

| Adult Veno-venous (V-V) Extracorporeal Membrane Oxygenation (ECMO) Eligibility Criteria Minnesota ECMO Consortium | |
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| <p>Note: these criteria allow the ECMO centers in the state to uniformly and equitably offer VV ECMO to those who may benefit the most. The adult ECMO consultants at (in alphabetical order) Abbott Northwestern Hospital, Hennepin County Medical Center, Mayo Clinic, and University of Minnesota Medical Center are available for telephone consultation or questions about patient management or eligibility criteria interpretation. We welcome timely communication from our colleagues at referring centers regarding a potential candidate for ECMO (e.g. an adult with severe ARDS and a concerning trajectory but not yet unsupportable or unsafe for transport).</p> | |
| Inclusion criteria* | |
| | <p>Severe ARDS</p> <ul style="list-style-type: none"> Does the patient fulfill oxygenation and/or ventilation criteria? <ul style="list-style-type: none"> ✦ On $\text{FIO}_2 \geq 80\%$, $\text{PEEP} \geq 10$, and $\text{VT} \leq 6 \text{ mL/kg PBW}$ ✦ $\text{PaO}_2/\text{FIO}_2 < 50$ for more than 3 hours ✦ $\text{PaO}_2/\text{FIO}_2 < 80$ for more than 6 hours ✦ $\text{pH} < 7.25$, $\text{PaCO}_2 > 60 \text{ mm Hg}$ with $\text{RR} > 35$ for more than 6 hours Has mechanical ventilation been optimized, including trial of neuromuscular blockade and prone position? <p>Other indications such as severe hypercarbic respiratory failure (e.g. status asthmaticus) or severe air leak syndrome considered on case-by-case basis</p> |
| Exclusion criteria** | |
| | <ul style="list-style-type: none"> > 10 days of high intensity (potentially injurious) mechanical ventilation Unacceptable risk of hemorrhage with therapeutic anticoagulation Age > 65 $\text{BMI} > 45 \text{ kg/m}^2$ Pre-ECMO cardiac arrest or suspected severe hypoxic-ischemic brain injury Marker(s) of poor short-term prognosis in relation to underlying disease (e.g. multisystem organ failure with fulminant shock) Premorbid conditions that would significantly limit functional recovery or have associated life expectancy of < 5 years, examples include: <ul style="list-style-type: none"> ○ Malignancy ○ End stage renal disease receiving chronic hemodialysis ○ Hepatic cirrhosis ○ Neurodegenerative diseases (e.g. ALS, Alzheimer's dementia) ○ If COVID+, chronic respiratory disease and/or chronic immunocompromise |
| <p>*Adapted from the EOLIA trial²⁰ and Bullen et al²⁵</p> <p>**For evidence of the prognostic implications of exclusion criteria in the setting of COVID-19, see Barbaro et al¹¹</p> | |