Wisconsin Standardized Emergency Medical Responder (EMR) Curriculum

Advanced Skills

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Wisconsin Department of Health Services
EMS Unit

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2013 – Wisconsin Emergency Medical Responder (EMR)
Advanced Skills Curriculum

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0.0 – Introduction

0.1 – Wisconsin Emergency Medical Responder (EMR) Program Outcomes

Upon successful completion of a Wisconsin EMR program, the student should be able to:

1. Prepare for incident response and EMS operations.
2. Integrate pathophysiological principles and assessment findings for a variety of patient encounters.
3. Demonstrate EMR skills associated with established standards and procedures for a variety of patient encounters.
4. Communicate effectively with others.
5. Demonstrate professional behavior.
6. Meet state and national competency requirements for EMR credentialing.

0.2 – Curriculum Background and EMS Training Center Adaptation

The Wisconsin First Responder scope of Practice integrated into this document was defined by the State EMS Board Physicians Advisory Committee, based upon their modifications to the February 2007 "National EMS Scope of Practice Model" as published by the National Highway Traffic Safety Administration, under the United States Department of Transportation.

It is recognized that additional content may be added at the discretion of the EMS Training Center to meet local needs or requirements.

Objectives are divided into Cognitive, Psychomotor, and Affective domains (denoted by a C, P, and A, respectively, before the objective number).

0.3 – Contribution Acknowledgement

This curriculum document adaptation is based upon the work of the following individuals (listed alphabetically):

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0.4 – EMR WI Additional Modules

The WI Department of Health Services EMS Unit recognizes a statewide EMR scope of practice that exceeds the requisite knowledge contained within the "base" EMR curriculum given the inclusion of several optional skills. Services and personnel wishing to expand their local scope of practice to include any of these optional disciplines must complete additional training beyond that of the "base" EMR curriculum. These modules are not taught as part of a "base" EMR course.

This particular document contains the WI EMR optional modules only. Please see the WI EMR Core Curriculum document for the "base" WI EMR curriculum.

0.5 – Course Structure and Topical Hour Guidelines

This particular document contains curriculum material pertaining to optional EMR skills. These skills may be taught individually or together (in any combination). Three separate skills are recognized: non-visualized airways, epinephrine administration via auto injector, and spinal immobilization. Each individual skill module is expected to take approximately four (4) hours to complete. Thus, the anticipated time required for teaching one, a combination, or all skills is as follows:

- One Skill: 4 hours
- Two Skills: 8 hours
- Three Skills: 14 hours

It is recognized that state-approved EMS training centers have the ability, and are highly encouraged, to provide instruction using various educational methodologies (e.g. traditional classroom lecture, hybrid, online, open labs, interactive television, clinical/field partnerships, and simulation). Nothing within this curriculum document is intended to mandate minimum contact hours (didactic or lab) or to limit individual state-approved EMS training centers from employing various educational methodologies as they deem appropriate so long as the curriculum objectives contained herein are delivered.

Within the curriculum, students are often asked to "demonstrate the assessment and management" of patients with varying medical complaints. Given that no clinical or field time is mandated at the EMR level, such patient experiences may be simulated (using live actors, high-fidelity mannequins, or low-fidelity mannequins). Scenario-based demonstrations are encouraged unless the demonstration is of a specific skill.

All skills and procedures are required to be taught in compliance with the current *State of Wisconsin Standards & Procedures of Practical Skills Manual*.

10.0 – Optional Skills Modules

The Wisconsin EMR scope of practice includes optional skills that may be performed by an EMR with appropriate training and medical direction oversight. These modules are optional and are not included within the "base" EMR curriculum or associated hours. It is anticipated that each module will take approximately four hours to complete (although more time may be required to ensure competence as determined by the EMS Training Center or local medical direction)

10.1 – Non-Visualized Airway

Objective	Educational Standard
10.1.1 – Airway Anatomy	
C 10.1.1 – Explain airway anatomy as it relates to the use of non-visualized airways	1. Dead space: Portion of tidal volume that is not available for gas exchange (air that fills the nasopharynx, oropharynx, trachea, larynx, bronchi, and bronchioles) 2. Tidal volume: The volume of air inspired and expired in a single resting breath a. Impact of a non-visualized airway on dead space and tidal volume b. Impact on ventilation
10.1.2 – Non-Visualized Airways	
C 10.1.2.1 – Identify the component parts and accessories of non-visualized airway devices	1. Non-visualized airway a. Lumen(s) b. Inflation cuff(s)/balloon(s) c. Pilot balloon(s) d. Inflation valve(s) 2. Accessories a. Syringes b. Water-soluble lubricant
C 10.1.2.2 – Outline the indications and contraindications for the use of a non-visualized airway	1. Indications a. Cardiac arrest from any cause b. Respiratory arrest with no gag reflex c. Unconscious patient with inadequate respirations and no gag reflex 2. Contraindications a. Patient too small for the device (review manufacturer's literature for correct size and placement) b. Known or suspected obstruction of the larynx or trachea c. Active gag reflex d. Caustic substance ingestion e. Known or suspected esophageal disease
P 10.1.2.3 – Demonstrate insertion, securing, and subsequent use of a non-visualized airway	1. Utilize proper PPE (including eye protection) 2. Obtain permission from medical control, if required 3. Prepare device as per manufacturer's recommendations 4. Prepare patient 5. Insert non-visualized airway as per manufacturer's recommendations

	6. Confirm proper placement 7. Secure non-visualized airway 8. Ventilate using non-visualized airway
P 10.1.2.4 – Demonstrate removal of a non-visualized airway	1. Indications for removal a. Patient regains consciousness b. Protective gag reflex returns c. Ventilation is inadequate 2. Contact medical control, if required 3. Prepare suctioning equipment 4. Position patient appropriately 5. Remove device as per manufacturer's recommendations

10.2 – Epinephrine Administration via Auto-Injector

Objective	Educational Standard
10.2.1 – Anaphylactic Reactions	
C 10.2.1.1 – Summarize the pathophysiology of anaphylactic reactions	1. Definition (allergic reaction) 2. Potential causes 3. Signs and symptoms a. Affected body systems i. Skin ii. Respiratory iii. Cardiac iv. Other
10.2.2 – Epinephrine Auto-Injector	
C 10.2.2.1 – Explore the properties, dosages, indications, contraindications, actions, and side effects of epinephrine when used for anaphylactic emergencies	1. Medication name: Epinephrine, Adrenaline 2. Medication form: liquid 3. Care and storage of auto-injectors a. Secure storage to avoid rolling or jarring of device b. Store away from light c. Store in temperature-controlled environment (avoid temperature extremes in storage) d. Routine inspection for expiration or other deficiencies 4. Follow local protocol for administration 5. Dosages a. Adult (0.3 mg) b. Pediatric (0.15 mg) 6. Indication for use: acute allergic reaction 7. Contraindications a. No absolute contraindication in life-threatening emergencies b. Special considerations: i. Hypertension ii. Underlying cardiovascular disease iii. Coronary insufficiency iv. Pregnancy v. Underlying respiratory disease 1. COPD 2. Pulmonary edema 3. Pneumonia vi. Diabetes vii. Certain medications 1. Beta blockers (i.e., Inderal) 2. MAO inhibitor (i.e., Parnate, Nardil) 8. Actions a. Bronchodilator b. Vasoconstrictor 9. Side effects a. Increases heart rate b. Pallor c. Dizziness d. Chest pain e. Headache

	f. Nausea g. Vomiting h. Excitability, anxiousness
P 10.2.2.2 – Demonstrate the use of an epinephrine auto-injector	1. Follow manufacturer's recommendations
P 10.2.2.3 – Demonstrate the assessment and management of a patient requiring the administration of epinephrine via auto-injector for an anaphylactic reaction	1. PPE 2. Scene safety 3. Assessment a. ABCs i. Respiratory status b. Focused history given allergic reaction i. History of allergies? ii. Exposed to what (if known)? iii. When did exposure occur? iv. How did the exposure occur? v. What are the effects from the exposure? vi. Progression of the signs and symptoms? vii. Any interventions? c. Pertinent medical history 4. Medical control a. Time of order b. Physician name 5. Reassessment

10.3 – Spinal Immobilization

Objective	Educational Standard
10.3.1 – Head, Neck, and Spine Anatomy	
C 10.3.1.1 – Summarize the anatomy of the head, neck, and spine as it pertains to spinal immobilization given a traumatic incident	1. Nervous system 2. Skeletal system
10.3.2 – Spinal Stabilization Devices	
C 10.3.2.1 – Identify spinal stabilization and immobilization devices	1. C-Collar 2. Cervical immobilization device (CID) 3. Longboard 4. Shortboard 5. Seated spinal devices 6. Others
C 10.3.2.2 – Summarize complications associated with the use of immobilization devices	1. Time required 2. Personnel resources 3. Positioning (i.e., vomiting patient, respiratory access/compromise)
C 10.3.2.3 – Explain special considerations associated with spinal immobilization	1. Rapid extrication a. Indications 2. Helmet removal a. Special assessment needs (airway and breathing) b. Indications for removal 3. Pediatrics 4. Geriatrics
P 10.3.2.4 – Demonstrate the use of spinal stabilization and immobilization devices	1. PPE 2. Mechanism of Injury 3. Assessment a. Establish and maintain in-line stabilization b. Signs and symptoms c. Circulation, motion, and sensation 4. Sizing (if required) and application of device(s) per manufacturer's recommendations 5. Reassessment
P 10.3.2.5 – Demonstrate airway access techniques for a spinal patient wearing a helmet	
P 10.3.2.6 – Demonstrate the assessment, immobilization, and management of a patient requiring spinal immobilization	

Summary of Curriculum Objectives

2013 Wisconsin EMR Curriculum

Document History:
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