naemse.org/

National Association of EMS Officials (NASEMSO): https://nasemso.org/

National Association of EMS Physicians (NAEMSP): https://naemsp.org/

National Association of Emergency Medical Technicians (NAEMT): https://naemt.org/

National EMS Advisory Council: https://www.ems.gov/memsac.html

National EMS Management Association (NEMSMA): https://www.nemsma.org/

National Organizations:

National EMS Quality Alliance (NEMSQA): https://www.nemsqa.org/

National Fire Protection Association (NFPA): https://www.nfpa.org/

National Organization of State Offices of Rural Health (NOSORH): https://nosorh.org/

National Registry of Emergency Medical Technicians (NREMT): https://www.nremt.org

National Volunteer Fire Council (NVFC): https://www.nvfc.org/about/

Safe States Alliance: https://www.safestates.org/

Society for Academic Emergency Medicine: https://www.saem.org/home

Federal Agencies:

Federal Interagency Committee on EMS (FICEMS): https://www.ems.gov/ficems.html

Department of Transportation: https://www.transportation.gov/

- Federal Highway Administration (FHWA): https://ops.fhwa.dot.gov/eto_tim_pse/preparedness/tim/index.htm
- National Highway Traffic Safety Administration (NHTSA): https://www.ems.gov/

Department of Homeland Security **(DHS):** https://www.dhs.gov/

- U.S. Fire Administration (USFA): https://www.usfa.fema.gov/

Department of Health and Human Services **(DHHS):** https://www.hhs.gov/

- Agency for Healthcare Research and Quality (AHRQ): https://www.ahrq.gov/
- Centers for Disease Control and Prevention (CDC): https://www.cdc.gov/
- National Institute for Occupational Safety and Health (NIOSH): https://www.cdc.gov/niosh/index.htm

Federal Agencies:

Centers for Medicare & Medicaid Services (CMS): https://www.cms.gov/

Health Resources & Services Administration (HRSA): https://www.hrsa.gov/

Indian Health Service (IHS): https://www.ihs.gov/

National Institutes of Health (NIH): https://www.nih.gov/

Office of the Assistant Secretary for Preparedness and Response (ASPR): https://www.phe.gov/about/aspr/Pages/default.aspx

Substance Abuse and Mental Health Services Administration (SAMHSA): https://www.samhsa.gov/

Federal Communications Commission **(FCC):** https://www.fcc.gov/

Department of Defense **(DoD):** https://dod.defense.gov/

- Office of the Assistant Secretary of Defense for Health Affairs: https://www.health.mil/About-MHS/OASDHA

Department of the Interior **(DOI):** https://www.doi.gov/

- National Park Service (NPS): https://www.nps.gov/index.htm

Department of Agriculture **(USDA):** https://www.usda.gov/

- U.S. Forest Service (USFS): https://www.fs.usda.gov/

Department of Labor **(DOL):** https://www.dol.gov/

Other Sources:

Occupational Safety and Health Administration (OSHA): https://www.osha.gov/

National Highway Traffic Safety Administration (NHTSA): www.EMS.gov

American Heart Association ECC: https://cpr.heart.org/en/resuscitation-science/cpr-and-ecc-guidelines

EMSC Innovation and Improvement Center (EIIC): https://emscimprovement.center/

National EMS Advisory Council (NEMSAC): https://www.ems.gov/nemsac.html

National EMS Information System (NEMSIS): https://nemsis.org/

Prehospital Care Research Forum: https://www.cpc.mednet.ucla.edu/pcrf

Prehospital Guidelines Consortium: http://prehospitalguidelines.org/

NHTSA