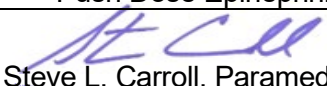



COUNTY OF VENTURA HEALTH CARE AGENCY		EMERGENCY MEDICAL SERVICES POLICIES AND PROCEDURES	
Policy Title: Push Dose Epinephrine		Policy Number 735	
APPROVED: Administration:  Steve L. Carroll, Paramedic		Date: December 1, 2024	
APPROVED: Medical Director:  Daniel Shepherd, M.D.		Date: December 1, 2024	
Origination Date: January 10, 2019			
Date Revised: September 8, 2022		Effective Date: December 1, 2024	
Date Last Reviewed: October 10, 2024			
Review Date: October 31, 2026			

- I. PURPOSE: To define the indications, contraindications, and procedure related to administration of push dose epinephrine
- II. AUTHORITY: Health and Safety Code, Sections 1797.220 and 1798. California Code of Regulations, Title 22, Sections 100091.01 and 100096.02
- III. POLICY: Paramedics may administer push dose epinephrine to adult and pediatric patients as defined by VCEMSA treatment protocols.
- IV. Procedure:
  - A. Classification
    1. Sympathomimetic agent (catecholamine)
  - B. Indications
    1. Anaphylaxis with shock (ref: 705.02 – Allergic reaction / anaphylaxis)
    2. Hypotension secondary to presumed cardiogenic shock (ref: 705.09 – Chest Pain – Acute Coronary Syndrome, 705.21 – SOB – Pulmonary Edema)
    3. Hypotension secondary to Crush Injury (ref: 705.11 – Crush Injury)
    4. Symptomatic bradycardia (ref: 705.24 – Symptomatic Bradycardia)
    5. Sepsis Alert (ref: 705.27 – Suspect Shock)
    6. Deteriorating patient condition with unknown shock etiology
  - C. Contraindications
    1. None
  - D. Adverse Effects

Cardiovascular	Neurological	Gastrointestinal
Tachycardia	Anxiety	Nausea / Vomiting
Hypertension	Dizziness	
Chest Pain	Headache	
Palpitations	Tremors	
Arrhythmias		

E. Actions

Increases blood pressure and cardiac output via stimulation of alpha and beta adrenergic receptors.

F. Preparing the Concentration

1. Adults and Pediatrics

- Using a “cardiac preload”: 1 mg/10mL (0.1 mg/mL or 100 mcg/mL)
  - Supplies Needed
    - 1 – 0.1 mg/mL epinephrine preload syringe
    - 1 – 100 mL bag of 0.9% normal saline
    - 1 – 1 mL syringe
  - Mixing Instructions
    - Push 10 mL of 0.1 mg/mL epinephrine from preload into 100mL bag of normal saline
    - Final concentration is essentially 10 mcg/mL (0.01 mg)

2. Points to Remember

- Confirm your concentration prior to mixing
- Maintain sterile technique
- Label the bag with the drug name and final concentration
  - Example: “Epinephrine 10 mcg/mL”
- DO NOT administer epinephrine and sodium bicarbonate in the same vascular access line and/or location unless that line has been flushed with at least 10mL of normal saline.

G. Dosing

1. Adults

- 1mL (10mcg) every 2 minutes, slow IV/IO push
  - Titrate to SBP of greater than or equal to 90 mm/Hg

2. Pediatrics

- 0.1 mL/kg (1 mcg/kg) every 2 minutes, slow IV/IO push
  - Max single dose of 1 mL or 10 mcg
  - Titrate to SBP of greater than or equal to 80 mm/Hg

H. Communication and Documentation

1. Communicate the use of push dose epinephrine to base hospital
- Include final concentration delivered

- Report total amount of push dose epinephrine administered, total elapsed time of administration, and patient response
2. Administration of epinephrine and any/all associated fields will be documented in the Ventura County electronic Patient Care Report (VCePCR)
- I. Alternative Concentrations
1. In the event of a shortage that limits a provider agency from obtaining the necessary 100 mL bags of normal saline solution, please see below for acceptable alternatives:
    - Discard 1 mL from 10 mL saline flush syringe and draw 1 mL from epinephrine preload into flush syringe. This creates a solution of 10 mcg per 1 mL.
    - Draw 5 mL of from epinephrine preload into 50 mL bag of normal saline. This essentially creates a solution of 10 mcg per 1 mL.