

Medical Control Guideline: PERFUSION STATUS

PRINCIPLES:

1. Perfusion status is determined by a combination of parameters that includes heart rate, blood pressure, tissue color and mentation. No one parameter alone can be used to determine perfusion status.
2. Adequate perfusion is defined as adequate circulation of blood through organs and tissues, manifested by normal pulse, tissue color, level of consciousness and blood pressure.
3. Poor perfusion is defined as inadequate circulation of blood through organs and tissues manifested by vital sign abnormalities and/or signs and symptoms of organ dysfunction.
4. Patients with poor perfusion that are unresponsive to initial fluid resuscitation are in shock.

GUIDELINES:

1. EMS providers should evaluate **adult patients** for the following signs and use clinical judgment to determine poor perfusion status:
 - a. Bradycardia, tachycardia and/or poor pulse quality (weak/thready)
 - b. Altered mental status (including anxiety, restlessness, lethargy, combative behavior)
 - c. Adult systolic blood pressure (SBP) < 90mmHg
 - d. Delayed capillary refill time (> 2 seconds) and/or changes in tissue color including pallor, cyanosis, or mottling
2. For **pediatric patients**, EMS providers should determine a patient to have poor perfusion if they exhibit altered mental status (including lethargy or agitation) with one or more of the following:
 - a. Mottling, cyanosis, or flushed redness
 - b. Bradycardia or tachycardia per *MCG 1309*
 - c. Hypotension relative to size per *MCG 1309*
 - d. Delayed capillary refill >2 seconds or flash capillary refill <1 second