Absolute Contraindications for ECMO

- Prolonged ventilation for > 10 days or with high airway pressure and/or high FiO_2 > 7 days
- Established multi-system organ failure
- Contraindication to anticoagulation
- Refusal to receive blood products
- Ungrafted severe burns
- Quadriplegia
- Bone marrow transplant recipients
- Severe immunosuppressed state (ANC < 400/mm^3)

Risk of Rewarming

- Rewarming of the trunk should be undertaken **PRIOR** to the extremities in order to minimize the risk of core temperature afterdrop, hypotension, and academia due to arterial vasodilatation.
    - Atropine does **not** work on hypothermic bradycardia.
    - Epinephrine may induce potentially lethal cardiac arrhythmias.
    - No evidence exists to support the use of antiarrhythmic medications.
- When using forced air warming systems, leave the extremities uncovered initially to minimize risk of afterdrop and to allow for proper heat transfer.
- Due to decreased sensation and reduced blood blow, body surface burns may result when using heading pads to rewarm a hypothermic patient.

Reference

- Brown, Douglas J.A., et al. "Accidental Hypothermia." *The New England Journal of Medicine* 367.20 (2012): 1930-1938.
- Herbert, Mel and Doug Brown. "Accidental Hypothermia - Part 1." 15 January 2014. *Emergency Medicine Reviews and Perspectives*
- Kerber, Richard E., et al. "Guidelines for Cardiopulmonary Resuscitation and Emergency Cardiac Care." *Journal of the American Medical Association* 368.16 (1992): 2171-2183.
- Lanken, Paul N., et al. *The Intensive Care Unit Manual*. Orlando: Elsevier, 2000.
- Mechem, C Crawford and Ken Zafren. "Accidental Hypothermia in Adults." October 2014. *UpToDate.*

Quality Measures

- ECLS outcome measures
    - Survival to decannulation
    - Survival to discharge
    - CPC score at discharge
- ECLS process measures
    - ED arrival to ECLS consult
    - ED arrival to cannulation
    - Total number of consults for this indication
        - Rate of approval
        - Rate of denial by reason
- LOS for inpatients with accidental hypothermia
- Mortality rate for inpatients with accidental hypothermia

Authors

- Colin Kaido, MD
- Erin Reichert, PharmD

Guideline Approved

April 30, 2015. First edition