Rady Children's Hospital San Diego	APPROVAL DATE **May 2015**	MANUAL: **Standardized Procedure**
		SECTION: **Pediatric CHET**
		TRACKING # **SP 3-02**
	TITLE: **EMERGENCY MEDICATION ADMINISTRATION**	
	☐ **GUIDELINE** ☐ **POLICY** ☐ **PROCEDURE** ☐ **STANDARD OF CARE** ☒ **STANDARDIZED PROCEDURE** ☒ **STANDING ORDERS**	

I. PURPOSE

A. This standardized procedure is designed to establish guidelines that will enable the Advanced Life Support (ALS) Registered Nurse (RN) and Advanced Life Support (ALS) Respiratory Therapist (RT) to perform Emergency Medication administration while on transport or as the resuscitation code leader on RCHSD Campus.

II. DEFINITIONS

A. Emergency Medications – The Standing Orders for medications listed in Appendix A. In all emergencies the Pediatric Intensive Care Unit (PICU) Attending on-call and the transport physician coordinator will be notified as soon as possible while advanced life support is being initiated. When possible the PICU Attending on-call will be contacted prior to medication administration.

III. POLICY

A. Standardized Procedure (SP) Function(s): The ALS RN initiating the "pre protocol" standing orders for patients requiring emergency medications during resuscitation in an emergency setting. The ALS RT may start airway support meds, albuterol and atrovent in collaboration with the ALS RN

B. Circumstances under which an ALS RN or ALS RT may perform Standardized Procedure function(s):
   1. Setting: Rady Children's Hospital San Diego Campus. Any setting or outlying facility in the process of transferring a patient to a higher level of care via the Rady Children's Hospital Emergency Transport (CHET) system
   2. Scope of Supervision /Collaboration: Indirect supervision is provided by the appropriate supervising &/or attending physician
      a. In the event that an Advanced Life Support policy or procedure is altered via a referring physician (verbal or written order) then the ALS nurse will inform the physician that he/she is not competent to carry out the altered plan and must either adhere to the procedure or relinquish responsibility to the referring physician.

b. When possible, the PICU attending should be contacted before the procedure. In all emergencies, the PICU attending or supervising attending physician will be notified as soon as possible while advanced life support is being initiated.
c. Under all circumstances the Advanced Life Support team will carry out urgent resuscitation according to the procedure.

3. Patient conditions requiring physician notification:
   a. Lack of vascular access
   b. If patient's condition is unstable
   c. If there are any complications or unexpected outcomes from the procedure
   d. In an emergency; as soon as possible while advanced life support is being initiated.
   e. Prior to departure from referring facility with patient status information
   f. Any unsuccessful resuscitation

C. RN/RT Requirements:
1. Education/Training/Experience – below will be documented and maintained in the employee file
2. Attend the Advanced Life Support didactic training classes (minimum of 40 hours)
   a. Pass all written and performance tests administered during the course with a minimum of 94% accuracy on the final exam.
   b. Complete initial orientation and competency assessment via return demonstration of minimum 5 resuscitations observed by physician or experienced ALS member
3. Initial Competency Assessment: observed and signed off by team manager
   a. At completion of ALS Training will demonstrate assessment and proper preparation of the patient and equipment via simulation
   b. Will function as the Team Leader in the "mega code" testing scenario
4. Annual Competency Assessment:
   a. Complete 3 resuscitations
   b. If minimum number of annual procedures not obtained, the following are options for competency maintenance:
   c. Attend skills lab offered biannually (procedure review & simulation)
   d. Complete Annual Competency validation test
   e. 1:1 simulation & demonstration check off
   f. Participation with mock codes (expected: 2 annually)
   g. If consecutive years of failure to obtain minimum number required procedures ALS RN or ALS RT will be required to again complete Initial competency assessment.

D. RNs/RTs authorized to perform Standardized Procedure function(s): A written record of initial and ongoing competency will be maintained in the employee file. A list of Competency Validated RNs/RTs will be kept in the CHET office

IV. PROCEDURE

A. Database
1. Subjective
   a. Historical information relevant to present illness.
   b. History including reactions/allergies to medications
2. Objective
   a. Physical examination with focus on pulmonary and cardiovascular systems
   b. Assessment
   c. Decision for emergency medication administration will be based upon subjective and objective data and in collaboration with attending physician when not an emergent life-saving maneuver.
3. Plan
   a. Patients and families will be provided with the appropriate information on emergency medication as soon as possible after administration and obtain consent as per hospital protocol.

b. The physician must be contacted for multiple doses or for administration of medications requiring physician order
c. In all emergencies, the PICU Attending on-call and the transport physician coordinator will be notified as soon as possible while advanced life support is being initiated. When possible the PICU attending on-call should be contacted prior to medication administration
d. Documentation of the medications given, outcome, and any complications will be recorded on the Transport Record

B. Treatment
1. Please see attached list of Standing Orders for emergency medications that may be administered "per protocol" per this standardized procedure without a physician's order. All medication orders must be later co-signed by a supervising physician within one business day.
2. Repeat doses, or change in dosage of these medications require a physician's order, except in the presence of cardiac arrest, anaphylaxis, and symptomatic bradycardia. Repeat doses of epinephrine and atropine may be administered per the American Heart Association PALS and ACLS algorithms.

C. Documentation
1. A written consent per hospital protocol will be obtained and placed in the patient's medical record prior to procedure if not a lifesaving procedure. If consent not obtained in advance, parent/guardian to be notified as soon as possible after procedure.
2. A procedure note will be documented within the patient's medical record.
3. Document procedure within the procedure competency tracking system
4. Observe the child's status, and upon stabilization, document medications, doses, routes, vital signs of the child before and after procedure, and any complications

V. DEVELOPMENT & APPROVAL

A. Developed in collaboration with the Pediatric CHET Team and Anesthesiology/Critical Care Section, with consensus approvals from the interdisciplinary members of the Pharmaceutical and Therapeutics Committee (PNT) and the ADP/IDP Committee.
B. Review Schedule – Reviewed annually and when significant content changes are as needed.
C. Required Approval(s) – Division of Anesthesiology/Critical Care, AHP/IDP Committee, PNT, MSEC.

VI. REFERENCES

Nichols, D. (2012). Rogers Textbook of Pediatric Intensive Care 4th Ed. Baltimore: Lippincott Williams and Wilkins

Curley, M. et al (2007). Critical Care Nursing of Infants and Children 2nd Ed. Philadelphia: Saunders.

Ralston, M et al (2011). Pediatric Advanced Life Support. Dallas, TX: American Heart Association.

MacDonald, M. et al (2003). Guidelines for Air and Ground Transport of Neonatal and Pediatric Patients. 2nd Ed. Elk Grove, IL: American Academy of Pediatrics

VII. CROSS REFERENCES

A. Universal Protocol, PM 2-17, Clinical Care Manual
B. Interdisciplinary Practice Policy, CPM 4-16
C. Code Blue Procedure PM 2-4

VIII. ATTACHMENTS

A. Appendix A is a list Standing Orders for emergency medications that may be given without a physician's order based on assessment as outlined in this standardized procedure.

IX. APPROVALS

A. Pediatric Children's Emergency Transport Team – March 2015
B. Pediatric Transport Team Medical Director – March 2015
C. Anesthesiology/Critical Care Section – March 2015
D. AHP/IDP Committee – 3/31/15
E. P & T – 4/20/15
F. Medical Staff Executive Committee – 5/21/15

X. REPLACES N/A

XI. HISTORY N/A

APPENDIX A

STANDING ORDERS

Indication	Medication	Dosage	Administration Remarks
Anaphylaxis	Epinephrine	1:10,000 0.01 mg/kg IV 1:1000 0.01 mg/kg IM (In thigh)	Per American Heart Association PALS algorithms and ACLS algorithms may repeat if hypotensive: IV: Every 3-5 mins IM: Every 15 mins
1. Bronchospasm	Albuterol (0.5%)	0.15-0.3 mg/kg SVN, intermittent	Dilute in 2-3 ml Normal Saline; May repeat every 1-4 hours with a provider order.
or Bronchospasm: If patient already on intermittent.	Albuterol (0.5%)	0.5 mg/kg/hr SVN, continuous inhalation	Total volume with Normal Saline dilution is 20 ml.
or Bronchospasm: Added for persistent wheezing unrelieved by albuterol	Ipratropium Bromide (Atrovent)	250 mcg for up to 15kg, SVN 500 mcg for >15kg, SVN Given over 20 minutes.	May have up to 2 additional doses but will need a provider order to do so.
Hypoglycemia	Dextrose (Glucose)	0.5-1 Gram/kg IV; infuse over 20 minutes	Must dilute D50W 1:2 with NS; maximum peripheral concentration 25%.
Intubation (Prevent Bradycardia): Child <6 months or any patient already receiving succinylcholine.	Atropine	0.02 mg/kg IV Minimum dose 0.1 mg Max single dose: Child: 0.5 mg Adolescent: 1 mg	May repeat after 5 minutes per American Heart Association PALS and ACLS algorithms
Intubation Paralytic: Nondepolarizing neuromuscular blocking agent	Vecuronium	0.3 mg/kg IV (Intubation Dose)	
1. Intubation Sedation	Fentanyl	1-2 mcg/kg IV	
or Intubation Sedation: Patient with suspected increased intracranial pressure.	Pentobarbital	5 mg/kg IV	May cause respiratory depression and hypotension. May be repeated for intracranial hypertension after speaking with CHET Medical Control Physician
or Intubation Sedation combination with vecuronium or control of seizures.	Midazolam (Versed)	0.05-0.1 mg/kg IV	Can cause respiratory depression
Pulseless arrest or symptomatic bradycardia	Epinephrine	1:10,000 0.01 mg/kg (max single dose 1 mg) IV/IO 1:1000 0.1mg/kg (max single dose 2.5 mg) ETT	May repeat every 3-5 minutes, per American Heart Association PALS and ACLS algorithms
Status Epilepticus	Phenobarbital	20 mg/kg IV in two divided doses of 10mg/kg each; Infusion rate: Give 1-5 mg/kg/min	
Stridor	Racemic Epinephrine (2.25%)	0.1-0.5 ml SVN	Mix in 3 ml NS. May give up to 3 doses per the American Heart Association PALS and ACLS algorithms.
1. DKA GCS <15	3% Sodium Chloride	5-10 ml/kg IV	1 ml/kg increases the serum NA by 1 mEq/L
2. Documented hyponatremia			
a. Serum Na <128 give 5 ml/kg			
b. Actively seizing with hyponatremia 10 ml/kg			
3. Suspected increase in ICP			

4. Volume replacement in hypovolemic shock if Na <145			
For hypotension, rehydration, or volume expansion: Primary choice is Normal Saline unless the patient is post burn then use Lactated Ringers	Volume Expanders: 1. 0.9% NaCl 2. Lactated Ringers	20 ml/kg IV per dose; may give via rapid infusion.	May repeat bolus x 1, per American Heart Association PALS algorithms and ACLS algorithms, if hypotensive.