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AIR AMBULANCE OPERATIONS

Section 1. Background and Definitions

EAC 91-6.1 Introduction.

This chapter contains background information on air ambulance operations (previously known as "emergency medical"). This chapter also contains specific crew training requirements and operational procedures for both airplane and helicopter air ambulance operations .

EAC91-6.3 Operators Requiring Air Ambulance OpSpecs Paragraphs

The unique association of the aviation and medical professions has formed a technically sophisticated system of life-sustaining care for ill or injured passengers during air transportation. Air ambulance operators have met the public need and demand for such services by equipping and dedicating aircraft specifically for this purpose .The ECAA, in consultation with air ambulance operators, has created specific a OpSpecs paragraph to clarify the methods these operators will use to comply with safety and regulatory requirements while conducting air ambulance operations.

(a) Regulatory Requirements. An air ambulance operator must comply with all requirements of the ECAR Part under which the operator is certified. Air ambulance operators are not exempted from any requirement of the ECARs by reason of conducting air ambulance operations. To ensure industry   standardization and a clear understanding between the ECAA and air ambulance operators, OpSpecs paragraphs contain the specific means by which air ambulance operators can comply with the ECARs. Some of these rules are as follows: Certification. An air ambulance operator must be certified under ECAR 121 and comply with all provisions of the Part.

(b) Advertising. An operator may not advertise or conduct an operation unless authorized to do so by the operator's operating certificate and OpSpecs.

(c) Operators Requiring Air Ambulance OpSpecs paragraphs . An operator who holds out to the public to provide basic or advanced in-flight life support services during air transport must have been issued the appropriate air ambulance OpSpecs paragraph before conducting such operations. Operators may or may not overly advertise their services . For example, hospital-based air ambulance services must also hold air ambulance OpSpecs eventhough they do not advertise. Operators holding OpSpecs may transport medical personnel as passengers who are accompanying a sick or injured person, but must meet the following requirements.

(1) They may not advertise air ambulance or in-flight patient care services.

(2) Any in-flight patient care equipment and medical personnel that accompany the passenger must be provided by the passenger.

(3) The patient-care equipment must not require modification to the aircraft, such as the removal of seats.

(4) The patient-care equipment must not be required for basic or advanced life support.
Note: Air ambulance operations are not conducted under emergency authority , where a life-threatening situation exists, a pilot in command (PIC) may declare an emergency in accordance with ECARs 91 or 121 and transport a sick or injured person . The PIC who takes such actions must report the actions to the ECAA.

(d) Terminology. Standardized terminology has become necessary due to the growth of helicopter and airplane air ambulance services . The term " aeromedical operations" as associated with OpSpecs has been replaced with the term " air ambulance-helicopter " or " air ambulance-airplane, " as applicable.

EAC91-6.5 Definitions .

The following terms are defined according to their use in this EAC:

(a) Medical Personnel: Those persons trained in aeromedical profession , who perform medical duties in an air ambulance operation.

(b) Basic Life Support (BLS) System : The medical personnel and equipment required to provide basic life support to patients (such as oxygen, suction, electrical supply,

lighting and climate control) and equipment which provides for air-to-ground medical related communications when applicable.

(c) Air Ambulance: An aircraft equipped with at least a basic life support (BLS) system.

(d) Air Ambulance Services: The operation of an aircraft as an air ambulance in air transportation service.

(e) Local Flying Area: An area designated by the operator in which air ambulance services will be conducted. Each local flying area should be defined in a manner acceptable to both the operator and the ECAA, taking into account the operating environment and geographic terrain features and capabilities of the aircraft.

(f) Scene : The location to which an air ambulance has been dispatched for an air ambulance flight.

EAC91-6.7 Overview of Helicopter Air Ambulance Services .

The issuance of OpSpecs authorizes air ambulance-helicopter service for hospital-to-hospital transfer work, accident scene work , offsite (unimproved site) work, or emergency evacuation facility patient pick-ups. A trend of weather-related accidents during aeromedical operations has resulted in the inclusion of weather limitations for VFR flight with these OpSpecs.

(a) Paragraph A-21 Authorizations. Paragraph A-21 of the OpSpecs grants latitude to a helicopter operator the authority to land on appropriate sites during both day and night air ambulance operations.

    (1) Higher Minimums. The authorization to conduct helicopter air ambulance operations is based on the operator's using higher ceiling and visibility minimums in uncontrolled airspace than is required for conventional Part 121 operations.

    (2) Night Landings. Night landings at unimproved sites are permitted with adequate lighting for the pilot to identify the landing site and surrounding hazards.
Note: "Adequate" lighting is that lighting which allows a helicopter pilot to conduct a safe terrain and obstacle collision avoidance approach and landing during conditions of darkness . The source of this lighting may be on the helicopter or on the surface, and includes the possibility of automobile lights being used to illuminate the landing site. Pyrotechnic road hazard flares are not recommended for marking the touchdown area..

    (3) Local Flying Area. The operator must define a local flying area for each base of operation and the description of the area must be entered in the OpSpecs.
Note: The dimensions of the local area should be that which an operator could service adequately with a helicopter taking into account the terrain features and capabilities of the helicopter. The descriptions in an operator's OpSpecs should be easy to understand and define.

(b) IFR and VFR requirements. Operators of helicopter air ambulance operations must comply with the following requirements for IFR and VFR:

    (1) IFR Operations. The operator's procedures, training and qualification program and the operating environment should be evaluated by the ECAA before granting the operator the authority to conduct single pilot IFR operations with an autopilot.

    (2) VFR Operations. When conducting VFR flight the operator must comply with the weather minimums as specified in the OpSpecs . Operator requests for lower VFR minimums than specified in the OpSpecs must be coordinated in accordance with the ECAA requirements.

    (3) Training for Stress-Related Issues . Cockpit crews may experience high stress levels in air ambulance service operations due to the potential urgency for responding to emergencies related to preserving human life . Operators should give adequate attention to cockpit resource management (CRM) training to prevent inappropriate actions and decisions during periods of stress. One acceptable means operators may use to guard against inappropriate decisions is to require that both the individual exercising operational control and the PIC agree that the flight can be safety initiated and continued under the applicable operational conditions .

(c) Flight and Rest Time. Operators may choose to schedule crews under one of several rules. In some cases , operators may conduct operations at different locations under

different rules . The operator's general operations manual (GOM) must contain the specific method to be used and how records are to be kept to show compliance with the rule used.

EAC91-6.9 Overview of Airplane Air Ambulance Services .

OpSpecs specify requirements and grants the operator authorization of air ambulance - airplane service. The operator's cockpit crew members must be adequately trained in the special requirements of air ambulance operations.

(a) Cockpit crew Training. An air ambulance-airplane must train the cockpit crews in the following areas :

(1) To be capable of interfacing effectively with medical personnel.

(2) To be cognizant of potential stress placed on the patient in various realms of flight, such as unpressurized flight, extreme temperature gradients, or turbulence.

(3) To be able to respond well when under high levels of stress when emergencies related to preserving human life create urgent situations (In response to such stresses, operators must train cockpit crews to not jeopardize the safety of either themselves, in-flight medical personnel, or the public) .

(4) In cockpit resource management (CRM) and operational control procedures to prevent the cockpit crew from inappropriate actions and decisions during periods of stress.

(5) In the special communication requirements for accommodating medical care during flight and/or to coordinate with destination medical personnel

(b) IFR and VFR Training . Air ambulance operators should qualify cockpit crews to conduct both IFR and VFR operations.

SECTION 2
Air Ambulance Service Training Program

EAC91-6.11 General

The section covers the specifications for air ambulance-helicopter training programs, air ambulance airplane training programs, and coordination training for medical personnel and cockpit crews in an air ambulance service operation.

Note : For the purposes of this training, a "response scene" refers to a site where an air ambulance service flight operation is conducted, which involves nonroutine hazardous situations.

EAC91-6.13 Helicopter training programs

The following elements should be considered in an operator's helicopter flight training program and helicopter ground training program.

(a) Helicopter Flight Training Program . Cockpit resource management (CRM) and crew coordination procedure are an integral part of each of the flight maneuvers that follow. Each of these maneuvers is included in the operator's flight training curriculum:

(1) Unimproved takeoff/landing area operations.

(2) Night cross-country.

(3) Night cockpit lighting considerations.

(4) Night forced landing.

(5) Communications, air-to-ground and cockpit crew/medical crew.

(6) Inadvertent instrument meteorological conditions (IMC) (should include demonstrated control of the aircraft in simulated or actual instrument meteorological conditions).

(7) Techniques used with lighting equipment.

(b) Helicopter Ground Training Program.

The following areas should be included in the operator's ground training curriculum (1) Day-response scene operations.

(2) Night-response scene operations.

(3) Obstacle recognition.

(4) Use of local area maps.

(5) Aircraft Systems variations (such as special electrical generation).

(6) Passenger restraining methods in flight.

(7) Local flying area orientation (day/night) (helicopter only).

(8) Handling problem passengers.

(9) Adequacy of landing sites.

(10) Cockpit crew functions and responsibilities.

(11) Foreign operations (if appropriate).

(12) Prevention and control of infectious conditions (to include knowledge of infectious and communicable diseases and diseases recently identified as occupational health risks, such as hepatitis B, herpes simplex , herpes zoster, and AIDS)

EAC91-6.15 Airplane Training Programs.

The following elements should be considered in an operator's airplane flight training program and airplane ground training program .

(a) Airplane Flight Training Program .

There are no airplane flight training maneuvers which are unique to air ambulance services.

(b) Airplane Ground Training Program .

The following areas should be included in the operator's ground training curriculum:

(1) Aircraft systems variations.

(2) Passenger restraining methods in flight.

(3) Handling problem passengers.

(4) Cockpit crew functions and responsibilities.

(5) Prevention and control of infections conditions (to include knowledge of infections and communicable diseases, diseases recently identified as occupational health risks such as hepatitis B, herpes simplex , herpes zoster , and AIDS).

EAC91-6.17 Medical Personnel and Cockpit crew Coordination Training.

In air ambulance service operations, the medical personnel and the cockpit crew are involved in two distinct operations. While cockpit crewmembers are generally not required to be trained in any medical subject areas, and medical personnel are not required to be trained in any flight operational procedures, training is permitted in some specific areas that the operator deems necessary. Operators must have training in coordination procedures to be used between cockpit crewmembers and medical personnel in specified situations. These specific situations must include, but are not limited to, the following:

(a) Physiological aspects of flight.

(b) Patient loading and unloading.

(c) Safety in and around the aircraft.

(d) Passenger briefing (when appropriate).

(e) Appropriate in-flight emergency procedures.

(f) Emergency landing procedures.

(g) Emergency evacuation procedures.