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A New Protocol for First Responders for Hypothermic Pulselessness in Pediatric Patients

Accidental Hypothermia

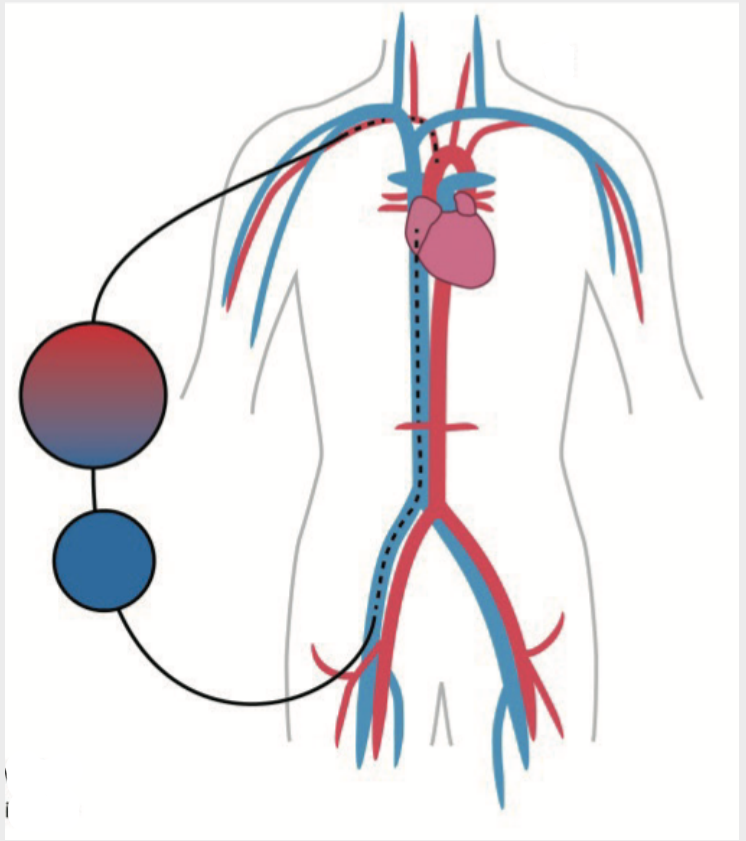
- Core temperature <35° C
- Mild hypothermia
- Moderate hypothermia
- Severe hypothermia

Hypothermic Cardiac Arrest

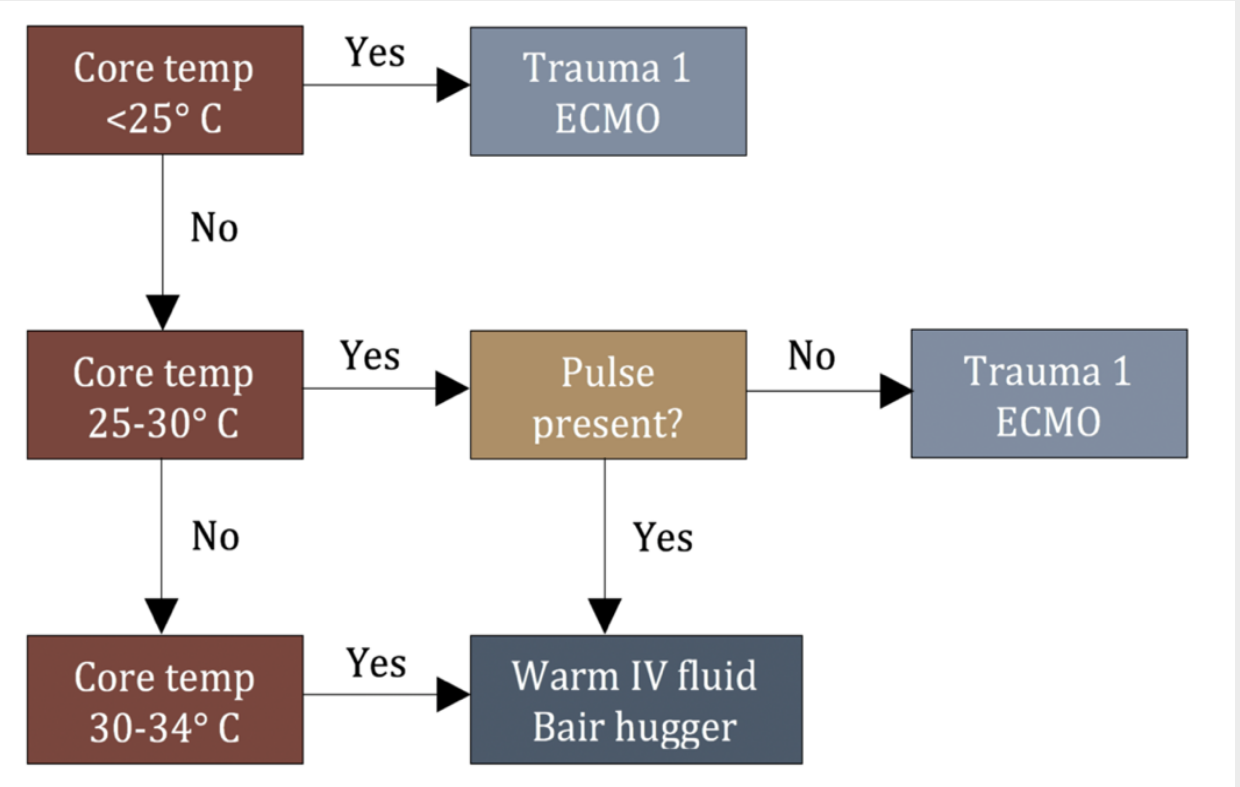
- Definition
- Causes
- Survival

ECMO Use in Hypothermic Arrests

- Effectiveness
- Advantages
- Survival rates
- Outcomes



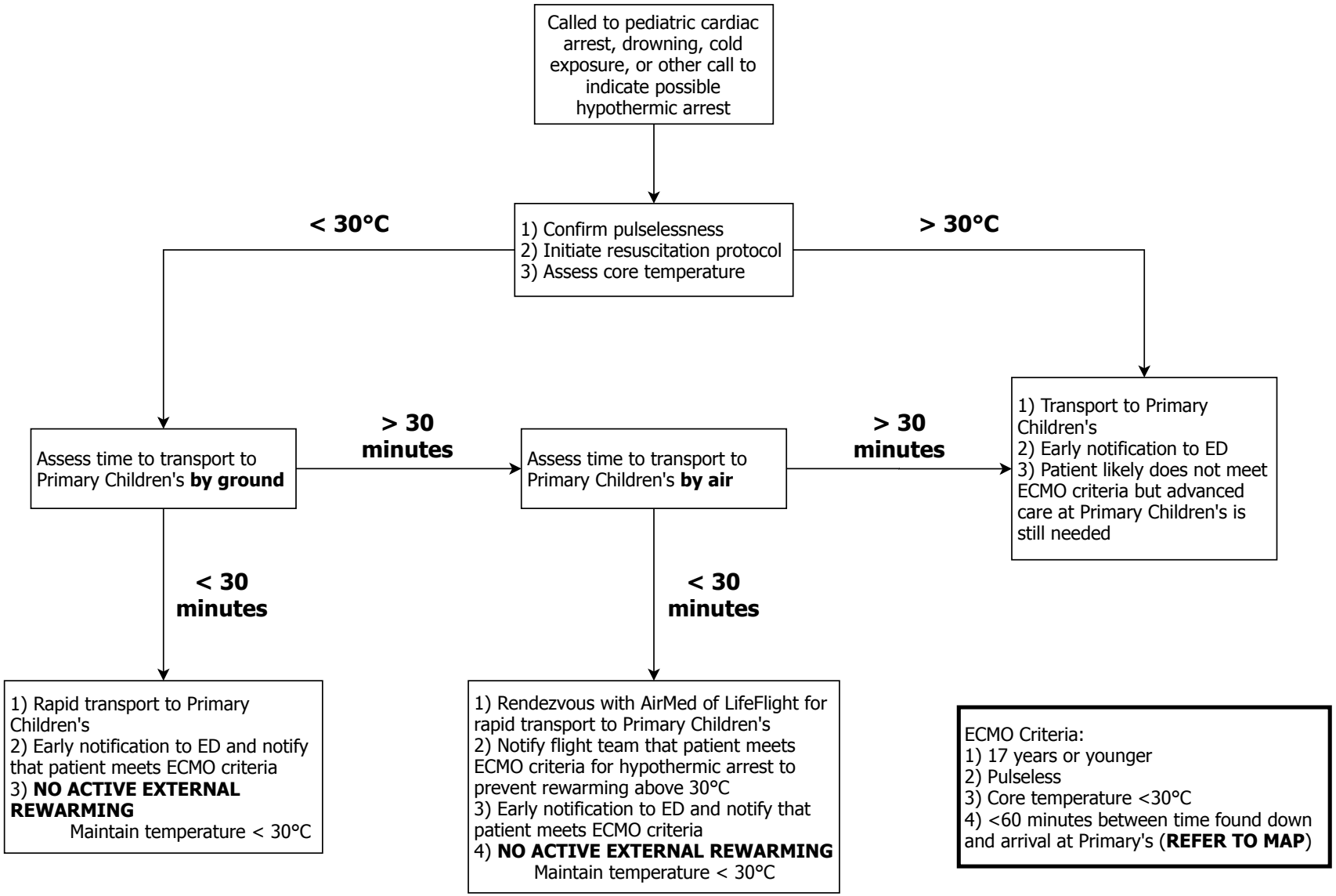
Primary Children's ECMO Criteria

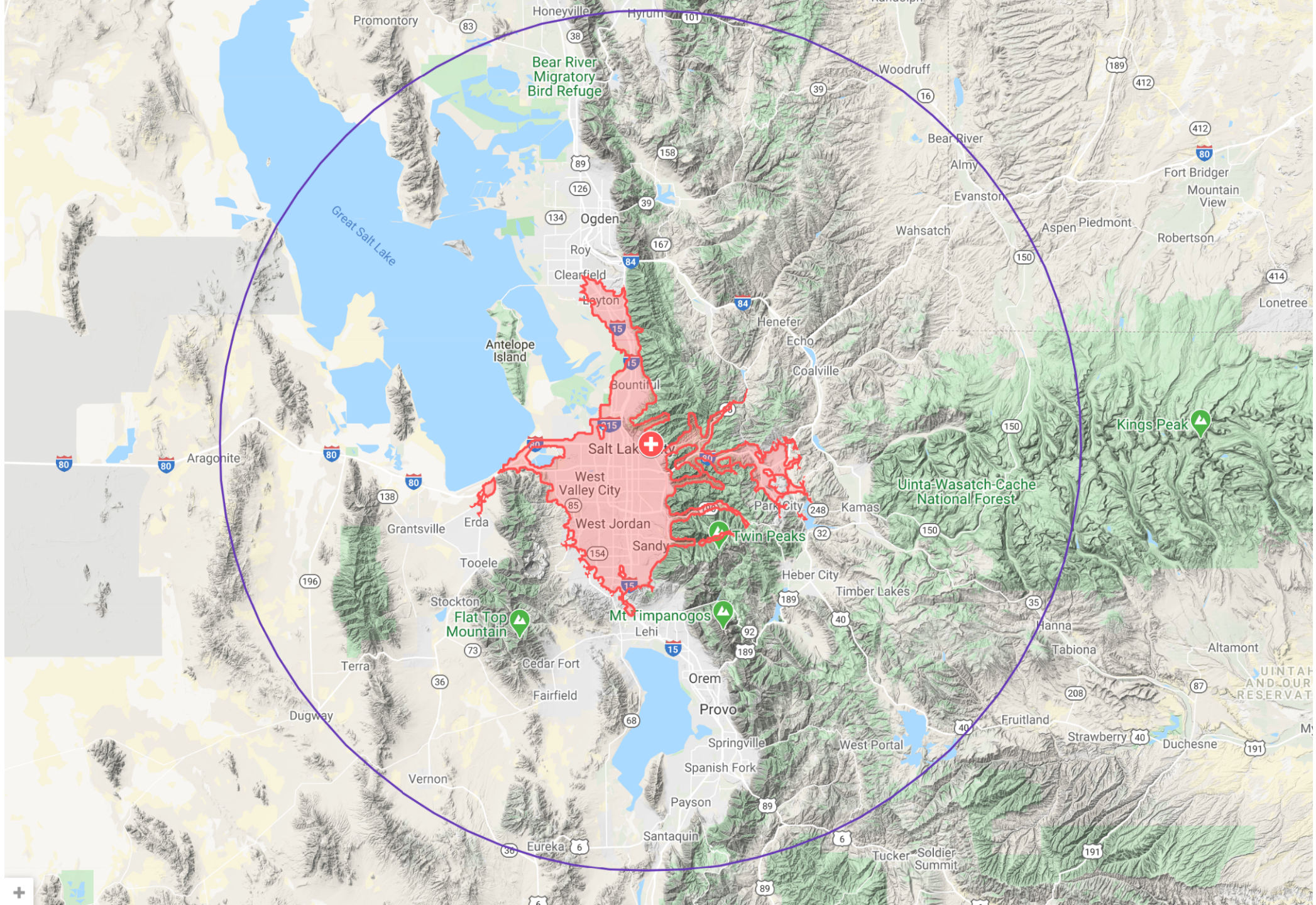


New Protocol Development

- No active rewarming under 30° C (86° F)
- Rapid transport to Primary Children's
- Otherwise normal hypothermic arrest treatment

Pulseless Hypothermic Pediatric ECMO Protocol




Promontory
Honeyville
Hyrum
Bear River Migratory Bird Refuge
Woodruff
Bear River
Almy
Evanston
Fort Bridger
Mountain View
Aspen
Piedmont
Robertson
Wahsatch
Great Salt Lake
Ogden
Roy
Clearfield
Layton
Lonetree
Henefer
Echo
Coalville
Antelope Island
Bountiful
Kings Peak
Salt Lake City
West Valley City
Aragonite
Uinta-Wasatch-Cache National Forest
Park City
Kamas
Grantsville
Erda
West Jordan
Sandy
Twin Peaks
Tooele
Heber City
Timber Lakes
Stockton
Flat Top Mountain
Mt Timpanogos
Lehi
Hanna
Tabiona
Altamont
Terra
Cedar Fort
Orem
Fairfield
Provo
Dugway
Fruitland
Strawberry
Duchesne
Springville
West Portal
Spanish Fork
Vernon
Payson
Santaquin
Eureka
Tucker
Soldier Summit

Keys to Success

- Early recognition of severe hypothermia in a prehospital setting
- Early communication with and rapid transport to a pediatric facility with ECMO
- Early notification of air medical agency
- **ECMO can be established in pulseless pediatric patients with a core temperature of less than 30 °C**

Implementation

- State protocols released March 4, 2020
- Trainings at Park City Fire District and Mountain West Ambulance
- Assessments of self- and team-efficacy

Results

- Research is ongoing
- Target population is low frequency
- Education of EMS providers and assessment of self- and team-efficacy