



**Stanislaus County Sheriff's Office
Emergency Services Division**

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TO: ALL EMS Providers
FROM: Dr. Greg Kann
DATE: April 11, 2023
BULLETIN: No. 23 – BUL – 008 Medication Shortages - **Update**

Medication backorders from manufacturers have become an increasing concern and are now posing a threat to patient treatment within the established Agency policies and protocols. (**Updates in RED**).

Authorization for the following is given, until further notice:

1. Substitute **Levalbuterol** (0.63mg/3ml) for Albuterol (2.5mg/3ml)
 - a. Substitute on a 1:1 basis (1 vial of Levalbuterol for 1 vial of Albuterol).
 - b. Providers **SHALL NOT** mix Levalbuterol with Albuterol.
 - c. Levalbuterol may be used in place of albuterol in all applicable protocols.
2. Extension of existing expiration dates on Epinephrine 1:10,000 concentration.
 - a. Up to 6 months past their manufacturer printed expiration date. This is only for Epinephrine that was set to expire prior to 9/30/2022.
 - b. Providers should continue to make every effort to provide non-expired Epinephrine and may do so by diluting, when available, Epinephrine 1:1,000 to the 1:10,000 concentration with Normal Saline.
3. Dose changes for Epinephrine 1:10,000 administration pertaining to Stanislaus County EMS Agency Policy 554.11 Cardiac Arrest Algorithms.
 - a. Change from the current 1mg 1:10,000 Epinephrine administration, to 0.5mg 1:10,000 Epinephrine administration with a maximum of 3mg 1:10,000 total administration per adult cardiac arrest.
4. Dilution of Atropine Multi-Dose Vials (20ml vial of 0.4mg/ml) to create Atropine 1mg/10ml concentration, may be used to supplement shortages in Atropine pre-load availability.
5. Tranexamic Acid (TXA) can be mixed with 250ml Normal Saline bags **IF** 100ml Normal Saline bags are unobtainable. TXA will continue to be administered as 1 gram over 10 minutes.

Please contact the EMS Agency office if you have any questions related to this temporary approval.