

**EMERGENCY MEDICAL RESPONDER  
REFRESHER TRAINING PROGRAM  
Ohio Approved Curriculum**



**Instructor Course Guide**

## **OHIO APPROVED EMERGENCY MEDICAL RESPONDER REFRESHER TRAINING PROGRAM CURRICULUM**

The Ohio Emergency Medical Responder (EMR) is responsible for a wide range of knowledge and skills which includes material originally learned, as well as new information resulting from the constant growth and evolution of the field of emergency medical care. In order to maintain up-to-date proficiency, an Emergency Medical Responder must regularly participate in educational programs which review the essential components of the Ohio approved EMR curriculum as well as those which provide exposure to new knowledge and skills resulting from advances in emergency medical care.

This document is an EMS instructor course guide for the Ohio EMR Refresher Training Program as approved by the State Board of EMS pursuant to chapter 4765-12-05 of the Ohio Administrative Code. The Ohio EMR Refresher Training Program is based on the National EMS Education Standards and standards adopted in rule by the EMS Board. In implementing the Ohio EMR Refresher Training Program, EMS instructors will develop learning objectives, lesson plans and identification of resources necessary to achieve the educational goals. The EMS instructor may wish to reference the EMR and EMT Instructional Guidelines approved by the National Highway Traffic Safety Administration (NHSTA). [www.ems.gov](http://www.ems.gov)

Pursuant to ORC 4765.16, each course offered through an emergency medical services training program or an emergency medical services continuing education program, other than ambulance driving, shall be developed under the direction of a physician who specializes in emergency medicine. Each course that deals with trauma care shall be developed in consultation with a physician who specializes in trauma surgery.

### **COURSE OVERVIEW**

The Ohio EMR Refresher Training Program curriculum is the minimum acceptable content that must be included in any Ohio EMR Refresher Training Program. The didactic portion of the Ohio EMR Refresher Training Program may be taught through online or distance learning formats, however cognitive and psychomotor testing shall be conducted in a traditional classroom environment. The Ohio EMR Refresher Training Program consists of 15 classroom hours. The EMR Refresher Training Program is divided into the following subject areas and hours (including evaluations):

- Preparatory Considerations 2 hours
- Airway Management & Ventilation 2 hours
- Patient Assessment 2 hours
- Medicine
  - Cardiac Management 2 hours
  - Illness & Injury Management 3 hours
- Trauma Issues 2 hours
- Special Populations
  - Childbirth & Pediatric Issues 1 hour
  - Geriatric Issues 1 hour

Emergency Medical Responders who successfully complete this course must demonstrate competency through written and practical testing over the knowledge and psychomotor skills outlined in this refresher training program prior to receiving a certificate of completion.

### **NREMT TRANSITION COURSE POLICY**

The Ohio EMR Refresher Training Program course curriculum is approved and adopted in rule by the Ohio board of Emergency Medical Services and meets the requirements of the NREMT-FR to NR-EMR transition policy.

### **EMS EDUCATION STANDARDS**

The EMS education standards are divided into three categories: Knowledge, Psychomotor and Clinical Behavior/Judgment. Some standards may be repeated in more than one unit. All standards refer to all patient age groups (pediatric, adult and geriatric) unless otherwise specified or appropriate. Patient assessment standards are grouped together in the curriculum for organization. It is expected that these standards will be covered in each section as appropriate.

### **PERSONNEL**

Each course offered through an EMS training program or continuing education program shall be taught by a person who holds a certificate to teach issued under section 4765.23 of the Revised Code.

An EMS Instructor must hold a current and valid certificate to practice and a certificate to teach issued by the State Board of EMS. An EMS Instructor may teach courses for initial certification and continuing education that are at or below the level of the instructor's certificate to practice.

An Assistant EMS Instructor holds a current and valid certificate to practice and a certificate to teach issued by the State Board of EMS. All course instruction and preparation must occur under the mentorship of a certified EMS Instructor. An Assistant EMS Instructor may teach courses for initial certification and continuing education that are at or below the level of the instructor's certificate to practice.

A Continuing Education Instructor may teach an EMS continuing education program at or below the level of the instructor's certificate to practice.

A Guest Lecturer may be used to bring a specific area of expertise to the classroom. Whenever a guest lecturer is used, a certified instructor must be present in the classroom.

### **LESSON PREPARATION**

The instructor should be familiar with the subject area and the specific objectives of the subject area. Each instructor will incorporate their own personality and style into the lesson, but the goal of all instructors is to design an organized lesson that maximizes the students' opportunity to achieve the stated standards. A lesson plan that outlines the goals, objectives, content, instructional materials and evaluation methods should be developed for each class session. The lesson plan may also provide a timeline for the appropriate flow of information.

Presentation of lesson objectives may be accomplished by various methods, including lectures, small group discussion, and the use of audio-visual materials. EMS equipment is an integral part of the classroom presentation and laboratory instruction. The instructor should assure that the necessary types of equipment, in appropriate amounts, are accessible to the students. The instructor should perform demonstrations prior to asking the student perform the skill. The instructor should supervise the students while they practice the psychomotor skills and should reinforce the progress of the student in all areas. The instructor: student ratio should be no more than 1:10 during these practice

sessions. If there is difficulty understanding the content or performing the skills, the instructor should remediate as needed.

### **NEEDS ASSESSMENT**

The first step in course planning is the performance of a comprehensive analysis of the many factors which influence the pre-hospital emergency care delivery system in the area. Factors which should be included in this analysis are:

- Recertification requirements (local and state)
- System structure
- Call characteristics (i.e., volume, type)
- Community demographics
- Community hazard assessment

The second step of the needs assessment is an analysis of the education needs of the potential course participants. Information obtained through the assessment process should be used as a guide to selection of specific material to be presented in the classroom, within the limitations imposed by local and state standards. The assessment results should also be used in determining course format, schedule, and methods.

### **COURSE DESIGN**

Once the needs assessment has been performed, the following steps should be accomplished to design and implement the course:

- Course and sponsoring agency approval
- Hours, content, faculty requirements or restrictions in compliance with state requirements
- Identify and orient program staff (medical director and program coordinator)
- Identify and provide equipment sufficient for needs
- Determine class size
- Appropriate physical facilities based on class size
- Presentation can be individual lessons/units, or lessons/units can be combined in a variety of formats

### **INSTRUCTIONAL APPROACH**

Given the repetitive nature of refresher education, it is easy for participants to become bored quickly and to lack enthusiasm about the program. In order to improve the quality of the educational experience for instructors and participants, creative and innovative instructional activities are strongly suggested.

- Cognitive: Participants in refresher programs have a wealth of experience to draw on and enjoy sharing it.
- Affective: A significant concern in EMS today is stress caused by a variety of factors including indifference to quality of education, poor community support, excessive demands on personal time and energy, too many or too few runs, or feelings of inadequacy when dealing with critical patients. Be aware of this and be prepared to provide additional assistance as needed.
- Psychomotor: Students rapidly lose interest in repetitive entry-level skills drills. Be creative and try new ideas.

## **RECORDS MANAGEMENT**

The EMR Refresher Training Program must maintain program and student records which demonstrate compliance with rule 4765-7-09 of the Administrative Code. All class records are to be given to the program coordinator of the sponsoring institution, which will include the following:

### Program records

- Syllabus
- Course schedule
- Advertising materials
- Master attendance records
- Copies of exams, lesson plans, handout materials
- Records required by the local training institution and program coordinator

### Student records

- Attendance records
- Exam scores
- Copies of exams
- Psychomotor skill evaluations

## **EVALUATION OF STUDENT ACHIEVEMENT**

The primary purpose of refresher training is to assure that EMRs maintain the knowledge and psychomotor competency which are pertinent to their scope of practice. The program standards identify these knowledge and psychomotor skill areas. Training programs must provide for regular evaluation of student performance and achievement through written and practical testing prior to issuance of a Certificate of Completion.

In order to assure that each student has met the knowledge and psychomotor standards, it is necessary for the training program to use a variety of methods for testing and evaluation. If the devices used to measure student performance are faulty, then an accurate appraisal of student performance will be impossible. Written exams should be designed to measure critical components within the EMR knowledge base. The psychomotor skills examination should assess both component skills and the student's ability to apply necessary and appropriate skills to simulated patient care situations. Psychomotor skills proficiency should be measured at several points in the refresher program.

The Certificate of Completion shall be issued to a student who has met the required program training hours and demonstrated competency as measured by formal and documented effective written and psychomotor skills evaluations. Students must attend all refresher training sessions for successful course completion. The certificate must be signed by the program coordinator of the sponsoring institution.

## **PROGRAM EVALUATION**

Process evaluation will help identify specific causes of instructional failure (i.e., the reason why students fail to achieve satisfactory performance during the course). Some possible causes of such failure may include:

- Instructional activities do not conform to the lesson plans

- Resources, facilities, or materials are inadequate
- Instructor is not well qualified to teach a particular lesson
- Lack of student attendance and/or participation

Students must be provided the opportunity to evaluate the class. These evaluations should be reviewed by the instructor(s) and program coordinator and used to develop a quality program. The on-going review of the course is part of the program coordinator's responsibilities. The review process will include the student evaluations, an evaluation by the instructional staff and an evaluation of the class by the program coordinator. If deficiencies are found, corrective measures must be taken. All documentation for the class must be submitted to and maintained by the program coordinator of the sponsoring institution.

## EMR REFRESHER STANDARDS

### PREPARATORY CONSIDERATIONS 2 HOURS

**Preparatory - Uses simple knowledge of the EMS system, safety/well-being of the EMR, medical/legal issues at the scene of an emergency while awaiting a higher level of care.**

#### **COGNITIVE:**

##### EMS Systems

Simple depth, simple breadth-

- EMS systems
- Roles/ responsibilities/professionalism of EMS personnel
- Quality improvement
- Patient safety
- Safe vehicle extrication
- Triage principles and resource management in multiple casualty incidents

##### Workforce Safety and Wellness

Simple depth, simple breadth-

- Standard safety precautions
- Personal protective equipment
- Stress management
- Dealing with death and dying
- Prevention of response related injuries
- Lifting and moving patients
- Disease transmission

##### Documentation

Simple depth, simple breadth-

- Recording patient findings
- Principles of medical documentation and report writing

##### Medical Terminology

Uses simple medical and anatomical terms.

- Simple medical prefixes and suffixes
- Combining words.

##### EMS System Communication

Simple depth, simple breadth-

Communication needed to:

- Call for resources
- Transfer care of the patient
- Interact within the team structure

##### Therapeutic Communication

Simple depth, simple breadth-

Principles of communicating with patients in a manner that achieves a positive relationship:

- Interviewing techniques
- Family presence issues

#### Medical/Legal and Ethics

Simple depth, simple breadth-

- Consent/refusal of care
- Expressed VS implied consent
- Confidentiality
- Advanced directives
- Tort and criminal actions
- Evidence preservation
- Statutory responsibilities
- Do Not Resuscitate [DNR] (advance directives) and local or state provisions regarding EMS application.
- Ohio Do Not Resuscitate Comfort Care [DNRCC] laws or rules and their impact on impact EMS care.
- Recognizing and reporting abuse and neglect
- Ethical principles/moral obligations
- End-of-life issues

#### **PSYCHOMOTOR:**

Safely and effectively perform psychomotor skills within the National EMS Scope of Practice Model and Ohio Scope of Practice at this level.

- Body substance isolation precaution/administration
- Standard safety precautions
- Personal protective equipment

## AIRWAY MANAGEMENT, RESPIRATION AND ARTIFICIAL VENTILATION 2 HOURS

**Applies knowledge (fundamental depth, foundational breadth) of general anatomy and physiology to assure a patent airway, adequate mechanical ventilation, and respiration while awaiting additional EMS response for patients of all ages.**

### **COGNITIVE:**

#### Airway Management

Fundamental depth, simple breadth-

Within the scope of practice of the EMR:

- Airway anatomy
- Airway assessment
- Techniques of assuring a patent airway

#### Respiration

Fundamental depth, simple breadth-

- Assessment and management of adequate and inadequate respiration
- Supplemental oxygen therapy

#### Artificial Ventilation

Fundamental depth, simple breadth-

Assessment and management of adequate and inadequate ventilation:

- Artificial ventilation
- Minute ventilation
- Alveolar ventilation
- Effect of artificial ventilation on cardiac output

### **PSYCHOMOTOR:**

Safely and effectively perform the following psychomotor skills within the National EMS Scope of Practice Model and Ohio Scope of Practice at this level.

- Manual airway maneuvers
- Measure and insert an oropharyngeal airway device
- Measure and insert a nasopharyngeal airway device
- Upper airway suctioning
- Foreign Body Airway Obstruction (FBAO) in a responsive adult, child and infant
- FBAO in an unresponsive adult, child and infant
- Use of resuscitation mask to ventilate a patient
- Ventilation of a patient with a stoma
- BVM ventilation for the adult, child and infant
- Oxygen administration by non-rebreather mask
- Artificial ventilation of a patient with a flow restricted, oxygen-powered ventilation device



## PATIENT ASSESSMENT 2 HOURS

**Assessment- Uses scene information and simple patient assessment findings to identify and manage immediate life threats and injuries within the scope of practice of the EMR.**

### **COGNITIVE:**

#### Scene Size-Up

Complex depth, comprehensive breadth-

- Scene safety:
  - Impact of the environment on patient care
  - Addressing hazards
  - Violence
  - Need for additional or specialized resources
  - Standard precautions

#### Primary Assessment

Simple depth, simple breadth-

- Primary assessment for all patient situations:
  - Level of consciousness
  - ABCs
  - Identifying life threats
  - Assessment of vital functions
- Begin interventions needed to preserve life

#### History Taking

Simple depth, simple breadth-

- Determining the chief complaint
- Mechanism of injury/nature of illness
- Associated signs and symptoms

#### Secondary Assessment

Simple depth, simple breadth-

- Performing a rapid full body scan
- Focused assessment of pain
- Assessment of vital signs

#### Monitoring Devices

Simple depth, simple breadth-

Within the scope of practice of the EMR:

- Obtaining and using information from patient monitoring devices including (but not limited to)
  - Pulse oximeter and capnography equipment
  - Non-invasive blood pressure

#### Reassessment

Simple depth, simple breadth-

- How and when to perform reassessment for all patient situations

### **PSYCHOMOTOR**

Safely and effectively perform the following psychomotor skills within the National EMS Scope of Practice Model and Ohio Scope of Practice at this level.

- Patient Assessment/Management Medical of an adult, child and infant
- Patient Assessment/Management Trauma of an adult, child and infant
- Vital signs, to include manual blood pressure, pulse and respirations in the adult, child and infant
- Obtain pulse oximetry value

## CARDIAC MANAGEMENT 2 HOURS

**Medicine- Recognizes and manages life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response.**

### **COGNITIVE:**

#### Cardiovascular

Simple depth, simple breadth-

Anatomy, signs, symptoms and management

- Chest pain
- Cardiac arrest
- Cardiopulmonary resuscitation (CPR)
- Automated external defibrillator (AED)

### **PSYCHOMOTOR:**

Safely and effectively perform psychomotor skills within the National EMS Scope of Practice Model and Ohio Scope of Practice at this level.

- Manual CPR on an adult, pediatric and infant manikin
- Use of the automated external defibrillator

## ILLNESS AND INJURY MANAGEMENT 3 HOURS

**Pharmacology - Uses simple knowledge of the medications that the EMR may self-administer or administer to a peer in an emergency.**

### **COGNITIVE:**

#### Medication Administration

Simple depth, simple breadth-

Within the scope of practice of the EMR, how to:

- Self-administer medication
- Peer-administer medication
- Patient assist epinephrine auto-injector

#### Emergency Medications

Simple depth, simple breadth-

Within the scope of practice of the EMR:

- Names
- Effects
- Indications
- Routes of administration
- Side effects
- Dosages for the medications administered

**Medicine- Recognizes and manages life threats based on assessment findings of a patient with a medical emergency while awaiting additional emergency response.**

### **COGNITIVE:**

#### Neurology

Simple depth, simple breadth-

Anatomy, presentations, and management of:

- Decreased level of responsiveness
- Seizure
- Stroke

#### Immunology

Simple depth, simple breadth-

Recognition and management of shock and difficulty breathing related to:

- Anaphylactic reactions

#### Infectious Diseases

Simple depth, simple breadth-

Awareness of:

- A patient who may have an infectious disease
- How to decontaminate equipment after treating a patient

### Endocrine Disorders

Simple depth, simple breadth-

Awareness that:

- Diabetic emergencies cause altered mental status

### Psychiatric

Simple depth, simple breadth-

Recognition of:

- Behaviors that pose a risk to the EMR, patient or others

### Toxicology

Simple depth, simple breadth-

• Recognition and management of:

- Carbon monoxide poisoning
- Nerve agent poisoning
- How and when to contact a poison control center

### Respiratory

Simple depth, simple breadth -

Anatomy, signs, symptoms and management of respiratory emergencies including those that affect the:

- Upper airway
- Lower airway

### **PSYCHOMOTOR:**

Safely and effectively perform psychomotor skills within the National EMS Scope of Practice Model and state Scope of Practice at this level.

- Management of a patient with a general medical complaint
- Management of a patient with an altered mental status
- Management of a patient with a behavioral change
- Management of a patient with psychological crisis
- Management of a patient with seizures
- Management of a patient with an exposure to cold
- Management of a patient with an exposure to heat
- Management of a patient with an altered mental status
- Use of epinephrine auto-injector

## TRAUMA 2 HOURS

**Trauma - Uses simple knowledge to recognize and to provide basic emergency care and transportation based on assessment findings for an acutely injured patient. Manage life threats based on assessment findings for an acutely injured patient while awaiting additional emergency medical response.**

### **COGNITIVE:**

#### Shock and Resuscitation

Uses assessment information to recognize shock, respiratory failure or arrest, and cardiac arrest based on assessment findings and to provide management of shock, respiratory failure or arrest, cardiac failure or arrest, while awaiting additional emergency response.

#### Trauma Overview

Simple depth, simple breadth-

Assessment and management of the trauma patient:

- Rapid transport and destination issues
- Manual stabilization
- C-spine injuries
- Extremity fractures
- Bleeding control
- Emergency moves
- Eye irrigation
- Trauma Triage determination per OAC 4765-14-02

#### Bleeding

Simple depth, simple breadth-

Recognition and management of bleeding

#### Chest Trauma

Simple depth, simple breadth-

Recognition and management of:

- Blunt versus penetrating mechanisms
- Open chest wound
- Impaled object

#### Abdominal and Genitourinary Trauma

Simple depth, simple breadth-

Recognition and management of:

- Blunt versus penetrating mechanisms
- Impaled object

#### Orthopedic Trauma

Simple depth, simple breadth-

Recognition and management of:

- Open fractures

- Closed fractures
- Dislocations
- Amputations

#### Soft Tissue Trauma

Simple depth, simple breadth-

Recognition and management of:

- Wounds
- Burns
  - Electrical
  - Chemical
  - Thermal
- Chemicals in the eye and on the skin

#### Head, Facial, Neck, and Spine Trauma

Simple depth, simple breadth-

Recognition and management of:

- Life threats
- Head and spine trauma
- Mechanism of injury

#### Special Considerations in Trauma

Simple depth, simple breadth-

Recognition and management of trauma in:

- Pediatric patient

#### Environmental Emergencies

Simple depth, simple breadth-

Recognition and management of:

- Water and ice injury
- Temperature-related illness

#### Multi-System Trauma

Simple depth, simple breadth-

Recognition and management of multi-system trauma

#### **PSYCHOMOTOR:**

Safely and effectively perform psychomotor skills within the National EMS Scope of Practice Model and state Scope of Practice at this level.

- Emergency moves
- Airway management of a patient with suspected spinal cord injury
- External bleeding control
- Internal bleeding control
- Soft tissue management
- Open chest wound management
- Management of a patient with open abdominal wounds
- Management of a patient with impaled object
- Management of a patient with amputation

- Spinal immobilization
- Management of extremity fractures
- Eye irrigation

## CHILDBIRTH AND PEDIATRIC ISSUES

### 1 HOUR

**Special Patient Populations - Recognizes and manages life threats based on simple assessment findings for a patient with special needs while awaiting additional emergency response.**

#### **COGNITIVE:**

##### Obstetrics

Simple depth, simple breadth-

Recognition and management of:

- Normal delivery
- Vaginal bleeding in the pregnant patient
- Assessment of the pregnant patient
- Management of normal delivery
- Recognition of abnormal delivery

##### Neonatal care

Simple depth, simple breadth-

- Newborn care
- Neonatal resuscitation

##### Pediatrics

Simple depth, simple breadth-

Age-related assessment findings, and age-related assessment and treatment modifications for pediatric specific major diseases and/or emergencies:

- Upper airway obstruction
- Lower airway reactive disease
- Respiratory distress/failure/arrest
- Seizures
- Recognizing and reporting abuse and neglect

#### **PSYCHOMOTOR:**

Safely and effectively perform psychomotor skills within the National EMS Scope of Practice Model and state Scope of Practice at this level.

- Assisted normal delivery
- Post-delivery care of mother
- Care of newborn
- Emergency childbirth management
- Assessment and management of infant and child



## GERIATRIC ISSUES 1 HOUR

**Special Patient Populations - Recognizes and manages life threats based on simple assessment findings for a patient with special needs while awaiting additional emergency response.**

### **COGNITIVE:**

#### Geriatrics

Simple depth, simple breadth-

- Impact of age-related changes on assessment and care
- 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:
  - Cardiovascular diseases
  - Respiratory diseases
  - Neurological diseases
  - Alzheimer's
  - Dementia
- Recognizing and reporting abuse and neglect

### **PSYCHOMOTOR:**

Safely and effectively perform psychomotor skills within the National EMS Scope of Practice Model and state Scope of Practice at this level.

- Assessment and management of a geriatric patient

## **APPENDIX A**

### **Ohio Approved Emergency Medical Responder Refresher Psychomotor Skills Examination**

The psychomotor skills should be measured at several points in the refresher program. The final psychomotor skills examination should assess both component skills and the student's ability to apply necessary and appropriate skills to simulated patient care situations.

The Ohio approved EMR Refresher Training Program psychomotor examination consists of the following four (4) stations. The psychomotor skills will be evaluated using the National Registry of Emergency Medical Technician skill sheets and guidelines. The candidate is to be tested individually in each station and is expected to direct the actions of any assistant EMR who may be present at the scene. The candidate should pass or fail the examination based solely on his/her actions and decisions.

The following is a list of the stations and the skills to be tested.

Station 1: Cardiac Arrest Management / AED

Station 2: Patient Assessment Management – Medical

Station 3: Patient Assessment Management – Trauma

Station 4: Airway Management

- BVM Ventilation of an Apneic Adult Patient
- Oxygen Administration with NRB

The skill examiners are to observe the candidate's performance and record the observations on the skill evaluation instruments. Each station is graded on pass/fail criteria.