

North Dakota EMS for Children  
Pediatric Prepared  
Voluntary Ambulance Recognition Program



June 8, 2015

Dear EMS Agency Administrator:

It is my pleasure to introduce a new voluntary statewide initiative sponsored by the North Dakota EMS for Children (EMSC) program: a recognition program for North Dakota EMS agencies who wish to demonstrate the work they do to go above and beyond for pediatric patients. Again, this program is **completely voluntary**.

Participating in this program provides an excellent opportunity for your agency to receive community and media recognition for your commitment to improving the delivery of emergency medical care to children.

**Please note that your decision to participate in this program will in no way impact your licensure by the North Dakota Department of Health Division of EMS & Trauma.**

If you and your organization are interested in participating in the Pediatric Prepared voluntary ambulance recognition program, please review this guide and send the attached application. Organizations that successfully complete the process will receive a certificate and decal to affix to their ambulances to recognize their accomplishments and commitments to North Dakota's children.

Should questions arise, please contact the EMS for Children program manager at (701) 328-2953 or [epihlaja@nd.gov](mailto:epihlaja@nd.gov).

Sincerely,

Elizabeth Pihlaja, MPH  
North Dakota EMS for Children Program Manager

**Program Standards**

The Pediatric Prepared voluntary ambulance recognition program features three required areas of participation in order to achieve recognition:

1. **Equipment.** Organizations must carry 100 percent of the recommended pediatric equipment according to the 2014 Joint Policy Statement *Equipment for Ground Ambulances*. Note that this list is more extensive than the equipment required by North Dakota regulations. A list of this equipment is included in the application (attached).
2. **Training.** Each member on the roster of the applying service must have two documented hours of pediatric-related training every year.
3. **Community.** Each applying service must perform at least one act or event of community outreach or education each year. Examples might include a bike rodeo, teddy bear/doll clinic, child car seat checks, or visits to schools or day cares. This outreach or education may target a variety of audiences (children, parents, teachers and more). If you would like to verify that your organization's event qualifies, please contact the North Dakota EMS for Children program manager. Any events submitted will be subject to the approval of the North Dakota EMS for Children program staff or the EMS for Children Advisory Committee. If an event is an annual or regular occurrence, or has been planned for the future, the EMS for Children program would appreciate notice of the event so a data bank of pediatric outreach and education being conducted across the state can be developed.

### Frequently Asked Questions

**Q: Is participation in this program mandatory?**

A: No. This program is entirely voluntary.

**Q: Does the Division of EMS & Trauma plan to mandate future participation?**

A: No. This program is entirely voluntary.

**Q: What are the benefits of participating?**

A: Participation in this program will help you and your organization's EMS professionals to improve the capability of your organization to treat pediatric emergencies. Additionally, participation will allow your service to present your achievement to local media outlets, elected officials, and the members of your community.

**Q: Will I be penalized for not participating in this program?**

A: Absolutely not. This program is not intended to be punitive in any way. The goal of the program is to help facilitate education around the use of proper pediatric equipment and enhance pediatric treatment skills, NOT to be punitive in any way.

**Q: Is there a fee to participate in this program?**

A: No. There is no cost to an EMS organization to participate in the program beyond any costs incurred to meet the requirements of the program.

**Q: Where can I learn more about the program?**

A: Up-to-date information can be found by calling the North Dakota EMS for Children program manager at (701) 328-2953, emailing the program manager at [epihlaja@nd.gov](mailto:epihlaja@nd.gov), or by visiting the North Dakota EMSC program's web page at [www.ndhealth.gov/ems/emsc.html](http://www.ndhealth.gov/ems/emsc.html).

**Q: My pulse-ox doesn't have pediatric probes but it seems to work on children. Does this count?**

A: Yes, the terminology used on the equipment list is based on the 2014 Joint Policy Statement *Equipment for Ground Ambulances*. EMS agencies will comply with the North Dakota Pediatric Prepared voluntary ambulance recognition program so long as their pulse-oximeter is pediatric capable, even if it does not have a specific pediatric probe. Managers are encouraged to obtain documentation from their pulse-ox manufacturer validating the device's ability to obtain accurate readings on pediatric patients.

**Q: Is there any way to avoid the expense associated with obtaining the required equipment?**

A: The North Dakota EMSC program understands the concern and barrier of costs involved in obtaining equipment. The North Dakota EMSC program manager is always willing to help organizations find grant funding or other financial assistance to obtain recommended equipment.

### **Application Process**

#### **To Obtain an Application:**

1. Application forms can be downloaded from the EMSC web page at [www.ndhealth.gov/ems/emsc.html](http://www.ndhealth.gov/ems/emsc.html).
2. If you would prefer to have a copy mailed to you, or you do not have internet access, applications can be requested by contacting:

North Dakota EMS for Children Program  
North Dakota Department of Health  
Division of EMS & Trauma  
1720 Burlington Drive  
Bismarck, ND 58504

#### **Submitting a Completed Application:**

Completed applications may be submitted via U.S. mail to the address above, by fax (**701-328-0357**), or by email ([epihlaja@nd.gov](mailto:epihlaja@nd.gov)).

#### **Application Review Process:**

At this time, no inspection is planned as part of the application process; however, the Division of EMS & Trauma reserves the right to perform ad hoc inspections as determined by the department. When a signed and completed application is received by the North Dakota EMS for Children program, the program manager will check for completeness and will then contact the applicant to:

1. Ask for further clarification or documentation, or
2. Send the service an award of recognition.

#### **Appeal Process:**

In the event that an application is denied or returned, EMS agencies may appeal the decision to deny recognition by submitting a written request to have their application re-evaluated. Appeal letters should be submitted to the North Dakota EMS for Children program for review by the North Dakota EMS for Children Advisory Committee. A written response to the appeal will be returned to the EMS agency within six months of its receipt.

**Suspension or Revocation:**

Recognition through this program may be suspended or revoked if the service is proven to have provided falsified information in order to gain recognition or failed to maintain the standards of the program as identified in this guidance.

Additionally, agencies must maintain good standing with the Division of EMS & Trauma license procedures. If an agency's recognition is suspended or revoked, recognition decals must be removed from all vehicles within five days of the revocation.

If an agency sells a vehicle or places the vehicle out of service for an extended period of time, recognition decals must be removed within five days.

**Renewal of Recognition:**

If an agency would like to seek renewal of the recognition program status, that agency must resubmit an application three years after initial recognition. The North Dakota EMS for Children program will send a reminder letter within three months of the renewal deadline.

**Award of Recognition**

Upon successful submission of the completed application and verification documentation, the North Dakota EMS for Children program will send a recognition certificate and ambulance decal(s) to the applicant. While the placement of the vehicle recognition decal is strongly encouraged, it is not required. At this time, the North Dakota EMS for Children program will also send sample language for a press release should the service wish to submit that to local media outlets. The state EMS for Children program will, through the Department of Health, submit statewide quarterly press releases with the names of services who have achieved recognition.

Successful applicants, by virtue of applying for recognition, authorize their organization name and general information to be posted in program documents and on the North Dakota EMS for Children website.

**APPLICATION FOR ENROLLMENT**

**North Dakota EMS for Children Pediatric Prepared Voluntary Ambulance Recognition Program**

The North Dakota EMS for Children program has implemented a voluntary recognition program to improve care provided to pediatric patients.

Please complete the following questions and forward this application to the state EMS for Children program via mail, fax or email.

**EMS Agency Information**

<b>Service Name</b>	
<b>License Number</b>	
<b>Address</b>	
<b>Primary Contact Name</b>	
<b>Phone Number</b>	
<b>Email Address</b>	

**EMS Agency Medical Director Information**

<b>Medical Director Name</b>	
<b>Address</b>	
<b>Phone Number</b>	
<b>Email Address</b>	

*Return this application and other forms and documentation to:*

*North Dakota EMS for Children Program  
Division of EMS & Trauma  
1720 Burlington Drive  
Bismarck, ND 58504*

*Fax: (701) 328-0357  
Email: [epihlaja@nd.gov](mailto:epihlaja@nd.gov)*

**Compliance Reporting Form  
Pediatric Ambulance Equipment**

*To be completed by an EMS agency administrator.*

By signing this form, I attest to the fact that my EMS agency maintains, on all North Dakota Division of EMS & Trauma licensed vehicles, all pediatric equipment recommended by the North Dakota EMS for Children Pediatric Prepared Voluntary Ambulance Recognition Program.

I acknowledge that our equipment, specific to this form, will not be inspected specifically by the voluntary recognition program; however, it may be inspected by the North Dakota Division of EMS & Trauma at any site visits or agency inspections.

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I, \_\_\_\_\_, employed with the  
\_\_\_\_\_ (service or EMS agency), as an administrator. I  
affirm that \_\_\_\_ out of \_\_\_\_ ambulance(s) carry 100 percent of the required equipment as listed in  
the 2014 Joint Policy Statement *Equipment for Ground Ambulances*.

\_\_\_\_\_, service administrator

Date: \_\_\_\_\_

**Compliance Reporting Form  
Pediatric Continuing Education**

By signing this verification form, I attest to the fact that my EMS agency requires that all certified EMS providers obtain a minimum of two (2) hours of continuing education on pediatric-specific subject matter per year. This continuing education has been approved by the North Dakota Department of Health Division of EMS & Trauma for EMS continuing education credit.

I attest that we maintain, on record, proof of this accomplishment, such as course completion certificates or other program reports or records for each agency provider.

**Print Name:** \_\_\_\_\_

**Title:** \_\_\_\_\_

**Agency Name:** \_\_\_\_\_

**License Number:** \_\_\_\_\_

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

**Compliance Reporting Form  
Community Outreach and Education**

*Please include documentation of event – attendance records, newspaper articles, thank you notes, et cetera.*

By signing this verification form, I attest to the fact that my EMS agency offers at least one educational or outreach event for community members per year.

**Event Title (e.g. Community Safety Day, Pediatric First Aid and CPR Class, Bike Rodeo, Injury Prevention Presentation at School):** \_\_\_\_\_

**Target Audience:** \_\_\_\_\_

**Objective of Event:** \_\_\_\_\_

**Event Frequency (e.g. annual event, occurs as requested, one-time event):**  
\_\_\_\_\_

I acknowledge that approval of this event is subject to the discretion of the North Dakota EMS for Children program and its advisory committee. I understand I may be asked to provide further clarification or documentation of this event prior to achieving recognition status.

**Signature:** \_\_\_\_\_

**Date:** \_\_\_\_\_

# JOINT POLICY STATEMENT

## EQUIPMENT FOR GROUND AMBULANCES

American Academy of Pediatrics  
American College of Emergency Physicians  
American College of Surgeons Committee on Trauma  
Emergency Medical Services for Children  
Emergency Nurses Association  
National Association of EMS Physicians  
National Association of State EMS Officials

Four decades ago, the Committee on Trauma of the American College of Surgeons (ACS) developed a list of standardized equipment for ambulances. In 1988, the American College of Emergency Physicians (ACEP) published a similar list. The two organizations collaborated on a joint document published in 2000, and the National Association of EMS Physicians (NAEMSP) participated in the 2005 revision. The 2005 revision included resources needed on emergency ground ambulances for appropriate homeland security. All three organizations adhere to the principle that emergency medical services (EMS) providers at all levels must have the appropriate equipment and supplies to optimize out-of-hospital delivery of care. The document was written to serve as a standard for the equipment needs of emergency ground ambulance services both in the United States and Canada.

EMS providers care for patients of all ages who have a wide variety of medical and traumatic conditions. The 2009 revision included updated pediatric recommendations developed by members of the Federal Emergency Medical Services for Children (EMSC) Stakeholder Group and endorsed by the American Academy of Pediatrics (AAP). The EMSC program has developed several performance measures for the program's state partnership grantees. One of the performance measures evaluates the availability of essential pediatric equipment and supplies for basic life

support (BLS) and advanced life support (ALS) patient care units. This document is used as the standard for this performance measure. The National Association of State EMS Officials and the Emergency Nurses Association have participated in the latest revision process. The recommendations in this document specifically pertain to ALS and BLS emergency ground ambulance services in the United States.

For purposes of this document, the following definitions have been used: a neonate is 0–28 days old, an infant is 29 days to 1 year old, and a child is >1 year through 11 years old with delineation into the following developmental stages:

Toddlers (1–3 years old)  
Preschoolers (3–5 years old)  
Middle childhood (6–11 years old)  
Adolescents (12–18 years old)

These standard definitions are age based. Length-based systems have been developed to more accurately estimate the weight of children and predict appropriate equipment sizes, medication doses, and guidelines for fluid volume administration.

## PRINCIPLES OF OUT-OF-HOSPITAL CARE

The goal of out-of-hospital care is to minimize further systemic injury and manage life-threatening conditions through a series of well-defined and appropriate interventions and to embrace principles that ensure patient safety. High-quality, consistent emergency care demands continuous quality improvement and is directly dependent on the effective monitoring, integration, and evaluation of all components of the patient's care.

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Declaration of Interest: Organizations participating in this joint policy statement, and their representatives to the working group that drafted it, report no conflicts of interest.

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Integral to this process is medical oversight of out-of-hospital care by using preexisting patient care protocols (indirect medical oversight), which are evidence based when possible, or by medical control via voice and/or video communication (direct medical oversight). The protocols that guide patient care should be established collaboratively by medical directors for ground ambulance services, adult and pediatric emergency medicine physicians, adult and pediatric trauma surgeons, and appropriately trained basic and advanced emergency medical personnel. Current recommendations of the Institute of Medicine (IOM) encourage each EMS agency to have a pediatric coordinator to specifically coordinate the capability of the service to care for non-adult patients.

## EQUIPMENT AND SUPPLIES

The current guidelines provide a recommended core list of supplies and equipment that should be stocked on ground ambulances to provide the accepted standards of patient care. Equipment requirements will vary, depending on the certification or licensure levels of the providers (as defined by the National EMS Scope of Practice Model 2007 [www.ems.gov/education/EMSScope.pdf](http://www.ems.gov/education/EMSScope.pdf)), local medical direction and jurisdiction, population densities, geographic and economic conditions of the region, and other factors.

The National EMS Scope of Practice Model defines and describes four certification or licensure levels of EMS provider: emergency medical responder (EMR), emergency medical technician (EMT), advanced EMT (AEMT), and paramedic. Each level represents a unique role, set of skills, and knowledge base. The National EMS Scope of Practice Model establishes a framework that ultimately determines the range of skills and roles that an individual possessing a state EMS license is authorized to do in a given EMS system. Individual state EMS rules or regulations that limit provider scope of practice may impact the need for availability of certain pieces of equipment.

The current equipment list is derived from a number of sources, which may be found in the reference list at the end of the document. The use of a proprietary name that is inextricably linked with its product should not be construed as an endorsement.

The following list is divided into equipment for basic life support (BLS) and advanced life support (ALS) emergency ground ambulances. ALS ambulances must have all of the equipment on the required BLS list as well as equipment on the required ALS list. This list represents a consensus of recommendations for equipment and supplies that will facilitate patient care in the out-of-hospital setting.

## REQUIRED EQUIPMENT FOR BLS EMERGENCY GROUND AMBULANCES

- A. Ventilation and Airway Equipment
  1. Portable and fixed suction apparatus with a regulator, per federal specifications
    - Wide-bore tubing, rigid pharyngeal curved suction tip; tonsil and flexible suction catheters, 6F–16F, are commercially available (have one between 6F and 10F and one between 12F and 16F)
  2. Portable oxygen apparatus, capable of metered flow with adequate tubing
  3. Portable and fixed oxygen supply equipment
    - Variable flowmeter
  4. Oxygen administration equipment
    - Adequate-length tubing; transparent mask (adult and child sizes), both non-rebreathing and valveless; nasal cannulas (adult, child)
  5. Bag-valve mask (manual resuscitator)
    - Hand-operated, self-expanding bag; adult (>1000 mL) and child (450–750 mL) sizes, with oxygen reservoir/accumulator, valve (clear, operable in cold weather), and mask (adult, child, infant, and neonate sizes)
  6. Airways
    - Nasopharyngeal (16F–34F; adult and child sizes)
    - Oropharyngeal (sizes 0–5; adult, child, and infant sizes)
  7. Pulse oximeter with pediatric and adult probes
  8. Saline drops and bulb suction for infants
- B. Monitoring and Defibrillation
 

BLS ground ambulances should be equipped with an automated external defibrillator (AED) unless staffed by advanced life support personnel who are carrying a monitor/defibrillator. The AED should have pediatric capabilities, including child-sized pads and cables OR dose attenuator with adult pads.
- C. Immobilization Devices
  1. Cervical collars
    - Rigid for children ages 2 years or older; child and adult sizes (small, medium, large, and other available sizes) OR pediatric and adult adjustable cervical collars
  2. Head immobilization device (not sandbags)
    - Firm padding or commercial device
  3. Upper and lower extremity immobilization devices
    - Joint-above and joint-below fracture (sizes appropriate for adults and children) rigid support, constructed with appropriate material (cardboard, metal, pneumatic, vacuum, wood, or plastic)

4. Impervious backboards (long, short; radiolucent preferred) and extrication device
  - Short extrication/immobilization device (e.g., KED)
  - Long transport (head-to-feet length) with at least 3 appropriate restraint straps (chin strap alone should not be used for head immobilization) and with padding for children and handholds for moving patients
- D. Bandages/Hemorrhage Control
  1. Commercially packaged or sterile burn sheets
  2. Bandages
    - Triangular bandages
  3. Dressings
    - Sterile dressings, including gauze sponges of suitable size
    - Abdominal dressing
  4. Gauze rolls
    - Various sizes
  5. Occlusive dressing or equivalent
  6. Adhesive tape
    - Various sizes (including 1" and 2") hypoallergenic
    - Various sizes (including 1" and 2") adhesive
  7. Arterial tourniquet (commercial preferred)
- E. Communication
 

Two-way communication device between ground ambulance, dispatch, medical control, and receiving facility
- F. Obstetrical Kit (commercially packaged are available)
  1. 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 infant)
- G. Miscellaneous
  1. Access to pediatric and adult patient care protocols
  2. A length-based resuscitation tape OR a reference material that provides appropriate guidance for pediatric drug dosing and equipment sizing based on length OR age
  3. Sphygmomanometer (pediatric and adult regular size and large cuffs)
  4. Adult stethoscope
  5. Thermometer with low-temperature capability
  6. Heavy bandage or paramedic scissors for cutting clothing, belts, and boots
  7. Cold packs
  8. Sterile saline solution for irrigation
  9. Two functional flashlights
  10. Blankets
  11. Sheets (at least one change per cot)
  12. Pillows
  13. Towels
  14. Triage tags
  15. Emesis bags or basins
  16. Urinal
  17. Wheeled cot
  18. Stair chair or carry chair
  19. Patient care charts/forms or electronic capability
  20. Lubricating jelly (water soluble)
- H. Infection Control\*
  1. Eye protection (full peripheral glasses or goggles, face shield)
  2. Face protection (e.g., surgical masks per applicable local or state guidance)
  3. Gloves, nonsterile
  4. Fluid-resistant overalls or gowns
  5. Waterless hand cleanser, commercial antimicrobial (towelette, spray, or liquid)
  6. Disinfectant solution for cleaning equipment
  7. Standard sharps containers, fixed and portable
  8. Biohazard trash bags (color coded or with biohazard emblem to distinguish from other trash)
  9. Respiratory protection (e.g., N95 or N100 mask—per applicable local or state guidance)

\*Latex-free equipment should be available

#### I. Injury-prevention Equipment

1. Availability of necessary age/size-appropriate restraint systems for all passengers and patients transported in ground ambulances. For children, this should be according to the National Highway Traffic Administration's document: Safe Transport of Children in Emergency Ground Ambulances ([www.nhtsa.gov/staticfiles/nti/pdf/811677.pdf](http://www.nhtsa.gov/staticfiles/nti/pdf/811677.pdf))
2. Fire extinguisher
3. Department of Transportation Emergency Response Guide
4. Reflective safety wear for each crewmember (must meet American National Standard for High Visibility Public Safety Vests if working within the right of way of any federal-aid highway. Visit [www.reflectivevest.com/federalhighwayruling.html](http://www.reflectivevest.com/federalhighwayruling.html) for more information)

## REQUIRED EQUIPMENT: ADVANCED LIFE SUPPORT (ALS) EMERGENCY GROUND AMBULANCES

For paramedic services, include all of the required equipment listed above, plus the following additional equipment and supplies. For advanced EMT services (and other non-paramedic advanced levels), include all of the equipment from the above list and selected equipment and supplies from the following list, based on scope of practice, local need, and consideration of out-of-hospital characteristics and budget.

### A. Airway and Ventilation Equipment

1. Laryngoscope handle with extra batteries and bulbs
2. Laryngoscope blades, sizes:
  - a. 0–4, straight (Miller), and
  - b. 2–4, curved
3. Endotracheal tubes (if ALS service scope of practice includes tracheal intubation), sizes:
  - a. 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, and 5.5 mm cuffed and/or uncuffed, and
  - b. 6.0, 6.5, 7.0, 7.5, and 8.0 mm cuffed (1 each), other sizes optional
4. 10-mL non-Luer Lock syringes
5. Stylettes for endotracheal tubes, adult and pediatric
6. Magill forceps, adult and pediatric
7. End-tidal CO<sub>2</sub> detection capability (adult and pediatric)
8. Rescue airway device, such as the ETDLA (esophageal–tracheal double-lumen airway), laryngeal tube, disposable supraglottic airway, or laryngeal mask airway (as approved by local medical direction)

### B. Vascular Access

1. Isotonic crystalloid solutions
2. Antiseptic solution (alcohol wipes and povidone–iodine wipes preferred)
3. Intravenous fluid bag pole or roof hook
4. Intravenous catheters, 14G–24G
5. Intraosseous needles or devices appropriate for children and adults
6. Latex-free tourniquet
7. Syringes of various sizes
8. Needles, various sizes (including suitable sizes for intramuscular injections)
9. Intravenous administration sets (microdrip and macrodrip)
10. Intravenous arm boards, adult and pediatric

### C. Cardiac

1. Portable, battery-operated monitor/defibrillator

- With tape write-out/recorder, defibrillator pads, quick-look paddles or electrode, or hands-free patches, electrocardiogram leads, adult and pediatric chest attachment electrodes, adult and pediatric paddles
2. Transcutaneous cardiac pacemaker, including pediatric pads and cables
    - 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. Long large-bore needles or angiocatheters (should be at least 3.25" in length for needle chest decompression in large adults)

### E. Medications

Drug dosing in children should use processes minimizing the need for calculations, preferably a length-based system. In general, medications may include:

1. Cardiovascular medication, such as 1:10,000 epinephrine, atropine, antidysrhythmics (e.g., adenosine and amiodarone), calcium channel blockers, beta-blockers, nitroglycerin tablets, aspirin, vasopressor for infusion
2. Cardiopulmonary/respiratory medications, such as albuterol (or other inhaled beta agonist) and ipratropium bromide, 1:1000 epinephrine, furosemide
3. 50% dextrose solution (and sterile diluent or 25% dextrose solution for pediatrics)
4. Analgesics, narcotic and nonnarcotic
5. Anti-epileptic medications, such as diazepam or midazolam
6. Sodium bicarbonate, magnesium sulfate, glucagon, naloxone hydrochloride, calcium chloride
7. Bacteriostatic water and sodium chloride for injection
8. Additional medications, as per local medical director

## OPTIONAL EQUIPMENT

The equipment in this section is not mandated or required. Use should be based on local needs and resources.

### A. Optional Equipment for BLS Ground Ambulances

1. Glucometer or blood glucose test strips (per state protocol and/or local medical control approval)

2. Infant oxygen mask
  3. Infant self-inflating resuscitation bag
  4. Airways
    - a. Nasopharyngeal (12F, 14F)
    - b. Oropharyngeal (size 00)
  5. CPAP/BiPAP capability
  6. Neonatal blood pressure cuff
  7. Infant blood pressure cuff
  8. Pediatric stethoscope
  9. Infant cervical immobilization device
  10. Pediatric backboard and extremity splints
  11. Femur traction device (adult and child sizes)
  12. Pelvic immobilization device
  13. Elastic wraps
  14. Ocular irrigation device
  15. Hot packs
  16. Warming blanket
  17. Cooling device
  18. Soft patient restraints
  19. Folding stretcher
  20. Bedpan
  21. Topical hemostatic agent/bandage
  22. Appropriate CBRNE PPE (chemical, biological, radiological, nuclear, explosive personal protective equipment), including respiratory and body protection; protective helmet/jackets or coats/pants/boots
  23. Applicable chemical antidote auto-injectors (at a minimum for crew members' protection; additional for victim treatment based on local or regional protocol; appropriate for adults and children)
- B. Optional Equipment for ALS Emergency Ground Ambulances
1. Respirator, volume-cycled, on/off operation, 100% oxygen, 40–50 psi pressure (child/infant capabilities)
  2. Blood sample tubes, adult and pediatric
  3. Automatic blood pressure device
  4. Nasogastric tubes, pediatric feeding tube sizes 5F and 8F, sump tube sizes 8F–16F
  5. Size 1 curved laryngoscope blade
  6. Gum elastic bougies
  7. Needle cricothyrotomy capability and/or cricothyrotomy capability (surgical cricothyrotomy can be performed in older children in whom the cricothyroid membrane is easily palpable, usually by puberty)
  8. Rescue airway devices for children
  9. Atomizers for administration of intranasal medications

## OPTIONAL MEDICATIONS

- A. Optional Medications for BLS Emergency Ambulances

1. Albuterol
  2. Epi-pen
  3. Oral glucose
  4. Nitroglycerin (sublingual tablet or paste)
  5. Aspirin
- B. Optional Medications for ALS Emergency Ground Ambulances
1. Intubation adjuncts, including neuromuscular blockers

## INTERFACILITY TRANSPORT

Additional equipment may be needed by ALS and BLS out-of-hospital care providers who transport patients between facilities. Transfers may be made to a lower or higher level of care, depending on the specific need. Specialty transport teams, including pediatric and neonatal teams, may include other personnel, such as respiratory therapists, nurses, and physicians. Training and equipment needs may be different depending on the skills needed during transport of these patients. There are excellent resources available that provide detailed lists of equipment needed for interfacility transfer, such as *Guidelines for Air and Ground Transport of Neonatal and Pediatric Patients* from the AAP and *The Interfacility Transfer Toolkit for the Pediatric Patient* from the EMSC, ENA, and the Society of Trauma Nurses.

Any ground ambulance that, either by formal agreement or by circumstance, may be called into service during a disaster or mass casualty incident to treat and/or transport any patient from the scene to the hospital or to transfer between facilities any patient other than those within their designated specialty population should carry, at a minimum, all equipment, adult and pediatric, listed under "Required Equipment for All Emergency Ground Ambulances."

## EXTRICATION EQUIPMENT

In many cases, optimal patient care mandates appropriate and safe extrication or rescue from the patient's situation or environment. It is critical that EMS personnel possess or have immediate access to the expertise, tools, and equipment necessary to safely remove patients from entrapment or hazardous environments. It is beyond the scope of this document to describe the extent of these. Local circumstances and regulations may affect both the expertise and tools that are maintained on an individual ground ambulance, and on any other rescue vehicle that may be needed to accompany an ambulance to an EMS scene. The tools and equipment carried on an individual ground ambulance need to be thoughtfully determined by local features of the EMS system with explicit plans to deploy the needed resources when extrication or rescue is required.

## Select Readings

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