**ECLS Registry Form**

**Extracorporeal Life Support Organization (ELSO)**

<table>
<thead>
<tr>
<th>Center ID:</th>
<th>Center name:</th>
<th>Run No</th>
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<tbody>
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<table>
<thead>
<tr>
<th>Unique ID:</th>
<th>Birth Date/Time:</th>
<th>Month d, yyyy hh:mm</th>
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<table>
<thead>
<tr>
<th>Sex: (M, F)</th>
<th>Race: (Asian, Black, Hispanic, White, Other)</th>
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**Neonatal patients:**

- Birth weight: _________ kg
- Maternal age: _________
- Apgar (1 min): _________
- Apgar (5 min): _________
- Delivery:  
  - [ ] Vaginal  
  - [ ] C-sect  
  - [ ] Elective C-sect
- Gestational age: _________
- CDH present? [ ] (Check if yes)  
  - If Yes: Prenatal diagnosis? [ ] (Check if yes)
- Side of CDH: [ ] (R,L,B)  
- Repair:  
  - [ ] None  
  - [ ] Pre-ECLS  
  - [ ] On ECLS  
  - [ ] Post-ECLS
- Infant Transported? [ ] (Check if yes)  
- Cardiac arrest at birth? [ ] (Check if yes)

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**Diagnoses and Procedures**

**ICD-9 Codes**

- **Primary diagnosis:** _________
- **Use ICD-9 codes for diagnoses**  
  - (see diagnosis codes sheet)

- **Secondary diagnoses:**
  - _________
  - _________
  - _________
  - _________  
  - **(unlimited)**

<table>
<thead>
<tr>
<th>CPT Code</th>
<th>Date/Time of Procedure</th>
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</table>

- **Procedures:**
  - _________
  - _________  
  - **(unlimited)**

- **Use CPT codes for procedures**  
  - (see procedure codes sheet)

- **(List all relevant procedures related to the patient even if preceding this admission)**

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**ECLS Registry Form**  
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Cultured Organisms:
(unlimited)

<table>
<thead>
<tr>
<th>Organism</th>
<th>Site</th>
<th>Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>_________</td>
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</tbody>
</table>

Sites: Blood, Bone, Cerebrospinal fluid, Peritoneal fluid, Pleural fluid, Respiratory tract, Skin/soft tissue, Stool, Urine, Wound – surgical, Wound – traumatic, Other, Unknown

Pre-ECLS Course

Date / Time admitted: ________________________________  Intubated: ________________________________
(to ECLS center)  Month d, yyyy hh:mm  Month d, yyyy hh:mm

Current weight (kg): _________
Patient Transported: ☐  Pre-ECLS cardiac arrest: ☐  Bridge to transplant: ☐

Pre-ECLS support: _______ _______ _______ _______ _______ _______ (Use Support Codes)

Pre-ECLS blood gases:

Date/Time: ________________________________  (Worst in last 6 hours)

pH: _______  PaCO2: _______  PaO2: _______  HCO3: _______  SaO2(%): _______

Pre-ECLS ventilator settings:

Date/Time: ________________________________  (Worst in last 6 hours)

Rate/Hz: _______  FiO2(%): _______  PIP/Ampl: _______  PEEP: _______  MAP: _______

Hand bagging: ☐ (check if yes)  Vent type: ☐ Conventional  ☐ HFO  ☐ Other HFV

Pre-ECLS hemodynamics:

Date/Time: ________________________________  (Worst in last 6 hours)

BP: _______ _______ _______  Systolic  Diastolic  Mean  SvO2: _______  PCWP: _______

PAP: _______ _______ _______  Systolic  Diastolic  Mean  CI: _______

ECLS Course

Date/Time on ECLS: ________________________________  Date/Time off ECLS: ________________________________

Month d, yyyy hh:mm  Month d, yyyy hh:mm

Reason for support: ☐ Pulmonary  ☐ Cardiac  ☐ ECPR

ECLS mode:  (VA, VA+V, VA-VV, VV, VV-VA, VVA, VVDL, VVDL+V, Other)

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Cannulations:

<table>
<thead>
<tr>
<th>Site</th>
<th>Percutaneous</th>
<th>Manufacturer</th>
<th>Size (Fr)</th>
<th>Length (cm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>☐ Yes</td>
<td></td>
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<td></td>
<td>☐ Yes</td>
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</table>

Site: RCCA, LCCA, RIJV, RIJVC, LIJV, RFA, LFA, RFV, LFV, RA, LA, PA, Aorta, Other

Equipment used:

Membrane lung: 

Heat exchanger: 

Pump: 

Hemofilter: 

Pump flow: Units: ☐ ml/kg/min ☐ ml/min ☐ L/min (Check one)

4th hour flow: _______ 24th hour: _______

24 hour ECLS blood gases:

Date/Time: ___________________________ (Best values at 24 hours of ECLS)

pH: _______ PaCO2: _______ PaO2: _______ HCO3: _______ SaO2(%): _______

24 hour ECLS ventilator settings:

Date/Time: ___________________________ (Best values at 24 hours of ECLS)

Rate/Hz: _______ FiO2(%): _______ PIP/Ampl: _______ PEEP: _______ MAP: _______

Hand bagging: ☐ (check if yes) Vent type: ☐ Conventional ☐ HFO ☐ Other HFV

24 hour hemodynamics:

Date/Time: ___________________________ (Best values at 24 hours of ECLS)

BP: _______ _______ _______ SvO2: _______ PCWP: _______

Systolic Diastolic Mean

PAP: _______ _______ _______ CI: _______

Systolic Diastolic Mean
### ECLS Complications

**Mechanical complications:** (requiring change of equipment or intervention)
- Oxygenator failure
- Raceway rupture
- Other tubing rupture
- Pump malfunction
- Heat exch. Malfunction
- Clots: oxygenator
- Clots: bladder
- Clots: hemofilter
- Clots: other
- Air in circuit
- Cracks: connectors
- Cannula problems

**Patient complications:**

**Hemorrhagic complications:** (requiring transfusion or other intervention)
- GI hemorrhage
- Cannulation site bleeding
- Surgical site bleeding
- Hemolysis (plasma hgb > 50 mg/dl)
- DIC

**Neurologic complications:**
- Clinical brain death
- Clinical seizures
- EEG seizures
- Infarction (US or CT)
- Hemorrhage (US or CT)

**Renal complications:**
- Creatinine 1.5-3.0
- Creatinine > 3.0
- Hemodialysis
- Hemofiltration
- CAVHD

**Pulmonary complications:** (requiring intervention)
- Pneumothorax
- Pulmonary hemorrhage

**Cardiopulmonary complications:** (requiring intervention)
- Inotropes on ECLS
- CPR required
- Myocardial stun by echocardiography
- Cardiac arrhythmia
- Hypertension requiring vasodilator treatment
- PDA: R→L
- PDA: L→R
- PDA: Bidirectional
- PDA: Unknown
- Tamponade: Blood
- Tamponade: Serous
- Tamponade: Air

**Infectious complications:**
- Culture proven new infection (code organism under Diagnosis and Procedures)
- WBC < 1,500

**Metabolic complications:**
- Glucose < 40
- Glucose > 240
- pH < 7.20
- pH > 7.60
- Hyperbilirubinemia (> 2 direct, > 13 indirect, or > 15 total)
### Outcome

**Reason for discontinuing ECLS:**
- [ ] Recovery (survived ECMO)
- [ ] Died on ECLS, or ECLS withdrawn in anticipation of death

**If died on ECLS**
- [ ] Parental or family request
- [ ] Hemorrhage

**or ECLS withdrawn in anticipation of death**
- [ ] Diagnosis incompatible with life

**select 1 reason:**
- [ ] Irreversible organ failure: (Select all that apply)
  - [ ] CNS
  - [ ] Pulmonary
  - [ ] Cardiac
  - [ ] Liver
  - [ ] Infection
  - [ ] Other

**Cannula site repair:**
- [ ] None
- [ ] Carotid artery
- [ ] Jugular vein
- [ ] Both
- [ ] Other

**Date / time of final extubation:** ________________________________

- [ ] Discharged alive (from ECLS center)

**Date / time of discharge / transfer:** ________________________________

**Discharge location:**
- [ ] Home
- [ ] In-hospital service
- [ ] Referral hospital
- [ ] Other facility (hospital or rehab facility)

**Date / time of death:** ________________________________

If death, code primary cause of death and contributing causes under Diagnosis and Procedures

**Form completed by:** ________________________________  **Date completed:** ________________________________

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