## Article 4

## Air Medical Regulations, Rotor and Fixed Wing Operations

### 12VAC5-31-870. Application for agency licensure.

A. General provisions. Air medial public service agencies will meet or exceed Federal Aviation Regulations, 14 CFR Part 91, and commercial operators will meet or exceed 14 CFR Part 135.

B. Interruption of service (rotor wing only). The air medical service shall notify the Office of EMS of temporary discontinuation of service from any base expected to last 24 hours or greater.

### 12VAC5-31-875. Operations and safety.

Operational policies must be present to address the following areas pursuant to medical flight personnel:

1. Hearing protection.

2. Protective clothing and dress codes relative to mission type.

3. Flight status during pregnancy.

4. Flight status during acute illness.

### 12VAC5-31-880. Air medical service personnel classifications.

Air medical service personnel classifications are as follows:

1. Air medical crew (rotary).

a. A pilot-in-command in accordance with current Federal Aviation Administration (FAA) requirements.

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

(1) Board prepared Physician;

(2) Nurse practitioner, or physician assistant, licensed for a minimum of three years.

(3) Registered nurse, licensed for a minimum of three years;

(4) Paramedic, certified for a minimum of two years

(5) An attendant-in-charge shall have specialized air training as identified in 12VAC5-31-885.

c. An attendant shall be a paramedic, registered nurse, or an equivalent approved by the Office of EMS, with specialized training as identified in 12VAC5-31-885.

2. Air medical crew (fixed wing).

a. A pilot-in-command in accordance with current FAA requirements.

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

(1) A board prepared physician;

(2) A nurse practitioner or physician assistant licensed for a minimum of three years with specialized air medical training;

(3) Registered nurse, licensed for a minimum of three years;

(4) Paramedic, certified for a minimum of two years;

(5) An emergency medical technician certified for a minimum of two years with specialized air medical training; or

(6) Any other health care personnel with equivalent training or experience as approved by the Office of EMS.

c. An attendant shall be a Paramedic or an equivalent approved by the Office of EMS.

3. Specialty care mission providers.

a. The agency shall have in place policies that identify the crew composition for each specialty mission type that it is willing to perform and are consistent with industry standards. These policies shall be approved by the agency OMD and have a method of continuously monitoring adherence to those policies.

b. The specialty care team must minimally consist of a physician, registered nurse or other specialists as the primary caregiver whose expertise must be consistent with the needs of the patient, per the agency's policy required in subdivision 3 a of this section.

c. All specialty care team members must have received an orientation to the air medical service that includes (i) in-flight treatment protocols, (ii) general aircraft safety and emergency procedures, (iii) operational policies, (iv) infection control, and (v) altitude physiology annually.

d. Specialty care mission personnel shall meet the following educational requirements.

(i). Specialty care personnel must have appropriate certification or licensure by appropriate agencies or governing bodies, and have relevant specialty experience as described by program policy.

(ii). Pre-transport safety briefing performed prior to transport.

(iii). Specialty care personnel are familiar with air medical service policies, safety and survival techniques as they relate to the specific aircraft.

**12VAC5-31-885. Training.**

A. The air medical agency shall have a planned and structured program in which all medical transport personnel must participate. Competency and currency must be ensured and documented through relevant continuing education programs or certification programs listed in this section. Training and continuing education programs will be guided by each air medical transport service's mission statement and medical direction. Measurable objectives shall be developed and documented for each experience.

B. Pilot initial training requirements. In addition to FAA requirements pilots must have the following:

1. Orientation to the hospital or health care system associated with the agency’s primary service area.

2. Orientation to infection control, medical systems installed on the aircraft, and patient loading and unloading procedures.

3. Orientation to the EMS and public service agencies unique to the specific coverage area (fixed wing excluded).

C. Physician,

D. Nurse Practitioner, Physician Assistant,

E. Registered nurse training requirements.

1. Valid unrestricted license to practice nursing in Virginia.

2. Cardio-Pulmonary Resuscitation (CPR) - documented evidence of current CPR certification according to the American Heart Association (AHA) standards or equivalent as approved by OEMS.

3. Advanced Cardiac Life Support (ACLS) - documented evidence of current ACLS according to the AHA or equivalent as approved by OEMS.

4. Pediatric Advanced Life Support (PALS) - documented evidence of current PALS or equivalent education.

5. Neonatal Resuscitation Program (NRP) - documented evidence of current NRP according to the AHA or American Academy of Pediatrics (AAP) or equivalent education within one year of hire. (fixed wing, mission specific).

6. EMT or equivalent education within twelve months of hire (fixed wing excluded).

F. Paramedic training requirements.

1. Valid Virginia Paramedic certification.

2. CPR - documented evidence of current CPR certification according to the AHA standards or equivalent as approved by OEMS.

3. ACLS - documented evidence of current ACLS certification according to the AHA or equivalent as approved by OEMS.

4. PALS - documented evidence of current PALS or equivalent education.

5. NRP - documented evidence of current NRP according to the AHA or AAP or equivalent education. (fixed wing, mission specific).

G. Minimum initial training for air medical clinical staff.

1. 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.

Minimum training for all air medical crew members, including the OMD, shall include:

a. Altitude physiology and stressors of flight.

b. Air medical resource management.

c. Aviation - aircraft orientation, safety, in-flight procedures, and general aircraft safety including depressurization procedures for fixed wing.

d. Cardiology.

e. Disaster and triage.

f. EMS radio communications.

g. Hazardous materials recognition and response.

h. External pacemakers, automatic implantable cardiac defibrillator (AICD), and central lines.

i. High risk obstetric emergencies (bleeding, medical, trauma).

j. Infection control.

k. 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.

l. Metabolic or endocrine emergencies.

m. Multi-trauma (adult trauma and burns).

n. Neuro.

o. Pediatric medical emergencies.

p. Pediatric trauma.

q. Pharmacology (specialty application).

r. Respiratory emergencies.

s. Scene management, rescue and extrication.

t. Rescue and extrication awareness.

u. Survival training.

v. Toxicology.

2. Clinical component of initial education. Clinical experiences or high fidelity simulations 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 and obstetrics.

c. Critical care.

d. Emergency care.

e. Invasive procedures on mannequin equivalent for practicing invasive procedures.

f. Pediatric critical care.

g. Prehospital care.

3. Annual continuing education requirements. Continuing education or staff development programs shall include reviews or updates for all air medical crew clinical staff and the agency OMD on the following areas:

a. Aviation safety issues.

b. Air medical resource management.

c. Hazardous materials recognition and response.

d. Invasive procedures labs.

e. Management of emergency or critical care adults, pediatric, and neonatal patients (medical and trauma).

f. Survival training.

**12VAC5-31-890. Equipment.**

A. Aircraft equipment.

1. General aircraft inspection requirements.

a. Current FAA documented compliance.

b. Current EMS permit posted.

c. Interior and supplies clean and sanitary.

d. Exterior clean.

e. Equipment in good working order.

f. Current USDOT Emergency Response Guide.

2. Aircraft warning devices.

a. 180 degree controllable searchlight 400,000 candle power (fixed wing excluded)

3. Design and dimensions.

a. Surfaces easily cleaned and nonstainable.

b. Security restraints for stretcher to aircraft.

c. Climate controlled environment for operator and patient care compartments.

d. 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 on both sides, three inches in height, contrasting color.

5. Aircraft communications.

a. The aircraft shall be equipped with a functioning emergency locator transmitter (ELT).

b. Attendant-in-charge to medical control (fixed wing excluded).

c. Patient compartment to pilot.

d. The pilot must be able to control and override radio transmissions from the cockpit in the event of an emergency situation.

e. The flight crew must be able to communicate internally.

f. Cellular phones may not be used to satisfy these requirements.

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.

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. Safety apparel.

j. 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.

1. General patient care equipment.

a. A minimum of one stretcher shall be provided that can be carried to the patient and properly secured to the aircraft as defined in FAR 27.785.

(1) The stretcher shall be age appropriate and 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. (1)

(3) The head of the stretcher shall be capable of being elevated for patient care and comfort.

(4) The stretcher shall be equipped with a minimum of 3 restraint straps

b. Biohazard container for contaminated sharp objects (ALS), secured or mounted. (1)

c. Waterless antiseptic hand wash. (1)

d. Exam gloves, nonsterile, pairs in sizes small through extra large (small, medium, large, and extra large), if not one size fits all. (5)

e. Face shield or eyewear. (Helmet shield acceptable substitute)(2)

f. Infectious waste trash bags. (2)

g. Linen: towels, blankets, and sheets. (2 each)

2. Basic life support air ambulance equipment requirements.

a. Roller or conforming gauze of assorted widths. (6)

b. Medical adhesive tape, rolls of 1" and 2". (2)

c. Trauma scissors. (1)

d. Trauma dressings, minimum of 8" x 10"-5/8 ply, sterile, individually wrapped. (2)

e. Sterile 4" x 4" gauze pads, individually wrapped. (10)

f. Occlusive dressings, sterile 3" x 8" or larger. (2)

g. Oropharyngeal airways, one of each sizes 0-5 wrapped or in closed container. (1 set)

h. Nasopharyngeal airways set of four, varied sizes, with water soluble lubricant. (1 set)

i. Bag valve mask with oxygen attachment, adult size, with transparent mask. (1)

j. Bag valve mask with oxygen attachment, child size, with transparent mask. (1)

k. BVM infant mask. (1)

l. Portable $O_2$ 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 approved flow meter.

m. Installed oxygen system containing a sufficient quantity of oxygen to supply two patient flowmeters at the approximate flow rate for the period of time it is anticipated oxygen will be needed, but not less than 10 liters per minute for 30 minutes. This unit must be capable of being manually

controlled, have two flowmeters, and have an attachment available for a single use humidification device.

n. $O_2$ high concentrate mask and cannula, child and adult. (2 each)

o. Installed suction apparatus capable of providing a minimum of 20 minutes of continuous operation. (1)

p. Battery powered portable suction apparatus. A manually powered device does not meet this requirement. (1)

q. Suction catheters, wrapped, rigid tonsil tip, FR18, FR14, FR8 and FR6. (2 each)

r. Stethoscope, adult, and pediatric sizes. (1 each)

s. BP cuff, pediatric, adult, and large adult. (1 each)

t. Obstetrics 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. (2)

v. Rigid cervical collars in small adult, medium adult, large adult, and pediatric sizes (1 each). If adjustable adult collars are utilized, a minimum of two.

w. First aid kit of durable construction and suitably equipped. The contents of this kit may be used to satisfy these supply requirements completely or in part. (1)

3. Advanced life support air ambulance equipment requirements.

a. A drug kit with controlled medications authorized by the agency's OMD for use by clinical staff. (1)

b. Lockable storage for drug kit and supplies.

c. All drugs shall be in date.

d. Intubation kit with two sets of batteries, adult and pediatric blades and handles (sizes 0-4) (1 set), Magill forceps in adult and pediatric sizes (1 each), disposable tubes in sizes 8.0, 7.0, 6.0, 5.0, 4.0, 3.0, 2.5, or equivalent (2 each), rigid adult stylettes (2 each), 10cc disposable syringe (2), and 5ml of water soluble lubricant (1).

e. There shall be an approved secondary airway device as prescribed by the agency's OMD. (1)

f. Assorted IV, IM, subcutaneous, and other drug and IV fluid administration delivery devices and supplies as specified by agency's OMD.

g. IV infusion pump. (1)

h. Defibrillator, cardioversion and external pacing capable. (1)

i. EKG monitor. (1)

j. Monitor electrodes, with adult and pediatric defibrillation pads. (2 each)

k. Adult and pediatric external pacing pads. (2 each)

l. Noninvasive blood pressure monitoring device capable of adult and pediatric use. (1)

m. Continuous end tidal $CO_2$ monitoring device. (1)

n. Pulse oximetry monitoring device. (1)

o. A mechanical ventilator and circuit appropriate to age and scope of care on-board for critical care transports as pertinent to the scope of care of the medical transport service.