Request for Provider Grants Incentive
Category EMTS Funding Program – Fiscal Year
2016

Please complete all 11 questions and email your submission to jeanne.bakehouse@state.co.us no later than 5 p.m. on June 30, 2014.

Need

1. Specifically describe the EMTS Provider Grants Program category or subcategory that is requested to be funded at a reduced match.

   On behalf of the Colorado EMS for Children Program and the Pediatric Emergency Care Committee (PECC) we respectfully request the Public Policy and Finance Committee consider the creation on an incentive category in the EMTS Provider Grant Program for Essential Pediatric Care Equipment and Supplies. We further request this category exist for not more than two (2) grant cycles. Eligible items in this category will be restricted to pediatric care items contained on the Recommended Equipment for Ambulances document published by the American College of Surgeons Committee on Trauma and endorsed by a variety of national organizations and the Guidelines for the Care of Children in Emergency Departments issued jointly by the American Academy of Pediatric, American College of Emergency Physicians and the Emergency Nurses Association. Finally, we request this category have a variable dollar limitation per applicant based on applicant type and number of EMS transport vehicles.

2. Specifically describe why an incentive is needed to encourage applications in this category or subcategory. Include supporting data.

   In a review of the scope of pediatric care in Colorado conducted by the Colorado Prehospital Quality Council, EMS patients under age 17 accounted for 23,995 or 5.6% of 424,820 calls in the state dataset in 2012. In 2013 patients these patients accounted for 30,966 or 6.6% of the 467,114 calls in the dataset. A large portion of this population requires specialized EMS equipment of an appropriate size in order to be cared for effectively. While data regarding the scope of children seen in emergency departments is not currently available, it is likely many times higher than the EMS amount.

   In an assessment of EMS agencies in Colorado required by the national EMSC program in late 2013 and early 2104 86% of EMS transport services in the state reported the status of pediatric EMS equipment on 671 ambulances in Colorado including 54 basic life support and 617 advanced life support ambulances statewide. 78 of 81 (97%) facilities providing emergency care in Colorado were also surveyed in 2013 regarding available pediatric equipment.

   Of ambulances only 13% of BLS ambulances and 35.7% of ALS ambulances had ALL of the nationally recommended equipment. The facility figures were summarized without extensive detail, however, facilities reported missing a variety of equipment items as well with some recommended items indicating availability in only 67% of hospitals.

EMS numbers lagged behind the national averages. On the bright side, however, BLS ambulances in Colorado had on average 95% of the recommended equipment while ALS ambulances had 97%. In summary, this indicates a limited amount of equipment is needed on a lot of ambulances. Facility needs appear to be similar.

To summarize, a limited amount of equipment is needed in a large number of places in order to ensure appropriate equipment is available to provide effective care to children. An incentive is an excellent way to address this. Additional detail on the surveys listed above is attached.

3. Describe why increased applications in this category or subcategory are needed. Include supporting data.

   Increased applications in this area would be useful to address equipment deficits that exist to some level on at least 47 BLS ambulances and 397 ALS ambulances and a number of facilities across the state.

   Additionally, due to the infrequent nature of pediatric EMS calls and the overall lack of use of this equipment, it is reasonable to assume that pediatric equipment concerns, including the acquisition, updating and replacement of this equipment suffers from unintentional neglect by organizations providing emergency care that could be effectively addressed through the use of thoughtfully designed incentives that are both targeted and limited.

4. Explain why this category or subcategory is not adequately addressed in the existing structure of the grant program.

   Pediatric EMS equipment, particularly the equipment that is frequently missing based on survey data, is actually relatively inexpensive. As such, it is likely not a priority for grant applicants looking to fund the acquisition of more expensive items or items that are more frequently used.

   A good bit of the recommended equipment may also be categorized currently as ineligible for grant funding due to its disposable nature. The PECC recommends that for the duration of this incentive category that all recommended pediatric equipment, regardless of disposability, be eligible for reduced match grant funding up to a specified amount.

5. Provide a concise description of the statewide public policy goal that the reduced match is expected to achieve.

   In order to appropriately provide emergency care for children, a specialized, yet small segment of EMS calls in Colorado, an incentive for the purchase of recommended EMS equipment up to a set amount at a reduced level of applicant match should be available for a limited time to EMS services and emergency care facilities.

6. Explain how progress towards this goal will be determined.

   Baseline data for 156 EMS services and 78 facilities already exists based on assessment results collected in 2013 and early 2014. Additional surveys are planned by the national EMS for Children program for EMS services in 2015 and 2017 that would provide extensive and detailed progress measurements of the effectiveness of this incentive category. Unfortunately, a nationally sponsored follow up survey of facilities is not currently planned, but could be replicated at the state level if desired.

7. What level of match reduction do you think is necessary to meet this goal?

   The PECC recommends an increased state match between 75 – 90% to provide EMS services and facilities a strong incentive to purchase recommended equipment in this category. The incentive should be both attractive and limited in time order to encourage applicants to use this category while available to acquire and upgrade their pediatric care equipment. Correspondingly, the program should be limited in the amount of funding available to an applicant in order to reduce the desire of applicants to stockpile equipment.

Statewide Impact

8. Describe the statewide impact of this proposal.

It is not possible to measure the impact of this program prior to implementation, however, it is clear that a large number of ambulances are missing useful equipment and at least 30,000 children in Colorado may benefit from appropriate emergency care equipment annually. We are fortunate, however, to have an ongoing measurement program in place to evaluate the impact of this program over time in EMS as well as a 2013 snapshot of needs in facilities.

Systems Integration

9. Describe how an incentive for this category or subcategory will improve integration of the EMTS system.

Provided this category is set up to allow applicants to purchase off a standardized list of equipment, perhaps even from a limited number of vendors, significant strides could be made towards improving the interoperability of pediatric equipment and the standardization of training around that equipment.

Priority to Underdeveloped or Aged Systems

10. Describe how an incentive for this category or subcategory addresses an underdeveloped or aged EMTS system component.

Recent statewide survey data clearly indicates a shortage of some pediatric EMS equipment on ambulances and in emergency departments across Colorado than can be addressed by an incentive. Due to the low volume of pediatric EMS and ED encounters overall, it is also likely this incentive will encourage MES services and facilities to replace outdated equipment.

Cost Effectiveness

11. Describe how a reduced match is the most cost effective alternative to encourage applications in this category or subcategory.

This is an inexpensive problem to address across a large number of EMS services and facilities, a situation not often faced by the EMTS provider grant program which deals mostly with expensive problems in a single service or facility. An incentive limited in time, scope and amount would be a very cost effective way to encourage a large number of services and facilities to address pediatric equipment issues while the incentive is available. To describe it in advertising terms, this project would put pediatric equipment "on sale" in order to encourage organizations across the state to have recommended pediatric equipment.

Attachments

- Recommended Equipment for Ambulances
- Guidelines for Care of Children in the Emergency Department
- 2013 Colorado Pediatric Readiness Facility Assessment Summary
- HRSA Summary Slides on 2013/2014 Colorado EMS Assessment

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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

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for ambulance services, adult and pediatric emergency medicine physicians, adult and pediatric trauma surgeons, and appropriately trained basic and advanced emergency medical personnel. Current Institute of Medicine (IOM) recommendations encourage each EMS agency to have a pediatric coordinator to specifically coordinate the capability of the service to care for nonadult patients.

Equipment and Supplies

The guidelines list the supplies and equipment that should be stocked on ambulances to provide the accepted standards of patient care. Previous documents regarding ambulance equipment referred to essential or minimal equipment necessary to adequately equip an ambulance. Equipment requirements will vary, depending on the certification levels of the providers, population densities, geographic and economic conditions of the region, and other factors.

The following list is divided into equipment for basic life support (BLS) and advanced life support (ALS) 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: Basic Life Support (BLS) Ambulances

A. Ventilation and Airway Equipment

1. Portable and fixed suction apparatus with a regulator (per Federal specifications; see Federal Specification KKK-A-1822F reference)
   - Wide-bore tubing, rigid pharyngeal curved suction tip; tonsillar 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 flow regulator
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-reexpanding bag; adult (>1000 ml) and child (450–750 ml) sizes, with oxygen reservoir/accumulator; valve (clear, disposable, 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 Defibrilation

All 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.

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)
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)

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4. 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)
5. Impervious backboards (long, short; radiolucent preferred) and extrication device
   - Short (extrication, head-to-pelvis length) and long (transport, head-to–feet length) with at least three 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

1. Commercially-packaged or sterile burn sheets
2. Triangular bandages
   - Minimum two safety pins each
3. Dressings
   - Sterile multitrauma dressings (various large and small sizes)
   - ABDs, 10”x12” or larger
   - 4”x4” gauze sponges or suitable size
4. Gauze rolls
   - Various sizes
5. Occlusive dressing or equivalent
   - Sterile, 3”x8” or larger
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 EMS provider, dispatcher, and medical control

F. Obstetrical Kit (commercially packaged is available)

1. Kit (separate sterile kit)
   - Towels, 4”x4” 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)

G. Miscellaneous

1. Sphygmomanometer (pediatric and adult regular and large size cuffs)
2. Adult stethoscope
3. Length/weight-based tape or appropriate reference material for pediatric equipment sizing and drug dosing based on estimated or known weight
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 (minimum 4), linen or paper, and pillows
11. Towels
12. Triage tags
13. Disposable emesis bags or basins
14. Disposable bedpan
15. Disposable urinal
16. Wheeled cot (conforming to national standard at the time of manufacture)
17. Folding stretcher
18. Stair chair or carry chair
19. Patient care charts/forms
20. Lubricating jelly (water soluble)

H. Infection Control*

**Latex-free equipment should be available*

1. Eye protection (full peripheral glasses or goggles, face shield)
2. Face protection (for example, surgical masks per applicable local or state guidance)
3. Gloves, nonsterile (must meet NFPA 1999 requirements found at *http://www.nfpa.org/*)
4. Coveralls or gowns
5. Shoe covers
6. Waterless hand cleanser, commercial antimicrobial (towelette, spray, liquid)
7. Disinfectant solution for cleaning equipment
8. Standard sharps containers, fixed and portable

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9. Disposable trash bags for disposing of biohazardous waste
10. Respiratory protection (for example, N95 or N100 mask—per applicable local or state guidance)

I. Injury Prevention Equipment

1. All individuals in an ambulance need to be restrained (there is currently no national standard for transport of uninjured children; see NHTSA Web site, *http://www.nhtsa.gov/* for list of EMS-approved child occupant protection devices)
2. Protective helmet
3. Fire extinguisher
4. Hazardous material reference guide
5. Traffic signaling devices (reflective material triangles or other reflective, nonigniting devices)
6. Reflective safety wear for each crewmember (must meet or exceed ANSI/ISEA performance class II or III if working within the right of way of any federal-aid highway. Visit *http://www.reflectivevest.com/federalhighwayruling.html* for more information.)

Required Equipment: Advanced Life Support (ALS) Ambulances

For EMT-Paramedic services, include all of the required equipment listed for the basic level provider, plus the following additional equipment and supplies. For EMT-Intermediate services (and other nonparamedic advanced levels), include all of the equipment for the basic level provider and selected equipment and supplies from the following list, based on local need and consideration of prehospital characteristics and budget.

A. Airway and Ventilation Equipment

1. Laryngoscope handle with extra batteries and bulbs
2. Laryngoscope blades, sizes 0–4, straight (Miller); sizes 2–4, curved, (MacIntosh)
3. Endotracheal tubes, sizes 2.5–5.5 mm uncuffed and 6–8 mm cuffed (2 each), other sizes optional
4. Meconium aspirator adaptor
5. 10-mL non-Luerlock syringes
6. Stylettes for endotracheal tubes, adult and pediatric
7. Magill (Rovenstein) forceps, adult and pediatric
8. Lubricating jelly (water soluble)
9. End-tidal CO_2 detection capability
   - Colorimetric (adult and pediatric) or quantitative capnometry

B. Vascular Access

1. Crystalloid solutions, such as Ringer's lactate or normal saline solution (1,000-mL bags x 4); fluid must be in bags, not bottles; type of fluid may vary depending on state and local requirements
2. Antiseptic solution (alcohol wipes and povidone-iodine wipes preferred)
3. IV pole or roof hook
4. Intravenous catheters 14G–24G
5. Intraosseous needles or devices appropriate for children and adults
6. Venous tourniquet, rubber bands
7. Syringes of various sizes, including tuberculin
8. Needles, various sizes (one at least 1 ½" for IM 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, ECG 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

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D. Other Advanced Equipment

1. Nebulizer
2. Glucometer or blood glucose measuring device
   - With reagent strips
3. Large bore needle (should be at least 3.25" in length for needle chest decompression in large adults)

E. Medications (pre-loaded syringes when available)

Medications used on advanced level ambulances should be compatible with current guidelines as published by the American Heart Association's Committee on Emergency Cardiovascular Care, as reflected in the Advanced Cardiac Life Support and Pediatric Advanced Life Support Courses, or other such organizations and publications (ACEP, ACS, NAEMSP, and so on). Medications may vary depending on state requirements. Drug dosing in children should use processes minimizing the need for calculations, preferably a length-based system. In general, medications may include:

- Cardiovascular medication, such as 1:10,000 epinephrine, atropine, antidysrhythmics (for example, adenosine and amiodorone), calcium channel blockers, beta-blockers, nitroglycerin tablets, aspirin, vasopressor for infusion
- Cardiopulmonary/respiratory medications, such as albuterol (or other inhaled beta agonist) and ipratropium bromide, 1:1,000 epinephrine, furosemide
- 50% dextrose solution (and sterile dilutent or 25% dextrose solution for pediatrics)
- Analgesics, narcotic and nonnarcotic
- Antiepileptic medications, such as diazepam or midazolam
- Sodium bicarbonate, magnesium sulfate, glucagon, naloxone hydrochloride, calcium chloride
- Bacteriostatic water and sodium chloride for injection
- Additional medications as per local medical director

Optional Basic Equipment

This section is intended to assist EMS providers in choosing equipment that can be used to ensure delivery of quality prehospital care. Use should be based on local resources. The equipment in this section is not mandated or required.

A. Optional Equipment

1. Glucometer (per state protocol)
2. Elastic bandages
   - Nonsterile (various sizes)
3. Cellular phone
4. Infant oxygen mask
5. Infant self-inflating resuscitation bag
6. Airways
   - Nasopharyngeal (12, 14 Fr)
   - Oropharyngeal (size 00)
7. Alternative airway devices (for example, a rescue airway device such as the ETDLA [esophageal-tracheal double lumen airway], laryngeal tube, or laryngeal mask airway) as approved by local medical direction.
8. Alternative airway devices for children (few alternative airway devices that are FDA approved have been studied in children. Those that have been studied, such as the LMA, have not been adequately evaluated in the prehospital setting).
9. Neonatal blood pressure cuff
10. Infant blood pressure cuff
11. Pediatric stethoscope
12. Infant cervical immobilization device
13. Pediatric backboard and extremity splints
14. Topical hemostatic agent
15. Appropriate CBRNE PPE (chemical, biological, radiological, nuclear, explosive personal protective equipment), including respiratory and body protection
16. Applicable chemical antidote autoinjectors (at a minimum for crew members' protection; additional for victim treatment based on local or regional protocol; appropriate for adults and children)

B. Optional Advanced Equipment

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. Pediatric laryngoscope handle
6. Size 1 curved (MacIntosh) laryngoscope blade

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7. 3.5–5.5 mm cuffed endotracheal tubes
8. 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 the age of 12 years)

Optional Medications

A. Optional Basic Life Support Medications

1. Albuterol
2. Epi pens
3. Oral glucose
4. Nitroglycerin (sublingual tablet or paste)

B. Optional Advanced Life Support Medications

1. Anxiolytics
2. Intubation adjuncts including neuromuscular blockers

Interfacility Transport

Additional equipment may be needed by ALS and BLS prehospital care providers who transport patients between facilities. Transfers may be done 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 the American Academy of Pediatrics Guidelines for Air and Ground Transport of Neonatal and Pediatric Patients.

Appendix

Extrication Equipment

Adequate extrication equipment must be readily available to the emergency medical services responders, but is more often found on heavy rescue vehicles than on the primary responding ambulance.

In general, the devices or tools used for extrication fall into several broad categories: disassembly, spreading, cutting, pulling, protective, and patient-related.

The following is necessary equipment that should be available either on the primary response vehicle or on a heavy rescue vehicle.

Disassembly Tools

- Wrenches (adjustable)
- Screwdrivers (flat and Phillips head)
- Pliers
- Bolt cutter
- Tin snips
- Hammer
- Spring-loaded center punch
- Axes (pry, fire)
- Bars (wrecking, crow)
- Ram (4 ton)

Spreading Tools

- Hydraulic jack/spreader/cutter combination

Cutting Tools

- Saws (hacksaw, fire, windshield, pruning, reciprocating)
- Air-cutting gun kit

Pulling Tools/Devices

- Ropes/chains
- Come-along
- Hydraulic truck jack
- Air bags

Protective Devices

- Reflectors/flares
- Hard hats
- Safety goggles
- Fireproof blanket
- Leather gloves
- Jackets/coats/boots

Patient-Related Devices

- Stokes basket

Miscellaneous

- Shovel
- Lubricating oil
- Wood/wedges
- Generator
- Floodlights

Local extrication needs may necessitate additional equipment for water, aerial, or mountain rescue.

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Selected References

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FOOTNOTE: The evidence in children for selected prehospital care interventions or topics was reviewed in preparation for finalizing this ambulance equipment list. These topics included: (a) child safety and booster seats approved for EMS use; (b) alternative airway devices; (c) spinal immobilization devices including collars; and (d) prehospital use of cuffed endotracheal tubes. The results of this evidence evaluation including full citations will be provided in a companion article authored by the primary reviewers of the topics and the EMSC Stakeholders Group. The evidence in all ages for use of arterial tourniquets and hemostatic agents was also reviewed and will be provided in separate consensus review articles.

Guidelines for Care of Children in the Emergency Department

This checklist is based on the American Academy of Pediatrics (AAP), American College of Emergency Physicians (ACEP), and Emergency Nurses Association (ENA) 2009 joint policy statement "Guidelines for Care of Children in the Emergency Department," which can be found online at http://aappolicy.aappublications.org/cgi/reprint/pediatrics;124/4/1233.pdf. Use the checklist to determine if your emergency department (ED) is prepared to care for children.

Administration and Coordination of the ED for the Care of Children

- ❍ *Physician Coordinator for Pediatric Emergency Care.* The pediatric physician coordinator is a specialist in emergency medicine or pediatric emergency medicine; or if these specialties are not available then pediatrics or family medicine, appointed by the ED medical director, who through training, clinical experience, or focused continuing medical education demonstrates competence in the care of children in emergency settings, including resuscitation.
- ❍ *Nursing Coordinator for Pediatric Emergency Care.* The pediatric nurse coordinator is a registered nurse (RN), appointed by the ED nursing director, who possesses special interest, knowledge, and skill in the emergency care of children.

Physicians, Nurses and Other Healthcare Providers Who Staff the ED

- ❍ Physicians who staff the ED have the necessary skill, knowledge, and training in the emergency evaluation and treatment of children of all ages who may be brought to the ED, consistent with the services provided by the hospital.
- ❍ Nurses and other ED health care providers have the necessary skill, knowledge, and training in providing emergency care to children of all ages who may be brought to the ED, consistent with the services offered by the hospital.
- ❍ Baseline and periodic competency evaluations completed for all ED clinical staff, including physicians, are age specific and include evaluation of skills related to neonates, infants, children, adolescents, and children with special health care needs. (Competencies are determined by each institution's medical and nursing staff privileges policy.)

Guidelines for QI/PI in the ED

- ❍ The QI/PI plan shall include pediatric specific indicators.
- ❍ The pediatric patient care-review process is integrated into the ED QI/PI plan. Components of the process interface with out-of-hospital, ED, trauma, inpatient pediatric, pediatric critical care, and hospital-wide QI or PI activities.

Guidelines for Improving Pediatric Patient Safety

The delivery of pediatric care should reflect an awareness of unique pediatric patient safety concerns and are included in the following policies or practices:

- ❍ Children are weighed in kilograms.
- ❍ Weights are recorded in a prominent place on the medical record.
- ❍ For children who are not weighed, a standard method for estimating weight in kilograms is used (e.g., a length-based system).
- ❍ Infants and children have a full set of vital signs recorded (temperature, heart rate, respiratory rate) in medical record.
- ❍ Blood pressure and pulse oximetry monitoring are available for children of all ages on the basis of illness and injury severity.
- ❍ A process for identifying age-specific abnormal vital signs and notifying the physician of these is present.
- ❍ Processes in place for safe medication storage, prescribing, and delivery that includes precalculated dosing guidelines for children of all ages.
- ❍ Infection-control practices, including hand hygiene and use of personal protective equipment, are implemented and monitored.
- ❍ Pediatric emergency services are culturally and linguistically appropriate.
- ❍ ED environment is safe for children and supports patient- and family-centered care.
- ❍ Patient identification policies meet Joint Commission standards.
- ❍ Policies for the timely reporting and evaluation of patient safety events, medical errors, and unanticipated outcomes are implemented and monitored.

Guidelines for ED Policies, Procedures, and Protocols

Policies, procedures, and protocols for the emergency care of children should be developed and implemented in the areas listed below. These policies may be integrated into overall ED policies as long as pediatric specific issues are addressed.

- ❍ Illness and injury triage.
- ❍ Pediatric patient assessment and reassessment.

Guidelines for ED Policies, Procedures, and Protocols, Cont.

- ❍ Documentation of pediatric vital signs and actions to be taken for abnormal vital signs.
- ❍ Immunization assessment and management of the under-immunized patient.
- ❍ Sedation and analgesia, including medical imaging.
- ❍ Consent, including when parent or legal guardian is not immediately available.
- ❍ Social and mental health issues.
- ❍ Physical or chemical restraint of patients.
- ❍ Child maltreatment and domestic violence reporting criteria, requirements, and processes.
- ❍ Death of the child in the ED.
- ❍ Do not resuscitate (DNR) orders.
- ❍ Family-centered care:
  - ❍ Family involvement in patient decision-making and medication safety processes;
  - ❍ Family presence during all aspects of emergency care;
  - ❍ Patient, family, and caregiver education;
  - ❍ Discharge planning and instruction; and
  - ❍ Bereavement counseling.
- ❍ Communication with the patient's medical home or primary care provider.
- ❍ Medical imaging, specfically policies that address pediatric age- or weight-based appropriate dosing for studies that impart radiation consistent with ALARA (as low as reasonably achievable) principles.

Polices, Procedures, and Protocols for All-Hazard Disaster Preparedness

Policies, procedures, and protocols should also be developed and implemented for all-hazard disaster-preparedness. The plan should address the following preparedness issues:

- ❍ Availability of medications, vaccines, equipment, and trained providers for children.
- ❍ Pediatric surge capacity for injured and non-injured children.
- ❍ Decontamination, isolation, and quarantine of families and children.
- ❍ Minimization of parent-child separation (includes pediatric patient tracking and timely reunification of separated children with their family).
- ❍ Access to specific medical and mental health therapies, and social services for children.
- ❍ Disaster drills which include a pediatric mass casualty incident at least every two years.
- ❍ Care of children with special health care needs.
- ❍ Evacuation of pediatric units and pediatric subspecialty units.

Policies, Procedures, and Protocols for Patient Transfers

- ❍ Written pediatric inter-facility transfer procedures should be established.

Guidelines for ED Support Services

Radiology capability must meet the needs of the children in the community served. Specifically:

- ❍ A process for referring children to appropriate facilities for radiological procedures that exceed the capability of the hospital is established.
- ❍ A process for timely review, interpretation, and reporting of medical imaging by a qualified radiologist is established.

Laboratory capability must meet the needs of the children in the community served, including techniques for small sample sizes. Specifically:

- ❍ A process for referring children or their specimens to appropriate facilities for laboratory studies that exceed the capability of the hospital is established.

Guidelines for Equipment, Supplies, and Medications for the Care of Pediatric Patients in the ED

- ❍ Pediatric equipment, supplies, and medications are appropriate for children of all ages and sizes (see list below), and are easily accessible, clearly labeled, and logically organized.
- ❍ ED staff is educated on the location of all items.
- ❍ Daily method in place to verify the proper location and function of equipment and supplies.
- ❍ Medication chart, length-based tape, medical software, or other systems is readily available to ensure proper sizing of resuscitation equipment and proper dosing of medications.

Medications

- ❍ atropine
- ❍ adenosine
- ❍ amiodarone
- ❍ antiemetic agents
- ❍ calcium chloride
- ❍ dextrose (D10W, D50W)
- ❍ epinephrine (1:1000; 1:10 000 solutions)
- ❍ lidocaine
- ❍ magnesium sulfate
- ❍ naloxone hydrochloride
- ❍ procainamide
- ❍ sodium bicarbonate (4.2%, 8.4%)
- ❍ topical, oral, and parenteral analgesics
- ❍ antimicrobial agents (parenteral and oral)
- ❍ anticonvulsant medications
- ❍ antidotes (common antidotes should be accessible to the ED)
- ❍ antipyretic drugs
- ❍ bronchodilators
- ❍ corticosteroids
- ❍ inotropic agents
- ❍ neuromuscular blockers
- ❍ sedatives
- ❍ vaccines
- ❍ vasopressor agents

Equipment/Supplies: General Equipment

- ○ patient warming device
- ○ intravenous blood/fluid warmer
- ○ restraint device
- ○ weight scale in kilograms (not pounds)
- ○ tool or chart that incorporates weight (in kilograms) and length to determine equipment size and correct drug dosing
- ○ age appropriate pain scale-assessment tools

Equipment/Supplies: Monitoring Equipment

blood pressure cuffs
- ○ neonatal
- ○ infant
- ○ child
- ○ adult-arm
- ○ adult-thigh

- ○ doppler ultrasonography devices
- ○ electrocardiography monitor/ defibrillator with pediatric and adult capabilities including pads/paddles
- ○ hypothermia thermometer
- ○ pulse oximeter with pediatric and adult probes
- ○ continuous end-tidal CO2 monitoring device

Equipment/Supplies: Vascular Access

arm boards
- ○ infant
- ○ child
- ○ adult

catheter-over-the-needle device
- ○ 14 gauge
- ○ 16 gauge
- ○ 18 gauge
- ○ 20 gauge
- ○ 22 gauge
- ○ 24 gauge

intraosseous needles or device
- ○ pediatric
- ○ adult

- ○ IV administration sets with calibrated chambers and extension tubing and/or infusion devices with ability to regulate rate and volume of infusate

umbilical vein catheters
- ○ 3.5F
- ○ 5.0F

central venous catheters (any two sizes)
- ○ 4.0F
- ○ 5.0F
- ○ 6.0F
- ○ 7.0F

intravenous solutions
- ○ normal saline
- ○ dextrose 5% in normal saline
- ○ dextrose 10% in water

Equipment/Supplies: Fracture-Management Devices

extremity splints
- ○ femur splints, pediatric sizes
- ○ femur splints, adult sizes

- ○ spine-stabilization devices appropriate for children of all ages

Equipment/Supplies: Respiratory

endotracheal tubes
- ○ uncuffed 2.5 mm
- ○ uncuffed 3.0 mm
- ○ cuffed or uncuffed 3.5 mm
- ○ cuffed or uncuffed 4.0 mm
- ○ cuffed or uncuffed 4.5 mm
- ○ cuffed or uncuffed 5.0 mm
- ○ cuffed or uncuffed 5.5 mm
- ○ cuffed 6.0 mm
- ○ cuffed 6.5 mm
- ○ cuffed 7.0 mm
- ○ cuffed 7.5 mm
- ○ cuffed 8.0 mm

feeding tubes
- ○ 5F
- ○ 8F

laryngoscope blades
- ○ straight: 0
- ○ straight: 1
- ○ straight: 2
- ○ straight: 3
- ○ curved: 2
- ○ curved: 3

- ○ laryngoscope handle

magill forceps
- ○ pediatric
- ○ adult

nasopharyngeal airways
- ○ infant
- ○ child
- ○ adult

oropharyngeal airways
- ○ size 0
- ○ size 1
- ○ size 2
- ○ size 3
- ○ size 4
- ○ size 5

stylets for endotracheal tubes
- ○ pediatric
- ○ adult

suction catheters
- ○ infant
- ○ child
- ○ adult

tracheostomy tubes
- ○ 2.5 mm
- ○ 3.0 mm
- ○ 3.5 mm
- ○ 4.0 mm
- ○ 4.5 mm
- ○ 5.0 mm
- ○ 5.5 mm

- ○ yankauer suction tip

bag-mask device, self inflating
- ○ infant: 450 ml
- ○ adult: 1000 ml

masks to fit bag-mask device adaptor
- ○ neonatal
- ○ infant
- ○ child
- ○ adult

Equipment/Supplies: Respiratory, Continued

clear oxygen masks
- ❍ standard infant
- ❍ standard child
- ❍ standard adult
- ❍ partial nonrebreather infant
- ❍ nonrebreather child
- ❍ nonrebreather adult

nasal cannulas
- ❍ infant
- ❍ child
- ❍ adult

nasogastric tubes
- ❍ infant: 8F
- ❍ child: 10F
- ❍ adult: 14-18F

laryngeal mask airway
- ❍ size: 1
- ❍ size: 1.5
- ❍ size: 2
- ❍ size: 2.5
- ❍ size: 3
- ❍ size: 4
- ❍ size: 5

Equipment/Supplies: Specialized Pediatric Trays or Kits

- ❍ lumbar puncture tray (including infant/pediatric 22 gauge and adult 18-21 gauge needles)
- ❍ supplies/kit for patients with difficult airway (supraglottic airways of all sizes, laryngeal mask airway, needle cricothyrotomy supplies, surgical cricothyrotomy kit)
- ❍ tube thoracostomy tray

chest tubes:
- ❍ infant: 10-12F
- ❍ child: 16-24 F
- ❍ adult: 28-40 F

- ❍ newborn delivery kit, including equipment for resuscitation of an infant (umbilical clamp, scissors, bulb syringe, and towel)
- ❍ urinary catheterization kits and urinary (indwelling) catheters (6F–22F)

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

American College of Emergency Physicians®
ADVANCING EMERGENCY CARE

EMSC Emergency Medical Services for Children NATIONAL RESOURCE CENTER

ENA® EMERGENCY NURSES ASSOCIATION
SAFE PRACTICE, SAFE CARE

Children's National Medical Center

National Pediatric Readiness Project
Ensuring Emergency Care for All Children

State Name: Colorado

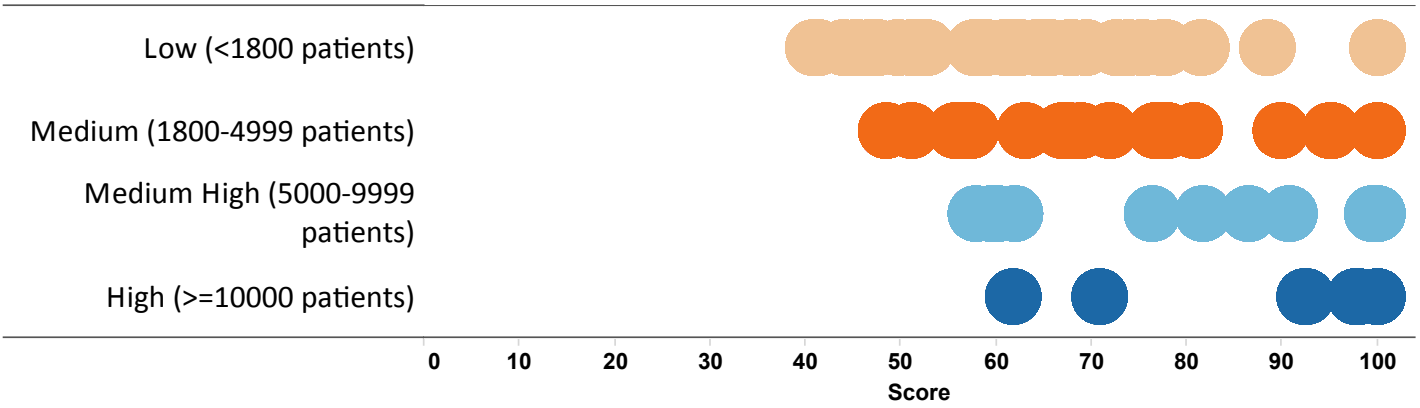
Report Date: 3/5/2014 11:35:46 AM

Number of Hospital Respondents:	78
Number of Hospitals Assessed:	81
Response Rate:	96.3%

STATE SCORE AND COMPARATIVE SCORES:

71	68	69
STATE AVERAGE HOSPITAL SCORE OUT OF 100	STATE MEDIAN HOSPITAL SCORE OUT OF 100	n = 4,146 NATIONAL MEDIAN OF PARTICIPATING HOSPITALS

DISTRIBUTION OF *STATE* SCORES FOR EACH VOLUME TYPE:



BREAKDOWN OF *STATE* SCORES FOR EACH VOLUME TYPE:

Annual Pediatric Volume	# of Hospitals	Avg. Score	Median Score	Min. Score	Max. Score
Low (<1800 patients)	38	61.7	61.5	41	100
Medium (1800-4999 patients)	18	72.2	70.4	48	100
Medium High (5000-9999 patients)	13	82.6	86.4	58	100
High (>=10000 patients)	9	90.1	97.7	62	100
Grand Total	**78**	**70.9**	**67.6**	**41**	**100**

NOTE: *Blank indicates fewer than 5 hospitals; score can't be shown.*

BREAKDOWN OF *NATIONAL* SCORES FOR EACH VOLUME TYPE:

Annual Pediatric Volume	# of Hospitals	Avg. Score	Median Score	Min. Score	Max. Score
Low (<1800 patients)	1,629	61.9	61.3	22	100
Medium (1800-4999 patients)	1,248	69.7	69.3	27	100
Medium High (5000-9999 patients)	708	73.7	74.8	31	100
High (>=10000 patients)	561	84.2	89.8	35	100
Grand Total	**4,146**	**69.3**	**68.9**	**22**	**100**

NOTE: *Blank indicates fewer than 5 hospitals; score can't be shown.*

ANALYSIS OF YOUR SCORE:

Below are the average state scores* for each section of the assessment. The scores are based on the weighted assessment items for each section.

** The sum of the sectional scores below may vary slightly from actual overall readiness score above due to rounding.*

Average Section Scores	State Section Scores	National Section Scores
Guidelines for Administration and Coordination (19 pts)	**10.4**	**10.1**
Physicians, Nurses, and Other Health Care Providers Who Staff the ED (10 pts)	**5.1**	**5.3**
Guidelines for QI/PI in the ED (7 pts)	**3.3**	**2.9**
Guidelines for Improving Pediatric Patient Safety in the ED (14 pts)	**11.0**	**10.8**
Guidelines for Policies, Procedures, and Protocols for the ED (17 pts)	**10.9**	**10.5**
Guidelines for Equipment, Supplies, and Medications for the Care of Pediatric Patients in the ED (33 pts)	**30.3**	**29.4**

Guidelines for Administration and Coordination of the ED for the Care of Children

Scored Items

	Yes (N)	% Yes	% National Yes	Difference
Nurse Coordinator	47	60.3%	59.3%	1.0%
Physician Coordinator	38	48.7%	47.4%	1.3%

Physicians, Nurses, and Other Health Care Providers Who Staff the ED

Scored Items

	Yes (N)	% Yes	% National Yes	Difference
Nurse Competency Evaluations	50	64.1%	66.6%	-2.5%
Physician Competency Evaluations	29	37.2%	38.6%	-1.4%

Guidelines QI/PI

Scored Items

	Yes (N)	% Yes	% National Yes	Difference
Does your ED have a pediatric patient care-review process?	40	51.3%	45.1%	6.2%
The following results are a breakdown of those who said "Yes" to having a pediatric patient care-review process...				
Collection and analysis of pediatric emergency care data	37	92.5%	88.1%	4.4%
Identification of quality indicators for children	22	55.0%	58.3%	-3.3%
Development of a plan for improvement in pediatric emergency care	32	80.0%	78.9%	1.1%
Re-evaluation of performance using outcomes-based measures	24	60.0%	73.4%	-13.4%

Guidelines for Improving Pediatric Patient Safety in the ED

Scored Items

	Yes (N)	% Yes	% National Yes	Difference
Weigh in Kilograms	50	64.1%	67.7%	-3.6%
If Weigh in Kilograms, also Record in Kilograms	41	82.0%	75.3%	6.7%
Temperature, heart rate, and respiratory rate recorded	77	98.7%	98.6%	0.1%
Blood pressure monitoring available based on severity of illness	77	98.7%	98.1%	0.6%
Pulse oximetry monitoring available based on severity of illness	78	100.0%	99.7%	0.3%
Written procedure in place for notification of physicians when abnormal vital signs	53	67.9%	70.1%	-2.2%
Process in place for the use of pre-calculated drug dosing	61	78.2%	78.9%	-0.7%
Process in place that allows for 24/7 access to interpreter services in the ED	75	96.2%	95.4%	0.7%

Guidelines for Policies, Procedures, and Protocols for the ED

Scored Items

	Yes (N)	% Yes	% National Yes	Difference
Triage policy that specifically addresses ill and injured children	49	62.8%	57.6%	5.2%
Policy for pediatric patient assessment and reassessment	59	75.6%	73.4%	2.2%
Policy for immunization assessment and management of the under-immunized child	40	51.3%	51.7%	-0.4%
Policy for child maltreatment	71	91.0%	89.6%	1.4%
Policy for death of the child in the ED	53	67.9%	58.0%	10.0%
Policy for reduced-dose radiation for CT and x-ray imaging based on pediatric age or weight	41	52.6%	52.6%	0.0%
Policy for promoting family-centered care	43	55.1%	59.6%	-4.5%
Hospital disaster plan addresses issues specific to the care of children	41	52.6%	46.8%	5.8%
Inter-facility transfer guidelines	55	70.5%	70.5%	0.0%

Guidelines for Equipment, Supplies, and Medications for the Care of Pediatric Patients in the ED

Scored Items

	Yes (N)	% Yes	% National Yes	Difference
Is the ED staff trained on the location of all pediatric equipment and medications?	78	100.0%	99.5%	0.5%
Is there a daily method used to verify the proper location and function of pediatric equipment and supplies?	66	84.6%	83.1%	1.5%
Is a medication chart, length-based tape, medical software, or other system readily available to ensure proper sizing of resuscitation equipment and proper dosing of medications?	78	100.0%	99.5%	0.5%
Neonatal blood pressure cuff	69	88.5%	92.0%	-3.6%
Infant blood pressure cuff	78	100.0%	99.1%	0.9%
Child blood pressure cuff	78	100.0%	99.9%	0.1%
Defibrillator with pediatric and adult capabilities including pads/paddles	78	100.0%	99.7%	0.3%
Pulse oximeter with pediatric and adult probes	78	100.0%	99.7%	0.3%
Continuous end-tidal CO2 monitoring device	73	93.6%	81.7%	11.9%
22 gauge catheter-over-the-needle	78	100.0%	99.7%	0.3%
24 gauge catheter-over-the-needle	78	100.0%	99.5%	0.5%
Pediatric intra-osseus needles	77	98.7%	97.6%	1.1%

Guidelines for Equipment, Supplies, and Medications for the Care of Pediatric Patients in the ED *cont.*

Scored Items

	Yes (N)	% Yes	% National Yes	Difference
IV administration sets with calibrated chambers and extension tubing and/or infusion devices with ability to regulate rate and volume of infusate	77	98.7%	95.3%	3.4%
Umbilical vein catheters (3.5F or 5.0F)	52	66.7%	62.3%	4.3%
Central venous catheters (any two sizes in range, 4F-7F)	55	70.5%	62.5%	8.0%
Endotracheal tubes: cuffed or uncuffed 2.5 mm	73	93.6%	94.3%	-0.7%
Endotracheal tubes: cuffed or uncuffed 3.0 mm	75	96.2%	97.0%	-0.8%
Endotracheal tubes: cuffed or uncuffed 3.5 mm	76	97.4%	98.4%	-1.0%
Endotracheal tubes: cuffed or uncuffed 4.0 mm	78	100.0%	99.4%	0.6%
Endotracheal tubes: cuffed or uncuffed 4.5 mm	77	98.7%	98.6%	0.1%
Endotracheal tubes: cuffed or uncuffed 5.0 mm	78	100.0%	99.4%	0.6%
Endotracheal tubes: cuffed or uncuffed 5.5 mm	76	97.4%	98.1%	-0.7%
Endotracheal tubes: cuffed or uncuffed 6.0 mm	76	97.4%	99.2%	-1.7%
Laryngoscope blades: straight, size 00	62	79.5%	77.4%	2.0%
Laryngoscope blades: straight, size 0	72	92.3%	94.1%	-1.8%
Laryngoscope blades: straight, size 1	75	96.2%	98.2%	-2.1%
Laryngoscope blades: straight, size 2	77	98.7%	96.8%	1.9%

Guidelines for Equipment, Supplies, and Medications for the Care of Pediatric Patients in the ED *cont.*

Scored Items

	Yes (N)	% Yes	% National Yes	Difference
Laryngoscope blades: curved, size 2	76	97.4%	96.5%	1.0%
Pediatric-sized Magill forceps	71	91.0%	82.4%	8.6%
Nasopharyngeal airways: infant-sized	59	75.6%	82.9%	-7.2%
Nasopharyngeal airways: child-sized	67	85.9%	87.7%	-1.8%
Oropharyngeal airways: size 0 (50mm)	75	96.2%	92.5%	3.6%
Oropharyngeal airways: size 1 (60mm)	78	100.0%	96.6%	3.4%
Oropharyngeal airways: size 2 (70mm)	77	98.7%	95.6%	3.1%
Oropharyngeal airways: size 3 (80mm)	78	100.0%	96.8%	3.2%
Stylets for pediatric/infant-sized endotracheal tubes	76	97.4%	97.4%	0.1%
Tracheostomy tubes: size 3.0 mm	61	78.2%	68.0%	10.2%
Tracheostomy tubes: size 3.5 mm	57	73.1%	67.8%	5.2%
Tracheostomy tubes: size 4.0 mm	65	83.3%	75.0%	8.3%
Bag-mask device, self inflating: infant, 450 ml	75	96.2%	96.8%	-0.6%
Masks to fit bag-mask device adaptor: neonatal	71	91.0%	92.4%	-1.4%
Masks to fit bag-mask device adaptor: infant	78	100.0%	98.6%	1.4%
Masks to fit bag-mask device adaptor: child	78	100.0%	99.0%	1.0%
Clear oxygen masks: standard infant	74	94.9%	93.4%	1.5%
Clear oxygen masks: standard child	78	100.0%	98.1%	1.9%
Non-rebreather masks: infant-sized	69	88.5%	84.1%	4.4%
Non-rebreather masks: child-sized	76	97.4%	93.8%	3.7%

Guidelines for Equipment, Supplies, and Medications for the Care of Pediatric Patients in the ED *cont.*

Scored Items

	Yes (N)	% Yes	% National Yes	Difference
Nasal cannulas: infant	75	96.2%	91.0%	5.2%
Nasal cannulas: child	77	98.7%	95.9%	2.8%
Laryngeal mask airways: size 1	53	67.9%	57.2%	10.8%
Laryngeal mask airways: size: 1.5	50	64.1%	55.1%	9.0%
Laryngeal mask airways: size: 2	56	71.8%	60.9%	10.9%
Laryngeal mask airways: size: 2.5	52	66.7%	58.5%	8.2%
Laryngeal mask airways: size: 3	59	75.6%	66.3%	9.3%
Suction catheters: at least one in range 6-8F	78	100.0%	98.5%	1.5%
Suction catheters: at least one in range 10-12F	78	100.0%	99.2%	0.8%
Supplies/kit for pediatric patients with difficult airways (supraglottic airways of all sizes, needle cricothyrotomy supplies, surgical cricothyrotomy kit)	66	84.6%	75.3%	9.3%

PEDIATRIC EQUIPMENT ON TRANSPORTING VEHICLES

Colorado EMSC Performance Measure Data – 2013-14

Pediatric Equipment on Transporting Vehicles

The percent of transporting vehicles in the State/Territory that have the **essential pediatric equipment and supplies** as outlined in national guidelines.

Transport Vehicles

- 671 transporting vehicles in the **Colorado** dataset (54 BLS / 617 ALS).
- 16,234 transporting vehicles in the national dataset.*

**Preliminary National EMSC Performance Measure Data – 2013-14*

Colorado EMSC Performance Measure Data – 2013-14

The Average Percent of Recommended Pediatric Equipment Carried

Type of Vehicle	Colorado	National
BLS Transport	95%	92%*
ALS Transport	97%	95%*

**Preliminary National EMSC Performance Measure Data – 2013-14*

Colorado EMSC Performance Measure Data – 2013-14

Performance Measure Calculation

The percent of transporting vehicles that carry **all** of the recommended pediatric equipment:

Type of Vehicle	Colorado	National
BLS Transport	13.0% (n=7)	25.1%*
ALS Transport	35.7% (n=220)	38.7%*

**Preliminary National EMSC Performance Measure Data – 2013-14*

Colorado EMSC Performance Measure Data – 2013-14

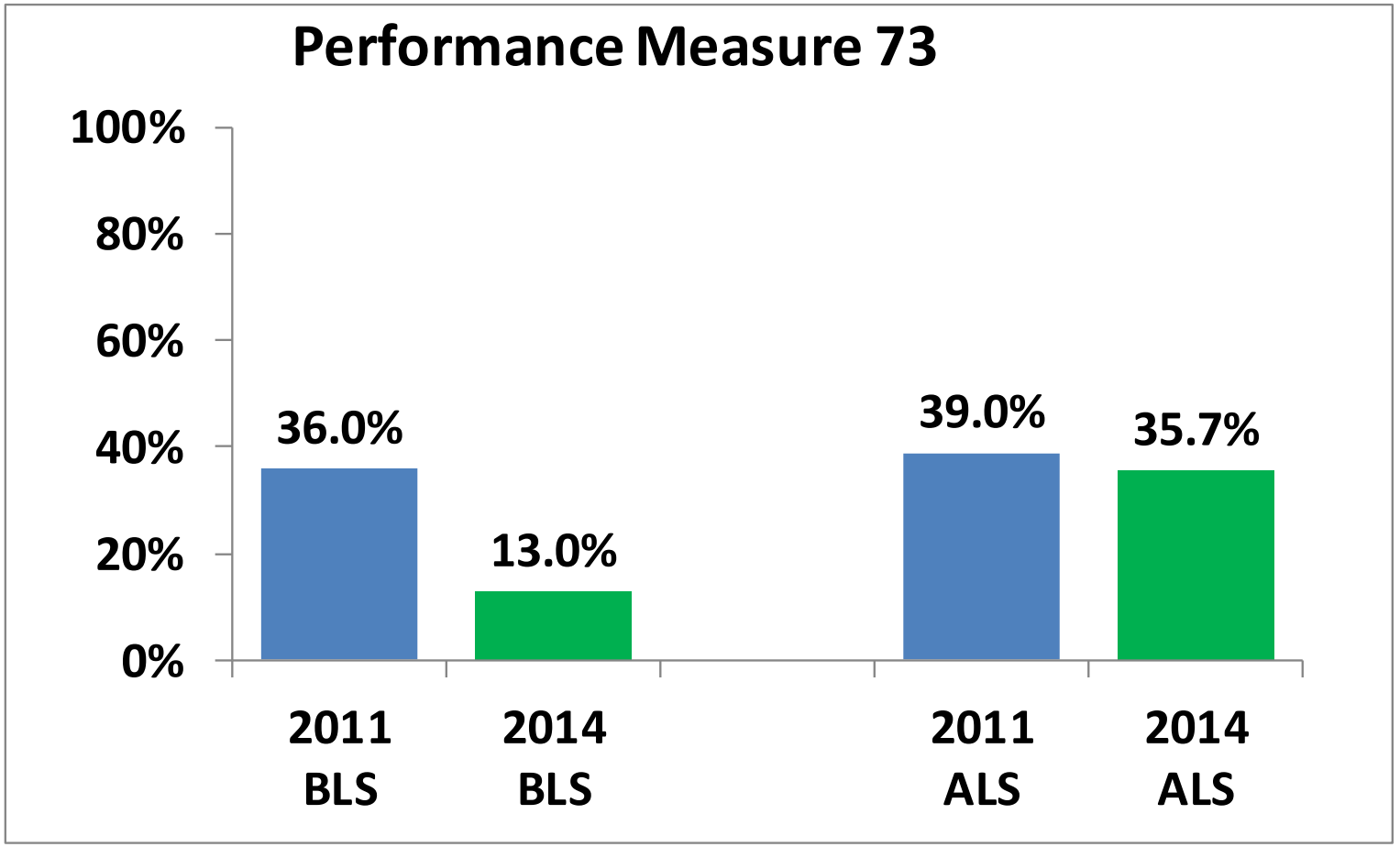
Least Carried Items BLS

Equipment Name	% Carry
Mask for bag-valve mask - neonate size	**55.6%**
Lower extremity (femur) traction device - child size	**64.8%**
Pulse oximeter with pediatric probes	**81.5%**
Nasal canula - child size	**85.2%**
Length/weight-based tape or appropriate reference material for pediatric equipment sizing and drug dosing	**87.0%**
Rigid cervical immobilization device - small	**88.9%**
AED or defibrillator that includes pediatric capability	**90.7%**
Extremity immobilization device -small	**90.7%**
Oral airway - either a size 2 or size 3 (70mm or 80mm)	**90.7%**
Nasal airway in one of the following sizes: 16fr, 18fr, 20fr, 22fr, or 24fr (internal diameters 3.5mm to 6.0mm)	**96.3%**

Least Carried Items ALS

Equipment Name	% Carry
Lower extremity (femur) traction device - child size	**63.4%**
Mask for bag-valve mask - neonate size	**78.6%**
Meconium aspirator adaptor	**86.2%**
Rigid cervical immobilization device - small	**91.9%**
Endotracheal tubes (2 each) - 2.5mm	**92.7%**
Extremity immobilization device -small	**94.2%**
Endotracheal tubes (2 each) - 4.5mm	**94.3%**
Endotracheal tubes (2 each) - 3.5mm	**94.3%**
Endotracheal tubes (2 each) - 3.0mm	**94.3%**
Endotracheal tubes (2 each) - 4.0mm	**94.3%**

Colorado Comparison Data



Colorado EMSC Performance Measure Data – 2013-14