	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	9014.21
	PROGRAM DOCUMENT: **PEDIATRIC** **Cardiac Dysrhythmias**	Initial Date:	01/30/95
		Last Approved Date:	11/01/15
		Effective Date:	05/01/18
		Next Review Date:	09/01/19

EMS Medical Director

EMS Administrator

Purpose:

A. To serve as the treatment standard for EMT's and Paramedics in treating pediatric patients with symptomatic bradycardias.

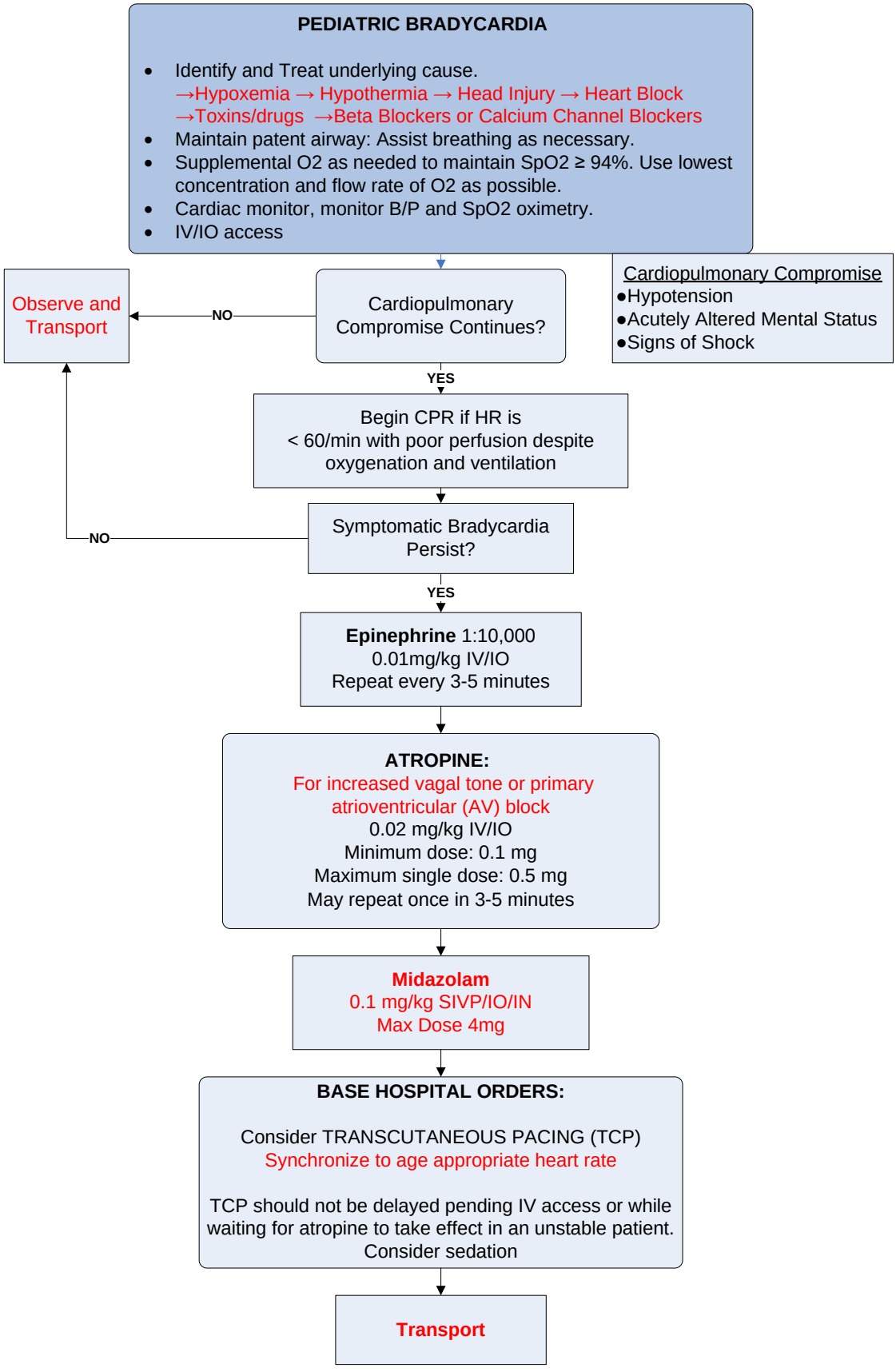
B. To serve as the treatment standard for EMT's and Paramedics in treating pediatric patients with tachyarrhythmia's with pulses.

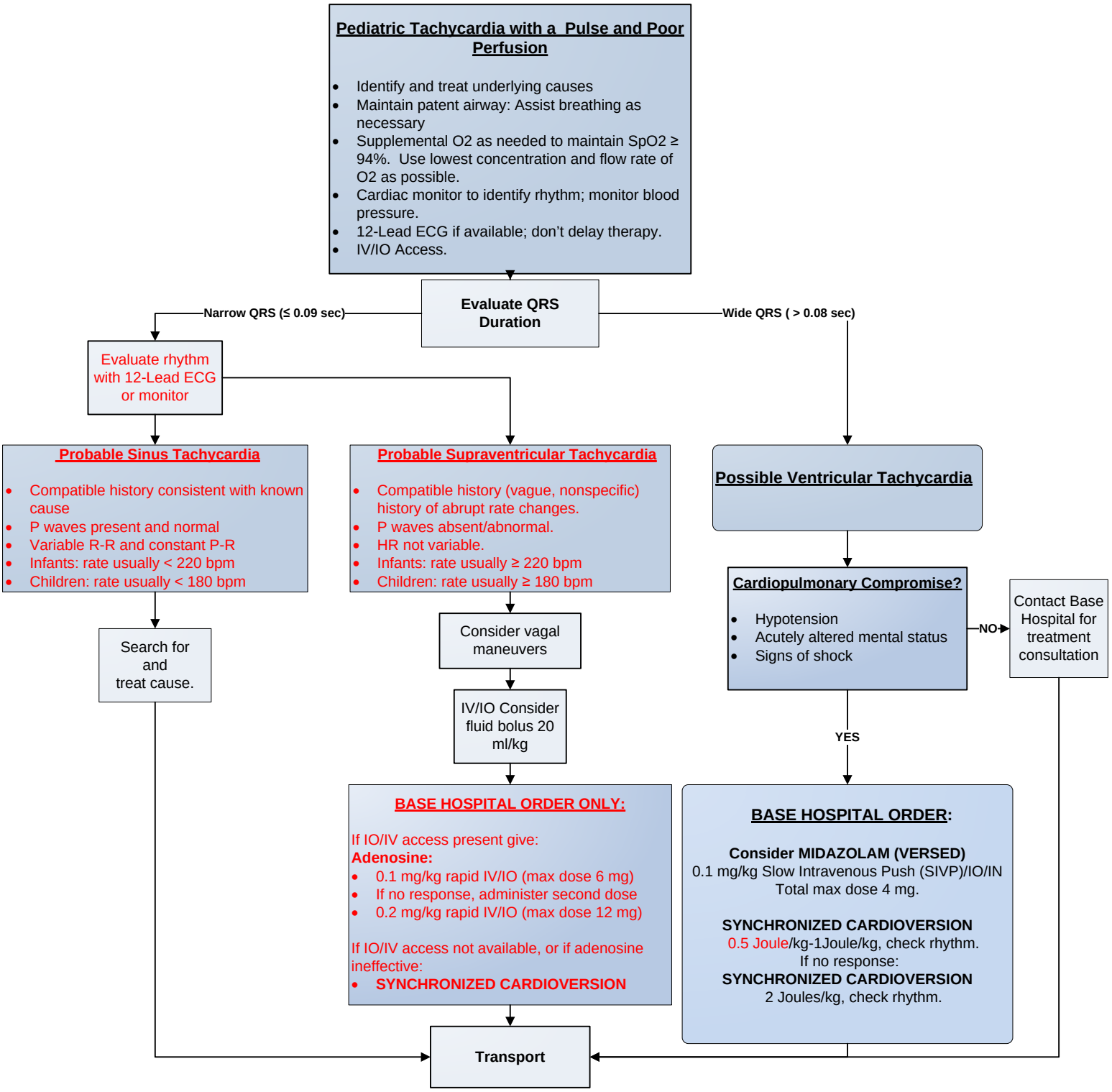
Authority:

A. California Health and Safety Code, Division 2.5
B. California Code of Regulations, Title 22, Division 9

Protocol:

A. Most pediatric bradycardias can be corrected by hyperventilation with 100% oxygen
B. When Cardiopulmonary Resuscitation (CPR) is indicated, high quality CPR improves survival: "Push hard, push fast, minimize interruptions; allow full chest recoil, and don't hyperventilate"
C. In the prehospital setting with short transport times, Bag Valve Mask (BVM) ventilation is the method of choice for children who required ventilator support
D. Symptomatic Brady and Tachy-Dysrhythmias frequently have an underlying cause which should be recognized and treated in addition to any treatment directed at the dysrhythmia itself. It is critically important to determine the cause of the patient's instability in order to properly direct treatment. Search for and treat possible contributing factors (i.e. Hypothermia, Hyperkalemia, Hypovolemia, Hypoxia, Hypoglycemia, Tamponade, Thrombosis, Tension Pneumo, Toxins, Trauma, etc.)


PEDIATRIC BRADYCARDIA
Identify and Treat underlying cause.
→Hypoxemia → Hypothermia → Head Injury → Heart Block
→Toxins/drugs →Beta Blockers or Calcium Channel Blockers
Maintain patent airway: Assist breathing as necessary.
Supplemental O2 as needed to maintain SpO2 ≥ 94%. Use lowest concentration and flow rate of O2 as possible.
Cardiac monitor, monitor B/P and SpO2 oximetry.
IV/IO access
Cardiopulmonary Compromise
●Hypotension
●Acutely Altered Mental Status
●Signs of Shock
Cardiopulmonary Compromise Continues?
NO
Observe and Transport
YES
Begin CPR if HR is < 60/min with poor perfusion despite oxygenation and ventilation
Symptomatic Bradycardia Persist?
NO
YES
Epinephrine 1:10,000
0.01mg/kg IV/IO
Repeat every 3-5 minutes
ATROPINE:
For increased vagal tone or primary atrioventricular (AV) block
0.02 mg/kg IV/IO
Minimum dose: 0.1 mg
Maximum single dose: 0.5 mg
May repeat once in 3-5 minutes
Midazolam
0.1 mg/kg SIVP/IO/IN
Max Dose 4mg
BASE HOSPITAL ORDERS:
Consider TRANSCUTANEOUS PACING (TCP)
Synchronize to age appropriate heart rate
TCP should not be delayed pending IV access or while waiting for atropine to take effect in an unstable patient.
Consider sedation
Transport



Cross Reference: Pediatric Airway Management, PD# 8837