



# Standard Specification for Fixed Wing Specialized Medical Transport Units<sup>1</sup>

This standard is issued under the fixed designation F 1283; 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.

## INTRODUCTION

Committee F-30 was established on a voluntary basis to edit, update, and create where necessary, voluntary standards for all facets of emergency medical services (EMS).

Task Group F30.01.02 is responsible for water and air vehicles and has prepared standards that cover the medical transport units for the three levels of general patient care, namely basic, advanced, and specialized.

The specifications for these units have been prepared as separate standards, each standing alone, for the convenience of the unit's personnel.

It cannot be emphasized enough that the requirements contained in these specifications are minimums. Additional personnel, equipment, and supplies can be carried at any time, providing the stated minimums are not violated.

The specifications are concerned only with the three broad categories of general EMS. They do not cover any aspect of rescue and they do not preclude unique configurations such as the units that are used exclusively as neonatal transports.

This specification covers the third of the three fixed wing medical transport unit categories. It is solely concerned with the minimum requirements for the fixed wing specialized medical transport unit. In addition to its specialized capability, a unit, staffed and equipped as specified in this specification will be capable of meeting today's accepted standard of advanced life support.

## 1. Scope

1.1 This specification pertains to fixed wing transport units involved in patient transportation and care at the specialized medical transport level. It outlines the minimum requirements, including personnel and the patient care equipment and supplies, that must be met before the unit can be classified as a specialized medical transport unit.

1.2 This specification describes the minimum vehicle configuration and capability, the minimum number of seats for personnel, and the provisions for the minimum medical equipment and supplies.

1.3 Other specifications of Committee F-30 will apply.

## 2. Referenced Documents<sup>2</sup>

### 2.1 ASTM Standards:

F 1118 National Air Medical Transport Units Resources Catalog<sup>3</sup>

F 1149 Practice for Qualifications, Responsibilities and Authority of Individuals and Institutions Providing Medical

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<sup>2</sup> Appendix XI contains a list of documents that relate to medical transportation.

<sup>3</sup> *Annual Book of ASTM Standards*, Vol 13.01.

Direction of Emergency Medical Services<sup>3</sup>

F 1177 Terminology Relating to Emergency Medical Services<sup>3</sup>

F 1220 Guide for Emergency Medical Systems (EMSS) Telecommunications<sup>3</sup>

F 1229 Guide for Establishing the Qualifications, Education, and Training of EMS Aeromedical Patient Care Providers<sup>3</sup>

### 2.2 Other Standard:

USARTL-TR-79-22D Aircraft Crash Survival Design Guide

## 3. Terminology

### 3.1 Definitions:

3.1.1 Specific terms used throughout this specification are defined in 3.2. Other applicable terms are contained in Terminology F 1177.

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

#### 3.2.1 Descriptions of Terms Relating to Personnel:

3.2.1.1 *air ambulance provider*—the individual or entity that holds the state (or equivalent) air ambulance provider certificate and is responsible for and manages the operation of the air medical transport unit.

3.2.1.2 *air-medical crewmembers*—transport personnel whose primary function is to carry out the medical duties of the medical mission that has been accepted by an air medical

transport unit. They are qualified to perform the medical responsibilities of the mission to the standard established for the designated air medical transport unit category (basic life support, advanced life support or specialized).

3.2.1.3 *flight crewmembers*—transport personnel whose primary function is to operate and navigate the aircraft under the specified conditions, in accordance with all the applicable Federal Aviation Regulations. Flight crewmembers include pilots, navigators, radio operators, and crew chiefs.

3.2.1.4 *transport personnel*—flight crewmembers and air-medical crewmembers who, by specialized training (as defined in Guide F 1229 or applicable FAA regulations) are currently qualified to carry out their assigned duties.

### 3.2.2 *Descriptions of Terms Relating to Vehicles:*

3.2.2.1 *fixed wing aircraft*—aircraft that use a wing to fly. The wing is generally immovable. Jet engines or propellers provide the required forward motion. A takeoff and landing roll is essential.

3.2.2.2 *medical transport vehicle*—a vehicle that is capable of meeting the standard for a medical transport unit if the requisite personnel, equipment, and supplies are added. It does not include the personnel and the on board medical equipment.

3.2.3 *Descriptions of Terms Relating to Patient Care Equipment*—Patient care equipment is defined as that equipment related to the medical mission. It includes the following:

3.2.3.1 *permanently installed patient care equipment*—Designed to be used inside the air medical transport vehicle. It may be self contained or it may depend on the vehicle’s power source, or a combination of both.

3.2.3.2 *portable patient care equipment*—self contained and designed for use en route, at the pick-up point, and in transit. It implies being capable of being hand carried. Some items of portable patient care equipment may have the option of using the vehicle’s sources of power and medical gases.

3.2.3.3 *transportable patient care equipment*—Not necessarily self-contained. It may be used en route if qualified for use in flight, and power and accessibility are available.

3.2.4 *Descriptions of Terms Relating to Communications*—Airborne communication equipment consists of three groups, depending on its primary function:

3.2.4.1 *aviation communication equipment*—equipment installed in the aircraft, used by the flight crew for traffic control, navigation of the aircraft, and receiving weather information.

3.2.4.2 *intercommunication equipment*—equipment installed in the aircraft, used by the transport personnel to facilitate conversations between the flight crew and air-medical crewmembers and, in some cases, with the patient.

3.2.4.3 *medical communication equipment*—equipment installed in the aircraft, used by the transport personnel to facilitate conversations between the air-medical crewmembers and the emergency medical system in which they operate. It includes voice communication with selected medical control, and with EMS systems dispatch centers. It can include equipment for the transmission of graphic data.

### 3.2.5 *Description of Term Relating to Documentation:*

3.2.5.1 *national air medical transport units resources catalog*—the document produced in accordance with the format that is contained in Specification F 1118. The format is a

guideline so that the catalog will contain standardized, comparable data on existing air medical transport units. The short title “Resources Catalog” may be used when the meaning is clear.

### 3.2.6 *Descriptions of Terms Related to the Mission:*

3.2.6.1 *advanced life support level*—a level of patient care where all the skills required for advanced life support can be effectively applied at any time during the complete mission.

3.2.6.2 *category*—a level of patient care, relating to the capability of the aviation medical transport unit and that can be applied at any time during the complete mission. There are three levels; basic life support, advanced life support, and specialized.

3.2.6.3 *declared effective service range*—the number of nautical miles, without resupply of aviation or medical requirements, within which the fixed wing medical transport unit can be expected to operate at full capacity. The two items can be listed separately and, if more convenient, the medical limitations can be given in hours of available use.

3.2.6.4 *declared response time*—the normal minimum number of minutes required between the initial notification of the medical mission and the liftoff of the aviation medical transport unit.

3.2.6.5 *declared service area*—the area designated by the air ambulance provider where the fixed wing medical transport unit is operationally capable of response. There are usually no restrictions but if such exist they will be clearly indicated in the “Resources Catalog.”

3.2.6.6 *fixed wing specialized medical transport unit*—a unit that meets the standard described in this specification.

3.2.6.7 *fixed wing medical transport unit*—a fixed wing medical transport vehicle, the crew, and on board equipment that meets the standard for the named category.

3.2.6.8 *medical mission*—an accepted medical flight from the initial notification to the completion or cancellation.

3.2.6.9 *specialized level of patient care*—a level of patient care that is directed to particular problems that are usually already undergoing advanced treatment. Typically the patient is being moved to a facility that can provide additional service. It may also include the need for special equipment not normally required by first responders such as incubators, heart pumps, pressure chambers, etc.

## 4. Classification

4.1 Air ambulance providers will use the title “Fixed Wing Specialized Medical Transport Unit” to indicate that the capabilities contained in this specification have been met.

## 5. Significance and Use

5.1 The intent of this specification is to define a unit, a suitable vehicle with the proper personnel and equipment, that will provide the following.

5.1.1 The environment for specialized medical transportation.

5.1.2 Specialized patient care for the specific medical requirement, at least to national standards for advanced life support, throughout the medical mission.

5.2 Application of this specification will ensure that the fixed wing medical transport unit will be able to provide a

well-established level of advanced patient care for the specific medical requirement. The capability, as listed in the “Resources Catalog,” will improve inter-state mutual aid and increase the capability for improved cooperation throughout the nation.

5.3 This specification will assist in the definition of appropriate care, increase public awareness of the high standard available, and provide a nationally accepted guideline. It will also provide the following:

5.3.1 A scale upon which to evaluate resources and capabilities.

5.3.2 The incentive to improve the vehicle, personnel and medical components, to meet an acceptable standard of patient care. This will include configuration, equipping, and training.

5.3.3 A means of identifying inappropriate advertising.

5.3.4 Consistent criteria for correct performance and cost-effective comparisons.

## 6. General Requirements

6.1 The fixed wing specialized medical transport unit shall consist of the medical transport vehicle, transport personnel and patient care equipment and supplies in accordance with this specification and as listed in the “Resources Catalog.”

6.2 The three components must be licensed/certificated by the appropriate governmental authority. The air ambulance provider is the individual or entity responsible for ensuring that the following exist:

6.2.1 Current air ambulance license or certificate.

6.2.2 Appropriate license or certificate for the aircraft under applicable Federal Aviation regulations.

6.3 To comply with this specification, the fixed wing specialized medical transport unit must be a part of a designated medical control system as described in Practice F 1149.

6.4 The unit will have medical direction provided by a medical director, as defined in Practice F 1149.

6.5 The specific aircraft, personnel, equipment, and supplies that have been licensed/certificated as a fixed wing specialized medical transport unit will be available for the medical mission as stated in the “Resources Catalog.” The aircraft will be configured to accept the personnel, equipment, and supplies as stated. The equipment and supplies may be in the aircraft or held in readiness in an airworthy condition, in a specific location. More than one team and set of equipment and supplies may be provided for any particular aircraft, in more than one location, providing they each meet the standard specification criteria. The aircraft must have the appropriate equipment and supplies and the appropriate air-medical crewmembers on board prior to patient transport.

6.6 The air ambulance provider and medical director will complete the resources format and submit it to the state EMS director (or equivalent official). The format will be updated annually and each time significant changes to its content occur.

6.7 The fixed wing aircraft that responds to the medical mission as a specialized medical transport vehicle shall be capable of performing as stated in the “Resources Catalog.” The aircraft will be configured to accept the personnel, equipment, and supplies to FAA approved standards. For the specialized mission, only the equipment and supplies appropriate to the mission need be carried on board but all such items

must be accessible throughout the mission.

6.8 The fixed wing specialized medical transport unit shall be capable of transporting the patient(s) and the equipment as stated and shall have sufficient space to allow the performance of medical treatment at the specialized medical level, en route. At least one advanced life support aeromedical crewmember, as defined in Guide F 1229, accompanies each patient and has access to the patient at all times.

6.9 When, in the best interest of patient care, a decision has to be made that runs counter to this specification, a mission deviation will be recorded. Such a mission deviation from the accepted medical norm will be regulated and disciplined by state, regional, and local medical control. A written report will be made to the medical control point responsible for the unit’s operation, within 24 h, describing the mission deviation, its cause, and its impact.

6.10 The license/certification authority may accept and record transient deviations for a particular medical transport unit pending receipt of adequate equipment. Such transient deviations must be clearly documented in the “Resources Catalog,” together with the alternative solution until the deviation is resolved. Such deviations must not be extended beyond July 1, 1995.

## 7. Personnel

7.1 The minimum personnel requirement for the fixed wing specialized medical transport unit shall be the flight crew and for each patient, one advanced life support air-medical crewmember, with accommodation for a second attendant, as required and defined in Guide F 1229.

7.1.1 *Medical Director*—Each program shall have a medical director, as defined by Practice F 1149, under contract, to supervise the medical operation of the unit. He will be responsible for the following:

7.1.1.1 Assessing and accepting the mission. Once accepted, the director will maintain overall supervision of the mission.

7.1.1.2 Selecting the air-medical crew. This may include the appointment of a medical specialist as an associate medical director, who in turn will select the medical team and be responsible for the mission details. The associate will be responsible to the director throughout the mission assignment.

7.1.1.3 Ensuring that the correct configuration of the aircraft has been arranged for the mission. This will include accommodation for the required air-medical crewmembers, facilities to secure the equipment necessary for the specialized mission, adequate access to the patient(s), access and security for the medical supplies, and adequate environmental control for the planned route.

7.2 *Flight Crewmember*—The minimum flight crew for the fixed wing specialized medical transport unit shall be the FAA flight crew requirement for the type of aircraft and the flight plan parameters, under the applicable Federal Aviation Regulations. The pilot shall be appropriately rated.

7.3 *Air-Medical Crewmembers*—The number and skills of the air-medical crew for the fixed wing specialized medical transport unit shall be as required by the medical director. However, the minimum will be one advanced life support air-medical crewmember as defined by Task Group F30.02.01