Ensure adequate airway and hemodynamics

No STEMI

Review STAT ECG

STEMI

See STEMI pathway

Hold sedation for up to 20 minutes (restart if MAP < 65 despite pressor adjustment)

Patient clearly following verbal commands?

No commands but obvious seizure or myoclonus:

- Midazolam bolus 6-12 mg IV + Levetiracetam 40mg/kg or valproic acid 20mg/kg
- If not clinically controlled: Midazolam bolus at 0.2mg/kg followed by continuous infusion of 0.2mg/kg/hr. Increase at increments of 0.2mg/kg bolus + increased infusion by 0.2mg/kg/hr until controlled.
- Hold Neuromuscular Blockade (NMB) until clinically controlled.
- When clinically controlled, can lower sedation dose and reevaluate. Start transfer process.

Goal directed therapy:

- Hemodynamic: MAP goal > 80 unless refractory shock to vasopressors
- Oxygenation: SpO2 92 – 98%
- Ventilation: pH > 7.2, normocapnia unless chronic hypercapnic patient
- Temperature: core temperature monitoring (bladder and esophageal preferred over rectal monitoring), ice packs and NMB
- Glucose (90-180 mg/dL)

No STEMI

Evaluate and address underlying etiology:

- Bedside POCUS echo
- Sequential ECGs (ideally 1 hr after first)
- CT head for unwitnessed PEA/asystole or dilated/fixed pupils
- CTA chest, as appropriate
- Consider additional imaging as appropriate

Start transfer process to increased level of care

Document targeted history for report to accepting intensivist (ROSC available in Epic)

- Location of arrest
- Witnessed
- Bystander/professional AED
- Initial rhythm
- Bystander/professional CPR
- Approximate time to sustained ROSC (>30 min)

Additional Guidance:

1. Myoclonus can be difficult to distinguish from seizure without EEG but can easily be differentiated from shivering (Myoclonus has more prominent jerking and typically diffusse, shivering looks more like a tremor and starts in head/neck/chest).
2. Sedation: Propofol is preferred over versed, but versed can be used when there is significant hemodynamic compromise.
3. NMB: Patients must be receiving continuous sedation to receive NMB.
4. Maximum dose for Propofol is 60mcg/kg/min. Maximum dose for fentanyl is 100mcg/hr.
5. Hemodynamics: Norepinephrine is preferred agent, followed by vasopressin and epinephrine. Clinical judgment should take precedence (i.e., if etiology is thought to be cardiogenic shock- favor inotropes first). Move to second agent if Norepinephrine is at ~0.25mg/kg/min.
6. Fluid management: Volume is at the discretion of the providers. Favor LR for patients with acute/chronic renal disease and NS or normalol for patients with radiographic or suspected cerebral edema.
7. Temperature Management – see Post-Cardiac Arrest Targeted Temperature Management (TTM) Algorithm for selecting temperature.
8. For MMC transfers: STEMI or urgent cardiac intervention should be evaluated first by Cardiology Service for admission and all other patients should be evaluated by Neurocritical Care Service for admission.
9. Consider adding hydrocortisone at 50mg q6 hours if sepsis is etiology with refractory shock.

*This guideline was ratified by the Emergency Department faculty at Maine Medical Center in April 2022. It reflects our consensus opinion and is not necessarily applicable to all institutions. It is intended to be a reference for clinicians caring for patients and is not intended to replace providers’ clinical judgment. Produced by Teresa May DO, Doug Campbell MD.