	COUNTY OF SACRAMENTO EMERGENCY MEDICAL SERVICES AGENCY	Document #	8024.31
	PROGRAM DOCUMENT: **Cardiac Dysrhythmias**	Initial Date:	10/26/94
		Last Approval Date:	11/01/16
		Effective Date:	11/01/18
		Next Review Date:	05/01/20

EMS Medical Director

EMS Administrator

Purpose:

To serve as the treatment standard for Bradycardic, Supraventricular Tachycardia, and Ventricular Tachycardia Dysrhythmias with pulses for patients who are either stable or unstable.

Authority:

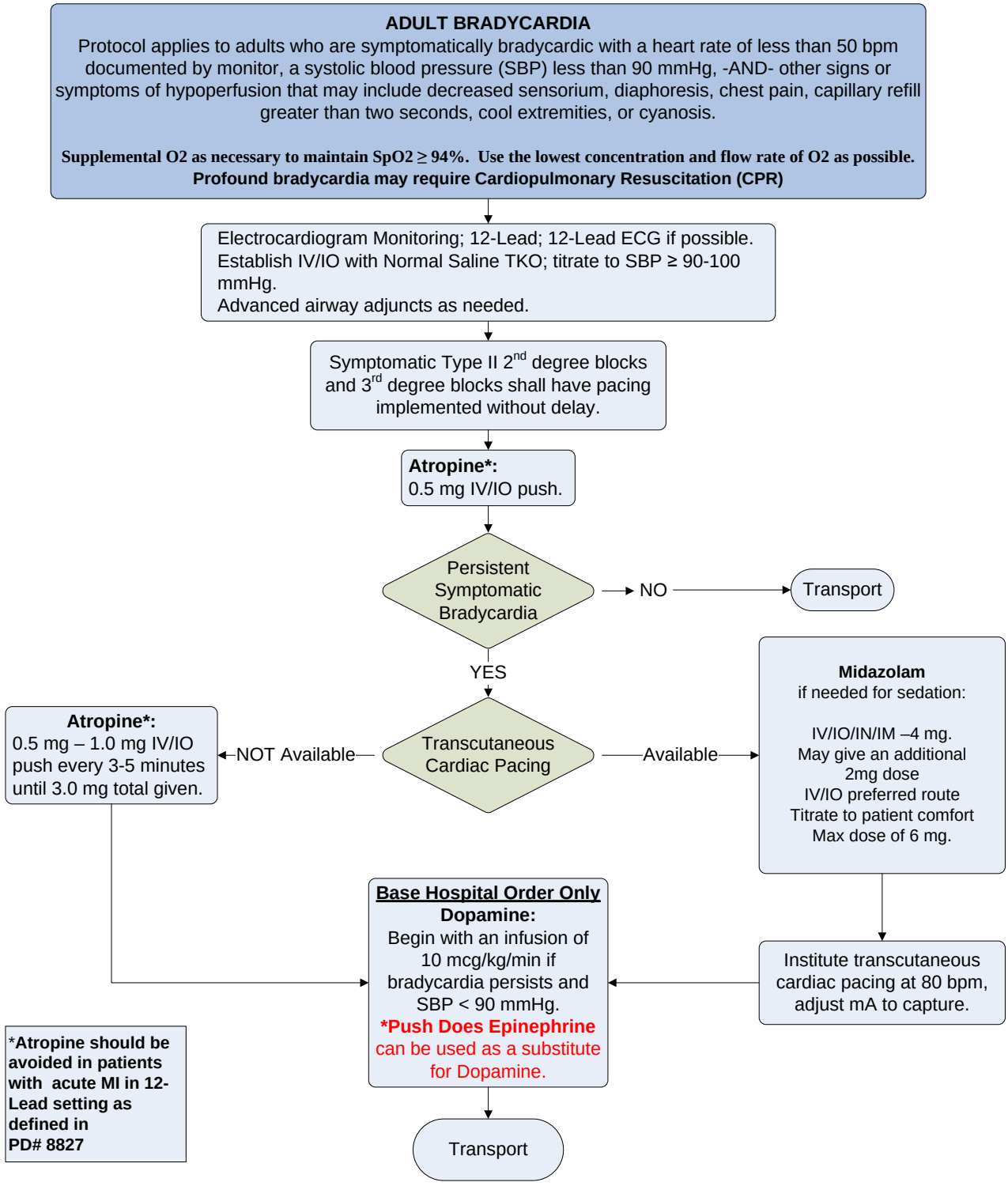
A. California Health and Safety Code, Division 2.5
B. California Code of Regulations, Title 22, Division 9

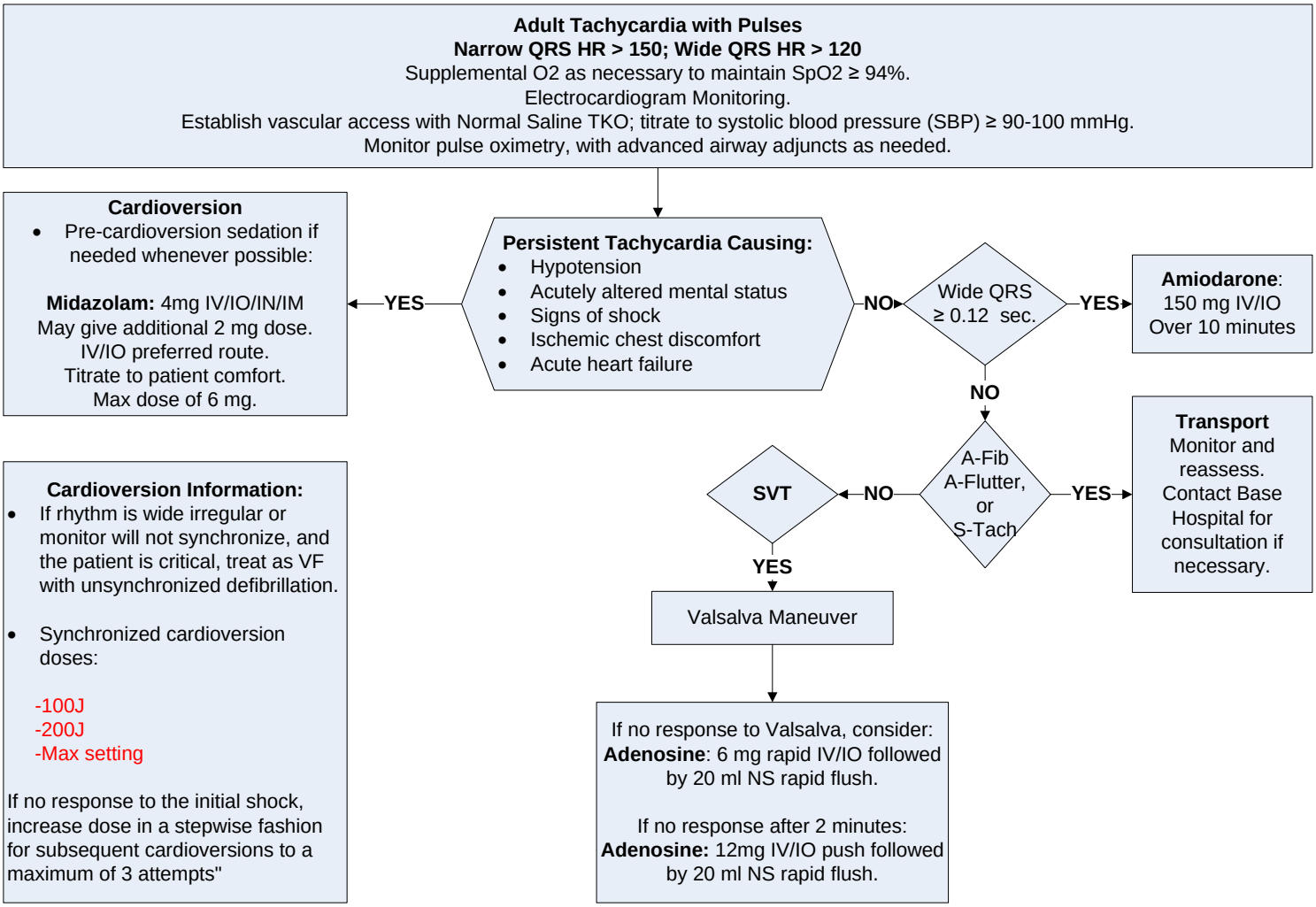
Protocol:

Symptomatic Bradycardia and Tachycardia Dysrhythmias frequently have an underlying cause which should be recognized and treated. 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:

1. Hypovolemia
2. Hypoxia
3. Hydrogen Ion (acidosis)
4. Hypo-/hyperkalemia
5. Hypoglycemia
6. Hypothermia
7. Tamponade (Cardiac)
8. Thrombosis (coronary or pulmonary)
9. Tension Pneumothorax
10. Trauma (hypovolemia, increased ICP)
11. Toxins


ADULT BRADYCARDIA
Protocol applies to adults who are symptomatically bradycardic with a heart rate of less than 50 bpm documented by monitor, a systolic blood pressure (SBP) less than 90 mmHg, -AND- other signs or symptoms of hypoperfusion that may include decreased sensorium, diaphoresis, chest pain, capillary refill greater than two seconds, cool extremities, or cyanosis.
Supplemental O2 as necessary to maintain SpO2 ≥ 94%. Use the lowest concentration and flow rate of O2 as possible.
Profound bradycardia may require Cardiopulmonary Resuscitation (CPR)
Electrocardiogram Monitoring; 12-Lead; 12-Lead ECG if possible.
Establish IV/IO with Normal Saline TKO; titrate to SBP ≥ 90-100 mmHg.
Advanced airway adjuncts as needed.
Symptomatic Type II 2nd degree blocks and 3rd degree blocks shall have pacing implemented without delay.
Atropine*:
0.5 mg IV/IO push.
Persistent Symptomatic Bradycardia
NO
Transport
YES
Transcutaneous Cardiac Pacing
NOT Available
Atropine*:
0.5 mg – 1.0 mg IV/IO push every 3-5 minutes until 3.0 mg total given.
Available
Midazolam
if needed for sedation:
IV/IO/IN/IM –4 mg.
May give an additional 2mg dose
IV/IO preferred route
Titrate to patient comfort
Max dose of 6 mg.
Institute transcutaneous cardiac pacing at 80 bpm, adjust mA to capture.
Base Hospital Order Only
Dopamine:
Begin with an infusion of 10 mcg/kg/min if bradycardia persists and SBP < 90 mmHg.
*Push Does Epinephrine can be used as a substitute for Dopamine.
Transport
*Atropine should be avoided in patients with acute MI in 12-Lead setting as defined in PD# 8827



Note:

Any patient with a symptomatic dysrhythmia should be treated by protocol before 12-lead ECG is considered. 12-lead ECGs for dysrythmias in the pre-hospital setting are optional, and should only be considered when there is suspicion for cardiac ischemia.

Cross Reference: Transcutaneous Cardiac Pacing, PD# 8810