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NOTICES

DEPARTMENT OF HEALTH

Vehicle, Equipment and Supply Requirements for Emergency Medical Services Agencies

[51 Pa.B. 5906]

[Saturday, September 11, 2021]

Under 28 Pa. Code § 1027.3(c) (relating to licensure and general operating standards), the Department of Health (Department) has the authority to publish in the *Pennsylvania Bulletin*, and update as necessary, vehicle construction and equipment and supply requirements for emergency medical services (EMS) agencies based upon the types of services they provide and the EMS vehicles they operate. An EMS agency that is licensed to operate as a quick response service (QRS), basic life support ambulance, intermediate life support ambulance, advanced life support ambulance, critical care ambulance, air ambulance, basic life support squad, intermediate life support squad and advanced life support squad service by the Department under 35 Pa.C.S. § 8129 (relating to emergency medical services agencies), shall maintain and have readily available in working order the following vehicle, equipment and supply requirements.

A. *Ground Ambulance Requirements*

Ground Ambulances: QRS/Basic Life Support/Intermediate Life Support/Advanced Life Support/Critical Care Transport/Basic Life Support Squad/Intermediate Life Support Squad/Advanced Life Support Squad

1. The ambulance must meet the requirements of Federal Specifications KKK 1822 and Ambulance Manufacturers Division (AMD) Standards in effect at the time of the vehicles manufacture. (Does not apply to a Squad Vehicle.)
2. The ambulance must meet the requirements in 75 Pa.C.S. (relating to Vehicle Code) for vehicle registration, annual safety inspection and liability insurance, and the requirements of all Department of Transportation regulations relating to flashing and revolving lights, including intersection lights.
3. Emblems and markings must be affixed to the ambulance exterior as follows:
 - a. The word "AMBULANCE" shall be mirror imaged in letters not less than 4" high, centered above the grill. The placement of the word "AMBULANCE" shall be on the rear of the vehicle and the curved surface of the hood or can be placed on a flat bug screen. (Does not apply to a Squad Vehicle or QRS Vehicle.)
 - b. The words "EMS SQUAD," "PARAMEDIC," "ALS SQUAD," "BLS SQUAD" or "PARAMEDIC RESCUE," shall be mirror imaged in letters not less than 4" high, centered above the grill. The placement of the wording identified in this section shall be on the rear of the vehicle and the curved surface of the hood, front bumper or can be placed on a flat bug screen. (Does not apply to ambulances, Fire Apparatus (for example, Rescue, Engine, Ladder, Tower and the like) that is primarily used for fire suppression or QRS Vehicle.)

c. "Star of Life" shall appear on the ambulance in the following sizes and numbers

* Two 3" size "Stars of Life" on each side of the word "AMBULANCE" on the hood of the vehicle or on a bug screen.

* Two 16" size "Stars of Life" on the right and left side panels.

* Two 12" size "Stars of Life" on the rear of the vehicle.

* One 32" size "Star of Life" on the vehicle rooftop.

Note: All squad units must have at least 3" size "Stars of Life," one on each side, and two in front and two on the rear of the vehicle. (Does not apply to QRS Vehicles.)

d. The Department issued licensure decal must be applied to right and left exterior sides of the vehicle in a conspicuous place.

e. A reflective chevron is not required. If used, a reflective chevron may be placed on the rear vertical surface of the exterior of the vehicle. The chevron pattern shall slant downward on both sides of the vehicle at an angle of 45° pointing in the direction of the bottom rear corner of the tailboard. The pattern shall resemble an inverted V with the point at the top center of the vehicle. The chevron shall use an alternating color pattern. The vertical panels shall be 8" to 12" wide and at least 24" in height, and consist of alternating color retro-reflective stripes at least 4" in width. If the panel height is greater than 36" the stripes shall be 6" wide, shall slope down at 45° and have a minimum of 270 square inches of retro-reflective area facing traffic.

4. The name of the EMS agency or its registered fictitious name in letters at least 3" in size must appear on both the right and left exterior sides of the vehicle. The name must be the dominant lettering. Reference the Agency Name and Fictitious Name FAQ published on January 20, 2017.

a. The word "Ambulance" or words such as Emergency Medical Services, EMS and Rescue must also appear on both exterior sides and rear of the vehicle. (Does not apply to Squad Vehicle.)

5. The EMS vehicle must be equipped with an electronically operated audible warning device with a 100-watt or higher watt speaker.

6. The ambulance must have overhead interior lighting that illuminates the entire top surface of the patient litter, stair-well lighting and courtesy lights that must illuminate the ambulance's controls. (Does not apply to a Squad Vehicle or QRS Vehicle.)

7. The ambulance must have a dual battery system. (Does not apply to Squad Vehicle or QRS Vehicle.)

8. The ambulance must have two minimum 5 pound unit fire extinguishers (ABC dry chemical or carbon dioxide) in a quick-release bracket, one in the driver/cab compartment or in the body of the ambulance reachable from outside the vehicle and one in the patient compartment. When located in either the driver or patient compartment the mounting bracket shall be of a stable design. Each fire extinguisher must be intact with a safety seal, have been inspected within the previous 12 calendar months and have the appropriate completed inspection tag attached. (Squad and QRS Vehicles are only required to have one.)

9. The ambulance must have a power supply to generate sufficient current to operate all accessories without excessive demand on the generating system. All exterior and interior lighting and onboard equipment shall be able to run for at least 5 minutes without placing a demand on the engine.

10. The ambulance must have a nonskid floor that is flat, reasonably unencumbered, free of equipment in the walk-through areas and well maintained. (Does not apply to a Squad Vehicle or QRS Vehicle.)
11. The ambulance must have minimum interior dimensions of 60" from floor to ceiling. (Does not apply to a Squad Vehicle or QRS Vehicle.)
12. The ambulance must have a patient partition to separate the patient area from the driver area. (Does not apply to a Squad Vehicle or QRS Vehicle.)
13. The ambulance must have storage cabinets with sliding doors or with latches, or have a cargo-type netting or other means to ensure against opening during vehicle movement. (Does not apply to a Squad Vehicle or QRS Vehicle.)
14. Bulky items such as portable radios and AEDs, oxygen equipment and jump bags must be secured at all times during patient transport to prevent them from falling on patients or crew or becoming projectiles if the vehicle is involved in an accident. Equipment on a Squad Vehicle or QRS must be in cabinets or otherwise secured at all times.
15. The ambulance must have two IV hangers mounted flush with the ceiling. (Does not apply to a Squad Vehicle or QRS Vehicle.)
16. The ambulance must have a litter for transporting a patient and at least five patient restraint straps (which includes a minimum of two shoulder restraint straps) in good operating condition that are secured to the litter. (Does not apply to a Squad Vehicle or QRS Vehicle.)
17. The ambulance must have a stair chair designed for patient extrication.
18. The ambulance must have a pediatric safe transport device. (Does not apply to a Squad Vehicle or QRS Vehicle.)
19. The ambulance must have doors that function properly with door seals that are not cracked, broken or missing pieces, and are otherwise in good condition.
20. The ambulance must have both "No Smoking Oxygen Equipped" and "Fasten Seat Belts" signs (in English) in both the driver and the patient compartment. A Squad and QRS Vehicle is required to have these signs in the driver compartment.
21. The ambulance must have operational heating, cooling and ventilation equipment meeting GSA KKK-1822 Standard. Must be capable of maintaining patient compartment temperature of 68°F to 78°F.
22. Required equipment and supplies shall be carried and readily available in working order and maintained in accordance with manufactures recommended/required operating standards.
23. The EMS vehicle must have current vehicle inspection validation issued by the state where the vehicle is registered.
24. The EMS vehicle must have communication equipment that is in compliance with the regional communication plan. This equipment shall allow for direct communication with a public safety answering point (PSAP) and hospitals in the agency response/service areas. A cellular phone may be used as a backup means of communication and not as the primary means of communication.
25. The ambulance must have an installed, onboard oxygen system with the following: (Does not apply to a Squad Vehicle or QRS Vehicle.)

a. At least 122 cubic feet supply of oxygen in a cylinder that is secured to provide maximum safety for patients and personnel. The oxygen cylinders shall be mounted with restraining devices, as required for the crashworthiness tests of AMD Standard 003, Oxygen Tank Retention System. A liquid oxygen system that provides the same volume of oxygen and meets AMD Standard 003 is also acceptable. Critical Care Transport ambulance must have onboard oxygen system with a capacity of a minimum of 6,800 liters.

b. The cylinder must have more than 500 liters of oxygen at all times (Critical Care Transport ambulance must have more than 1,750 liters of oxygen at all times.) and be secured with at least three metal or nylon brackets while in the compartment.

c. The unit must be equipped with a reducing valve (from 2,000 psi to 50 psi line pressure).

d. The unit must be equipped with one flow meter with a range of 0—25 lpm delivery.

26. The ambulance must have an installed onboard suctioning system with the following components or capabilities; or both: (Does not apply to Squad Vehicle.)

a. It is fitted with a large bore, nonkinking tubing.

b. It has power enough to provide within 4 seconds a vacuum of over 300 mm/Hg or 11.8 inches of water when the tube is clamped.

c. It is controllable for use on children and intubated patients. The vacuum gauge, when attached to the tubing, must be adjustable to the amount of vacuum needed to ensure that the unit can maintain vacuum levels without requiring continuous increase in control.

d. It is equipped with a lateral opening between the suction tube and the suction source.

B. *Air (Rotorcraft) Ambulance Requirements*

The following will apply to all air ambulances. The air ambulance must have:

1. The name of the air ambulance service or its registered fictitious name prominently displayed on the exterior of the aircraft. Reference the Agency Name and Fictitious Name FAQ published on January 20, 2017.

2. Exterior lighting that illuminates the tail rotor and pilot controllable search/spot/landing lights.

3. An "Air Worthiness Certificate" from the Federal Aviation Administration (FAA).

4. A patient litter capable of carrying one adult in the supine position and capable of being secured according to FAA requirements.

5. An FAA Form 337 with items 1 (which identifies the aircraft), 2 (which identifies the aircraft owner) and 7 (which shows that the aircraft is approved to "Return to Service") completed and signed by the appropriate FAA official.

6. Climate controls for maintaining an ambient cabin temperature of between 60°—85° during flight.

7. Sufficient interior lighting to allow for close observation of patients.

8. A physical barrier between the pilot, throttle, flight controls and radios and the patients.

9. Patient litter with manufacture approved straps.

10. A 110-volt electrical outlet for each patient transported.
11. Two-way radio communications for the pilot to be able to communicate with hospitals, PSAPs and ground ambulances in areas to which the air ambulance routinely provides service.
12. At least one headset per crew member with built in communication among the crew when the aircraft is operating and noise levels prevent normal conversation.
13. One fully charged fire extinguisher rated at least 5 B:C securely mounted where it can be reached by the pilot or crewmembers. The fire extinguisher must be intact with safety seal, have been inspected within the previous 12 calendar months and have the appropriate inspection tag attached.
14. Installed onboard suctioning equipment that meets the same requirements as a transporting ground ambulance. (See requirements under Ground Ambulances.)
15. Must have a pediatric safe transport device.
16. An onboard oxygen system with the following:
 - a. Cylinders with a capacity of 1,200 liters.
 - b. The cylinders must have at least 1,650 psi at the time of inspection.
 - c. If a liquid oxygen system is used, manufacturer documentation must be provided that the system has at least a 1,200-liter capacity.
 - d. A flow meter with a range of 0—25 lpm delivery.

	BLS		BLS IALS		IALS ALS		ALS		
Equipment/Supplies	QRS	Ambulance	Squad	Ambulance	Squad	Ambulance	Squad	CCT	Air
Portable Suction Unit with wide-bore tubing. Must achieve 300 mm/Hg or 11.8" in 4 sec	X	X	X	X	X	X	X	X	X
<i>Suction catheters, pharyngeal: (Must be sterile) Size is FR</i>									
Rigid (2)	X	X	X	X	X	X	X	X	X
Flexible 6 and 8 (1 each)		X	X	X	X	X	X	X	X
Flexible 10 or 12 (2)		X	X	X	X	X	X	X	X
Flexible 14 or 16 (2)		X	X	X	X	X	X	X	X
<i>Airways:</i>									
Nasopharyngeal (5 different sizes) Size 16, Size 24, Size 26, Size 32, Size 34 (1 of each)	X	X	X	X	X	X	X	X	X
Oropharyngeal (6 different sizes) Size 0, Size 1, Size 2, Size	X	X	X	X	X	X	X	X	X

3, Size 4, Size 5 (1 of each)

Sphygmomanometer:

Child, Adult and Thigh (large) (1 each) X X X X X X X X X

Interchangeable gauges are permitted

Stethoscope (1) Adult and (1) Pediatric X X X X X X X X X

Stethoscope Doppler (1) X X X X X X X X X

Penlight (1) X X X X X X X X X

Portable Oxygen Unit:

Cylinder capacity of at least 300 Liters (D Size), with 500 psi Yoke Cylinder with a minimum total pressure of 500 psi X X X X X X X X X

Nonsparking wrench/tank opening device X X X X X X X X X

Gauge/flow meter not gravity dependent and can deliver 0—25 liter per minute X X X X X X X X X

Full spare cylinder with at least 300 liter capacity X X X X X X X X X

Cylinders must be secured in the vehicle at all times X X X X X X X X X

Folding Litter/Collapsible Device (1) X X X X X X X

Oxygen Delivery Devices:

Nasal Cannulas adult/pediatric 1 each X X X X X X X X X

High concentration mask capable of providing 80% or greater concentration adult, pediatric, infant —1 each X X X X X X X X X

Humidifier bottle (1) X X X X X X X

Adhesive Tape (4 rolls assorted) 1 roll must be hypoallergenic X X X X X X X X X

Dressings:

Multi Trauma (10 × 30) (4)	X	X	X	X	X	X	X	X	X
Occlusive (3 × 4) (4)	X	X	X	X	X	X	X	X	X
Sterile Gauze Pads (4 × 4) (25)	X	X	X	X	X	X	X	X	X
Soft self-adhering (6 rolls)	X	X	X	X	X	X	X	X	X
Bandage Shears (1)	X	X	X	X	X	X	X	X	X
<i>Immobilization Devices:</i>									
Cervical spine device (1)		X		X		X		X	
Long spine board (1)		X		X		X		X	
Rigid/Semi-rigid neck immobilizer S, M, L, pediatric (1 each) Multi-size are permitted and will suffice for the S, M, L (3)		X	X	X	X	X	X	X	X
<i>Bag-Valve-Mask Devices:</i>									
Hand operated infant/pediatric (450—700cc) (1) Must be capable of high concentration oxygen delivery with adult and pediatric masks to include neonatal, infant and child sizes	X	X	X	X	X	X	X	X	X
Pediatric length-based Drug Dosing/Equipment Sizing Tape, most current version available				X	X	X	X	X	X
Straps—9' (5) (may substitute spider straps or speed clips for 3 straps)		X		X		X		X	
<i>Splinting Devices:</i>									
Lower extremity mechanical traction splint adult and pediatric (1 each or combination)		X		X		X		X	
Upper and Lower extremity splints (2 each)		X		X		X		X	
Sterile Water/Normal Saline (2 liters)		X	X	X	X	X	X	X	X

Sterile Burn Sheet (4' X by 4') (2)	X	X	X	X	X	X	X	X	X
Cold Packs, Chemical (4)	X	X	X	X	X	X	X	X	X
Heat Packs, Chemical (4)	X	X	X	X	X	X	X	X	X
Triangular Bandages (8)	X	X	X	X	X	X	X	X	
Sterile OB Kits (2) (AIR 1)	X	X	X	X	X	X	X	X	X
Separate Bulb Syringe (1) Sterile	X	X	X	X	X	X	X	X	X
Sterile Thermal Blanket (Silver Swaddler) (1), or 1 roll of sterile aluminum foil for use on infants/newborns	X	X	X	X	X	X	X	X	X
Blankets (2)	X	X	X	X	X	X	X	X	
Sheets (4)	X			X		X			X
Pillowcases (2)	X			X		X			X
Pillow (1)	X			X		X			X
Towels (4)	X			X		X			X
Appropriate patient coverings capable of maintaining body temperature based on anticipated weather conditions									X
Disposable Tissues (1 box)	X			X		X			X
Emesis Container (1)	X			X		X			X
Urinal (1)	X			X		X			X
Bed Pan (1)	X			X		X			X
Disposable Paper Drinking Cups (3 oz.) (4)	X			X		X			X
Regional Approved Triage Tags (20)	X	X	X	X	X	X	X	X	X
Hand-lights (2)	X	X	X	X	X	X	X	X	X
Hazard Warning Device (3)	X	X	X	X	X	X	X	X	X
Emergency BLS/ALS Jump Kit (1)	X	X	X	X	X	X	X	X	X
Survival Bag (1)									X
Emergency Response Guidebook (1) Current Ed.	X	X	X	X	X	X	X	X	X
Thermometer—	X	X	X	X	X	X	X	X	X

electronic digital,
non-tympanic

Sharps Receptacle— X X X X X X X X
Secured

Instant Glucose (40% X X X X X X X X X
dextrose-d-glucose
gel) or food grade
substitute (for
example, cake
frosting) 45 grams

Personal Protective X X X X X X X X
Equipment (PPE)
Helmet, eye
protection, gloves and
high-visibility safety
apparel (1 per crew
member)

Flight Helmet (1 per X
crew member)
W/Comm.

Personal Infection Control Kit, which includes the following:

Eye protection, clear, X X X X X X X X X
disposable (1 per
crew member)

Gown/coat (1 per X X X X X X X X X
crew member)

Surgical Cap/Foot X X X X X X X X X
Coverings, disposable
(1 set per crew
member)

Exam Gloves (1 set X X X X X X X X X
per crew member)

Sharps Containers X X X X X X X X X
and Red Bags per
Infectious Control
Plan

N95 respirator (1 per X X X X X X X X X
crew member)

Hand Disinfectant— X X X X X X X X X
Nonwater hand
disinfectant (1
container)

Sponges, Alcohol, X X X X X X X X X
Prep (10)

Endotracheal Tubes Sizes/Quantities:

2.5 mm or 3.0 mm (2 X X X X
uncuffed)

3.5 mm or 4.0 mm (2 X X X X
uncuffed)

4.5 mm or 5.0 mm (2) X X X X

5.5 mm or 6.0 mm (2)							X	X	X	X
6.5 mm or 7.0 mm (2)							X	X	X	X
7.5 mm or 8.0 mm (2)							X	X	X	X
8.5 mm or 9.0 mm (2)							X	X	X	X
(3) King LT™ Size 3, 4 and 5 or (3) i-gel® Size 3, 4 and 5 or (2) Combitubes™ Size 37 Fr and 41 Fr	X				X		X	X	X	X
Electronic Wave-Form Capnography	X				X		X	X	X	X
Laryngoscope handle with batteries and spare batteries and bulbs and the following blades:							X	X	X	X
<i>Straight</i>										
# 1 (S)							X	X	X	X
# 2 (M)							X	X	X	X
# 3 (L)							X	X	X	X
<i>Curved</i>										
# 3							X	X	X	X
# 4							X	X	X	X
Lubrication (2 cc or larger tubes) sterile water soluble (2)	X	X		X	X		X	X	X	X
Forceps, Magill (adult/pediatric 1 each)							X	X	X	X
<i>Medication and Supplies:</i>										
Per Statewide protocols, approved medications that must be kept within expiration dates	X			X	X		X	X	X	X
Nebulizer System (1)				X			X	X	X	X
<i>Hypodermic needles:</i>										
16—18 gauge (4), 20—22 gauge (4), 23—25 gauge, (4) Total of 12 and each must be individually wrapped and sterile. Two syringes of assorted sizes, including at least one with a 1 mL volume				X			X	X	X	X
<i>Defibrillator/Monitor: (FDA approved)</i>										
(HIGHER THAN							X	X	X	X

IALS ONLY) Battery powered, monophasic or biphasic, energy dose range capable of treating adult and pediatric patients, paper readout, 12 lead electrocardiogram with transmit capabilities and pediatric/adult pads with pacing capabilities

12-Lead ECG

Battery powered, 12 lead electrocardiogram with paper print out and transmit capabilities

X* X*

Defibrillator/Monitor Supplies:

Defibrillator pads, (1) set of adult and (1) set of pediatric, electrodes (ECG, adult and pediatric sizes 12 each)

X X X X X X X

Automated External Defibrillator with pads, (1) set of adult and (1) set of Pedi Pads

X X X X* X*

**IALS vehicles must be capable of obtaining and transmitting a 12-lead ECG and have an AED. To meet this*

requirement the AED and 12-Lead ECG can be met with a single device or by having two separate

CPAP Ventilation—portable equipment with (2) disposable masks

X X X X X X X

Stylette, Malleable—adult (1) must be sterile

X X X X

Phlebotomy Equipment (per protocols)

X X X

Pulse Oximetry

X X X X X X X X X

Electronic Glucose Meter (Optional for BLS ambulance and BLS squad as of September 1, 2017)

X X X X X X X

"IV" fluid Therapy Supplies Catheters over the Needle sized 14, 16, 18, 20, 22 (4 each) and 24 (2)								X	X	X
Micro drip 50—60 drops/ml (2)						X		X	X	X
Macro drip 10—20 drops/ml (2)				X		X	X	X	X	X
IV solutions (2,000) ml total per Statewide protocols				X		X	X	X	X	X
Tourniquets for IV (2)				X		X	X	X	X	X
Intraosseous Needle 14—18 gauge (1 of each)							X	X	X	X
Commercial "Tactical" Tourniquet (2)	X	X	X	X		X	X	X	X	X
Copy of most current version of Statewide EMS protocols	X	X	X	X		X	X	X	X	X
Aspirin, chewable, one small bottle		X	X	X		X	X	X	X	X
Bougie endotracheal tube introducer (1)								X	X	
Video capable laryngoscope with appropriate sized blades (1)								X	X	
Electronic wave-form capnography, nonintubated patient, capable of wave-form display (1)								X	X	
Electronic wave-form capnograph, including gas sampler for intubated patient, capable of wave-form display (1)				X		X	X	X	X	X
Portable transport ventilator which must have the capabilities that include, but are not limited to, controlling rate, volume, FiO2, I:E Ratio, PEEP and volume control,								X	X	

pressure control, SIMV and NPPV modes. Device must have both volume and pressure modes and low/high pressure warning alarms (1)

Portable transport ventilator circuits appropriately sized for patient being transported (2)

3 1/4" over the needle catheter in 10, 12 or 14 gauge (2)

Automated noninvasive blood pressure monitoring device (1)

Endotracheal cuff pressure manometer (1)

Invasive pressure monitoring, electronic waveform, two-channel capability (1)

Portable Doppler (1)

Pelvic stabilization device (1)

Blood administration sets only if agency provides or maintains blood products (2)

Intravenous infusion pumps or one multi-channel unit capable of managing three simultaneous infusions (3)

Onboard oxygen with a capacity of a minimum of 6,800 liters

Portable oxygen with a capacity of a minimum of 1,800 liters

Inverter or generator capability of supporting all

		X	X		
	X	X	X	X	
			X	X	
			X	X	
			X	X	
			X	X	
			X	X	
			X		
			X		
			X		

required equipment
electrical needs

All QRS, basic life support, intermediate advanced life support (IALS), and advanced life support (ALS) ambulances services, which also includes air (rotorcraft) agencies that are licensed to operate in this Commonwealth, shall collect, maintain and report accurate and reliable patient data and information for calls of assistance in the format prescribed using electronic forms provided or approved by the Department. An EMS agency shall file the report for any call to which it responds that results in patient care, assessment or refusal of the patient to be assessed. The report shall be made by completing an EMS patient care report and filing it, within 30 days, with the regional EMS council that is assigned responsibilities for the region in which the ambulance is based. It shall contain information specified by the Department. The Department will publish a list of the data elements and the form specifications for the EMS patient care report form in a notice in the *Pennsylvania Bulletin* and on the Department's web site. Electronic reporting shall conform with the requirements published in the *Pennsylvania Bulletin* notice. The Department will maintain a list of software it has determined to satisfy the requirements for electronic reporting.

Persons with a disability who require an alternative format of this notice (for example, large print, audiotape, Braille) should contact Aaron M. Rhone, Department of Health, Bureau of Emergency Medical Services, 1310 Elmerton Avenue, Harrisburg, PA 17110, (717) 787-8740. Persons with a speech or hearing impairment may use V/TT (717) 783-6154 or the Pennsylvania Hamilton Relay Service at (800) 654-5984 (TT).

ALISON BEAM,
Acting Secretary

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