MICHIGAN
State Protocols

Protocol Number | **Protocol Name**

Adult Treatment Protocols

Table of Contents

Altered Mental Status

The purpose of this protocol is to provide for the assessment and treatment of patients with altered mental status. Consideration should be given to treatable and reversible causes due to hypoglycemia, opioid overdose or unknown etiology.

1. Follow **General Pre-hospital Care Protocol**.
2. **If patient is not alert or vital signs are unstable:**
   a. Evaluate and maintain airway, provide oxygenation and support ventilations as needed per **Emergency Airway Procedure**.
   b. If no suspected spinal injury, place the patient in recovery position.
3. If respiratory depression is present due to suspected opioid overdose, administer Naloxone per **Naloxone Administration Procedure**.
4. Restrain patient if necessary, refer to **Patient Restraint Procedure**.
5. For a known diabetic, consider small amounts of oral glucose if unable to measure blood glucose level.

6. If the patient is demonstrating signs of hypoglycemia, measure blood glucose level.
   a. If less than 60 mg/dL, administer oral glucose.

MCA Approval of Blood Glucose Testing by specific MFR Agencies
(Provide participating agency list to BETP)

☑YES ☐NO

7. If glucose is less than 60 mg/dL, and patient is demonstrating signs of hypoglycemia:
   a. Administer IV Dextrose 25 gm.
   b. Per MCA selection, if unable to start IV, when IV Dextrose is indicated, administer Glucagon.

Glucagon 1mg IM

☐Included

☑Not Included

8. Recheck the blood glucose 10 minutes after glucose/Glucagon administration (Per MCA selection).

9. Contact medical control.

MCA Name: Macomb County
MCA Board Approval Date: April 20, 2018
MCA Implementation Date: June 01, 2018
Protocol Source/References:

Stroke or Suspected Stroke

1. Follow **General Pre-hospital Care Protocol.**
2. Utilize the Cincinnati Pre-hospital Stroke Scale (CPSS). Try to elicit the following signs:
   A. Facial droop (have patient show teeth or smile)
   B. Arm drift (have patient close eyes and hold both arms straight out for 10 seconds)
   C. Abnormal speech (have patient say "the sky is blue in Michigan")

Any deficit in the CPSS is considered positive for stroke.

3. If the patient is demonstrating signs of hypoglycemia, measure blood glucose level.
   a. If less than 60 mg/dL, administer oral glucose.

MCA Approval of Blood Glucose Testing by specific MFR Agencies
(Provide participating agency list to BETP)

◉YES ○NO

   b. Treat per **Altered Mental Status Protocol**.
4. If seizure, follow **Seizures Protocol.**
5. Document time last seen normal for patient, if known.
6. Minimize scene time, notify destination hospital as soon as possible and begin transport.

7. Initiate vascular access. (**DO NOT** delay scene time for IV.)

8. Monitor ECG. (**DO NOT** delay scene time for ECG monitoring.)

Respiratory Distress

1. Follow **General Pre-hospital Care Protocol.**
2. Allow patient a position of comfort.
3. **Determine the type of respiratory problem involved:**

CLEAR BREATH SOUNDS:

1. Possible metabolic problems, MI, pulmonary embolus, hyperventilation
2. Obtain 12-lead ECG.

ASYMMETRICAL BREATH SOUNDS:

1. If evidence of tension pneumothorax and patient unstable, consider decompression (refer to **Pleural Decompression Procedure**)

STRIDOR/UPPER AIRWAY OBSTRUCTION:

1. Complete Obstruction:
   A. Follow **Emergency Airway Procedure**.
2. Partial Obstruction: epiglottitis, foreign body, anaphylaxis:
   A. Follow **Emergency Airway Procedure**.
   B. Consider anaphylaxis (see **Anaphylaxis/Allergic Reaction Protocol**).
   C. Transport in position of comfort.

RHONCHI (SUSPECTED PNEUMONIA):

1. Sit patient upright.
2. Consider CPAP per MCA selection. Refer to **CPAP/BiPAP Procedure**.
3. Consider NS IV/IO fluid bolus up to 1 liter, wide open if tachycardia, repeat as needed.

CRACKLES (CHF/PULMONARY EDEMA):

1. Refer to the **Pulmonary Edema/CHF** protocol in the adult cardiac protocols.

WHEEZING, DIMINISHED BREATH SOUNDS (ASTHMA, COPD):

1. Assist the patient in using their own Albuterol Inhaler, if available
2. Administer Albuterol if available. Refer to **Nebulized Bronchodilators Procedure**.
3. Consider CPAP per MCA selection. Refer to **CPAP/BiPAP Procedure**.
4. Administer Epinephrine auto-injector (0.3 mg) in patients with impending respiratory failure unable to tolerate nebulizer therapy.
5. Administer Bronchodilator per **Nebulized Bronchodilators Procedure**.

6. Administer Epinephrine 1 mg/ml, 0.3 mg (0.3 ml) IM in patients with impending respiratory failure unable to tolerate nebulizer therapy.
7. Per MCA Selection, if a second nebulized treatment is needed, administer Prednisone **OR** Methylprednisolone.

Medication Options:

Prednisone
50 mg tablet PO

☒YES ☐NO

Methylprednisolone
125 mg IV

☒YES ☐NO

8. For MCA with both selected, Prednisone PO is the preferred medication. Methylprednisolone is secondary and reserved for when a patient can't take a PO medication.
9. Consider CPAP/BiPAP (if available) per **CPAP/BiPAP Procedure**.

Asthma:

10. Consider repeat Epinephrine 1mg/ml, 0.3 mg (0.3 ml) IM in patients with impending respiratory failure unable to tolerate nebulizer therapy.
11. Consider Magnesium Sulfate 2gms slowly IV in refractory Status Asthmaticus. Administration of Magnesium Sulfate is best accomplished by adding Magnesium Sulfate 2gm to 100 to 250 ml of NS and infusing over approximately 10 minutes.

Sepsis

It is the purpose of this policy to recognize and treat sepsis early to promote optimal care and survival of patients who may be septic. This protocol applies to patients 14 years and above with a clinical suspicion of systemic infection who have 2 or more of the inclusion criteria. These patients are defined as meeting criteria for suspicion of sepsis and should be evaluated and treated per this protocol.

INCLUSION CRITERIA

1. Clinical suspicion of systemic infection, and two or more of the following:
   A. Hyperthermia temp >38^{o} C (100.4 F)
   B. Hypothermia temp<36^{o} C (96.8 F)
   C. Heart rate >90bpm
   D. Respiratory rate <10 or >20 per minute
   E. SBP <90 mmHg or evidence of hypoperfusion

Treatment

1. Follow **General Pre-Hospital Care** protocol.
2. Place patient in supine position.
3. Start large bore IV catheter.
4. Start second large bore IV catheter, if time permits.
5. Place on cardiac monitor and treat rhythm according to appropriate protocol.
6. Place on continuous pulse oximetry.
7. Measure blood glucose.
8. If the patient meets inclusion criteria, administer a NS IV/IO fluid bolus up to 1 liter, wide open. Reassess the patient, repeat boluses to a maximum of 2 L NS as long as vital sign abnormalities persist.
9. If hypotension persists, refer to **Shock Protocol**.
10. **(Optional)** Measure ETCO2 level. If CO2 < 25, report level to the receiving facility as soon as possible.

Excited Delirium

Indications: Patient who is an imminent physical threat to personnel and/or themselves.

Treatment

1. Ensure ALS response
2. Follow **General Pre-hospital Care Protocol**
3. Coordinate with on scene law enforcement before any physical patient contact. Refer to **Patient Restraint Procedure.**
4. Obtain history when possible and perform a visual patient assessment looking for symptoms of ExDS. If an alternate cause of the behavior is likely, transition to the **Altered Mental Status Protocol**.

5. If the patient remains combative, following restraint by law enforcement:
    a. ~~A~~dminister **Midazolam 10 mg IM or 5 mg IN**

6. Obtain temperature
    b. If hyperthermic, provide cooling – ice packs to neck, axilla and groin; fluids to skin
7. Provide fluid bolus of up to 2 L of NS
8. Restrain patient per the **Patient Restraint Procedure** in anticipation of the sedation wearing off.
9. After 5 minutes, if the patient remains combative administer Ketamine 4mg/kg IM.
10. Evaluate for other causes of Altered Mental Status including: **A**lcohol, **E**pilepsy/Seizure, **I**nsulin, **O**verdose, **U**remia/Under dose, **C**ardiac, **H**ypoxia, **E**nvironment, **S**troke, **S**epsis, **T**rauma, **I**ngestion, **P**sych, **P**henothiazines, **S**alicylates
11. Monitor EKG, consider 12-lead if any evidence of hyperkalemia (peaked T waves, prolonged PR, widened QRS)
12. Monitor capnography, if possible
13. Additional sedation as needed, per **Patient Sedation Procedure.**