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## Standard Guide for Defining the Performance of First Aid Providers in Occupational Settings<sup>1</sup>

This standard is issued under the fixed designation F2171; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope

1.1 This guide covers the minimum requirements needed to train a student to assess and manage illness and injury prior to: (1) notification, arrival, or treatment by traditional EMS agencies, or combination thereof, or (2) management of a minor emergency medical incident instead of an EMS response.

1.2 This guide also recommends minimum instructor qualifications, program logistics, and medical oversight considerations.

1.3 This guide does not delineate a new level of formalized education for prehospital medical provision. This guide does not replace or decrease the need for appropriate agencies to seek state or national licensure or certification as an First Responder or Emergency Medical Technician (Basic, Intermediate, or Paramedic).

1.4 Content and skills appropriate to the first aid provider's scope of care and specific to the hazards or risks of particular industries and occupations may be added by program developers, instructors, and employers. These changes should be consistent with the intent and design of this guide.

### 2. Referenced Documents

#### 2.1 Related Documents:

[National Guidelines for First Aid Training in Occupational Settings, November 1998, Preface, Course Guide and Curriculum Modules](#)<sup>2</sup>

[National EMS Education and Practice Blueprint](#)<sup>3</sup>

### 3. Terminology

#### 3.1 Definitions of Terms Specific to This Standard:

<sup>1</sup> This guide is under the jurisdiction of ASTM Committee F30 on Emergency Medical Services and is the direct responsibility of Subcommittee F30.02 on Personnel, Training and Education.

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<sup>2</sup> Available from National Guidelines for First Aid Training in Occupational Settings, [www.ngfatos.net](http://www.ngfatos.net).

<sup>3</sup> Available from the National Highway Traffic Safety Administration's EMS Division, 400 7th St., NW, Washington, DC 20590. Also available from <http://www.nhtsa.dot.gov/people/injury/ems/EdAgenda/final/emstoc.html>.

3.1.1 *first aid provider, n*—a person who has an occupational requirement to be trained in very basic emergency medical techniques and may be designated or expected to provide aid as an initial (pre-EMS) responder.

3.1.2 *initial responder, n*—a person who has an occupational requirement to be trained in very basic initial emergency medical techniques, but responds as a “Good Samaritan.”

### 4. Significance and Use

4.1 Currently, no one body of work exists that contains a comprehensive standard for defining the performance standards for personnel that are initial responders to illness and injury in the occupational setting. Whereby several corporate, state, and national organizations have developed training curricula, no independent consensus standard establishes a national minimum requirement. This guide allows the determination of course equivalency and provides a mechanism to assess regulatory compliance.

4.2 This guide is intended to be consistent with the National EMS Education and Practice Blueprint, thus the first aid provider in an occupational setting in this guide is defined as in 3.1.2. This individual uses a limited amount of equipment to perform initial assessment and intervention while awaiting arrival of EMS.

4.3 The goal of this guide is to provide program developers, institutions teaching first aid courses, consumers of these courses, and regulatory agency personnel who review or approve courses, or both, the essential elements of what is considered safe, helpful, and effective first aid training. The focus and training is similar and, in some cases, largely identical to those standards developed by the National Guidelines for First Aid Training in Occupational Settings (NGFATOS) developed by the NGFATOS consensus group referenced in Section 2.

### 5. Instructor Qualification

5.1 Minimum instructor criteria include:

5.1.1 Be knowledgeable in aspects of first aid techniques and basic life support/cardiopulmonary resuscitation (BLS/CPR).

5.1.2 Be knowledgeable in methods of adult education.

5.1.3 Possess basic skills in managing resources and personnel.

5.1.4 Have attended and successfully completed a standardized course of instruction in First Aid, First Responder, or EMT-Basic.

5.1.5 Possess appropriate medical education abilities equivalent to the criteria in 5.1.1-5.1.5.

5.1.6 Possess other appropriate medical credentials including, but not limited to, EMT-P, RN, PA, and MD.

## 6. Curriculum

6.1 The typical first aid provider curriculum consists of six major and five optional (or enrichment) areas, as follows:

### 6.1.1 Major Areas:

6.1.1.1 Basic Preparatory,

6.1.1.2 Airway,

6.1.1.3 Assessment,

6.1.1.4 Circulation,

6.1.1.5 Medical Emergencies, and

6.1.1.6 Trauma Emergencies.

### 6.1.2 Optional Areas:

6.1.2.1 Enhanced Preparatory,

6.1.2.2 Infants and Children,

6.1.2.3 Oxygen Administration,

6.1.2.4 Automatic External Defibrillator (AED) (see **Note 1**), and

6.1.2.5 Industry specific medical/traumatic disorders.

**NOTE 1**—If an AED is available in the workplace, AED training shall be required.

## 7. Curriculum Objectives

7.1 Curriculum objectives are classified using the following legend:

C

C = *Cognitive*

C-1 = Knowledge level

C-2 = Application level

C-3 = Problem-solving level

A = *Affective*

A-2 = Application level

A-3 = Problem-solving level

P = *Psychomotor*

P-1 = Knowledge level

P-2 = Application level

P-3 = Problem-solving level

7.2 At the completion of the Basic Preparatory section, the student will be able to:

7.2.1 Discuss the components of Emergency Medical Services (EMS) systems. (C-1)

7.2.2 Differentiate the roles and responsibilities of the first aid provider from other out-of-hospital care providers. (C-3)

7.2.3 Accept and uphold the responsibilities of a first aid provider in accordance with the generally recognized standards of care. (A-3)

7.2.4 Explain the need to determine scene safety. (C-2)

7.2.5 Discuss the importance of body substance isolation (BSI). (C-1)

7.2.6 Describe the steps the student should take for personal protection from bloodborne pathogens. (C-1)

7.2.7 Describe the personal protective equipment necessary for exposure to bloodborne pathogens. (C-1)

7.2.8 Appropriately use personal protective equipment, given a scenario with potential infectious exposure. At the completion of the scenario, the first aid provider will properly remove and discard the protective garments. (P-1, P-2)

7.2.9 Define the first aid provider's scope of care. (C-1)

7.3 At the completion of the Airway section, the student will be able to:

7.3.1 Describe the major structures of the respiratory system. (C-1)

7.3.2 Describe determining the presence of breathing. (C-1)

7.3.3 Describe the steps in the head-tilt chin-lift (and the chin-lift without head-tilt). (C-1)

7.3.4 Relate mechanism of injury to opening the airway. (C-3)

7.3.5 Describe how to ventilate an ill or injured adult (with a resuscitation barrier device). (C-1)

7.3.6 Describe the steps in providing mouth-to-mouth and mouth-to-stoma ventilation. (C-1)

7.3.7 Describe how to clear a foreign body airway obstruction in a responsive adult. (C-1)

7.3.8 Describe how to clear a foreign body airway obstruction in an unresponsive adult. (C-1)

7.3.9 Explain why airway protective skills and basic life support ventilation take priority over all other basic life support skills. (A-3)

7.3.10 Demonstrate a caring attitude towards ill or injured persons with airway problems who request emergency medical services. (A-3)

7.3.11 After rescuer safety is ensured, place the interests of the ill or injured person with airway problems as the foremost consideration when making any and all emergency care decisions. (A-3)

7.3.12 Demonstrate the steps in the head-tilt chin-lift. (P-1, P-2)

7.3.13 Describe the steps in the chin-lift without head-tilt. (P-1, P-2)

7.3.14 Demonstrate the steps in mouth-to-mouth ventilation with body substance isolation (barrier shields) in the unresponsive adult. (P-1, P-2)

7.3.15 Demonstrate how to clear a foreign body airway obstruction in a responsive adult. (P-1)

7.3.16 Demonstrate how to clear a foreign body airway obstruction in an unresponsive adult. (P-1)

7.4 At the completion of the Patient Assessment the section, the student will be able to:

7.4.1 Describe the components of scene assessment. (C-1)

7.4.2 Describe common hazards found at the scene. (C-1)

7.4.3 Determine if the scene is safe to enter. (C-2)

7.4.4 Describe common mechanisms of injury or nature of illness, or both. (C-1)

7.4.5 Describe the reason for determining the total number of ill or injured persons at the scene. (C-1)

7.4.6 Describe methods of assessing responsiveness. (C-1)

7.4.7 Describe methods used for assessing if an ill or injured person is breathing. (C-1)

7.4.8 Distinguish between an ill or injured person with adequate breathing and an ill or injured person with inadequate breathing. (C-3)

7.4.9 Describe how to assess circulation. (C-1)

7.4.10 Describe the how to obtain a pulse in an adult. (C-3)

7.4.11 Determine the need for assessing external bleeding. (C-1)

7.4.12 Describe the components of on-going assessment. (C-1)

7.4.13 Explain the reason for assessment of scene safety prior to entering. (A-2)

7.4.14 Explain the value of initial assessment. (A-2)

7.4.15 Explain the value of questioning the ill or injured person and bystanders. (A-2)

7.4.16 Explain the value of an on-going assessment. (A-2)

7.4.17 Demonstrate a caring attitude when performing initial and physical assessments. (A-3)

7.4.18 Demonstrate the ability to distinguish potential hazards. (P-1)

7.4.19 Demonstrate the techniques for assessing responsiveness. (P-1, P-2)

7.4.20 Demonstrate the techniques for assessing the airway. (P-1, P-2)

7.4.21 Demonstrate the techniques for assessing breathing. (P-1, P-2)

7.4.22 Demonstrate the techniques for assessing circulation. (P-1, P-2)

7.4.23 Demonstrate the techniques for assessing external bleeding. (P-1, P-2)

7.4.24 Demonstrate the techniques for assessing skin color, temperature, and moisture. (P-1, P-2)

7.4.25 Demonstrate the techniques for physical assessment. (P-1, P-2)

7.4.26 Demonstrate the on-going assessment. (P-1, P-2)

7.5 At the completion of the Circulation section, the student will be able to:

7.5.1 Explain the reasons the heart stops beating. (C-1)

7.5.2 Describe the components of basic life support/ cardiopulmonary resuscitation (BLS/CPR). (C-1)

7.5.3 Describe each link in the chain of survival. (C-2)

7.5.4 Describe the steps of one-rescuer adult. (C-1)

7.5.5 Describe the technique of external chest compression on an adult. (C-1)

7.5.6 Explain when the first aid provider is able to stop BLS/CPR. (C-2)

7.5.7 Demonstrate a caring attitude towards persons in cardiac arrest. (A-3)

7.5.8 After rescuer safety is ensured, place the interests of the ill or injured person in cardiac arrest as the foremost consideration when making emergency care decisions. (A-3)

7.5.9 Demonstrate the proper technique of chest compression on an adult. (P-1, P-2)

7.5.10 Demonstrate the steps of adult (one rescuer) BLS/CPR. (P-1, P-2)

7.6 At the completion of Medical Emergency section, the student will be able to:

7.6.1 Identify the person who complains of a medical problem. (C-1)

7.6.2 Describe the steps in providing first aid to a person who complains of a medical problem. (C-1)

7.6.3 Describe the ill or injured person with a decreased level of responsiveness. (C-1)

7.6.4 Describe the steps in providing first aid to an ill or injured person with a decreased level of responsiveness. (C-1)

7.6.5 Describe a person having a seizure. (C-1)

7.6.6 Describe the steps in providing first aid to a person with seizures. (C-1)

7.6.7 Describe a person with medical problems resulting from exposure to cold. (C-1)

7.6.8 Describe the steps in providing first aid to a person with an exposure to cold. (C-1)

7.6.9 Describe a person with medical problems resulting from exposure to heat. (C-1)

7.6.10 Describe the steps in providing first aid to a person with an exposure to heat. (C-1)

7.6.11 Demonstrate a caring attitude towards a person who complains of a medical problem. (A-3)

7.6.12 After rescuer safety is ensured, place the interests of the person with a medical problem as the foremost consideration when making emergency care decisions. (A-3)

7.6.13 Demonstrate the steps in providing first aid to a person who complains of a medical problem. (P-1, P-2)

7.6.14 Demonstrate the steps in providing first aid to an ill or injured person with a decreased level of responsiveness. (P-1, P-2)

7.6.15 Demonstrate the steps in providing first aid to a person with seizures. (P-1, P-2)

7.6.16 Demonstrate the steps in providing first aid to a person with an exposure to cold or heat. (P-1, P-2)

7.6.17 Distinguish between minor and major bleeding. (C-3)

7.6.18 Describe the first aid for external bleeding. (C-1)

7.6.19 Explain the importance of body substance isolation. (C-3)

7.6.20 Describe the signs of internal bleeding. (C-1)

7.6.21 Describe first aid for an injured person with signs and symptoms of internal bleeding. (C-1)

7.6.22 Define shock. (C-1)

7.6.23 Describe the first aid for an ill or injured person in shock. (C-1)

7.6.24 Describe types of open soft tissue injuries. (C-1)

7.6.25 Describe the first aid for a soft tissue injury. (C-1)

7.6.26 Describe the functions of dressing and bandaging. (C-1)

7.6.27 Describe the reason for body substance isolation when dealing with bleeding and soft tissue injuries. (A-3)

7.6.28 Demonstrate a caring attitude towards injured persons with a soft tissue injury or bleeding. (A-3)

7.6.29 After rescuer safety is ensured, place the interests of the person with a soft tissue injury, bleeding, or shock as the foremost consideration when making emergency care decisions. (A-3)

7.6.30 Demonstrate direct pressure for external bleeding. (P-1, P-2)