## Green Section Change Document POST MDPB

| Location Section/Page # | Change | Purpose of Change (Provider Input, Stakeholder Input, Evolution of Evidence, Best Practice, etc.) | Evidence for Change | Expected Impact (Operational, Educational, Financial, QI, Medical Direction, Communication, etc.) | Size of Change (Small/Medium/ Large) | Desired Outcome |
|---|---|---|---|---|---|---|
| Green 3 (Trauma Triage #1) | Flow chart VS: Add in section for peds and infants VS. GCS<13SBP <90mmHg or <age appropriate (70+ agex2) in pediatrics RR <10 or >29 bpm or <20 or >29 bpm in infant <1yr old | Be inclusive of Pediatric vital signs | Expert Stakeholder Input | Educational | Small | Improved pediatric trauma triage accuracy |
| Green 3 (Trauma Triage #1) | In box titled "ASSESSMENT #2" Add:<br>- "knee" to "proximal to the elbow"<br>- "or suspected spinal cord injury" to "Paralysis" | Increase guidance of list of conditions prompting consideration of Trauma Center transfer | Expert Stakeholder input | Educational | Small | More complete Trauma triage guidance |
| Green 4 (Trauma Assessment #3) | In box titled "ASSESSMENT #4" Add the word "may": "SBP < 110 *may* represent shock after age 65 years" | More accurate language | Expert Stakeholder input | Educational | Small | More accurate language |
| Green 6 (Spine Assessment) | Add *"(*For High Risk Mechanisms of Injury in Pediatrics, see below)"* to first box (Starts with "Suspected spinal…" to denote consideration of high risk mechanism of injury in the pediatric patient (* below chart) | Highlight High Risk MOI's for Pediatric Spine Injuries | EMS Clinician Input | Operational and Educational | Small | Increase sensitivity of spinal assessment protocol |
| Green 7 (Spine Management) | Add " *" to "Is the patient in a seated position and able to self-extricate?" to refer to " * " in pearl | Clarify location of Pearl to protocol details | EMS Clinician Input | Educational | Small | Clarify text of protocol |
| Green 10 (Chest Trauma) | EMT 6.<br>Add in "b. Consider applying non-circumferential splint." | Highlight treatment options for flail cheat | EMS Clinician Input | Educational | Small | Align with current care/teaching |
| Green 11 (Head Trauma) | Adoption of EPIC study protocol to replace previous Head Trauma protocol. | Best Practice | EPIC<br><br>EPIC4Kids | Operational, Educational, Financial | Large | Improve mortality of moderate and severe traumatic |

DRAFT

## Green Section Change Document POST MDPB

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | | | brain injury patients |
| Green 12 (Hemorrhage) | EMT 1.<br>Add: direct pressure AND ELEVATION (which should occur simultaneously) | Best Practice | EMS Clinician Input | Operational, education | Small | Increase visibility of baseline therapies in hemorrhage control |
| Green 13 (Hemorrhagic Shock #1) | Reword top section on alternative causes of shock for easier reading:<br>"If cause of shock is NOT related to hemorrhage, consider the following protocols:<br>Anaphylaxis: **Gold 1**<br>Cardiogenic: **Red 20**<br>Tension Pneumothorax: **Green 10**<br>Medical Shock: **Gold 14**" | Easier reading | Foundational | Text edit | Small | Easier reading |
| Green 13 (Hemorrhagic Shock #1) | Advanced EMT 7<br>Move current comment from next page regarding preferential use of LR to this page.<br>"If shock present (see below table), perform fluid bolus according to the following guidelines, preferentially with more physiologically-similar IVF like lactated ringers" | Emphasize LR over NS | Increasing Evidence presented in the 2019 MEMS Protocol Update | Operational, educational | Medium | Bring protocol in line with evolving evidence – Chang in Protocol Format |
| Green 13 (Hemorrhagic Shock #1) | Advanced EMT 8 b.<br>Change to "maintain age appropriate BP" | Emphasize age appropriate BP goals | Foundational | Operational, educational | Small | Assuring appropriate target BP goal |
| Green 13 (Hemorrhagic Shock #1) | Advanced EMT 7 b.<br>Add "age appropriate" to the current text so it reads:<br>"…fluid bolus to maintain age appropriate target systolic BP (90 mmHg in adults)" | Add language to blend pediatrics with adult instructions | | educational | Small | Emphasize pediatric treatment expectations |
| Green 14 (Hemorrhagic Shock #2) | Contraindications for TXA: Add in GI bleed<br>Roberts, I et al, "Effects of a high-dose 24-h infusion of tranexamic acid on death and thromboemboembolic events in patients with acute gastrointestinal bleeding (HALT-IT): an international randomized, double-blind, placebo-controlled trial", *Lancet*, 2020 | Improve patient care by highlighting contra-indications for patient care | HALT-IT Article | Operational, educational | Small | Bring protocol in line with evolving evidence |
| | Add in " * " to "Discuss use of TXA in patients on anticoagulation…" and add in " * " to pearl that begins with "Additionally" to tie it to note about OLMC on bottom of page Green 13 | Easier reading | Reviewer/Stakeholder Input | Text edit | Small | Easier reading |

DRAFT

## Green Section Change Document POST MDPB

| | | | | | | |
|---|---|---|---|---|---|---|
| | Move comment regarding pelvic fracture and use of stabilization device to Green 13 under EMT | Easier reading | Reviewer/Stakeholder Input | Text edit | Small | Easier reading |
| | Move comment regarding LR use to Green 13 Advanced EMT 7 | Easier reading | Reviewer/Stakeholder Input | Text edit | Small | Easier reading |
| Green 17 – 18 (Universal Pain Management #1 & #2 | EMT 2<br><br>Change "consider ice application" to "consider cold pack application" | More accurate language | Reviewer/Stakeholder Input | Text edit | Small | More accurate language |
| | Advanced EMT 6.<br><br>Add in "based on patient assessment OR INJURY ETIOLOGY." Below this, add in the following pearl: "Consider medical causes of all trauma, especially in the elderly, lift assist, fall and MVC." | Emphasize increased vigilance as to etiology of trauma | Reviewer/Stakeholder Input | Educational | Small / moderate | Better care |
| | **Introduce intravenous Tylenol to AEMT and paramedic**<br><br>Advanced EMT 7.<br><br>Remove current text. Add in: "If pain not improved and no contraindications to acetaminophen use, consider administration of oral chewable or IV acetaminophen: 10 mg/kg. (May be rounded to nearest 80-100mg.)<br><br>Sobieraj D. et al "Comparative Effectiveness of Analgesics to Reduce Acute Pain int the Prehospital Setting", *PEC* 2020 | Provider input | See comments re: Reference | Educational, operational, financial, scope of practice | Large | Allow for IV non-narcotic pain control option for AEMT and Paramedic |
| | Advanced EMT (add a #8).<br><br>Add in reference to Gold 19 for nausea and vomiting | Easier reading | Reviewer/Stakeholder Input | Text edit | Small | Link protocols |
| Green 19 (Universal Pain Management #3) | Paramedic 9<br><br>Rewrite options for pain control so that paramedics may choose either Fentanyl OR Ketamine OR Nitrous Oxide first-line, but MUST call OLMC prior to combining any of these due to increased risk of adverse reactions when combining analgesics.<br><br>Sobieraj D. et al "Comparative Effectiveness of Analgesics to Reduce Acute Pain int the Prehospital Setting", *PEC* 2020 | Remove barrier of requiring OLMC for permission to use ketamine for pain. Maine ED's have evolved and are more comfortable | See comments re: Reference | Educational – including messaging with OLMC/Hospitals | Moderate | Improve EMS Clinician Operations |

DRAFT

## Green Section Change Document POST MDPB

| | | | | | | |
|---|---|---|---|---|---|---|
| | | with low dose ketamine. | | | | |
| Green 20 (Termination….) | Added “rapid” fluid bolus and “early” needle decompression<br><br>Make Exclusion criteria section more uniform with other sections:<br><br>“**Inclusion Criteria**: Cardiac arrest from blunt or penetrating trauma in adult and pediatric patients.<br><br>**Exclusion Criteria:** (patients for whom this protocol does not apply):<br>- Patients whose presentation is consistent with a medical cause of cardiac arrest, refer to: Cardiac Arrest protocol, Red 8<br>- Hypothermic patients, refer to Hypothermia protocol, Yellow 7<br>- Drowning patients: refer to Drowning/Submersion Injuries protocol, Yellow 11” | Easier reading | Reviewer/Stakeholder Input | Text edit | Small | Text edit |
| | EMT/Advanced EMT / Paramedic 2.<br><br>2. Consider resuscitation and transport only if, transporting in a safe and prudent manner, you can deliver the patient to a hospital within 15 minutes of the time of arrest.<br><br>3. If unable to meet these transport guidelines, do not initiate resuscitation in trauma patients who are apneic and pulseless. | Easier reading | N/A | Text edit | Small | Text edit |
| Green 21 (Crush Injury) | Paramedic 8. b.<br><br>Add in: “If ECG suggestive of hyperkalemia, see hyperkalemia protocol and consider calcium gluconate 10% (may dilute to 50 to 100mL)” | Link to new Hyperkalemia Protocol | N/A | Educational | Small | Increased vigilance |
| | Remove current PEARLS for crush injury<br><br>Replace PEARL with “Treat suspension injury trauma as prolonged entrapment and follow crush injury protocols as above.” | Expand consideration for same treatment to similar injury pattern to | N/A | Educational | small | Improved education |

DRAFT

## Green Section Change Document POST MDPB

| | | | | | | |
|---|---|---|---|---|---|---|
| Green 23 (Ophthalmology) | Change AEMT to Advanced EMT<br><br>Change Advanced EMT 1 to Advanced EMT 8 refer to nausea vomiting protocol Gold 19 | Text edit | N/A | Text edit | Small | Text edit |
| Green 23 (Ophthalmology) | Change Paramedic 9:<br>- REMOVE the language "this may repeated for a total of three doses" | Remove strict limit to number of doses of tetracaine during 911 phase of care | N/A | Educational | Small | We removed need for OLMC approval for more than 3 doses of tetracaine |
| *New Protocol* | Add intravenous antibiotics for open fractures.<br><br>Discussion with MEMS TAC and review of MEFIRS – around 50 open fractures documented/year (and believe there are more not documented). Current Trauma Guidelines require abx for open fractures within 1 hour. Per the Trauma Centers – they struggle to meet this goal in all patients and envision this as a means to support their care of patients and prevention of infections due to open fractures. | Best Practice | Advance the MEMS Protocols in line with other states and the National Model Guidelines | Operational, Educational, Financial | Large | Improve patient outcomes by decreasing post trauma infections from Open Fractures |

DRAFT