EMS Services

PRE-HOSPITAL CARE

MEDICAL CONTROL

PROTOCOLS AND PROCEDURES
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### SHOCK GUIDELINES

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<td><strong>ANAPHYLACTIC SHOCK</strong></td>
<td>• Warm, burning feeling &lt;br&gt;• Itching &lt;br&gt;• Rhinorrhea &lt;br&gt;• Hoarseness / Stridor &lt;br&gt;• Wheezing &lt;br&gt;• Shock &lt;br&gt;• Severe Respiratory Distress &lt;br&gt;• Altered LOC / Coma &lt;br&gt;• Cyanosis &lt;br&gt;• Pulmonary Edema &lt;br&gt;• Facial / Airway Edema &lt;br&gt;• Urticaria / Hives &lt;br&gt;• Dyspnea</td>
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<td><strong>CARDIOGENIC SHOCK</strong></td>
<td>• Cool, clammy skin &lt;br&gt;• Weakness &lt;br&gt;• Difficulty breathing &lt;br&gt;• Hypotension</td>
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<td><strong>HYPOVOLEMIC SHOCK</strong></td>
<td>• Tachycardia &lt;br&gt;• Weak, thready pulse &lt;br&gt;• Hypotension with Narrow Pulse Pressure &lt;br&gt;• Hypotension or falling systolic BP &lt;br&gt;• Pale skin &lt;br&gt;• Clammy or dry skin &lt;br&gt;• Dyspnea &lt;br&gt;• Altered LOC / Coma &lt;br&gt;• Decreased urine output &lt;br&gt;• Restlessness &lt;br&gt;• Irritability</td>
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<td><strong>NEUROGENIC SHOCK</strong></td>
<td>• Evidence of Trauma (lacerations, bruising, swelling, deformity) &lt;br&gt;• Normal or Bradycardic HR &lt;br&gt;• Hypotension with a Narrow Pulse Pressure &lt;br&gt;• Compromise in neurological function &lt;br&gt;• Normal or flush skin color</td>
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<tr>
<td><strong>SEPTIC SHOCK</strong></td>
<td>• Tachycardia &lt;br&gt;• Hypovolemia &lt;br&gt;• Hypotension with a Narrow Pulse Pressure &lt;br&gt;• Dehydration &lt;br&gt;• Altered LOC / Coma &lt;br&gt;• Dyspnea &lt;br&gt;• Febrile / Hx of UTI &lt;br&gt;• Signs of Infection</td>
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CIRCULATION / SHOCK

SHOCK

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<tr>
<th>History</th>
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<th>Differential Diagnosis</th>
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<td>• Blood loss - vaginal or gastrointestinal bleeding, AAA, ectopic</td>
<td>• Restlessness, confusion</td>
<td>• Shock / Vasovagal Syncope</td>
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<td>• Fluid loss - vomiting, diarrhea, fever</td>
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<td>• Cardiac ischemia (MI, CHF)</td>
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<td>• Medications</td>
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<td>• Pregnancy</td>
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<td>• Tarry stools</td>
<td>• Dysrhythmias</td>
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<td>• Pulmonary embolus</td>
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<td>• Tension pneumothorax</td>
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<td></td>
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<td>• Medication effect / overdose</td>
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<td></td>
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<td>• Physiologic (pregnancy)</td>
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GENERAL CONSIDERATIONS:

• Exam: Mental Status, Skin, Heart, Lungs, Abdomen, Back, Extremities, Neuro
• Hypotension can be defined as a systolic blood pressure of less than 100.
• Consider all possible causes of shock and treat per appropriate protocol.

Anaphylactic Shock

• Routine assessment and supportive care of the patient’s respiratory and cardiovascular systems is required.
• Do not confuse epinephrine 1:1000 and 1:10,000.
• Treat patients with a history of anaphylaxis aggressively.
• Use caution when using epinephrine for patients over fifty years of age.
• Call Med. Control and use caution when using epinephrine for patients with a heart rate greater than 150 bpm.
• When possible, remove any stingers.
• Consider glucagon for elderly, pregnant and ASHD.

Cardiogenic Shock

• Circulatory failure is due to inadequate cardiac function.
• Be aware of patients with congenital defects.
• Cardiogenic shock exists in the pre-hospital setting when an MI is suspected and there is no specific indication of volume related shock.
• Pulmonary Edema or CHF may cause cardiogenic shock (pediatrics with congenital heart defects may rarely have pulmonary edema).
• Marked, symptomatic tachycardia and bradycardia will also cause cardiogenic shock.

Hypovolemic Shock

• Patients suffering from hemorrhagic shock secondary to trauma, should be treated under the Trauma Criteria, and should be rapidly transported to the nearest appropriate facility.
• Initiate a second large bore IV for all patients in hypovolemic shock.

Neurogenic Shock

• Cushings Reflex is a sign of increased ICP. Cushings Reflex is a high blood pressure, low pulse rate, and irregular respirations.

Septic Shock

• Hypotensive patients not in distress do not necessarily require aggressive intervention.
• Be alert for septic shock in the elderly.
UNIVERSAL PATIENT CARE PROTOCOL

IV PROTOCOL

Apply Cardiac Monitor and Assess Vitals

Mild

- Rash, itching, NO difficulty breathing or throat tightening, BP – normal limits

Treatment

- Oxygen per cannula
- Benadryl 25-50 mg IV or IM
- Consider Epi if history of severe reaction

Moderate

- Rash, itching, Wheezing, Throat tightening, Swelling, face lips, BP – normal limits

Treatment

- Oxygen per NRB
- Assist with Epi-pen
- *For patients over 50 yrs. in category mild, moderate or severe, may give Glucagon 1 mg IV/IM before EPI
- Epinephrine 1:1000 0.3-0.5 mL subcut.
- Benadryl 25-50 mg IV or IM
- Consider Albuterol aerosol tx.

Severe

- Rash, itching, Airway compromise Wheezing, Swelling, Hypotension

Treatment

- Oxygen per NRB
- Assist with Epi-pen
- *For patients over 50 yrs. in category mild, moderate or severe, may give Glucagon 1 mg IV/IM before EPI
- Epinephrine 1:1000 0.3-0.5 mL subcut.
- Benadryl 25-50 mg IV or IM
- IV with NS-Bolus 200-400 mL
- Albuterol Aerosol watch airway & breathing
- Consider repeat Epi after 5 min. if no improvement

(Adult Any Age)

Impending Arrest

- Severe Hypotension
- No response to Epi
- Decreased level of consciousness
- Airway compromise

Treatment

- Epinephrine 1:10,000 0.3-0.5mg IVP
- IV NS wide open
- Control airway via BVM
- Follow ACLS

CONTACT MEDICAL CONTROL

TRANSPORT

*For patients over 50 yrs. in category mild, moderate or severe, may give Glucagon 1 mg IV/IM before EPI

Consider Albuterol aerosol tx.
**CIRCULATION / SHOCK**

**CARDIOGENIC SHOCK**

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**UNIVERSAL PATIENT CARE PROTOCOL**

- **Airway Protocol** – Use NRB
- **Monitor Lung Sounds for Fluid Overload**

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**IV PROTOCOL**

- **Apply Cardiac Monitor and Assess Vitals**

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**Pale, cool, clammy, hypotensive**
- Acute MI in progress
- Pulmonary Edema, CHF

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**Dopamine (800 mg in 500 mL in NS D5W)**
- 2 - 20 mcg/kg/min IV
- Titrate for increase BP greater than 90 systolic

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**Monitor and Reassess BP**

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**CONTACT MEDICAL CONTROL**

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**TRANSPORT**
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**UNIVERSAL PATIENT CARE PROTOCOL**

- **B**: EMT-B
- **I**: EMT-I
- **P**: EMT-P
- **M**: MED CONTROL
Airway Protocol – Use NRB
Monitor Lung Sounds for Fluid Overload

IV PROTOCOL
Apply Cardiac Monitor and Assess Vitals

NS IV BOLUS 200 – 400 mL
(If BP less than 100 Systolic)
Check Glucose Level, treat if needed
Monitor and Reassess BP
Additional bolus if needed
Treatment per Appropriate Trauma Protocol

Consider Spinal Immobilization, if necessary
NS IV BOLUS 200 – 400 mL
(If BP less than 100 Systolic)
Check Glucose Level, treat if needed
BP less than 100 Systolic
NS IV BOLUS 200 – 400 mL
(If BP less than 100 Systolic)
Monitor and Reassess BP
Dopamine (800 mg in 500 mL NS or D5W)
2 - 20 mcg/kg/min IV
CONTACT MEDICAL CONTROL
TRANSPORT

Septic Shock
NS IV BOLUS 200 – 400 mL
(If BP less than 100 Systolic)
Check Glucose Level, treat if needed
BP less than 100 Systolic
NS IV BOLUS 200 – 400 mL
(If BP less than 100 Systolic)