2023 Maine EMS Protocol Update
Frequently Asked Questions

The Maine EMS Medical Direction and Practices Board appreciates your time and attention to the 2023 Maine EMS Protocol update. In an effort to address common questions that have arisen during the 2023 Maine EMS Protocol dissemination and implementation process, the MDPB is publishing a "Frequently Asked Questions" document. This will be a living document and will be updated periodically as additional questions are presented to MDPB members. Please reach out with any questions as your question can help others' understanding of the protocols as well. Again, we thank you for all of your efforts surrounding this protocol update.

Question #1: With the statement "If available, use continuous quantitative end-tidal CO2 (ETCO2) monitoring for ALL severe TBI patients" is the MDPB suggesting a scope of practice change at the EMT scope of practice?

Answer #1: No. The MDPB does not expect EMTs to learn to interpret ETCO2 for head injured patients. This step is a requirement for AEMTs and Paramedics only. At present, the use of ETCO2 is not included in the National EMS Scope of Practice for EMTs, it is not being taught during initial licensure classes for EMTs, and not all EMS Agencies have the equipment necessary to perform this step of the protocols.

In situations where AEMTs and Paramedics are managing the airway of patients with moderate to severe TBIs, the expectation is that continuous ETCO2 monitoring will occur EVEN WHEN ONLY BASIC AIRWAY MANEUVERS ARE UTILIZED, not just for advanced airway devices.

While the MDPB and Maine EMS are not opposed to adding to any given scope of practice and practicing above and beyond the National EMS Scope of Practice, the MDPB recognizes that additional training requirements can be difficult for EMS clinicians and agencies. Recognizing the impact of the 2021 Maine EMS Protocol Update in which the MDPB added to the EMT scope of practice in order to keep up with the National Scope of Practice, the MDPB and Maine EMS are sensitive to changing any scope of practice and commit to doing so only with adequate foreshadowing.

Question #2: With the change in the maximum dose of dexamethasone, how will the medication be supplied after the update to the 2023 Maine EMS Protocols?

Answer #2: Based on best evidence and recommendations from outside stakeholder groups, including the American Academy of Pediatrics, the MDPB increased the maximum dose of dexamethasone from 10 mg to 16 mg. The medication comes in 10 mg vials (commonly 10 mg/ml). Once the protocols go live, the paramedic formulary will be updated to include two, 10 mg vials of dexamethasone. At present, there does not appear to be larger quantity vials of dexamethasone available, but as this change is occurring across the US, there may be new ways dexamethasone is supplied in the future.

Please see the MDPB White Paper regarding this issue, available at the following website: https://www.maine.gov/ems/sites/maine.gov.ems/files/inline-files/20230726-DexamethasoneUpdate-WhitePaper.pdf

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Question #3: With the change in Red 14 - "Termination of Resuscitation #2," and Grey 11 – "Death Situations for Emergency Responders #1," requiring notification of New England Donor Services, are we expected to discuss this phone call with the family?

Answer #3: No. This protocol change requires EMS clinicians to contact New England Donor Services (NEDS) upon termination of resuscitative efforts in the field. NEDS requests a modest list of information (located on Red 14) including, patient name, DOB, date and time of death, cause of death (including any evidence of drug use), any past known history and medications, number of IVs, which police department is involved, where the patient's remains are being taken, if the Medical Examiner was contacted and the patient's next of kin's contact information. Based on conversations with NEDS staff, this phone call should be relatively brief and is not expected to add a significant operational burden but instead, offer much needed tissue donation options for those in need.

Once the phone call is made, no other steps are necessary. NEDS staff will review the details of the case and, if they feel clinically appropriate, will reach out to the next of kin and discuss the opportunity for donation. NEDS Staff members are trained to have the difficult conversations in the context of grieving the loss of a loved one.

Please see the MDPB White Paper regarding this issue, available at the following website: https://www.maine.gov/ems/sites/maine.gov.ems/files/inline-files/20230726-NE-Donor-Service-WhitePaper.pdf

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Question #4: Does the change in Red 14 - "Termination of Resuscitation #2," and Grey 11 - "Death Situations for Emergency Responders #1," and notification of New England Donor Services require transportation of the patient's remains to the hospital?

Answer #4: No. The requirement to contact NEDS does not include the need to transport the patient's remains to the hospital and your current processes for disposition of the patient's remains can remain intact. Please recall, upon termination of resuscitation, patients are able to donate tissue only (including bone, cornea, skin, etc.). Organ donation is more complex and amongst other requirements must be performed in a hospital's operating room with a team of highly specialized Transplant Surgeons. Tissue donation does not require the same level of resources and can take place outside of the hospital, including in a funeral home.

Question #5: With the new Fever Protocol, can IV acetaminophen be used to manage a fever?

Answer #5: No. While some patients suffering fever may require an IV, not all patients will need IV access. In addition, the vast majority of patients with fevers can still tolerate oral medications, and whenever possible it is important to utilize the oral route of medications. This is in line with common medical practice and supports stewardship of healthcare resources.

Question #6: Given that AEMTs are able to provide EPINEPHrine for adults suffering out-of-hospital cardiac arrest (OHCA), is calling ALS and requesting a Paramedic still necessary?

Answer #6: Yes. Please recall, the provision of EPINEPHrine is only one of a number of other therapies and steps that occur during resuscitation. The MDPB included EPINEPHrine at the AEMT scope of practice to encourage earlier application of the medication for areas where AEMTs arrive significantly earlier than Paramedics and for Paramedic support in circumstances in which Paramedics and AEMTs are practicing together. There are a number of other ACLS therapies that Paramedics can bring to the care of patients suffering OHCA, including additional medications, additional therapies, and additional medical decision making, all of which can be helpful for patients suffering OHCA. Therefore, the MDPB feels very strongly that including EPINEPHrine at the AEMT scope of practice is NOT a replacement for Paramedicine and Paramedics should be included in the care of all OHCA patients, when available.

Question #7: What additional training should take place given that AEMTs are now allowed to provide EPINEPHrine in adult out-of-hospital cardiac arrest (OHCA)?

Answer #7: The MDPB feels strongly that the addition of EPINEPHrine at the AEMT scope of practice should NOT disrupt other essential steps of care of patients suffering OHCA, including High-Performance CPR (HPCPR) and early defibrillation. AEMTs should work within their agencies to coordinate the care of OHCA patients with accompanying Paramedics, and together ensure that the provision of EPINEPHrine does not disrupt other resuscitative steps, especially HPCPR and early defibrillation. In addition, education should also include discussions regarding the pharmacology of EPINEPHrine, its role in the management of patients suffering OHCA, and a general overview of the principles of OHCA care. For individuals who have not been trained in the principles of High-Performance CPR, this is an additional and critical training to consider.

Please note, the provision of IV medications is currently within the AEMT scope of practice and therefore, Instructor Coordinators are not necessary for this training.

Question #8: Why has the MDPB changed the Naloxone Dispensation Protocol on Yellow 4 to require naloxone be offered to all patients after suffering an opiate overdose?

Answer #8: The Naloxone Dispensation protocol was introduced in the 2021 Maine EMS Protocols after State Legislation allowed for the dispensation of this one medication. The MDPB and Maine EMS Staff, including Substance Use Disorder Program Staff, have followed this practice closely since implementation and noted that since the initiation of the protocol, there have been fewer overdose deaths in patients who received naloxone kits by participating EMS agencies and clinicians. While the cause of this difference in morbidity and mortality is not completely understood, the MDPB and Maine EMS remain impressed by the difference in outcomes when naloxone is dispensed to patients suffering overdose and with the 2023 Maine EMS Protocols, hope to expand this practice statewide. While this may sound daunting on first consideration, services and clinicians who have been performing this step have shared that this practice does not add substantial time to the call (5-10 min). Given the significant outcomes noted to date, we hope this practice balances workload, availability, and readiness while also offering the same outcomes across the state as a whole.

Question #9: Why doesn't the Universal Pain Management Protocol on Green 18 allow for dividing acetaminophen tablets into quarters?

Answer #9: Acetaminophen is a safe, over the counter medication that is approved for use in the Maine EMS Protocols. It is the only medications in the Maine EMS Protocols with multiple formulations, oral as chewable tablets and injectable as an IV solution. Both produce an equally effective response. In order to simplify dosing and reduce errors, a table is available in the protocols that includes both the IV and oral forms. The ability to give an exact dose exists with the IV formulation and use of a pump. The oral form needs to be rounded to the nearest tablet size or fraction of a tablet that is reasonably safe to prepare in an ambulance. It has been shown that splitting a tablet more than once can decrease the accuracy of the dose considerably, this is why each weight range corresponds to a dose and tablet calculation in increments of a half tablet (using 160mg tablets). The goal is to round the calculated weight based, patient specific dose, to the nearest whole or half tablet. The provided chart is a guide for this process.

Question #10: In the Universal Pain Management Protocol (Green 18), when providing oral acetaminophen, which is the best directive to follow, the mg dose column or the number of tablet column?

Answer #10: The MDPB acknowledges that it is challenging to provide specific mg/kg dosing when providing oral acetaminophen, especially given the issues with accuracy described in Answer 9 when dividing a tablet in less than half. Based on this issue, the MDPB has created a range of acetaminophen dosing such that safe and effective doses of medications may be provided over a range of weights, requiring that tablets only be divided in halves at most. Based

on this, EMS Clinicians providing acetaminophen orally should follow the dosing instructions listed under the “Number of 160 mg tabs (Double for 80 mg tabs)".

Question #11: In the Severe Hypothermia WITH signs of Life and the Severe Hypothermia WITHOUT Signs of Life (Yellow 11 & 12), the protocol asks to consider 1000 ml boluses of NS heated to 104-108 degrees F (40-42 degrees C). Does that require a new equipment purchase?

Answer #11: No. When drafting the Hypothermia Protocols, the MDPB was guided by most recent evidence concerning the management of hypothermia. This evidence suggests that IV fluids should be warmed to between 40-42 degrees C in an effort to reduce further heat loss. The MDPB recognizes that many EMS agencies do not have fluid warmers that can achieve these temperatures, therefore added this as a consideration, allowing services who routinely care of hypothermic patients to consider investing in these devices, while other services may not choose to invest in these devices. Even if services choose not to purchase a fluid warmer that can achieve the recommended 40-42C, EMS clinicians should use fluids that are warmed to the maximum temperature achievable (but no more than 42 degrees C) in an effort to prevent further cold stress.

NOTE: IV fluid warmers are not currently Maine EMS-required equipment inventory for services licensed or permitted to the AEMT or Paramedic levels. This protocol does not require services without an IV fluid warmer to purchase one.

Question #12: Red 12 currently states the following for the Advanced and Paramedic levels:

“Refractory VF/VT after 3 unsuccessful shocks and administration of EPINEPHrine and amiodarone, consider the following steps:

1. Consider dual-sequential external defibrillation, if 2 defibrillators are available.”

Does this mean that only the Paramedic can perform dual-sequential external defibrillation?

Answer #12: No. The MDPB has been made aware that this language presents a paradox for EMS clinicians performing a resuscitation at the Advanced EMT level (i.e. no Paramedics on scene). In the current wording, clinicians are directed to proceed to DSD after 3 rounds of EPINEPHrine AND administering amiodarone. However, amiodarone is in the scope of practice for the Paramedic level only. Thus, this phrasing has the unintentional effect of precluding the AEMT from following the correct pathway to progression to DSD, but at the same time places DSD within the AEMT scope.
It was always the intent of the MDPB that DSD be available to the AEMT. It was never the intent of the Board to require amiodarone administration prior to an attempt at DSD if a Paramedic was not on scene. In recognition that many services in the State operate at an Advanced EMT

level, it is certainly possible that multiple EMS personnel may be at the resuscitation with no Paramedic present.
For this reason, MDPB offers the following clarifying instruction to Red 12:

"If clinicians have reached three unsuccessful defibrillation attempts and have two manual monitors on-scene, proceeding to DSD or, less preferred, considering a vector change gives the patient the best chance at conversion, regardless of the availability of amiodarone. In the cases where a Paramedic is not present and 3 unsuccessful defibrillation attempts have been made and VF/VT persists, Advanced EMTs, with two manual defibrillators on scene, should proceed to Dual Sequential Defibrillation and Vector Change per the Red 12 protocol directions."

Question #13: When managing a pediatric patient in cardiac arrest between 1 and 28 days old, should the Pediatric Cardiac Arrest (Red 17-19) be referenced or the Neonatal Arrest (Pink 7) protocol?

Answer #13: The MDPB recommends following Pink 7 for all cardiac arrests and peri-arrest states in pediatric patients less than 29 days old. The MDPB acknowledges there is no absolute national standard regarding which cardiac arrest algorithm (PALS vs. NALS) is used in pediatric patients after birth but less than 29 days old. In reviewing most common practices in Neonatal Intensive Care Units and in Pediatric Emergency Departments, the MDPB recognizes that many pediatric specialists follow Neonatal Cardiac Arrest algorithms up to the 28-day range. The MDPB hoped to clarify this by adding a note at the top of Red 17 referring EMS clinicians to Pink 7 for patients less than 29 days old.

Cardiac arrest in the neonate is commonly caused by respiratory compromise and the neonatal cardiac arrest management curriculums spend time focusing on oxygen, PPV, and airway management as a means to PREVENT cardiac arrest. When applying those therapies, pulse is the best determinant of response and improvement, but when the pulse remains less than 60 despite those efforts, chest compressions are warranted. Normal neonatal HR is in the 100-190 range. In this age group, heart rates of less than 60 are inadequate to supply oxygenated blood to vital organs and therefore chest compressions are recommended to supplement the underlying poor perfusion. In pediatric patients less than 29 days old, consider a rate less than 60 bpm as dangerous as cardiac arrest in adults.

In both NALS and the Maine EMS protocols, heart rates of 60 are highlighted due to the danger of persistent rates this low. Regardless though, the "HR less than 60" stipulation also accounts for neonates who have suffered OHCA and are pulseless. Even in those cases, attentiveness to oxygenation and ventilation are important in the context of providing high performance CPR. It's for that reason that the very top of Red 17 refers the reader back to Pink 7 in the case of neonates as the MDPB recommends following Pink 7 for all cardiac arrests and peri arrest states in pediatric patients less than 29 days old.