

2009 National EMS Education Standards Gap Analysis Template

A Comparison of EMS Knowledge and Skills to Assist the
Transition and Implementation of the National EMS
Education Standards for:

Emergency Medical Responder (EMR)

Emergency Medical Technician (EMT)

Advanced Emergency Medical Technician (AEMT)

Paramedic

7/17/2009

National Association of State EMS Officials
Falls Church, VA



Introduction

As a component of the *EMS Education Agenda: A Systems Approach (Education Agenda)*, the National Highway Traffic Safety Administration (NHTSA) published the *National EMS Education Standards (Education Standards)* in 2009. While education is an essential component of EMS practice and practitioner credentialing, successful completion of an instructional program based on the *Education Standards* does not mean an EMS practitioner is ready or authorized to perform EMS procedures in an EMS system. States maintain the legal authority to establish a local EMS scope of practice and to implement the *Education Standards* in a way that best meets the needs of the state. Each state establishes the legal authority for an EMS practitioner to function by establishing education, certification and licensure processes and providing direction for medical oversight and credentialing:

- *Education* includes all of the cognitive, psychomotor, and affective learning that individuals have undergone throughout their lives. This includes entry-level and continuing professional education, as well as other formal and informal learning. Clearly, many individuals have extensive education that, in some cases, exceeds their EMS skills or roles.
- *Certification* is an external verification of the competencies that an individual has achieved and typically involves an examination process. While certification exams can be set to any level of proficiency, in health care they are typically designed to verify that an individual has achieved minimum competency to assure safe and effective patient care.
- *Licensure* represents permission granted to an individual by the State to perform certain restricted activities. Scope of practice represents the legal limits of the licensed individual's performance. States have a variety of mechanisms to define the margins of what an individual is legally permitted to perform.
- *Credentialing* is a local process by which an individual is permitted by a specific entity (medical director) to practice in a specific setting (EMS agency). Credentialing processes vary in sophistication and formality.

For every individual, these four domains are of slightly different relative sizes. However, one concept remains constant: an individual may only perform a skill or role for which that person is:

- educated (has been trained to do the skill or role), AND
- certified (has demonstrated competence in the skill or role), AND
- licensed (has legal authority issued by the State to perform the skill or role), AND
- credentialed (has been authorized by medical director to perform the skill or role).

Because states may need to revise or develop processes to facilitate a smooth transition from the *U.S. Department of Transportation National Standard Curricula* (NSC) to the new *Education Standards*, the National Association of State EMS Officials (NASEMSO) collaborated with a panel of experts and several national stakeholder groups to establish this *Gap Analysis Template*. The purpose of the gap analysis is to identify skills, content, and new course considerations not included in the previous *National Standard Curricula* for each EMS practitioner level. This *Gap Analysis Template* is not a “stand-alone” transition document; the template should serve as another tool to facilitate implementation of the *EMS Education Agenda*. Its intended audience is state EMS offices although NASEMSO acknowledges that the content may be useful to a much broader audience.

Prior to using the *Education Standards*, educational programs should communicate and coordinate with their state EMS office to ensure that:

- The state has adopted the scope of practice levels consistent with the *National Scope of Practice Model*.
- The state has defined any instructor qualifications that must be met prior to using the *Education Standards*.
- A state-wide transition process for existing EMS personnel and instructors has been identified.
- Adequate text and support materials are in place for program delivery.
- Certification and licensure are based on the *Education Standards*.

Although educational programs should not independently decide to incorporate the *Education Standards* into current instruction, instructors should present updated content to students as quickly as possible. States are encouraged to demonstrate sensitivity to the needs of the EMS community in order to accomplish a logical and timely transition to the new *Education Standards*.

States should consider several other important factors before implementation of the *Education Standards*:

- Individual states are encouraged to use the *National EMS Scope of Practice Model* as a foundation to establish state EMS practitioner levels.
- Individual states are encouraged to use the *Gap Analysis Template* to help define system processes that support the transition of EMS practitioners to the state-adopted scope of practice.
- The *Education Standards* promotes increased flexibility, encourages creativity within each EMS education program and encourages alternative delivery methods. The *Education Standards* do not represent a prescriptive sequence or content grouping for a class presentation. States and/or educational programs will need to determine the sequence for teaching the materials.

- Course outcome evaluations should be based on student competency, not the time to course completion, as this may vary. Time estimates may be provided to guide the *planning* for presentation of course materials.
- States and/or education programs should re-evaluate student qualifications, co-requisites, or pre-requisites for all EMS practitioner levels.
- States and/or programs should consider co-requisites or pre-requisites for transition courses to help establish the depth and breadth of new content.
- Affective (professional behavior) evaluation is new for EMR and EMT and the content at those levels includes new expectations and materials.
- Individuals transitioning within a level (i.e. EMT-P to Paramedic) are responsible for the knowledge and skills that are implicit to all previous levels.
- All EMS stakeholders are strongly encouraged to use the correct terms to describe EMS practitioner levels—i.e. Emergency Medical Responder, Emergency Medical Technician, Advanced Emergency Medical Technician, and Paramedic. The term “EMT” no longer represents a generic term but instead describes a specific provider level.

Essential components of EMS practice that lie outside the scope of the *Education Standards* may include, but are not limited to:

- Vehicle operations/driving
- Selected/local EMS health and safety concerns
- OSHA requirements and fit-testing methods
- Immunizations recommended to function in an EMS environment as a healthcare practitioner
- Physical requirements for job performance
- Policies or protocols related to the scope of practice
- Credentialing info (educational preparation leading to state licensure and national certification)
- Other State and local policies and requirements

The *Gap Analysis Template* is not a policy document and it is NOT intended to describe:

- Policies and procedures for State implementation of the Education Agenda.
- Policies and procedures for EMS Program implementation of the Education Agenda.
- Policies and procedures for EMS Agency implementation of the Education Agenda.
- Regulatory language for states to implement the Education Agenda or Scope of Practice Model.
- Education strategies for instructors and/or programs.

- Educational materials to create learning modules (appropriate references are included in the Education Standards.)
- Regression strategies for EMS practitioners who choose to revert to a lower level of certification/licensure (i.e. I-85 to Emergency Medical Technician.) States are encouraged to consider appropriate credentialing policies in this regard. Some states may decide to consider individual requests to revert to another level on a case-by-case basis.

Figure 1 is intended to help illustrate the continuum of the knowledge and skill levels of EMS practitioners from the previous National Standard Curriculum (NSC) to the current Education Standards (ES) based on the National Scope of Practice Model. The overlapping areas are intentional because they help identify and compare points of intersection and divergence between the NSC and ES.

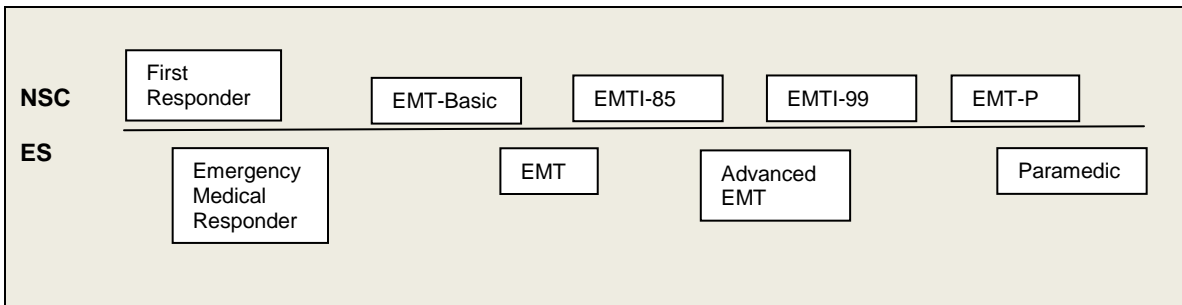


Figure 1. Relationship of NSC to Education Standards

Figure 2 illustrates the components of the *Education Agenda*. The *Education Agenda* and the following components: National EMS Core Content, National EMS Scope of Practice Model, and the National EMS Education Standards are available at www.ems.gov.

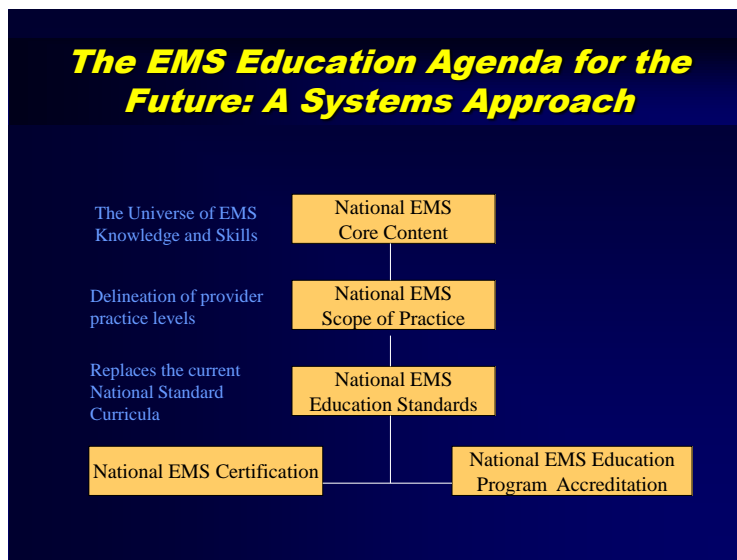


Figure 2. The EMS Education Agenda for the Future: A Systems Approach

The NASEMSO Implementation Working Group is available to provide technical assistance to states with the gap analysis and other *Education Agenda* implementation efforts. State officials that desire additional information can contact NASEMSO via info@nasemso.org or call NASEMSO Program Advisor Kathy Robinson at (703) 538-1799 ext 1708.

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Comparison of knowledge components between the *National Standard Curricula* and *Education Standards* at the EMR level.

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List of organizational components that require review prior to transitioning to the Education Standards.

b. Emergency Medical Technician: Skills

Comparison of skill components between the *National Standard Curricula* and the *Education Standards* at the EMT level.

c. Emergency Medical Technician: Content

Comparison of knowledge components between the *National Standard Curricula* and *Education Standards* at the EMT level.

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List of organizational components that require review prior to transitioning to the Education Standards.

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7. “Essential” Content for Transition Courses **Page 34**

List of content considered essential for transitioning currently certified/licensed providers to the updated levels once implementation of the *Education Standards* is complete.

- 7.1. Emergency Medical Responder**
- 7.2. Emergency Medical Technician**
- 7.3. Advanced Emergency Medical Technician**
- 7.4. Paramedic**

**8. Appendix A—Skill Spreadsheet
National Standard Curricula to National SOP Model Page 41**

Skill components presented in a spreadsheet/checklist format compares the skills from the NSC to the National EMS Scope of Practice Model.

**9. Appendix B—Skill Spreadsheet
Blank Checklist for State EMS Office Use Page 45**

Skill components presented in a spreadsheet/checklist format provides the skill matrix from the National EMS Scope of Practice Model with blank columns for states to establish its own gap analysis.

1. Cross Reference of Education Standards and Instructional Guidelines (by Sections)

Section Title	Education Standards Page Number	EMR Instructional Guidelines Page Number	EMT Instructional Guidelines Page Number	AEMT Instructional Guidelines Page Number	Paramedic Instructional Guidelines Page Number
Preparatory	11	1	1	1	1
• EMS Systems	11	1	1	1	1
• Research	11	4	4	3	9
• Workforce Safety and Wellness	12	4	5	4	12
• Documentation	13	12	9	5	16
• EMS System Communication	13	13	13	8	18
• Therapeutic Communications	13	14	17	11	20
• Medical/Legal Ethics	13	15	20	12	25
Anatomy and Physiology	14	18	24	13	31
Medical Terminology	14	21	29	19	54
Physiology	14	22	30	20	55
Life Span Development	14	24	34	22	72
Public Health	15	26	40	23	76
Pharmacology	15	27	42	25	78
• Principles of Pharmacology	15	27	42	25	78
• Medication Administration	16	28	44	30	85
• Emergency Medications	16	29	46	32	87
Airway Management, Respiration, and Artificial Ventilation	17	30	47	33	90
• Airway Management	17	30	47	33	90
• Respiration	18	33	50	36	94
• Artificial Ventilation	18	37	57	39	100
Patient Assessment	19	41	60	42	102
• Scene Size Up	19	41	60	42	102
• Primary Assessment	20	44	63	43	105
• History-Taking	20	48	66	45	107
• Secondary Assessment	20	50	71	46	118
• Monitoring Devices	21	53	76	47	131
• Reassessment	21	54	78	48	133
Medicine	22	56	80	49	134
• Medical Overview	22	56	80	49	134
• Neurology	23	57	84	53	138
• Abdominal and Gastrointestinal Disorders	24	59	87	56	142
• Immunology	25	61	89	58	148
• Infectious Diseases	26	62	91	60	151
• Endocrine Disorders	27	63	93	63	163
• Psychiatric	28	65	96	65	166
• Cardiovascular	29	68	99	68	169

Section Title	Education Standards Page Number	EMR Instructional Guidelines Page Number	EMT Instructional Guidelines Page Number	AEMT Instructional Guidelines Page Number	Paramedic Instructional Guidelines Page Number
• Toxicology	30	70	104	73	203
• Respiratory	31	73	107	77	210
• Hematology	32	74	109	80	217
• Genitourinary/Renal	33	75	110	82	220
• Gynecology	34	76	112	84	226
• Non-traumatic Musculoskeletal Disorders	34	77	113	85	229
• Diseases of the Eyes, Ears, Nose, and Throat	35	78	114	86	231
Shock and Resuscitation	35	79	115	87	233
Trauma	35	82	122	94	244
• Trauma Overview	35	82	122	94	244
• Bleeding	35	83	125	95	248
• Chest Trauma	37	85	128	98	255
• Abdominal and Genitourinary Trauma	38	86	131	104	262
• Orthopedic Trauma	39	87	135	108	267
• Soft Tissue Trauma	40	89	142	110	272
• Head, Facial, Neck and Spine Trauma	41	93	147	115	279
• Nervous System Trauma	42	96	155	118	283
• Special Considerations in Trauma	42	97	160	121	288
• Environmental Trauma	43	99	164	127	293
• Multi-System Trauma	43	103	170	128	299
Special Patient Populations	44	104	174	132	303
• Obstetrics	44	104	174	132	303
• Neonatal Care	45	107	177	133	308
• Pediatrics	46	108	178	134	327
• Geriatrics	47	112	189	135	345
• Patients With Special Challenges	48	114	197	136	362
EMS Operations	48	115	200	139	377
• Principles of Safely Operating a Ground Ambulance	48	115	200	139	377
• Incident Management	49	117	202	140	378
• Multiple Casualty Incidents	49	118	203	141	379
• Air Medical	49	120	205	142	380
• Vehicle Extrication	49	122	207	144	381
• Hazardous Materials Awareness	49	125	210	147	384
• Mass Casualty Incidents Due to Terrorism and Disaster	50	126	211	148	385

2. Glossary of Abbreviations and Terms

A&P	Anatomy and physiology
ABG	Arterial blood gas
ACLS	Advanced Cardiac Life Support
AED	Automated external defibrillator
AEMT	Advanced EMT, this is the 3 rd provider level in the Scope of Practice, and is often thought of as the first advanced life support level due to the number of invasive skills contained within this provider level.
Affective Domain	One of three learning domains in EMS education, the affective domain focuses on behaviors, including morals, values and ethics.
AIDS	Acquired immune deficiency syndrome or acquired immunodeficiency syndrome
Accreditation	Relates to EMS programs not individual practitioners, specifically, granting of approval by an official review board after specific requirements have been met. The review board is non-governmental and the review is collegial and based on self-assessment, peer assessment, and judgment. The purpose of accreditation is public accountability.
ALS	Advanced Life Support. This is the level of EMS provider that must possess a greater depth and breadth of knowledge. It deals with more invasive procedures and more complicated medical problems. The AEMT and paramedic are considered ALS level providers.
ATV	Automatic transport ventilator
BiPAP/CPAP	Bi-level positive airway pressure/continuous positive airway pressure
BLS	Basic Life Support. This level of EMS provider has the foundational levels of depth and breadth and less invasive skills and procedures are performed. The BLS level includes both the EMR and EMT.
BSI	Body substance isolation

BTF	Brain Trauma Foundation
Bridge	The process of transitioning from one practitioner level to the next higher practitioner level via an educational framework (i.e. Emergency Medical Technician to Advanced Emergency Medical Technician)
BVM	Bag valve mask
CDC	Centers for Disease Control and Prevention
Certification	An external verification of the competencies that an individual has achieved and typically involves an examination process. While certification exams can be set to any level of proficiency, in health care they are typically designed to verify that an individual has achieved minimum competency to assure safe and effective patient care. (Certification does not grant an individual permission to perform as an EMS provider, but it is often the first step in the process to gain permission to volunteer or work as an EMS provider.)
CO₂	Carbon dioxide
CoAEMSP	Committee on Accreditation of Educational Programs for the EMS Professions
Cognitive Domain	One of three learning domains in EMS education, the cognitive domain focuses on knowledge and includes the depth (how much is required on an individual topic area) as well as breadth (how many and how varied the topics need to be in a given practitioner level such as EMT or AEMT).
CPR	Cardiopulmonary resuscitation
Credentialing	A local process by which an individual is permitted by a specific entity (medical director) to practice in a specific setting (EMS agency). Credentialing processes vary in sophistication and formality. (Certification and licensure are prerequisites to credentialing.)
CISM	Critical Incident Stress Management
ECG	Electrocardiogram

Education	All of the cognitive, psychomotor, and affective learning that individuals have undergone throughout their lives. This includes entry-level and continuing professional education, as well as other formal and informal learning. Clearly, many individuals have extensive education that, in some cases, exceeds their EMS skills or roles
GI	Gastrointestinal
HAZWOPER	Hazardous Waste Operations and Emergency Response , it is a special credential for fire and EMS providers that is earned following additional HAZMAT focused training.
HIPAA	Health Insurance Portability and Accountability Act
HIV	Human immunodeficiency virus
IG	Instructional Guidelines
ILCOR	International Liaison Committee on Resuscitation
IO	Intraosseous
IV	Intravenous
Licensure	Permission granted to an individual by the State to perform certain restricted activities. Scope of practice represents the legal limits of the licensed individual's performance. States have a variety of mechanisms to define the margins of what an individual is legally permitted to perform.
MAST	Medical anti-shock trouser
MRSA	Methicillin-resistant Staphylococcus aureus
NASEMSO	National Association of State EMS Officials
NEMSES	National EMS Education Standards
NG	Nasogastric
NHTSA	National Highway Traffic Safety Administration
NSC	National Standard Curriculum

OG	Orogastric
PASG	Pneumatic anti-shock garment
PEEP	Positive end-expiratory pressure
PID	Pelvic inflammatory disease
PPE	Personal protective equipment

Psychomotor Domain

One of three learning domains in EMS education, the psychomotor domain focuses on skills and body movements.

STD	Sexually transmitted disease
Transition	The process of credentialing the same practitioner level from the National Standard Curricula to the Education Standards (i.e. EMT-A to Emergency Medical Technician)
STEMI	ST-segment elevation myocardial infarction
TIA	Transient ischemic attack

3. Knowledge and Skill Comparison (Emergency Medical Responder)

The order of content is not meant to imply the order of delivery.

a. Emergency Medical Responder: New Course Considerations

When planning and conducting a new EMR course, the Program Director or Course Coordinator must consider the following:

- Instructional resources
- Instructor qualifications
- Medical director oversight
- Review and verify integration of the clinical behavior/judgment section of the *Education Standards*, particularly related to lab and clinical and field activities.
- Include affective evaluation and professional behavior in student assessment
- Program effectiveness evaluation

b. Emergency Medical Responder: Skills

For a current First Responder (based on 1995 First Responder National Standard Curriculum) transitioning to Emergency Medical Responder (EMR), the following skills are no longer taught:

- Insertion of a nasopharyngeal airway
- Pressure points and elevation for hemorrhage control

For a current 1995 First Responder transitioning to 2009 Emergency Medical Responder, the following skills were optional in 1995 First Responder National Standard Curriculum with State approval:

- Use of supplemental oxygen
- Use of nasal cannula
- Use of non-rebreather face mask
- Use of the automated external defibrillator (AED)

For a current 1995 First Responder transitioning to 2009 Emergency Medical Responder, the following skills are new:

- Use of a bag-valve-mask
- Use of an auto-injector (self or peer)
- Obtaining manual blood pressures

- Performing eye irrigation

c. Emergency Medical Responder: Content

Preparatory

- **EMS Systems** - there is more content about quality improvement here than in the First Responder curriculum; contains section on required affective/behavioral characteristics
- **Research** – extremely limited information, but new to this level
- **EMS System Communication** – addition of fundamental information about transferring patient care to incoming EMTs
- **Therapeutic Communications** – addition of fundamental information about improving communication with the patient
- **Medical/Legal/Ethics** – Health Insurance Portability and Accountability Act (HIPAA) did not exist when the First Responder curriculum was authored; includes a brief discussion on living wills, surrogate decision makers, and civil and criminal court cases; in the discussion on advanced directives, the reference to ILCOR should have been removed

Anatomy and Physiology

- Brief discussion on the life support chain focusing on oxygenation and perfusion

Medical Terminology

- This content is new to this level

Pathophysiology

- This content is new to this level but only focuses on respiratory dysfunction and shock

Life-Span Development

- Minimal new information at this level

Public Health

- Minimal new information at this level

Pharmacology

- **Medication administration** – discussion focuses on the use of an autoinjector for self-preservation or for use on one's peers (chemical attack)
- **Emergency Medications** – chemical antidote autoinjector only

Airway Management, Respiration, and Oxygenation

- **Anatomy and Physiology** – more detailed than in the previous First Responder curriculum, especially in the area of respiratory physiology. The increases in this area are related to enhanced skills in scope of practice and new evidence that demonstrates the important interrelationship between ventilation and circulation.
- **Respiration** - more detailed than in the previous First Responder curriculum
- **Artificial Ventilation** - more detailed than in the previous First Responder curriculum

Patient Assessment

- **Scene Size-Up** – no new information here but a re-emphasis on the need for scene safety for everyone present
- **Primary Assessment** - new terminology that more closely mimics other health care professionals

- **History Taking** - new terminology that more closely mimics other health care professionals; some content specific to geriatrics added
- **Secondary Assessment** - new terminology that more closely mimics other health care professionals; more thorough than in the previous curriculum; blood pressure assessment added to this level
- **Reassessment** - blood pressure reassessment added to this level

Medicine

- **Medical Overview** – re-use of the new assessment terminology
- **Neurology** – stroke discussion is new information at this level
- **Abdominal and Gastrointestinal Disorders** – minimal new information at this level
- **Immunology** - minimal new information at this level
- **Infectious Diseases** – two definitions added and a brief discussion about transmission routes
- **Endocrine** – a brief discussion about diabetes, more detailed than in the previous curriculum
- **Psychiatric** – includes new material, a brief discussion on the assessment for suicide risk
- **Cardiovascular** – deeper discussion on chest pain and heart attack
- **Toxicology** – new information at this level; discussion on the use of chemical antidote autoinjector
- **Respiratory** – deeper discussion on respiratory distress
- **Genitourinary/Renal** – discussion focuses on hemodialysis
- **Gynecology** – discussion focuses on vaginal bleeding
- **Diseases of Eyes, Ears, Nose, and Throat** – focuses on nosebleed

Shock and Resuscitation

- New section that combines the CPR information from the old curriculum with more detail and a discussion on the use of the AED; more detailed shock information

Trauma

- **Overview** – discussion on the Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol
- **Orthopedic Trauma** - The terms fracture and dislocation appear here; they did not appear in the previous First Responder National Standard Curriculum
- **Soft Tissue Trauma** – brief discussion added about foreign bodies in the eye; assessment information added about the extent of burns.
- **Head, Facial, Neck, and Spine Trauma** – elaboration on special management situations
- **Special Considerations in Trauma** – added discussion on the elderly and the pregnant patient
- **Environmental** – AEDs mentioned, brief discussion on submersions added
- **Multi-system Trauma** – new material at this level

Special Patient Populations

- **Pregnant Patient** – vaginal bleeding discussion added, the term Braxton Hicks did not appear in the previous First Responder National Standard Curriculum
- **Pediatrics** – pediatric assessment triangle included; discussion of shock in the pediatric patient in the previous curriculum, it was called circulatory failure
- **Geriatrics** – all new section for this level
- **Patients with Special Challenges** – elder abuse added

EMS Operations

- **Principles of Safely Operating a Ground Ambulance** - increased depth of discussion on the risks of emergency response and leaving the scene
- **Incident Management** – references the incident management system and the federal requirements for compliance
- **Air Medical** – new material at this level; patient transfer issues, interaction with flight personnel, scene safety, landing zone selection/prep
- **Vehicle Extrication** – added discussion on situational safety and the use of simple hand tools
- **Hazardous Materials Awareness** – references **Hazardous Waste Operations and Emergency Response (HAZWOPER)** standard
- **Mass Casualty Incidents Due to Terrorism or Disaster** – all new material at this level

4. Knowledge and Skill Comparison (Emergency Medical Technician)

The order of content is not meant to imply the order of delivery.

a. Emergency Medical Technician: New Course Considerations

When planning and conducting a new EMT course, the Program Director or Course Coordinator must incorporate all considerations at the EMR levels plus,

- Student rotation through the emergency department
- Ten patient assessments
- Field patient contacts
- Review and verify integration of the clinical behavior/judgment section of the *Education Standards* particularly related to lab and clinical and field activities.
- Include affective evaluation and professional behavior in student assessment

b. Emergency Medical Technician: Skills

For a current EMT-Basic (based on 1994 EMT-B National Standard Curriculum) transitioning to 2009 Emergency Medical Technician (EMT), the following skills are no longer taught:

- Insertion of nasogastric and orogastric tubes (Not in the 1994 EMT-B National Standard Curriculum but in the 2002 Advanced Airway supplement)
- Activated charcoal removed from formulary

For a current 1994 EMT-Basic transitioning to 2009 Emergency Medical Technician EMT, the following skills are new:

- Use of oxygen humidifiers
- Use of partial rebreather masks
- Use of simple face masks
- Use of Venturi masks
- Obtaining a pulse oximetry value
- Use of automated transport ventilators
- Use of mechanical CPR devices (requires additional specialty training and device approval)
- Application of mechanical patient restraint (1994 EMT-B National Standard Curriculum contains an approach now deemed inappropriate—i.e. forceful restraint in a prone position, with wrists & ankles tightly tied together ("hobbled") behind the back.)

- Assisting a patient with his/her prescribed medications, nebulized/aerosolized (1994 EMT-B National Standard Curriculum advocated assisting a patient with hand-held aerosol inhalers, but not administer nebulized medications to a patient)
- Administration of aspirin by mouth
- Use of an auto-injector (self or peer) (introduced at the EMR level)

c. Emergency Medical Technician: Content

Preparatory – EMS Systems

- **EMS Systems** – more detailed discussion on patient safety issues, decreasing medical errors, and required affective/behavioral characteristics
- **Research** – extremely limited information on evidence based decision making
- **Workforce Safety and Wellness** – emphasizes the difference between body substance isolation and personal protective equipment; brief discussion on bariatric issues, neonatal isolettes and medical restraint
- **Documentation** - Health Insurance Portability and Accountability Act (HIPAA) did not exist when the 1994 EMT-B National Standard Curriculum was authored
- **Therapeutic Communications** – more detailed information about improving communication with the patient
- **Medical/Legal/Ethics** – Health Insurance Portability and Accountability Act (HIPAA) did not exist when the 1994 EMT-B National Standard Curriculum was authored; should include a state-specific discussion on privileged communication; includes a brief discussion on living wills, surrogate decision makers, and civil and criminal court cases; ethics

Anatomy and Physiology

- The respiratory information found in the 2000 Supplemental Airway and Ventilation Module should be added; more detailed discussion on the life support chain focusing on oxygenation, perfusion, and the cellular environment

Medical Terminology

- Minimal new content added to this level

Pathophysiology

- This content is new to this level but only focuses on respiratory and perfusion dysfunction along with shock

Life-Span Development

- New information at this level

Public Health

- New information at this level; related to *EMS Agenda for the Future* issues

Pharmacology

- **Medication administration** – added the five rights of medication administration
- **Emergency Medications** – aspirin added to this level

Airway Management, Respiration, and Oxygenation

- **Anatomy and Physiology** – much more detailed than in the previous 1994 EMT-B National Standard Curriculum
- **Respiration** - much more detailed than in the previous 1994 EMT-B National Standard Curriculum
- **Artificial Ventilation** - much more detailed than in the previous 1994 EMT-B National Standard Curriculum

Patient Assessment

- **Scene Size-Up** – no new information here but a re-emphasis on the need for scene safety for everyone present
- **Primary Assessment** - new terminology that more closely mimics other health care professionals
- **History Taking** - new terminology that more closely mimics other health care professionals
- **Secondary Assessment** - new terminology that more closely mimics other health care professionals; more thorough than in the previous curriculum
- **Monitoring Devices** – pulse oximetry added

Medicine

- **Medical Overview** – re-use of the new assessment terminology; with focus on medical patient
- **Neurology** – in the previous curriculum, most of the neurological conditions were bundled together into altered mental status. This new section requires a greater assessment and differentiation; stroke is a rapidly changing area. Local standards and various national organizations should serve as a resource for currently accepted assessment and treatment
- **Abdominal and Gastrointestinal Disorders** – minimal new content added to this level
- **Immunology** - the term anaphylaxis did not appear in the 1994 EMT-B National Standard Curriculum; some geriatric information added
- **Infectious Diseases** – this section should include updated infectious disease information, for example methicillin-resistant Staphylococcus aureus (MRSA) and Acquired Immune Deficiency Syndrome (AIDS) update; should include a discussion on cleaning and sterilizing equipment and decontaminating the ambulance
- **Endocrine** – increased emphasis on pathophysiology and acknowledgement of the increasing prevalence and incidence of diabetes in the community
- **Psychiatric** – includes new material on excited delirium; the 1994 EMT-B National Standard Curriculum has incorrect and dangerous information about the use of restraint and should no longer be presented (i.e. “hog-tied” or hobble technique)
- **Cardiovascular** – increased emphasis on anatomy, physiology and pathophysiology; increased emphasis on specific cardiovascular emergencies, addition of aspirin information for acute coronary syndrome
- **Toxicology** – poison control information included; addition of drugs of abuse
- **Respiratory** – more in-depth evaluation of a patient with respiratory problems.
- **Hematology** – brief discussion of sickle cell disease
- **Genitourinary/Renal** – more detailed discussion of this organ system
- **Gynecology** – includes brief discussion of sexually transmitted diseases and pelvic inflammatory disease
- **Non-Traumatic Musculoskeletal Disorders** – new information at this level

Shock and Resuscitation

- This shock content was moved from trauma to emphasize the fact that it occurs in contexts other than trauma; the cardiac arrest information was moved from cardiology for

the same reason; brief discussion on devices to assist circulation, although subject to local protocol; shock should be taught in a more comprehensive context rather than simply as a consequence of bleeding

Trauma

- **Overview** – discussion on the Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol; assessment focuses on trauma patient; the term fracture was placed back into the vocabulary
- **Chest Trauma** – more detailed discussion
- **Abdominal Trauma** – more detailed discussion
- **Orthopedic Trauma** - the term fracture was placed back into the vocabulary
- **Head, Facial, Neck, and Spine Trauma** – more detail about neck eye, oral and brain injuries; emphasizes the harm of hyperventilation in most circumstances
- **Nervous System Trauma** - the old curriculum was separated into soft tissue and injuries to the head and spine; more detail on brain anatomy; emphasizes the harm of hyperventilation; references the Brain Trauma Foundation; increased emphasis on neurological assessment
- **Special Considerations in Trauma** – added discussion on the elderly, pediatrics, the pregnant patient, the cognitively impaired
- **Environmental** – more in depth discussion on submersion, bites, envenomations, diving injuries (subject to local protocols) and radiation exposure
- **Multi-system Trauma** – new material at this level; includes discussion of kinematics and blast injury

Special Patient Populations

- **Pregnant Patient** – more detailed discussion on complications of pregnancy; uses the terms preeclampsia, eclampsia and premature rupture of membranes (which do not require a lengthy discussion)
- **Pediatrics** – this section is more detailed than in the previous version
- **Geriatrics** – all new section for this level
- **Patients with Special Challenges** – elder abuse, homelessness, poverty, bariatric, more technology dependant, hospice, sensory deficit, homecare, and developmental disabilities added

EMS Operations

- **Principles of Safely Operating a Ground Ambulance** - increased depth of discussion on the risks of emergency response and leaving the scene
- **Incident Management** – references the incident management system and the federal requirements for compliance
- **Multiple Casualty Incidents** – references Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol
- **Air Medical** – all material at this level represents the same depth and breadth as at the EMR level
- **Vehicle Extrication** – all material at this level represents the same depth and breadth as the EMR level
- **Hazardous Materials Awareness** – all material at this level represents the same depth and breadth as the EMR level
- **Mass Casualty Incidents Due to Terrorism or Disaster** – all material at this level represents the same depth and breadth as the EMR level

5. Knowledge and Skill Comparison (Advanced Emergency Medical Technician)

The order of content is not meant to imply the order of delivery.

a. Advanced Emergency Medical Technician: New Course Considerations

When planning and conducting a new AEMT course, the Program Director or Course Coordinator must incorporate all considerations at the EMR and EMT levels plus,

- Clinical skills
- Field experience as a team leader
- Review and verify integration of the clinical behavior/judgment section of *Education Standards*, particularly related to lab and clinical and field activities.
- Include affective evaluation and professional behavior in student assessment

b. Advanced Emergency Medical Technician : Skills

1985 EMT-Intermediate

For a current 1985 EMT-Intermediate (based on 1985 EMT-I National Standard Curriculum) transitioning to 2009 Advanced Emergency Medical Technician (AEMT), the following skills are no longer taught:

- Insertion of esophageal airways

For a current 1985 EMT-I transitioning to 2009 AEMT, the following skills are now taught in the 2009 EMR or 2009 EMT and are to be considered new:

- Use of partial rebreather masks (introduced at the EMT level)
- Use of simple face masks (introduced at the EMT level)
- Use of Venturi masks (introduced at the EMT level)
- Obtaining a pulse oximetry value (introduced at the EMT level)
- Use of automated transport ventilators (introduced at the EMT level)
- Administration of aspirin by mouth (introduced at the EMT level)
- Automated defibrillation (introduced at EMT level)
- Self or peer use of an auto-injector (introduced at the EMR level)

For a current 1985 EMT-I transitioning to 2009 AEMT, the following skills are new:

- Insertion of supraglottic airways; airways not intended for insertion into the trachea
- Use of oxygen humidifiers
- Use of tracheostomy mask
- Tracheobronchial suctioning (already intubated patient)
- Use of mechanical CPR devices (requires additional specialty training and device approval)
- Application of mechanical patient restraint (not new skill, but new information)
- Insertion of intraosseous infusion in children
- Administration of aerosolized or nebulized beta agonists (I-85s could previously only assist a patient with his or her own prescription medication and now they administer as an EMS medication)
- Allow self-administered nitrous oxide
- Administer intramuscular epinephrine and glucagon
- Administration of intranasal naloxone
- Administer intravenous naloxone or 50% dextrose
- Administration of subcutaneous epinephrine
- Blood glucose monitoring

1999 EMT-Intermediate

For a current 1999 EMT-Intermediate (based on 1999 EMT-I National Standard Curriculum) transitioning to 2009 Advanced Emergency Medical Technician (AEMT), the following skills are no longer taught:

- Perform needle chest decompression
- Perform needle cricothyrotomy
- Insertion of nasogastric and orogastric tubes
- Insertion of an orotracheal tube
- Performing direct laryngoscopy
- Tracheobronchial suctioning (I-99s permitted to intubate and suction; now AEMTs only able to perform suctioning in already intubated patients)
- Interpret single lead electrocardiograms
- Perform manual defibrillation attempts
- Apply ECG to monitor internal cardiac pacing
- Perform transcutaneous cardiac pacing
- Rectal medication administration
- Transtracheal medication administration
- Pressure points and elevation for hemorrhage control

For a current 1999 EMT-Intermediate (based on 1999 EMT-I National Standard Curriculum) transitioning to 2009 Advanced Emergency Medical Technician (AEMT), the following skills are new:

- Administration of intranasal naloxone
- Use of mechanical CPR devices (introduced at the EMT level)
- Self or peer use of an auto-injector (introduced at the EMR level)

c. Advanced Emergency Medical Technician: Content

Preparatory – EMS Systems

- **EMS Systems** – more detailed discussion on patient safety issues, strategies to decrease medical errors
- **Research** – extremely limited information on evidence based decision making
- **Workforce Safety and Wellness** – emphasizes the difference between body substance isolation and personal protective equipment; brief discussion on bariatric issues, neonatal isolettes and medical restraint
- **Documentation** - the Health Insurance Portability and Accountability Act (HIPAA) did not exist when either of the EMT-I curricula was authored
- **Therapeutic Communications** – more detailed information about improving communication with the patient
- **Medical/Legal/Ethics** – the Health Insurance Portability and Accountability Act (HIPAA) did not exist when the EMT-I curriculum was authored; should include a state-specific discussion on privileged communication; includes a brief discussion on living wills, surrogate decision makers, and civil and criminal court cases; ethics

Anatomy and Physiology

- More detailed discussion than in the previous version

Medical Terminology

- Although not detailed, this content is new to this level

Pathophysiology

- This content is new to this level but only focuses on respiratory and perfusion dysfunction along with shock

Life-Span Development

- New information at this level

Public Health

- New information at this level; related to *EMS Agenda for the Future* issues

Pharmacology

- **Principles of Pharmacology** – new information at this level
- **Medication Administration** – added the five rights of medication administration; more detailed information
- **Emergency Medications** – specific list of medications

Airway Management, Respiration, and Oxygenation

- **Anatomy and Physiology** – much more detailed than in the previous EMT-I curriculum
- **Artificial Ventilation** - much more detailed than in the previous EMT-I curriculum
- **Respiration** - much more detailed minimal new content added to this level in the previous EMT-I curriculum

Patient Assessment

- **Scene Size-Up** – no new information here but a re-emphasis on the need for scene safety for everyone present
- **Primary Assessment** - new terminology that more closely mimics other health care professionals
- **History Taking** - new terminology that more closely mimics other health care professionals
- **Secondary Assessment** - new terminology that more closely mimics other health care professionals; more thorough than in the previous curriculum
- **Monitoring Devices** – blood glucose monitoring and blood chemistry analysis added to this level

Medicine

- **Medical Overview** – re-use of the new assessment terminology
- **Abdominal and Gastrointestinal Disorders** – minimal new content added to this level
- **Immunology** – all new information
- **Infectious Diseases** – this section should include updated infectious disease information, for example methicillin-resistant *Staphylococcus aureus*, hepatitis, and Acquired Immune Deficiency Syndrome update; should include a discussion on cleaning and sterilizing equipment and decontaminating the ambulance
- **Endocrine** – increased emphasis on pathophysiology and acknowledgement of the increasing prevalence and incidence of diabetes in the community
- **Psychiatric** – includes new material on excited delirium
- **Cardiovascular** – increased emphasis on anatomy, physiology and pathophysiology; increased emphasis on specific cardiovascular emergencies
- **Toxicology** – all new information
- **Respiratory** – more in-depth evaluation of a patient with respiratory problems.
- **Hematology** – brief discussion in sickle cell disease
- **Genitourinary/Renal** – more detailed discussion of this organ system
- **Gynecology** – includes brief discussion of sexually transmitted diseases and pelvic inflammatory disease
- **Non-Traumatic Musculoskeletal Disorders** – new information at this level

Shock and Resuscitation

- This shock content was moved from trauma to emphasize the fact that it can happen in a context other than trauma; the cardiac arrest information was moved from an optional module at the Intermediate-85 level and cardiovascular emergencies at the Intermediate-99 level; brief discussion on devices to assist circulation, although subject to local protocol; shock should be taught in a more comprehensive context rather than simply as a consequence of bleeding

Trauma

- **Overview** – all material at this level represents the same depth and breadth as at the EMT level
- **Bleeding** – more detailed discussion
- **Chest Trauma** – more detailed discussion
- **Abdominal Trauma** – more detailed discussion
- **Orthopedic Trauma** - more detailed discussion
- **Head, Facial, Neck, and Spine Trauma** – more detail about neck eye, oral and brain injuries; emphasizes the harm of over ventilation in most situations

- **Nervous System Trauma** - more detail on brain anatomy; emphasizes the harm of hyperventilation; references the Brain Trauma Foundation; increased emphasis on neurological assessment
- **Special Considerations in Trauma** – all section new or increased emphasis
- **Environmental** – all material at this level represents the same depth and breadth as at the EMT level
- **Multi-system Trauma** – new material at this level; includes discussion of kinematics and blast injury

Special Patient Populations

- **Pregnant Patient** – more detailed discussion on complications of pregnancy; uses the terms preeclampsia, eclampsia and premature rupture of membranes which do not require a lengthy discussion
- **Pediatrics** – this section is much more detailed than in the previous version
- **Geriatrics** – all new section for this level
- **Patients with Special Challenges** – elder abuse, homelessness, poverty, bariatric, more technology dependant, hospice, sensory deficit, homecare, and developmental disabilities added

EMS Operations

- **Principles of Safely Operating a Ground Ambulance** - all material at this level represents the same depth and breadth as at the EMT level
- **Incident Management** – all material at this level represents the same depth and breadth as at the EMT level
- **Multiple Casualty Incidents** – all material at this level represents the same depth and breadth as at the EMT level
- **Air Medical** – all material at this level represents the same depth and breadth as at the EMT level
- **Vehicle Extrication** – all material at this level represents the same depth and breadth as at the EMT level
- **Hazardous Materials Awareness** – all material at this level represents the same depth and breadth as at the EMT level
- **Mass Casualty Incidents Due to Terrorism or Disaster** – all material at this level represents the same depth and breadth as at the EMT level

6. Knowledge and Skill Comparison (Paramedic)

The order of content is not meant to imply the order of delivery.

a. Paramedic: New Course Considerations

When planning and conducting a new Paramedic course, the Program Director or Course Coordinator must incorporate all considerations at the EMR, EMT, and AEMT levels plus,

- Reference Committee on Accreditation of Educational Programs for the EMS Professions (CoAEMSP) Standards and Guidelines
- Review and verify integration of the clinical behavior/judgment section of the *Education Standards*, particularly related to lab and clinical and field activities.
- Include affective evaluation and professional behavior in student assessment

b. Paramedic: Skills

1999 EMT-Intermediate

For a current 1999 EMT-Intermediate (based on 1999 EMT-I National Standard Curriculum) transitioning to 2009 Paramedic, the following skills are no longer taught:

- Pressure points and elevation for hemorrhage control

For a current 1999 EMT-I transitioning to 2009 AEMT, the following skills are now taught in the 2009 EMR, 2009 EMT or 2009 AEMT and are to be considered new:

- Self or peer use of an auto-injector (introduced at the EMR level)
- Use of mechanical CPR devices (introduced at EMT level)

For a current 1999 EMT- Intermediate transitioning to Paramedic, the following skills are new:

- Use of BiPAP/CPAP
- Monitoring and management of a chest tube
- Performing a percutaneous cricothyrotomy (not a surgical airway)
- Interpretation and monitoring of end-tidal carbon dioxide (including waveform capnography)
- Nasotracheal intubation

- Use of therapeutic positive end-expiratory pressure (PEEP)
- Multi-lead ECG interpretation
- Performing electrical synchronized cardioversion
- Performing carotid massage
- Central line monitoring
- Initiation of intraosseous (IO) infusion in all patients (previously used IOs on children only)
- Initiation and maintenance of intravenous medication drips
- Intranasal medication administration
- Nasogastric medication administration
- Oral medication administration
- Eye irrigation with the Morgan[®] lens
- Initiation and monitoring of thrombolytic medication
- Obtaining venous blood samples
- Blood chemistry analysis (this includes the psychomotor skills involved with collection of blood for analysis [point of care testing] and the cognitive material necessary to understand the implications of the results)
- Assist in the insertion of a chest tube
- Accessing indwelling catheters and implanted central IV ports

1998 EMT-Paramedic

For a current 1998 EMT-Paramedic (based on 1998 EMT-P National Standard Curriculum) transitioning to 2009 Paramedic, the following skills are no longer taught:

- Pressure points and elevation for hemorrhage control
- Umbilical vein access
- Urinary catheterization

For a current 1998 EMT-Paramedic (based on 1998 EMT-P National Standard Curriculum) transitioning to 2009 Paramedic, the following skills are new:

- Use of BiPAP/CPAP
- Waveform capnography
- Monitoring and management of a chest tube
- Assist in the insertion of a chest tube
- Performing a percutaneous cricothyrotomy
- Accessing indwelling catheters and implanted central IV ports
- Central line monitoring
- Initiation of intraosseous infusion in all patients (previously used IOs on children only)
- Intranasal medication administration (1998 Paramedic limited to intranasal decongestants)
- Eye irrigation with the Morgan[®] lens

- Initiation and monitoring of thrombolytic medication
- Blood chemistry analysis (includes psychomotor skills involved with collection of blood for analysis [point of care testing] and the cognitive material necessary to understand implications of results)

c. Paramedic: Content

Preparatory – EMS Systems

- **EMS Systems** – more detailed discussion on patient safety issues
- **Research** – the section is primarily focused on evidence based decisions and how to interpret research; the section on conducting research is gone.
- **Workforce Safety and Wellness** – the 1998 EMT-P National Standard Curriculum mentioned CISM. The new standards does not use that term instead focusing more on stress management issues.
- **Documentation** - Health Insurance Portability and Accountability Act (HIPAA) did not exist when the 1998 EMT-P National Standard Curriculum was authored
- **Therapeutic Communications** – increased depth of cultural competence issues.
- **Medical/Legal/Ethics** – Health Insurance Portability and Accountability Act (HIPAA) did not exist when the 1998 EMT-P National Standard Curriculum was authored; increased depth of discussion regarding advance directives; the term "end-of-life" was not previously used; there is an increased emphasis on end of life issues; increased depth and breadth on ethics

Anatomy and Physiology

- The current recommendation calls for more comprehensive coverage of A&P than provided in the previous 1998 EMT-P National Standard Curriculum. Programs should evaluate their current A&P program to see how much upgrade they need to reach a comprehensive and complex understanding, especially in the cardiovascular, respiratory, and neurological systems.

Pathophysiology

- The current recommendation calls for more comprehensive coverage of pathophysiology than provided in the previous 1998 EMT-P National Standard Curriculum. Programs should evaluate their current pathophysiology program to see how much upgrade they need to reach a comprehensive and complex understanding, especially in the cardiovascular, respiratory, and neurological systems.

Public Health

- Consistent with *the EMS Agenda for the Future*, there is a greater emphasis on public health issues

Pharmacology

- **Principles of Pharmacology** – programs should evaluate their current pharmacology program to see how much upgrade they need to reach a comprehensive and complex understanding
- **Medication Administration** – programs should evaluate their current pharmacology program to see how much upgrade they need to reach a comprehensive and complex understanding
- **Emergency Medications** – In the 1998 EMT-P National Standard Curriculum, there was no list of medications; the list in the IGs represents medications commonly used in numerous EMS systems and is a minimum list that all paramedics should know. States

and programs are encouraged to add to the list, but should not delete. This list may become dated quickly.

Airway Management, Respiration, and Oxygenation

- Confusion exists about the differences between oxygenation, ventilation, and respiration. The *Education Standards* were organized to attempt to highlight the differences between the concepts. There is a greater emphasis on ventilation and respirations and the importance of artificial ventilation. Research suggests that EMS can make a difference in this area.

Patient Assessment

- **Scene Size-Up** – no new information here but a re-emphasis on the need for scene safety for everyone present
- **Primary Assessment** - new terminology that more closely mimics other health care professionals
- **History Taking** - new terminology that more closely mimics other health care professionals
- **Secondary Assessment** - new terminology that more closely mimics other health care professionals; more thorough than in the previous curriculum
- **Monitoring Devices** – includes capnography, chemistry analysis, arterial blood gas interpretation
- **Reassessment** - new terminology that more closely mimics other health care professionals; more thorough than in the previous curriculum

Medicine

- **Medical Overview** – re-use of the new assessment terminology; emphasis on pathophysiologic basis; updated destination decisions for some medical conditions such as stroke and acute coronary syndrome,
- **Neurological Disorders** - the term "demyelinating" was not used in the 1998 EMT-P National Standard Curriculum; more detailed information on stroke assessment and management
- **Abdominal and Gastrointestinal Disorders** – in the 1998 EMT-P National Standard Curriculum, the topic was gastroenterology; new section on mesenteric ischemia, rectal foreign body obstructions and rectal abscess
- **Immunology** – the term anaphylactoid is used here; that term was not used in the 1998 EMT-P National Standard Curriculum; transplant related problems and collagen vascular disease added
- **Infectious Diseases** – refocused with more of an emergency medicine flavor; drug-resistant bacteria discussed
- **Endocrine Disorders** - added long term effects of diabetes and how the disease impacts other conditions
- **Psychiatric** – includes new material on excited delirium; other psychiatric conditions are re-categorized with an increase in depth and breadth
- **Cardiovascular** – increased emphasis on anatomy, physiology and pathophysiology; acute coronary syndrome, 12-lead interpretation; updated information on heart failure
- **Toxicology** - includes section on over-the-counter medication toxicology
- **Respiratory** – more in-depth evaluation of a patient with respiratory problems.
- **Hematology** – reorganized with added section on blood transfusion reactions
- **Genitourinary/Renal** - urinary catheter management (not insertion)
- **Non-Traumatic Musculoskeletal Disorders** – added section on disorders of the spine, joint abnormalities, muscles abnormalities, and overuse syndromes
- **Diseases of the Eye, Ears, Nose and Throat** - new section emphasizing major eye, ear, nose, and throat disease

Shock and Resuscitation

- Reorganized for emphasis, more pathophysiology

Trauma

- **Overview** – discussion on the Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol and trauma scoring
- **Bleeding** – increased emphasis on pathophysiology
- **Chest Trauma** – more detailed discussion, added section on commotio cordis
- **Abdominal Trauma** – increased emphasis on pathophysiology
- **Orthopedic Trauma** - greater emphasis on pathophysiology
- **Soft Tissue Trauma** - added section on high pressure injection
- **Head, Facial, Neck, and Spine Trauma** – grouped these conditions separately from neurological trauma
- **Nervous System Trauma** - added section on cauda equina syndrome
- **Special Considerations in Trauma** – more detailed discussion concerning pregnancy, pediatric, elderly, cognitively impaired
- **Environmental** – increased emphasis on pathophysiology
- **Multi-system Trauma** – more detailed discussion; critical thinking skills emphasized, blast injuries

Special Patient Populations

- **Pregnant Patient** – added section on hyperemesis gravidarum
- **Pediatrics** – more detailed discussion
- **Geriatrics** – added section on Herpes zoster
- **Patients with Special Challenges** – added section on bariatrics

EMS Operations

- **Principles of Safely Operating a Ground Ambulance** - all material at this level represents the same depth and breadth as at the EMT level
- **Incident Management** – references the incident management system and the federal requirements for compliance
- **Multiple Casualty Incidents** – all material at this level represents the same depth and breadth as at the EMT level
- **Air Medical** – updated material at this level concerning risks/needs/advantages of air transport
- **Vehicle Extrication** – all material at this level represents the same depth and breadth as at the EMT level
- **Hazardous Materials Awareness** – all material at this level represents the same depth and breadth as at the EMT level
- **Mass Casualty Incidents Due to Terrorism or Disaster** – all material at this level represents the same depth and breadth as at the EMT level

7. 1 Essential Content: EMR

This section identifies the knowledge content considered essential for transitioning currently certified First Responders (trained under the 1995 First Responder National Standard Curricula) to function as Emergency Medical Responders once the *Education Standards* are implemented. Individual states may determine whether this essential content should be delivered in the form of continuing education classes or a formal transitioning program.

Section	Content
Pathophysiology	Respiratory compromise; shock
Airway Management, Respiration, and Oxygenation: Anatomy and Physiology	Airway anatomy; airway assessment; techniques of assuring an open airway; age-related variation in airway anatomy
Airway Management, Respiration, and Oxygenation: Respiration	Anatomy of the respiratory system; physiology of respiration; pathophysiology of respiration; assessment of respiratory status; respiratory management; supplemental oxygen therapy; age-related respiratory variation
Airway Management, Respiration, and Oxygenation: Artificial Ventilation	Assessment of ventilation status; oxygenation; ventilation management (adequate, inadequate, apneic); differentiating normal from positive pressure ventilation; age-related ventilation variation
Patient Assessment: All sections	Orientation to the new terminology
Patient Assessment: Secondary Assessment	Blood pressure assessment and interpretation
Shock and Resuscitation	Use of the automatic external defibrillator
Trauma: Overview	Become familiar with the Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol

7.2 Essential Content: EMT

This section identifies the knowledge content considered essential for transitioning currently certified Emergency Medical Technician - Basic (trained under the 1994 EMT-B National Standard Curricula) to function as Emergency Medical Technicians once the *Education Standards* are implemented. Individual states may determine whether this essential content should be delivered in the form of continuing education classes or a formal transitioning program.

Section	Content
Preparatory: EMS Systems	Patient safety; high risk activities; how errors happen; preventing errors, including medication administration safety ("rights" of drug administration)
Preparatory: Research	Importance of evidence-based decision making process
Preparatory: Therapeutic Communication	Contains section on required affective/behavioral characteristics
Preparatory: Medical, Legal, and Ethics	Morals, ethics and ethical conflicts
Anatomy and Physiology; Pathophysiology	Fundamental elements of the life support chain, including oxygenation, perfusion, and the cellular environment; composition of ambient air, airway patency; respiratory compromise; ventilation/perfusion mismatch; perfusion and shock, blood volume; myocardial effectiveness; microcirculation; blood pressure; alterations in cellular metabolism
Airway Management, Respiration, and Oxygenation: All sections	Airway anatomy; airway assessment; techniques of assuring an open airway; age-related variation in airway anatomy; anatomy of the respiratory system; physiology of respiration; pathophysiology of respiration; assessment of respiratory status; respiratory management; supplemental oxygen therapy; age-related respiratory variation; assessment of ventilation status; oxygenation; ventilation management (adequate, inadequate, apneic); differentiating normal from positive pressure ventilation; age-related ventilation variation
Patient Assessment: All sections	Orientation to the new terminology (may be covered in a handout)
Patient Assessment: Monitoring Devices	Pulse oximetry
Medicine: Neurology	Stroke/TIA; stroke alert criteria
Medicine: Abdominal and Gastrointestinal Disorders	Anatomy; assessment; management; gastrointestinal bleeding, peritonitis, ulcerative disease, age-related variations
Medicine: Infectious Disease	Updated information on methicillin

	resistant Staphylococcus aureus (MRSA), human immunodeficiency virus (HIV); cleaning and disinfecting ambulance equipment; decontaminating ambulance
Medicine: Endocrine Disorders	Diabetes update
Medicine: Psychiatric	Excited delirium; medical/legal considerations; use of medical restraint
Medicine: Cardiovascular	Anatomy; physiology; pathophysiology; assessment; management; acute coronary syndrome; hypertensive emergencies; cardiogenic shock; aspirin administration;
Medicine: Respiratory	Anatomy; assessment; management; specific respiratory conditions; metered-dose inhalers; small volume nebulizers; age-related variations
Medicine: Hematology	Sickle cell disease
Medicine: Genitourinary/Renal	Anatomy, physiology, pathophysiology; dialysis emergencies
Shock and Resuscitation	General shock; reasons for shock; mechanism of shock
Trauma: Overview	Become familiar with the Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol
Trauma: Chest Trauma	Incidence; anatomy; physiology; pathophysiology; blunt or open trauma
Trauma: Abdominal and Genitourinary Trauma	Incidence; anatomy; physiology; specific injuries; assessment; management
Trauma: Head, Facial, Neck, and Spine Trauma	Assessment and management of neck, eye, dental; laryngeal injuries
Trauma: Nervous System Trauma	Traumatic brain injuries
Trauma: Special Considerations in Trauma	Trauma in pregnancy, elderly, and cognitively impaired
Special Patient Populations: Obstetrics	Complications of pregnancy
EMS Operations: Principles of Safely Operating a Ground Ambulance	Safety issues during transport
EMS Operations: Incident Management	Incident management system
EMS Operations: Hazardous Materials Awareness	Hazardous Waste Operations and Emergency Response (HAZWOPER) First Responder Awareness Level
EMS Operations: Mass Casualty Incidents Due to Terrorism and Disaster	Roles and responsibilities at the scene;

7.3 Essential Content: AEMT

This section identifies the knowledge content considered essential for transitioning currently certified EMT – Intermediates to function as Advanced Emergency Medical Technicians once the *Education Standards* are implemented. Individual states may determine whether this essential content should be delivered in the form of continuing education classes or a formal transitioning program.

Section	Content
Preparatory: EMS Systems	Patient safety; high risk activities; how errors happen; preventing errors, including medication administration safety (“rights” of drug administration)
Preparatory: Research	Importance of evidence-based decision making process
Preparatory: Therapeutic Communication	Contains section on required affective/behavioral characteristics
Preparatory: Medical, Legal, and Ethics	Morals, ethics and ethical conflicts
Anatomy and Physiology; Pathophysiology	Fundamental elements of the life support chain including oxygenation, perfusion, and the cellular environment; composition of ambient air; airway patency; respiratory compromise; ventilation/perfusion mismatch; perfusion and shock, blood volume; myocardial effectiveness; microcirculation; blood pressure; alterations in cellular metabolism
Airway Management, Respiration, and Oxygenation: All sections	Airway anatomy; airway assessment; techniques of assuring an open airway; age-related variation in airway anatomy; anatomy of the respiratory system; physiology of respiration; pathophysiology of respiration; assessment of respiratory status; respiratory management; supplemental oxygen therapy; age-related respiratory variation; assessment of ventilation status; oxygenation; ventilation management (adequate, inadequate, apneic); differentiating normal from positive pressure ventilation; age-related ventilation variation
Patient Assessment: All sections	Orientation to the new terminology (may be covered in a handout)
Patient Assessment: Monitoring Devices	Pulse oximetry
Medicine: Neurology	Stroke/TIA; stroke alert criteria
Medicine: Abdominal and Gastrointestinal Disorders	Anatomy; assessment; management; gastrointestinal bleeding, peritonitis, ulcerative disease, age-related variations
Medicine: Infectious Disease	Updated information on methicillin

	resistant Staphylococcus aureus (MRSA); human immunodeficiency virus (HIV); cleaning and disinfecting ambulance equipment; decontaminating ambulances
Medicine: Endocrine Disorders	Diabetes update
Medicine: Psychiatric	Agitated delirium; medical/legal considerations; use of medical restraint
Medicine: Cardiovascular	Anatomy; physiology; pathophysiology; assessment; management; acute coronary syndrome; hypertensive emergencies; cardiogenic shock; aspirin administration
Medicine: Respiratory	Anatomy; assessment; management; specific respiratory conditions; metered-dose inhalers; small volume nebulizers; age-related variations
Medicine: Hematology	Sickle cell disease
Medicine: Genitourinary/Renal	Anatomy; physiology; pathophysiology; dialysis emergencies
Shock and Resuscitation	General shock; reasons for shock; mechanism of shock
Trauma: Overview	Become familiar with the Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol
Trauma: Chest Trauma	Incidence; anatomy; physiology; pathophysiology; blunt or open trauma
Trauma: Abdominal and Genitourinary Trauma	Incidence; anatomy; physiology; specific injuries; assessment; management
Trauma: Head, Facial, Neck, and Spine Trauma	Assessment and management of neck, eye, dental; laryngeal injuries
Trauma: Nervous System Trauma	Traumatic brain injuries
Trauma: Special Considerations in Trauma	Trauma in pregnancy, elderly, and cognitively impaired
Special Patient Populations: Obstetrics	Complications of pregnancy
EMS Operations: Principles of Safely Operating a Ground Ambulance	Safety issues during transport
EMS Operations: Incident Management	Incident management system
EMS Operations: Hazardous Materials Awareness	Hazardous Waste Operations and Emergency Response (HAZWOPER) First Responder Awareness Level
EMS Operations: Mass Casualty Incidents Due to Terrorism and Disaster	Roles and responsibilities at the scene

7.4 Essential Content: Paramedic

This section identifies the knowledge content considered essential for transitioning currently certified EMT – Paramedics (trained under the 1998 EMT-P National Standard Curricula) to function as Paramedics once the Education Standards are implemented. Individual states may determine whether this essential content should be delivered in the form of continuing education classes or a formal transitioning program.

Section	Content
Preparatory: EMS Systems	More detailed discussion on patient safety issues
Preparatory: Documentation	Health Insurance Portability and Accountability Act (HIPAA)
Preparatory: Medical/Legal/Ethics	Health Insurance Portability and Accountability Act (HIPAA); advance directives and end-of-life issues
Anatomy and Physiology	Review--greater depth and breadth in cardiovascular, respiratory, and neurological systems
Pathophysiology	Review--greater depth and breadth in cardiovascular, respiratory, and neurological systems
Pharmacology: Medication Administration	Medication review related to the state scope of practice; accessing indwelling catheters and implanted ports, intraosseous in all patients, intranasal and nasogastric administration of medications, thrombolytics
Airway Management, Respiration, and Oxygenation	Greater emphasis on ventilation and respirations and the importance of artificial ventilation. BiPAP/CPAP; percutaneous cricothyrotomy
Patient Assessment	New terminology, history taking, monitoring devices including waveform capnography, chemistry analysis; arterial blood gas interpretation
Medicine: Overview	New terminology, ACLS update, specialty care such as STEMI and stroke
Medicine: Infectious Diseases	Drug-resistant bacteria, other emerging diseases
Medicine: Psychiatric	Excited delirium
Medicine: Cardiovascular	Acute coronary syndrome, 12-lead ECG interpretation, updated info on heart failure
Shock and Resuscitation	Increased pathophysiology, central line monitoring
Trauma: Overview	Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol and trauma scoring
Trauma: General	Increased emphasis on pathophysiology plus commotio cordis, cauda equina

	syndromes, high pressure injection, blast injuries; critical thinking skills in trauma
Trauma: Chest	Monitoring and management of a chest tube
Trauma: Head, Facial, Neck, and Spine Trauma	Use of Morgan [®] lens
EMS Operations: Principles of Safely Operating a Ground Ambulance	Safety issues during transport
EMS Operations: Incident Management	Incident management system
EMS Operations: Hazardous Materials Awareness	Hazardous Waste Operations and Emergency Response (HAZWOPER) First Responder Awareness Level
EMS Operations: Air Medical	Risks, needs, advantages of air transport
EMS Operations: Mass Casualty Incidents Due to Terrorism and Disaster	Roles and responsibilities at the scene

8. Appendix A: Skill Spreadsheet

(National Standard Curricula to Scope of Practice Model)

The following is a graphical representation of the information provided in the skill comparison sections based on the *National EMS Scope of Practice Model*. The model represents nationally consistent minimum entry level of knowledge and skills for states to consider when establishing state-specific EMS scopes of practice. In other words, the Scope of Practice Model describes a minimum set of competencies—a foundation for knowledge and skills at a national level. States and their medical directors maintain the legal authority to establish their scopes of practice. States that choose to exceed the minimum entry level should be aware that texts, publisher-created support materials, and national certification exams will likely not address content beyond this description.

States may wish to use this chart as a tool to help establish a “gap analysis” for their state. A gap analysis can help states identify skills, knowledge, and other state requirements to support the transition from the *National Standard Curricula* to the *National EMS Education Standards*. Some states may choose to create a “bridge program” from the old to the new levels. Some states may decide to allow practitioners to acquire such education by a variety of means: classroom updates, distance methods, continuing education, or other learning tools. States will need to determine what testing mechanism, if any, as well as any credentialing processes that may be needed for the transition of existing practitioners. (The shaded vertical columns reflect skill levels from the Scope of Practice Model. A legend to chart abbreviations is provided at the end of each section.)

Skill – Airway/Ventilation/Oxygenation	EMR	FR	EMT	EMT-B	I-85	AEMT	I-99	P	EMT-P
Airway/Ventilation/Oxygenation									
Airway - esophageal					X	X	X	X	X
Airway – supraglottic						X		X	
Airway – nasal		X	X	X	X	X	X	X	X
Airway – oral	X	X	X	X	X	X	X	X	X
Bag-valve-mask (BVM)	X		X	X	X	X	X	X	X
BiPAP/CPAP								X	
Chest decompression - needle							X	X	X
Chest tube placement – assist only								X	
Chest tube – monitoring and management								X	
Cricoid pressure (Sellick's Maneuver)	X	X	X	X	X	X	X	X	X
Cricothyrotomy – needle							X	X	X
Cricothyrotomy – percutaneous								X	E
Demand valve – manually triggered ventilation			X	X	X	X	X	X	X
End tidal CO ₂ monitoring/capnography							M	X	X
Gastric decompression – NG tube				AAM			X	X	X

Skill – Airway/Ventilation/ Oxygenation	EMR	FR	EMT	EMT-B	I-85	AEMT	I-99	P	EMT-P
Gastric decompression – OG tube				AAM			X	X	X
Head tilt - chin lift	X	X	X	X	X	X	X	X	X
Intubation – nasotracheal								X	X
Intubation - orotracheal							X	X	X
Jaw-thrust	X	X	X	X	X	X	X	X	X
Jaw-thrust - Modified (trauma)	X	X	X	X	X	X	X	X	X
Mouth-to-barrier	X	X	X	X	X	X	X	X	X
Mouth-to-mask	X	X	X	X	X	X	X	X	X
Mouth-to-mouth	X	X	X	X	X	X	X	X	X
Mouth-to-nose	X	X	X	X	X	X	X	X	X
Mouth-to-stoma	X	X	X	X	X	X	X	X	X
Obstruction – direct laryngoscopy							X	X	X
Obstruction – Manual	X	X	X	X	X	X	X	X	X
Oxygen therapy – Humidifiers		X	X			X	X	X	X
Oxygen therapy – Nasal cannula	X	X	X	X	X	X	X	X	X
Oxygen therapy – Non-rebreather mask	X	X	X	X	X	X	X	X	X
Oxygen therapy – partial rebreather mask			X			X	X	X	X
Oxygen therapy – simple face mask			X			X	X	X	X
Oxygen therapy – Venturi mask			X			X	X	X	X
PEEP – therapeutic								X	X
Pulse oximetry			X			X	X	X	X
Suctioning – Upper airway	X	X	X	X	X	X		X	X
Suctioning – tracheobronchial						AI	X	X	X
Ventilator – Automated transport (ATV)			X			X	X	X	X
AAM = Advanced Airway Module									
E = Enhanced									
M – Monitor only									
AI – Already Intubated									
Cardiovascular Circulation									
Skill – Cardiovascular/Circulation	EMR	FR	EMT	EMT-B	I-85	AEMT	I-99	P	EMT-P
Cardiac monitoring – multi-lead (interpretive)								X	X
Cardiac monitoring – single lead (interpretive)							X	X	X
Cardiopulmonary resuscitation (CPR)	X	X	X	X	X	X	X	X	X
Cardioversion – electrical								X	X
Carotid massage								X	X
Defibrillation – automated / semi-automated	X		X	X	X	X	X	X	X
Hemorrhage control – direct pressure	X	X	X	X	X	X	X	X	X
Hemorrhage control – pressure point	R	X	R	X	X	R	X	R	X
Hemorrhage control – tourniquet	X	X	X	X	X	X	X	X	X
Internal; cardiac pacing – monitoring only							X	X	X
MAST/PASG			X	X	X	X	X	X	X
Mechanical CPR device			A			A		A	A
Transcutaneous pacing - manual							X	X	X
A = requires additional specialty training									
R = removed									
Immobilization									

Skill - Immobilization	EMR	FR	EMT	EMT-B	I-85	AEMT	I-99	P	EMT-P
Spinal immobilization – cervical collar			X	X	X	X	X	X	X
Spinal immobilization – long board			X	X	X	X	X	X	X
Spinal immobilization – manual	X	X	X	X	X	X	X	X	X
Spinal immobilization – seated patient (KED, etc)			X	X	X	X	X	X	X
Spinal immobilization – rapid manual extrication			X	X	X	X	X	X	X
Extremity stabilization - manual	X	X	X	X	X	X	X	X	X
Extremity splinting			X	X	X	X	X	X	X
Splint – traction			X	X	X	X	X	X	X
Mechanical patient restraint			X	X	X	X	X	X	X
Emergency moves for endangered patients	X	X	X	X	X	X	X	X	X
Medication Administration – Routes									
Skill – Medication Administration - Routes	EMR	FR	EMT	EMT-B	I-85	AEMT	I-99	P	EMT-P
Assisting a patient with his/her own prescribed medications (aerosolized/nebulized)			X	X	X	X	X	X	X
Aerosolized/nebulized (beta agonist)						X	X	X	X
Buccal						L	X	X	X
Endotracheal tube							X	X	X
Inhaled – self-administered (nitrous oxide)						X	X	X	X
Intramuscular (epinephrine or glucagon)						X	X	X	X
Intranasal (naloxone)						X		X	L
Intravenous push (naloxone, dextrose 50%)						L	X	X	X
Intravenous piggyback								X	X
Nasogastric								X	X
Oral (glucose)			X	X	X	X		X	X
Oral (aspirin)			X			X		X	X
Rectal							X	X	X
Subcutaneous (epinephrine)						L	X	X	X
Sublingual (nitroglycerin)			X	X	X	L	X	X	X
Auto-injector (self or peer care)	X		X			X		X	X
Auto-injector (patient's own prescribed meds)			X	X	X	X		X	X
L = Limited									
IV Initiation / Maintenance Fluids									
Skill – IV Initiation/Maintenance Fluids	EMR	FR	EMT	EMT-B	I-85	AEMT	I-99	P	EMT-P
Access indwelling catheters and implanted central IV ports								X	
Central line – monitoring								X	
Intraosseous – initiation						Ped	Ped	X	Ped
Intravenous access						X	X	X	X
Intravenous initiation - peripheral					X	X	X	X	X
Intravenous – maintenance of non-medicated IV fluids					X	X	X	X	X
Intravenous – maintenance of medicated IV fluids								X	X
Umbilical - initiation								R	X
Ped = Pediatric Only									
R = Removed									

Miscellaneous									
Skill - Miscellaneous	EMR	FR	EMT	EMT-B	I-85	AEMT	I-99	P	EMT-P
Assisted delivery (childbirth)	X	X	X	X	X	X	X	X	X
Assisted complicated delivery (childbirth)			X	X	X	X	X	X	X
Blood glucose monitoring						X	X	X	X
Blood pressure automated			X	X	X	X	X	X	X
Blood pressure – manual	X		X	X	X	X	X	X	X
Eye irrigation	X		X	X	X	X	X	X	X
Eye irrigation – Morgan [®] lens								X	
Thrombolytic/fibrinolytic therapy – initiation								X	
Thrombolytic/fibrinolytic therapy – monitoring								X	
Urinary catheterization									
Venous blood sampling								X	X
Blood chemistry analysis								X	

9. Appendix B: Skill Comparison

(Blank Checklist for State EMS Office Use)

The following checklist provides a blank column to assist states establish their own “gap analysis.” Additional rows are added for state-preferred skills that may exceed the National EMS Scope of Practice Model.

Skill - Airway/Ventilation/ Oxygenation	EMR	State SOP	EMT	State SOP	AEMT	State SOP	Paramedic	State SOP
Airway - esophageal					X		X	
Airway – supraglottic					X		X	
Airway – nasal			X		X		X	
Airway – oral	X		X		X		X	
Bag-valve-mask (BVM)	X		X		X		X	
BiPAP/CPAP							X	
Chest decompression - needle							X	
Chest tube placement – assist only							X	
Chest tube – monitoring and management							X	
Cricoid pressure (Sellick's Maneuver)	X		X		X		X	
Cricothyrotomy – needle							X	
Cricothyrotomy – percutaneous							X	
Demand valve – manually triggered ventilation			X		X		X	
End tidal CO ₂ monitoring/capnography							X	
Gastric decompression – NG Tube							X	
Gastric decompression – OG Tube							X	
Head tilt - chin lift	X		X		X		X	
Intubation – nasotracheal							X	
Intubation - orotracheal							X	
Jaw-thrust	X		X		X		X	
Jaw-thrust - Modified (trauma)	X		X		X		X	
Mouth-to-barrier	X		X		X		X	
Mouth-to-mask	X		X		X		X	
Mouth-to-mouth	X		X		X		X	
Mouth-to-nose	X		X		X		X	
Mouth-to-stoma	X		X		X		X	
Obstruction – direct laryngoscopy							X	
Obstruction – Manual	X		X		X		X	
Oxygen therapy – Humidifiers			X		X		X	
Oxygen therapy – Nasal cannula	X		X		X		X	
Oxygen therapy – Non-rebreather mask	X		X		X		X	
Oxygen therapy – partial rebreather mask			X		X		X	
Oxygen therapy – simple face mask			X		X		X	
Oxygen therapy – Venturi mask			X		X		X	
PEEP – therapeutic							X	
Pulse oximetry			X		X		X	
Suctioning – Upper airway	X		X		X		X	
Suctioning – tracheobronchial					AI		X	

Skill - Airway/Ventilation/Oxygenation	EMR	State SOP	EMT	State SOP	AEMT	State SOP	Paramedic	State SOP
Ventilator – Automated transport (ATV)			X		X		X	
Skill-Cardiovascular/Circulation	EMR	State SOP	EMT	State SOP	AEMT	State SOP	Paramedic	State SOP
Cardiac monitoring – multi-lead (interpretive)							X	
Cardiac monitoring – single lead (interpretive)							X	
Cardiopulmonary resuscitation (CPR)	X		X		X		X	
Cardioversion – electrical							X	
Carotid massage							X	
Defibrillation – automated / semi-automated	X		X		X		X	
Hemorrhage control – direct pressure	X		X		X		X	
Hemorrhage control – tourniquet	X		X		X		X	
Internal; cardiac pacing – monitoring only							X	
MAST/PASG			X		X		X	
Mechanical CPR device			A		A		A	
Transcutaneous pacing - manual							X	
Skill-Immobilization	EMR	State SOP	EMT	State SOP	AEMT	State SOP	Paramedic	State SOP
Spinal immobilization – cervical collar			X		X		X	
Spinal immobilization – long board			X		X		X	
Spinal immobilization – manual	X		X		X		X	
Spinal immobilization – seated patient (KED, etc)			X		X		X	
Spinal immobilization – rapid manual extrication			X		X		X	
Extremity stabilization - manual	X		X		X		X	
Extremity splinting			X		X		X	
Splint – traction			X		X		X	
Mechanical patient restraint			X		X		X	
Emergency moves for endangered patients	X		X		X		X	
Skill-Medication Administration - Routes	EMR	State SOP	EMT	State SOP	AEMT	State SOP	Paramedic	State SOP
Assisting a patient with his/her own prescribed medications (aerosolized/nebulized)			X		X		X	
Aerosolized/nebulized (beta agonist)					X		X	
Buccal					L		X	
Endotracheal tube							X	

Skill-Medication Administration - Routes	EMR	State SOP	EMT	State SOP	AEMT	State SOP	Paramedic	State SOP
Inhaled – self-administered (nitrous oxide)					X		X	
Intramuscular (epinephrine or glucagon)					X		X	
Intranasal (naloxone)					X		X	
Intravenous push (naloxone, dextrose 50%)					L		X	
Intravenous piggyback							X	
Nasogastric							X	
Oral (glucose)			X		X		X	
Oral (aspirin)			X		X		X	
Rectal							X	
Subcutaneous (epinephrine)					L		X	
Sublingual (nitroglycerin)			X		L		X	
Auto-injector (self or peer care)	X		X		X		X	
Auto-injector (patient's own prescribed meds)			X		X		X	
Skill - -- IV Initiation/Maintenance Fluids	EMR	State SOP	EMT	State SOP	AEMT	State SOP	Paramedic	State SOP
Access indwelling catheters and implanted central IV ports							X	
Central line – monitoring							X	
Intraosseous – initiation					Ped		X	
Intravenous access					X		X	
Intravenous initiation - peripheral					X		X	
Intravenous – maintenance of non-medicated IV fluids					X		X	
Intravenous – maintenance of medicated IV fluids							X	
Skill - Miscellaneous	EMR	State SOP	EMT	State SOP	AEMT	State SOP	Paramedic	State SOP
Assisted delivery (childbirth)	X		X		X		X	
Assisted complicated delivery (childbirth)			X		X		X	
Blood glucose monitoring					X		X	
Blood pressure automated			X		X		X	
Blood pressure – manual	X		X		X		X	
Eye irrigation	X		X		X		X	
Eye irrigation – Morgan® lens							X	
Thrombolytic therapy – initiation							X	
Thrombolytic therapy – monitoring							X	
Urinary catheterization								
Venous blood sampling							X	
Blood chemistry analysis							X	

Legend of abbreviations for blank checklist

A	Requires additional specialty training
AI	Already Intubated
L	Limited
Ped	Pediatric Only

