

M A S S A C H U S E T T S
OFFICE OF EMERGENCY MEDICAL SERVICES
 DEPARTMENT OF PUBLIC HEALTH

ADMINISTRATIVE REQUIREMENT MANUAL

EFFECTIVE DATE: July 13, 2023 **AUTHORIZATION:** Susan Lewis, Director

TITLE: Minimum Standards for First Responder Training in First Aid, Epinephrine Auto-Injector and Naloxone Use

SUPERSEDES: December 15, 2016

PURPOSE:

- I. To establish the minimum requirements for a first responder training course in first aid, which all first responders must take, in order to meet the requirements of M.G.L. c. 111, §201 and 105 CMR 171.130(A).
- II. To establish the minimum requirements for the first responder training required of those first responder agencies that choose the options of carrying and using Epinephrine Auto-Injector Devices or Naloxone.

PRIMARY INSTRUCTOR'S QUALIFICATIONS:

- (1) **All courses covered by this administrative requirement shall be conducted by a qualified instructor who has primary responsibility for that training course.** The primary instructor may utilize other experienced persons to teach individual segments of the course provided that the primary instructor maintains overall responsibility for the course.
- (2) The primary instructor shall:
 - (a) possess current, valid documentation of successful completion of any course in 105 CMR 171.130(A) or 171.130(B) and, for Epinephrine Auto-Injector Devices and Naloxone Administration, any course in 105 CMR 171.165 or its equivalent;
 - (b) have a minimum of one year of substantial experience providing direct patient care in an emergency setting, gained within three years prior to teaching the first responder course. For courses in Epinephrine Auto-Injector Device and Naloxone Administration, one year of substantial experience providing direct patient care in an emergency setting, familiar with the use of these medications, within the three years prior to the course;
 - (c) be currently certified as an instructor in Basic Life Support cardiopulmonary resuscitation provided by a nationally recognized organization and reflecting current resuscitation science and treatment recommendations, and
 - (d) hold current instructor certification and credentialing from the Massachusetts Firefighting Academy, the Municipal Police Training Committee, or the Massachusetts State Police; or approval as an Instructor/Coordinator from the Department, under 105 CMR 170.977.

I. COURSE CURRICULUM: INITIAL TRAINING IN FIRST AID

TOPIC	MINIMUM HOURS	OBJECTIVE
<i>Emergency Medical Services System</i>	1 1/2	Describe the EMS System, including: 1) role of the first responder; 2) role of the ambulance EMS personnel; 3) communications with, and relationships between, the first responders, ambulance EMS personnel and hospitals; 4) location and types of available emergency medical care, such as hospitals and first aid stations, 5) medical control role in EMS system, methods of contact, requirements for approval for some interventions, 6) workforce safety and

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		wellness, 7) legal/ethics/ documentation of prehospital care, 8) EMS system communications, and 9) EMS Statewide Treatment Protocols.
<i>Human Body (Function and Development)</i>	1	Describe 1) medical terminology, 2) anatomy and 3) physiology. Describe function of the upper airway, heart, vessels, blood, lungs, skin, muscles, and bones as the foundation of emergency care and managing life-threatening conditions.
<i>Patient Assessment and Actions at the Scene</i>	3	Describe scene size up; how to assure scene and responder safety, and use of personal protective equipment. Describe and demonstrate the <u>primary</u> survey, addressing 1) level of consciousness/responsiveness; 2) airway, 3) breathing, 4) circulation, as well as the management of immediate life threats identified during primary survey. Describe and demonstrate the <u>secondary</u> survey, addressing the following: a) recognition of common medical emergencies and history taking; b) mechanisms and causes of injury; c) signs of bleeding; d) signs of possible skeletal injury; e) differential assessment of medical conditions which may be obscure or insidious, <i>such as</i> , diabetic reactions, stroke, heart attack; f) medical identification, <i>such as</i> MedicAlert jewelry. Secondary survey includes physical exam, which may be focused on patient complaint. Assessment and interpretation of basic vital signs, including, but not limited to, blood pressure, heart rate and respiratory rate. Students shall demonstrate proficiency in measurement of above vital signs. Establish criteria for determining triage and treatment priorities, including prioritization of specific patient conditions (i.e., stroke-like symptoms and trauma).

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		<p>Outline the necessary data and information to be relayed to the ambulance service EMS personnel, and communication techniques.</p> <p>Identify appropriate interactions at the scene between first responders and ambulance service EMS personnel.</p> <p>Describe reassessment of patient to identify and manage changes in condition.</p>
<i>Gaining Access and Emergency Rescue</i>	1	<p>General overview of various patient access procedures, including the following: a) use of access tools; b) water rescue techniques; c) patient transport techniques; d) determinants of need for support equipment, <i>such as</i> traffic control, heavy rescue equipment. Describe indication for emergent vs. non-emergent extrication. Demonstrate and practice use of patient movement equipment, which may include long spine board, scoop stretcher, stretcher and stair chair, and movement techniques such as extremity lift and draw sheet transfer. Students shall demonstrate proficiency with use of patient movement equipment and transfer techniques.</p>
<i>Medical Emergencies</i>	3	<p>Identify the signs and symptoms, as well as the basic intervention needed, to support persons with conditions including the following: 1) OB emergencies; 2) infectious diseases; 3) neurological emergencies; 4) endocrine emergencies; 5) abdominal/gastrointestinal emergencies; 6) toxicological emergencies; 7) immunological emergencies, and 8) psychiatric/behavioral disorders/emergencies.</p>
<i>Cardiovascular Emergencies</i>	1 1/2	<p>Identify the signs and symptoms of, as well as the basic interventions needed to support persons with, conditions including syncope, chest pain, myocardial infarction and adult and pediatric cardiac arrest.</p>
<i>Airway and Respiratory Emergencies and Oxygen Administration</i>	3	<p>Describe the normal breathing process – ventilation and oxygenation.</p> <p>Describe and demonstrate, methods of maintaining a clear and patent airway, including: obtaining a seal and using a bag-valve mask (BVM).</p>

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		<p>Describe the indications for, and use of, oxygen. Describe the safe use of oxygen tanks and equipment.</p> <p>Describe the use of supplemental oxygen delivery devices, including non-rebreather masks and nasal cannula.</p> <p>Students shall demonstrate proficiency with assembly of oxygen equipment and administration of oxygen. Students shall demonstrate proficiency in performance of BVM-to-mask ventilation of a mannequin.</p>
<i>Hemorrhage Control</i>	2 1/2	<p>Describe the circulatory system and perfusion; pathophysiology of shock as a result of airway, respiration or circulatory compromise.</p> <p>Identify signs and symptoms, causes and management of shock conditions, including but not limited to, trauma, anaphylaxis and sepsis.</p> <p>Describe, demonstrate and practice, methods of bleeding control: a) direct pressure (emphasize, as most bleeding can be stopped this way), b) use of commercial and improvised dressings, c) hemostatic dressings and d) Committee on Tactical Combat Casualty Care (CTCCC)-approved arterial tourniquets.</p> <p>Students shall demonstrate proficiency with bleeding control techniques described above, including application of tourniquets.</p>
<i>Toxicological Emergencies</i>	1	<p>Identify assessment priorities for patients who have overdosed on drugs, alcohol, or have accidental poisoning, including responsiveness and assessing adequate respirations.</p> <p>Differentiate the signs of alcohol intoxication from those of medical conditions which may mimic alcohol abuse, such as diabetes and stroke.</p> <p>Demonstrate effective management of opioid overdose, including ventilation with BVM device.</p> <p>Discuss nerve agent/organophosphate and other systemic toxicological emergencies, and outline treatment. Discuss administration of nerve agent antidote auto-injectors, in accordance with Statewide Treatment Protocols.</p>

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		Students shall demonstrate proficiency in performance in performance of rescue breathing using a BVM.
<i>Trauma: Thermal and Environmental Injuries</i>	1/2	Identify signs, symptoms of basic intervention needed by victims of the following: a) burns (degrees of severity), b) heat stroke and exhaustion, c) frostbite and exposure.
<i>Central Nervous System (CNS) and Chest Injuries</i>	2	Identify signs, symptoms of, and basic intervention needed for injuries, including blunt and penetrating trauma, of the following: a) head: fractures, lacerations, b) face: fractures, lacerations, c) eye: foreign body, impaled object, d) chest: sucking chest wound, e) abdomen: crush injuries, evisceration, and CNS. Students shall demonstrate proficiency in management of above injuries.
<i>Musculoskeletal Injuries</i>	2	Identify signs and symptoms of possible musculoskeletal injury including the following: a) fractures, b) dislocations, c) sprains-strains, d) spinal injury Demonstrate and practice immobilization techniques for all of the above, including the following: a) maintenance of spinal motion restriction, including application of cervical collar, b) application of a commercial or improvised splint for upper and lower extremity bone and/or joint injury, and c) pain control with cold compresses and immobilization. Students shall demonstrate proficiency in application of cervical collars, and use of splints for immobilization of extremity injuries.
<i>Special Populations and Life Span Development</i>	1	Describe life span development, including age-related differences to assess and care for patients. Discuss and demonstrate appropriate differences in assessment and management of pediatric and geriatric patients, as well as those with chronic conditions and treatments in the community, including but not limited to, end-stage renal disease, mechanical ventilation in the home and ventricular assist devices. Describe communication techniques for pediatric and geriatric patients.

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		Discuss normal and abnormal vital signs for pediatric and geriatric patients.
<i>Examination</i>	1	Measure knowledge and skills proficiency of each first responder student through a written and practical examination of the material contained herein
TOTAL, Minimum Required First Aid First Responder Training	24	

II. Minimum Required First Aid Course, in addition to Basic Life Support Course, as defined and required by 105 CMR 171.150: First Aid, 24 Hours, BLS CPR, 4 Hours. TOTAL: 28 HOURS

III. COURSE CURRICULUM: FIRST RESPONDER TRAINING IN USE OF EPINEPHRINE AUTO-INJECTORS and NALOXONE

A. EPINEPHRINE AUTO-INJECTORS: Minimum hours for entire course: 1 Hour

TOPIC	OBJECTIVE
<i>Medical Considerations in Anaphylaxis</i>	Identify and explain signs and symptoms of severe allergic reaction
<i>Dose Considerations</i>	Identify and explain appropriate dosing, and need for medical control contact, for different patient populations, as follows: a) Pediatric dose for patients <25kg, 55lbs, and b) Adult dose for all other patients, except c) Medical control contact required if patient <6 months or >65 years and d) Medical control contact required if second dose necessary for any pediatric patient. (See current Statewide Treatment Protocols.) Discuss repeat dose, and contacting medical control for authorization.
<i>Procedure for Administration</i>	Describe and explain to trainees the following steps, and demonstrate as appropriate: a) Activate 9-1-1 and ensure ambulance response, b) Check “5-Rights” for medication administration: i. Right patient (does this patient need the medication?) Note: No contraindications to administration of Epinephrine auto-injector in true anaphylaxis; ii. Right medication (check to make sure it is auto-injector of Epinephrine); iii. Right date (check expiration, medication clarity); iv. Right dose (appropriate for age/size); and v. Right documentation (document the time and response to intervention) c) Site selection

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	<ul style="list-style-type: none"> i. Outside thigh, avoiding site of possible injury ii. Hand placement, to avoid injury to first responder d) Follow manufacturer instructions for administration e) Handling and disposal <ul style="list-style-type: none"> i. Do not remove safety cap until ready to use ii. Dispose in appropriate sharps container as soon as possible f) Note time of administration to report to ambulance service EMS personnel g) Monitor patient until ambulance arrives
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B. NALOXONE: Minimum hours for entire course: 1 Hour

TOPIC	OBJECTIVE
<i>Medical Considerations in Narcotic/Opioid Overdose</i>	Identify and explain signs and symptoms of drug overdose, resulting in unresponsiveness. To be considered for naloxone administration, the victim should be unresponsive and have reduced respirations possibly attributable to an opioid overdose.
<i>Dose Considerations</i>	Identify and explain dosing per EMS Statewide Treatment Protocols. Dose and delivery method based on available formulation. Review assembly and administration of nasal atomizer and intramuscular auto-injector. Note that single doses of higher than 4 mg are rarely clinically indicated, in part due to risk of aspiration from precipitated withdrawal; consult with medical control.
<i>Procedure for Administration</i>	Describe and demonstrate the following steps: <ul style="list-style-type: none"> a) Check patient responsiveness and whether the patient has reduced/inadequate respirations. b) Ensure ambulance response. c) Start rescue breathing with BVM device and oxygen. Remember that ventilation is the <i>primary</i> treatment for opioid respiratory depression. d) Check “5-Rights” for medication administration: <ul style="list-style-type: none"> i. Right patient (does this patient need the medication?); ii. Right medication (check to make sure it is Naloxone); iii. Right date (check expiration, medication clarity); iv. Right dose (administer until return of spontaneous respirations, up to maximum dose allowed by applicable Statewide Treatment Protocols); and v. Right documentation (document the time and response to intervention). e) Consider possible contraindications for intranasal administration of naloxone (such as facial trauma, nasal obstruction, bloody nose);

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| | <ul style="list-style-type: none"> f) Administer naloxone using available formulation, either intranasally or intramuscularly via auto-injector, following manufacturer's instructions for use. g) When respirations are restored, move the victim to the Recovery Position, on their side, to prevent aspiration in the event of vomiting, and monitor respirations. h) Handling and disposal:
 For either intranasal administration or auto-injector, dispose in appropriate sharps container as soon as possible. i) Note time of administration to report to ambulance service EMS personnel j) Monitor patient until ambulance arrives <ul style="list-style-type: none"> i. Caution: Naloxone-precipitated withdrawal symptoms, including watery nose and eyes, sneezing, yawning, muscle aches, nausea, vomiting, agitation, and combativeness, is likely. ii. Work with other first responders to secure the scene and the victim to keep him or her safe. k) Ensure care is transferred to responding ambulance, for further evaluation and treatment by definitive care. l) Complete documentation as required by your agency or medical director. |
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