February 28, 2022

EPINEPHRINE 1:10,000 1 MG/10 ML (0.1 MG/ML) PRE-FILLED SYRINGE SHORTAGE – GUIDANCE FOR EMS PERSONNEL

The San Diego County EMS Office is aware that epinephrine 1:10,000 1 mg/10 mL (0.1 mg/mL) pre-filled syringes are in limited supply and may be difficult to obtain. EMS agencies are encouraged to anticipate shortages and implement internal mitigation strategies by monitoring drug reports via the FDA website and their pharmaceutical supply vendor.

This epinephrine concentration is used to treat cardiac arrest patients. Additionally, after dilution, it is used via intravenous push-dose to treat hypotensive patients.

San Diego County EMS authorizes the following modifications to current policy and practice until July 31, 2022:

- EMS providers should retain and reserve any available epinephrine 1:10,000 1 mg/10 mL pre-filled syringes for push-dose epinephrine use
- Expired epinephrine may be administered following a Base Hospital Physician Variation Order
- EMS providers may dilute an epinephrine 1:1,000 1 mg/1 mL ampule with 9 mL of normal saline to create a 1:10,000 1 mg/10 mL concentration for use in cardiac arrest situations.¹ This solution may be used in place of an epinephrine 1:10,000 1 mg/10 mL pre-filled syringe.
- EMS providers should limit epinephrine administration in an adult cardiac arrest patient to 3 doses
- Dilution of epinephrine 1:1,000 1 mg/1 mL to create epinephrine 1:100,000 push-dose epinephrine for hypotensive patients is NOT authorized

¹ Paramedic personnel creating an epinephrine 1:10,000 solution shall:
- Draw up one 1 mg/1 mL of epinephrine from an epinephrine 1:1,000 1 mg/1mL ampule into a 10 mL syringe.
- Add 9 mL of normal saline from a vial or an IV normal saline bag to the epinephrine.
- The resulting 10 mL solution may be used in place of an epinephrine 1:10,000 pre-fill syringe.
Epinephrine is a high alert medication and may cause significant patient harm when used in error. To minimize the potential for error, paramedics should take the following steps:

- Have another crew member confirm the dilution
- Mark the diluted epinephrine syringe to ensure it is not mistakenly used (e.g., as a normal saline flush)
- Do not prepare epinephrine solutions in advance
- Do not save prepared epinephrine solutions for later use

Please notify County EMS via EMSNotifications@sdcounty.ca.gov when the epinephrine 1:10,000 1 mg/10 mL backorder resolves and a return to standard operations and stock occurs. We would welcome you to recontact our office to request an extension to this time-limited exemption should the shortage last longer than anticipated.

Thank you for your assistance in continuing to provide outstanding care to our patients.

Sincerely,

Kristi König

San Diego County Emergency Medical Services Office
San Diego County Fire

cc: Andrew Parr, EMS Administrator