National Emergency Medical Services Education Standards

EMS NHTSA
National Highway Traffic Safety Administration

The National EMS Education Standards
Table of Contents

Executive Summary 1

Introduction 1
- Historical Development of EMS in the United States 2
- The National EMS Education Standards 7

National EMS Education Standards 11
- Preparatory 11
  - EMS Systems 11
  - Research 11
  - Workforce Safety and Wellness 12
  - Documentation 12
  - EMS System Communication 12
  - Therapeutic Communication 13
  - Medical/Legal and Ethics 13
- Anatomy and Physiology 14
- Medical Terminology 14
- Pathophysiology 14
- Life Span Development 14
- Public Health 15
- Pharmacology 15
  - Principles of Pharmacology 15
  - Medication Administration 16
  - Emergency Medications 16
- Airway Management, Respirations and Artificial Ventilation 17
  - Airway Management 17
  - Respiration 18
  - Artificial Ventilation 18
- Assessment 19
  - Scene Size-Up 19
  - Primary Assessment 20
  - History Taking 20
  - Secondary Assessment 20
  - Monitoring Devices 21
  - Reassessment 21

Medicine 22
Medical Overview 22
Neurology 23
Abdominal and Gastrointestinal Disorders 24
Immunology 25
Infectious Diseases 26
Endocrine Disorders 27
Psychiatric 28
Cardiovascular 29
Toxicology 30
Respiratory 31
Hematology 32
Genitourinary/Renal 33
Gynecology 34
Non-Traumatic Musculoskeletal Disorders 34
Diseases of the Eyes, Ears, Nose, and Throat 35

Shock and Resuscitation 35

Trauma 35
Trauma Overview 35
Bleeding 35
Chest Trauma 37
Abdominal and Genitourinary Trauma 38
Orthopedic Trauma 39
Soft Tissue Trauma 40
Head, Facial, Neck, and Spine Trauma 41
Environmental Emergencies 43
Multisystem Trauma 43

Special Patient Populations 44
Obstetrics 44
Neonatal care 45
Pediatrics 46
Geriatrics 47
Patients With Special Challenges 48

EMS Operations 48
Principles of Safely Operating a Ground Ambulance 48
Incident Management 49
Multiple Casualty Incidents 49
Air Medical 49
Vehicle Extrication 49
Hazardous Materials 49
Terrorism and Disaster 50

Clinical Behavior/Judgment 51
Assessment 51
Therapeutic Communication and Cultural Competency 51
Psychomotor Skills 52
Professionalism 53
Decision-Making 53
Record Keeping 53
Patient Complaints 54
Scene Leadership 55
Scene Safety 55

Educational Infrastructure 56
Educational Facilities 56
Student Space 56
Instructional Resources 56
Instructor Reparation Resources 56
Storage Space 57
Sponsorship 57
Programmatic Approval 57
Faculty 57
Medical Director Oversight 57
Hospital/Clinical Experience 58
Field Experience 59
Course Length 59
Course Design 59
Student Assessment 60
Program Evaluation 60

Instructional Guidelines 61

Glossary for Education Standards 62

References 66

Acknowledgements 67

Executive Summary

The *National EMS Education Standards* (the *Standards*) represent another step toward realizing the vision of the *1996 EMS Agenda for the Future,* as articulated in the *2000 EMS Education Agenda for the Future: A Systems Approach*.

The *National EMS Education Standards* outline the minimal terminal objectives for entry-level EMS personnel to achieve within the parameters outlined in the *National EMS Scope of Practice Model*. Although educational programs must adhere to the *Standards*, its format will allow diverse implementation methods to meet local needs and evolving educational practices. The less prescriptive format of the *Standards* will also allow for ongoing revision of content consistent with scientific evidence and community standards of care.

In implementing the *Standards*, EMS instructors and educational programs will have the freedom to develop their own curricula or use any of the wide variety of publishers' lesson plans and instructional resources that are available at each licensure level.

Consistent with the EMS Education Agenda, EMS accreditation authorities will use the *Standards* as the framework for evaluation of program curricula.

The *National EMS Education Standards* are not a stand-alone document. 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*.

Introduction

As a profession, EMS is still in its early developmental stages. The formal progression of an organized civilian EMS system began in the 1960s and continues to evolve 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 practice and there was no clear delineation of scopes of practice in EMS.

Historical Development of EMS in the United States

Table 1 outlines key events in the development of EMS in the United States from the 1950s to the present.

Table 1: Historical Development of EMS		
Year	**Event/Organization**	**Result**
1950s	American College of Surgeons	Developed the first training program for ambulance attendants
1960	President's Committee for Traffic Safety	Recognized the need to address "Health, Medical Care and Transportation of the Injured" to reduce traffic fatalities
1966	National Academy of Science published *Accidental Death and Disability: The Neglected Disease of Modern Society (The White Paper)*	Quantified the scope of traffic-related death in the United States Described the deficiencies in prehospital care in this country, including: ▪ Call for ambulance standards ▪ State-level policies and regulations ▪ Recommendation to adopt methods for providing consistent ambulance services at the local level
1966	Highway Safety Act of 1966	Required each State to adopt highway safety programs to comply with Federal standards (including "emergency services") Impetus for NHTSA leadership in EMS: ▪ Directed writing of National Standard Curricula ▪ Provided funding to States to develop State EMS Offices ▪ Took leadership role in EMS system development, including developing model EMS State legislation
1970s	Robert Wood Johnson Foundation and Federal Government	Funded regional EMS systems and demonstration projects
1970s	Crash Injury Management for the Law Enforcement Officer published by NHTSA	40-hour program that evolved into First Responder: NSC in 1979
1970	National Registry of EMTs (NREMT)	Held first board meeting, with goal to provide uniform standards for credentialing ambulance attendants.

Table 1: Historical Development of EMS		
Year	**Event/Organization**	**Result**
1971	*Emergency Care and Transportation of the Sick and Injured* published by the American Academy of Orthopedic Surgeons (AAOS)	One of the first EMS textbooks
1973	Emergency Medical Services Act of 1973 enacted by Congress as Title XII of the Public Health Services Act	Over $300 million in funding for EMS over 8 years: ▪ Allowed for EMS system planning and implementation ▪ Required States to focus on EMS personnel and training ▪ Resulted in legislation and regulation of EMS personnel levels
1975	American Medical Association (AMA)	Recognized EMT-Paramedic as an allied health occupation
1977	National Standard Curriculum for EMT-Paramedic published by NHTSA	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-Intermediate, and EMT-Paramedic: NSC revised by NHTSA	EMT-Paramedic reformatted into six divisions
1990	NHTSA hosts EMS Training Workshop	This workshop facilitated the development of the 1990s curricula and introduced the assessment based education concept
1992	EMS Education and Practice Blueprint.	This document served as a template for the revised format of the 1990s NSC revision projects
1992	Initiated EMS Agenda for the Future	Funded by NHTSA, Maternal and Child Health Bureau (MCHB), and Health Resources and Services Administration (HRSA)

Table 1: Historical Development of EMS		
Year	**Event/Organization**	**Result**
1994	NREMT Practice Analysis	Conducted practice analysis of EMTs and paramedics: ▪ Determined importance of EMS actions based on assessment of frequency and potential for harm ▪ Provided foundation for NREMT test blueprint
1994	EMT-Ambulance revised and renamed EMT-Basic: NSC	
1995	First Responder: NSC is revised	
1996	*EMS Agenda for the Future* is created by the National Association of EMS Physicians and National Association of State EMS Directors	Vision statement for integration of EMS into the health care system and funded by NHTSA and Health Resources and Services Administration (HRSA), Maternal and Child Health Bureau (MCHB), EMSC Program
1998	PEW Health Professions Commission Taskforce on Health Care Workforce Regulation published *Strengthening Consumer Protection: Priorities for Health Care Workforce Regulation*	Recommended: ▪ National Policy Advisory Board to establish standards and model legislative language for uniform scope of practice authority for health professions ▪ Emphasis on States' responsibility to enact uniform scope of practice consistent with the recommendations of the National Policy Advisory Board.
1998	EMT-Paramedic: NSC revised	
1999	EMT-Intermediate: NSC revised	
2000	*Education Agenda for the Future: A Systems Approach* published by NHTSA	Funded by NHTSA and HRSA. Designed to develop an integrated system of EMS regulation, certification, and licensure
2004	*2004 National EMS Practice Analysis* published by NREMT	Updates the 1994 Practice Analysis
2005	*National EMS Core Content* published by NHTSA and HRSA	Defines: ▪ Domain of knowledge of EMS personnel described within the *National EMS Scope of Practice* ▪ Universal knowledge and skills of EMS personnel

Table 1: Historical Development of EMS		
Year	**Event/Organization**	**Result**
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 Identifying instructor attributes necessary for implementing education standards
2006	*EMS at the Crossroads* Institute of Medicine Report	Recommendations related to *EMS Education Agenda*: ▪ State governments should adopt a common scope of practice for EMS personnel, with State licensing reciprocity ▪ States should require national accreditation of paramedic programs States should accept national certification as a prerequisite for State licensure and local credentialing of EMS providers
2007	*National EMS Scope of Practice* published by NHTSA	National guideline to define levels of EMS licensure: ▪ Guide State legislation ▪ Promote reciprocity between States ▪ Clarify EMS roles for the community

In August 1996, the *EMS Agenda for the Future* (the *Agenda*) was published. This consensus document was developed with funding from the National Highway Traffic Safety Administration and the Health Resources and Services Administration. The National Association of EMS Physicians and the National Association of State EMS Directors led this process, which involved many stakeholders.

The *Agenda* document was designed to guide government and private organizations in EMS planning, development, and policy-making at the national, State, and local levels. It addressed 14 attributes of EMS, including the EMS education system. The *Agenda* defined a vision for the future of EMS education that "employs sound educational principles," "based on research," and "conducted by qualified instructors." In December of that year, 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 outcome of the EMS Education Conference was summarized in the *EMS Education Agenda for the Future: A Systems Approach.* This document included the following recommendations:

- 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 more explicitly identify core educational content 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.

In 1998, NHTSA convened a Blueprint Modeling Group to revise the *Blueprint*. That group determined that the *Blueprint* represented only one component of a comprehensive EMS education system, so it redefined its mission, and the group was renamed the EMS Education Task Force. The Task Force produced a document titled the *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 into the model shown in Figure 1 in the *Education Agenda*. This document states that, to be most effective, each component in the EMS education system should be structured, coordinated, and interdependent.

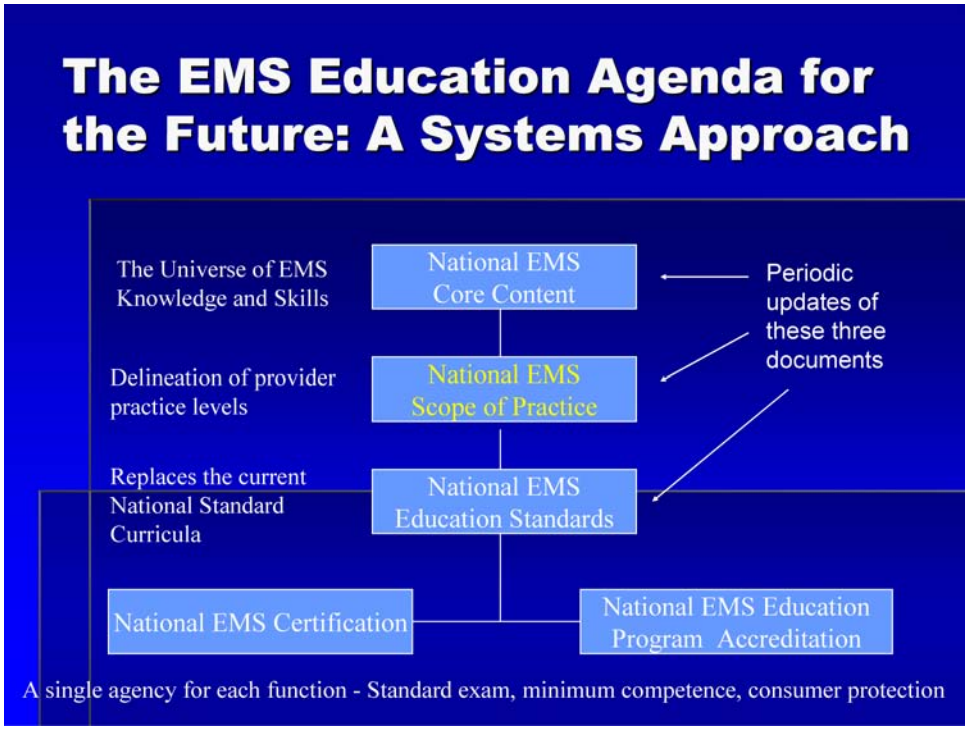

Figure 1: Model EMS System

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 providers 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.

The *National EMS Scope of Practice Model* (*Scope of Practice*) is a consensus document that was published in 2006. This document defines the levels of EMS personnel and delineates the practices and minimum competencies for each level of EMS personnel. 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 this country 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* describes four levels of EMS personnel licensure: Emergency Medical Responder (EMR), Emergency Medical Technician (EMT), Advanced Emergency Medical Technician (AEMT), and Paramedic. 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."

The *National EMS Education Standards*, led by the National Association of EMS Educators, replace the NHTSA National Standard Curricula at all licensure levels. The *Standards* define the competencies, clinical behaviors, and judgments that must be met by entry-level EMS personnel to meet practice guidelines defined in the *National EMS Scope of Practice Model*. Content and concepts defined in the *National EMS Core Content* are also integrated within the *Standards*.

National EMS Certification and National EMS Education Program Accreditation are the "bookends" that support the other key elements of the system. The Education Agenda recommends an individual must graduate from a nationally accredited EMS education program to be eligible for National EMS Certification. This recommendation was also supported by the Institute of Medicine report, *The Future of Emergency Care: EMS at the Crossroads*. 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.

The National EMS Education Standards

The *National EMS Education Standards* comprise four components (Table 2):

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

Table 2: 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

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, unless a specific age group is identified.

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 knowing and doing everything identified in that specific area, as well as knowing and doing all tasks in the three preceding levels.

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 (Figure 2).

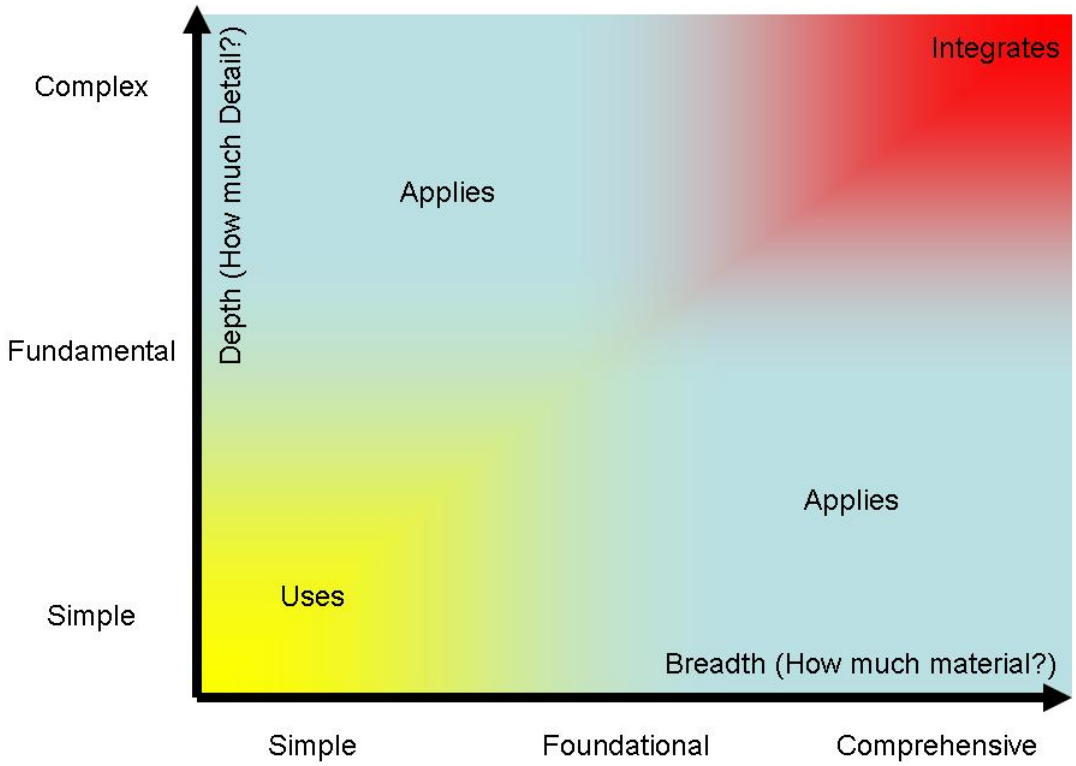

Figure 2: Terminology Graph

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, the Emergency Medical Responder needs to have a thorough understanding (depth) about how to safely and effectively use the bag valve mask; however, the EMR is taught a limited number of concepts (breadth) surrounding management of a patient's airway.

To describe the intended depth of knowledge of a particular concept within a provider level, the Project Team uses the terms *simple*, *fundamental*, and *complex*. This terminology better illustrates the progression of the depth of knowledge from one particular level to another. For example, the EMR's *depth* of knowledge for bleeding control is simple while the EMT's *depth* of knowledge for bleeding control is fundamental.

To describe the intended breadth of knowledge of a concept within a provider level, the project team uses the terms *simple*, *foundational*, and *comprehensive*. This terminology also better illustrates the progression of the breadth of knowledge from one particular level to another. For example, the EMT's breadth of knowledge for cardiovascular disorders is foundational while the Paramedic's *breadth* of knowledge for cardiovascular disorders is comprehensive.

From the National EMS Scope of Practice Model: EMS Personnel Licensure Levels

Emergency Medical Responder

The primary focus of the Emergency Medical Responder is to initiate immediate lifesaving care to critical patients who access the emergency medical system. This individual possesses the basic knowledge and skills necessary to provide lifesaving interventions while awaiting additional EMS response and to assist higher level personnel at the scene and during transport. Emergency Medical Responders function as part of a comprehensive EMS response, under medical oversight. Emergency Medical Responders perform basic interventions with minimal equipment.

Emergency Medical Technician

The primary focus of the Emergency Medical Technician is to provide basic emergency medical care and transportation for critical and emergent patients who access the emergency medical system. This individual possesses the basic knowledge and skills necessary to provide patient care and transportation. Emergency Medical Technicians function as part of a comprehensive EMS response, under medical oversight. Emergency Medical Technicians perform interventions with the basic equipment typically found on an ambulance. The Emergency Medical Technician is a link from the scene to the emergency health care system.

Advanced Emergency Medical Technician

The primary focus of the Advanced Emergency Medical Technician is to provide basic and limited advanced emergency medical care and transportation for critical and emergent patients who access the emergency medical system. This individual possesses the basic knowledge and skills necessary to provide patient care and transportation. Advanced Emergency Medical Technicians function as part of a comprehensive EMS response, under medical oversight. Advanced Emergency Medical Technicians perform interventions with the basic and advanced equipment typically found on an ambulance. The Advanced Emergency Medical Technician is a link from the scene to the emergency health care system.

Paramedic

The Paramedic is an allied health professional whose primary focus is to provide advanced emergency medical care for critical and emergent patients who access the emergency medical system. This individual possesses the complex knowledge and skills necessary to provide patient care and transportation. Paramedics function as part of a comprehensive EMS response, under medical oversight. Paramedics perform interventions with the basic and advanced equipment typically found on an ambulance. The Paramedic is a link from the scene into the health care system.

Each educational level assumes mastery of previously stated competencies. Each individual must demonstrate each competency within his or her scope of practice and for patients of all ages.

	EMR	EMT	AEMT	Paramedic
Preparatory	**Uses simple knowledge of the EMS system, safety/well-being of the EMR, medical/legal issues at the scene of an emergency while awaiting a higher level of care.**	**Applies fundamental knowledge of the EMS system, safety/well-being of the EMT, medical/legal and ethical issues to the provision of emergency care.**	**Applies fundamental knowledge of the EMS system, safety/well-being of the AEMT, medical/legal and ethical issues to the provision of emergency care.**	**Integrates comprehensive knowledge of EMS systems, the safety/well-being of the paramedic, and medical/legal and ethical issues which is intended to improve the health of EMS personnel, patients, and the community.**
EMS Systems	Simple depth, simple breadth • EMS systems • Roles/ responsibilities/ professionalism of EMS personnel • Quality improvement	**EMR Material PLUS:** Simple depth, foundational breadth • EMS systems • History of EMS • Roles/ responsibilities/ professionalism of EMS personnel • Quality improvement • Patient safety	**EMT Material PLUS:** Fundamental depth, foundational breadth • Quality improvement • Patient safety	**AEMT Material PLUS:** Fundamental depth, foundational breadth • History of EMS Complex depth, comprehensive breadth • EMS systems • Roles/ responsibilities/ professionalism of EMS personnel • Quality improvement • Patient safety
Research	Simple depth, simple breadth • Impact of research on EMR care • Data collection	**EMR Material PLUS:** Simple depth, simple breadth • Evidence-based decision making	**Same as Previous Level**	**AEMT Material PLUS:** Fundamental depth, foundational breadth • Research principles to interpret literature and advocate evidence-based practice

	EMR	EMT	AEMT	Paramedic

Workforce Safety and Wellness	Simple depth, simple breadth
	• Standard safety precautions
	• Personal protective equipment
	• Stress management
	  ○ Dealing with death and dying
	• Prevention of response-related injuries
	• Lifting and moving patients
		EMR Material PLUS:
		Fundamental depth, foundational breadth
		• Standard safety precautions
		• Personal protective equipment
		• Stress management
		  ○ Dealing with death and dying
		• Prevention of work related injuries
		• Lifting and moving patients
		• Disease transmission
		• Wellness principles
			Same as Previous Level	**AEMT Material PLUS:**
				Complex depth, comprehensive breadth
				• Provider safety and well-being
				• Standard safety precautions
				• Personal protective equipment
				• Stress management
				  ○ Dealing with death and dying
				• Prevention of work related injuries
				• Lifting and moving patients
				• Disease transmission
				• Wellness principles

Documentation	Simple depth, simple breadth • Recording patient findings	**EMR Material PLUS:** Fundamental depth, foundational breadth • Principles of medical documentation and report writing	**EMT Material PLUS:** Complex depth, foundational breadth • Principles of medical documentation and report writing	**AEMT Material PLUS:** Complex depth, comprehensive breadth • Principles of medical documentation and report writing
EMS System Communication	Simple depth, simple breadth Communication needed to • Call for Resources • Transfer care of the patient • Interact within the team structure	**EMR Material PLUS:** Simple depth, simple breadth • EMS communication system • Communication with other health care professionals • Team communication and dynamics	**EMT Material PLUS:** Fundamental depth, foundational breadth • EMS communication system • Communication with other health care professionals • Team communication and dynamics	**AEMT Material PLUS:** Complex depth, comprehensive breadth • EMS communication system • Communication with other health care professionals • Team communication and dynamics

	EMR	EMT	AEMT	Paramedic
Therapeutic Communication	Simple depth, simple breadth Principles of communicating with patients in a manner that achieves a positive relationship • Interviewing techniques	**EMR Material PLUS:** Simple depth, simple breadth Principles of communicating with patients in a manner that achieves a positive relationship • Adjusting communication strategies for age, stage of development, patients with special needs, and differing cultures Fundamental depth, foundational breadth • Interviewing techniques • Verbal defusing strategies • Family presence issues	**EMT Material PLUS:** Simple depth, simple breadth Principles of communicating with patients in a manner that achieves a positive relationship • Dealing with difficult patients	**AEMT Material PLUS:** Complex depth, comprehensive breadth Principles of communicating with patients in a manner that achieves a positive relationship • Factors that affect communication • Interviewing techniques • Dealing with difficult patients • Adjusting communication strategies for age, stage of development, patients with special needs, and differing cultures
Medical/Legal and Ethics	Simple depth, simple breadth • Consent/refusal of care • Confidentiality • Advanced directives • Tort and criminal actions • Evidence preservation • Statutory responsibilities • Mandatory reporting • Ethical principles/moral obligations • End-of-life issues	**EMR Material PLUS:** Fundamental depth, foundational breadth • Consent/refusal of care • Confidentiality • Advanced directives • Tort and criminal actions • Evidence preservation • Statutory responsibilities • Mandatory reporting • Ethical principles/moral obligations	**Same as Previous Level**	**AEMT Material PLUS:** Complex depth, comprehensive breadth • Consent/refusal of care • Confidentiality • Advanced directives • Tort and criminal actions • Statutory responsibilities • Mandatory reporting • Health care regulation • Patient rights/advocacy • End-of-life Issues • Ethical principles/moral obligations • Ethical tests and decision making

	EMR	EMT	AEMT	Paramedic
Anatomy and Physiology	**Uses simple 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 fundamental knowledge of the anatomy and function of all human systems to the practice of EMS.**	**Integrates complex knowledge of the anatomy and physiology of the airway, respiratory and circulatory systems to the practice of EMS.**	**Integrates a complex depth and comprehensive breadth of knowledge of the anatomy and physiology of all human systems**

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

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

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

	EMR	EMT	AEMT	Paramedic
Public Health	**Have an awareness of local public health resources and the role EMS personnel play in public health emergencies.**	**Uses simple knowledge of the principles of illness and injury prevention in emergency care.**	**Uses simple knowledge of the principles of the role of EMS during public health emergencies.**	**Applies fundamental knowledge of principles of public health and epidemiology including public health emergencies, health promotion, and illness and injury prevention.**

	EMR	EMT	AEMT	Paramedic
Pharmacology	**Uses simple knowledge of the medications that the EMR may self-administer or administer to a peer in an emergency.**	**Applies fundamental knowledge of the medications that the EMT may assist/administer to a patient during an emergency.**	**Applies to patient assessment and management fundamental knowledge of the medications carried by AEMTs that may be administered to a patient during an emergency.**	**Integrates comprehensive knowledge of pharmacology to formulate a treatment plan intended to mitigate emergencies and improve the overall health of the patient.**
Principles of Pharmacology	**No knowledge related to this competency is applicable at this level.**	Simple depth, simple breadth • Medication safety • Kinds of medications used during an emergency	**EMT Material PLUS:** Fundamental depth, foundation breadth • Medication safety • Medication legislation • Naming • Classifications • Storage and security • Autonomic pharmacology • Metabolism and excretion • Mechanism of action • Medication response relationships • Medication interactions • Toxicity	**AEMT Material PLUS:** Complex depth, comprehensive breadth) • Medication safety • Medication legislation • Naming • Classifications • Schedules • Pharmacokinetics • Storage and security • Autonomic pharmacology • Metabolism and excretion • Mechanism of action • Phases of medication activity • Medication response relationships • Medication interactions • Toxicity

	EMR	EMT	AEMT	Paramedic
Medication Administration	Simple depth, simple breadth Within the scope of practice of the EMR, how to • Self-administer medication • Peer-administer medication	**EMR Material PLUS:** Fundamental depth, foundational breadth Within the scope of practice of the EMT how to • Assist/administer medications to a patient	**EMT Material PLUS:** Fundamental depth, foundational breadth • Routes of administration • Within the scope of practice of the AEMT, administer medications to a patient	**AEMT Material PLUS:** Complex depth, comprehensive breadth • Routes of administration • Within the scope of practice of the paramedic, administer medications to a patient
Emergency Medications	Simple depth, simple breadth Within the scope of practice of the EMR • Names • Effects • Indications • Routes of administration • Dosages for the medications administered	**EMR Material PLUS:** Fundamental depth, simple breadth Within the scope of practice of the EMT • Names • Actions • Indications • Contraindications • Complications • Routes of administration • Side effects • Interactions • Dosages for the medications administered	**EMT Material PLUS:** Fundamental depth, foundational breadth Within the scope of practice of the AEMT • Names • Actions • Indications • Contraindications • Complications • Routes of administration • Side effects • Interactions • Dosages for the medications administered	**AEMT Material PLUS:** Complex depth, comprehensive breadth Within the scope of practice of the paramedic • Names • Actions • Indications • Contraindications • Complications • Routes of administration • Side effects • Interactions • Dosages for the medications administered

	EMR	EMT	AEMT	Paramedic
Airway Management, Respiration and Artificial Ventilation	**Applies knowledge (fundamental depth, foundational breadth) of general 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 (fundamental depth, foundational breadth) of general 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 (fundamental depth, foundational breadth) of additional 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 complex 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	Fundamental depth, simple breadth Within the scope of practice of the EMR • Airway anatomy • Airway assessment • Techniques of assuring a patent airway	**EMR Material PLUS:** Fundamental depth, foundational breadth Within the scope of practice of the EMT • Airway anatomy • Airway assessment • Techniques of assuring a patent airway	**EMT Material PLUS:** Fundamental depth, foundational breadth Within the scope of practice of the AEMT • Airway anatomy • Airway assessment • Techniques of assuring a patent airway	**AEMT Material PLUS:** Complex depth, comprehensive breadth Within the scope of practice of the paramedic • Airway anatomy • Airway assessment • Techniques of assuring a patent airway

	EMR	EMT	AEMT	Paramedic
Respiration	Fundamental depth, simple breadth • Anatomy of the respiratory system • Physiology and pathophysiology of respiration ○ Pulmonary ventilation ○ Oxygenation ○ Respiration ▪ External ▪ Internal ▪ Cellular • Assessment and management of adequate and inadequate respiration • Supplemental oxygen therapy	**EMR Material PLUS:** Fundamental depth, foundational breadth • Anatomy of the respiratory system • Physiology and pathophysiology of respiration ○ Pulmonary ventilation ○ Oxygenation ○ Respiration ▪ External ▪ Internal ▪ Cellular • Assessment and management of adequate and inadequate respiration • Supplemental oxygen therapy	**EMT Material PLUS:** Complex depth, foundational breadth • Anatomy of the respiratory system Fundamental depth, comprehensive breadth • Physiology and pathophysiology of respiration ○ Pulmonary ventilation ○ Oxygenation ○ Respiration ▪ External ▪ Internal ▪ Cellular • Assessment and management of adequate and inadequate respiration • Supplemental oxygen therapy	**AEMT Material PLUS:** Complex depth, comprehensive breadth • Anatomy of the respiratory system • Physiology, and pathophysiology of respiration ○ Pulmonary ventilation ○ Oxygenation ○ Respiration ▪ External ▪ Internal ▪ Cellular • Assessment and management of adequate and inadequate respiration • Supplemental oxygen therapy
Artificial Ventilation	Fundamental depth, simple breadth Assessment and management of adequate and inadequate ventilation • Artificial ventilation • Minute ventilation • Alveolar ventilation • Effect of artificial ventilation on cardiac output	**EMR Material PLUS:** Fundamental depth, foundational breadth Assessment and management of adequate and inadequate ventilation • Artificial ventilation • Minute ventilation • Alveolar ventilation • Effect of artificial ventilation on cardiac output	**EMT Material PLUS:** Complex depth, foundational breadth Assessment and management of adequate and inadequate ventilation • Artificial ventilation • Minute ventilation • Alveolar ventilation • Effect of artificial ventilation on cardiac output	**AEMT Material PLUS:** Complex depth, comprehensive breadth Assessment and management of adequate and inadequate ventilation • Artificial ventilation • Minute ventilation • Alveolar ventilation • Effect of artificial ventilation on cardiac output

	EMR	EMT	AEMT	Paramedic
Assessment	**Use scene information and simple 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 Previous 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 Size-Up	Complex depth, comprehensive breadth • Scene safety Fundamental depth, foundational breadth • Scene management ○ Impact of the environment on patient care ○ Addressing hazards ○ Violence ○ Need for additional or specialized resources ○ Standard precautions	**EMR Material PLUS:** Fundamental depth, foundational breadth • Scene management ○ Multiple patient situations	**Same as Previous Level**	**AEMT Material PLUS:** Complex depth, comprehensive breadth • Scene management ○ Impact of the environment on patient care ○ Addressing hazards ○ Violence ○ Multiple patient situations

	EMR	EMT	AEMT	Paramedic
Primary Assessment	Simple depth, simple breadth • Primary assessment for all patient situations ○ Level of consciousness ○ ABCs ○ Identifying life threats ○ Assessment of vital functions • Begin interventions needed to preserve life	**EMR Material PLUS:** Fundamental depth, simple breadth • Primary assessment for all patient situations ○ Initial general impression ○ Level of consciousness ○ ABCs ○ Identifying life threats ○ Assessment of vital functions • Integration of treatment/ procedures needed to preserve life	**EMT Material PLUS:** Fundamental depth, foundational breadth • Primary assessment for all patient situations ○ Initial general impression ○ Level of consciousness ○ ABCs ○ Identifying life threats ○ Assessment of vital functions • Integration of treatment/ procedures needed to preserve life	**AEMT Material PLUS:** Complex depth, comprehensive breadth • Primary assessment for all patient situations ○ Initial general impression ○ Level of consciousness ○ ABCs ○ Identifying life threats ○ Assessment of vital functions • Integration of treatment/ procedures needed to preserve life
History Taking	Simple depth, simple breadth • Determining the chief complaint • Mechanism of injury/nature of illness • Associated signs and symptoms	**EMR Material PLUS:** Fundamental depth, foundational breadth • Investigation of the chief complaint • Mechanism of injury/nature of illness • Past medical history • Associated signs and symptoms • Pertinent negatives	**Same as Previous Level**	**AEMT Material PLUS:** Complex depth, comprehensive breadth • Components of the patient history • Interviewing techniques • How to integrate therapeutic communication techniques and adapt the line of inquiry based on findings and presentation
Secondary Assessment	Simple depth, simple breadth • Performing a rapid full body scan • Focused assessment of pain • Assessment of vital signs	**EMR Material PLUS:** Fundamental depth, foundational breadth Techniques of physical examination • Respiratory system ○ Presence of breath sounds • Cardiovascular system • Neurological system • Musculoskeletal system • All anatomical regions	**EMT Material PLUS:** Complex depth, foundational breadth Assessment of • Lung sounds	**AEMT Material PLUS:** Complex depth, comprehensive breadth Techniques of physical examination for all major • Body systems • Anatomical regions

	EMR	EMT	AEMT	Paramedic

Monitoring Devices	**No knowledge related to this competency is applicable at this level.**	Simple depth, simple breadth
		Within the scope of practice of the EMT
		• Obtaining and using information from patient monitoring devices including (but not limited to)
		  ○ Pulse oximetry
		  ○ Non-invasive blood pressure
			EMT Material PLUS:
			Within the scope of practice of the AEMT
			Simple depth, simple breadth
			• Obtaining and using information from patient monitoring devices including (but not limited to)
			  ○ Blood glucose determination
				AEMT Material PLUS:
				Fundamental depth, foundational breadth
				Within the scope of practice of the paramedic
				• Obtaining and using information from patient monitoring devices including (but not limited to):
				  ○ Continuous ECG monitoring
				  ○ 12 lead ECG interpretation
				  ○ Carbon dioxide monitoring
				  ○ Basic blood chemistry

Reassessment	Simple depth, simple breadth • How and when to reassess patients	**EMR Material PLUS:** Fundamental depth, foundational breadth • how and when to perform a reassessment for all patient situations	**Same as Previous Levels**	**AEMT Material PLUS:** Complex depth, comprehensive breadth • How and when to perform a reassessment for all patient situations

	EMR	EMT	AEMT	Paramedic
Medicine	**Recognizes and manages life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response.**	**Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely ill patient.**	**Applies fundamental 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 comprehensive treatment/disposition plan for a patient with a medical complaint.**
Medical Overview	Simple depth, simple breadth Assessment and management of a • Medical complaint	**EMR Material PLUS:** Simple depth, foundational breadth Pathophysiology, assessment, and management of a medical complaints to include • Transport mode • Destination decisions	**EMT Material PLUS:** Fundamental depth, foundational breadth Pathophysiology, assessment, and management of a medical complaints to include • Transport mode • Destination decisions	**AEMT Material PLUS:** Complex depth, comprehensive breadth Pathophysiology, assessment, and management of medical complaints to include • Transport mode • Destination decisions

	EMR	EMT	AEMT	Paramedic
Neurology	Simple depth, simple breadth Anatomy, presentations, and management of • Decreased level of responsiveness • Seizure • Stroke	**EMR Material PLUS:** Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of • Stroke/ transient ischemic attack • Seizure • Status epilepticus • Headache	**EMT Material PLUS:** Complex depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of • Seizure	**AEMT Material PLUS:** Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of Complex depth, comprehensive breadth • Stroke/intracranial hemorrhage/transient ischemic attack • Seizure • Status epilepticus • Headache Fundamental depth, foundational breadth • Dementia • Neoplasms • Demyelinating disorders • Parkinson's disease • Cranial nerve disorders • Movement disorders • Neurologic inflammation/ infection • Spinal cord compression • Hydrocephalus • Wernicke's encephalopathy

	EMR	EMT	AEMT	Paramedic
Abdominal and Gastrointestinal Disorders	Simple depth, simple breadth Anatomy, presentations and management of shock associated with abdominal emergencies • Gastrointestinal bleeding	**EMR Material PLUS:** Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment, and management of • Acute and chronic gastrointestinal hemorrhage Simple depth, simple breadth • Peritonitis • Ulcerative diseases	**Same as Previous Level**	**AEMT Material PLUS:** Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of Complex depth, comprehensive breadth • Acute and chronic gastrointestinal hemorrhage • Liver disorders • Peritonitis • Ulcerative diseases Fundamental depth, foundational breadth • Irritable bowel syndrome • Inflammatory disorders • Pancreatitis • Bowel obstruction • Hernias • Infectious disorders • Gall bladder and biliary tract disorders Simple depth, simple breadth • Rectal abscess • Rectal foreign body obstruction • Mesenteric ischemia

	EMR	EMT	AEMT	Paramedic
Immunology	Simple depth, simple breadth Recognition and management of shock and difficulty breathing related to • Anaphylactic reactions	**EMR Material PLUS:** Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment, and management of hypersensitivity disorders and/or emergencies • Anaphylactic reactions	**EMT Material PLUS:** Complex depth, comprehensive breadth Anatomy, physiology, pathophysiology, assessment, and management of hypersensitivity disorders and/or emergencies • Allergic and anaphylactic reactions	**AEMT Material PLUS:** Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major immune system disorders and/or emergencies Complex depth, comprehensive breadth • Hypersensitivity • Allergic and anaphylactic reactions • Anaphylactoid reactions Fundamental depth, foundational breadth • Collagen vascular disease • Transplant related problems

	EMR	EMT	AEMT	Paramedic

Infectious Diseases	Simple depth, simple breadth
	Awareness of
	• A patient who may have an infectious disease
	• How to decontaminate equipment after treating a patient
		EMR Material PLUS:
		Simple depth, simple breadth
		Assessment and management of
		• A patient who may have an infectious disease
		• How to decontaminate the ambulance and equipment after treating a patient
			AEMT Material PLUS:
			Fundamental depth, foundational breadth
			Assessment and management of
			• A patient who may be infected with a bloodborne pathogen
			  ○ HIV
			  ○ Hepatitis B
			• Antibiotic resistant infections
			• Current infectious diseases prevalent in the community
				AEMT Material PLUS:
				Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, reporting requirements, prognosis, and management of
				Complex depth, comprehensive breadth
				• HIV-related disease
				• Hepatitis
				• Pneumonia
				• Meningococcal meningitis
				Fundamental depth, foundational breadth
				• Tuberculosis
				• Tetanus
				• Viral diseases
				• Sexually transmitted disease
				• Gastroenteritis
				• Fungal infections
				• Rabies
				• Scabies and lice
				• Lyme disease
				• Rocky Mountain Spotted Fever
				• Antibiotic resistant infections

	EMR	EMT	AEMT	Paramedic
Endocrine Disorders	Simple depth, simple breadth Awareness that • Diabetic emergencies cause altered mental status	**EMR Material PLUS:** Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of • Acute diabetic emergencies	**EMT Material PLUS:** Complex depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of • Acute diabetic emergencies	**AEMT Material PLUS:** Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of Complex depth, comprehensive breadth • Acute diabetic emergencies • Diabetes Fundamental depth, foundational breadth • Adrenal disease • Pituitary and thyroid disorders

	EMR	EMT	AEMT	Paramedic
Psychiatric	Simple depth, simple breadth Recognition of • Behaviors that pose a risk to the EMR, patient or others	**EMR Material PLUS:** Simple depth, simple breadth • Basic principles of the mental health system Fundamental depth, foundational breadth Assessment and management of • Acute psychosis • Suicidal/risk • Agitated delirium	**Same as Previous Level**	**AEMT Material PLUS:** Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of Complex depth, comprehensive breadth • Acute psychosis • Agitated delirium Fundamental depth, foundational breadth • Cognitive disorders • Thought disorders • Mood disorders • Neurotic disorders • Substance-related disorders / addictive behavior • Somatoform disorders • Factitious disorders • Personality disorders • Patterns of violence/ abuse/neglect • Organic psychoses

	EMR	EMT	AEMT	Paramedic

Cardiovascular	Simple depth, simple breadth
	Anatomy, signs, symptoms and management
	• Chest pain
	• Cardiac arrest
		EMR Material PLUS:
		Anatomy, physiology, pathophysiology, assessment, and management of
		
		Fundamental depth, foundational breadth
		• Acute coronary syndrome
		  ○ Angina pectoris
		  ○ Myocardial infarction
		• Aortic aneurysm/dissection
		• Thromboembolism
		
		Simple depth, simple breadth
		• Heart failure
		• Hypertensive emergencies
			EMT Material PLUS:
			Anatomy, physiology, pathophysiology, assessment, and management of
			
			Complex depth, foundational breadth
			• Acute coronary syndrome
			  ○ Angina pectoris
			  ○ Myocardial infarction
			
			Fundamental depth, simple breadth
			• Heart failure
			• Hypertensive emergencies
				AEMT Material PLUS:
				Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of
				Complex depth, comprehensive breadth
				• Acute coronary syndrome
				  ○ Angina pectoris
				  ○ Myocardial infarction
				• Heart failure
				• Non-traumatic cardiac tamponade
				• Hypertensive emergencies
				• Cardiogenic shock
				• Vascular disorders
				  ○ Abdominal aortic aneurysm
				  ○ Arterial occlusion
				  ○ Venous thrombosis
				• Aortic aneurysm/dissection,
				• Thromboembolism
				• Cardiac rhythm disturbances
				Fundamental depth, foundational breadth
				• Infectious diseases of the heart
				  ○ Endocarditis
				  ○ Pericarditis
				• Congenital abnormalities

	EMR	EMT	AEMT	Paramedic
Toxicology	Simple depth, simple breadth • Recognition and management of ○ Carbon monoxide poisoning ○ Nerve agent poisoning • How and when to contact a poison control center	**EMR Material PLUS:** Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment, and management of • Inhaled poisons • Ingested poisons • Injected poisons • Absorbed poisons • Alcohol intoxication and withdrawal	**EMT Material PLUS:** Fundamental depth, foundational breadth • Opiate toxidrome	**AEMT Material PLUS:** Complex depth, comprehensive breadth Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of the following toxidromes and poisonings: • Cholinergics • Anticholinergics • Sympathomimetics • Sedative/hypnotics • Opiates • Alcohol intoxication and withdrawal • Over-the-counter and prescription medications • Carbon monoxide • Illegal drugs • Herbal preparations

	EMR	EMT	AEMT	Paramedic
Respiratory	Simple depth, simple breadth Anatomy, signs, symptoms and management of respiratory emergencies including those that affect the • Upper airway • Lower airway	**EMR Material PLUS:** Anatomy, physiology, pathophysiology, assessment, and management of Fundamental depth, foundational breadth • Epiglottitis • Spontaneous pneumothorax • Pulmonary edema • Asthma • Chronic obstructive pulmonary disease • Environmental/industrial exposure • Toxic gas Simple depth, simple breadth • Pertussis • Cystic fibrosis • Pulmonary embolism • Pneumonia • Viral respiratory infections	**EMT Material PLUS:** Complex depth, foundational breadth Anatomy, physiology, pathophysiology, assessment, and management of • Asthma • Obstructive/restrictive disease • Pneumonia	**AEMT Material PLUS:** Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, management of Complex depth, comprehensive breadth • Acute upper airway infections • Spontaneous pneumothorax • Obstructive/restrictive lung diseases • Pulmonary infections Fundamental depth, foundational breadth • Neoplasm • Pertussis • Cystic fibrosis

	EMR	EMT	AEMT	Paramedic
Hematology	**No knowledge related to this competency is applicable at this level.**	Simple depth, simple breadth Anatomy, physiology, pathophysiology, assessment, and management of • Sickle cell crisis • Clotting disorders	**EMT Material PLUS:** Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of • Sickle cell crisis	**AEMT Material PLUS:** Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major hematological diseases and/or emergencies Complex depth, foundational breadth • Sickle cell disease Fundamental depth, foundational breadth • Blood transfusion complications • Hemostatic disorders • Lymphomas • Red blood cell disorders • White blood cell disorders • Coagulopathies

	EMR	EMT	AEMT	Paramedic
Genitourinary/Renal	Simple depth, simple breadth • Blood pressure assessment in hemodialysis patients	**EMR Material PLUS:** Simple depth, simple breadth Anatomy, physiology, pathophysiology, assessment, and management of • Complications related to ○ Renal dialysis ○ Urinary catheter management (not insertion) • Kidney stones	**EMT Material PLUS:** Fundamental depth, simple breadth Anatomy, physiology, pathophysiology, assessment, and management of • Complications related to renal dialysis • Kidney stones	**AEMT Material Plus:** Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of Complex depth, comprehensive breadth • Complications of ○ Acute renal failure ○ Chronic renal failure ○ Dialysis • Renal calculi Fundamental depth, foundational breadth • Acid base disturbances • Fluid and electrolyte • Infection • Male genital tract conditions

	EMR	EMT	AEMT	Paramedic
Gynecology	Simple depth, simple breadth Recognition and management of shock associated with • Vaginal bleeding	**EMR Material Plus:** Anatomy, physiology, assessment findings, and management of Fundamental depth, foundational breadth • Vaginal bleeding • Sexual assault (to include appropriate emotional support) Simple depth, simple breadth • Infections	**Same as Previous Level**	**AEMT Material Plus:** Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major gynecological diseases and/or emergencies Complex depth, comprehensive breadth • Vaginal bleeding • Sexual assault Fundamental depth, foundational breadth • Infections • Pelvic Inflammatory Disease • Ovarian cysts • Dysfunctional uterine bleeding • Vaginal foreign body
Non-Traumatic Musculoskeletal Disorders	**No knowledge related to this competency is applicable at this level.**	Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of • Non-traumatic fractures	**Same as Previous Level**	**AEMT Material Plus:** Fundamental depth, foundation breadth Anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, and management of common or major non-traumatic musculoskeletal disorders • Disorders of the spine • Joint abnormalities • Muscle abnormalities • Overuse syndromes

	EMR	EMT	AEMT	Paramedic
Diseases of the Eyes, Ears, Nose, and Throat	Simple depth, simple breadth Recognition and management of • Nose bleed	**Same as Previous Level**	**Same as Previous Level**	**AEMT Material Plus:** Fundamental depth, foundational breadth Knowledge of anatomy, physiology, epidemiology, pathophysiology, psychosocial impact, presentations, prognosis, management of • Common or major diseases of the eyes, ears, nose, and throat, including nose bleed

	EMR	EMT	AEMT	Paramedic
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 fundamental knowledge of the causes, pathophysiology, and management of shock, respiratory failure or arrest, cardiac failure or arrest, and post resuscitation management.**	**Applies fundamental 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, and post resuscitation management.**	**Integrates comprehensive knowledge of causes and pathophysiology into the management of cardiac arrest and peri-arrest states.** **Integrates a comprehensive knowledge of the causes and pathophysiology into the management of shock, respiratory failure or arrest with an emphasis on early intervention to prevent arrest.**

	EMR	EMT	AEMT	Paramedic
Trauma	**Uses simple knowledge to recognize and manage life threats based on assessment findings for an acutely injured patient while awaiting additional emergency medical response.**	**Applies fundamental knowledge to provide basic emergency care and transportation based on assessment findings for an acutely injured patient.**	**Applies fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for an acutely injured patient.**	**Integrates assessment findings with principles of epidemiology and pathophysiology to formulate a field impression to implement a comprehensive treatment/disposition plan for an acutely injured patient.**
Trauma Overview	**No knowledge related to this competency is applicable at this level.**	Fundamental depth, foundational breadth Pathophysiology, assessment, and management of the trauma patient • Trauma scoring • Rapid transport and destination issues • Transport mode	**Same as Previous Level**	**AEMT Material Plus:** Complex depth, comprehensive breadth Pathophysiology, assessment and management of the trauma patient • Trauma scoring • Transport and destination issues
Bleeding	Simple depth, simple breadth Recognition and management of • Bleeding	**EMR Material Plus:** Fundamental depth, foundational breadth Pathophysiology, assessment, and management of • Bleeding	**EMT Material Plus:** Complex depth, comprehensive breadth • Fluid resuscitation	**AEMT Material Plus:** Complex depth, comprehensive breadth Pathophysiology, assessment, and management of • Bleeding

	EMR	EMT	AEMT	Paramedic

Chest Trauma	Simple depth, simple breadth
	Recognition and management of
	• Blunt versus penetrating mechanisms
	• Open chest wound
	• Impaled object
		EMR Material Plus:
		Fundamental depth, simple breadth
		Pathophysiology, assessment and management
		• Blunt versus penetrating mechanisms
		• Hemothorax
		• Pneumothorax
		  ○ Open
		  ○ Simple
		  ○ Tension
		• Cardiac tamponade
		• Rib fractures
		• Flail chest
		• Commotio cordis
			EMT Material Plus:
			Fundamental depth, foundational breadth
			Pathophysiology, assessment and management of
			• Traumatic aortic disruption
			• Pulmonary contusion
			• Blunt cardiac injury
			• Hemothorax
			• Pneumothorax
			  ○ Open
			  ○ Simple
			  ○ Tension
			• Cardiac tamponade
			• Rib fractures
			• Flail chest
			• Commotio cordis
			• Traumatic asphyxia
				AEMT Material Plus:
				Complex depth, comprehensive breadth
				Pathophysiology, assessment, and management of
				• Traumatic aortic disruption
				• Pulmonary contusion
				• Blunt cardiac injury
				• Hemothorax
				• Pneumothorax
				  ○ Open
				  ○ Simple
				  ○ Tension
				• Cardiac tamponade
				• Rib fractures
				• Flail chest
				• Commotio cordis
				• Tracheobronchial disruption
				• Diaphragmatic rupture
				• Traumatic asphyxia

	EMR	EMT	AEMT	Paramedic
Abdominal and Genitourinary Trauma	Simple depth, simple breadth Recognition and management of • Blunt versus penetrating mechanisms • Evisceration • Impaled object	**EMR Material Plus:** Fundamental depth, simple breadth Pathophysiology, assessment and management of • Solid and hollow organ injuries • Blunt versus penetrating mechanisms • Evisceration • Injuries to the external genitalia • Vaginal bleeding due to trauma • Sexual assault	**EMT Material Plus:** Fundamental depth, foundational breadth Pathophysiology, assessment, and management of • Vascular injury • Solid and hollow organs injuries • Blunt versus penetrating mechanisms • Evisceration • Retroperitoneal injuries • Injuries to the external genitalia • Vaginal bleeding due to trauma • Sexual assault	**AEMT Material Plus:** Complex depth, comprehensive breadth Pathophysiology, assessment, and management of • Vascular injury • Solid and hollow organ injuries • Blunt versus penetrating mechanisms • Evisceration • Retroperitoneal injuries • Injuries to the external genitalia

	EMR	EMT	AEMT	Paramedic
Orthopedic Trauma	Simple depth, simple breadth Recognition and management of • Open fractures • Closed fractures • Dislocations • Amputations	**EMR Material Plus:** Pathophysiology, assessment, and management of Fundamental depth, foundational breadth • Upper and lower extremity orthopedic trauma • Open fractures • Closed fractures • Dislocations • Sprains/strains • Pelvic fractures • Amputations/replantation	**EMT Material Plus:** Pathophysiology, assessment, and management of Simple depth, simple breadth • Compartment syndrome Complex depth, foundational breadth • Pelvic fractures • Amputations/replantation	**AEMT Material Plus:** Pathophysiology, assessment, and management of Fundamental depth, foundational breadth • Pediatric fractures • Tendon laceration/ transection/ rupture (Achilles and patellar) • Compartment syndrome Complex depth, foundational breadth • Upper and lower extremity orthopedic trauma • Open fractures • Closed fractures • Dislocations

	EMR	EMT	AEMT	Paramedic

Soft Tissue Trauma	Simple depth, simple breadth
	Recognition and management of
	• Wounds
	• Burns
	  ○ Electrical
	  ○ Chemical
	  ○ Thermal
	• Chemicals in the eye and on the skin
		EMR Material Plus:
		Fundamental depth, foundational breadth
		Pathophysiology, assessment, and management
		• Wounds
		  ○ Avulsions
		  ○ Bite wounds
		  ○ Lacerations
		  ○ Puncture wounds
		  ○ Incisions
		• Burns
		  ○ Electrical
		  ○ Chemical
		  ○ Thermal
		  ○ Radiation
		Simple depth, simple breadth
		• Crush syndrome
			EMT Material Plus:
			Fundamental depth, simple breadth
			▪ Crush syndrome
				AEMT Material Plus:
				Complex depth, comprehensive breadth
				Pathophysiology, assessment, and management of
				• Wounds
				  ○ Avulsions
				  ○ Bite wounds
				  ○ Lacerations
				  ○ Puncture wounds
				• Burns
				  ○ Electrical
				  ○ Chemical
				  ○ Thermal
				• High-pressure injection
				• Crush syndrome

	EMR	EMT	AEMT	Paramedic

Head, Facial, Neck, and Spine trauma	Simple depth, simple breadth
	Recognition and management of
	• Life threats
	• Spine trauma
		EMR Material Plus:
		Fundamental depth, foundational breadth
		Pathophysiology, assessment, and management of
		• Penetrating neck trauma
		• Laryngeotracheal injuries
		• Spine trauma
		Simple depth, simple breadth
		• Facial fractures
		• Skull fractures
		• Foreign bodies in the eyes
		• Dental trauma
			EMT Material Plus:
			Complex depth, foundational breadth
			Pathophysiology, assessment, and management of
			• Facial fractures
			• Laryngeotracheal injuries
				AEMT Material Plus:
				Pathophysiology, assessment, and management of
				Fundamental depth, foundational breadth
				• Unstable facial fractures
				• Orbital fractures
				• Perforated tympanic membrane
				Complex depth, comprehensive breadth
				• Skull fractures
				• Penetrating neck trauma
				• Laryngeotracheal injuries
				• Spine trauma
				  ○ Dislocations/subluxations
				  ○ Fractures
				  ○ Sprains/strains
				• Mandibular fractures

	EMR	EMT	AEMT	Paramedic
Nervous System Trauma	**No knowledge related to this competency is applicable at this level.**	Fundamental depth, foundational breadth Pathophysiology, assessment, and management of • Traumatic brain injury • Spinal cord injury	**EMT Material Plus:** Complex depth, foundational breadth Pathophysiology, assessment, and management of • Traumatic brain injury	**AEMT Material Plus:** Pathophysiology, assessment, and management of Fundamental depth, foundational breadth • Cauda equina syndrome • Nerve root injury • Peripheral nerve injury Complex depth, comprehensive breadth • Traumatic brain injury • Spinal cord injury • Spinal shock
Special Considerations in Trauma	Simple depth, simple breadth Recognition and management of trauma in • Pregnant patient • Pediatric patient • Geriatric patient	**EMR Material Plus:** Fundamental depth, foundational breadth Pathophysiology, assessment, and management of trauma in the • Pregnant patient • Pediatric patient • Geriatric patient • Cognitively impaired patient	**EMT Material Plus:** Complex depth, foundational breadth Pathophysiology, assessment, and management of trauma in the • Pregnant patient • Pediatric patient • Geriatric patient • Cognitively impaired patient	**AEMT Material Plus:** Complex depth, comprehensive breadth Pathophysiology, assessment, and management of trauma in the • Pregnant patient • Pediatric patient • Geriatric patient • Cognitively impaired patient

	EMR	EMT	AEMT	Paramedic

Environmental Emergencies	Simple depth, simple breadth
	Recognition and management of
	• Submersion incidents
	• Temperature-related illness
		EMR Material Plus:
		Fundamental depth, foundational breadth
		Pathophysiology, assessment, and management of
		• Near drowning
		• Temperature-related illness
		• Bites and envenomations
		• Dysbarism
		  ○ High-altitude
		  ○ Diving injuries
		• Electrical injury
		• Radiation exposure
			Same as Previous Level	**AEMT Material Plus:**
				Complex depth, comprehensive breadth
				Pathophysiology, assessment, and management of
				• Near-drowning
				• Temperature-related illness
				• Bites and envenomations
				• Dysbarism
				  ○ High-altitude
				  ○ Diving injuries
				• Electrical injury
				• High altitude illness

Multi-System Trauma	Simple depth, simple breadth Recognition and management of • Multi-system trauma	**EMR Material Plus:** Fundamental depth, foundational breadth Pathophysiology, assessment, and management of • Multi-system trauma • Blast injuries	**EMT Material Plus:** Complex depth, foundational breadth Pathophysiology, assessment and management of • Multi-system trauma	**AEMT Material Plus:** Complex depth, comprehensive breadth Pathophysiology, assessment, and management of • Multi-system trauma • Blast injuries

	EMR	EMT	AEMT	Paramedic
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 a fundamental knowledge of growth, development, and aging and assessment findings to provide basic emergency care and transportation for a patient with special needs.**	**Applies a fundamental 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 comprehensive treatment/disposition plan for patients with special needs.**
Obstetrics	Simple depth, simple breadth Recognition and management of • Normal delivery • Vaginal bleeding in the pregnant patient	**EMR Material Plus:** Fundamental depth, foundational breadth • Anatomy and physiology of normal pregnancy • Pathophysiology of complications of pregnancy • Assessment of the pregnant patient • Management of ○ Normal delivery ○ Abnormal delivery ▪ Nuchal cord ▪ Prolapsed cord ▪ Breech delivery ○ Third trimester bleeding ▪ Placenta previa ▪ Abruptio placenta ○ Spontaneous abortion/miscarriage ○ Ectopic pregnancy ○ Preeclampsia/Eclampsia	**Same as Previous Level**	**AEMT Material Plus:** Complex depth, comprehensive breadth • Anatomy and physiology of pregnancy • Pathophysiology of complications of pregnancy • Assessment of the pregnant patient Psychosocial impact, presentations, prognosis, and management of • Normal delivery • Abnormal delivery ○ Nuchal cord ○ Prolapsed cord ○ Breech • Spontaneous abortion/miscarriage • Ectopic pregnancy • Eclampsia • Antepartum hemorrhage • Pregnancy induced hypertension

	EMR	EMT	AEMT	Paramedic
				• Third trimester bleeding ○ Placenta previa ○ Abruptio placenta • High risk pregnancy • Complications of labor ○ Fetal distress ○ Pre-term ○ Premature rupture of membranes ○ Rupture of uterus • Complication of delivery • Post partum complications Foundational depth, foundational breadth • Hyperemesis gravidarum • Post partum depression
Neonatal care	Simple depth, simple breadth • Newborn care • Neonatal resuscitation	**EMR Material Plus:** Fundamental depth, foundational breadth Assessment and management • Newborn • Neonatal resuscitation	**Same as Previous Level**	**AEMT Material Plus:** Complex depth, comprehensive breadth • Anatomy and physiology of neonatal circulation • Assessment of the newborn Presentation and management • Newborn • Neonatal resuscitation

	EMR	EMT	AEMT	Paramedic
Pediatrics	Simple depth, simple breadth Age-related assessment findings, and age-related assessment and treatment modifications-for pediatric-specific major diseases and/or emergencies • Upper airway obstruction • Lower airway reactive disease • Respiratory distress/failure/arrest • Shock • Seizures • Sudden Infant Death Syndrome	**EMR Material Plus**: Fundamental depth, foundational breadth Age-related assessment findings, age-related, and developmental stage related assessment and treatment modifications for pediatric specific major diseases and/or emergencies • Upper airway obstruction • Lower airway reactive disease • Respiratory distress/failure/arrest • Shock • Seizures • Sudden Infant Death Syndrome • Gastrointestinal disease	**Same as Previous Level**	**AEMT Material Plus:** Age-related assessment findings, age-related anatomic and physiologic variations, age-related and developmental stage related assessment and treatment modifications of the pediatric-specific major or common diseases and/or emergencies~~:~~ Complex depth, comprehensive breadth • Foreign body (upper and lower) airway obstruction • Bacterial tracheitis • Asthma • Bronchiolitis ○ Respiratory Syncytial Virus (RSV) • Pneumonia • Croup • Epiglottitis • Respiratory distress/failure/arrest • Shock • Seizures • Sudden Infant Death Syndrome (SIDS) • Hyperglycemia • Hypoglycemia Fundamental depth, foundational breadth • Pertussis

	EMR	EMT	AEMT	Paramedic
				• Cystic fibrosis • Bronchopulmonary dysplasia • Congenital heart diseases • Hydrocephalus and ventricular shunts
Geriatrics	Simple depth, simple breadth • impact of age-related changes on assessment and care	**EMR Material Plus:** Fundamental depth, foundational breadth Changes associated with aging, psychosocial aspects of aging and age-related assessment and treatment modifications for the major or common geriatric diseases and/or emergencies • Cardiovascular diseases • Respiratory diseases • Neurological diseases • Endocrine diseases • Alzheimer's • Dementia	**EMT Material Plus:** Complex depth, foundational breadth • Fluid resuscitation in the elderly	**AEMT Material Plus:** Normal and abnormal changes associated with aging, pharmacokinetic changes, psychosocial and economic aspects of aging, polypharmacy, and age-related assessment and treatment modifications for the major or common geriatric diseases and/or emergencies Complex depth, comprehensive breadth • Cardiovascular diseases • Respiratory diseases • Neurological diseases • Endocrine diseases • Alzheimer's • Dementia • Delirium ○ Acute confusional state Fundamental depth, foundational breadth • Herpes zoster • Inflammatory arthritis

	EMR	EMT	AEMT	Paramedic
Patients with Special Challenges	Simple depth, simple breadth • Recognizing and reporting abuse and neglect	**EMR Material Plus:** Simple depth, simple breadth Healthcare implications of • Abuse • Neglect • Homelessness • Poverty • Bariatrics • Technology dependent • Hospice/ terminally ill • Tracheostomy care/dysfunction • Homecare • Sensory deficit/loss • Developmental disability	**EMT Material Plus:** Fundamental depth, foundational breadth Healthcare implications of • Abuse • Neglect • Homelessness • Poverty • Bariatrics • Technology dependent • Hospice/ terminally ill • Tracheostomy care/dysfunction • Homecare • Sensory deficit/loss • Developmental disability	**AEMT Material Plus:** Complex depth, comprehensive breadth Healthcare implications of • Abuse • Neglect • Poverty • Bariatrics • Technology dependent • Hospice/ terminally ill • Tracheostomy care/ dysfunction

	EMR	EMT	AEMT	Paramedic
EMS Operations	**Knowledge of operational roles and responsibilities to ensure safe patient, public, and personnel safety**	**Same as Previous Level**	**Same as Previous Level**	**Same as Previous Level**
Principles of Safely Operating a Ground Ambulance	Simple depth, simple breadth • Risks and responsibilities of emergency response	**EMR Material Plus:** Simple depth, foundational breadth • Risks and responsibilities of transport	**Same as Previous Level**	**Same as Previous Level**

	EMR	EMT	AEMT	Paramedic
Incident Management	Simple depth, simple breadth • Establish and work within the incident management system	**EMR Material Plus:** Fundamental depth, foundational breadth • Establish and work within the incident management system	**Same as Previous Level**	**AEMT Material Plus:** Complex depth, comprehensive breadth • Establish and work within the incident management system

Multiple Casualty Incidents	Simple depth, simple breadth
	• Triage principles
	• Resource management
		EMR Material Plus:
		Simple depth, foundational breadth
		• Triage
		  • Performing
		  • Re-Triage
		  • Destination Decisions
		  • Post Traumatic and Cumulative Stress
			Same as Previous Level	**Same as Previous Level**

Air Medical	Simple depth, simple breadth • Safe air medical operations • Criteria for utilizing air medical response	**Same as Previous Level**	**Same as Previous Level**	**AEMT Material Plus:** Complex depth, comprehensive breadth • Medical risks/needs/advantages
Vehicle Extrication	Simple depth, simple breadth • Safe vehicle extrication • Use of simple hand tools	**Same as Previous Level**	**Same as Previous Level**	**Same as Previous Level**
Hazardous Materials Awareness	Simple depth, simple breadth • Risks and responsibilities of operating in a cold zone at a hazardous material or other special incident	**Same as Previous Level**	**Same as Previous Level**	**Same as Previous Level**

	EMR	EMT	AEMT	Paramedic
Mass Casualty Incidents due to Terrorism and Disaster (this section subject to ongoing collective and cooperative review and input from all stakeholders including the Department of Transportation, Department of Homeland Security and the Department of Health and Human Services)	Simple depth, simple breadth • Risks and responsibilities of operating on the scene of a natural or man made disaster	**Same as Previous Level**	**Same as Previous Level**	**Same as Previous Level**

Clinical Behavior/Judgment				
	EMR	EMT	AEMT	Paramedic
Assessment	Perform a simple assessment to identify life threats, identify injuries requiring immobilization and conditions requiring treatment within the scope of practice of the EMR: including foreign substance in the eyes and nerve agent poisoning.	Perform a basic history and physical examination to identify acute complaints and monitor changes. Identify the actual and potential complaints of emergency patients.	Perform a basic history and physical examination to identify acute complaints and monitor changes. Identify the actual and potential complaints of emergency patients.	Perform a comprehensive history and physical examination to identify factors affecting the health and health needs of a patient. Formulate a field impression based on an analysis of comprehensive assessment findings, anatomy, physiology, pathophysiology, and epidemiology. 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. Perform health screening and referrals.
Therapeutic communication and cultural competency	Communicates to obtain and clearly transmit information with an awareness of cultural differences.	Communicate in a culturally sensitive manner.	Communicate in a culturally sensitive manner.	Effectively communicate in a manner that is culturally sensitive and intended to improve the patient outcome.

Clinical Behavior/Judgment				
	EMR	EMT	AEMT	Paramedic

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.
	Airway and Breathing
	• Basic Airway Maneuvers
	  • Head-tilt, chin-lift
	  • Jaw thrust
	  • Modified chin lift
	  • FBAO relief - manual
	• Oropharyngeal airway
	• Sellick's maneuver
	• Positive pressure ventilation devices such as BVM
	• Suction of the upper airway
	• Supplemental oxygen therapy
	  • Nasal cannula
	  • Non-rebreather mask
	Assessment
	• Manual B/P
	Pharmacologic interventions
	• Unit-dose autoinjectors (life-saving medications intended for self or peer rescue in hazardous materials situation, nerve agent antidote kit)
	Medical/Cardiac care
	• Manual CPR
	• AED
	• Assisted normal delivery
	Trauma care
	• Manual stabilization
	  • C-spine injuries
	  • Extremity fractures
		Safely and effectively perform all psychomotor skills within the National EMS Scope of Practice Model AND state Scope of Practice at this level.
		Airway and Breathing
		• Nasopharyngeal airway
		• Positive pressure ventilation
		  • Manually-triggered ventilators
		  • Automatic transport ventilators
		• Supplemental oxygen therapy
		  • Humidifiers
		  • Partial-rebreather mask
		  • Venturi mask
		Assessment
		• Pulse oximetry
		• Automatic B/P
		Pharmacologic interventions
		• Assist patients in taking their own prescribed medications
		• Administration of OTC medications with medical oversight
		  • Oral glucose for hypoglycemia
		  • Aspirin for chest pain
		Medical/Cardiac care
		• Mechanical CPR
		• Assisted complicated delivery
		Trauma care
		• Spinal immobilization
		  • Cervical collars
		  • Seated
			Safely and effectively perform all psychomotor skills within the National EMS Scope of Practice Model AND state Scope of Practice at this level.
			Airway and Breathing
			• Airways not intended for insertion into the trachea
			  • Esophageal-tracheal
			  • Multi-lumen airway
			• Tracheal-bronchial suctioning of an already intubated patient
			Assessment
			• Blood glucose monitor
			Pharmacologic interventions
			• Establish and maintain peripheral intravenous access
			• Establish and maintain intraosseous access in pediatric patient
			• Administer (nonmedicated) intravenous fluid therapy
			• Sublingual nitroglycerin (chest pain)
			• Subcutaneous or intramuscular epinephrine (anaphylaxis)
			• Glucagon (hypoglycemia)
			• Intravenous 50% dextrose (hypoglycemia)
			• Inhaled beta agonists (wheezing)
			• Intravenous narcotic antagonist (narcotic overdose)
			• Nitrous oxide (pain)
				Safely and effectively perform all psychomotor skills within the National EMS Scope of Practice Model AND state Scope of Practice at this level.
				Airway and Breathing
				• Oral and nasal endotracheal intubation
				• FBAO – direct laryngoscopy
				• Percutaneous cricothyrotomy
				• Pleural decompression
				• BiPAP, CPAP, PEEP
				• Chest tube monitoring
				• ETCO2 monitoring
				• NG/OG tube
				Assessment
				• ECG interpretation
				• 12-lead interpretation
				• Blood chemistry analysis
				Pharmacologic interventions
				• Intraosseous insertion
				• Enteral and parenteral administration of approved prescription medications
				• Access indwelling catheters and implanted central IV ports
				• Medications by IV infusion
				• Maintain infusion of blood or blood products
				• Blood sampling
				• Thrombolytic initiation
				• Administer physician approved medications
				Medical/Cardiac care
				• Cardioversion

Clinical Behavior/Judgment				
	EMR	EMT	AEMT	Paramedic

	• Bleeding control
	• Emergency moves
	• Eye irrigation
		• Longboard
		• Rapid extrication
		• Splinting
		  • Extremity
		  • Traction
		  • PASG
		• Mechanical patient restraint
		• Tourniquet
				• Manual defibrillation
				• Transcutaneous pacing
				• Carotid massage
				Trauma care
				• Morgan lens

				Anticipate and prospectively intervene to improve patient outcome.
Professionalism	Demonstrate professional behavior including: but not limited to, integrity, empathy, self-motivation, appearance/personal hygiene, self-confidence, communications, time-management, teamwork/ diplomacy, respect, patient advocacy, and careful delivery of service.	Demonstrate professional behavior including: but not limited to, integrity, empathy, self-motivation, appearance/personal hygiene, self-confidence, communications, time-management, teamwork/ diplomacy, respect, patient advocacy, and careful delivery of service.	Demonstrate professional behavior including: but not limited to, integrity, empathy, self-motivation, appearance/personal hygiene, self-confidence, communications, time-management, teamwork/ diplomacy, respect, patient advocacy, and careful delivery of service.	Is a role model of exemplary professional behavior including: but not limited to, integrity, empathy, self-motivation, appearance/personal hygiene, self-confidence, communications, time-management, teamwork/ diplomacy, respect, patient advocacy, and careful delivery of service.
Decision Making	Initiates simple interventions based on assessment findings.	Initiates basic interventions based on assessment findings intended to mitigate the emergency and provide limited symptom relief while providing access to definitive care	Initiates basic and selected advanced interventions based on assessment findings intended to mitigate the emergency and provide limited symptom relief while providing access to definitive care	Performs basic and advanced interventions as part of a treatment plan intended to mitigate the emergency, provide symptom relief, and improve the overall health of the patient. Evaluates the effectiveness of interventions and modifies treatment plan accordingly.
Record Keeping	Record simple assessment findings and interventions	Report and document assessment data and interventions.	Report and document assessment findings and interventions.	Report and document assessment findings and interventions. Collect and report data to be used for epidemiological and research purposes.

Clinical Behavior/Judgment				
	EMR	EMT	AEMT	Paramedic
Patient Complaints	Perform a patient assessment and provide prehospital emergency care for patient complaints: abdominal pain, abuse/neglect, altered mental status/decreased level of consciousness, apnea, back pain, behavioral emergency, bleeding, cardiac arrest, chest pain, cyanosis, dyspnea, eye pain, GI bleeding, hypotension, multiple trauma, pain, paralysis, poisoning, shock, and stridor/drooling.	Perform a patient assessment and provide prehospital emergency care and transportation for patient complaints: abdominal pain, abuse/neglect, altered mental status/decreased level of consciousness, anxiety, apnea, ataxia, back pain, behavioral emergency, bleeding, cardiac arrest, cardiac rhythm disturbances, chest pain, constipation, cyanosis, dehydration, diarrhea, dizziness/vertigo, dysphasia, dyspnea, edema, eye pain, fatigue, fever, GI bleeding, headache, hematuria, hemoptysis, hypertension, hypotension, joint pain/swelling, multiple trauma, nausea/vomiting, pain, paralysis, pediatric crying/fussiness, poisoning, rash, rectal pain, shock, sore throat, stridor/drooling, syncope, urinary retention, visual disturbances, weakness, and wheezing.	Perform a patient assessment and provide prehospital emergency care and transportation for patient complaints: abdominal pain, abuse/neglect, altered mental status/decreased level of consciousness, anxiety, apnea, ataxia, back pain, behavioral emergency, bleeding, cardiac arrest, cardiac rhythm disturbances, chest pain, constipation, cyanosis, dehydration, diarrhea, dizziness/vertigo, dysphasia, dyspnea, edema, eye pain, fatigue, fever, GI bleeding, headache, hematuria, hemoptysis, hypertension, hypotension, joint pain/swelling, multiple trauma, nausea/vomiting, pain, paralysis, pediatric crying/fussiness, poisoning, rash, rectal pain, shock, sore throat, stridor/drooling, syncope, urinary retention, visual disturbances, weakness, and wheezing.	Perform a patient assessment, develop a treatment and disposition plan for patients with the following complains: abdominal pain, abuse/neglect, altered mental status/decreased level of consciousness, anxiety, apnea, ascites, ataxia, back pain, behavioral emergency, bleeding, blood and body fluid exposure, cardiac arrest, cardiac rhythm disturbances, chest pain, congestion, constipation, cough/hiccough, cyanosis, dehydration, dental pain, diarrhea, dizziness/vertigo, dysmenorrhea, dysphasia, dyspnea, dysuria, ear pain, edema, eye pain, fatigue, feeding problems, fever, GI bleeding, headache, hearing disturbance, hematuria, hemoptysis, hypertension, hypotension, incontinence, jaundice, joint pain/swelling, malaise, multiple trauma, nausea/vomiting, pain, paralysis, pediatric crying/fussiness, poisoning, pruritus, rash, rectal pain, red/pink eye, shock, sore throat, stridor/drooling, syncope, tinnitus, tremor, urinary retention, visual disturbances, weakness, and wheezing.

Clinical Behavior/Judgment				
	EMR	EMT	AEMT	Paramedic
Scene Leadership	Manage the scene until care is transferred to an EMS team member licensed at a higher level arrives.	Entry-level EMTs serve as an EMS team member on an emergency call with more experienced personnel in the lead role. EMTs may serve as a team leader following additional training and/or experience.	Serve as an EMS team leader of an emergency call.	Function as the team leader of a routine, single patient advanced life support emergency call.
Scene Safety	Ensure the safety of the rescuer and others during an emergency.	Ensure the safety of the rescuer and others during an emergency.	Ensure the safety of the rescuer and others during an emergency.	Ensure the safety of the rescuer and others during an emergency.

Educational Infrastructure				
	EMR	**EMT**	**AEMT**	**Paramedic**
Educational Facilities	• Facility sponsored or approved by sponsoring agency • ADA compliant facility • Sufficient space for class size • Controlled environment	**Same as Previous Level**	**Same as Previous Level**	• 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	**Same as Previous Level**	**Same as Previous Level**	
Instructional Resources	• Provide basic instructional support material • Provide audio, visual, and kinematic aids to support and supplement didactic instruction	**Same as Previous Level**	**Same as Previous Level**	
Instructor Preparation Resources	• Provide space for instructor preparation • Provide support equipment for instructor preparation	**Same as Previous Level**	**Same as Previous Level**	
Storage Space	• Provide adequate and secure storage space for instructional materials	**Same as Previous Level**	**Same as Previous Level**	

[1] The *National EMS Education Agenda for the Future: A Systems Approach* calls for national accreditation of Paramedic programs. CoAEMSP is currently the only national agency that offers EMS paramedic education program accreditation; it is used or recognized by most States. While the CoAEMSP *Standards and Guidelines* are adopted for the Education Infrastructure section, this does not itself require the program to be CoAEMSP accredited. Recognition of national accreditation is the responsibility of each State.

Educational Infrastructure				
	EMR	**EMT**	**AEMT**	**Paramedic**

Sponsorship	• Sponsoring organizations shall be one of the following:
	  • Accredited educational institution, or
	  • Public safety organization, or
	  • Accredited hospital, clinic, or medical center, or
	  • Other State approved institution or organization
		Same as Previous Level	**Same as Previous Level**	

Programmatic Approval	• Sponsoring organization shall have programmatic approval by authority having jurisdiction for program approval (State)	**Same as Previous Level**	**Same as Previous Level**	
Faculty	The course primary instructor should • be educated at a level higher than he or she is teaching; however, as a minimum, he or she must be educated at the level he or she is teaching • Have successfully completed an approved instructor training program or equivalent	**Same as Previous Level**	**Same as Previous Level**	
Medical Director Oversight	• Provide medical oversight for all medical aspects of instruction	**Same as Previous Level**	**Same as Previous Level**	

Educational Infrastructure				
	EMR	**EMT**	**AEMT**	**Paramedic**
Hospital/Clinical Experience	• None required at this level	• Students should observe emergency department operations for a period of time sufficient to gain an appreciation for the continuum of care Students must perform ten patient assessments. These can be performed in an emergency department, ambulance, clinic, nursing home, doctor's office, etc. or on standardized patients if clinical settings are not available.	▪ The student must demonstrate the ability to safely administer medications (the student should safely, and while performing all steps of each procedure, properly administer medications at least 15 times to live patient). ▪ The student must demonstrate the ability to safely gain vascular access (the student should safely, and while performing all steps of each procedure, successfully access the venous circulation at least 25 times on live patients of various age groups). ▪ The student should demonstrate the ability to effectively ventilate unintubated patients of all age groups (the student should effectively, and while performing all steps of each procedure, ventilate at least 20 live patients of various age groups). • The student must demonstrate the ability to perform an adequate assessment and formulate and implement a treatment plan for patients with chest pain. • The student must demonstrate the ability to perform an adequate assessment and formulate and implement a treatment plan for patients with respiratory distress. • The student must demonstrate the ability to perform an adequate assessment and formulate and implement a treatment plan for	

Educational Infrastructure				
	EMR	**EMT**	**AEMT**	**Paramedic**
			patients with altered mental status. • The student must demonstrate the ability to perform an adequate assessment on pediatric, adult and geriatric patients.	
Field Experience	• None required at this level	• The student must participate in and document patient contacts in a field experience approved by the medical director and program director.	• The student must participate in and document team leadership in a field experience approved by the medical director and program director.	

Course Length	• Course length is based on competency, not hours
	• Course material can be delivered in multiple formats including but not limited to:
	  • Independent student preparation
	  • Synchronous/Asynchronous distributive education
	  • Face-to-face instruction
	  • Pre- or co-requisites
	• Course length is estimated to take approximately **48-60** didactic and laboratory clock hours
		• Course length is based on competency, not hours
		• Course material can be delivered in multiple formats including but not limited to:
		  • Independent student preparation
		  • Synchronous/Asynchronous distributive education
		  • Face-to-face instruction
		  • Pre- or co-requisites
		• Course length is estimated to take approximately **150-190** clock hours including the four integrated phases of education (didactic, laboratory, clinical and field) to cover material
			• Course length is based on competency, not hours
			• Course material can be delivered in multiple formats including but not limited to:
			  • Independent student preparation
			  • Synchronous/Asynchronous distributive education
			  • Face-to-face instruction
			  • Pre- or co-requisites
			• Course length is estimated to take approximately **150-250** clock hours beyond EMT requirements including the four integrated phases of education (didactic, laboratory, clinical and field) to cover 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
			Same as Previous Level	

Educational Infrastructure				
	EMR	**EMT**	**AEMT**	**Paramedic**
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	**Same as Previous Level**	**Same as Previous Level**	
Program Evaluation	• Provide evaluation of program instructional effectiveness • Provide evaluation of organizational and administrative effectiveness of program	**Same as Previous Level**	**Same as Previous Level**	

Instructional Guidelines

The *Standards* are broad to allow for incorporation of evidence-based changes within the profession as they influence practice and to permit diverse presentation methods. The Instructional Guidelines (IG) are not part of the *National EMS Education Standards,* but are a companion document. The IG are intended to provide guidance to instructors, regulators, and publishers regarding the content that may be included within each area of the *Standards,* and to provide interim support as EMS instructors and programs transition from the NSC to the *National EMS Education Standards*. The IG are not intended to be all-inclusive; it is understood that they will become outdated as research, technology, and national organization guidelines dictate changes in patient assessment and care. The IG do not comprise a curriculum and are not intended to be adopted by States.

Glossary for Education Standards

Academic institution - A 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. 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.

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. (NAEMSE, 2005, p. 306)

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 competency 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, 2005, p. 306)

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 detailed lesson plans.

Didactic - The instructional theory, the lesson content. (NAEMSE, 2005, p. 307)

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, 2005, p. 307)

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 - A resource document that provides initial guidance for content within the *National EMS Education Standards*—it is not a curriculum and should not be adopted by States.

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 terminal objectives 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 required instructional experience necessary to provide quality instruction to students. (NAEMSE, 2005, p 309)

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, 2005, p309

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 their 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 the 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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Acknowledgements

Administrative Team

Project Director: Debra Cason, R.N., M.S., EMT-P; Associate Professor and Program Director, University of Texas Southwestern Medical Center, Dallas, TX
Project Executive Director: Joann Freel, B.S., CMP; Executive Director, National Association of EMS Educators, Pittsburgh, PA
Project Coordinator: Kenneth Navarro, B.S., EMT-P; CE Coordinator, University of Texas Southwestern Medical Center, Dallas, TX
Project Administrative Assistant: Laura Krawchyk, B.A.; Education Coordinator, National Association of EMS Educators, Pittsburgh, PA
Project Medical Director: Edward Racht, M.D.; Medical Director, City of Austin/Travis County EMS; System Associate Clinical Professor of Emergency Medicine, UT Southwestern; Chair, Governor's EMS & Trauma Advisory Council, Austin, Texas
Drew Dawson, Director, NHTSA Office of EMS, Washington, DC
Dan Kavanaugh; M.S.W., LCSW-C; Capt. USHS, Senior Program Manager, HRSA/MCHB EMSC, Rockville, MD
David Bryson, B.A., EMT-B; Highway Safety Specialist, NHTSA Office of EMS, Washington, DC

Project Level Leaders

EMR: Kim McKenna, R.N., BSN, EMT-P; Director of Education, St. Charles County Ambulance District, St. Peters, MO
EMT: Michael O'Keefe, M.S., NREMT-P; EMS Training Coordinator, Vermont Dept. of Health, Burlington, VT
AEMT: Pauline VanMeurs, M.S., Paramedic, LP; Instructor, Austin Community College, Austin, TX
Paramedic: Gregg S. Margolis, Ph.D., NREMT-P; Associate Director, NREMT, Columbus, OH

Content Level Leaders

Linda Abrahamson, B.A., R.N., EMT-P; EMS Education Coordinator, Silver Cross Hospital/Joliet Jr. College, Joliet, IL
David Becker, M.A., EFO, EMT-P; EMS Program Director, Sanford Brown College; Vice-Chair EMS Section, IAFC, St. Louis, MO
Richard Beebe, M.Ed., BSN, R.N., NREMT-P; EMS/Paramedic Program Director, Bassett Healthcare Center for Rural EMS Education; Clinical Assistant Professor, State University of New York, Cobleskill, NY
Marjorie Bowers, Ed.D., R.N., EMT-P; EMS Department Chair, Indian River Community College, Ft. Pierce, FL
Phil Dickison, NREMT-P, R.N., B.B.A., Ph.D.(c); Director, Health Professions Testing, Elsevier Review and Testing, St. Louis, MO
George Hatch, Jr., Ed.D., LP, EMT-P; Executive Director, Committee on Accreditation of Education Programs for the EMS Profession, Arlington, TX
Will Krost, B.S., AS, NREMT-P; Operations Manager & Flight Paramedic**,** St. Vincent Medical College, Maineville, OH
Joe Mistovich, M.Ed., NREMT-P; Chair and Professor Department of Health Professions, Youngstown State University—Bitonte College of Health and Human Services, Youngstown, OH
Judy Ruple, Ph.D., R.N., NREMT-P; The Ruple Group/Education Consultants, The Villages, FL
Walt Stoy, Ph.D.; Professor and Director, University of Pittsburgh Medical Center, Pittsburgh, PA
Bruce Walz, Ph.D., NREMT-P; Professor and Chair-Department of Emergency Health Services, University of Maryland Baltimore County, Baltimore, MD

Expert Writers

Melissa Alexander, M.S., NREMT-P; Learning Solutions for EMS, Albuquerque, NM
Leaugeay Barnes, B.S., NREMT-P, CCEMT-P; Oklahoma City Community College, Kiefer, OK
Daniel P. Barry, M.H.A., NREMT-P, Paramedic Program Director, Virginia Commonwealth University, Richmond, VA

Randy Benner, M.Ed., NREMT-P; Youngstown State University, Youngstown, OH
Chris Billinger, A.S.; Firefighter/Paramedic, Ft. Lauderdale, FL
Scott Bourn, M.S.N., R.N., NREMT-P; American Medical Response, Greenwood, CO
Michael Branum, Juneau, AK
Rebecca Brock, B.A.AS, NREMT-P, LP; Austin Community College, Austin, TX
Bill Brown, M.S., R.N., NREMT-P; Executive Director, National Registry of EMTs, Columbus, OH
William Browne, NREMT-P; Life Tek, Inc., Nine Mile Falls, WA
Thomas Candlin, III, EMT-P; EMS Coordinator, St. Anthony's Prehospital Services, Denver, CO
Julie Coffman, M.T. (ASCP), EMT-P, MPPM; Alabama Fire College, Pleasant Grove, AL
Harvey Connor, A.S., NREMT-P; Oklahoma City, OK
Amanda Cotter, M.S., R.N., NREMT-P; Greenville Technical College, Greenville, SC
Chris Coughlin, M.Ed., FP-C, NREMT-P; EMT Program Director, Glendale, AZ
John Cox, EMT-P; Richland Memorial Ambulance Service, Olney, IL
Heather Davis, M.S., NREMT-P; UCLA Center for Prehospital Care, Commerce, CA
Terry Devito, M.Ed., R.N., EMT-P; Capital Community College Nursing & Health Careers, Hartford, CT
Dave Donohue, M.A., EMT-P; Shepardstown, WV
Dennis Edgerly, EMT-P; HealthONE, Littleton, CO
Bob Elling, M.P.A., NREMT-P; Hudson Valley Community College, Colonie, NY
Kirsten Elling, B.S., NREMT-P; Paramedic Educator, Hudson Valley Community College, Colonie, NY
Bruce Evans, M.P.A., NREMT-P; Las Vegas Fire Department, Las Vegas, NV
Diana Fendya M.S.N., R.N.; Trauma/Acute Care Specialist, National Resource Center for Health Programs and Strategies, Silver Spring, M.D.
Carol Ferguson, R.N., M.S., EMT-P; University of Texas Southwestern Medical Center, Dallas, TX
Antonio Fernandez, B.S., M.D.; Research Fellow, National Registry of EMTs, Columbus, OH
Franc Ferola, B.A., EMT-P, MBA-P; Matrix Consulting Services, Inc., Boca Raton, FL
Joe Ferrell, M.S.; Educational Coordinator, Des Moines**,** IA
Ray Fowler, M.D., FACEP; University of Texas Southwestern Medical Center, Dallas, TX
Michael Frith, M.S., EMT-P; Fast Response School of Healthcare Education, Concord, CA
David Garmon, M.A., NREMT-P, CCEMT-P; University of Southern Alabama, Mobile, AL
John Gosford, B.S., EMT-P; Program Director, Lake City Community College, Crawfordville, FL
Randal Gray, M.A., NREMT-P; University of Alabama at Birmingham, Birmingham, AL
Daniel Griffin, EMT-P; Alachua County Fire and Rescue, Gainesville, FL
Michael Hahn, B.S., NREMT-P, CCEMT-P; University of Pittsburgh School of Health and Rehabilitation Sciences, Pittsburgh, PA
James Hanley, M.D., FAAP; Medical Director, University of Southern Alabama Children's and Women's Hospital, Mobile, AL
Art Hsieh, M.A., NREMT-P; San Francisco Paramedic Association, Piedmont, CA
Scott Jones, B.S., MICP; Victor Valley College, Apple Valley, CA
Steven Kanarian, M.P.H., B.S., Paramedic; New York City Fire Department, Stony Point, NY
Deborah Kufs, R.N., M.S., CCR.N., NREMT-P; Clinical Coordinator, Hudson Valley Community College, Troy, NY
Chris Le Baudour, M.Ed., EMT; Santa Rosa College, Windsor, CA
Larry LeForte, CEP, NREMT-P; Flight Paramedic, Aerocare Air Ambulance, Prescott, AZ
Debra Lejeune, M.Ed., EMT-P; Director of Education & Program Developmen**t,** Emed Health, Pittsburgh, PA
Scott Martin, M.Ed., NREMT-P; Program Director for Emergency Medicine Education, Akron General Medical Center, Akron, OH
Vicki L. May, M.Ed., LP, NREMT-P; EMS Department Chair, Houston Community College, Houston, TX
Beth Ann McNeill, B.F.A., CIC; Monroe Community College, Rochester, NY
Taz Meyer, B.S., EMT-P; St. Charles Co. Ambulance District, St. Peters, MO
Michael Miller, B.S., EMS, R.N., NREMT-P; Creighton University Medical Center, Omaha, NE
Michael Moyer, M.S.; Cincinnati Children's Hospital Medical Center, Cincinnati, OH
Gregory Neiman, B.A., NREMT-P; BLS Training Specialist, Virginia Department of Health Office of EMS, Richmond, VA
Robert Nixon, B.A., EMT-P; Lifecare Medical Training, Webster, MA
Chris Nollette, Ed.D., NREMT-P, LP; Program Director**,** Riverside Community College, Riverside, CA
Wes Ogilvie, M.P.A., JD, NREMT-P; Paramedic/Attorney, CE-Bar Volunteer Fire Department, Austin, TX

Douglas Paris, B.S., NREMT-P; Greenville Technical College, Taylors, SC
Dennis Parker, M.A., EMT-P, I/C; Tennessee Tech University, Cookeville, TN
Sean Pitezel, CCEMT-P, AAS; Physician Support Services, Inc., Catoosa Fire Department, Tulsa, OK
Timothy Perkins, B.S., EMT-P; Virginia Office of Emergency Medical Services, Richmond, VA
Jonathan Politis, M.P.A., NREMT-P; Chief, Town of Colonie Emergency Medical Services Department, Latham, NY
Warren Porter, M.S., B.A., LP, PNCCT; EMS Program Manager, Garland Fire Department, Garland, TX
Karen Pickard, M.A., R.N., EMT-P; University of Texas Southwestern Medical Center, Dallas, TX
Jeannie Riner, M.H.S.A., B.S., RRT, NP; Georgia Dept. of Human Resources, Atlanta, GA
Gabriel Romero, B.A., NREMT-P; National Registry of EMTs, Denver, CO
Jose Salazar, M.P.H., NREMT-P; Captain, Loudoun County Department of Fire & Rescue**,** Loudon County, VA
Jules Scadden, NREMT-P, PS; Sac Co. EMS, Schaller, IA
Hamilton Schwartz, M.D., FAAP; Cincinnati Children's Hospital, Cincinnati, OH
R. Samuel Seitz, M.Ed., R.N., NREMT-P; University of Pittsburgh, School of Health and Rehabilitation Science, Pittsburgh, PA
Manish Shah, M.D.; Baylor College of Medicine Section of Emergency Medicine, Houston, TX
Michael Stanley, B.S., EMT-P; Captain, Aurora Fire Department, Aurora, CO
John Tartt, M.P.H., EMT-P; Carolinas College of Health Sciences, Charlotte, NC
Shari Turner, M.Ed., EMT-P; Palm Beach Community College, Lake Worth, FL
Bob Waddell, B.S., B.A., EMT-P; Think Sharp, Cheyenne, WY
Robert Lee Wagoner, B.S.A.S., NREMT-P; Associate Director, National Registry of EMTs, Columbus, OH
Jason Whaley, PA-C, FF; British Petroleum, Prudhoe Bay, AK
Denise Wilfong, M.H.S., NREMT-P; Western Carolina University, Ashville, NC
Barbara Wise, B.S., CEP; Pima College Public Safety and Emergency Service Institute, Tucson, AZ
Timothy Wojcik, B.S., NREMT-P; Colleton County Fire-Rescue, Walterboro, SC
Jason Zigmont, NREMT-P; Center for Public Safety Education, East Berlin, CT

Physician Advisory Committee

Robert R. Bass, M.D.
Bryan Bledsoe, D.O., EMT-P
David C. Cone, M.D.
Art Cooper, M.D.
George Foltin, M.D.
Peter W. Glaeser, M.D.
Andy Jagota, M.D.
Bill Jermyn, D.O.
Doug Kupas, M.D.
Wayne Misselbeck, M.D.
Jeffrey W. Myers, D.O, NREMT-P
Robert E. O'Connor, M.D., MPH
Paul E. Phrampus, M.D.
Jeffrey P. Salomone, M.D.
Juliette Saussey, M.D.
Michael Tunik, M.D.

May 2006 National EMS Education Standards Stakeholders Meeting Representatives

Organization:	Representative(s)
American Academy of Pediatrics	Paul Sirbaugh, D.O.
American Ambulance Association	Unable to attend
American College of Emergency Physicians	Bill Jermyn, M.D.
American College of Surgeons	Unable to attend
Association of Air Medical Services	Unable to attend
Committee on Accreditation of EMS Professionals	Art Cooper, M.D.
Emergency Medical Services for Children	Jane Ball, Ph.D., R.N.
Emergency Nurses Association	Fred Neis, R.N., M.S., FACHE, CEN
Health Resources and Services Administration	Dan Kavanaugh, M.S.W, LCSW-C
International Association of Fire Chiefs	David Becker, MA, EFO, EMT-P
International Association of Fire Fighters	Jonathan Moore, B.A.
International Association of Flight Paramedics	Jason Hums, M.P.H., NREMT-P
National Association of Emergency Medical Technicians	David Garmon, M.Ed., NREMT-P, CCEMT-P
National Association of EMS Educators	Joe Grafft, M.S., NREMT-P
National Association of EMS Physicians	Robert Bass, M.D.
National Association of State EMS Directors	Robert Bass, M.D.
National Council of State EMS Training Coordinators	Liza Burrill
National Organization of State Offices of Rural Health	Unable to attend
National Registry of EMTs	William Brown, **M.S.**, R.N., NREMT-P
National Rural Health	Aarron Reinert, B.A., NREMT-P

Participants at the May 2006 Stakeholder Meeting

Organization:	Representative(s)
National Association of EMS Educators	Angel Burba, M.S., NREMT-P, NCEE
American Heart Association	Scott Strader Jo Haag, R.N., M.S.N.
Brady Publishing	Marlene Pratt, B.A.
Emergency Medical Services for Children	Susan Eads Role
Continuing Education Coordinating Board for EMS	Jay Scott, B.S., NREMT-P Liz Sibley, M.A. Alonzo Smith, B.A., NREMT-P
Delmar Cengage	Alison (Weintraub) Pase
Health Resources and Services Administration	Dan Kavanaugh, M.S.W., LCSW-C Tina Turgel, R.N., B.S.N., R.N.-C
Jones and Bartlett	Larry Newell, Ed.D., NREMT-P
Mosby JEMS Elsevier	Linda Honeycutt
Philadelphia Fire Department	Michael Touchstone, B.S., EMT-P

February 2008 National EMS Education Standards Stakeholders Meeting Representatives

Organization:	Representative(s)
American Academy of Pediatrics	Unable to attend
American Ambulance Association	Bill Mergendahl , J.D., EMT-P
American College of Emergency Physicians	Sabina Braithwaite, M.D.

Organization:	Representative(s)
American College of Surgeons	Jeffrey Salomone, M.D.
Association of Air Medical Services	Natasha Ross
Committee on Accreditation of Educational Programs for the EMS Professions	Randy Kuykendall, M.L.S., NREMT-P
Emergency Medical Services for Children	Jim Morehead
Emergency Nurses Association	Fred Neis, R.N.,M.S., FACHE, CEN
Indian Health Service Emergency Service	David Boyd, M.D.CM, FACS
International Association of Fire Chiefs	Kevin Bersche
International Association of Fire Fighters	Jonathan Moore, B.A.
International Association of Flight Paramedics	David Stamey, A.A.S., CCEMT-P
National Association of Emergency Medical Technicians	Jerry Johnston, B.A., NREMT-P
National Association of EMS Educators	Angel Burba, M.S., NREMT-P, NCEE
National Association of EMS Physicians	Ritu Sahni, M.D.
National Association of State EMS Officials	Fergus Laughridge, C.P.M.
National Organization of State Offices of Rural Health	Ron Seedorf
National Registry of EMTs	William Brown **M.S.**, R.N., NREMT-P
National Rural Health Association	Gary Wingrove
Office of Preparedness and Emergency Operations	David Marcozzi, M.D., MHS-CL, FACEP
U.S. Department of Homeland Security	Joseph Martin, M.S.
U.S. Fire Administration	John Brasko, M.A., EMT

Participants at the February 2008 Stakeholder Meeting

Organization:	Representative(s):
American Academy of Orthopedic Surgeons	Barbara Scotese, B.A. Andrew Pollak, M.D.
American College of Osteopathic Emergency Physicians	Juan Acosta, D.O., FACOEP, FACEP
American Heart Association	Rod Kimble, B.A., EMT-P
American Ambulance Association	Christopher Kerley, CCEMT-P Robert Doyle, B.S., EMT-B, IC
American Medical Response	Scott Bourn, Ph.D., M.S.N, R.N., NREMT-P
Association of Air Medical Services	Allen Wolfe, R.N., CFRN
Ann Arundel Community College	Melanie Miller, B.S.N., R.N.
Brady Publishing	Marlene Pratt Sladjana Repic Dan Limmer, A.S., EMT-P
Center for Emergency Medicine of Western Pennsylvania	Walt Stoy, Ph.D.
City of Phoenix Fire Department	Brenda Suttong, R.N., B.S.N., CEN, NREMT-B Barbara Bovee
Committee F30 on EMS	Paul Roman
Committee on Accreditation of Educational Programs for the EMS Professions	George Hatch, Ed.D.
Continuing Education Coordinating Board for EMS	Liz Sibley, M.A.
Cypress Creek EMS	Nick Robbins
Delmar Cengage	Jennifer Starr, B.A. Maria Conto, M.A.

Organization:	Representative(s):
EMS Institute--Regional EMS Council Southwestern Pennsylvania	Christian Perry, Ph.D., EMT-P
Erie Co. Medical Center	Jeff Myers, D.O., Ed.M., NREMT-P
FISDAP	David Page, M.S., NREMT-P
Florida Association of EMS Educators	Nerina Stepanovsky, Ph.D., R.N., EMT-P
George Washington University EMS	Michael Ward, EMT-P, B.S., MGA, MIFireE
Hutchison Community College	Chy Miller, B.S., MICT, IC Darrell Grubbs, EMT-B, IC Dan Jones, R.N., EMT, IC
International Association of Flight Paramedics	Kevin Brown, B.A., NREMT-P, EMT-I
Jones and Bartlett	Kimberly Brophy
Loudoun County Department of Fire, Rescue, and Emergency Management	Jose Salazar, M.P.H., NREMT-P
Maryland Department of Health and Metal Hygiene Center for Preventive Health Services	Maura Proser, M.P.H.
Maryland Institute for EMS Systems	Bill Seifarth, M.S., NREMT-P
Mesa Fire Department	Terrence Mason, R.N. Rick Apple, CEP
Mosby Jems Elsevier	Linda Honeycutt
National Volunteer Fire Council	Ken Knipper
Office of Preparedness and Emergency Operations	Shima Safikhani Lauren Arnold
Philadelphia Fire Department	Michael Touchstone, B.S., EMT-P
Professional Medical Transport Ambulance	Orlando Alcordo, NREMT-P
Southern California EMS Educators	Robert Lashier, M.P.H., M.Ed.
Victor Valley College	Scott Jones, B.S., MICP
Virginia Office of EMS	Thomas Nevetral Warren Short, B.S., NREMT-P
Wallace State Community College	Jennifer Ivey, B.S.A.H., NREMT-P
Western Virginia EMS Council	Deborah Akers, NREMT-P

Special Thanks

Meeting Planner:
Vi Boehm, Meeting Coordinator, Helms Briscoe, Pittsburgh, PA

National Registry of EMTs in kind services:
Jean Davidson, Executive Secretary, National Registry of EMTs, Columbus, OH
Bill Brown, M.S., R.N., NREMT-P; Executive Director, National Registry of EMTs, Columbus, OH

Meeting Facilitators:
Michael Kumer, Executive Director, Nonprofit Leadership Institute, Duquesne University, Pittsburgh, PA
Katherine Smith, Executive Coaching, Facilitation and Organizational Counseling, Alexandria, VA

NEMSES.org Webmaster:
Eric Rose, President, Mysterion Studios, Pittsburgh, PA

NAEMSE Office Staff:
Stephen Perdziola, Business Manager, National Association of EMS Educators, Pittsburgh, PA
T.J. Betz,Communications Administrator, National Association of EMS Educators, Pittsburgh, PA
Larissa Kocelko; Administrative Assistance, National Association of EMS Educators, Pittsburgh, PA

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