

NATIONAL EMS EDUCATION STANDARDS
EMT-BASIC TO EMERGENCY MEDICAL TECHNICIAN
EMT-I TO AEMT

Key to Provider Levels		
EMT	E	Emergency Medical Technician
AEMT	A	Advanced - Emergency Medical Technician

EMT-B to EMT: Complete the Purple highlighted portion only. (Approximately 13 hours)

EMT-I to AEMT: Complete the purple and green highlighted portion. (Approximately 4 hours)

Topic	Guidelines	Time
EMS Systems	Roles, Responsibilities, and Professionalism of EMS Personnel A. Roles and Responsibilities B. Professionalism Patient Safety A. Significant – One of the Most Urgent Health Care Challenges B. High-Risk Activities C. How Errors Happen D. Preventing Errors <i>More detailed discussion of patient safety issues, decreasing medical errors, and required affective/behavioral characteristics. How we can work to ensure we have the right attitude with patient care. How to prevent errors in documentation.</i>	15 minutes
Research	Evidence-Based Decision-Making A. Traditional Medical Practice B. High-Quality Patient Care Should Focus on Procedures Proven Useful in Improving Patient Outcomes C. The Challenge for EMS Is the Relative Lack of Pre-hospital Research Importance of data collection and how it serves to improve EMS systems. <i>How Research can help EMS move forward by using evidence-based information</i>	5 minutes
Workforce Safety and Wellness	(Selected Topics in) Lifting and Moving Patients <i>Brief discussion on bariatric issues, neonatal isolette and safe medical restraints</i>	10 minutes
EMS Systems Communication and Therapeutic Communication	Communication With Other Health Care Professionals Fundamental information about transferring patient care to incoming EMTs Principles of Communicating With Patients in a	20 minutes

	<p>Manner That Achieves a Positive Relationship</p> <p><i>Affective improvements regarding communication with patients</i></p>	
Anatomy and Physiology	<p>Life Support Chain</p> <p>A. Fundamental Elements Issues Impacting Fundamental Elements</p> <p><i>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</i></p>	60 minutes

Topic	Guidelines	Time
<p>EMT-I (IV, Airway, Medications) to AEMT</p> <p>Anatomy and Physiology</p>	<p>Anatomy and Body Functions</p> <p>A. Respiratory System B. Circulatory</p> <p>II. Life Support Chain</p> <p>A. Fundamental Elements B. Issues Affecting Fundamental Elements</p> <p>III. Alteration in Cells and Tissues</p> <p>IV. Cellular Injury</p> <p>V. Hypoperfusion</p> <p>A. Pathogenesis B. Types of Shock</p> <p>III. Age Related Variations for Pediatrics and Geriatrics</p> <p><i>This content is new to this level but only focuses on respiratory and perfusion dysfunction along with shock</i></p>	90 minutes
Pathophysiology	<p>Respiratory Compromise Impaired Airway, Respiration, or Ventilation</p> <p>Alteration in Regulation of Respiration Due to Medical or Traumatic Conditions</p> <p>Ventilation/Perfusion (V/Q) Ratio and Mismatch</p> <p>Perfusion and Shock</p> <p>Microcirculation</p> <p>Blood Pressure</p> <p>Alteration of Cell Metabolism</p> <p><i>Expanded content on respiratory dysfunction and shock at the cellular level.</i></p>	45 minutes
Life Span Development	<p>Applies fundamental knowledge of life span development to patient assessment and management</p>	5 minutes
Public Health	<p>Basic Principles of Public Health</p> <p>A. Role of Public Health' B. Public Health Laws, Regulations, and Guidelines C. EMS Interface with Public Health</p> <p><i>New information at this level; related to EMS Agenda for the Future issues. Principles of illness and injury prevention in emergency medicine</i></p>	5 minutes

Topic	Guidelines	Time
Pharmacology Medication Administration Emergency Medications	Aspirin <ul style="list-style-type: none"> • Name • Actions • Indications • Contraindications • Complications • Routes of administration • Side effects • Interactions • Dosages for the medications administered <i>New Medication</i>	10 minutes
EMT-I (IV, Airway, Medications) to AEMT Pharmacology	Medication safety <ul style="list-style-type: none"> • Medication legislation • Naming • Classifications • Storage and security • Autonomic pharmacology • Metabolism and excretion • Mechanism of action • Medication response relationships • Medication interactions • Toxicity 	10 minutes
Medication Administration	Routes of administration <ul style="list-style-type: none"> • Within the scope of practice of the AEMT, administer medications to a patient <i>The six rights of medication administration: Right: drug, dose, route, patient, time, documentation</i>	5 minutes

Topic	Guidelines	Time
Emergency Medications Activated Charcoal Albuterol Aspirin Dextrose Epinephrine 1:1000 Glucagon Oral Glucose Mark I Kit Naloxone Nitroglycerine	Names <ul style="list-style-type: none"> • Actions • Indications • Contraindications • Complications • Routes of administration • Side effects • Interactions • Dosages for the medications <p><i>Discussion of specific medications for the AEMT</i> <i>A brief discussion as to what the AEMT on the national level is administering</i></p>	10 minutes
Airway Management	<ul style="list-style-type: none"> I. Airway Anatomy II. Airway Assessment III. Techniques of Assuring a Patent Airway <p>Consider Age-Related Variations in Pediatric and Geriatric Patients (see Special Patient Populations Section)</p> <p><i>Discussion of Waveform Capnography and CPAP. Though not an EMT skill, EMTs will likely encounter both and need to be familiar with what the equipment does and how it is set up.</i></p>	30 minutes
EMT-I (IV, Airway, Medications) to AEMT Airway Management	<p>Within the scope of practice of the AEMT</p> <ul style="list-style-type: none"> • Airway anatomy • Airway assessment • Techniques of assuring a patent airway <p><i>Techniques of Assuring a Patent Airway. Consider Age Related Variations in Pediatric and Geriatric Patients</i></p>	30 minutes
Respiration	<ul style="list-style-type: none"> I. Anatomy of the Respiratory System <ul style="list-style-type: none"> A. Includes All Airway Anatomy Covered in the Airway Management Section B. Additional Respiratory System Anatomy; Vascular Structures That Support Respiration D. Cells II. Physiology of Respiration <ul style="list-style-type: none"> A. Pulmonary Ventilation B. Oxygenation C. Respiration III. Pathophysiology of Respiration IV. Assessment of Adequate and Inadequate Ventilation V. Management of Adequate and Inadequate Respiration VI. Consider Age-Related Variations in Pediatric and Geriatric Patients (see Special Patient Populations) <p><i>Increased understanding of the respiratory system and the vascular system as it relates to respiration.</i></p>	30 minutes

Topic	Guidelines	Time
EMT-I (IV, Airway, Medications) to AEMT Respiration	<ul style="list-style-type: none"> • Anatomy of the respiratory system • Physiology and pathophysiology of respiration <ul style="list-style-type: none"> o Pulmonary ventilation o Oxygenation o Respiration <ul style="list-style-type: none"> External Internal Cellular • Assessment and management of adequate and inadequate respiration • Supplemental oxygen therapy <p>Pathophysiology of Respiration Assessment of Adequate and Inadequate Respiration Management of Adequate and Inadequate Respiration Supplemental Oxygen Therapy Age Related Variations in Pediatric and Geriatric Patients</p>	60 minutes
Artificial Ventilation	I. The Management of Inadequate Ventilation II. The Differences Between Normal and Positive Pressure Ventilation III. Consider Age-Related Variations in Pediatric and Geriatric Patients (see Special Patient Considerations)	15 minutes
Patient Assessment	Scene Size Up Primary Assessment History Taking Secondary Assessment On-Going Assessment <p><i>New terminology; age related variations for Pediatric and Geriatric Assessment/Management</i></p>	90 minutes
Neurology	Stroke/TIA A. Causes B. Review of Anatomy and Function of the Brain and Cerebral Blood Vessels C. Assessment Findings and Symptoms D. Stroke Alert Criteria E. Management of Patient With Stroke Assessment Findings or Symptoms F. Scene Safety and Standard Precautions Transient Ischemic Attack (TIA)	15 minutes
Abdominal and Gastrointestinal Disorders	I. Define Acute Abdomen II. Anatomy of the Organs of the Abdominopelvic Cavity V. Specific Acute Abdominal Conditions VI. Consider Age-Related Variations for Pediatric and Geriatric Assessment and Management <ul style="list-style-type: none"> • Peritonitis • Ulcerative diseases <p><i>This is new information for the EMT level. It may take more than 15 minutes</i></p>	30 minutes

Topic	Guidelines	Time
Immunology	<p>Introduction</p> <p>A. Definition of Terms</p> <ol style="list-style-type: none"> Allergic reaction Anaphylaxis <p>B. Risk Factors and Common Allergens</p> <p>II. Basic Immune System's Response to Allergens</p> <p>III. Fundamental Pathophysiology</p> <p>IV. Assessment Findings for Allergic Reaction</p> <p>V. Assessment Findings for Anaphylaxis</p> <p>VI. Management</p> <p>VII. Epinephrine as a Treatment for Allergic Reaction</p> <p>VII. Age Related</p> <p>IX. Communication and Documentation</p> <p>X. Transport Decisions</p> <p><i>This information has been expanded from the EMT-B curriculum. Discussion should surround the immune system and the body's response to allergens</i></p>	10 minutes
Infectious Diseases	<p>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</p>	10 minutes
Endocrine Disorders	<p>Increased level of detail on diabetes</p> <p>I. Introduction</p> <p>II. Diabetes</p> <p><i>The pathophysiology of Type I and Type II diabetes and the uses for oral glucose</i></p>	10 minutes
Psychiatric	<p>New material; includes new material on excited delirium</p> <p><i>Revised restraint techniques. Not really new material but emphasis on proper vs. improper techniques</i></p>	15 minutes
Cardiovascular	<p>I. Anatomy of the Cardiovascular System</p> <p>II. Physiology</p> <p>III. Pathophysiology</p> <p>IV. Assessment</p> <p>V. Management (refer to the current American Heart Association Guidelines)</p> <p>VI. Specific Cardiovascular Emergencies (refer to current American Heart Association Guidelines)</p> <p>VII. Pharmacological Agents</p> <p>VIII. Consider Age-Related Variations for Pediatric and Geriatric Patients for Assessment and Management of Cardiac Compromise</p> <p>Angina Pectoris Acute Coronary Syndrome Acute Myocardial Infarction</p> <p><i>Increased emphasis on anatomy, physiology and pathophysiology; increased emphasis on specific cardiovascular emergencies, addition of aspirin information for acute coronary syndrome</i></p>	60 minutes

Topic	Guidelines	Time
Respiratory	<p>I. Anatomy of the Respiratory System A. Upper Airway B. Lower Airway C. Lungs and Accessory Structures</p> <p>II. Normal Respiratory Effort A. Assessment Findings and Symptoms and Management for Respiratory Conditions</p> <p>III. Specific Respiratory Conditions</p> <p>Anatomy, physiology, pathophysiology, assessment, and management of:</p> <ul style="list-style-type: none"> • Epiglottitis • Spontaneous pneumothorax • Pulmonary edema • Asthma • Chronic obstructive pulmonary disease • Environmental/industrial exposure • Toxic gas • Pertussis • Cystic fibrosis • Pulmonary embolism • Pneumonia • Viral respiratory infections <p><i>Cover additional information on the above disease processes. Previous curriculum only covered respiratory distress without any discussion of disease processes</i></p>	45 minutes
Hematology	<p>Sickle Cell Crisis General Assessment General Management</p> <p><i>Brief discussion of sickle cell disease; what it is; who is most affected; field treatment</i></p>	5 minutes
Genitourinary/Renal	<p>Dialysis A. Hemodialysis B. Peritoneal Dialysis</p> <p>Special Considerations for Hemodialysis Patients C. Complications/Adverse Effects of Dialysis</p> <p><i>This is new material and important since there are many people who are on hemodialysis; some at home with peritoneal dialysis and some at dialysis centers</i></p>	15 minutes
Shock and Resuscitation	<p>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</p>	30 minutes

Topic	Guidelines	Time
Chest Trauma	<p>Physiology</p> <ul style="list-style-type: none"> A. Role of the Chest in Systemic Oxygenation B. Ventilation <p>Pathophysiology of Chest Trauma</p> <ul style="list-style-type: none"> A. Impaired Cardiac Output B. Impaired Ventilation C. Impaired Gas Exchange <p><i>Increased level of detail that discusses pathophysiology of chest injuries and causes for respiratory compromise</i></p>	30 minutes
Abdominal and Genitourinary Trauma	<p>Physiology</p> <ul style="list-style-type: none"> A. Solid Organs B. Hollow Organs C. Vascular Structures <p>Specific Injuries</p> <ul style="list-style-type: none"> A. Closed Abdominal Trauma B. Penetrating/Open Abdominal Trauma C. Considerations in Abdominal Trauma <p><i>Increased level of detail that discusses pathophysiology of injuries and causes for compromise</i></p>	15 minutes
Head, Facial, Neck, and Spine Trauma	<p>Review of Anatomy and Physiology of the Head, Face, and Neck</p> <p><i>Increase level of detail. Emphasize the potential harm of hyperventilation</i></p>	10 minutes
Nervous System Trauma	<p>General Assessment Considerations for Brain Trauma Patients</p> <ul style="list-style-type: none"> A. Airway and Ventilation B. Mechanism of Injury C. Spinal Immobilization D. Respiratory Status -- brain injuries can cause irregular breathing patterns due to injuries affecting the brain stem E. Complete a Neurological Exam F. Management Considerations With Brain Trauma G. Transport Considerations H. Refer to Brain Injury Foundation Guidelines <p><i>Increase emphasis on neurological assessment</i></p>	45 minutes

Topic	Guidelines	Time
Special Considerations in Trauma	<p>Trauma in Pregnancy</p> <ul style="list-style-type: none"> A. Special Unique Considerations for Pregnant Patient Involved in Trauma B. Special Anatomy, Physiology, and Pathophysiology Considerations C. Unique Types of Injuries and Conditions D. Unique Assessment Considerations E. Unique Management Considerations <p>Trauma in the Pediatric Patient</p> <ul style="list-style-type: none"> A. Special Unique Considerations for Pediatric Patient Involved in Trauma B. Unique Anatomy, Physiology, and Pathophysiology Considerations C. Unique Assessment Considerations D. Unique Management Considerations <p>Trauma in the Elderly Patient</p> <ul style="list-style-type: none"> A. Special Considerations for Geriatric Patients Involved in Trauma B. Unique Anatomy, Physiology, and Pathophysiology Considerations C. Unique Assessment Considerations D. Unique Management Considerations <p>Trauma in the Cognitively Impaired Patient</p> <ul style="list-style-type: none"> A. Unique Considerations for Injured Cognitively Impaired Patients B. Unique Anatomy, Physiology, and Pathophysiology Considerations C. Unique Assessment Consideration D. Unique Management Consideration <p><i>Discussion regarding the unique issues with each population and how care may differ with each group of patients</i></p>	45 minutes
Obstetrics	<p>General System Physiology, Assessment, and Management Complications of Pregnancy</p> <p><i>More detailed discussion on complications of pregnancy; uses the terms preeclampsia, eclampsia and premature rupture of membranes (which do not require a lengthy discussion)</i></p>	10 minutes
<p>EMT-I (IV, Airway, Medications) to AEMT</p> <p>Pediatrics</p>	<p>Age related assessment findings, age related, and developmental stage related assessment and treatment modifications for pediatric specific major diseases and/or emergencies</p> <ul style="list-style-type: none"> • Upper airway obstruction • Lower airway reactive disease • Respiratory distress/failure/arrest • Shock • Seizures • Sudden Infant Death Syndrome • Gastrointestinal disease <p>Discuss fluid resuscitation as it relates to pediatrics</p>	15 minutes

Topic	Guidelines	Time
Geriatrics	<p>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</p> <ul style="list-style-type: none"> • Cardiovascular diseases • Respiratory diseases • Neurological diseases • Endocrine diseases • Alzheimer's • Dementia 	30 minutes
EMT-I (IV, Airway, Medications) to AEMT	Fluid resuscitation in the elderly	15 minutes
Geriatrics		
Patients with Special Challenges	<p>I. Abuse and Neglect II. Homelessness/Poverty III. Bariatric Patients IV. Technology Assisted/Dependent V. Hospice Care and Terminally Ill VII. Sensory Deficits VIII. Homecare IX. Patient With Developmental Disability</p> <p><i>Elder abuse, homelessness, poverty, bariatric, more technology dependent, hospice, sensory deficit, homecare, and developmental disabilities added</i></p>	20 minutes
Principles of Safely Operating a Ground Ambulance	<p>Risks and Responsibilities of Emergency Response</p> <p>A. Safety Issues During Transport</p> <p><i>Increased depth of discussion on the risks of emergency response and leaving the scene</i></p>	10 minutes
MCI	<p>Triage: References Centers for Disease Control (CDC) Field Triage Decision Scheme: The National Trauma Triage Protocol</p>	10 minutes
MCI Due to Terrorism and Disaster	<p>Risks and Responsibilities of Operating on the Scene of a Natural or Man-Made Disaster</p> <p>A. Role of EMS B. Safety</p>	
Air Medical	<p>Safe Air Medical Operations</p> <p>A. Types B. Advantages C. Disadvantages D. Patient Transfer E. Landing Zone Selection and Preparation F. Approaching the Aircraft G. Communication Issues</p> <p>Criteria for Utilizing Air Medical Response</p> <p>A. Indications for Patient Transport B. Activation</p> <p><i>Patient transfer issues Interaction with Air Medical personnel, scene safety, LZ selection and prep</i></p>	10 minutes

