



Standard Guide for Establishing the Qualifications, Education, and Training of EMS, Air-Medical Patient Care Providers¹

This standard is issued under the fixed designation F 1229; 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 (ε) indicates an editorial change since the last revision or reapproval.

INTRODUCTION

This guide describes the minimal qualifications, education, and training of five, definitive, air-medical providers. These guidelines are built on a foundation of recognized courses that are used to credential patient care providers; emergency medical technicians, nurses, and physicians. The members of the task group are experienced air-medical providers and users with broad and distinctive EMS backgrounds.

1. Scope

1.1 This guide applies only to personnel involved in the provision of *emergency* medical air transport, and does not necessarily address the qualifications, education, and training of specialty care responders or other allied health professionals.

1.2 This guide establishes air-medical nomenclature.

1.3 This guide establishes *minimal* qualifications, education, and training requirements for the air-medical crew member(s) and the air-medical director.

1.4 This guide identifies the general content of the curricula for air-medical education and training.

1.5 It is expected that a standard guide for education and training curricula, certification, and air-medical operations will be developed.

1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

F 1031 Practice for Training the Emergency Medical Technician (Basic)²

3. Terminology

3.1 *Descriptions of Terms:*

3.1.1 *aeromedicine*—the branch of medicine that deals with the physiological, psychological, pathological, and epidemio-

logical conditions, diseases, and disturbances that arise from flying.

3.1.2 *air-medical*—the practice of air-medicine.

3.1.3 *air-medical crew member(s)* (ACM)—patient care providers on-board medical flights. Identified by the prefix *flight* before their credentialed title (that is, *flight nurse*).

3.1.4 *air-medical director*—a physician who is licensed or otherwise legally authorized to practice and who functions within an air-medical operation as the individual ultimately responsible for the quality of patient care.

3.1.5 *air-medical operations*—that aspect of air-medicine involving policies, procedures, and protocols.

3.1.6 *air-medical patient care providers*—air-medical crew members and air-medical directors.

3.1.7 *air-medicine*—a discipline of medicine associated with the care and management of patients transported by aircraft.

3.1.8 *care*—patient care.

3.1.9 *educational experience*—the accumulation of knowledge and skills through education, training, and clinical practice.

3.1.10 *emergency medical air transport*—the transport of EMS patients by air.

3.1.11 *mission*—the specific patient care task and responsibility that an EMS provider has accepted.

3.1.12 *qualification*—possessing a recognized definable body of knowledge or specific credential (certificate, license, registration, or degree).

3.1.13 *specialty-care responder*—emergency air-medical responders whose mission is clearly defined and exclusively dedicated to the care of patients with specific illness or injuries.

3.1.14 *training*—supervised acquisition of specific skill or judgment, or both.

4. Significance and Use

4.1 This guide provides minimal criteria for development of

¹ 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.

Current edition approved Oct. 10, 2000. Published December 2000. Originally published as F 1229 - 89. Last previous edition F 1229 - 89 (1998).

² *Annual Book of ASTM Standards*, Vol 13.01.

air-medical education and training programs.

4.2 This guide aids in the selection of education and training programs that will correspond to the level of the defined patient care mission.

4.3 It is recognized that the body of knowledge encompassed by an education and training program, not the degree, certificate, or license, is crucial, although documentation of such training may be difficult without said credentials.

4.4 This guide pertains to education, training, and curricula development and is not intended to be used operationally to select the level of patient care provider.

AIR-MEDICAL CREW MEMBERS

5. Flight EMT-Basic—Qualifications, Education, and Training

5.1 The education and training provided at this level is recognized as producing the minimally qualified ACM. The training shall include the knowledge and skills identified by both the required and optional objectives contained in Practice F 1031. Additional training in the following areas is required:

- 5.1.1 Air-medical patient handling considerations,
 - 5.1.2 Aircraft safety,
 - 5.1.3 Altitude physiology, and principles of atmospheric physics (gas laws),
 - 5.1.4 Aviation communication,
 - 5.1.5 Crash and survival procedures,
 - 5.1.6 Familiarization with EMS systems in the service area,
 - 5.1.7 Hazardous materials response procedures,
 - 5.1.8 In-flight treatment modalities,
 - 5.1.9 Infection control,
 - 5.1.10 Mapping/aircraft orientation,
 - 5.1.11 Oxygen therapy in relation to altitude,
 - 5.1.12 Patient assessment in the airborne environment,
 - 5.1.13 Quality assurance,
 - 5.1.14 Roles and responsibilities,
 - 5.1.15 Stress recognition and management,
 - 5.1.16 Urinary catheter, nasogastric tube, feeding tubes, and ostomy devices: indications, complications, and monitoring of these devices in the airborne environment, and
 - 5.1.17 Vital sign determination in the airborne environment.
- 5.2 Additional, desirable, education and training includes adult and pediatric cardiac, trauma, and burn life support.

6. Flight EMT-Intermediate—Qualifications, Education, and Training

6.1 The minimal entry level for a flight EMT-intermediate shall be the body of knowledge and skills identified by the required and optional objectives contained in EMT-I as defined in the DOT, National Standard Curriculum.³ The flight EMT-intermediate shall possess all of the knowledge and skills required of a flight EMT-basic. Commensurate with the patient

care mission, additional education and training is at the discretion of the air-medical director.

7. Flight EMT-P (Flight Paramedic)—Qualifications, Education, and Training

7.1 The minimum entry level for a flight EMT-paramedic shall be the body of knowledge and skills identified by both the required and optional objectives contained in the EMT-Paramedic DOT National Standard Curriculum.⁴ The flight EMT-paramedic shall possess all of the knowledge and skills required of a flight EMT-intermediate. Commensurate with the patient care mission, additional education and training is at the discretion of the air-medical director and shall include:

7.1.1 Airborne endotracheal intubation/ventilation and needle cricothyroidotomy.

7.1.1.1 Rapid sequence induction as an adjunctive technique to intubation.

8. Flight Nurse—Qualifications, Education, and Training

8.1 The minimum entry level for a flight nurse shall be the body of knowledge and skills identified by the objectives contained in an accredited registered nursing program. Additional education and training in the areas 5.1.1-5.1.17. Commensurate with the patient care mission, the flight nurse shall possess all of the knowledge and skills required of a flight EMT-paramedic including those areas in 5.2, and may have additional education and training in the assessment and management of patients with special needs as prescribed by the air-medical director. Education and training shall include the airborne operation of monitoring and therapeutic devices and equipment.

9. Flight Physician—Qualifications, Education, and Training

9.1 The flight physician will be a doctor of medicine or osteopathy who is licensed or otherwise legally authorized to practice and who is educated and trained in areas 5.1.1-5.1.17 and, commensurate with the patient care mission, area 5.2.

10. Air-Medical Director, Flight Medical Director—Qualifications, Education, Training, and Educational Experience

10.1 The air-medical director shall be a physician who is licensed or otherwise legally authorized to practice and who has had educational experience in those areas of medicine and prehospital care that are commensurate with the patient care mission(s) including 5.2. Additional educational experience shall include areas listed in 5.1.1-5.1.17.

11. Keywords

- 11.1 aeromedicine; flight nurse; paramedic

³ Training Program for the Emergency Medical Technician-Intermediate: National Standard Curriculum (see latest version).

⁴ Training Program for the Emergency Medical Technician-Paramedic: National Standard Curriculum DOT (see latest version).

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