



**EMS Information Bulletin 2020-13**

**DATE:** April 2, 2020

**SUBJECT:** Alternatives to Nebulized Bronchodilators During COVID-2019

**TO:** PA EMS Agencies  
PA EMS Agency Medical Directors  
PA Regional EMS Councils

**Thru:** Dylan J Ferguson, Director  
Bureau of EMS

A handwritten signature in black ink, enclosed in a hand-drawn circle. The signature appears to be 'DJF'.

**FROM:** Douglas Kupas, MD, Commonwealth EMS Medical Director  
Bureau of EMS

The Bureau of EMS (Bureau) is providing this Informational Bulletin to authorize the use of various alternatives to nebulized albuterol treatments provided by EMS providers for patients with bronchoconstriction from asthma, COPD, or respiratory infection. Because these protocol treatment changes only apply during the COVID-19 epidemic, this EMSIB will permit temporary alteration in the treatments within the Statewide Asthma/COPD/Bronchospasm protocols #422, 4022i and 4022. These alterations in the protocol treatments will expire when there are no longer epidemic levels of COVID-19 infections in Pennsylvania and the Bureau of EMS rescinds this memo.

To reduce the risk of aerosol-generating procedures like nebulized bronchodilators in the close quarters of an ambulance during the COVID-19 pandemic, EMS agencies may substitute these alternative methods of bronchodilation:

- **albuterol MDI with spacer** – as previously published in the updated Viral Respiratory Infection Protocol #931 (effective 3/16/20) when approved by the EMS agency and its medical director, providers may substitute albuterol by MDI with spacer in place of nebulized bronchodilators as directed in the protocol. This applies to EMTs who have been trained to use nebulized albuterol treatments as well as all providers above the level of EMT, using protocols #422, 4022i, and 4022.
- **intramuscular EPINEPHrine** – IM EPINEPHrine is included in the Statewide Asthma/COPD/ Bronchospasm AEMT and ALS protocols secondary to albuterol and after attempting contact with medical command. If approved by the EMS agency medical director, this EMSIB permits providers at or above the level of AEMT to substitute IM EPINEPHrine before contact with medical command using the adult and pediatric doses listed in protocols #4022i and 4022 respectively. Intramuscular EPINEPHrine **should not**

**be given** if patient has a past history of coronary artery disease (myocardial infarction or angina).

- **intramuscular terbutaline** – terbutaline is a medication that is on the state medication list for use by providers above the level of AEMT. While this medication is not included in statewide ALS protocol #4022, if approved by the EMS agency medical director and carried by an ALS ambulance service, this medication can be administered by an ALS provider **but must be ordered by a medical command physician**.

Medications with beta-adrenergic properties have bronchodilating effects. Historically, intramuscular beta-agonists were used as a treatment for asthma and other reactive airway diseases prior to the development of inhaled / nebulized bronchodilators.

Please address any questions to your Regional EMS Council.