HEAT ILLNESS
ALWAYS USE STANDARD PRECAUTIONS

INDICATION
- Exposure to unusually high temperatures, humidity, or vigorous exercise resulting in heat cramps, heat exhaustion, or heat stroke

CRITICAL INFORMATION
- The following categories of heat illness should be seen as a continuum rather than three distinct categories. Treat heat illness aggressively, particularly in at-risk populations: elderly, pediatric and patient taking certain medication such as vasoconstrictors, ADHD (i.e., Adderall or Ritalin), beta blockers, diuretics, antidepressants or antipsychotics.
- Heat Cramps:
  - Severe painful cramping of fatigued muscles in the setting of heat stress, often following fluid replacement with hypotonic fluids
- Heat Exhaustion:
  - Systemic symptoms, often vague and nonspecific, precipitated by significant hypovolemia under conditions of heat stress, and characterized by any of the following: weakness, fatigue, nausea, vomiting, headache, impaired judgment, vertigo, syncope, tachycardia, hypotension and dizziness, often orthostatic. Mental status is normal.
- Heat Stroke:
  - Catastrophic life-threatening failure of homeostatic thermoregulatory mechanisms, manifested by extreme elevation of body temperature & severe CNS dysfunction, which may present as disorientation, delirium, seizure or coma.

TREATMENT
- Move to a cool environment and remove clothing
- Rapid cooling measures:
  - Apply wet towels and promote cooling by fanning
  - Apply cold packs to axilla and groin
- ALS RMC
- Replenish electrolytes by mouth or IV NS 1-liter bolus
- Transport all patients rapidly, even if in cardiac arrest
  - Treat ALOC, seizures or shock per appropriate policy
COLD INDUCED INJURY
ALWAYS USE STANDARD PRECAUTIONS

Suspected cold induced injury
Indication: exposure to cold or wet environment

Move patient to warm, protected area ASAP

Signs of life

Start warming measures; Handle gently

If ALOC, obtain rectal temp

Begin transport

During warming measures, auscultate HR for 1 minute & ventilate for 3 minutes; assess electrical activity

*Asystole

Begin CPR

If rectal temp <95 F

If rectal temp > 95 F

If ALOC, obtain rectal temp

If rectal temp ≥ one hour, obtain rectal temp

If submersion ≥ one hour

Determination of Death

Follow Adult Cardiac Arrest, GPC

If submersion ≤ one hour, obtain rectal temp

Warming measures include:
- Remove all wet clothes
- Cover entire body with warm blankets
- Hot packs
- Warm IV fluids

Symptoms can include:
- Mild- shivering, increased RR & HR
- Moderate/ Severe- ALOC, slurred speech, unsteady gait, slow HR & RR, low BP, (ventricular) dysrhythmias

Special Considerations:
- Subtler presentations exist in elderly, newborns, chronically ill and alcoholics

*Withhold ACLS meds if temp <86 F
ENVENOMATION
ALWAYS USE STANDARD PRECAUTIONS

INDICATION
- Unidentified and/or identified poisonous snake bite (physical evidence: puncture wound or symptoms of envenomation: local pain, swelling or numbness)

CRITICAL INFORMATION
- Identify or provide description of snake if seen

TREATMENT
- ALS RMC
- Remove rings, bracelets, or other constricting items from all extremities
- Limit patient’s movement as much as possible
- Mark extent of affected area, noting time on skin
- Immobilize extremity in a position of comfort and monitor distal pulses
- Consider pain management.
- If exhibiting signs of allergic reaction or shock, refer to Allergic Reaction Policy
- Expedite transport

SPECIAL CONSIDERATION
- Contact hospital early to allow preparation for treatment
- Do not apply tourniquets, incise skin, apply ice, or suction

DOCUMENTATION- ESSENTIAL ELEMENTS
- Estimated time of snake bite

RELATED POLICIES/ PROCEDURES
- Allergic Reactions/ Anaphylaxis M 3
- Adult Pain Management ATG 2
BURNS
ALWAYS USE STANDARD PRECAUTIONS

INDICATION
▪ Damage to the skin caused by contact with caustic material, electricity, or fire. Any burn associated with respiratory involvement

CRITICAL INFORMATION
▪ Consider early intubation for severe facial burns or
▪ Perform frequent airway assessments and consider early intubation for inhalation injury, i.e., facial or chest burns, singed nasal hairs, soot/blisters in oropharynx.
▪ Burns with trauma mechanism need to be transported per the Marin County Trauma Triage Tool

TREATMENT
▪ Remove patient to safe area and stop the burning process
  ▪ Remove contact with the agent, unless adhered to the skin
  ▪ Brush away any dry chemicals
  ▪ Flush with cool water to stop the burning process or to decontaminate
▪ ALS RMC
  ▪ High-flow oxygen via NRB for burns involving the chest and for patients with evidence/suspicion of inhalation injury (facial burn, singed nasal hair, soot/blisters in the oropharynx, etc.)
  ▪ Re-evaluate airway frequently
  ▪ If wheezing, consider bronchodilator therapy- Albuterol 5 mg in 6 ml NS HHN
▪ Expose affected area and apply clean dry sheet
▪ Remove all clothing/ jewelry
▪ Keep patient warm to avoid hypothermia
▪ IV NS TKO
▪ Pain management as soon as possible
▪ Transport according to Destination Guidelines

DOCUMENTATION- ESSENTIAL ELEMENTS
▪ Estimated body surface area percentage affected

RELATED POLICIES/ PROCEDURES
▪ Adult Pain Management ATG 2
▪ Destination Guidelines GPC 4
▪ Marin County Trauma Triage Tool, 4613a
DROWNING/ NEAR DROWNING
ALWAYS USE STANDARD PRECAUTIONS

INDICATION
- Drowning: loss of consciousness in water, now in full arrest
- Near Drowning: loss of consciousness in water, not in full arrest

TREATMENT
- ALS RMC
- Ensure patent airway
- Protect cervical spine if neck injury suspected
- High flow oxygen. Prepare to support ventilations with appropriate airway adjuncts (CPAP if available)
- Anticipate vomiting: take precautions against aspiration and be prepared to suction
- Remove wet clothing
- Keep patient warm and dry

SPECIAL CONSIDERATION
- If patient presents in full arrest and is normothermic, treat as cardiac arrest
- If patient is hypothermic (<95°F), refer to Cold Induced Injury policy

RELATED POLICIES/ PROCEDURES
- Spinal Immobilization GPC 13
- Cold Induced Injury E 2
- CPAP ALS PR 13
- Determination of Death BLS 5