

Substantive Change Log 2023-5 Guideline Update

OVERALL

- Organization & General
 - Removed guideline numbers to improve ability to add new guidelines and maintain alphabetical order.
 - All references to other guidelines indicate the section of that guideline (e.g. M = Medical, T = Trauma, OB = Obstetric, P = Policy, PR = Procedure, RM = Reference Material).
 - Removed many individual guideline references to RSI, replacing them with “appropriate airway management” to reflect the use of both RSI and DSI in most settings.
 - Replaced logos.
 - Numerous typographical errors and clarifications of existing wording.
 - Improved some graphics.
 - Updated Epi, Norepi, Nicardipine, & Nitroglycerin Drip Calculation charts in all areas.
 - Made norepinephrine and epinephrine infusion dosing consistent in all guidelines: 0.05 – 0.5 mcg/kg/min. Of note, if higher doses are needed, do not hesitate to medical consult.

GENERAL GUIDELINES

- Medical Control Authorization Levels
 - For EMTP-2, MILD sedation is now a Medical Consult/Medical Control category for all indications.
 - Addition of IV APAP to EMTP-1 and above.
- CPR
 - Removed hypoglycemia as a reversible cause.
 - Added anterior-posterior pad positioning (vector change) after 3 defibrillations.

MEDICAL

- AICD/Pacemaker Malfunction (M)
 - Added indication of inappropriate bradycardia from pacing failure. Reasoning: if the pacemaker is oversensing (e.g., thinking a patient’s shivering is tachycardia), it will not pace (as it doesn’t think the patient is bradycardic); using the magnet will default the pacemaker to a pre-determined fixed rate or asynchronous mode, fixing the bradycardia.
- Allergic Reaction/Anaphylaxis/Angioedema
 - Increased dosing frequency of IM epi from q10 to q5-15.
 - Implemented weight-based dosing of IM epi for AEMT & EMT-P to allow for increased max dose of 0.5 mg.
 - Clarified expectations of IM and IV dosing in CAD and elderly (in pearls section).

- Behavioral Emergency
 - Added agitated patient management (including what was previously known as excited delirium).
- Bradycardia (M)
 - Added pearl to consider pacing failure.
 - Added pearl to consider hypothermia.
- Cardiac Arrest – Asystole & PEA (M)
 - Removed hypoglycemia as a reversible cause.
 - Removed hyperkalemia as an indication for Sodium Bicarbonate.
- Cardiac Arrest – Ventricular Fibrillation & Pulseless Ventricular Tachycardia (M)
 - Added anterior-posterior pad positioning (vector change) after 3 defibrillations.
 - Removed hyperkalemia as an indication for Sodium Bicarbonate.
- Excited Delirium
 - Removed. Management of patients meeting these criteria is found in Behavioral Emergency (M).
- Fever
 - Added IV Acetaminophen.
- Respiratory – Bronchiolitis
 - Re-emphasized focus on BVM and EGD over intubation.
 - Re-direct to Non-Invasive Ventilation (PR) for procedure and goals.
- Respiratory – Bronchospasm
 - Increased Ipratropium dosing to max of 3 doses q 20 min.
 - Re-direct to Non-Invasive Ventilation (PR) for procedure and goals.
- Respiratory – Croup
 - Re-emphasized focus on BVM and EGD over intubation.
 - Re-direct to Non-Invasive Ventilation (PR) for procedure and goals.
- Respiratory – Pulmonary Edema
 - Re-direct to Non-Invasive Ventilation (PR) for procedure and goals.
- Seizure
 - Increased initial dose of midazolam for all patients. Be mindful: these are large doses, so they should reduce the need for second doses.
- Stroke/CVA
 - Changed head of bed elevation to 30°.
- Tachycardia – Narrow Complex
 - Added Modified Valsalva Maneuver as pediatric option.

TRAUMA

- Amputation & Hemorrhage
 - Clarified procedure for preparing and transporting amputated parts.
- Envenomation
 - HCA Kingwood Medical Center is preferred destination for envenomated patients (adult and pediatric).
- Eye Injury

- Tetracaine indications expanded. Use caution, as patients should be transported after its use. Furthermore, protect the eye as we don't want to cause more damage because they can't feel pain.
- Morgan lens removed.
- Traumatic Arrest
 - Added finger thoracostomy in pediatric patients ≥ 60 kg.

OBSTETRICS & GYNECOLOGY

- Neonatal Resuscitation
 - Increased hypoglycemia threshold to 40 mg/dL.
 - Removed oxygen for HR >100 , as per AHA recommendations.
- Obstetric Complications
 - In eclampsia, shortened duration of Magnesium Sulfate loading dose to 15-20 min.
- Uncomplicated Delivery
 - Stressed importance of delayed cord clamping by $\sim 30-60$ sec.

POLICIES

- Definition of a Patient
 - Revised the definition of a pediatric patient to reflect <18 years of age.

PROCEDURES

- Code STEMI
 - Replaced Sgarbossa Criteria with Modified Sgarbossa Criteria.
- Combat Application Tourniquet
 - Clarified optimal positioning.
 - Highlighted need for reassessment after movement and with hemodynamic changes. As the blood pressure rises, you may need to adjust the TQ to get hemorrhage control again.
- Delayed Sequence Intubation
 - Changed initial Ketamine induction dosing to 1.5 mg/kg.
 - Added reference to post-intubation pain management.
- Diagnostic Tools & Procedures
 - Added GCS to complete vital signs.
- Endotracheal Intubation
 - Added reference to Gastric Tube Insertion (PR).
- Intraosseous Insertion
 - Removed lidocaine for pain management.
 - Clarified guidance on site placement.
 - Added femoral site in adults for cardiac arrest.
- Intravascular Infusion Pump
 - Added link for generic infusion calculator to confirm your math.

- LUCAS Chest Compression System
 - Removed contraindication of pediatric patients so that larger adolescents could benefit from this device. Of note, the patient must still fit the device.
- Needle Chest Decompression
 - Clarified IV catheter need for pediatric patients.
- Needle Cricothyrotomy
 - Clarified pediatric inclusion criteria.
 - Updated equipment and procedure to clarify non-safety IV catheter need.
- Non-Invasive Ventilation
 - Added pediatric indications.
 - Changed goals and approach.
- Magnet Inhibition of AICD
 - Added indication of inappropriate bradycardia from pacing failure.
- Modified Valsalva Maneuver
 - Removed pediatric contraindication.
- Morgan Lens
 - Removed
- Pain Management
 - Added IV Acetaminophen.
 - Provided repeat fentanyl dose timing.
 - Provided max dosing for pediatric medications and removed 60 kg reference.
- Rapid Sequence Intubation
 - Changed initial Ketamine induction dosing to 1.5 mg/kg.
 - Changed initial Rocuronium dosing to 1.5 mg/kg.
 - Changed ongoing sedation/pain management goals to reference Pain Management and Sedation procedures.
- Sedation
 - Revised re-dosing recommendations for IV medications.
- Surgical Airway
 - Clarified pediatric contraindication.
- Tracheal Suctioning
 - Name change from Endotracheal Tube Suctioning
- Ultrasound
 - Encouraged vascular view of central arteries during pulse checks to more easily identify the presence of pulsatile flow.
- Ventilator
 - Added Weingart information about lung protective and obstructive strategies.
- Alternative Disposition – COVID-19
 - Removed

REFERENCE MATERIALS

- Vasopressor Drip Calculations
 - Added link for generic infusion calculator to double-confirm your math.

MEDICATION REFERENCE

- Acetaminophen (Tylenol)
 - Added IV Acetaminophen information.
- Adenosine
 - Added single syringe administration instructions.
- Amiodarone
 - Removed indication of symptomatic ventricular ectopy with R-on-T phenomenon, multifocal PVCs >6/min., runs of ≥5 PVCs.
- Epinephrine
 - Removed indication of bronchospasm – severe to reflect the Respiratory – Bronchospasm (M) guideline.
 - Updated infusion dosing.
- Fentanyl
 - Updated post-intubation dosing.
- Ipratropium
 - Increased dosing to max of 3 doses q 20 min.
- Ketamine
 - Updated post-intubation dosing.
- Lidocaine
 - Removed indication of EZ-IO infusion pain management.
- Midazolam
 - Updated seizure dosing to reflect the Seizure (M) guideline.
 - Updated post-intubation dosing.
- Norepinephrine
 - Updated infusion dosing.
- Oxygen
 - Added information regarding avoiding hyperoxia.
- Sodium Bicarbonate
 - Removed indication of hyperkalemia.
- Tetracaine
 - Indications adjusted to match Eye Injury (T).