

Emergency Medical Services

Wisconsin Curriculum Advanced Emergency Medical Technician

Background

Wisconsin revised its emergency medical services (EMS) curricula for all levels between 2011 and 2013 following release of the National EMS Education Standards in 2009. EMS, however, continually evolves. The National Highway Traffic Safety Administration published a revision of the National EMS Education Standards in 2021 incorporating developments from the past decade. The Wisconsin Department of Health Services (DHS), upon recommendation from the Physicians Advisory Committee, also made multiple additions to the Wisconsin EMS scope of practice since 2013 not in the previous curriculum. DHS and the Wisconsin Technical College System therefore launched a curriculum revision project in 2020 to align curriculum with the new National EMS Education Standards and the current Wisconsin EMS Scope of Practice. Through this partnership, EMS educators across the state participated in the development of new curricula for the emergency medical responder (EMR), emergency medical technician (EMT), and advanced emergency medical technician (AEMT) levels.

The new curricula restore alignment with the National EMS Education Standards and Wisconsin Scope of Practice. The new curriculum contains most of the medications, invasive procedures, and other higher risk skills for the AEMT level. Inclusion of specific advanced skills involved balancing the need to ensure new students are adequately trained and an effort to minimize additional content impacts on students and service providers. While these decisions were not taken lightly, the changes ensure Wisconsin training centers continue to provide high quality EMS education to our next generation of EMS personnel.

The format of the new AEMT curriculum differs from the previous curriculum. The new curriculum does not break down content to the same degree as the previous curriculum. Where the previous curriculum used a complex code to designate depth and breadth within the cognitive, affective, and psychomotor domains, the new curriculum designates depth and breadth within the domains using specific verbs. For example, use of "analyze" for a particular topic indicates greater depth and breadth within the cognitive domain than the use of "identify." The new curriculum is also less prescriptive in details of classroom activities, lesson planning, and other similar functions. These are left for individual training centers and instructors to develop. These changes result in a curriculum shorter and more focused than the previous version.

Description

This curriculum expands the role and skills of the EMT. Skills will include obtaining intravenous and intraosseous access, intranasal, intramuscular and subcutaneous medication administration, and fluid therapy.

Extensive patient assessment knowledge and skills and treatment decision making skills are integrated throughout the curriculum. Successful completion prepares the learner for the National Registry AEMT written examination.

Prerequisite

A current Wisconsin EMT license is required.

External Standards

AEMT NEMS Scope of Practice

2019 NEMS AEMT Education Standards

2021 WI AEMT Scope of Practice 2023

* This curriculum is designed to address all three sets of external standards listed above. Each competency or criteria that is identified with an asterisk is considered an advanced skill of the curriculum, based upon "optional" skills, equipment or medications from the Wisconsin AEMT Scope of Practice. For AEMT, these include the following medications – Ketorolac and Ondansetron.

Course Competencies

1. Analyze the EMS System

Assessment Strategies

- 1.1. Oral, written, graphic, and/or skill assessment

Criteria

- 1.1. Explain the EMS Systems structure(s)
- 1.2. Explain the role the National Highway Traffic Safety administration (NHTSA) plays in the system
- 1.3. Explain Access to the Emergency Medical Services
- 1.4. Detail the education required for AEMT licensing
- 1.5. Analyze Authorization to Practice requirements
- 1.6. Analyze systems of care
- 1.7. Examine EMS history
- 1.8. Differentiate between quality improvement and quality assurance in the EMS system
- 1.9. Analyze the roles of medical oversight in the EMS system
- 1.10. Explain culture of safety in the EMS system
- 1.11. Analyze MIH/CP and specialty roles in the EMS system

2. Evaluate AEMT responsibilities

Assessment Strategies

- 2.1. Oral, written, graphic, and/or skill assessment

Criteria

- 2.1 Categorize AEMT professional roles
- 2.2 Explain AEMT role responsibilities
- 2.3 Explain evidence-based decision principles
- 2.4 Examine importance of AEMT related critical thinking skills
- 2.5 Analyze AEMT responsibilities related to public health
- 2.6 Characterize professional AEMT behavior
- 2.7 Explain AEMTs role in quality improvement
- 2.8. Analyze the impact of research on emergency medical care
- 2.9. Explain the AEMT scope of practice
- 2.10. Analyze the emotional aspects of emergency care
- 2.11. Explain the importance of AEMT physical wellness
- 2.12. Explain the importance of AEMT psychological wellness
- 2.13. Analyze safety precautions used while working on and near roadways
- 2.14. Analyze disease transmission safety protocols
- 2.15. Select appropriate personal protective equipment (PPE) for a variety of responses
- 2.16. Demonstrate correct use of chosen PPE
- 2.17. Identify common immunizations
- 2.18. Identify immunizations that should be obtained by the AEMT

3. Apply AEMT operational procedures

Assessment Strategies

- 3.1. Oral, written, graphic, and/or skill assessment

Criteria

- 3.1. Analyze field operations
- 3.2. Analyze EMS response to terrorism
- 3.3. Explain the importance of emergency vehicle maintenance
- 3.4. Apply safe ambulance operation principles
- 3.5. Apply pediatric transport protocols
- 3.6. Explain crew resource management
- 3.7. Perform triage for a mass casualty incident
- 3.8. Adjust treatment for mass casualty incident(s)
- 3.9. Explain the risks and responsibilities of transport
- 3.10. Apply incident management techniques
- 3.11. Apply kinds of decontamination procedures
- 3.12. Meet FEMA ICS-100 training requirements
- 3.13. Meet FEMA ICS-700 training requirements
- 3.14. Meet WI weapons of mass destruction training requirement
- 3.15. Apply safety principles of patient care during transport
- 3.16. Explain items of safe ground ambulance operations

- 3.17. Explain safety considerations for air ambulance operations
- 3.18. Analyze guidelines for use of air ambulance
- 3.19. Apply safety considerations for vehicle extrication
- 3.20. Perform simple patient extrication
- 3.21. Provide patient care during extrication, if needed
- 3.22. Ensure patient safety during patient extrication
- 3.23. Use appropriate PPE during extrication

4. Apply AEMT legal requirements and ethical standards

Assessment Strategies

- 4.1. Oral, written, graphic, and/or skill assessment

Criteria

- 4.1. Explain legal aspect of AEMT scope of practice
- 4.2. Characterize advance directives
- 4.3. Explain the ethical issues related to starting and stopping resuscitation
- 4.4. Explain legal aspects of consent for various populations
- 4.5. Explain legal aspects of right of refusal requirements
- 4.6. Identify other legal considerations for the EMS professions
- 4.7. Apply confidentiality laws
- 4.8. Explain mandatory reporting laws
- 4.9. Explain the legal aspects of patient restraint
- 4.10. Document minimum data set
- 4.11. Complete pre-hospital care report
- 4.12. Document patient refusal

5. Apply AEMT communication principles

Assessment Strategies

- 5.1. Oral, written, graphic, and/or skill assessment

Criteria

- 5.1. Apply therapeutic communication techniques
- 5.2. Apply positive relationship building techniques
- 5.3. Use interviewing techniques
- 5.4. Apply verbal diffusing techniques
- 5.5. Apply special situation interview techniques
- 5.6. Identify communication technology components
- 5.7. Use technology-specific communication techniques
- 5.8. Apply accepted principles of documentation

- 5.9. Identify medical word roots, prefixes and suffixes
- 5.10. Define common medical abbreviations
- 5.11. Interpret common medical symbols
- 5.12. Use medical terms related to body structures
- 5.13. Use medical terms related to body systems
- 5.14. Apply Diversity Equity and Inclusion communication principles

6. Apply correct patient movement techniques

Assessment Strategies

- 6.1. Oral, written, graphic, and/or skill assessment

Criteria

- 6.1. Apply patient movement guidelines
- 6.2. Distinguish between urgent and non-urgent patient movement techniques
- 6.3. Use patient movement equipment safely
- 6.4. Apply patient positioning guidelines
- 6.5. Apply correct restraint techniques

7. Calculate drug dosages

Assessment Strategies

- 7.1. Oral, written, graphic, and/or skill assessment

Criteria

- 7.1. Calculate drip rates
- 7.2. Calculate dosages
- 7.3. Calculate amount of dosage based on concentration
- 7.4. Calculate volume-based bolus
- 7.5. Convert measurements to metric measurements

8. Correlate pathophysiology with disease processes

Assessment Strategies

- 8.1. Oral, written, graphic, and/or skill assessment

Criteria

- 8.1. Analyze cell components
- 8.2. Describe cellular injury
- 8.3. Analyze the distribution of body fluids

- 8.4. Explain cell transport mechanisms for maintaining homeostasis
- 8.5. Analyze the acid-base balance within the body
- 8.6. Analyze the pathogenesis of hypoperfusion
- 8.7. Differentiate between the types of shock
- 8.8. Differentiate the pathophysiology of different types of shock
- 8.9. Analyze the cellular metabolism impairment that occurs as a result of hypoperfusion

9. Integrate body system function knowledge to AEMT practice

Assessment Strategies

- 9.1. Oral, written, graphic, and/or skill assessment

Criteria

- 9.1. Integrate knowledge of the musculoskeletal system into AEMT practice
- 9.2. Integrate knowledge of the respiratory system into AEMT practice
- 9.3. Integrate knowledge of the circulatory system into AEMT practice
- 9.4. Integrate knowledge of the nervous system into AEMT practice
- 9.5. Integrate knowledge of the endocrine system into AEMT practice
- 9.6. Integrate knowledge of the reproductive system into AEMT practice
- 9.7. Integrate knowledge of the integumentary system into AEMT practice
- 9.8. Integrate knowledge of the digestive system into AEMT practice
- 9.9. Integrate knowledge of the lymphatic system into AEMT practice

10. Integrate human development stage knowledge into AEMT practice

Assessment Strategies

- 10.1. Oral, written, graphic, and/or skill assessment

Criteria

- 10.1. Integrate infant development knowledge into AEMT practice
- 10.2. Integrate toddler development knowledge into AEMT practice
- 10.3. Integrate pre-school aged child development knowledge into AEMT practice
- 10.4. Integrate school-aged child development knowledge into AEMT practice
- 10.5. Integrate adolescent development knowledge into AEMT practice
- 10.6. Integrate early-adulthood development knowledge into AEMT practice
- 10.7. Integrate middle adulthood development knowledge into practice
- 10.8. Integrate late adulthood development knowledge into practice

11. Obtain vascular access via IV/IO

Assessment Strategies

- 11.1. Oral, written, graphic, and/or skill assessment

Criteria

- 11.1. Determine the need for IV access
- 11.2. Select appropriate IV equipment
- 11.3. Assemble IV equipment
- 11.4. Use aseptic technique
- 11.5. Establish a patent IV
- 11.6. Determine the anatomical IV administration site
- 11.7. Secure catheter
- 11.8. Ensure patency
- 11.9. Apply tourniquet for IV
- 11.10. Determine the need for IO access
- 11.11. Select appropriate IO equipment
- 11.12. Assemble IO equipment
- 11.13. Establish a patent IO
- 11.14. Determine the anatomical IO administration site
- 11.15. Troubleshoot access
- 11.16. Secure IO device

12. Administer medications safely within the AEMT scope of practice

Assessment Strategies

- 12.1. Oral, written, graphic, and/or skill assessment

Criteria

- 12.1. Administer medications associated within the AEMT scope of practice safety
- 12.2. Apply safe blood draw techniques
- 12.3. Apply a pharmacological management plan
- 12.4. Comply with contaminated items and sharps disposal guidelines
- 12.5. Document rights of drug administration
- 12.6. Apply universal precautions during medication delivery
- 12.7. Apply medication cross-check safety principles
- 12.8. Use resources for safe administration of weight-based dosing

13. Analyze principles of pharmacology as it relates to the AEMT

Assessment Strategies

- 13.1. Oral, written, graphic, and/or skill assessment

Criteria

- 13.1. Analyze drug schedules
- 13.2. Analyze medications schedules for the drugs administered under the AEMT scope of practice
- 13.3. Explain the elements of the medication profile
- 13.4. Analyze specific medication profiles within the AEMT scope of practice
- 13.5. Apply vocabulary pharmacology related to AEMT scope of practice
- 13.6. Explain requirements for storing medications
- 13.7. Explain regulations for securing controlled substances
- 13.8. Analyze the process of pharmacokinetics
- 13.9. Analyze the process of pharmacodynamics
- 13.10. Analyze chronic or maintenance medications commonly prescribed to patients

14. Apply knowledge of the anatomy of the airway to respiration assessment

Assessment Strategies

- 14.1. Oral, written, graphic, and/or skill assessment

Criteria

- 14.1. Integrate patency of the airway knowledge into AEMT practice
- 14.2. Integrate knowledge of respiratory compromise into AEMT practice
- 14.3. Integrate knowledge of age-related variations in pediatric patients into AEMT practice
- 14.4. Integrate knowledge of adequate/inadequate airway signs and symptoms into AEMT practice
- 14.5. Integrate knowledge of swelling due to trauma or infection into AEMT practice
- 14.6. Integrate knowledge of the anatomical structures of the airway into AEMT practice

15. Apply knowledge of the anatomy of the airway to respiration assessment

Assessment Strategies

- 15.1. Oral, written, graphic, and/or skill assessment

Criteria

- 15.1. Determine the causes for inadequate respiration
- 15.2. Determine tidal volume
- 15.3. Interpret the results of a CO₂ monitoring device
- 15.4. Determine when to intervene based on tidal volume
- 15.5. Assess alveolar ventilation in terms of tidal volume
- 15.6. Assess alveolar ventilation in terms of dead space
- 15.7. Assess alveolar ventilation in terms of vital capacity
- 15.8. Assess alveolar ventilation in terms of minute volume
- 15.9. Assess alveolar ventilation in terms of residual volume

16. Apply airway management techniques within the scope of AEMT practice

Assessment Strategies

- 16.1. Oral, written, graphic, and/or skill assessment

Criteria

- 16.1. Demonstrate relief of FBAO through visualization
- 16.2. Apply positive pressure ventilation
- 16.3. Apply non-invasive positive pressure ventilation through use of CPAP
- 16.4. Apply non-invasive positive pressure ventilation through use of BiPAP
- 16.5. Analyze oxygen concentration for oxygen delivery devices for all life-span categories
- 16.6. Explain reasons for interruption of ventilation
- 16.7. Explain the physiology and pathophysiology of ventilation
- 16.8. Demonstrate techniques of a tracheobronchial suctioning
- 16.9. Demonstrate techniques of upper airway suctioning
- 16.10. Explain anatomy as it relates to use of non-visualized airway
- 16.11. Identify components of non-visualized airways
- 16.12. Outline indications and contraindications for use of non-visualized airways
- 16.13. Demonstrate insertion and use of non-visualized airways
- 16.14. Demonstrate the removal of a non-visualized airway
- 16.15. Identify gastric distention
- 16.16. Demonstrate gastric decompression
- 16.17. Demonstrate head tilt/chin lift method
- 16.18. Demonstrate modified jaw thrust method
- 16.19. Determine the need for either nasopharyngeal or oropharyngeal airway devices
- 16.20. Demonstrate the use of nasopharyngeal or oropharyngeal airway devices
- 16.21. Demonstrate safe oxygen cylinder handling
- 16.22. Explain oxygen safety considerations
- 16.23. Use an oxygen cylinder
- 16.24. Demonstrate the ventilation of a patient
- 16.25. Demonstrate use of oxygen delivery devices

17. Apply patient assessment procedures within the scope of AEMT practice

Assessment Strategies

- 17.1. Oral, written, graphic, and/or skill assessment

Criteria

- 17.1. Manage common scene hazards
- 17.2. Obtain pertinent SAMPLE history
- 17.3. Assess history of the present complaint using OPQRST questions
- 17.4. Apply clarifying history questions, if needed
- 17.5. Identify chief complaint
- 17.6. Determine if critical life-saving interventions are needed
- 17.7. Apply components of a primary assessment/survey
- 17.8. Perform a primary assessment
- 17.9. Determine if age-related assessment considerations apply
- 17.10. Modify assessment based on patient age
- 17.11. Obtain vital signs
- 17.12. Perform reassessment
- 17.13. Perform secondary assessment
- 17.14. Identify pertinent negatives (F,F)
- 17.15. Identify pertinent positives
- 17.16. Determine the type of assessment needed
- 17.17. Assess body systems for need to apply treatment as indicated by the chief complaint
- 17.18. Monitor pulse oximeter
- 17.19. Take non-invasive blood pressure
- 17.20. Monitor blood glucose
- 17.21. Apply end tidal (ETCO₂) CO₂ monitoring equipment if used for a non-visualized or advanced airway
- 17.22. Apply guidelines for field triage
- 17.23. Make patient transport decisions

18. Manage medical care within scope of AEMT practice

Assessment Strategies

- 18.1. Oral, written, graphic, and/or skill assessment

Criteria

- 18.1. Administer appropriate medications within the current AEMT scope of practice
- 18.2. Manage age-appropriate treatment(s) within the AEMT scope of practice given the availability of pharmacological interventions

- 18.3. Manage any altered mental status within the AEMT scope of practice given the availability of pharmacological interventions
- 18.4. Manage Abdominal and Gastrointestinal emergencies within the AEMT scope of practice given the availability of pharmacological interventions
- 18.5. Manage infectious disease emergencies within the AEMT scope of practice given the availability of pharmacological interventions
- 18.6. Manage endocrine disorder emergencies within the AEMT scope of practice given the availability of pharmacological interventions
- 18.7. Manage psychiatric disorder emergencies within the AEMT scope of practice given the availability of pharmacological interventions
- 18.8. Manage cardiovascular emergencies within the AEMT scope of practice given the availability of pharmacological interventions
- 18.9. Manage address toxicological emergencies within the AEMT scope of practice given the availability of pharmacological interventions
- 18.10. Manage respiratory emergencies within the AEMT scope of practice given the availability of pharmacological interventions
- 18.11. Manage Immunology Emergencies within the AEMT scope of practice given the availability of pharmacological interventions
- 18.12. Manage Non-Traumatic Musculoskeletal emergencies within the AEMT scope of practice given the availability of pharmacological interventions
- 18.13. Manage emergencies related to Eyes, Ears, Nose, and Throat within the AEMT scope of practice given the availability of pharmacological interventions
- 18.14. Implement a treatment plan for managing medical emergencies given the availability of pharmacological interventions

19. Manage fundamental trauma care within the AEMT scope of practice

Assessment Strategies

- 19.1. Oral, written, graphic, and/or skill assessment

Criteria

- 19.1. Implement a treatment plan for managing trauma emergencies given the availability of pharmacological interventions
- 19.2. Modify assessment as needed for trauma patient(s)
- 19.3. Manage age-appropriate treatment for trauma patient(s) within the AEMT scope of practice given the availability of pharmacological interventions
- 19.4. Manage bleeding within the AEMT scope of practice given the availability of pharmacological interventions
- 19.5. Manage chest trauma within the AEMT scope of practice given the availability of pharmacological interventions

- 19.6. Manage Abdominal and Genitourinary Trauma within the AEMT scope of practice given the availability of pharmacological interventions
- 19.7. Manage Orthopedic Trauma within the AEMT scope of practice given the availability of pharmacological interventions
- 19.8. Manage Soft Tissue Trauma within the AEMT scope of practice given the availability of pharmacological interventions
- 19.9. Manage Head, Facial, Neck and Spine Trauma within the EMT scope of practice given the availability of pharmacological interventions
- 19.10. Manage Special Considerations in Trauma within the AEMT scope of practice given the availability of pharmacological interventions
- 19.11. Manage Environmental Emergencies within the AEMT scope of Practice given the availability of pharmacological interventions
- 19.12. Manage Multi-System Trauma within the AEMT scope of practice given the availability of pharmacological interventions
- 19.13. Manage burn trauma given the availability of pharmacological interventions
- 19.14. Apply the spinal stabilization assessment to determine if stabilization is needed
- 19.15. Analyze kinematics of trauma
- 19.16. Apply principles of the Golden Period/Hour
- 19.17. Calculate a revised trauma score
- 19.18. Calculate a score using the Glasgow coma scale

20. Address special considerations in patient treatment within the scope of AEMT practice

Assessment Strategies

- 20.1. Oral, written, graphic, and/or skill assessment

Criteria

- 20.1. Modify assessments for patient with physical limitations
- 20.2. Modify assessments for patients with cognitive limitation
- 20.3. Modify assessment for patients with special challenges
- 20.4. Modify treatment for patients with special challenges
- 20.5. Modify assessment for patients pregnant women in a traumatic event
- 20.6. Identify home healthcare equipment that informs of patient status and care
- 20.7. Manage gynecological emergencies within the scope of AEMT practice given the availability of pharmacological interventions
- 20.8. Manage obstetric emergencies within the scope of AEMT scope of practice given the availability of pharmacological interventions
- 20.9. Differentiate between normal and complex labor and delivery
- 20.10. Manage normal labor and delivery given the availability of pharmacological interventions
- 20.11. Manage complex labor and delivery within the scope of AEMT practice given the availability of pharmacological interventions

20.12. Manage newborn emergencies within the scope of AEMT practice given the availability of pharmacological interventions

21. Address shock within the scope of AEMT practice

Assessment Strategies

21.1. Oral, written, graphic, and/or skill assessment

Criteria

- 21.1. Assess the need for fluid resuscitation
- 21.2. Assess the need for fluid restriction
- 21.3. Obtain vascular access
- 21.4. Monitor response to fluid resuscitation
- 21.5. Monitor response for fluid restriction