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MEMORANDUM

TO: All MA Licensed Ambulance Services and Accredited EMT Training Institutions
CC: EMCAB Members
FROM: Mark Miller, MS, NRP, Director
RE: 2018 Statewide Treatment Protocols
DATE: January 29, 2018

The Massachusetts Department of Public Health, Office of Emergency Medical Services (the Department) is committed to improving emergency services across the Commonwealth. Based on the recommendations of key stakeholders, including the Emergency Medical Care Advisory Board (EMCAB) and Medical Service Committee (MSC), the Department is pleased to release the 2018 Statewide Treatment Protocols (STPs). This update of the STPs includes four key changes aimed at improving patient safety across the Commonwealth. In summary, the four key changes are:

1) **1) Cardiac Arrest Management:** EMS personnel should be performing "High Performance CPR" on all patients. This includes frequent changes in personnel, high attention to lapses in compression and all EMS personnel providing oversight of the CPR in progress to ensure high compliance with hard, fast and deep compressions. This has been a practice across the state and is now formalized in the STP. This practice will continue to improve the ability for sudden cardiac arrest patients to have the best possible chance for recovery. Please remember that EMS personnel need to be trained using high performance CPR methods, and team management of CPR should be practiced frequently and with new combinations of crew members.

   Please note that the proper methods for CPR are currently under review by ILCOR and AHA. The most recent recommendations are as follows, and the consolidated cardiac arrest protocol is based on these items:

   a. For arrests due to noncardiac causes (drowning, overdose, asphyxiation, etc.), interposed ventilation without interrupting compressions are recommended.
   b. For arrests due to cardiac causes, interposed ventilations are recommended, but it is acceptable for services that have already implemented early-passive-ventilation strategies (previously "Cardiocerebral resuscitation") to continue to use them for this type of arrest.

   Keep in mind that endotracheal intubation is not recommended initially in either type of arrest due to the delay and interruption in compressions.

   The specific arrest protocols in Section 3 will continue to apply to arrests that fit into that category (so, for example, asystolic arrest should be managed using both 1.1 and 3.4).

2) Benzodiazepine Streamlining: The STPs include a change to reduce the number of benzodiazepine medications that are currently carried on paramedic-level ALS ambulances and are used for anticonvulsant, or seizure, purposes: diazepam, lorazepam and midazolam. As a result of its review, the MSC recommended to reduce the currently stocked medications of midazolam, diazepam and lorazepam, to only midazolam in a quantity stocked on an ambulance to treat two patients before requiring re-stocking. Midazolam is noted to have the fewest side effects, few storage issues, and the highest effectiveness of the current choices that ambulances typically carry. The other two benzodiazepines, diazepam and lorazepam, were found to have greater issues in the pre-hospital realm that make them less ideal than midazolam. Diazepam and lorazepam will remain in the STP medication appendix as allowable alternatives if a medication shortage occurs, and would only be stocked when a local shortage requires that change.

a. Paramedics will be required to remain familiar with all three benzodiazepines, in the event of emergency substitutions in the case of shortages, but the intention of this change is to reduce multiple variations of dosing and to standardize midazolam as the first choice to promote safe dosing processes in adults and pediatrics.

3) Epinephrine for EMT-Basics: All EMT-Basics will be able to provide epinephrine 1mg/ml IM to patients with training and approval of their medical director, using the Epinephrine (Epi) Check and Inject kit. The required training highlights basic sterile administration techniques as well as reviews indications for epinephrine administration. The Epi Check and Inject kits provide a solid model for increased confidence by EMT-Basics to provide treatment for anaphylaxis with lower risks of injury to patients. Professional EMS of Cambridge helped coordinate the Epi Check and Inject program with multiple services and have agreed to provide their education plan and model for their version of the Epi Check and Inject kits. A service's affiliate hospital medical director must approve this change and provide oversight of the implementation at the service.

4) Stroke Scale Enhancement: There are two additional items that will become part of the standard stroke scale assessment. The FAST scale is expanded to include two new metrics that the FAST-ED scale assesses. The two new assessment items are eye deviation and denial/neglect. These are important content improvements that provide significant information on the severity of a stroke. These assessments do not change the current stroke point of entry plan for patients, but will help ensure that stroke information is prioritized by the emergency departments. The 4-minute video linked below provides an overview of the additional evaluation points of the FAST-ED stroke scale. Please review this video or equivalent training and prepare to provide the new score to hospital staff when giving report: https://www.neurovascularexchange.com/training-for-ems-on-the-fast-ed-and-race-scales.

The updated STP will be effective on April 1, 2018, allowing services a 60-day training and implementation period. Services may begin implementing use of the 2018 STP as soon as their EMS personnel are trained and equipped in accordance with it prior to April 1, 2018.

Thank you for your continued collaboration and efforts to effectively serve patients across the Commonwealth. If you have any questions on the 2018 STP, please contact Patricia Reilly, RN, clinical coordinator, at patricia.reilly@state.ma.us, or Renee Atherton, NRP, compliance coordinator, at renee.atherton@state.ma.us.