ECLS Registry Form

Extracorporeal Life Support Organization (ELSO)

"The highlighted text means it is a Mandatory Data Field (minimal requirement)

Please refer to the FLSO Registry Data Definitions Document for Details.

Unique ID:		Rirth Date:
Offique ID.		Birth Date:(include time for neonates)
Sex:	(M, F, unknown) Race:	(Asian, Black, Hispanic, White, Middle Eastern or North African, Native American, Native Pacific Islander, Other, Unknown)
Run Inform	ation	
Run No:	or Unknown	Support Type: Pulmonary Cardiac Height (cm): or Unknown ECPR
ECLS mode:	· · · · · · · · · · · · · · · · · · ·	(Venovenous)
☐ Pre-existin☐ Yes, Date/	Fime Known: g invasive Ventilation: Fime Estimated: Fime Unknown	
Neonatal pati	ents only:	
Birth weig	nt (kg):	Gestational age:
Apgar (1 r	nin):	Delivery: (Vaginal, ER or Elective C-section, Unknown)
Apgar (5 r	nin):	Maternal age:
CDH:	Y N Unknown	
CDH Rep	nir: (Pre-ECL	S,On ECLS, Post-ECLS)
Date/Time	of repair:	_
Hospital Admi	Date/Time:	
☐ Transporte • If the p	d on ECMO Transporte	ed not on ECMO Not Transported Unknown The ECLS Start Date/Time as the time that your Center assumed care for the patient Tring ELSO Center Number or typing name of Center. Non-ELSO Center is a free text field.
☐ From an E	SO Center? ELSO Center num	nber: From a Non-ELSO Center? Center Name:
☐ Cannulated	with Mobile ECMO?	
_		r outside a hospital or within a separate hospital from the mobile ECMO team's home hospital.
. 5 34111	2000 1000 0000	
Bridge to trans	plant? Y N Unkn	own Pre-ECLS cardiac arrest?
•	underlying reason for ECLS?	Y N Unknown (if yes, consider completing the Trauma Addendum)
	, ,	

ABG: Closest to/before ECLS, no more than 6 hours before ECLS Vent Settings: Closest to/before ECLS, no more than 6 hours before ECLS Date/Time: No Ventilator in use: FiO2 (at ABG draw): (%) Date/Time: Vent Type: unknown/unavail? (mmol/L) Lactate: (Type: Other, Conventional, HFO, Other HFV, No Ventilator) unknown? □ Rate(BPM) or Hz: PIP/Ampl: _____ PaCO2: PaO2: ____ PEEP: _____ HCO3:_____ unknown? MAP: SaO2(%):___ Hand bagging: ☐ Y ☐ N ☐ Unknown SpO2 (%): (Select if hand bagged beginning in the 6hrs pre ECLS AND continuing to the time of cannulation) Hemodynamics (Closest to and before ECLS start, ideally no more than 6 hours before ECLS start) Systolic PAP: Date/Time: Diastolic PAP: _____ Systolic BP: _____ unknown/unavail? ___ Diastolic BP: _____ unknown/unavail? Mean PAP: _____ Mean BP: PCWP: SvO2: Cardiac Index: Pre ECLS Support Mechanical Cardiac Support (Select those used or in place within 24 hours pre ECLS) Cardiac pacemaker Cardiopulmonary bypass (CPB) Intra-aortic balloon Perc Ventricular Assist Device LVAD RVAD BiVAD Berlin Heart Renal, Pulmonary and Other Support (Select those used or in place within 24 hours pre ECLS) HFOV Inhaled Anesthetic Inhaled NO (>6 hours) Partial Liquid ventilation Plasmapheresis Prone Positioning (>16 hours) Renal Replacement Therapy Surfactant Therapeutic Hypothermia < 35 degrees C Medications Excluding Vasoactives (Select those used or in place within 24 hours pre ECLS) Pulmonary Vasodilators VBicarbonate Narcotics Neuromuscular blockers Systemic Steriods THAM Vasoactive Infusions (Select those used within 24 hours AND continuously for 6 hours pre ECLS) Dobutamine Dopamine Enoximone Epinephrine Esmolol Levosimendan Metaraminol Metoprolol Milrinone Nicardipine Nitroglycerin Nitroprusside Norepinephrine Phenylephrine Vasopressin

Pre-ECLS Assessment

ECLS Assessment Arterial Blood Gas Ventilator Settings Closest to 24 hours after ECLS start, but no less than 18 hours and not more than 30 hours after ECLS start Date/Time: No Ventilator in use: FiO2 (at ABG draw): _____(%) Date/Time: _____ Vent Type: _____unknown/una (Type: Other, Conventional, HFO, Other HFV, No Ventilator) (mmol/L) unknown/unavail? Lactate: Rate(BPM) or Hz: PIP/Ampl: PaO2: _____ PEEP: HCO3: Unknown? MAP: SaO2(%):_____ Hand bagging: ☐ Y ☐ N ☐ Unknown SpO2 (%):_____ Hemodynamics Closest to 24 hours after ECLS start, but no less than 18 hours and not more than 30 hours after ECLS start Systolic PAP: Date/Time: Diastolic PAP: _____ Systolic BP: _____ unknown/unavail? Mean PAP: _____ Diastolic BP: unknown/unavail? Mean BP: PCWP: Cardiac Index: SvO2: Blood Pump Flow Rates (L/min) ECLS Care Unit Where Majority of ECLS Care Received Adult Medicine ICU Adult Surgical ICU Adult Cardiac ICU Adult Cardiovascular ICU ECLS ICU Emergency Dept. Burn ICU Mixed ICU Neonatal ICU Pediatric ICU Pediatric Cardiac ICU Operating Room/Cath Lab → Initiated for procedure? Yes No **Nutrition and Mobility** Enteral Feeding Date/Time (started and continued for at least 2 days)

Level of Mobilization at day 7 of ECLS (>8 years)	Maximum Level Achieved During ECLS (>8 years)
0 Nothing (lying in bed)	0 Nothing (lying in bed)
1 Sitting in bed, exercises in bed	1 Sitting in bed, exercises in bed
2 Passively moved to chair (no standing)	2 Passively moved to chair (no standing)
3 Sitting over edge of bed	3 Sitting over edge of bed
4 Standing (with or without assist)	4 Standing (with or without assist)
5 Transferring bed to chair	5 Transferring bed to chair
6 Marching on spot (at bedside)	6 Marching on spot (at bedside)
7 Walking with assistance of 2 or more people	7 Walking with assistance of 2 or more people
8 Walking with assistance of 1 person	8 Walking with assistance of 1 person
9 Walking independently with a gail aid	9 Walking independently with a gail aid
10 Walking independently without a gait aid	10 Walking independently without a gait aid

Modes of ECLS	
Initial Mode of ECLS	
ECLS Start Date/Time:	ECLS/Mode Stop Date/Time:
ECLS mode: V-A (Veno	varterial)
Add New Mode Conversio	n (this section to be used only for mode conversions – must enter a Stop Date/Time for the initial mode)
Conversion mode: U-A (e: ECLS Mode Stop Date/Time: Venoarterial)
Add New Mode Conversio	n (this section to be used only for mode conversions – must enter a Stop Date/Time for the initial mode)
Conversion mode: V-A (e: ECLS Mode Stop Date/Time: Venoarterial)
Add New Mode Conversio	n (this section to be used only for mode conversions – must enter a Stop Date/Time for the initial mode)
Conversion mode: V-A (e: ECLS Mode Stop Date/Time: Venoarterial)
Add New Mode Conversio	n (this section to be used only for mode conversions – must enter a Stop Date/Time for the initial mode)
Conversion mode: V-A (VV-E) Is this a concurrent mode?	e: ECLS Mode Stop Date/Time: Venoarterial)
Add New Mode Conversio	n (this section to be used only for mode conversions – must enter a Stop Date/Time for the initial mode)
Conversion mode: V-A (e: ECLS Mode Stop Date/Time: Venoarterial)
	Duplicate this page as required for multiple mode changes

Cannulation

Cannulas placement for the ECLS Run

Please see ELSO Registry Data Definitions for specifics

If a manufacturer or model is not listed, please contact Registry Support @ELSO org

	Cannula #1	Cannula #2	Cannula #3	Cannula #4	Cannula #5	
	 Note: Times will autopopulate with time on and off ECLS. Only note new date/time for cannulas placed and removed during the run. If the purpose of the cannula changes over the life of the cannula, enter the new purpose of the cannula and the date and time for change in purpose 					
Start Date/Time						
End Date/Time						
Manufacturer						
Cannula Model						
Size						
Pre-Existing (Y/N/Unk)						
Percutaneous (Y/N/Unk)						
Site						
Initial Purpose (Return, Drainage, Both, DPC)						
Replaced (Y/N)						
Reason?						
Ligated or repaired? *Required for non adult patients						

	Cannula #6	Cannula #7	Cannula #8	Cannula #9	Cannula #10	
	 Note: Times will autopopulate with time on and off ECLS. Only note new date/time for cannulas placed and removed during the run. If the purpose of the cannula changes over the life of the cannula, enter the new purpose of the cannula and the date and time for change in purpose 					
Start Date/Time						
End Date/Time						
Manufacturer						
Cannula Model						
Size						
Pre-Existing (Y/N/Unk)						
Percutaneous (Y/N/Unk)						
Site						
Initial Purpose (Return,Drainage, Both, DPC)						
Replaced (Y/N)						
Reason?						
Ligated or repaired? *Required for non adult patients						

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Equipment

- Please see ELSO Registry Data Definitions for specifics
- Specific reasons for membrane and pump replacement require a complication to be entered within 4 hours of the equipment exchange, UNLESS ECMO Stop Date/Time or Date/Time of Death is not entered within 4 hours.

Membrane Lung	#1	#2	#3
Start Date/Time			
End Date/Time			
Manufacturer			
Device			
Concurrent Membrane (Y/N)			
Membrane Replaced (Y/N)			
Membrane Reason			
Blood Pump	#1	#2	#3
Start Date/Time			
End Date/Time			
Manufacturer			
Device			
Concurrent Pump (Y/N)			
Pump Replaced (Y/N)			
Pump Replaced Reason			

Other Equipment	Manufacturer	Device
Hemofilter		
Temp Regulation Device		

Membrane Lung	#4	#5	#6
Start Date/Time			
End Date/Time			
Manufacturer			
Device			
Concurrent Membrane (Y/N)			
Membrane Replaced (Y/N)			
Membrane Reason			
Blood Pump	#4	#5	#6
		 ~	# U
Start Date/Time			#0
Start Date/Time End Date/Time			#0
			#0
End Date/Time			
End Date/Time Manufacturer			
End Date/Time Manufacturer Device			

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*Neonatal Respi	ratory Issue a	as The Primary Di	iagnosis Categories: Please refer to the ELSO Registry Definitions for specifics.
Select the subcategore	primary diag ry or causativ	nosis from the cl	hoices. If a general category is selected, you will be prompted to choose a specific e sub-categories may require additional branching characterization. List any additional
diagnoses.	There is no	limit to the numb	ber of diagnoses you may enter.
Secondary	Diagnose	es: (unlimited)	
CPT Proce	dure Coc	des (List all rele	evant procedures related to the patient even if preceding this admission)
Date/Ti		Estimated?	evant procedures related to the patient even if preceding this admission) Code/Procedure
		Estimated?	

____(check box as primary)

Primary Diagnosis:

ECLS Complications

- Please see ELSO Registry Data Definitions for specifics regarding each complication definition.
- Enter multiple complications of the same type by 'add new complication' with new date/time for each occurrence.
- Complications that 'continue' for several days only need the first date of occurrence. (ie creatine >3.0) If the complication were to cease, and then re-occur, please enter the new date/time of the occurrence.
- A complication of Brain Death must be entered to allow a Date/Time of Death prior to ECMO Stop Date/Time.
- If a membrane lung failure or Blood Pump Failure is entered, an exchange should be entered in most circumstances

Is there any ECLS complication during this run? Yes ☐ No ☐ Is complication verified? Yes ☐ No				
Mechanical	Date/Time	Date/Time	Date/Time	Date/Time
Membrane Lung Failure				
Blood Pump Failure				
Raceway Rupture				
Other Tubing Rupture				
Circuit Change				
Cannula Problems				
Temp Reg Device Malfunction				
Clots and Air Emboli				
Thombosis/Clots in Circuit Component				
Clots Hemofilter				
Air in Circuit				
Hemorrhage	Date/Time	Date/Time	Date/Time	Date/Time
GI Hemorrhage	Date, Time	Date, Time	Date, Time	Date, Time
Peripheral Cannulation				
Site Bleeding				
Mediastinal Cannulation Site Bleeding				
Surgical Site Bleeding				
Cargical Cite Diceang				
Neurological	Date/Time	Date/Time	Date/Time	Date/Time
Brain Death				
Seizures Clinically Determined				
Seizures Confirmed by EEG				
CNS Diffuse Ischemia				
CNS Infarction				
Intra/extra Parenchymal CNS Hemorrhage				
Intraventricular CNS Hemorrhage				
Neurosurgical intervention performed				

ECLS Complications (cont'd)

Renal	Date/Time	Date/Time	Date/Time	Date/Time
Creatinine 1.5 – 3.0				
Creatinine > 3.0				
Renal Replacement Therapy Required				

Cardiovascular	Date/Time	Date/Time	Date/Time	Date/Time
CPR/Chemical Code				
Required				
Cardiac Arrhythmia				
Tamponade (blood)				
Tamponade (not blood)				

Pulmonary	Date/Time	Date/Time	Date/Time	Date/Time
Pneumothorax				
Pulmonary Hemorrhage				

Metabolic	Date/Time	Date/Time	Date/Time	Date/Time
Hyperbilirubinemia				
Moderate Hemolysis				
Severe Hemolysis				

Patient Limb	Date/Time	Date/Time	Date/Time	Date/Time
Compartment Syndrome				
Fasciotomy				
Limb Amputation				
Ischemia Requiring Limb Reperfusion Cannula				

Infections (pre and those occurring on ECMO) Does this run have any infections? Yes No Date/Time/Estimated? Culture Site Organism Type Organism			
Date/Time/Estimated?	Culture Site	Organism Type	Organism

- Wound traumatic, Other, Unknown
- Type: Unknown, Gram+ Bacteria, Gram- Bacteria, Mycobacterium, Fungus (yeast and mold), Viruses and Prions, Protozoa
- Selection of Type will populate specific associated organisms.
- Organisms are listed in the Data Definiitons. If an organism is not listed, please contact RegistrySupport@elso.org

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Outcomes			
Discontinuation Reason (Why the patient was separated from	n ECLS)		
This may be left blank if patient was transferred on ECLS			
 ☐ Expected recovery ☐ Poor prognosis followed by death ☐ Resource limitation ☐ ECLS complication ☐ Transition to VAD Support ☐ Unknown 	 □ Pumpless Lung Assist (Pa to LA) □ Poor prognosis followed by unexpected survival □ Heart transplant □ Lung transplant □ Heart and Lung transplant 		
Cannulation Repair			
This may be left blank if patient was transferred on ECLS			
☐ None☐ Internal Jugular Vein☐ Other	☐ Common Carotid Artery ☐ Both Carotid and Jugular		
Extubated			
This may be left blank if patient was transferred on ECLS			
☐ Endotracheally extubated ≥48 hrs☐ N/A - Transferred intubated☐ N/A - Other	N/A - TracheostomyN/A - Intubated at time of death		
Oral Endotracheal Tube Removed Date/Time:			
Discharged Alive / Transferred on ECMO			
	Stop Date/Time as the Discharged Date/Time and O Center Number or typing name of Center. Non-ELSO Center is a free text field. In the case of Brain Death – must enter brain death as a complication.		
☐ Yes ☐ No	☐ On ECMO?		
ICU Discharge Date/Time:	ELSO Center? ELSO Center ID:		
Hospital Discharge Date/Time:	☐ Non ELSO Center? Name of Center:		
Death Date/Time:			
Discharge Location			
☐ Home ☐ Transfer to Another Hospital ☐ Other/Unknown	☐ Transfer to Long Term Care (LTAC) ☐ Transfer to Rehab ☐ Transfer to Hospice		
Form completed by: Co.	mpleted date is automatically added when you submit the run.		
 Select Validate Data – to assure mandatory fields complete, dates are correct. 			
 Select Submit and Lock – to finalize the record and submit to ELSO. 			
Selection of Edit Run after Submission will allow the user to change data, but the form must be re-validated and re-submitted.			
Deletion of a record must be done by ELSO Staff – please email RegistrySupport@elso.org			
Any questions and concerns may be directed to RegistrySupport@elso.org			