

Virginia EMS Regulations

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PART V

Air Medical Regulations, Rotor and Fixed Wing Operations

12 VAC 5-31-2000. Application for agency licensure

A. General Provisions

1. Air medical public service agencies will meet or exceed FAR part 91 and commercial operators will meet or exceed FAR part 135.
2. No person may establish, operate, maintain, advertise or represent themselves or any service or organization as an air medical service without a valid license or certification, or in violation of the terms of a valid license or certification, issued by the Office of EMS.
3. Air medical services based outside of Virginia that provide emergency medical services to a patient that originates within Virginia, shall be subject to all parts of these regulations (agency licensure), in conjunction with other applicable state laws. (§ 32.1-111.3 Code of Virginia).

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4. All air medical services with a base of operations located within the Commonwealth of Virginia, or that engage in providing 'prehospital 911 service' regardless of the location of their base of operations, will be subject to all parts of these regulations.

B. Needs Determination, Rotor Wing only

The intent of the Needs Determination document is to provide adequate summary of services currently offered in a geographic area of the Commonwealth and to outline the intended enhancements that an air medical service expects to provide to the intended area. This information will be used to assess the impact for a given geographic area by the Virginia State Medevac Committee during a public hearing for discussion of an application for new or expanded services.

1. A current EMS agency or air medical vendor shall provide, at a minimum, the following information to OEMS (Any other information that the applying agency sees fit to submit may be reviewed by OEMS):
 - a. Geographic overview:
 - 1) Availability and response times related to ground transport.

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- 2) Availability and response times related to air (other programs).
- 3) Level of ground EMS care in the area (BLS vs. ALS).
- 4) Population density.
- 5) Resources in area
 - a) List all Level I and II Trauma centers in the region or in a bordering region.
 - b) List all regional hospital specialty services (critical care, trauma, cardiac, OB, burns, etc.).
 - c) List all air medical agencies, and their capabilities, in this region or in a bordering region (including out of state programs). (IFR, VFR, Specialty Teams).
- 6) Trauma Triage impact.
 - b. Establishment of additional base of operations or movement of a current base of operations greater than five miles:
 - 1) Flight volume breakdown to include: number of scenes, interfacility, specialty missions.
 - 2) Flight volumes for missed flights/requests due to: mission in progress, maintenance.
 - 3) Current EMS license.

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- 4) Current record of performance (safety, QM-QA, prior year utilization report).
 - 5) Customer satisfaction with existing service.
 - 6) Statement of intent explaining expansion or movement of services.
- c. New provider performance and history
- 1) A new applicants shall provide:
 - a) Estimate of patient volume (year one).
 - b) Evidence to support estimate of patient volume.
 - c) Anticipated patient types.
 - 2) Documentation to include:
 - a) Support from area rescue squad, fire, PD, or
 - b) Designated Regional EMS Council, and
 - c) Area hospital(s) participation.
 - 3) Local government approval.
- d. The Office of EMS shall review the assessment, within 30 (thirty) days of the submission.

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- e. The Office of EMS, upon receipt of the assessment, will notify the Chairperson of the Virginia Medevac Committee. The Virginia Medevac Committee will review and make a recommendation to the Office of Emergency Medical Services.

C. Application Process

An application for a license to operate an air medical service may be obtained from the Office of Emergency Medical Services. The following items are to be included:

1. Name and address of the applicant of the proposed air medical service and the name and address under which the service will operate as defined in 12 VAC 5-31-340.
2. Name, address and FAA (Federal Aviation Administration) certification number of the aircraft operator, if applicable.
3. Description of each aircraft to be used as an air ambulance, including the make, model, year of manufacture, registration number, name, monogram or other distinguishing designation and FAA air worthiness certification.
4. Roster of medical personnel to include levels of certification and/or licensure.
5. Roster of base pilots including training and qualifications.
6. Recommendation of the State Medevac Committee to the Office of EMS following the needs determination process.

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7. Other information the Office deems necessary and prescribes as part of the application. §15.2-955 (Code of Virginia) §32.1-111.14 (Code of Virginia) §5.31-440 (Code of Virginia), §5.31-460 (Code of Virginia).
- D. Agency Site Review (Rotor Wing only)
1. A site review team will inspect the agency. The team will consist of:
 - a. OEMS Program Representative.
 - b. Air Ambulance Service Program Administrator.
 - c. A Pilot.
 - d. Air Ambulance Service Medical Crew Member.
 2. Prior to a site visit, the site review team selected by OEMS shall have:
 - a. Complete copy of the agencies application.
 - b. Current status of the agency with regard to compliance with the Virginia Prehospital Patient Care Reporting Program provided by OEMS as defined by *Code of Virginia*, § 32.1-116.1.
 - c. A list of any received complaints, enforcement actions or investigations conducted by the Office of EMS since the last site visit.

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3. All services applying to provide Medevac service will have an initial site review and renewal site reviews every two (2) years to maintain EMS licensure.
4. Upon request of a representative of the OEMS, an EMS agency licensee will produce for inspection, the air ambulance(s), equipment, personnel, documents and other such items as is determined by the OEMS representative.
5. All records pertaining to the operation of the air medical service must be retained for a minimum of five (5) years.
6. Upon satisfactory completion of the inspection process, the agency will receive an EMS agency license for a two (2) year period. If the air medical service has been issued a correction order or a follow-up form during their site review they may be issued a license with conditions for a defined period of time. At the end of this period the agency must have complied with the conditions of the correction order or follow-up form in order to continue operations.

E. Interruption of service (Rotor Wing only)

1. The air medical service shall notify the OEMS of temporary discontinuation of service from any base expected to last at least twenty

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four (24) hours or greater. In addition, the back up agencies must be contacted and notified to ensure service coverage.

2. OEMS may notify the chairperson of the Virginia State Medevac Committee and determine if an emergent meeting of the committee is required. The Virginia Medevac Committee will recommend an action plan to OEMS to ensure appropriate Medevac coverage is maintained.

12 VAC 5-31-2010. Operations and Safety

A. Operational policies must be present to address the following areas:

1. Medical Flight Personnel

- a. Minimize duty-related fatigue (Fixed Wing excluded).
- b. Hearing protection.
- c. Crash survivability

- 1) Flame retardant clothing (Fixed Wing excluded).
- 2) Seat belts/shoulder harnesses.
- 3) Head-strike protection (Fixed Wing Excluded).
- 4) Securing of on-board and carry-on medical equipment.

- d. Protective clothing and dress codes relative to:

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- 1) Mission type.
 - 2) Infection control.
 - 3) Universal infection control.
- e. Flight status during pregnancy.
 - f. Flight status during acute illnesses.
 - g. Flight status while taking medications.

B. Visual Flight Rules (VFR)/Weather Issues

- a) VFR weather minimums shall be specified for day and night local, and day and night cross country (CC).
- b) VFR “response” minimums shall not be less than FAA minimum standards.
- c) The “local flying area” shall be determined by the operator based upon the operating environment.
- d) There is a system of obtaining pertinent weather information.

The pilot in command (PIC) is responsible for obtaining weather information according to policy which shall address at a minimum:

- a) Routine weather checks.
- b) Weather checks during marginal conditions.

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c) Weather trending.

1. Communication between pilots and medical personnel shall occur at shift change regarding the most current and forecasted weather as part of a formal briefing.
2. Policies include provisions for patient care and transport alternatives in the event that the aircraft must use alternate landing facilities due to deteriorating weather.
3. In the event the responding air medical service is unable to complete the mission, the closest, most appropriate provider of air medical service is to be utilized. The responding air medical service shall provide accurate estimated time of arrival to the requestor. Air medical services shall only respond to incidents when requested by the local jurisdiction.
4. Instrument flight rules (IFR)/Weather Issues – When transitioning to an off-airport site after an instrument approach, the following shall apply:
 - a) Local VFR weather minimums shall be followed if within a defined local area and if the route and off-airport site are familiar.
 - b) Cross-country VFR weather minimums shall be followed if not in defined local area or if not familiar with route and off-airport site.

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C. Communications

The flight crew or a communication specialist must assume the responsibility of receiving and coordinating all requests for the air medical service.

1. Should a communication specialist be employed, training shall be commensurate with the scope of responsibility of the communications center personnel and include:
 - a) Orientation based on the National Association of Air Medical Communication Specialists (NAACS) standards.
 - b) General safety rules and emergency procedures pertinent to air medical transportation and flight following procedures.
 - c) Navigation techniques/terminology and understanding weather interpretation.
 - d) Types of radio frequency bands used in air medical EMS.
 - e) Assistance with the materials response and recognition procedure using appropriate reference materials.
2. Aircraft shall communicate with ground units securing unprepared landing sites prior to landing.
3. Continuous flight following shall be monitored.
4. A readily accessible post incident/accident plan, that is understood by all staff, must be part of the flight following protocol so that appropriate

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search and rescue efforts may be initiated in the event the aircraft cannot be located, is overdue, or radio communication cannot be established.

- a) Written post incident/accident plans are easily identified and readily available.
- b) Current phone numbers are easily accessed.
- c) An annual drill is conducted to exercise the post incident/accident plan.

5. Initial coordination to include communication and documentation of:

- a) Time call received.
- b) Name and phone number of requesting agency.
- c) Time aircraft departed.
- d) Pertinent LZ information.
- e) Number of persons on board.
- f) Amount of fuel on board.
- g) Estimated time of arrival to patient (ETA).
- h) Diagnosis or mechanism of injury.
- i) Referring and receiving physician and facilities (for inter facility transports) as per policy of the air medical service.

6. Communications during mission shall also be documented accordingly:

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- a) Direct or relayed communications to communications center (while in flight) specifying locations and ETA's, and deviations, if necessary.
- b) Direct or relayed communications to communications center specifying take-off and landing information.
- c) Time between each communication.
- d) Time between each communication shall not exceed 15 minutes while in flight.
- e) Alternate agencies shall be used to relay communications when direct contact is not possible.

7. A Communications Center must contain the following:

- a) At least one dedicated phone line for the air medical service.
- b) A system for recording all incoming and outgoing telephone and radio transmissions with time recording and playback capabilities. Recordings shall be kept for a minimum of 30 days.
- c) Capability to immediately notify air medical team and on-line medical direction (through radio, pager, telephone, etc.).
- d) Back-up emergency power source for communications equipment, or a policy delineating methods for maintaining communications during power outages and in disaster situations.
- e) Communications policy and procedures manual.

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D. EMS System Integration/Community Outreach

1. The air medical service shall be integrated with and communicate with other public safety agencies, including ground emergency service providers. This may include appropriate participation in regional quality assurance reviews, regional disaster planning and mass casualty incident drills.
2. The air medical service shall interface with existing communications centers, public safety and law enforcement agencies, as well as with local off-line medical directors, as appropriate for prehospital ALS missions.
3. The air medical service must ensure continuity of care and expeditious treatment of patients by utilizing Statewide Trauma Triage Plan and EMS medical protocols and procedures, whenever applicable.
4. Whenever possible, the air medical service shall provide timely feedback to the referring agency, facility or physician about the patient's outcome and treatment that was rendered before, during, and after transport, where appropriate in compliance with current laws.
5. When requested, the air medical service shall facilitate the integration of emergency services and transport modalities by supporting continuing education programs and operational procedures, for:

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- a. Disaster response/triage.
 - b. Interface of the air medical team with other regional resources.
 - c. Safety program consisting of patient preparation and personal safety around the aircraft to include landing zone (LZ) designation for rotary wing services.
 - d. Patients considered appropriate for transport by the air medical service.
 - e. Hazardous materials recognition and response.
 - f. State Medevac Committee MCI/Mass Casualty Response.
 - g. Advanced Trauma Care.
7. The air medical service (rotor wing only) shall provide a planned, structured safety program to public safety/law enforcement agencies and hospital personnel who interface with the air medical service which includes:
- a. Landing zone designation and preparation.
 - b. Personal safety in and around the helicopter for all ground personnel.
 - c. Procedures for day/night operations, conducted by the air medical team, specific to the aircraft.
 - d. High and low reconnaissance.
 - e. Communication and coordination with ground personnel.
 - f. Approach and departure path selection.

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- g. Procedures for the pilot to ensure safety during ground operations in the landing zone with or without engines running.
- h. Procedure for the pilot to have ground control during engine start and departure from a landing site.
- i. Crash recovery (e.g., extricating a person from specific types of aircraft and knowledge of location of certain components within an airframe of specific aircraft make and model).
- j. Two way communication between helicopter and ground personnel to identify approach and departure obstacles and wind direction.
- k. The service shall maintain records for five years of initial and recurrent training provided by the air medical service to prehospital, referring and receiving ground support personnel.

The air medical service shall make available a plan and structured training program to include safety and utilization specific aspects to area EMS providers and hospital personnel on an annual basis, (i.e. introduction of new equipment or services, etc.).

E. Patient Care Reporting

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The Virginia Office of EMS has been charged with the responsibility of maintaining a comprehensive, coordinated, emergency medical care system in the Commonwealth (*Code of Virginia* § 32.1-111.3). System evaluation and planning must be supported with data. The Office of EMS through the *Code of Virginia* § 32.1-116.1 has the authority to prescribe and collect a minimum dataset from Virginia EMS Agencies. Therefore the following data submissions shall be required by all Virginia licensed Air Medical Services:

1. Submission of the minimum dataset on all patients transported by air medical services, to include scene and interfacility transports.
2. All air medical services missions that are cancelled or not completed.
3. All missed flights due to weather, no unit available, mechanical problems or other.

12 VAC 5-31-2020 Staffing

The type of air medical crew staffing each mission shall be directly related to the mission type: advanced life support, critical or specialty care. In each situation, consideration should be given to use of the closest appropriately staffed aircraft. All air medical crew members must have current appropriate state licensure or certification which legally allows them to function in their respective professions. The air medical transport service is staffed according to the mission statement, anticipated needs and

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scope of services offered. The aircraft, by virtue of medical staffing and retrofitting of medical equipment, becomes a patient care unit specific to the needs of the patient.

Staffing shall be commensurate with the mission statement and scope of care of the air medical service.

A. Definitions.

1. **Advanced life support (ALS)** is a mission generally defined as the transport of a patient who receives care during a transport that includes an invasive medical procedure or the administration of medications (including IV infusions) in addition to any non invasive care that is authorized by the Office of Emergency Medical Services.
2. **Basic life support (BLS)** – is a mission generally defined as the transport of a patient who receives care during a transport that is commensurate with the scope of practice of an Emergency Medical Technician-Basic (EMT-B). In the Commonwealth of Virginia, when such care is provided in the air medical environment, it must be assumed, at a minimum, by a Virginia Certified EMT-Paramedic that is a part of the regular air medical crew. (Fixed Wing excluded)
3. **Critical Care (CC)** is a mission defined as the interfacility transfer of critically ill or injured patients requiring specialized interventions,

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monitoring and/or staffing. Patients deemed as critical care patients could be receiving the following qualifying interventions:

- a. Vasopressors by continuous IV infusion
- b. Vasoactive compounds by continuous IV infusion
- c. Antiarrhythmics
- d. Fibrinolytics
- e. Tocolytics
- f. Blood or blood products
- g. Any other pharmaceutical unique to the patient's special health needs.
- h. Mechanical ventilation
- i. Multiple monitors
- j. Cardiac balloon pump
- k. External cardiac support (e.g. LVAD)
- l. Any other specialized device or procedure unique to the patient's health care needs.

4. **Interfacility Transport** is defined as a mission for whom a patient (or patients) was transported from a hospital or care giving facility (clinic, nursing home, etc) to a receiving facility/airport.

5. **Pre-Hospital (Scene)** Refers to direct response to the scene of incident or injury, such as a roadway, etc.

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6. **Specialty Care Mission** – The transport a patient requiring specialty patient care by one or more professionals who can be added to the regularly scheduled medical transport team.
 7. **Specialty Care Provider** - A provider of specialized medical care, such as neonatal, pediatric, perinatal, etc.
 8. **Air Medical Communications Specialist** – an individual who has received and completed NAACS based orientation education and operates in the following functions: initial call intake, dispatching of aircraft/team, flight following/aircraft tracking, communication with sending/receiving agencies or facilities, radio communications and is responsible for responding to or activating PAIP process.
- B. Air Medical Service Personnel Classifications
1. Pilot
 - a. All pilots must possess a current commercial rotorcraft-helicopter (or fixed-wing) airman’s certificate.
 - b. Pilot in Command (PIC) must possess 1,000 rotorcraft flight hours (or 1500 for fixed wing)as PIC prior to assignment with an air medical service or be currently employed by a public safety agency and have completed their agency pilot training program.

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- c. A planned structure program must be provided for relief pilots, which at a minimum includes specific roles and responsibilities, and familiarization with the region served.
- d. All air medical services shall appoint a lead pilot and designated safety officer to insure adherence to operational safety regulations for the program. Training and experience in air medical mission management and evaluation skills must be possessed to carry out these duties. (Fixed Wing excluded).
- e. The pilot cannot also be considered a member of the air medical crew.

2. Air Medical Crew (Rotary)

- a. An attendant-in-charge shall be an air medical specialist who must be one of the following:
 - 1) Physician;
 - 2) Registered nurse or physician's assistant, licensed for a minimum of two years with specialized air medical training and possessing the equivalent skills of an emergency medical technician - paramedic;

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- 3) Emergency medical technician – paramedic, certified for a minimum of two years with specialized air medical training; or
- 4) Other health care personnel with equivalent training or experience as approved by the Office of EMS.

b. An attendant shall be, at a minimum, a certified EMT-Paramedic.

3. Air Medical Crew (Fixed Wing)

a. An attendant-in-charge shall be an air medical specialist who shall be one of the following:

- 1) A physician;
- 2) A registered nurse or physician's assistant, licensed for a minimum of two years with specialized air medical training;
- 3) An emergency medical technician – certified for a minimum of two years with specialized air medical training; or
- 4) Any other health care personnel with equivalent training or experience as approved by the Office of EMS.

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- b. An attendant shall be an emergency medical technician paramedic or an equivalent approved by the Office of EMS, such as a respiratory therapist, OMD, etc.

4. Specialty Care Mission Providers

- a. The specialty care team must, minimally consist of a specially trained physician or registered nurse, or other specialists as the primary caregiver whose expertise must be consistent with the needs of the patient.
- b. All specialty care team members must have received a basic minimum orientation to the air medical service which includes in-flight treatment protocols, general aircraft safety and emergency procedures, operational policies, infection control and altitude physiology and emergency procedures annually.
- c. Specialty care mission personnel must be accompanied by at least one regularly scheduled air medical staff member of the air medical service, except when independent, dedicated flight specialty teams are used.

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5. Staffing for Specific Mission Types

a. Prehospital Scene Responses.

- 1) A paramedic must be a crew member on all Pre-hospital missions.

b. Inter-facility Transports

- 1) ALS - The transport of a patient whose condition warrants care commensurate with the scope of practice of two air medical ALS providers. For Fixed Wing, the second provider may be a BLS provider.
- 2) Critical Care – The transport of a patient whose condition warrants care commensurate with the scope of practice of a physician or registered nurse. The medical team must, at a minimum, consist of a specially trained physician or registered nurse.

12 VAC 5-31-2030. Training

A planned and structured program shall be required for all regularly scheduled medical transport personnel. Competency and currency must be ensured and documented through relevant continuing education programs/certification programs listed in this section. Training and continuing education programs will be guided by each air medical

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transport service's mission statement and medical direction. Measurable objectives shall be developed and documented for each experience.

1. Pilot Initial Training Requirements

- a. Terrain and weather considerations specific to the program's geographic area (Fixed Wing excluded).
- b. A structured orientation must be conducted for relief pilots who at a minimum must include: roles, responsibilities, and familiarization with the region served (Fixed Wing excluded).
- c. Orientation to the hospital or health care system associated with the air medical service.
- d. Orientation to infection control, medical systems installed on the aircraft and patient loading and unloading procedures.
- e. Orientation to the EMS and public service agencies unique to the specific coverage area (Fixed Wing excluded).

2. Registered Nurse Training Requirements

- a. Valid unrestricted nursing license to practice in Virginia.
- b. Basic Life Support (BLS) - documented evidence of current BLS certification according to the American Heart Association (AHA) standards.

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- c. Advanced Cardiac Life Support (ACLS) - documented evidence of current ACLS according to the AHA, or equivalent as approved by OEMS.
- d. Pediatric Advanced Life Support (PALS) - documented evidence of current PALS or equivalent education.
- e. Neonatal Resuscitation Program (NRP) - documented evidence of current NRP according to the AHA or AAP or equivalent education within one year of hire. (Fixed Wing, Mission specific).
- f. EMT-B or equivalent education within six months of hire (Fixed Wing excluded).

3. Paramedic Training Requirements

- a. Valid unrestricted Virginia Paramedic certification.
- b. Basic Life Support (BLS) - documented evidence of current BLS certification according to the American Heart Association (AHA) standards.
- c. Advanced Cardiac Life Support (ACLS) - documented evidence of current ACLS according to the AHA, or equivalent as approved by OEMS.

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- d. Pediatric Advanced Life Support (PALS) - documented evidence of current PALS or equivalent education.
- e. Neonatal Resuscitation Program (NRP) - documented evidence of current NRP according to the AHA or AAP or equivalent education. (Fixed Wing, mission specific).

4. Minimum Initial Training for Air Medical Crew Members

Didactic Component of Initial Education - shall be specific for the mission statement and scope of care of the medical transport service.

Measurable objectives shall be developed and documented for each experience by the program.

- a. Minimum Training for all air medical crew members, including the OMD, shall include:
 - 1) Altitude physiology/stressors of flight.
 - 2) Air Medical Resource Management.
 - 3) Aviation - aircraft orientation/safety & in-flight procedures/general aircraft safety including depressurization procedures for fixed wing
 - 4) Cardiology.
 - 5) Disaster and triage.
 - 6) EMS radio communications.

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- 7) Hazardous materials recognition and response.
- 8) External pacemakers, automatic implantable cardiac defibrillator (AICD), central lines.
- 9) High risk obstetric emergencies (bleeding, medical, trauma).
- 10) Infection control.
- 11) Mechanical ventilation and respiratory physiology for adult, pediatric and neonatal patients as it relates to the mission statement and scope of care of the medical transport service specific to the equipment.
- 12) Metabolic/endocrine emergencies.
- 13) Multi-trauma (adult trauma and burns).
- 14) Neuro.
- 15) Pediatric medical emergencies.
- 16) Pediatric trauma.
- 17) Pharmacology (specialty application).
- 18) Quality Management – didactic education that supports the medical transport services mission statement and scope of care of the medical transport service.
- 19) Respiratory emergencies.

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20) Scene management/rescue/extrication.

21) Survival training.

22) Toxicology.

5. Additional training for Critical Care air medical crew members, including Paramedics, RN's, MD's and the air medical services OMD shall include within their mission profile:

- a. Hemodynamic monitoring.
- b. Intra-aortic balloon pump.
- c. Pulmonary and arterial catheters.
- d. Ventricular assist devices.
- e. Extracorporeal membrane oxygenation (ECMO).

6. Clinical Component of Initial Education – clinical experiences shall include the following points (experiences shall be specific to the mission statement and scope of care of the medical transport service). Measurable objectives shall be developed and documented for each experience listed below reflecting hands-on experience versus observation only. (Fixed Wing excluded)

- a. Advanced Airway Management.
- b. Basic care for Pediatrics, Neonatal/OB.
- c. Critical care.

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- d. Emergency care.
- e. Invasive procedures on mannequin equivalent for practicing invasive procedures.
- f. Pediatric Critical Care.
- g. Pre-hospital care.

7. Annual Continuing Education Requirements

- a. Continuing education/staff development programs shall include reviews and/or updates for all air medical crew members and the agency OMD of the following areas if within the agencies mission profile:

- 1) Aviation-safety issues.
- 2) Altitude physiology.
- 3) Air Medical Resource Management.
- 4) Hazardous materials recognition and response.
- 5) Invasive procedures labs.
- 6) Management of emergency/critical care adults, pediatric and neonatal patients (medical and trauma).
- 7) Survival training.

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12 VAC 5-31-2040. Equipment**A. Aircraft Equipment****1. General Aircraft Inspection Requirements**

- a. Current FAA Documented Compliance.
- b. Current EMS Permit posted.
- c. Interior/supplies clean and sanitary.
- d. Exterior clean.
- e. Equipment in good working order.
- f. Meets current FAA Specifications.
- g. Current US DOT Emergency Response Book.

2. Aircraft Warning Devices

- a. 180 degree controllable searchlight 400,000 candle power (Fixed Wing excluded).

3. Design and Dimensions

- a. All interior edges and corners padded.
- b. Surfaces easily cleaned and non-stainable.
- c. Door opening for appropriate stretcher as specified by FAA regulations.
- d. Security restraints for stretcher to aircraft.

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- e. Climate controlled environment for operator and patient care compartments.
 - f. Supplemental lighting system shall be installed in the aircraft for use in situations in which standard lighting is insufficient for patient care.
 - g. Electric power outlet must be sufficient to meet the requirements of the agency's scope of mission.
 - h. The service's mission and ability to transport two or more patients shall not compromise the airway or stabilization or the ability to perform emergency procedures on any on-board patient.
4. Aircraft Markings
- a. Lettering is minimum three inches in height.
 - b. Name of agency aircraft is permitted to on both sides, three inches in height, contrasting color.
5. Aircraft Communications (use of cellular phones does not satisfy these requirements):
- a. The aircraft shall be equipped with a functioning emergency locator transmitter (ELT).
 - b. Air Ambulance to dispatch/base of operations.
 - c. Air Ambulance to other EMS vehicles of the same agency (Fixed Wing excluded).

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- d. Attendant-in-Charge to Medical Control (Fixed Wing excluded).
- e. Patient compartment to Pilot.
- f. Includes 155.205 or 462.950/467.950, Call I and 462.975 or 467.975. Call II (Fixed Wing excluded).
- g. The pilot must be able to control and override radio transmissions from the cockpit in the event of an emergency situation.
- h. The flight crew must be able to communicate internally.
- i. If cellular phones are part of the on-board communications equipment, they are to be used in accordance with FCC regulations.

6. Aircraft Safety Equipment

- a. Head strike envelope - Helmets shall be worn by all routine flight crews and scheduled specialty teams.
- b. Seatbelts for all occupants.
- c. Flashlight.
- d. Fire extinguisher mounted in a quick release bracket or other FAA approved fire suppression system.
- e. All items secured to prevent movement while the Air Ambulance is in motion.
- f. No Smoking Sign posted.

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- g. The aircraft shall be equipped with survival gear specific to the coverage area and the number of occupants.
- h. Survival kit to include: Signaling capabilities and shelter.
- i. All items shall be capable of being secured.

B. Medical Equipment

Any in-service air ambulance shall be configured in such a way that the medical transport personnel can provide patient care consistent with the mission statement and scope of care of the medical transport service. The aircraft medical interior is installed according to FAA criteria.

1. General Patient Care Equipment

- a. Adult patients secured per FAA regulations.
- b. Pediatric patients under 60 pounds (27 kg), excluding transport isolette patients, shall be provided with an appropriately sized restraining device (for patient's height and weight) which is further secured by a locking device. A pediatric immobilization device, secured, will meet the criteria for the transport of the pediatric patient.

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- c. A minimum of one stretcher shall be provided that can be carried to the patient and properly secured to the aircraft.
 - 1) The stretcher shall be large enough to carry an adult patient, full length in the supine position.
 - 2) The stretcher shall be sturdy and rigid enough that it can support cardiopulmonary resuscitation. If a backboard or equivalent device is required to achieve this, such device will be readily available.
 - 3) The head of the stretcher shall be capable of being elevated for patient care and comfort.
- d. Biohazard container for contaminated sharp objects (ALS), secured/mounted.
- e. Waterless antiseptic hand wash.
- f. Exam gloves, non-sterile, pairs in sizes small through extra large (small, medium, large and extra large), if not one size fits all.
- g. Face shield/Eyewear.
- h. Infectious waste trash bags.
- i. Linen; towels, blankets and sheets in sufficient quantities to care for patients.

2. Basic Life Support Air Ambulance Equipment Requirements

- a. Roller or conforming gauze of assorted widths.

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- b. Medical adhesive tape, rolls of 1" and 2".
- c. Trauma scissors.
- d. Trauma dressings, minimum of 8" x 10"-5/8 ply, sterile, individually wrapped.
- e. Sterile 4" x 4" gauze pads, individually wrapped.
- f. Occlusive dressings, sterile 3" x 8" or larger.
- g. Oropharyngeal airways, one of each sizes 0-5 wrapped or in closed container).
- h. Nasopharyngeal airways, set of four, varied sizes, with water soluble lubricant.
- i. Bag valve mask with oxygen attachment, adult size, with transparent mask.
- j. Bag valve mask with oxygen attachment, child size, with transparent mask.
- k. BVM Infant Mask.
- l. Portable O2 unit containing a quantity of oxygen sufficient to supply the patient at the appropriate flow rate for the period of time it is anticipated oxygen will be needed, but not less than 10 liters per minute for 15 minutes. The unit must be manually controlled and have an appropriate flow meter.
- m. O2 high concentrate masks and cannula, child and adult (2ea.).

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- n. Infant Nasal Cannula (2).
- o. Installed suction apparatus capable of providing a minimum of twenty minutes of continuous operation at a vacuum of 500 millimeters of mercury or greater and free air flow over 30 liters per minute at the delivery tube.
- p. Portable suction apparatus capable of providing a minimum of twenty minutes of continuous operation at a vacuum of 300 millimeters of mercury or greater and free air flow over of over 30 liters per minute at the delivery tube. A manually powered device does not meet this requirement.
- q. Suction catheters, wrapped, (2 each) rigid, tonsil tip, Fr 18, FR 14, FR 8 and FR 6.
- r. Stethoscope, adult and pediatric sizes.
- s. BP cuff, pediatric, adult, and large adult.
- t. OB kit containing: sterile surgical gloves (2 pair), scissors or other cutting instrument (1), umbilical cord ties (10" long) or disposable cord clamps (4), sanitary pad (1), cloth or disposable hand towels (2) and soft tip bulb syringe (1).
- u. Emesis basin or equivalent container.
- v. Removable stretcher or spine board with a minimum of 3 restraint straps and manufacturer approved aircraft mounting device.

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- w. Rigid cervical collars in small adult, medium adult, large adult and pediatric sizes (1 each).
 - x. Cervical immobilization device.
 - y. Pediatric immobilization device.
 - z. Immobilization devices for upper and lower extremities.
3. Advanced Life Support Air Ambulance Equipment Requirements
- a. A Medication kit with controlled medications authorized by the agency's OMD for use by Paramedic personnel.
 - b. Lockable storage for medication kit and supplies.
 - c. All medications shall be in date.
 - d. Intubation kit with 2 sets of batteries, adult and pediatric blades (sizes 0-4), Magill forceps in adult and pediatric sizes, two (2 each) of disposable tubes in sizes 8.0, 7.0, 6.0, 5.0, 4.0, 3.0, 2.5 or equivalent, rigid adult stylettes (2 each), 10cc disposable syringe (2), 5ml of water soluble lubricant (1).
 - e. There shall be an approved secondary airway device as prescribed by the agency's OMD.
 - f. Assorted IV, IM, subcutaneous and other medication and IV fluid administration delivery devices and supplies as specified by agency's OMD.
 - g. IV infusion pump.

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- h. Defibrillator, cardioversion/external pacing capable.
 - i. EKG monitor.
 - j. Monitor electrodes, two sets each of adult and pediatric defibrillation pads.
 - k. Two sets in adult and pediatric External Pacing pads.
 - l. Two sets each in adult and pediatric non invasive blood pressure monitoring device.
 - m. Continuous End Tidal CO2 monitoring device.
 - n. Pulse Oximetry monitoring device.
4. Critical Care Package Air Ambulance Equipment Requirements (Items listed are in addition to the Air Ambulance ALS package)
- a. Invasive pressure monitoring equipment.
 - b. Internal pacemaker/pulse generator immediately available.
 - c. Ventilator as appropriate for scope of practice.
 - d. Two additional IV infusion pumps.

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