CENTRAL CALIFORNIA
EMERGENCY MEDICAL SERVICES

A Division of the Fresno County Department of Public Health

Manual Emergency Medical Services Administrative Policies and Procedures	Policy Number 353 Page 1 of 11
Subject Pediatric Staffing and Equipment Guidelines for Emergency Departments	
References	Effective 01/01/93

I. POLICY

Hospitals in Fresno, Kings, and Madera Counties are encouraged to utilize the enclosed guidelines for developing, evaluating, and implementing appropriate staffing and equipment guidelines for the care of children in their respective emergency departments. The local EMS Agency has developed these guidelines with the cooperation of the local medical community in order to maintain and improve the quality of local pediatric emergency care services.

II. PROCEDURE

A. Attachment A contains the recommended Pediatric Staffing and Equipment Guidelines for Hospital Emergency Departments.

B. These guidelines are intended as a reference for local emergency departments to evaluate and upgrade their emergency care services provided to pediatric patients. They are not intended to establish formal standards of care.

C. Each hospital is encouraged to adopt these guidelines, if possible, based upon local resources.

D. These guidelines list recommendations for "Basic" and "Standby" Emergency Departments. These terms are used consistent with the definitions for emergency department permits in the California Code of Regulations. Any hospital with a "Comprehensive" emergency department permit should refer to the "Basic" guidelines. These guidelines are divided into the following sections:

1. Emergency Department Organization - This section contains regulations for emergency departments according to Title 22, California Code of Regulations.

2. Personnel - This section pertains to recommendations for staffing, specialized training, and continuing education for emergency department physicians and nursing staff who care for pediatric patients. It also addresses specialty physicians that should be available to emergency departments that care for pediatric patients.

Approved By EMS Division Manager	**Daniel J. Lynch** (Signature on File at EMS Agency)	Revision **02/01/1997**
EMS Medical Director	**Jim Andrews, M.D.** (Signature on File at EMS Agency)	

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3. Administration/coordination - This section outlines recommendations for designation, qualifications, and responsibilities of the physician pediatric coordinator and the pediatric liaison nurse.

4. Quality Improvement - This section provides recommendations for incorporating pediatrics into existing QI programs.

5. Support Services - This section lists recommended staffing guidelines for radiology, lab, and CT Scan at facilities that care for pediatric patients. Various lab test capabilities are also discussed.

6. Other Recommendations - This section contains miscellaneous recommendations such as policies, procedures, transfer protocols, and transfer agreements specific to pediatrics, as well as the importance of a helicopter landing site and two-way radio linkage with EMS vehicles.

7. Emergency Department Equipment and Supplies/Medications - This section outlines recommendations for equipment, supplies, and medications that are specific to caring for pediatric patients in the emergency department.

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POLICY #353

ATTACHMENT A

PEDIATRIC STAFFING AND EQUIPMENT GUIDELINES

FOR HOSPITAL EMERGENCY DEPARTMENTS

These guidelines are intended as a reference for local emergency departments to evaluate their emergency care services provided to pediatric patients. They are not intended to establish formal standards of care. Each hospital is encouraged to adopt these guidelines, if possible, based upon local resources.

X = Recommended
S = Suggested-Contingent upon local resources
- = Not Applicable

		BASIC	STANDBY
A.	EMERGENCY DEPARTMENT ORGANIZATION		
1.	Licensed basic hospital services, as per Title 22 of the California Code of Regulations.	X	X
2.	Special permit for a basic emergency service, as per Title 22 of the California Code of Regulations.	X	-
3.	Special permit for a standby emergency service, as per Title 22 of the California Code of Regulations.	-	X
B.	PERSONNEL		
1.	Physician Staffing-ED		
a.	ED physician on duty in-house 24 hours/day.	X	S
	Physician on call 24 hours/day.	-	X
b.	Board Certification - It is recommended that at least one physician on duty at all times be Board Certified or eligible/prepared for certification by the American Board of Emergency Medicine, the American Board of Pediatrics, or the American Board of Family Practice.	X	S
c.	Certifications or "Training" for physicians (may be completed within 12 months of employment).		
	The local EMS Agency acknowledges that Board certification in Emergency Medicine or Pediatric Emergency Medicine is the recognized standard of competence. The following recommendations are for Non-Board Certified Emergency Medicine or Pediatric Emergency Medicine physicians:		
1.	Current Advanced Cardiac Life Support Provider Certificate.	X	X

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		2. Pediatric Advanced Life Support (PALS) or Advanced Pediatric Life Support (APLS) trained.	X	X
		3. Current Advanced Trauma Life Support (ATLS) Provider Certificate.	X	X
	d.	It is recommended that all ED physicians have 8 hours of CME in topics related to pediatric acute care every 2 years.* +	X	X
2.	Back-up MD Specialty Services			
	a.	Department of Pediatrics.	S	-
	b.	Designated pediatric consultant on-call and promptly available 24 hours a day.**	X	S
	c.	Roster of specialty physicians available for consultation at all times (Per section 70653 of Title 22 of the California Code of Regulations).	X	X
		1. It is recommended that this roster include, but not be limited to, specialists in surgery, orthopedics, anesthesiology, and neurosurgery.	S	S
	d.	A formal relationship with a pediatric critical care center and a trauma center which includes the availability of 24-hour phone consultation with:		
		1. In the case of a pediatric critical care center, American Board of Pediatrics pediatric consultant and specialized pediatric consultants.	X	X
		2. In the case of a trauma center, trauma care specialists.	X	X
3.	Nursing Staff-ED			
	a.	At least one ED RN with Advanced Cardiac Life Support certification on duty/shift (Basic).	X	-
		At least one RN in-house with Advanced Cardiac Life Support certification on duty/shift and available to the ED (Standby).	-	X
	b.	At least one ED RN with Pediatric Advanced Life Support or Advanced Pediatric Life Support training/shift (Basic).	S	-
		At least one RN in-house with Pediatric Advanced Life Support or Advanced Pediatric Life Support training on duty per shift and available to the ED (Standby).	-	S
	c.	It is recommended that all RNs that work in the ED and care for pediatric patients have 6 hours of CE in topics related to pediatric acute care every two years.*	X	X

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C. ADMINISTRATION/COORDINATION

1.	Medical Director for the ED	X	X
2.	Director or Coordinator for Emergency Pediatrics. (This may be a component of an existing position such as the ED Medical Director, Base Hospital Medical Director, etc.).	X	S
a.	Recommend Qualifications:		
1.	BC/BE in Pediatrics or Family Practice or BC/BP in Emergency Medicine.	S	-
2.	An interest in pediatric emergency medicine and critical care.	X	X
3.	PALS or APLS trained.	X	X
b.	Responsibilities would include:		
1.	Clinical leadership in pediatric emergency medicine.	X	X
2.	Oversee ED Pediatric QI, in collaboration with the Pediatric Liaison Nurse.	X	X
3.	A Pediatric Liaison Nurse (PdLN) - This position may be a component of an existing position, such as the Emergency Department Manager, Prehospital Liaison Nurse, etc.	X	X
a.	Recommended Qualifications		
1.	At least 2 years experience in pediatrics or emergency nursing within the previous five years, or 12 hours of CE in topics related to pediatric acute care within the previous two years.	X	X
2.	An interest in pediatric emergency nursing and critical care nursing.	X	X
3.	PALS or APLS trained.	X	X
4.	It is recommended that the PdLN have 12 hours of CE in topics related to pediatric acute care every two years.*	X	X
c.	Responsibilities would include:		
1.	Liaison with pediatric critical care centers and trauma centers, the local EMS Agency, and other hospitals.	X	X

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	2.	Clinical leadership in pediatric emergency nursing.	X	X
	3.	Assist the Director/Coordination of Emergency Pediatrics in the monitoring of pediatric ED QI activities.	X	X

D. QUALITY IMPROVEMENT

1.		The Director or Coordinator for Emergency Pediatrics, in conjunction with the PdLN, should assure that there is an organized pediatric emergency QI plan. (This may be part of the existing ED QI activities.)	X	X
2.		The Pediatric QI plan should include the following:	X	X
	a.	data collection;		
	b.	review of patient care;		
	c.	monitoring of professional education; and		
	d.	development of pediatric policies, procedures, and protocols.		
3.		Review of pediatric patients should include the following JCAHO requirements:	X	X
	a.	pediatric deaths in the ED;		
	b.	transfers of pediatric patients;		
	c.	child abuse cases; and		
	d.	pediatric cardio-pulmonary arrests.		
4.		It is also recommended that the pediatric consultation/transfer guidelines be used as suggestions for pediatric audit filters for QI reviews (see attached).	X	X

E. SUPPORT SERVICES

1.		Radiology		
	a.	Availability/Staffing:		
		1. Radiologist on call.	X	S
		2. Tech. in-house 24 hours	S	-
		3. Tech. on-call 24 hours (if not in-house).	X	X
	b.	C.T. Scan - Tech. on-call 24 hours/day and available within 30 mins.	X	-
2.		Laboratory		
	a.	Availability/Staffing:		

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		1.	Tech. in-house 24 hours	S -
		2.	Tech. on-call 24 hours (if not in-house).	X X
	b.	Lab Test Capabilities:		
		1.	CBC, UA, amylase, electrolytes, ABG's and PH, glucose, CA, carboxyhemoglobin, BUN, creatinine, PT, PTT, and CSF analysis:	
			on STAT basis.	X -
			available within 24 hours	- X
		2.	Microtechnique	X S
		3.	Microbiology lab.	X X
		4.	Toxicology-Quantitative screening for iron, ethyl alcohol, acetaminophen, salicylates, phenobarbital, phenytoin, and theophylline:	
			on STAT basis.	X -
			available within 4 hours	- X
			blood and urine screens on a STAT basis.	X -
		5.	Blood Bank	
			a. Stat blood typing and cross matching.	X -
			b. Blood typing and cross matching.	X X
			c. Blood Bank access.	- X
			d. STAT availability of blood, platelets, and fresh frozen plasma.	X -
F.	<u>OTHER RECOMMENDATIONS</u>			
	1.	Burn Care plan and transfer protocol.		X X
	2.	Spinal Cord Injury plan and transfer protocol.		X X
	3.	Dedicated ped. ward or transfer protocol (if no pediatric service).		X X
	4.	Treatment plans and transfer protocols for services such as trauma, intensive care, cardiac surg., dialysis, reimplantation.		X X

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5.	Written transfer agreements with a pediatric critical care center and a trauma center.	X	X
6.	Written policies and procedures for the identification, evaluation and referral of suspected child abuse victims	X	X
7.	Predesignated access to a helicopter landing site.	X	X
8.	Two-way radio linkage with vehicles of local emergency medical services transport system.	X	X

G. EMERGENCY DEPARTMENT EQUIPMENT AND SUPPLIES

1.	Pediatric Emergency Crash Cart - immediately available.	X	X
2.	Immediately accessible reference for pediatric emergency drug dosages and ET tube sizes.X	X	
3.	Monitoring Devices		
a.	EKG monitor with recording capability.	X	X
b.	Defibrillator with pediatric paddles and with capability down to 20 joules.	X	X
c.	Capability down to 5 joules.	S	S
4.	IV Equipment		
a.	Pumps - Infusion pumps, drip or volumetric.	X	X
b.	Supplies:		
1.	Intravenous administration devices, including intravenous catheters (14 to 24 g), butterflies (19 to 25 g) and pediatric volumetric sets.	X	X
2.	Intraosseous fluid administration needles (13, 15, 18g).	X	X
5.	Surgical Equipment		
a.	Thoracic:		
1.	Tube thoracostomy tray or equivalent.	X	X
2.	Chest tubes - 10, 12, 16, 20, and 28 fr.	X	X
3.	Water seal drainage.	X	X
b.	Trachea - Equipment to perform a needle cricothyrotomy		

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		(including ventilation device).	X	X
	c.	Other:		
1.	Spinal tap trays with 22g 1.5" and 2.5" needles.		X	X
2.	Cut-down trays with components suitable for all size pediatric patients.		X	X
6.	Respiratory Equipment			
	a.	Pediatric 100% 02 bag-valve resuscitation device with infant, child, and adult size masks.	X	X
	b.	Oxygen delivery equipment appropriate for infants and children.	X	X
	c.	Pediatric airways, endotracheal tubes (uncuffed sizes 2.5 to 5 and uncuffed sizes 5.5 to 9), ET tube stylets, infant and child laryngoscope handles and blades (curved and straight), backup batteries, and Magill forceps (adult and pediatric).	X	X
	d.	Suction devices, including suction catheters (sizes 5/6 to 18 fr.).	X	X
	e.	Apparatus for administering aerosolized solutions.	X	X
	f.	Pulse oximeter with pediatric sensor.	X	S
7.	Lavage			
	a.	Gastric lavage tubes and equipment - readily accessible.	X	X
	b.	NG tubes - 6, 8, 10, 12, 14 fr.	X	X
8.	Fracture Management			
	a.	Femur splint appropriate for pediatric patients.	X	S
	b.	Splints	X	X
	c.	Cast material	X	X
9.	Spinal Management			
	a.	Spinal boards, lateral immobilizers (e.g., towel rolls), and immobilizing cervical collars suitable for pediatric patients.	X	X
10.	Blood Pressure Devices			
	a.	Pediatric blood pressure cuffs:		

		Sizes - preemie, infant, child, adult and thigh size.	X	X
	b.	Non-invasive automatic blood pressure monitoring device with cuffs suitable for infants and children.	S	-
11.	Urinary Catheters			
	a.	Pediatric Foley catheters 6 to 14 fr.	X	X
	b.	Feeding tubes, sizes 5 and 8.	X	X
12.	Other Equipment			
	a.	Pediatric scale.	X	-
	b.	Pediatric scale readily available to the ED.	-	X
	c.	Blood warmer - readily accessible to the ED.	X	-
	d.	Patient warming devices - readily accessible to the ED.	X	X
	e.	Portable X-ray equipment available.	X	X
	f.	Child restraint device.	X	X
13.	IV Fluids			
	a.	250, 500, 1,000, ml. bags or bottles of: D5-1/4 NS, D5-1/2 NS D5-NS, NS, and Lactated Ringers.	X	X
	b.	Albumin, 5% or plasma protein fraction.	X	X

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H. MEDICATIONS - Available in the Emergency Department (Same guidelines for Basic and Standby EDs);

1. Activated charcoal (with and without sorbitol)
2. Aminophylline (IV)
3. Antibiotics including third generation cephalosporins
4. Antipyreti
5. * Atropine (in 0.01 mg/cc 10cc vials)
6. Beta agonist for inhalation (e.g., albuterol)
7. Bretylium
8. * Calcium chloride (10%)
9. Dexamethasone sodium phospate
10. Diazepam or Lorazepam (4 mg/cc)
11. Digoxin, pediatric
12. Diphenhydramine HCL
13. * Dobutamine
14. * Dopamine
15. * D50W (dilute 1:1 with Normal Saline to make D25)
16. * Epinephrine (1:1,000);
    * Epinephrine (1:10,000)
17. Furosemide
18. Heparin (1:1,000)
19. Hydralazine
20. Hydrocortisone
21. Insulin
22. Ipecac, Syrup of
23. * Isoproterenol HCL
24. IV Beta blockers
25. * Lidocaine HCL (20mg/cc)
26. Magnesium Sulfate
27. Mannitol
28. Methyl prednisolone
29. Midazolam
30. Morphine sulfate
31. * Naloxone

Non-depolorizing muscle relaxants (e.g., vecuronium, pancuronium)

33. Phenobarbital
34. Phenytoin
35. Potassium chloride
36. Racemic epinephrine

* Sodium bicarbonate (0.5 mEq/ml and 1mEq/ml)

Sodium chloride 3% (1 mEq/ml in premixed syringes)

39. Succinylcholine
40. Terbutaline

*Should be on crash cart.