

EMERGENCY MEDICAL SERVICES

WISCONSIN CURRICULUM

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 EMT 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 to 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 EMT curriculum differs from the previous curriculum. The new curriculum does not breakdown 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 prepares students to perform emergency medical care sanctioned by the DHS scope of practice for the EMT. Includes foundational knowledge and skill application for EMT in the following areas: the EMS system, EMT responsibilities, legal and ethical standards, patient movement techniques, pathophysiology, body systems and functions, patient assessment and treatment, pharmacology, shock and resuscitation, age-specific patient considerations, special medical considerations,

medication administration, airway anatomy and management. Successful completion prepares the learner for the National Registry EMT written examination.

Prerequisite A Wisconsin EMR certificate or equivalent is required to demonstrate competency in Wisconsin Curriculum for Emergency Medical Responder in addition to the competencies and criteria outlined below.

External Standards EMT NEMS Scope of Practice 2019 (correlation matrix available)
NEMS EMT Education Standards 2021 (correlation matrix available)
WI EMT Scope of Practice 2023 (correlation matrix available)

* 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 EMT Scope of Practice. For EMT, these include: End Tidal CO₂ Continuous Monitoring; Non-Invasive Positive Pressure Ventilation; ECG Monitor – Acquisition and Transmission; ECG 12, 15, or 18 Lead Acquisition and Transmission; and the following medications - Acetaminophen, Atrovent, Glucagon, and Ibuprofen.

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 EMT 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. explain the roles of medical oversight in the EMS system
- 1.10. explain culture of safety in the EMS system
- 1.11. analyze EMS MIH/CP and specialty roles in the EMS system

2. Evaluate EMT responsibilities

Assessment Strategies

2.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 2.1. categorize EMS professional roles
- 2.2. explain EMT role responsibilities
- 2.3. explain evidence-based decision principles
- 2.4. examine importance of EMT-related critical thinking skills
- 2.5. analyze EMT responsibilities related to public health
- 2.6. characterize professional behavior for the EMR/EMT
- 2.7. explain the role of the EMR/EMT in quality improvement
- 2.8. analyze the impact of research on emergency medical care
- 2.9. explain the EMT scope of practice
- 2.10. analyze the emotional aspects of providing emergency care
- 2.11. explain the importance of EMR/EMT physical fitness
- 2.12. explain the importance of EMR/EMT 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 EMR/EMT

3. Apply EMT operational procedures

Assessment Strategies

- 3.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 3.1. analyze field operations
- 3.2. explain the importance of emergency vehicle maintenance
- 3.3. explain principles of safe ground ambulance operations
- 3.4. apply safe ambulance operation principles
- 3.5. apply pediatric transport protocols
- 3.6. explain the risks and responsibilities of transport
- 3.7. apply safety principles of patient care during transport
- 3.8. explain crew resource management
- 3.9. perform triage for a mass casualty incident
- 3.10. adjust treatment for mass casualty incidents
- 3.11. apply incident management techniques
- 3.12. meet FEMA IS-100 training requirements
- 3.13. meet FEMS ICS 700 training requirements
- 3.14. explain safety considerations for air ambulance operations
- 3.15. analyze guidelines for use of air ambulance
- 3.16. apply safety considerations for vehicle extrication
- 3.17. use appropriate PPE during extrication
- 3.18. perform simple patient extrication
- 3.19. provide patient care during extrication, as needed
- 3.20. ensure patient safety during patient extrication
- 3.21. analyze hazardous material operations
- 3.22. apply decontamination procedures
- 3.23. analyze EMS response to terrorism
- 3.24. meet WI weapons of mass destruction training requirement*

4. Apply EMT Legal Requirements and Ethical Standards

Assessment Strategies

- 4.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 4.1. explain the legal aspects of the EMT scope of practice
- 4.2. characterize advance directives
- 4.3. explain the ethical issues related to starting and stopping resuscitation
- 4.4. explain the legal aspects of consent for various populations
- 4.5. explain the legal aspects of a patient's right of refusal
- 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 a minimum data set
- 4.11. complete a pre-hospital care report
- 4.12. document a patient refusal

5. Apply EMT 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 defusing 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. apply diversity, equity, and inclusion communication principles
- 5.10. identify medical word roots, prefixes, and suffixes
- 5.11. define common medical abbreviations
- 5.12. interpret common medical symbols
- 5.13. use medical terms related to body structures
- 5.14. use medical terms related to body systems

6. Apply correct patient movement techniques

Assessment Strategies

- 6.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 6.1. define body mechanics
- 6.2. distinguish between urgent and non-urgent patient movement techniques
- 6.3. apply patient positioning guidelines
- 6.4. apply correct restraint techniques
- 6.5. apply patient movement guidelines
- 6.6. use patient movement equipment safely

7. Apply pathophysiology principles related to EMT scope of practice

Assessment Strategies

- 7.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 7.1. quantify the components of ambient air
- 7.2. maintain a patent airway
- 7.3. address obstructions at various anatomic levels
- 7.4. evaluate respiratory changes associated with respiratory compromise
- 7.5. quantify minute ventilation
- 7.6. explain alveolar ventilation
- 7.7. evaluate perfusion
- 7.8. compare and contrast aerobic and anaerobic metabolism
- 7.9. compare and contrast the functions of blood components
- 7.10. evaluate how systemic vascular resistance affects the body
- 7.11. compare and contrast hydrostatic and oncotic pressures

8. Analyze body system functions

Assessment Strategies

- 8.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 8.1. explain the importance of different anatomical positions
- 8.2. analyze components of the musculoskeletal system
- 8.3. analyze the function of the musculoskeletal system
- 8.4. analyze components of the respiratory system
- 8.5. analyze the function of the respiratory system
- 8.6. analyze components of the circulatory system
- 8.7. analyze the function of the circulatory system
- 8.8. analyze components of the nervous system
- 8.9. analyze the function of the nervous system
- 8.10. analyze components of the endocrine system
- 8.11. analyze the function of the endocrine system
- 8.12. analyze components of the reproductive system
- 8.13. analyze the function of the reproductive system
- 8.14. analyze components of the integumentary system

- 8.15. analyze the function of the integumentary system
- 8.16. analyze components of the digestive system
- 8.17. analyze the function of the digestive system
- 8.18. analyze components of the lymphatic system
- 8.19. analyze the function of the lymphatic system

9. Characterize human development stages

Assessment Strategies

- 9.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 9.1. compare and contrast the anatomical differences among different age groups
- 9.2. compare and contrast physiological difference among different age groups
- 9.3. analyze infant development
- 9.4. analyze toddler development
- 9.5. analyze pre-school aged child development
- 9.6. analyze school-aged child development
- 9.7. analyze adolescent development
- 9.8. analyze early-adulthood development
- 9.9. analyze middle adulthood development
- 9.10. analyze late adulthood development

10. Apply pharmacological principles as related to the EMT scope of practice

Assessment Strategies

- 10.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 10.1. analyze medication profiles
- 10.2. analyze metabolism and excretion
- 10.3. identify the medications used by an EMT
- 10.4. identify indications of medications administered by EMTs
- 10.5. identify the expiration dates of medications
- 10.6. function with legal parameters applicable to the EMT scope of practice regarding medication administration
- 10.7. analyze the risk of polypharmacy for all age groups

11. Administer medications safely with the EMT scope of practice

Assessment Strategies

- 11.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 11.1. apply safe medication administration practices
- 11.2. administer medications through routes within the EMT scope of practice
- 11.3. validate the right patient
- 11.4. validate the right medication
- 11.5. validate the right dosage
- 11.6. validate the right route
- 11.7. validate the right time
- 11.8. validate the right documentation
- 11.9. reassess patient after medication administration
- 11.10. apply medication cross-check safety principles
- 11.11. use resources for safe administration of weight-based dosing

12. Relate the anatomy of the airway to airway management

Assessment Strategies

- 12.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 12.1. explain patency of the airway
- 12.2. analyze respiratory compromise
- 12.3. explain age-related variations in pediatric patients

- 12.4. differentiate between an adequate and inadequate airway
- 12.5. compare and contrast the signs and symptoms of a patient with an adequate and inadequate airway
- 12.6. differentiate swelling of the airway due to trauma or infection
- 12.7. identify the anatomical structures of the airway

13. Analyze the anatomy of the airway related to process of respiration

Assessment Strategies

- 13.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 13.1. analyze causes for inadequate respiration
- 13.2. analyze vascular structures that support respiration
- 13.3. analyze how the diaphragm and accessory muscles aid in ventilation
- 13.4. compare and contrast adequate tidal volume among various patients
- 13.5. analyze alveolar ventilation in terms of dead space
- 13.6. interpret the results of a CO₂ monitoring device
- 13.7. determine when to intervene based on tidal volume
- 13.8. analyze alveolar ventilation in terms of tidal volume
- 13.9. analyze alveolar ventilation in terms of vital capacity
- 13.10. analyze alveolar ventilation in terms of minute volume
- 13.11. analyze alveolar ventilation in terms of residual volume

14. Apply airway management techniques within the scope of EMT practice.

Assessment Strategies

- 14.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 14.1. analyze oxygen concentration for oxygen delivery devices for all life-span categories
- 14.2. explain reasons for interruption of ventilation
- 14.3. explain the physiology and pathophysiology of ventilation
- 14.4. demonstrate techniques of a tracheobronchial suctioning
- 14.5. demonstrate techniques of upper airway suctioning
- 14.6. explain anatomy as it relates to the use of non-visualized airways
- 14.7. identify components of non-visualized airways
- 14.8. outline indications and contraindications for use of non-visualized airways
- 14.9. demonstrate insertion and use of non-visualized airways
- 14.10. demonstrate the removal of a non-visualized airway
- 14.11. Identify gastric distention
- 14.12. demonstrate gastric decompression with the usage of an advanced airway*
- 14.13. demonstrate head tilt-chin lift method
- 14.14. demonstrate modified jaw thrust method
- 14.15. demonstrate the need for either nasopharyngeal or oropharyngeal airway devices
- 14.16. demonstrate the use of nasopharyngeal or oropharyngeal airway devices
- 14.17. explain oxygen safety considerations
- 14.18. demonstrate safe oxygen cylinder handling
- 14.19. use an oxygen cylinder
- 14.20. demonstrate the ventilation of a patient
- 14.21. demonstrate use of oxygen delivery devices
- 14.22. apply non-invasive positive pressure ventilation*
- 14.23. demonstrate end-tidal CO₂ continuous monitoring*
- 14.24. demonstrate use of automated transport ventilator during CPR*
- 14.25. demonstrate relief of foreign body airway obstruction (FBAO) through visualization

15. Apply patient assessment procedures within scope of EMT practice

Assessment Strategies

- 15.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 15.1. manage common scene hazards
- 15.2. perform scene assessment
- 15.3. obtain pertinent SAMPLE history

- 15.4. assess history of the present complaint using OPQRST questions
- 15.5. apply clarifying history questions, if needed
- 15.6. identify chief complaint
- 15.7. determine if critical life-saving interventions are needed
- 15.8. apply components of a primary assessment/survey
- 15.9. perform a primary assessment
- 15.10. determine if age-related assessment considerations apply
- 15.11. modify assessment based on patient age
- 15.12. obtain vital signs
- 15.13. perform reassessment
- 15.14. perform secondary assessment
- 15.15. identify pertinent negatives (F,F)
- 15.16. identify pertinent positives
- 15.17. determine the type of assessment needed
- 15.18. assess body systems for need to apply treatment as indicated by the chief complaint
- 15.19. monitor pulse oximeter
- 15.20. take non-invasive blood pressure
- 15.21. Apply ECG monitoring patches for obtaining acquisition and transmission of 12, 15, and 18-lead ECGs.*
- 15.22. Monitor blood glucose.
- 15.23. Apply guidelines for field triage.
- 15.24. Make patient transport decisions.
- 15.25. Apply end-tidal (ETCO₂) CO₂ monitoring equipment if used for a non-visualized or advanced airway.

16. Manage medical care within scope of EMT practice

Assessment Strategies

- 16.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 16.1. administer appropriate medications within EMT scope of practice
- 16.2. manage age-appropriate treatment(s)
- 16.3. manage any altered status
- 16.4. manage abdominal and gastrointestinal emergencies
- 16.5. manage infectious disease emergencies
- 16.6. manage endocrine disorder emergencies
- 16.7. manage psychiatric disorder emergencies
- 16.8. manage cardiovascular emergencies
- 16.9. manage toxicological emergencies
- 16.10. manage respiratory emergencies
- 16.11. manage immunology emergencies
- 16.12. manage non-traumatic musculoskeletal emergencies
- 16.13. manage emergencies related to the eyes, ears, nose, and throat
- 16.14. implement a treatment plan for managing medical emergencies

17. Manage trauma care within the EMT scope of practice

Assessment Strategies

- 17.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 17.1. modify assessment as needed for trauma patients
- 17.2. implement a treatment plan for managing trauma emergencies
- 17.3. manage age-appropriate treatment for trauma patients
- 17.4. manage bleeding
- 17.5. manage chest trauma
- 17.6. manage abdominal and genitourinary trauma
- 17.7. manage orthopedic trauma
- 17.8. manage soft tissue trauma
- 17.9. manage head, facial, neck, and spine trauma
- 17.10. manage special considerations in trauma
- 17.11. manage environmental emergencies
- 17.12. manage multi-system trauma

- 17.13. manage burn trauma
- 17.14. apply the spinal stabilization assessment to determine if stabilization is needed
- 17.15. analyze kinematics of trauma
- 17.16. apply principles of the Golden Hour-Golden Period
- 17.17. calculate a revised trauma score
- 17.18. calculate a Glasgow Coma Scale score

18. Address special considerations in patient treatment within the scope of EMT practice

Assessment Strategies

- 18.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 18.1. modify assessment for patients with special challenges
- 18.2. modify assessments for patients with physical limitations
- 18.3. modify assessments for patients with cognitive limitations
- 18.4. modify treatment for patients with special challenges
- 18.5. identify home healthcare equipment that informs of patient status and care
- 18.6. manage gynecological emergencies
- 18.7. modify assessment for pregnant female patients in a traumatic event
- 18.8. manage obstetric emergencies
- 18.9. differentiate between normal and complex labor and delivery
- 18.10. manage normal labor and delivery
- 18.11. manage complex labor and delivery
- 18.12. manage newborn emergencies

19. Address shock within the scope of EMT practice

Assessment Strategies

- 19.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 19.1. differentiate various signs and symptoms of shock
- 19.2. identify patients in shock
- 19.3. characterize stages of shock
- 19.4. identify types of shock
- 19.5. apply treatment(s) based upon the type of shock the patient is suffering
- 19.6. apply age-related shock treatment considerations

20. Resuscitate patient

Assessment Strategies

- 20.1. Oral, Written, Graphic and/or Skill Assessment

Criteria

- 20.1. treat cardiac arrest through the use of external defibrillation devices
- 20.2. treat cardiac arrest through the use of manual external defibrillation devices*
- 20.3. differentiate appropriate application of CPR and CCR
- 20.4. apply CCR techniques*
- 20.5. perform appropriate BLS per AHA guidelines
- 20.6. perform appropriate age-related CPR per AHA guidelines