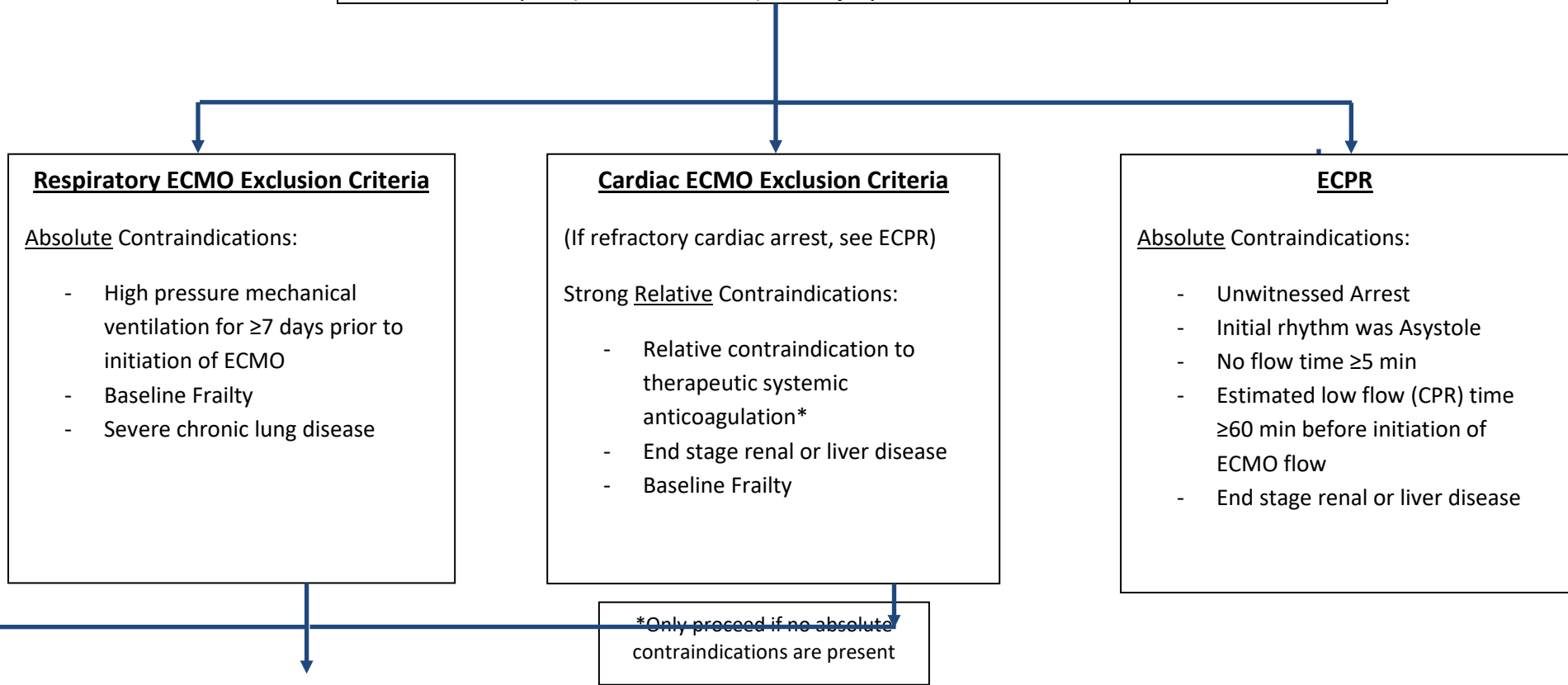


Guide for Adult Extracorporeal Life Support (ECLS) and ECMO Patient Selection during COVID-19 Surge

Content Applies To: Rochester

Scope: Physicians, Nurse Practitioners and Physician Assistants, Perfusionists, ECMO Primers and ECMO Specialists

General ECMO Absolute Contraindications	Comments
<ul style="list-style-type: none"> - Pre-existent Terminal diagnosis (life expectancy <6 weeks) - End-stage (irreversible) Heart/Lung disease AND <u>not</u> likely a transplant candidate or VAD candidate - Catastrophic (non-recoverable) CNS injury 	These patients are highly unlikely to benefit from ECMO



*Relative contraindications to therapeutic systemic anticoagulation include: intracranial hemorrhage, ischemic stroke within 2 weeks, large untreated esophageal varices, intracranial malignancy, acute trauma with active hemorrhage.



Respiratory ECMO Patient Selection Criteria

Relative Contraindications:

- Contraindications to therapeutic systemic anticoagulation*
- Refractory vasodilatory shock
- Multiorgan failure

Indications:

- Acute, persistent hypoxia and/or severe hypercapnia despite following [Refractory Hypoxemia Protocol](#)
- Primary graft dysfunction



Cardiac ECMO Patient Selection Criteria

Relative Contraindications:

- Severe peripheral arterial disease
- Severe metabolic acidosis (lactate >12) for >12h
- Aortic dissection
- Aortic regurgitation
- Multiorgan failure

Indications:

- Cardiogenic shock which is expected to be reversible
- VT Ablations
- High risk PCI
- Primary graft dysfunction

- See supplemental material for list of conditions most suitable for ECMO

MCS= mechanical circulatory support device



ECPR Patient Selection Criteria

Strong Relative Contraindications:

- Pre-EMS arrest
- ETCO₂ ≤10 mmHg during CPR
- Age >65 years
- Cause of arrest was hypoxia or hemorrhage
- Severe peripheral arterial disease
- Relative contraindication to therapeutic systemic anticoagulation*
- BMI >40
- Lactate > 17
- Known/Suspected COVID-19 with significant comorbidities

Indications:

- Refractory VF/VT
- Hypothermia
- Suspected massive pulmonary embolism

*Relative contraindications to therapeutic systemic anticoagulation include: intracranial hemorrhage, ischemic stroke within 2 weeks, large untreated esophageal varices, intracranial malignancy, acute trauma with active hemorrhage.