National EMS Education Standard Competencies

Pharmacology
Applies fundamental knowledge of the medications that the EMT may assist/administer to a patient during an emergency.

Principles of Pharmacology
- Medication safety (pp 227-228)
- Kinds of medications used during an emergency (pp 229-239)

Medication Administration
- Self-administer medication (pp 228-229)
- Peer-administer medication (pp 228-229)
- Assist/administer medications to a patient (pp 228-229)

Emergency Medications
- Names (p 222)
- Effects (pp 221-222)
- Actions (p 222)
- Indications (p 222)
- Contraindications (p 222)
- Complications (p 222)
- Routes of administration (pp 222-224)
- Side effects (p 222)
- Interactions (pp 230-231)
- Dosages for the medications administered (p 221)

Knowledge Objectives
1. Explain the actions of medications on the body and define the terms pharmacodynamics, intended effects, and indications. (pp 221-222)
2. Explain and give examples of medication contraindications and define the terms side effects, unintended effects, and untoward effects. (p 222)
3. Discuss the differences between a generic medication name and a trade medication name, and provide an example of each. (p 222)
4. Describe the enteral and parenteral routes of medication administration and explain how they differ. (pp 222-223)
5. Describe the following routes of medication administration and discuss their individual rates of absorption: rectal, oral, intravenous, intramuscular, subcutaneous, and transcutaneous. (pp 222-224)
6. Explain the solid, liquid, and gas forms of medication, provide examples of each, and discuss how the form of a medication dictates its route of administration. (pp 222-227)
7. Explain the “six rights” of medication administration and describe how each one relates to EMS. (pp 227-228)
8. Describe the role of medical direction in medication administration and explain the difference between direct orders (online) and standing orders (off-line). (pp 228-229)
9. Discuss the circumstances surrounding the administration of medication, including peer-assisted medication, patient-assisted medication, and EMT-administered medication. (p 229)
10. Give the generic and trade names, actions, indications, contraindications, routes of administration, side effects, interactions, and doses of ten medications that may be administered by an EMT in an emergency as dictated by state protocols and local medical direction. (pp 229-239)
11. Describe the medication administration considerations that must be applied to special populations, including pediatric, geriatric, and pregnant patients. (pp 229, 236, 238)
12. Describe the steps an EMT should follow when dispensing epinephrine to a patient using an auto-injector. (p 236)
13. Explain why determining what prescription and OTC medications a patient is taking is a critical aspect of patient assessment during an emergency. (p 239)

Skills Objectives
1. Demonstrate the process an EMT should follow when following the six rights of medication administration. (p 228)
2. Demonstrate how to administer oral medication to a patient. (pp 232-234, Skill Drill 7-1)
3. Demonstrate the administration of aspirin to a patient with chest pain. (pp 232-234, Skill Drill 7-1)
4. Demonstrate the administration of oral glucose to a patient with hypoglycemia. (pp 232-234, Skill Drill 7-1)
5. Demonstrate how to assist a patient with the sublingual administration of a medication. (pp 234-235)
6. Demonstrate how to administer epinephrine by injection. (pp 235-237)