



State of Maryland

**Maryland  
Institute for  
Emergency Medical  
Services Systems**


653 West Pratt Street  
Baltimore, Maryland  
21201-1536

Larry Hogan  
Governor

Donald L. DeVries, Jr., Esq.  
Chairman  
Emergency Medical  
Services Board

410-706-5074  
FAX: 410-706-4768

TO: Highest Jurisdictional Officials  
Medical Directors  
Commercial Services  
Regional Administrators

FROM: Richard Alcorta, MD   
Acting Co-Executive Director  
State EMS Medical Director

DATE: June 29, 2018

RE: **\*\*\*REPLACEMENT OF JUNE 27, 2018 SHORTAGE OF KETAMINE MEMO\*\*\***

Due to the shortage of ketamine, *The Maryland Medical Protocols for EMS Providers*, specifically the Pain Management (pgs. 130-133), Adult and Pediatric Rapid Sequence Intubation (RSI) (pgs. 327-344), and Excited Delirium Syndrome (pgs. 127-129) protocols, which are effective July 1, 2018, require modification.

Jurisdictions that have ketamine and are able to fulfill the requirements of the Pain Management, Rapid Sequence Intubation, and Excited Delirium Syndrome protocols shall implement the protocols as written without modification.

Jurisdictions that do not have ketamine to fulfill the requirements of the Pain Management Protocol should continue to implement the protocol with the opiate approved for their jurisdiction: fentanyl and/or morphine.

Jurisdictions that have approved RSI programs will need to use alternative sedatives: etomidate or midazolam.

Jurisdictions that do not have ketamine to fulfill the requirements of the Excited Delirium Syndrome Protocol shall modify the protocol and follow all of the existing protocol components with the exception of ketamine during the time that it is not available. **\*\*\*Only during the EMS Operational Program (EMSOP) shortage of ketamine, providers for that EMSOP are authorized to administer medication as follows\*\*\*:**

**Excited Delirium Syndrome ONLY**

**a. Adults:**

(i) Consider 2.5 mg IV/IO midazolam.

a. If agitation persists, consider 2.5 mg IV/IO midazolam without online medical direction should agitation persist.

(ii) If IV/IO unavailable: 5 mg IM midazolam.

a. If IV/IO unavailable with online medical direction, repeat one time 5 mg IM midazolam should agitation persist.

**b. Pediatrics:**

(i) Patients aged 13 years to not yet reached their 18<sup>th</sup> birthday, consider 0.1 mg/kg midazolam SLOW IVP/IO over 1-2 minutes. Maximum single dose 2.5 mg.

a. If agitation persists with online medical direction, repeat 0.1 mg/kg SLOW IVP/IO over 1-2 minutes. Maximum single dose 2.5 mg.

- (ii) If IV/IO unavailable without online medical direction, consider 2.5 mg midazolam IM.  
a. If agitation persists with online medical direction, consider 2.5 mg midazolam IM.***
- (iii) Patients who have not yet reached their 13<sup>th</sup> birthday require online medical direction: 0.1 mg/kg midazolam SLOW IVP/IO over 1-2 minutes. Maximum single dose 2.5 mg.  
a. If agitation persists with online medical direction, repeat 0.1 mg/kg SLOW IVP/IO over 1-2 minutes. Maximum single dose 2.5 mg.***
- (iv) If IV/IO unavailable with online medical direction, consider 2.5 mg midazolam IM.  
a. If agitation persists with online medical direction, consider 2.5 mg midazolam IM.***

To facilitate the ability to stock transport units with ketamine, the requirement for jurisdictions who participate in the voluntary ambulance inspection program (VAIP) to stock enough ketamine for two patients will be waived during this shortage.

These modifications will only be in place until the jurisdiction is able to acquire ketamine.