



# County of El Dorado

## Emergency Medical Services Agency

*Kristine Guth, MPH  
Interim EMS Agency Administrator*

*Dr. David Duncan, MD  
EMS Agency Medical Director*

*2900 Fairlane Court  
Placerville, CA 95667-4197  
Phone (530) 621-6500*

### **\*\*\*PARAMEDIC ALERT\*\*\*** **No. 2023-05**

**September 12<sup>th</sup>, 2023**

**TO: EMS Personnel**  
**FROM: El Dorado County EMS Agency**  
**SUBJECT: Updates to Protocols and Procedures**  
**PURPOSE: Stakeholder information**

#### Background:

1. The El Dorado County EMS Agency (EDCEMSA) is the Local Emergency Medical Services Authority (LEMSA) for the County of El Dorado.
2. Pursuant to CCR Title 22 § 100148, EDCEMSA shall establish policies and procedures governing the delivery of EMS services within its jurisdiction, including field procedures, policies and protocols.

#### **ALERT:**

Updated guidance is published in the following documents:

- [Field Procedure – Epinephrine Dilution \(1:10,000 and ‘Push Dose’ 1:100,000\)](#)
- [Formulary – Epinephrine](#)
- [Prehospital Protocol – Allergic Reaction](#)
- [Prehospital Protocol - ROSC](#)
- [Prehospital Protocol – Sepsis](#)
- [Prehospital Protocol – Shock](#)

#### **OVERVIEW:**

While the preparation and administration of pressor boluses of epinephrine 1:100,000 is fairly standardized in adults, there are a number of approaches for pediatric dosing described in the literature, each with some confusing aspects – particularly with patients on the higher and lower ends of weight-based formulae. EDCEMSA brings forth the following revisions to align adult and

pediatric push-dose *preparation* as closely as possible, and to minimize the confusion around pediatric *administration* by simplifying the weight ranges.

## FORMULARY – EPINEPHRINE

This document has been updated to reflect the dosing and preparation guidance below.

### FIELD PROCEDURE: EPINEPHRINE DILUTION

Describes the procedures for diluting epinephrine 1:1000 to 1:10,000 (for resuscitation), as well as diluting 1:10,000 to 1:100,000 (for push-dose). In addition, this document clarifies that all patients needing push-dose epi will receive the same concentration (1:100,000), with weight-based dosing for patients below **20kg** and fixed dosing for patients above **20kg**, each regimen titrated to effect.

An instructional video on the [preparation](#) of ‘push dose’ epinephrine has been uploaded to the El Dorado County EMS Agency [YouTube channel, here.](#)

### PREHOSPITAL PROTOCOLS

- ALLERGIC REACTION
- ROSC
- SEPSIS
- SHOCK

Each of the above have been updated to unify the guidance for push-dose epinephrine across all scenarios where it may be indicated, and to align each protocol with the relevant field procedures and formulary.

*Note: ‘Allergic Reaction’ has also been updated to include Levalbuterol ([2023-01](#))*

- These documents are accessible in electronic form on the ‘**Drug Formulary/Medication Profile**’, ‘**Prehospital Protocols**’ and ‘**Field Procedures**’ sections of the EMS Agency Website: <https://edcgov.us/Government/EMS/>
- While none of the updates above draw upon new skills or medications, field personnel should review the changes carefully to ensure thorough retention and execution.
- Stakeholders are encouraged to stay abreast of future updates by signing up for automatic notifications. *From the link above, use the ‘Emergency Medical Services Menu’ (upper left) to navigate to any of the pages under the Policies/Procedures/Protocols/Drug Formulary heading. Subscription link is at the top of each page.*