

2002
State of Ohio

Intermediate
Transitional Update

CURRICULUM

Sections

Section 1 Pharmacology

Section 2 Medication Administration

Section 3 Airway

Section 4 Trauma

Total Hours To Complete = 40

State of Ohio – Intermediate Update

1-1 At the completion of this unit, the EMT-Intermediate student will be able to understand the basic principles of pharmacology.

COGNITIVE OBJECTIVES

At the completion of this unit, the EMT-Intermediate student will be able to:

- 1-1.1 Review the specific anatomy and physiology pertinent to pharmacology.
- 1-1.2 Discuss the standardization of the drugs.
- 1-1.3 Differentiate among the chemical, generic (nonproprietary), and trade (proprietary) names of a drug.
- 1-1.4 List the four main sources of drug products.
- 1-1.5 Describe how drugs are classified.
- 1-1.6 List the authoritative sources for drug information.
- 1-1.7 Discuss the EMT-Intermediate's responsibilities and scope of management pertinent to the administration of medications.
- 1-1.8 List and differentiate routes of drug administration.
- 1-1.9 Differentiate between enteral and parenteral routes of drug administration.
- 1-1.10 Describe the mechanism of drug action.
- 1-1.11 List and describe the classification, pharmacological actions, indications, precautions, therapeutic dosage and side effects of the following medications, including those necessary for the relief of pain:
 - a. Oxygen
 - b. Nitroglycerin
 - c. Dextrose 50% in Water
 - d. Aspirin
 - e. Epinephrine
 - f. diphenhydramine
 - g. diazepam / lorazepam
 - h. Bronchodilators
 - i. naloxone
 - j. Glucagon
 - k. Nitrous Oxide
 - l. nalbuphine
 - m. morphine sulfate
 - n. ketorolac
 - o. meperidine
 - p. Any other analgesics approved by regional and/or local protocol

2-1 At the completion of this unit, the EMT-Intermediate student will be able to safely and precisely access the venous circulation and administer medications.

COGNITIVE OBJECTIVES

At the completion of this unit, the EMT-Intermediate student will be able to:

- 2-1.1 Review mathematical principles.
- 2-1.2 Review mathematical equivalents.
- 2-1.3 Discuss formulas as a basis for performing drug calculations.
- 2-1.4 Calculate oral and parenteral drug dosages for all emergency medications administered to adults, infants and children.
- 2-1.5 Discuss legal aspects affecting medication administration.
- 2-1.6 Discuss the "six rights" of drug administration and correlate these with the principles of medication administration.
- 2-1.7 Describe the indications, equipment needed, techniques utilized, precautions, and general principles of intravenous and intraosseous needle placement and infusion.
- 2-1.8 Describe the indications, equipment needed, techniques utilized, precautions, and general principles of administering medications by the inhalation route.
- 2-1.9 Describe the equipment needed and general principles of administering oral and rectal medications.
- 2-1.10 Differentiate among the different parenteral routes of medication administration.
- 2-1.11 Describe the equipment needed, techniques utilized, complications, and general principles for the preparation and administration of parenteral medications.
- 2-1.12 Differentiate among the different percutaneous routes of medication administration.
- 2-1.13 Describe the purpose, equipment needed, techniques utilized, complications and general principles of obtaining a blood sample.
- 2-1.14 Describe disposal of contaminated items and sharps.
- 2-1.15 Integrate pathophysiological principles of medication administration with patient management.

PSYCHOMOTOR OBJECTIVES

At the completion of this unit, the EMT-Intermediate student will be able to:

- 2-1.16 Use universal precautions and body substance isolation (BSI) procedures during medication administration.
- 2-1.17 Demonstrate aseptic technique during medication administration.
- 2-1.18 Demonstrate administration of medications by the inhalation route.
- 2-1.19 Demonstrate administration of medications by the oral route.
- 2-1.20 Demonstrate preparation and administration of parenteral medications
- 2-1.21 Perfect disposal of contaminated items and sharps.

3-1 At the completion of this unit, the EMT-intermediate student will be able to establish and/or maintain a patient airway, oxygenate, and ventilate a patient.

- 3-1.1 Review special considerations of suctioning the upper airway.
- 3-1.2 Review the technique of tracheobronchial suctioning in the intubated patient.
- 3-1.3 Review gastric distention.
- 3-1.4 Review the indications, contraindications, advantages, disadvantages, complications, and technique for inserting an oropharyngeal and nasopharyngeal airway.

4-1 At the completion of this unit, the EMT-intermediate student will be able to utilize the assessment findings to formulate a field impression and implement a treatment plan for a patient with a thoracoabdominal injury.

- 4-1.1 Review the management of chest wall injuries, including rib fractures, sternal fractures and flail chest.
- 4-1.2 Review the pathophysiology, assessment and management of injury to the lung, including:
 - a. Hemothorax
 - b. Hemopneumothorax
 - c. Pulmonary contusion
 - d. Open pneumothorax
 - e. Simple/Tension pneumothorax
- 4-1.3 Review the pathophysiology, assessment and management of abdominal injuries.
- 4-1.4 Describe and demonstrate the steps in trauma assessment and management, including the initial assessment, rapid trauma survey and detailed exam.
- 4-1.5 Describe the treatment and management of the patient with life-threatening or potential life-threatening injuries.
- 4-1.6 Describe the procedure of your local regional destination guidelines including triage and transport decisions.

PSYCHOMOTOR OBJECTIVES

At the completion of this unit, the EMT-intermediate will be able to:

- 4-1.7 Develop a patient management plan based on the field impression.
- 4-1.8 Demonstrate a clinical assessment for a patient with suspected thoracic trauma.