Foundations Frameworks

**Approach to Hypothermic Resuscitation**

**Core temp $\leq 32^\circ$C**

- **Cold and Alive**
  - **Stable(ish) Hypothermia**
    - **Signs of Stability** (likely won’t need ECMO)
      1. Temp $\geq 28^\circ$C
      2. Stable cardiac features: bradycardia, normotension, atrial fibrillation
    - **Treatment:**
      - Active internal/external warming: warm IV fluids, Bair Hugger, bladder lavage
      - Limit movement
      - Obtain EKG

- **Unstable Hypothermia**
  - **Signs of Instability** (may benefit from ECMO)
    1. Temp $\leq 28^\circ$C
    2. Unstable cardiac features: ventricular arrhythmias, severe hypotension
  - *****High risk of cardiac arrest*****
  - **Treatment:**
    - Airway management, active internal/external rewarming, vasopressors as needed
    - Limit movement
    - Consider transfer to ECMO center

- **Cold and Dead**
  - **Salvageable**
    - Patient may be salvageable if hypothermia preceded death (i.e., hypothermia was the likely cause of arrest)
      - Start high quality CPR
      - Start ECMO if available
      - Arrange transfer to ECMO center if ECMO not available, continue CPR/rewarming
      - If ROSC achieved, still transfer (may develop pulmonary edema and need ECMO)
    - **Electricity/Epi?**
      - Reasonable to attempt shocks (1 or more)
      - Mixed data on Epi use, AHA says to consider administration of vasopressors
      - Resuscitate until temp $> 32-35^\circ$C
  - **Unsalvageable**
    - Hypothermia not cause of initial arrest
    - $K > 12$
    - Chest frozen solid

If patient likely died prior to cooling, there is very little chance of survival