



EMS Special Memorandum - #23-002

Date: April 5, 2023

To: Mendocino/ Sonoma County EMS Providers and System Stakeholders

From: Bryan Cleaver
Regional EMS Administrator

Mark Luoto, MD
Regional EMS Medical Director

Re: Medication Substitution

This memo is intended to provide authorization for alternative medication usage and the use of expired medication in response to a national shortage of Albuterol in liquid form. The memo also provides for paramedic Metered Dose Inhaler administration of Albuterol after training.

Paramedic service provider agencies and paramedics practicing under Coastal Valleys EMS Agency medical control are authorized to implement the following medical direction if unable to obtain Albuterol in liquid form.

Alternative medication: Levalbuterol is a beta-specific bronchodilator administered in the same manner as Albuterol using via hand-held or nebulizer mask. Levalbuterol may be directly substituted for Albuterol for any patient >than 6yo where Albuterol is indicated in CVEMSA Treatment Guidelines utilizing the equivalent dosing below:

0.63mg/3ml Levalbuterol = 2.5mgs/3ml Albuterol
1.25mgs/3ml Levalbuterol = 5.0 mgs/3ml Albuterol

Expiration date extension: Usage of Albuterol is authorized up to six months past manufacturer's recommended expiration date.

Alternative Albuterol administration: Paramedics may administer Albuterol via Metered Dose Inhaler (MDI) and spacer if other options are not available utilizing the equivalent dosing below:

8 puffs (90mcg /puff) = 2.5 mg Albuterol

Provider agencies choosing to deploy MDIs must submit an attestation of MDI training to include proper administration technique for the device and spacer. MDI training is available on the CVEMSA website here: [MDI Training Document](#)

Ipratropium (Atrovent) 0.5 mg in 6 mL NS may be used as a stand-alone one time dose if neither Albuterol or Levalbuterol are available.

Please direct any questions or concerns to markluoto@comcast.net