

District of Columbia Department of Health  
Health Emergency Preparedness and Response Administration  
Division of Emergency Medical Services

# EMS Ambulance Equipment Gap Analysis

June 2014



## Gap Analysis – EMS Ambulance Equipment

The chart below contains all of the items from the 2009 and 2014 American College of Surgeons (ACS) Ambulance Equipment Standard. The columns to the right indicate if the item is mandatory under 2009 (ACS 2009) or the 2014 standard (ACS 2014). It also identifies what is mandatory under current DOH requirements (Current DOH) and what will be required under the new DOH requirements (New DOH) based on the new ACS standard. **Changes are highlighted in yellow.** An “A” in the column indicates an Advanced Life Support item; “B” is a Basic Life Support item. “O” is optional but recommended. If the block is blank the item was not required.

Basic Life Support Ambulances Item	ACS 2009	ACS 2014	Current DOH	New DOH
<b>Ventilation and Airway Equipment</b>				
Portable suction apparatus with a regulator	B	B	B	B
Fixed suction apparatus with a regulator	B	B	B	B
Wide-bore tubing	B	B	B	B
Rigid pharyngeal curved suction tip;	B	B	B	B
Flexible suction catheter – 1 each – between 6F and 10F	B	B	B	B
Flexible suction catheter – 1 each – between 12F and 16F	B	B	B	B
Portable oxygen apparatus, capable of metered flow	B	B	B	B
Portable oxygen supply equipment with variable flow regulator	B	B	B	B
Fixed oxygen supply equipment with variable flow regulator	B	B	B	B
Oxygen administration equipment				
Adequate length tubing	B	B	B	B
Transparent mask, adult, non-rebreathing	B	B	B	B
Transparent mask, adult, valveless	B	B	B	B
Transparent mask, child, non-rebreathing	B	B	B	B
Transparent mask, child, valveless	B	B	B	B
Nasal cannulas, adult	B	B	B	B
Nasal cannulas, child	B	B	B	B
Bag-valve mask (manual resuscitator) hand-operated, self-reexpanding bag, with oxygen reservoir/accumulator; valve (clear, disposable, operable in cold weather)				
Adult B-V-M (>1000 ml)	B	B	B	B
Child B-V-M (450–750 ml)	B	B	B	B
Mask, adult	B	B	B	B
Mask, child	B	B	B	B
Mask, infant	B	B	B	B
Mask, neonate	B	B	B	B
Nasopharyngeal airways, 16F–34F	B	B	B	B
Oropharyngeal airways, sizes 0–5	B	B	B	B
Pulse oximeter	B	B	B	B
Pediatric probe	B	B	B	B
Adult probe	B	B	B	B
Saline drops and bulb suction for infants	B	B	B	B

Basic Life Support Ambulances Item	ACS 2009	ACS 2014	Current DOH	New DOH
<b>Monitoring and Defibrillation</b>				
Automated External Defibrillator (AED)	B	B	B	B
Adult sized pads and cables	B	B	B	B
Child sized pads and cables or Dose Attenuator with Adult Pads	B	B	B	B
<b>Immobilization Devices</b>				
Rigid Cervical Collars, Adjustable or;	B	B	B	B
Child	B	B	B	B
Adult, small	B	B	B	B
Adult, medium	B	B	B	B
Adult, large	B	B	B	B
Head immobilization device, firm padding or commercial device	B	B	B	B
Femur traction device	B		B	
Upper extremity immobilization devices, adults	B	B	B	B
Lower extremity immobilization devices, adults	B	B	B	B
Upper extremity immobilization devices, child	B	B	B	B
Lower extremity immobilization devices, child	B	B	B	B
Impervious backboard, long	B	B	B	B
Impervious backboard, short	B	B	B	B
<b>Bandages</b>				
Sterile burn sheets	B	B	B	B
Triangular bandages	B	B	B	B
Sterile multi-trauma dressings, ABDs, 10"x12" or larger	B	B	B	B
4"x4" gauze sponges	B	B	B	B
Gauze rolls, various sizes	B	B	B	B
Occlusive dressing or equivalent, sterile, 3"x8" or larger	B	B	B	B
Adhesive tape, 1" hypoallergenic	B	B	B	B
Adhesive tape, 2" hypoallergenic	B	B	B	B
Arterial tourniquet	B	B	A	B
<b>Communication</b>				
Two-way communication device between EMS provider, dispatcher, and medical control	B	B	B	B
<b>Obstetrical Kit</b>				
OB Kit - Towels, 4"x4" dressing, umbilical tape, sterile scissors or other cutting utensil, bulb suction, clamps for cord, sterile gloves, blanket	B	B	B	B
Thermal absorbent blanket	B	B	B	B
Head cover	B	B	B	B

Basic Life Support Ambulances Item	ACS 2009	ACS 2014	Current DOH	New DOH
<b>Miscellaneous</b>				
Sphygmomanometer, pediatric	B	B	B	B
Sphygmomanometer, adult regular	B	B	B	B
Sphygmomanometer, adult large	B	B	B	B
Adult stethoscope	B	B	B	B
Length/weight-based tape or appropriate reference material for pediatric equipment sizing and drug dosing based on estimated or known weight <b>or age</b>	B	B	B	B
Thermometer with low temperature capability	B	B	B	B
Heavy bandage or paramedic scissors	B	B	B	B
Cold packs	B	B	B	B
Sterile saline solution for irrigation <b>(1 liter bottles or bags)</b>	B	B	B	B
Flashlights (2)	B	B	B	B
Blankets	B	B	B	B
Sheets <b>(minimum 4), linen or paper minimum one change per cot</b>	B	B	B	B
Towels	B	B	B	B
Triage tags	B	B	B	B
Disposable emesis bags or basins	B	B	B	B
<b>Disposable bedpan</b>	B		B	
Disposable urinal	B	B	B	B
Wheeled cot (conforming to national standard at the time of manufacture)	B	B	B	B
<b>Folding stretcher</b>	B		B	
Stair chair or carry chair	B	B	B	B
Lubricating jelly (water soluble)	B	B	B	B
Patient care charts/forms <b>or electronic capability</b>	B	B	B	B
<b>Access to pediatric and adult patient care protocols</b>		B		B
<b>Infection Control (Latex-free equipment should be available)</b>				
Full peripheral glasses or goggles, face shield	B	B	B	B
Face protection, surgical masks	B	B	B	B
Gloves, nonsterile, <b>must meet NFPA 1999 requirements</b>	B	B	B	B
Coveralls or gowns, <b>fluid resistant</b>	B	B	B	B
<b>Shoe covers</b>	B		B	
Waterless hand cleanser	B	B	B	B
Disinfectant solution for cleaning equipment	B	B	B	B
Standard sharps containers, fixed	B	B	B	B
Standard sharps containers, portable	B	B	B	B
Disposable trash bags for disposing of biohazardous waste	B	B	B	B
Respiratory protection, N95 or N100 mask	B	B	B	B

Basic Life Support Ambulances Item	ACS 2009	ACS 2014	Current DOH	New DOH
<b>Injury Prevention Equipment</b>				
All individuals in an ambulance need to be restrained	B	B	B	B
Protective helmet	B	B	B	B
Fire extinguisher	B	B	B	B
Hazardous material reference guide	B		B	
DOT Emergency Response Guidebook		B		B
Reflective material triangles or other reflective, nonigniting devices	B	B	B	B
Reflective safety wear for each crewmember	B	B	B	B

**All mandatory items included in the Basic Life Support Checklist (above) are required in Advanced Life Support Ambulances**

Advanced Life Support Ambulances Item	ACS 2009	ACS 2014	Current DOH	New DOH
<b>Ventilation and Airway Equipment</b>				
Laryngoscope handle with extra batteries and bulbs	A	A	A	A
Laryngoscope blades, sizes 0–4, straight (Miller)	A	A	A	A
Laryngoscope blades, sizes 2–4, curved (MacIntosh)	A	A	A	A
Endotracheal tubes, sizes 2.5–5.5 mm uncuffed or cuffed (1 each)	A	A	A	A
Endotracheal tubes, 6–8 mm cuffed (1 each)	A	A	A	A
Meconium aspirator adaptor	A		A	
10-mL non-Luerlock syringes	A	A	A	A
Stylettes for endotracheal tubes, adult	A	A	A	A
Stylettes for endotracheal tubes, pediatric	A	A	A	A
Magill (Rovenstein) forceps, adult	A	A	A	A
Magill (Rovenstein) forceps, pediatric	A	A	A	A
End-tidal CO2 detection capability, colorimetric (adult and pediatric) or quantitative capnometry	A	A	A	A
Rescue airway device, such as the esophageal-tracheal double-lumen airway (ETDLA), laryngeal tube, disposable supraglottic airway, or laryngeal mask airway		A		A
<b>Vascular Access</b>				
Crystalloid solutions (1,000-mL bags x 4), fluid must be in bags, not bottles	A	A	A	A
Antiseptic solution wipes	A	A	A	A
IV pole or roof hook	A	A	A	A
Intravenous catheters 14G	A	A	A	A
Intravenous catheters 16G	A	A	A	A
Intravenous catheters 18G	A	A	A	A
Intravenous catheters 20G	A	A	A	A
Intravenous catheters 22G	A	A	A	A
Intravenous catheters 24G	A	A	A	A
Intraosseous needles or devices appropriate for children	A	A	A	A
Intraosseous needles or devices appropriate for adults	A	A	A	A
Venous tourniquet, latex free	A	A	A	A
Syringes of various sizes, including tuberculin	A	A	A	A
Needles, various sizes	A	A	A	A
Needles, one at least 1 ½" for IM injections	A	A	A	A
Intravenous administration sets, microdrip	A	A	A	A
Intravenous administration sets, macrodrip	A	A	A	A
Intravenous arm boards, adult	A	A	A	A
Intravenous arm boards, pediatric	A	A	A	A
<b>Cardiac</b>				
Portable, battery-operated monitor/defibrillator	A	A	A	A
Transcutaneous cardiac pacemaker including pediatric pads and cables	A	A	A	A

Advanced Life Support Ambulances Item	ACS 2009	ACS 2014	Current DOH	New DOH
<b>Other Advanced Equipment</b>				
Nebulizer	A	A	A	A
Glucometer or blood glucose measuring device with reagent strips	A	A	A	A
Large bore needle, at least 3.25" in length	A	A	A	A
<b>Medications (pre-loaded syringes when available)</b>				
Cardiovascular medications				
1:10,000 epinephrine	A	A	A	A
Atropine	A	A	A	A
Adenosine	A		A	
Antidysrhythmics (such as adenosine and amiodarone)	A	A	A	A
Calcium channel blockers	A	A	A	A
Beta-blockers	A	A	A	A
Nitroglycerin (tablets or spray)	A	A	A	A
Aspirin	A	A	A	A
Vasopressor for infusion	A	A	A	A
Cardiopulmonary/respiratory medications				
Albuterol (or other inhaled beta agonist)	A	A	A	A
Ipratropium bromide	A	A	A	A
1:1,000 epinephrine	A	A	A	A
Furosemide	A	A	A	A
50% dextrose solution	A	A	A	A
Sterile diluent or 25% dextrose solution for pediatrics	A	A	A	A
Analgesics, narcotic and nonnarcotic	A	A	A	A
Antiepileptic medications, such as diazepam or midazolam	A	A	A	A
Sodium bicarbonate	A	A	A	A
Magnesium sulfate	A	A	A	A
Glucagon	A	A	A	A
Naloxone hydrochloride	A	A	A	A
Calcium chloride	A	A	A	A
Bacteriostatic water and sodium chloride for injection	A	A	A	A
Additional medications as per local medical director	A	A	O-A	O-A

## The following items are optional equipment

Basic Life Support Ambulances Item	ACS 2009	ACS 2014	Current DOH	New DOH
<b>Optional Equipment</b>				
Pillows	B	B	O	O
Glucometer	B	B	O	O
Elastic bandages, nonsterile (various sizes)	B	B	O	O
Ocular irrigation device		B		O
Hot packs		B		O
Warming blanket		B		O
Cooling device		B		O
Soft patient restraints		B		O
Folding stretcher		B		O
Bedpan		B		O
Cellular phone	B		O	
Infant oxygen mask	B	B	O	O
Infant self-inflating resuscitation bag	B	B	B	B
Nasopharyngeal airway, 12, 14 Fr	B	B	O	O
Oropharyngeal airway (size 00)	B	B	O	O
CPAP/BiPAP capability		B		O
<b>Alternative airway devices – adult</b>				
esophageal tracheal double lumen airway	B		O	
laryngeal tube	B		O	
laryngeal mask airway	B		O	
<b>Alternative airway devices for children</b>	B		O	
Neonatal blood pressure cuff	B	B	O	O
Infant blood pressure cuff	B	B	O	O
Pediatric stethoscope	B	B	O	O
Infant cervical immobilization device	B	B	O	O
Pediatric backboard and extremity splints	B	B	O	O
Femur traction device		B		O
Pelvic immobilization device		B		O
Topical hemostatic agent	B	B	O	O
Appropriate CBRNE PPE, including respiratory and body protection	B	B	O	O
Applicable chemical antidote autoinjectors	B	B	O	O
<b>Optional Basic Life Support Medications</b>				
Albuterol	B		O	
Epi pens	B		O	
Oral glucose	B		O	
Nitroglycerin (sublingual tablet or paste)	B		O	
Aspirin		B		O



Advanced Life Support Ambulances Item	ACS 2009	ACS 2014	Current DOH	New DOH
<b>Optional Advanced Equipment</b>				
Respirator, Volume-cycled, on/off operation, 100% oxygen, 40–50 psi pressure (child/infant capabilities)	A	A	O	O
Blood sample tubes, adult	A	A	O	O
Blood sample tubes, pediatric	A	A	O	O
Automatic blood pressure device	A	A	O	O
Nasogastric tubes	A	A	O	O
pediatric feeding tube sizes 5F and 8F	A	A	O	O
sump tube sizes 8F–16F	A	A	O	O
Pediatric laryngoscope handle	A	A	O	O
Size 1 curved (MacIntosh) laryngoscope blade	A	A	O	O
<b>3.5–5.5 mm cuffed endotracheal tubes</b>	A		O	
Needle cricothyrotomy capability and/or cricothyrotomy capability	A	A	O	O
Gum elastic bougies		A		O
Rescue airway devices for children		A		O
Atomizers for administration of intranasal medications		A		O
<b>Optional Advanced Life Support Medications</b>				
<b>Anxiolytics</b>	A		O	
Intubation adjuncts including neuromuscular blockers	A		O	