Definition
ECPR is the application of rapid-deployment VA ECMO to provide circulatory support in patients in whom conventional cardiopulmonary resuscitation (CPR) is unsuccessful in achieving sustained return of spontaneous circulation (ROSC). Sustained ROSC is deemed to have occurred when chest compressions are not required for 20 consecutive minutes and signs of circulation persist.

Please refer to the ELSO Registry ECPR Addenda Data Definitions for specific details regarding the fields collected.

Pre-Cardiopulmonary Arrest Precipitating Event

☐ Cardiac  ☐ Non-Cardiac  ☐ Unknown

Antecedent Event (Present up to 4 hours before Arrest)
Cardiac: ☐ Ventricular Dysfunction  ☐ Vasoplegia  ☐ Cardiac Tamponade  ☐ Obstructive Shock  ☐ Arrhythmia
Non Cardiac: ☐ Hypoxemia  ☐ Hypercarbia/Respiratory Acidosis  ☐ Pulmonary Hemorrhage  ☐ Pneumothorax
Neurological: ☐ Impending Herniation Syndrome
Toxic/Metabolic: ☐ Metabolic Acidosis
☐ None  ☐ Unknown

Co-Morbid Conditions (Present up to 24 hours before Arrest)
Cardiac: ☐ ACS  ☐ CHD-Acyanotic  ☐ CHD-Cyanotic  ☐ CHF  ☐ CV Shock  ☐ Tamponade  ☐ Arrhythmia  ☐ PHN  ☐ PE
Pulmonary: ☐ Critical Airway Emergency  ☐ Mediastinal Mass  ☐ Obstructive Airways Disease  ☐ Lung Disease
Neurological: ☐ CNS-Non Stoke  ☐ Ischemic Stroke  ☐ Hemorrhagic Stroke  ☐ Spinal Cord Injury
Toxic/Metabolic: ☐ Chronic Renal Failure  ☐ Intoxication/Ingestion  ☐ Vitamin/Electrolyte Abnormality
Infectious: ☐ Distributive Shock  ☐ Septic Shock
Other: ☐ Hemorrhage or Hypovolemic Shock  ☐ Major Trauma  ☐ Pregnancy/Delivery
☐ None  ☐ Unknown

Cardiopulmonary Arrest Event

Location of Arrest: Out of Hospital  ☐ (Select Site)
☐ Home  ☐ Public Place  ☐ Ambulatory Medical Care  ☐ Ambulance Transport  ☐ Other
☐ EMS On-Site?  ☐ Bystander CPR?  ☐ Bystander AED Use?

Location of Arrest: In Hospital  ☐ (Select Site)
☐ Ambulatory/Outpatient  ☐ ED  ☐ Inpatient Ward  ☐ HDU  ☐ ICU (specify) _____________________
☐ Cath Lab  ☐ Interventional Radiology  ☐ OR  ☐ PACU  ☐ Delivery Room  ☐ Other

Witnessed Arrest?: ☐ Yes  ☐ No  ☐ Unknown

Date/Time: _______________________

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Management of Cardiopulmonary Arrest

Time CPR Commenced: ______  Total CPR Time Prior to ECLS: ______ minutes

Multiple Arrests during prior 24 hours?  Yes  No

ROSC at any time after CPR and prior to ECLS?  Yes  No

Did the patient have a pulse at the time of cannulation?  Yes  No

Compression Method Used and Time:  □ Standard for ______ minutes

□ Automatic Compressor for ______ minutes

□ Open Chest CPR for ______ minutes

□ Unknown

Initial Pulseless Rhythm:  □ Asystole  □ Pulseless Electrical Activity  □ Ventricular Fibrillation

□ Ventricular Tachycardia - no pulse  □ Unknown – Shockable  □ Unknown – Non Shockable

□ Unknown

DC Cardioversion or Defibrillation:  □ No  □ Yes: Number of Shocks: ______

Rhythm at Time of Cannulation:  □ Asystole  □ Pulseless Electrical Activity  □ High Degree AV Block  □ Sinus Rhythm

□ Sinus Bradycardia  □ Sinus Tachycardia  □ SVT  □ Ventricular Fibrillation  □ Ventricular Tachycardia - no pulse  □ Unknown

Medications During Arrest:  □ Epinephrine – Number of Doses ________  □ Vasopressin – Number of Doses ________

□ Adenosine  □ Amiodarone  □ Atropine  □ Calcium Chloride/Gluconate  □ Dobutamine  □ Dopamine  □ Flumazenil

□ Glucagon  □ Glucose  □ Lidocaine  □ Magnesium  □ Milrinone  □ Naloxone  □ Norepinephrine

□ Procainamide  □ Phenylephrine  □ Sodium Bicarbonate  □ No Medications

Other Interventions during CPA:  □ Temporary Cardiac Pacing  If yes what type?

□ Transcutaneous  □ Transvenous  □ Epicardial  □ PPM In Situ  □ No Attempt at Pacing  □ Unknown

Circulation: Quality of CPR

End tidal CO2 Monitoring  □ Yes  □ No  ETCO2 closest to ECLS Flow Start: ____________

Invasive Arterial Access  □ Yes  □ No  DPB closest to ECLS Flow Start: ____________

Cerebral NIRS  □ Yes  □ No  NIRS closest to ECLS Flow Start: ____________

CPR Feedback Device  □ Yes  □ No  Rate of compressions Delivered: ____________

Signs of Life prior to ECLS  □ Yes  □ No  If No, was neuromuscular blockade in use:  □ Yes  □ No

Cannulation and Circuit Details

Location of Cannulation: Out of Hospital  □ (Select Site)

□ Home  □ Public Place  □ Ambulatory Medical Care

□ Ambulance/Transport  □ Other

Location of Cannulation: In Hospital  □ (Select Site)

□ Ambulatory/Outpatient  □ ED  □ Inpatient Ward  □ HDU

□ ICU (specify) ________________

□ Cath Lab  □ Interventional Radiology  □ OR  □ PACU

□ Delivery Room  □ Other

ECPR System:  Pre-primed pump  □ Yes  □ No  □ Unknown

If yes:  □ Blood Prime  □ Clear Prime  □ Unknown
Early Post ECPR Management (Within 24 hours of cannulation)

Neurology: ☐ EEG Monitoring: ☐ standard ☐ continuous ☐ Intracranial Imaging: ☐ CUS ☐ CT

Temp Management: ☐ Targeted 32-34°C ☐ Targeted normothermia ☐ Targeted 32-36°C ☐ No Target ☐ Unknown

Highest Temp in first 24 hours
☐ < 32 °C ☐ 32-<34°C ☐ 34-<35°C ☐ 35-<36°C ☐ 36-37.5°C ☐ 37.6-38.5°C ☐ >38.5°C ☐ Unknown

Lowest Temp in first 24 hours:
☐ < 30 °C ☐ 30-<32°C ☐ 32-<34°C ☐ 34-<35°C ☐ 35-<36°C ☐ 36-37.5°C ☐ 37.6-38.5°C ☐ >38.5°C ☐ Unknown

First Blood Gas Post ECPR (Closest to initiation or < 6 hours post initiation)

Patient Arterial Blood Gas Post ECPR: Date/Time: ____________________________ ☐ No Blood Gas

pH ______  pCO2 ______  pO2 ______  HCO3 ______  Lactate ________

Post ECPR Review

Was a debrief held by the inter-disciplinary team Post ECPR: ☐ No  ☐ Yes

If yes, in what timeframe? ☐ within 24 hours

☐ If > 24 hours was it within 1 month?

☐ If > 1 month was it within 3 months?

Neurological Assessment at Discharge

Did the patient have a functional performance assessment by Cerebral Performance Category (CPC) for patients >18yo; or by Pediatric Cerebral Performance Category for patients < 18 yo?

☐ No  ☐ Yes: Result: Adult CPC Score = _______  Pediatric PCPC Score = _______