

FAQ's about the 2009 Updated List of Recommended Pediatric Equipment for BLS and ALS Ambulances

EQUIPMENT FOR AMBULANCES

AMERICAN COLLEGE OF SURGEONS
COMMITTEE ON TRAUMA

AMERICAN COLLEGE OF
EMERGENCY PHYSICIANS

NATIONAL ASSOCIATION
OF EMS PHYSICIANS

PEDIATRIC EQUIPMENT GUIDELINES
COMMITTEE—EMERGENCY
MEDICAL SERVICES FOR CHILDREN
(EMSC) PARTNERSHIP FOR CHILDREN
STAKEHOLDER GROUP

AMERICAN ACADEMY
OF PEDIATRICS

Almost four decades ago, the Committee on Trauma (COT) of the American College of Surgeons (ACS) developed a list of standardized equipment for ambulances. Beginning 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 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 prehospital delivery of care. The document was written to serve as a standard for the equipment needs of emergency 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. With permission from the ACS COT, ACEP, and NAEMSP, the current revision includes updated pediatric recommendations developed by members of the federal Emergency Medical Services for Children (EMSC) Stakeholder Group. 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 and Advanced Life Support patient care units. This document will be used as the standard for this performance measure. The American Academy of Pediatrics (AAP) has also officially endorsed this list.

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:

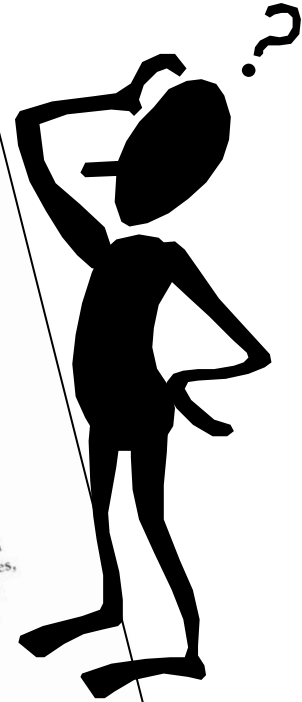
- Toddlers (1–3 years old)
- Preschoolers (3–5 years old)
- Middle Childhood (6–11 years old)
- Adolescents (12–18 years old)

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 Prehospital Care

The goal of prehospital care is to minimize further systemic insult or 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.

Integral to this process is medical oversight of prehospital care by using preexisting 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



- 1) **Under Letter F. Obstetrical Kit, would a Mylar blanket be appropriate for newborns?** Absorbent Thermal blankets insulate to prevent and treat hypothermia, which is typically encountered following accidents involving immersion in cold water, traffic accidents, and accidents in highly exposed environments such as oil rigs. The Mylar Emergency blanket is designed to reflect heat back to the body, deflect heat when used as a shelter from the sun, and prevent post accident shock by retaining the patient's body heat. In regards to newborns, a Mylar blanket would preserve infant heat, much like aluminum foil; however, the EMS Provider would more than likely need to use towels as required on the list for drying and then utilize the blanket for heat preservation. Although, patients, especially babies are more comfortable with a thermal blanket, especially during times of emotional stress. Here are a variety of sources that list thermal absorbent blankets:

Canada

<http://www.cps.ca/ENGLISH/statements/EP/ep94-01.htm>

California

<http://www.emsa.ca.gov/pubs/pdf/emsa188.pdf>

American College of Emergency Physicians

<http://www.facs.org/trauma/publications/ambulance.pdf>

South Dakota

<http://www.state.sd.us/dps/ems/Forms/AMBULANCE%20INSPECTION%20FORM%202004.pdf>

There are hardly any commercially available Obstetrical Kits that list "Mylar blankets." A variety of manufactures tend to list them as "receiving blankets," such as the following:

GAM Kit

<http://www.buyemp.com/product/1112101.html>

Life Medical Kit

<http://www.lifemedicalsupplier.com/emergency-ob-kit-with-scalpel-in-plastic-bag-ref-3010965-p-2081.html>

Cascade Kit

<http://www.1cascade.com/ProductInfo.aspx?productid=6009>

- 2) **Under *Miscellaneous, #9, "blankets,"* what type of material does this have to be? Our ambulance currently carries sheets (i.e. linen), which are provided by the hospital as part of standard issue. The only blanket the hospital has aside from the linen blanket is heavy, waffle-type blankets that are for inpatients. Both blankets and sheets are required in the equipment list. Because of their thin nature, sheets would not preserve or warm patients as a blanket would. "A thermal blanket may help minimize heat loss. Hypothermia will complicate many illnesses and injuries, particularly in infants and young children. The type of material used will depend on local preference, protocols, and procedures but may include Mylar, standard blankets, or aluminum foil for small infants." Annals of Emergency Medicine (1996)**

Sheets provide little warmth. Keep in mind for the item to be counted as available, it must be ON the patient care unit and not only available for inpatients.

- 3) **We have some out-of-scope items like AEDs with Pediatric capabilities. The AEDs currently available on the ambulances are not pediatric-capable; however, the medical director decided it was best to have BLS providers perform CPR on pediatric patients rather than place adult pads on the child. How do we address this requirement? Contact the EMSC Program to determine if this item is "out of scope". Items that are out of scope for purposes of the performance measures are those that are not available due to a practice issue. In this case, if pediatric capable AED's are not available because of cost issues, the item is NOT out of scope. Also check with your vendor to see if your AED's are upgradeable to AHA 2005 standards. If you cannot get help from your vendor try this commercial site <http://www.aedupgrades.com>.**
- 4) **Has the document been published and if so where? No, the list has not been published in an official journal as of yet though numerous publications are planned via the professional groups that have endorsed the list. The PDF copy sent out by the NRC was published by the American College of Surgeons, specifically as a document to be disseminated to membership and to the EMSC grantees. It is available at www.childrensnational.org/emsc**
- 5) **Under BLS Immobilization Devices, what type of lower extremity (femur) traction device are you referring to? Hare traction splint is the name of the splint the equipment list is referring to and it is sold by several manufacturers. The information provided was designed to be used as a guide for an "Ischial" type traction splint. There are several different types of commercially made traction splints available. This information may differ for the device that others use. As with all equipment, you must follow the manufacturer's guidelines and instructions for proper application of the device you use. Hare makes a good traction splint. There are others such as the Sager Splint.**

Since EMS providers do not diagnose, only assess, treat and stabilize using the ABCs, a thermometer with low temperature capability is not used as part of the vitals collected; why would this be required? Thermometers can be helpful in assessing pyrexia as seen in infectious processes and thereby allowing for treatment of the febrile child while enroute to the hospital and potentially averting febrile seizures sometimes seen in children.

Assessing hypothermia is equally important, especially in geographic areas where cold is common, for children with severe hypothermia. Knowing the temperature of the child having sustained a fall through a partially frozen lake or waterway, may provide sufficient information to the receiving hospitals to consider rewarming techniques and special procedures such as extracorporeal oxygenation which require extra set up time.

- 6) **Must we have all 5 sizes of oral airways?** No, you should have one size appropriate for an infant which may be a 0 or 1, one size appropriate for child which may be a 2 or 3, and one size appropriate for an older child/adolescent which may be 4 or 5. Therefore, you would have at least 3 airway sizes available to provide airway protection; EMS services may want to assess the frequency with which they utilize the different sizes in choosing the appropriate one for infant, child and adolescent.
- 7) **The list specifies crystalloid solutions - 4 liter bags, we require 4 liters of crystalloids on the ambulance but do specify liter bags - will this be acceptable?** Yes
- 8) **Under the Injury Prevention Equipment section, I am unable to find referenced document “EMS-approved child occupant protection devices” on the NHTSA website provided; NHTSA is currently in the process of updating their guidelines. This reference has been removed in an updated document now available at www.childrensnational.org/emsc. For another resource on this topic, you can refer to the NRC’s “Do’s and Don’ts of Safe Transport,” currently found on our website at www.childrensnational.org/emsc. However, don’t forget the following:**
 - a. All drivers and front seat passengers of ambulances must use seat belts at all times when the vehicle is in motion.
 - b. All operators & passengers of non-ambulance response vehicle (EASV, ALSFR, etc.) must use seat belts at all times when the vehicle is in motion.
 - c. All patients not located on a patient carrying device - stretcher, as well as any passengers riding in the patient compartment must use seat belts at all times when the vehicle is in motion.
 - d. All EMS personnel in the patient compartment must use seat belts when they are not attending to a patient and the vehicle is in motion. In as much

as possible, EMS personnel should perform patient care activities while restrained by a seatbelt. Only if it becomes necessary to care for the patient, should the seat belt be removed. Examples of necessary care are CPR, artificial ventilation, medication administration, or reassessment of unstable patients.

- e. All patients on the stretcher must be secured at all times when the vehicle is in motion or the stretcher is being carried or moved. Manufacturer recommendations often include the use of shoulder harnesses and those restraints should be used at all times.
 - f. Any child transported to the hospital should be in the child's own protective restraining device - child safety seat - when available. He/she should be placed in the device and the device should be belted to an ambulance seat. If the child actually is the patient, he/she should be secured onto the stretcher and if appropriate, kept in the child safety seat.
 - g. If the ambulance service does not have an ambulance equipped with child safety seats, it is recommended that the agency purchase an approved child safety seat for each ambulance.
 - h. Agencies should consider the acquisition of patient monitoring devices (such as automated blood pressure cuffs) and positioning of equipment in the patient care area that would allow for personnel to remain restrained while providing patient care.
- 9) **How will the EMSC performance measures be affected by the changes; how will grantees show in the EHB what pieces are present and what pieces are missing?** The EMSC Program encourages grantees to work with EMS agencies to equip the patient care units with all of the equipment listed on the new equipment list; however, for purposes of data collection for the performance measures, a subset of the list will be used. This list can be obtained by contacting the NRC or NEDARC.
- 10) **When was this document created (date)?** April 2009. An updated document is provided on the EMSC NRC website.
- 11) **BLS Required Equipment: A1 – Portable and fixed suction apparatus with a regulator. Would there need to be a regulator on a portable device? According to our providers, it is not standard to have a regulator on a portable device.** Most standard and portable suction devices do have regulators integrated. Regulation of suction power is preferred for the pediatric patient because children have thinner tissues and there is a risk of significant damage if high suction power is used. Portable suction devices without regulators have a constant suction power that was not calibrated for children.