

HEALTHEAST MEDICAL TRANSPORTATION
MEDICAL OPERATIONS MANUAL

4D SUBMERSION TRAUMA

PATIENT CARE GOALS

- Identify and treat potential life threats and maintain adequate airway, ventilation, oxygenation, and perfusion in the drowning victim.
- Limit on-scene time to 10 minutes or less for all serious or critical patients unless safety, access, extrication, or immediate life-saving interventions require more time.
- Provide rapid and effective immobilization of spinal and other orthopedic injuries.
- Continue reassessments and treatment procedures during patient transport.

EMT

1. Assess the patient and provide initial care, including oxygen and vascular assess, per **1B General Assessment and Care**.¹

2. Continue treatment as follows, according to the type of submersion trauma:

For drowning and near drowning incidents:

- a. If the patient is in cardiac arrest, treat the arrest per **5B Hypothermia**.²
- b. Perform full spinal immobilization per **7L Selective Spinal Precautions**.
- c. If there is no suspected spinal injury, place the patient on their left side to allow water, vomitus and secretions to drain from the upper airway.

For SCUBA related incidents:

- a. Perform full spinal immobilization per **7L Selective Spinal Precautions**.
- b. If there is no suspected spinal injury, place the patient in a head down, left side lateral position to allow water, vomitus and secretions to drain from the upper airway.
- c. Collect all diving gear, gauges and computers and transport to the hospital with the patient.
- d. Transport to HCMC hospital with a hyperbaric chamber.

PARAMEDIC

3. If indicated, secure the patient's airway with an ET tube as soon as possible.
4. Consider CPAP for the near drowning patient. **CPAP is contraindicated in SCUBA related incidents**.³
5. Check the patient's temperature rectally, if possible.

DOCUMENTATION KEY POINTS

- Suspected duration of submersion.
- Suspicion for spinal injury.
- Initial and ongoing assessments, monitoring, interventions, patient response, and

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complications (if any) encountered.

NOTES

- ¹ Request assistance from local water rescue resources if the patient is still in the water. Do not attempt to rescue the patient.
- ² When delivering ventilations and chest compressions assume the patient will vomit. Be prepared to suction and secure the patient's airway as soon as possible. Do not attempt manual foreign body airway obstruction removal (abdominal thrusts).
- ³ Pneumothorax and/or pneumomediastinum are associated with pulmonary barotrauma from rapid ascent and can be worsened with positive pressure ventilation.