

**Medical Procedure****Date: 07/01/2023****Push-Dose Epinephrine for Hypoperfusion****Policy #7060****I. Purpose:**

- A. To establish indications, guidelines, and the standard procedure for push-dose epinephrine in the pre-hospital setting.

**II. Authority:**

- A. Health and Safety Code, Section 1797.220, 1798. Title 22, Section 100170.

**III. Policy:**

- A. The use of push dose epinephrine is limited by ALS certification skill level and requires annual maintenance and testing completion.
- B. This policy is to be used when identifying a patient with hypoperfusion per Shock Protocol. This includes:
  - 1. Low blood pressure
  - 2. Anaphylaxis, refractory to IM epinephrine and IV fluids
  - 3. Severe reactive airway disease, COPD or asthma exacerbations, refractory to IM epinephrine
  - 4. Septic shock, refractory to IV fluids
  - 5. Undifferentiated hypotension with evidence of hypoperfusion, refractory to IV fluids
  - 6. Unstable bradycardia, refractory to atropine and pacing
- C. Push-dose epinephrine is the pressor of choice for adults in Imperial County. Dopamine is the pressor of choice for pediatrics in Imperial County. Two exceptions exist:
  - 1. Adults with cardiac suspected etiology of hypotension, dopamine should be used, NOT push-dose epinephrine
  - 2. Pediatrics with anaphylaxis suspected etiology of hypotension, push-dose epinephrine should be used, NOT dopamine
- D. Relative contraindications:
  - 1. ACS or cardiac source of symptoms
  - 2. Pregnancy or active labor
  - 3. Elevated systolic blood pressure > 140 mmHg
  - 4. Trauma
- E. Absolute contraindications
  - 1. Poor IV or IO access
  - 2. Infiltration of an IV or IO line

**Medical Procedure****Date: 07/01/2023****Push-Dose Epinephrine for Hypoperfusion****Policy #7060****F. Potential side effects:**

1. Systemic: Palpitations, tachycardia, arrhythmia, anxiety, panic attacks, headache, tremor, hypertension, acute pulmonary edema, myocardial infarction
2. Local: Localized tissue damage and/or compartment syndrome

**IV. Push-Dose Epinephrine Procedure**

- A. Take an epinephrine syringe of 1 mg of 0.1 mg/ml preparation (known also as cardiac arrest dosing of 1:10,000 Epinephrine) and waste 9 ml of epinephrine
- B. In that same syringe, draw 9 ml of normal saline using a stopcock and a preloaded normal saline syringe
  1. Mixture now provides 10 ml of epinephrine at a 0.01 mg/ml (10 mcg/ml) concentration
- C. If patient fulfill indications, and has approval from Base Hospital, by age, administer epinephrine 1.0 mL (10 mcg) IV/IO for adults, or per pediatric dosing chart, every 3 minutes
  1. Titrate to a SBP > 90 mmHg in adults, or age-specific threshold in pediatric anaphylactic shock, or as directed by the Base Hospital Physician for respiratory distress due to suspected asthma or COPD exacerbations

**V. Certification Requirements:**

- A. Maintain knowledge of the indications, contraindications, technique, and possible complications of the procedure
- B. Assessment of this knowledge may be accomplished via quality assurance mechanisms, classroom demonstrations, skills stations, or other mechanisms as deemed appropriate by the Imperial EMS System
- C. Assessment should include direct observation at least once per certification cycle

APPROVED:

Signature on File

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