



EMERGENCY DEPARTMENTS APPROVED FOR PEDIATRICS STANDARDS

INTRODUCTION

Emergency Departments Approved for Pediatrics (EDAP): A licensed basic emergency department that is approved by the County of Los Angeles Emergency Medical Services (EMS) Agency to receive pediatric patients via the 9-1-1 system. These emergency departments provide care to pediatric patients by meeting specific requirements for professional staff, quality improvement, education, support services, equipment, supplies, medications, and established policies and procedures, as per the guidelines outlined in Reference 510 – Pediatric Patient Destination.

ACKNOWLEDGEMENTS

The EMS Agency EDAP Standards were first developed by the Committee on Pediatric Emergency Medicine (COPEM), which is made up of representatives from the following organizations: Los Angeles Pediatric Society, Pediatric Liaison Nurses of Los Angeles County, California Chapter of the American College of Emergency Physicians (ACEP), National Emergency Medical Services for Children (EMSC) Resource Alliance, American Academy of Pediatrics (AAP)-California Chapter 2, Emergency Nurses Association (ENA), American College of Surgeons (ACS), and the EMS Agency.

The EDAP Standards have since been revised by the EMS Agency Pediatric Advisory Committee, endorsed by The Hospital Association of Southern California, and now meet or exceed the guidelines established by the Emergency Medical Services Authority (EMSA) #182: Administration, Personnel, and Policy for the Care of Pediatric Patients in the Emergency Department, and the 2009 Joint Policy Statement: Guidelines for Care of Children in the Emergency Department which was ratified by the AAP, ACEP, and the ENA.

DEFINITIONS

Advanced Pediatric Life Support (APLS): The Pediatric Emergency Medicine Resource: is a continuing medical education program developed by AAP and ACEP. APLS features an innovative modular curriculum designed to present the information physicians, nurses and allied health professionals need to assess and care for critically ill and injured children during first few hours in the ED or office-based setting. Course is valid for four years.

Board Certified (BC): Successful completion of the evaluation process through one of the Member Boards of the American Board of Medical Specialties (ABMS) including an examination designed to assess the knowledge, skills and experience necessary to provide quality patient care in a particular specialty.

Board Eligible (BE): Successful completion of an Emergency Medicine (EM) or Pediatric residency training program approved by the Accreditation Council for Graduate Medical Education (ACGME) with progression to board certification based on the timeframe as specified by the ABMS.

Emergency Nursing Pediatric Course (ENPC): Two-day course developed by the ENA that provides core-level pediatric knowledge and psychomotor skills needed to care for pediatric patients in the emergency care setting. Course is valid for four years.

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APPROVED: _____

Director, EMS Agency

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Medical Director, EMS Agency

Pediatric Advisory Committee (PedAC): Acts in an advisory capacity to the EMS Agency. This committee is responsible for all matters regarding pediatric care and policy development pertinent to the practice, operation and administration of prehospital care. Committee reviews, evaluates and makes recommendations on issues related to EMS which impact the pediatric population.

Pediatric Emergency Course: Two-day course with topics pre-approved by the EMS Agency that provides knowledge about the acutely ill and injured child, and a minimum of 14 hours of continuing education. Course is valid for four years.

Pediatric Advanced Life Support (PALS): Instructor-based course with hands-on skills validation (e.g., American Heart Association). Course is valid for two years.

Pediatric Medical Center (PMC): A licensed acute care hospital that is approved by the EMS Agency to receive **critically ill** pediatric patients via the 9-1-1 system based on guidelines outlined in Reference 510 – Pediatric Patient Destination.

Pediatric Trauma Center (PTC): A licensed acute care hospital that is approved by the EMS Agency to receive **injured** pediatric patients via the 9-1-1 system based on guidelines outlined in Reference 506 – Trauma Triage. These centers provide tertiary pediatric care and serve as referral centers for critically injured pediatric patients.

Promptly Available: Able to be physically present in the ED within a period of time that is medically prudent and appropriate to the patient's clinical condition; and further, should not have a measurably harmful effect on the course of patient management or outcome. Hospital guidelines shall be established that address response time for on-call physicians.

Qualified Specialist: A physician licensed in the State of California who has become BC or is BE in the corresponding specialty by the ABMS or American Osteopathic Association (AOA).

Senior Resident: A physician licensed in the State of California who is in training as a member of the residency program at the designated hospital and who has completed at least two years of the residency under consideration, and who demonstrated capability in initiating treatment when the clinical situation demands.

EDAP DESIGNATION / CONFIRMATION AGREEMENT

- I. EDAP initial designation is granted after a satisfactory review by the EMS Agency for a period of three years.
- II. EDAP confirmation status is granted after satisfactory periodic review by the EMS Agency for a period of three years.
- III. The EMS Agency reserves the right to perform scheduled site visits.
- IV. The EDAP shall immediately provide written notice to the Director of the EMS Agency if unable to adhere to any of the provisions set forth in the EDAP Standards.
- V. The EDAP shall provide a 90-day, written notice to the EMS Agency Director of intent to withdraw from the EDAP program.
- VI. The EDAP shall notify the EMS Agency in writing of any change in status of the EDAP Medical

Director, ED Nurse Manager/Director, Designated Pediatric Consultant, and Pediatric Liaison Nurse (PdLN) by completing the Notification of Personnel Change Form – Reference No. 621 and 621.1.

EDAP APPROVAL PROCESS**I. GENERAL REQUIREMENTS FOR THE HOSPITAL**

- A. Licensed by the State of California Department of Public Health (CDPH) as a General Acute Care Hospital, and
- B. Licensed to provide Basic or Comprehensive Emergency Medical Services pursuant to the provisions of Title 22, Division 5, California Code of Regulations.
- C. Accredited by a Centers for Medicare & Medicaid Services (CMS)-recognized Hospital Accreditation Organization (e.g., Joint Commission or Det Norske Veritas).

II. EDAP LEADERSHIP REQUIREMENTS

- A. EDAP Medical Director (i.e., physician coordinator for pediatric emergency care, or PECC)
 - 1. Qualifications:
 - a. Qualified specialist in EM or PEM
 - 2. Responsibilities:
 - a. Oversee EDAP quality improvement (QI) program and monitor to ensure adherence to the EDAP standards.
 - b. Promote and verify adequate skills and current knowledge of ED staff physicians and mid-level practitioners in pediatric emergency care and resuscitation.
 - c. Member of both the ED and pediatric committees (if applicable) to ensure that pediatric care needs are addressed and communicated across disciplines.
 - d. Liaison with PMCs, PTCs, base hospitals, community hospitals, prehospital care providers, and the EMS Agency to ensure pediatric care needs are addressed.
 - e. Collaborates with the ED Nurse Manager/Director and the PdLN to ensure adherence to the EDAP standards for staffing, medication, equipment, supplies, and other resources for children in the ED.
 - f. May also be assigned others roles in the ED.
 - 3. Committee Participation:
 - a. The EMS Agency Pediatric Advisory Committee meets quarterly on the second Tuesday of March, June, September, and December to address pediatric care issues related to prehospital care. Committee members are appointed to ensure that the five EDAP regions are represented. For non-committee member EDAP Medical Directors, attendance is highly encouraged.

B. Designated Pediatric Consultant**1. Qualifications:**

- a. Qualified specialist in pediatrics and/or subspecialty in PEM

2. Responsibilities:

- a. Promptly available for consultation.
- b. Participate in the development and monitoring of pediatric QI program, and pediatric policies and procedures.
- c. Collaborate with the EDAP Medical Director and PdLN as needed.
- d. May also be the EDAP Medical Director.

C. ED Nurse Manager/Director**1. Qualifications:**

- a. Licensed as a Registered Nurse (RN) in the State of California

2. Responsibilities:

- a. Ensure compliance with the EDAP Standards, EDAP Agreement, and EMS Agency policies and procedures.
- b. Oversee the EDAP QI program.
- c. Appoint an ED RN as the PdLN and provide a written description of responsibilities to ensure compliance with EDAP standards.
- d. Ensure that the PdLN is allocated the appropriate time and resources necessary to comply with the EDAP Standards. Allocation of time/hours may be based on the ED's annual pediatric volume:
 - 1) Low volume, or less than <1800 pediatric patients per/year
 - 2) Medium volume, or 1800-4999 pediatric patients per/year
 - 3) Medium-high volume, or 5000-9999 pediatric patients per/year
 - 4) High volume, or greater than >10,000 pediatric patients per/year
- e. Collaborate with the PdLN to develop and implement policies and procedures for all aspects of pediatric care.
- f. Ensure opportunities for the staff to meet the EDAP educational requirements.
- g. Ensure that the QI reports are presented at applicable hospital committees (e.g., ED committee, hospital wide QI committee, pediatric committee)
- h. Ensure that the appropriate documentation is readily available for the EMS Agency during the review process (e.g., physicians' credentials, nursing and respiratory care

practitioners' continuing education).

- i. Serves as the contact person for the EMS Agency and available upon request to respond to County business.

D. Pediatric Liaison Nurse (PdLN) (i.e., Nurse Coordinator for pediatric emergency care)

1. Qualifications:

- a. Licensed as an RN in the State of California
- b. At least two years of experience working in pediatrics, or in an ED that provides care for pediatric patients, within the previous five years
- c. Current PALS provider or instructor
- d. Completion of a two-day pediatric emergency course within the last four years.
- e. Completion of seven hours of pediatric continuing education (CE) approved by the Board of Registered Nursing (BRN) every two years.

2. Responsibilities:

- a. Collaborate with the EDAP Medical Director, ED Nurse Manager/Director, and Designated Pediatric Consultant to ensure compliance with the EDAP Standards, EDAP Agreement, Reference 312, Pediatric Liaison Nurse and policies and procedures established by the EMS Agency.
- b. Maintain and monitor the EDAP quality improvement program
- c. Serve as a liaison and maintain effective lines of communication with:
 - 1) ED management, physicians, and personnel
 - 2) Hospital pediatric management, physicians, and personnel
 - 3) Paramedic base hospital personnel
 - 4) System PdLNs
 - 5) Prehospital care coordinators (PCCs) as needed to follow up with pediatric treatment/transport concerns
 - 6) Prehospital care providers as needed to follow up with pediatric treatment and/or transport concerns
 - 7) EMS Agency
- d. Serve as the contact person for the EMS Agency and be available upon request to respond to County business.
- e. Monitor Pediatric Education:
 - 1) Develop a mechanism to track and monitor pediatric continuing education for the ED staff.
 - 2) Maintain continuing education documentation, to be readily available to the EMS Agency during the review process.

f. Committee Participation:

- 1) The EMS Agency Pediatric Advisory Committee meets quarterly on the second Tuesday (March, June, September, and December) to address pediatric care issues related to prehospital care. Committee members are appointed, to ensure the five EDAP regions are represented. For non-committee member PdLNs, attendance is highly encouraged.

III. PERSONNEL

A. ED Physicians

1. Twenty-four hour ED coverage shall be provided or directly supervised by physicians functioning as emergency physicians, or pediatricians experienced in emergency care, or senior residents.
2. At least 75% of the physicians attending in the ED shall be BC or BE in EM or PEM.
3. Those ED physicians who are not EM or PEM BC or BE shall be currently certified as PALS or APLS providers or instructors.

B. Pediatricians (applies to EDAPs with associated pediatric admission unit)

1. There shall be a call panel that allows for telephone consultation and a qualified specialist in pediatrics to be promptly available to the ED twenty-four hours per day.
2. Those pediatricians who are not BC or BE shall be currently certified as PALS or APLS providers or instructors.

C. Pediatric Subspecialty Services

1. Pediatric subspecialty physicians shall be available through in-house panel, phone consultation, telemedicine, or transfer agreements.

D. Mid-Level Practitioners (Physician Assistants and Nurse Practitioners)

1. Mid-level practitioners shall be licensed by the State of California.
2. All mid-level practitioners assigned to the ED caring for pediatric patients must be currently certified as PALS or APLS providers or instructors.

E. Registered Nurses

1. All RN staff in the ED caring for pediatric patients must be currently certified as PALS providers or instructors. In addition, all nurses assigned to the ED shall attend at least 14 hours of BRN-approved pediatric education every four years
2. At least one RN per shift shall have completed a Pediatric Emergency Course within the last 4 years and be available for patient care. It is highly recommended that all nurses regularly assigned to the ED complete this course as well.

IV. TWO-DAY PEDIATRIC EMERGENCY COURSE – CONTINUING EDUCATION

- A. May be completed in-house or off-site
- B. Curriculum should be selected from this broad spectrum of pediatric topics which have been pre-approved by the EMS Agency:

1. Airway management	12. Pain Management
2. Apparent life-threatening event (ALTE)	13. Disaster response
3. Child Maltreatment (suspected child abuse, neglect, and sexual assault) to include the mandated reporting process	14. Poisonings
4. Death	15. Procedural Sedation
5. Fever/Sepsis/Shock	16. Respiratory emergencies
6. Female presenting with signs & symptoms of recent delivery and no history of giving birth / newborn abandonment	17. Resuscitation
7. Human trafficking	18. Seizures
8. Injury prevention	19. SIDS/SUID
9. Medical conditions (e.g., diabetic ketoacidosis, inborn errors of metabolism, etc.)	20. Special health care needs
10. Medication safety	21. Submersions
11. Neonatal emergencies	22. Surgical emergencies
	23. Trauma/Burns
	24. Triage

V. QUALITY IMPROVEMENT (QI) PROGRAM REQUIREMENTS

- A. QI program shall be developed as per Reference 620, EMS Quality Improvement Program, and monitored by the EDAP Medical Director, ED Nurse Manager/Director, PdLN, with input as needed from the Designated Pediatric Consultant.
1. Develop a mechanism to easily identify pediatric (14 years of age and under) visits to the ED.
 2. Identification and trending of important aspects of pediatric care requiring improvement, to include 100% medical record review of:
 - a. Deaths
 - b. Child Maltreatment (suspected child abuse, neglect, and sexual assault) to include the mandated reporting process
 - c. Transfers to higher level of care
 - d. Admissions from the ED to an adult medical surgical unit, adult intensive care unit (ICU)
 - e. Unscheduled/unplanned return visits to the ED within 48 hours that are admitted or transferred.
 3. Hospital and Agency quality of care review may include, but is not limited to the following high-risk patients and important aspects of care:
 - a. Patients requiring critical care or pediatric intensive care unit (PICU)

- b. Pediatric patients transported via the 9-1-1 requiring admission or transfer to higher level of care
 - c. Airway management
 - d. Acute dehydration
 - e. Blunt head trauma
 - f. Diabetic ketoacidosis
 - g. Fever in infants less than three months of age
 - h. Long bone fractures
 - i. Medication safety
 - j. Seizures
 - k. Sepsis
 - l. Respiratory distress (e.g., asthma, bronchiolitis, croup, foreign body, aspiration pneumonia)
 - m. Facility-specific issues as identified by the PdLN and/or physician
 - n. Prevention of unnecessary tests and procedures per the "Choosing Wisely® Initiatives"
4. Maintain written QI plan, trending and analysis reports, agenda, minutes and attendance rosters to be readily available to the EMS Agency for the review process.

VI. ANCILLARY SERVICES

A. Respiratory Care Practitioners (RCP)

1. At least one RCP shall be in-house twenty-four hours per day to respond to the ED.
2. All RCPs shall be a current PALS provider or instructor.
3. The hospital shall have a mechanism to track and monitor PALS certifications for RCP.

B. Radiology

1. The radiology department shall have pediatric-specific policies and procedures pertaining to imaging studies of children.
2. Qualified specialist in radiology must be on-call and promptly available twenty-four hours per day.
3. Radiology technician must be in-house twenty-four hours per day, with a back-up technician

on-call and promptly available.

4. CT scan technician must be on-call and promptly available.
5. Ultrasound technician or designated operator must be on-call and promptly available.

C. Laboratory

1. Laboratory service shall have pediatric-specific policies and procedures pertaining to laboratory studies of children, including, but not limited to, obtaining samples, and microtechnique for small or limited sample sizes.
2. Technician must be in-house twenty-four hours per day, with a back-up technician on-call and promptly available.

VII. POLICIES AND PROCEDURES

A. Policies and procedures pertaining to the emergency care of children shall include, but are not limited to, the following:

1. Triage:
 - a. Vital signs recorded at triage for infants and children, to include age-appropriate measurement of temperature, heart rate, respiratory rate, and pain scale.
 - b. Blood pressure and pulse oximetry monitoring shall be available for children of all ages. Optimally, blood pressure and pulse oximetry should be assessed on all children. Exceptions must be addressed in policy and monitored.
2. Pediatric patient safety in the ED (e.g., environment of care)
3. Immunization assessment and management of the under immunized patient
4. Child maltreatment (suspected child abuse, neglect, and sexual assault) to include the mandated reporting process
5. Pediatric assessment and reassessment, including identification of abnormal vital signs according to the age of the patient, and physician notification when abnormal values are obtained
6. Pain assessment, treatment, and reassessment, utilizing developmentally appropriate pain scales (include a description of the tools used for infant and child)
7. Consent and assent for emergency treatment (including situations in which a parent/legal guardian is not immediately available)
8. Do Not Resuscitate (DNR) orders/Advanced Health Care Directives (AHCD)
9. Death of the child in the ED and care of the grieving family
10. Care and safety for the pediatric patient with mental and/or behavioral health emergencies

11. Physical and chemical restraint of patients
12. Procedural sedation
13. Reducing radiation exposure for pediatric patients
14. Safe surrender of newborns.
15. Daily verification of proper location and functioning of equipment and supplies for the pediatric crash cart, and a content listing of items in each drawer
16. Family Centered Care, including:
 - a. Supporting appropriate family presence during all aspects of care to include invasive procedures and resuscitation
 - b. Education of the patient, family, and regular caregivers
 - c. Discharge planning and instructions
 - d. Culturally and linguistically appropriate services
17. Communication with patient's medical home or primary provider based on illness and severity (e.g., aftercare instructions, x-ray results, laboratory studies, as appropriate)
18. Transfer from the ED to another facility
19. A surge plan for back-up personnel in the ED
20. Disaster preparedness addressing the following pediatric issues:
 - a. Minimizing parent-child separation, and methods for reuniting separated children with their families
 - b. Pediatric surge capacity for both injured and non-injured children
 - c. Medical and mental health therapies, as well as social services, for children in the event of a disaster
 - d. Disaster drills that include a pediatric mass casualty incident at least once every two years
 - e. Decontamination
21. Medication safety addressing the following pediatric issues:
 - a. All pediatric weights shall be recorded in kilograms:
 - 1) Children shall be weighed in kilograms, with the exception of children who require emergency stabilization, and the weight shall be recorded in a prominent place on the medical record such as with the vital signs.
 - 2) For children who cannot be safely weighed, a standard method for estimating

- weight in kilograms shall be used (e.g., a length-based resuscitation tape).
- 3) Scales used to weigh children must be configured to display weights in kilograms only.
 - 4) Electronic medical records shall allow for weight entries in kilograms only.
- b. Medication orders should be written clearly, in milligrams per kilogram, and should specify the total dosage – not to exceed the safe maximum dosage.
 - c. Processes for safe medication storage, prescribing, and delivery should be established and should include the use of pre-calculated dosing guidelines for children of all ages.
 - d. Involve the patient and /or family in the medication safety process to ensure accurate patient identification and provide education as to the rationale for the medication.

NOTE: Multiple required elements may be incorporated into one policy – e.g., “Care of the Pediatric patient in the ED.”

VIII. INTERFACILITY TRANSFER

- A. A written Interfacility Consultation and Transfer Agreement for tertiary or specialty care shall be established, which shall include, at a minimum, the following:
 1. A plan for subspecialty consultation (telephone, or real-time telemedicine) twenty-four hours per day
 2. Identification of transferring and receiving hospitals’ responsibilities in accordance with Emergency Medical Treatment and Active Labor Act (EMTALA)
 3. A process for selecting the appropriately staffed transport service to match the patient’s acuity level

IX. EQUIPMENT, SUPPLIES, AND MEDICATIONS

- A. Pediatric equipment, supplies, and medications shall be easily accessible, labeled, and logically organized – a mobile pediatric crash cart shall be utilized.
- B. Staff shall be able to identify the locations of all items (e.g., a locator grid identifying the required equipment and supplies).
- C. The following are the required EDAP equipment, supplies, and medications:
 1. GENERAL EQUIPMENT
 - a. Weight scale measuring only in kilograms for both infants and children
 - b. Standardized length-base resuscitation tape (most recent edition) or other standardized method to estimate pediatric weights in kilograms
 - c. Pediatric drug dosage reference material with dosages calculated in milligrams per kilogram – either posted, or readily available

- d. Developmentally appropriate pain scale assessment tools for infants and children
- e. Blood and IV fluid warmer
- f. Warming system with appropriate disposable blankets

2. MONITORING EQUIPMENT

- a. Blood pressure cuffs in the following sizes:
 - 1) Neonatal
 - 2) Infant
 - 3) Child
 - 4) Adult arm
 - 5) Adult thigh
- b. Vascular Doppler device (handheld)
- c. ECG monitor/defibrillator:
 - 1) ECG electrodes in pediatric and adult sizes
 - 2) Defibrillator paddles in pediatric and adult sizes, and/or;
 - 3) Hands-free defibrillation device, with multifunction pads in pediatric and adult sizes
- d. Thermometer with hypothermia capability

3. AIRWAY MANAGEMENT

- a. Bag-Valve-Mask (BVM) device with self-inflating bag in the following sizes:
 - 1) Infant (minimum 450ml)
 - 2) Child
 - 3) Adult
- b. BVM clear masks in the following sizes:
 - 1) Neonate
 - 2) Infant
 - 3) Child
 - 4) Adult
- c. Laryngoscope handle:
 - 1) Pediatric
 - 2) Adult
- d. Laryngoscope Blades:
 - 1) Macintosh/curved: 2, 3
 - 2) Miller/straight: 0, 1, 2, 3

- e. Endotracheal Tubes:
 - 1) Uncuffed: size mm 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5
 - 2) Cuffed: size mm 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0
- f. Stylets for endotracheal tubes:
 - 1) Pediatric
 - 2) Adult
- g. Magill Forceps:
 - 1) Pediatric
 - 2) Adult
- h. Continuous end-tidal CO₂ monitoring device for pediatric and adult patients (preferred). If not available, colorimetric CO₂ detector may be utilized.
- i. Pulse oximeter unit with sensors in the following sizes:
 - 1) Infant
 - 2) Pediatric
 - 3) Adult
- j. Nasopharyngeal Airways:
 - 1) size 10, 12, 14, 18, 20, 22, 24, 26, 30 Fr
- k. Oropharyngeal Airways:
 - 1) Neonatal: size 00 / 40 mm
 - 2) Infant: size 0 / 50 mm
 - 3) Child: size 1 / 60 mm
 - 4) Small child: size 2 / 70 mm
 - 5) Small adult: size 3 / 80 mm
 - 6) Medium adult: size 4 / 90 mm
 - 7) Large adult: size 5 / 100 mm
- l. Clear oxygen masks in the following sizes:
 - 1) Infant
 - 2) Child
 - 3) Adult
- m. Non-rebreather masks in the following sizes:
 - 1) Infant
 - 2) Child
 - 3) Adult

- n. Nasal cannulas in the following sizes:
 - 1) Infant
 - 2) Child
 - 3) Adult
- o. Suction catheters in the following sizes:
 - 1) 6, 8, 10, 12 Fr
- p. Yankauer suction tips
- q. Feeding tubes:
 - 1) 5, 8 Fr
- r. Nasogastric Tubes:
 - 1) size 5, 8, 10, 12, 14, 16, 18 Fr
- s. Laryngeal Mask Airways (LMA):
 - 1) sizes 1, 1.5, 2, 2.5, 3, 4, 5
- t. Cricothyrotomy Catheter set (pediatric)
- u. Tracheostomy trays:
 - 1) Pediatric
 - 2) Adult
- v. Tracheostomy Tubes:
 - 1) Neonatal: size mm 2.5, 3.0, 3.5, 4.0, 4.5
 - 2) Pediatric: size mm 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0

4. VASCULAR ACCESS EQUIPMENT

- a. Arm boards in the following sizes:
 - 1) Infant
 - 2) Child
 - 3) Adult
- b. Infusion device to regulate rate and volume
- c. IV administration sets with calibrated chambers
- d. IV catheters in the following sizes:
 - 1) 16, 18, 20, 22, 24 gauge

- e. 3-way stopcocks
- f. Device or needle to achieve intraosseous (IO) vascular access, to include needles in the appropriate sizes for pediatric and adult patients
- g. IV solutions, to include the following in 250ml and/or 500ml bags:
 - 1) 0.9 NS
 - 2) D5.45NS
 - 3) D5NS
 - 4) D10W

5. FRACTURE MANAGEMENT DEVICES

- a. Splinting supplies for long bone fractures
- b. Spinal motion restriction devices in the following sizes:
 - 1) Infant
 - 2) Child
 - 3) Adult
- c. Spinal board with the appropriate straps

6. SPECIALIZED TRAYS OR KITS

- a. Newborn delivery kit to include:
 - 1) Bulb syringe
 - 2) Umbilical clamps
 - 3) Towels
 - 4) Scissors
- b. Newborn initial resuscitation equipment should be readily available, including:
 - 1) Meconium aspirator
 - 2) Radiant warmer
 - 3) BVM device with self-inflating bag and clear mask for newborns
- c. Umbilical Vein Catheters, or 5.0 Fr feeding tube
- d. Central Venous Catheters in the following sizes:
 - 1) 4.0 Fr
 - 2) 7.0 Fr
- e. Thoracostomy tray:
 - 1) Pediatric
 - 2) Adult
- f. Chest drainage system

- g. Chest tubes in the following sizes:
 - 1) 10, 12, 14, 16, 18, 20, 22, 24, 28, 30, 32, 38 Fr
- h. Lumbar Puncture trays and spinal needles:
 - 1) 18-22 g, 1½-3 inch
 - 2) 22-25 g, 1½ inch
- i. Urinary catheterization sets and urinary (indwelling) catheters in a selection of sizes:
 - 1) 5, 8, 10, 12, 14, 16, 18, 20, 22 Fr

7. PEDIATRIC-SPECIFIC RESUSCITATION

- a. Immediately available drug calculation resources
- b. The following medications must be immediately available:
 - 1) Adenosine
 - 2) Albuterol
 - 3) Amiodarone
 - 4) Atropine
 - 5) Atrovent
 - 6) Calcium chloride
 - 7) Dextrose (25%, 50%)
 - 8) Dobutamine
 - 9) Dopamine
 - 10) Epinephrine 1:10,000
 - 11) Epinephrine 1:1,000
 - 12) Epinephrine for inhalation
 - 13) Lidocaine
 - 14) Mannitol or hypertonic saline
 - 15) Naloxone
 - 16) Procainamide
 - 17) Sodium Bicarbonate 4.2% (or a process to obtain the drug in an emergency situation)
 - 18) Sodium Bicarbonate 8.4%