



Equipment for Ambulances in Federal Disaster Response

Approved by FEMA & HHS 8/28/08

American Medical Response (AMR) is under contract with the Federal government to provide EMS in response to Federally-declared disaster as approved by FEMA. The following list represents recommendations for the equipment and supplies that will facilitate patient care activities in the out-of-hospital setting during Federal disasters. Unless otherwise regulated by applicable state law, all ambulances that deploy in response to activation of the AMR/FEMA Federal National Ambulance Service Contract shall be equipped in accordance with the consensus statement published jointly by the *National Association of EMS Physicians, the American College of Emergency Physicians, and the American College of Surgeons Committee on Trauma*¹, with the modifications set forth herein.

The contractor may choose to establish caches of reserve ambulances to be used exclusively for disaster response. They may not be used for non-disaster routine patient transport. Since they are not used for routine patient transport, they need not be licensed or permitted by the State EMS Authority in the state(s) where they are stored, and are not subject to the ambulance equipment minimum standards of the state(s). These reserve ambulances, when used for Federal deployment, will be stocked with the minimum equipment established herein. These vehicles will be marked with special placards identifying them as Disaster Reserve Ambulances.

Some ambulances responding to Federal disasters pursuant to the AMR/FEMA Contract may be from states that require additional equipment, which exceeds these minimum guidelines. Use of this additional equipment will be guided by medical control authorities having jurisdiction at the disaster site. Under no circumstances will EMS responders be allowed to use equipment and perform skills that exceed their formal training and scope of practice. For EMS deployments pursuant to the AMR/FEMA Federal National Ambulance Service Contract, the *National EMS Core Content*² defines the domain of out-of-hospital care. The scope of practice for the AMR/FEMA Federal National Ambulance Service Contract shall be the *National EMS Scope of Practice Model*³, which divides the core content into levels of practice, defining the minimum corresponding skills and knowledge for each level.

Except for controlled substances, the contractor shall be responsible for stocking and/or re-supplying the ambulances such that all of the equipment and supplies listed in the Joint Statement (as modified) are on board during patient care and transport.

¹ Equipment for Ambulances: A Joint Statement from the National Association of EMS Physicians, the American College of Emergency Physicians, and the American College of Surgeons Committee on Trauma. Pre-hospital Emergency Care 2007; 11:326-29.

² National EMS Core Content. National Highway Traffic Safety Administration. DOT HS 809 898. July 2005.

³ National EMS Scope of Practice Model. National Highway Traffic Safety Administration. DOT HS 810 657. February 2007.

All supplies, reagents, fluids and medications shall be stored under conditions specified by the manufacturer, and shall not have exceeded their shelf lives according to their expiration dates.

BASIC LEVEL PROVIDERS

A. VENTILATION AND AIRWAY EQUIPMENT

1. Portable and fixed suction apparatus
 - Wide-bore tubing, rigid pharyngeal curved suction tip; tonsillar and flexible suction catheters, 5F-14F
2. Portable and fixed oxygen equipment.
 - Variable flow regulator
3. Oxygen administration equipment
 - Adequate length tubing; mask (adult, child, and infant sizes), transparent, non-rebreathing, and valveless; Nasal cannulas (adult, child, and infant sizes)
4. Pocket mask with one-way valve
5. Bag-valve mask
 - Hand-operated, self re-expanding bag (adult and infant sizes), with oxygen reservoir/accumulator; clear mask (adult, child, infant sizes, and neonate sizes); valve (clear, disposable, operable in cold weather)
6. Airways
 - Nasopharyngeal, oropharyngeal (adult, child, and infant sizes)
7. Alternative airway devices (e.g., ETDLA [esophageal-tracheal double lumen airway]) as authorized by medical direction

B. MONITORING AND DEFIBRILLATION

All ambulances shall be equipped with an automated external defibrillator unless staffed by advanced life support personnel with a cardiac monitor and defibrillator.⁴

C. IMMOBILIZATION DEVICES

1. Cervical collars
 - Rigid for children ages 2 years or older, infant, child, and adult sizes (small, medium, large, and other available sizes)
2. Head immobilization device (not sandbags)
 - Firm padding or commercial device
3. Lower extremity (femur) traction devices
 - Lower extremity, limb-support slings, padded ankle hitch, padded pelvic support, traction strap (adult and child sizes)
4. Upper and lower extremity immobilization devices
 - Joint-above and joint-below fracture (adult and child sizes), rigid-support appropriate material (cardboard, metal, pneumatic, vacuum, wood, or plastic)
5. Radiolucent backboards (long, short) and extrication device

⁴ AEDs were not required in original RFP and contract and not all states require them on BLS ambulances. BLS ambulances will be equipped with AEDs if their home-state EMS authority requires it or if the government provides them.

6. Joint-above and joint-below fracture site (chin strap alone should not be used for head immobilization), adult and child sizes, with padding for children, handholds for moving patients, short (extrication, head-to-pelvis length), long (transport, head to feet), with at least three appropriate restraint straps

D. BANDAGES

1. Burn pack
 - Standard package, clean burn sheets (or towels for children)
2. Triangular bandages
 - Minimum 2 safety pins each
3. Dressings
 - Sterile multi-trauma dressings (various large and small sizes)
 - ABDs, 10" × 12" or larger
 - 4" × 4" gauze sponges
4. Gauze rolls
5. Elastic bandages
 - Nonsterile (various sizes)
6. Occlusive Dressing
 - Sterile, 3" by 8" or larger
7. Adhesive tape
 - Various sizes (including 2" or 3") hypoallergenic
 - Various sizes (including 2" or 3") adhesive

E. COMMUNICATION

In disaster areas where the communications infrastructure is intact, the ambulance contractor must provide two-way communications to enable ambulances to communicate with medical control and dispatch. Strike Team Leaders should be able to communicate with EMS Forward Command.

F. PROTOCOLS

Each ambulance should contain a printed copy of clinical and operational protocols that are used in their home jurisdiction. The authorized medical director at the disaster site will determine what protocols are to be used. If the approved protocols used for the disaster contain procedures for which the healthcare provider has not been trained and certified, s/he shall not perform any procedures that exceed their licensed scope of practice. Additional "just-in-time" training may be provided to certify EMS responders to perform these procedures if approved by the medical director.

G. OBSTETRICAL

1. OB Kit (separate sterile kit)
 - Towels, 4" × 4" dressing, umbilical tape, sterile scissors or other cutting utensil, bulb suction, clamps for cord, sterile gloves, blanket
2. Thermal absorbent blanket and head cover, aluminum foil roll, or appropriate heat-reflective material (enough to cover newborn)
3. Appropriate heat source for ambulance compartment

H. MISCELLANEOUS

1. Sphygmomanometer (infant, pediatric, and adult regular and large, for example, thigh sizes)
2. Stethoscope (pediatric and adult)
3. Length/weight-based chart for pediatric equipment sizing
4. Thermometer with low temperature capability
5. Heavy bandage or paramedic scissors for cutting clothing, belts, and boots
6. Cold packs
7. Sterile saline solution for irrigation (1-liter bottles or bags)
8. Flashlights (2) with extra batteries and bulbs
9. Blankets
10. Sheets, linen or paper (minimum 4), and pillows
11. Towels
12. Triage tags
13. Disposable emesis bags or basins
14. Disposable bedpan
15. Disposable urinal
16. Wheeled cot (properly secured patient transport system)
17. Folding stretcher
18. Stair chair or carry chair/device⁵
19. Patient care charts/forms
20. Lubricating jelly (water soluble)
(Items 21 & 22 are not routinely required and shall be defined by the circumstances of the deployment in consultation with Contractor and their medical director(s), the HHS COTR and SME(s) from OSHA, EPA, CDC, or other agencies.)
21. Appropriate CBRNE PPE (chemical, biological, radiological, nuclear, explosive personal protective equipment), including respiratory and body protection
22. Applicable chemical antidote auto-injectors (at a minimum for crew members' protection; additional for victim treatment as appropriate)

I. INFECTION CONTROL - Latex-free equipment should be available.

1. Eye protection (full peripheral glasses or goggles, face shield)
2. Masks
3. Gloves, non-sterile
4. Jumpsuits or gowns
5. Shoe covers
6. Disinfectant hand wash, commercial antimicrobial (towelette, spray, liquid)
7. Disinfectant solution for cleaning equipment
8. Standard sharps containers
9. Disposable trash bags (identifiable color, such as red)
10. HEPA mask

⁵ This item is not standard ambulance equipment in all states, therefore it is only required on ambulances that are licensed in states that do mandate it and on dedicated disaster reserve ambulances.

J. INJURY PREVENTION

1. Appropriate restraints (seat belts, air bags) for patient, crew, and family members.
2. Child safety restraints.⁵
3. Reflective safety vests or personal protective safety clothing to provide conspicuity during both daytime and nighttime usage (must comply with minimum federal regulations)
4. Fire extinguisher
5. Hazardous material reference guide
6. Traffic signaling devices (reflective material triangles or other reflective, non-igniting devices).

ADVANCED LEVEL PROVIDERS

For EMT-paramedic, including all the equipment listed for the basic level provider plus the following additional equipment and supplies. For EMT-Intermediate (and other PREHOSPITAL EMERGENCY CARE non-paramedic advanced levels), include all the equipment for the basic level provider and selected equipment and supplies from the following list, as appropriate.

A. VASCULAR ACCESS

1. Crystalloid solution Ringer's lactate or normal saline solution (1,000-mL bags × 4), 5% dextrose in water (optional) (fluid must be in bags, not bottles)
2. Antiseptic solution (alcohol wipes and povidone-iodine wipes preferred)
3. IV pole or roof hook
4. Intravenous catheters 14G– 24G, 1" long
5. Intraosseous needles
6. Tourniquet, rubber bands
7. Syringes of various sized, including tuberculin
8. Needles, sizes 19G–25G
9. Intravenous administration sets (microdrip and macrodrip)
10. Intravenous arm boards, adult and pediatric

B. AIRWAY AND VENTILATION EQUIPMENT

1. Laryngoscope handle with extra batteries and bulbs, adult and pediatric
2. Laryngoscope blades, sizes 0, 1, and 2, straight; sizes 3 and 4, straight and curved
3. Endotracheal tubes, sizes 2.5-6mm uncuffed and 6.5-8.0 mm cuffed (2 each), other sizes optional
4. Meconium aspirator
5. 10-ml non-Luerlock syringes
6. Stylettes for endotracheal tubes, adult and pediatric
7. Magill forceps, adult and pediatric
8. Lubricating jelly (water soluble)
9. Nasogastric tubes, pediatric sized 5F and 8F, Salem sump sizes 14F, 16F, and 18Fⁱ
10. End-tidal CO₂ detectors

- Colorimetric or quantitative

C. CARDIAC

1. Portable, battery-operated cardiac monitor/defibrillator
 - With tape write-out/recorder, defibrillator pads, quick-lock paddles or hands-free patches, ECG leads, adult and pediatric chest attachment electrodes, adult and pediatric paddles, with capability to provide electrical discharge below 25 watt-seconds.
2. Transcutaneous cardiac pacemaker
 - Either stand-alone unit or integrated into monitor /defibrillator

D. OTHER ADVANCED EQUIPMENT

1. Nebulizer
2. Glucometer or blood glucose measuring device
 - With reagent strips
3. Pulse oximetry with pediatric and adult probes

E. MEDICATIONS

Medications used on advanced level ambulances should be compatible with current standards as indicated by the American Heart Association's Emergency Cardiac Care Committee, as reflected in the Advanced Cardiac Life Support Course, or other such organizations and publications (ACEP, ACS, NAEMSP, and so on). In general, medications should include:

1. Cardiovascular medications, such as 1:10,000 epinephrine, atropine, antidysrhythmics, calcium channel blockers, beta-blockers, nitroglycerin tablets, aspirin, pressors
2. Cardiopulmonary/respiratory medications, such as albuterol (or other inhaled beta agonist), 1:1,000 epinephrine, furosemide
3. 50% dextrose solution (and sterile diluent or 25% dextrose solution for pediatrics)
4. Analgesics, narcotic and non-narcotic ⁶ (*recommended, not required*)
 - Morphine Sulfate Injection, 10 mg/ml, and
 - Fentanyl Injectable (Sublimaze), 0.05 mg/ml
5. Anticonvulsant medication⁶ (*recommended, not required*)
 - Lorazepam (Ativan), 2 mg/ml, (requires refrigeration) and
 - Midazolam (Versed), 1 mg/ml
6. Sodium bicarbonate, magnesium sulfate, glucagon, naloxone hydrochloride
7. Bacteriostatic water and sodium chloride for injection

Paralytics and other pharmaceutical adjuncts shall NOT be supplied to facilitate endotracheal intubation.

⁶ Unless otherwise restricted by state or Federal regulations, the contractor is responsible for providing initial supply of controlled substances or narcotics for ALS ambulances. Unless other arrangements are made, the U.S. Dept. of Health and Human Services will resupply these ALS ambulances. Documentation of administration of controlled substances and narcotics will be on forms approved by the HHS Technical Representative.