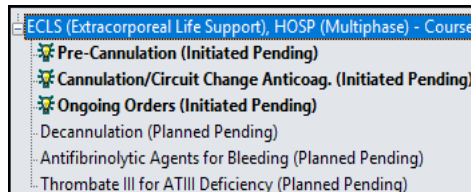


CCU RN Guide for ECLS

Effective: 2/28/2022

What is new?

Starting Feb 28th, the Extracorporeal Life Support (ECLS) program is launching. The ECLS PowerPlan (PP) will be ready for use. This is a comprehensive multiphase PP with several phases:








How does it impact my workflow?

- Click on the individual phases of the PP to access the orders within that phase.
- New ECLS anticoagulation (heparin and bivalirudin) protocols for VV or VA were developed in addition to existing protocols.
- Documentation of anticoagulation infusion given is similar to existing heparin drip documentation. Use the new **ECLS Anticoag Drips** section in PCM to document the protocol and next lab draw.

Medication Documentation

1. **Medications for Cannulation:** All medications administered for the cannulation must be documented on the MAW.

Medications for Cannulation		
 EPINEPHrine (EPINEPHrine 0.1 mg/mL injectable solution)		1 mg, inj soln, IV PUSH, Q15 Minutes, PRN, For: Other, NOW, for 4 hr, Note: RN to have at bedside during cannulation PRN for hemodynamic instability during cannulation
 calcium chloride		1 g, inj soln, IV, Q15 Minutes, PRN, For: Other, NOW, for 4 hr, Note: RN to have at bedside during cannulation PRN for hemodynamic instability during cannulation
 HYDROMorphone (HYDROMorphone injectable solution)		2 mg, inj soln, IV, Q15 Minutes, PRN, For: Other, NOW, for 4 hr PRN for analgesia during cannulation
 LORazepam		2 mg, inj soln, IV, Q15 Minutes, PRN, For: Other, NOW, for 4 hr PRN for sedation during cannulation
 rocuronium		0.6 mg/kg/dose, inj soln, IV, Q15 Minutes, PRN, For: Other, NOW, for 4 hr PRN for NMBA induction during cannulation *If actual body weight is greater than ideal body weight, then medication should be dosed on ideal body weight*

2. **Anticoagulation Boluses for Cannulation:** Heparin or bivalirudin will be ordered.
 - a. **Scheduled Initial Bolus:** Document using BCMA standard process for the initial bolus administered.

heparin (heparin 1,000 unit(s)/mL injectable...
8,000 unit(s), inj soln, IV, ONCE, NOW, Start: 02/09/2022 11:41:00 PST, Stop: 02/09/2022 11:41:00 PST, Note: Initial bolus for ECLS Cannulation/Circuit Changes, Dx: Stroke
INITIAL BOLUS Bolus from vial
heparin

- b. **ECLS Rebolus PRN:** Additional anticoagulation boluses may be needed to keep ACT >250 during cannulation. If additional boluses are given, document the total amount of ADDITIONAL anticoagulation given at the *end of the procedure* using the "ECLS Rebolus" PRN order. Lastly, document the time and each individual additional bolus dose administered within the comment field at the bottom of the window. For example:

The image shows two screenshots of the ECLS Rebolus PRN order form. The left screenshot shows the order details, including the medication name, dose, and a comment field. The right screenshot shows the administration details, including the performed date, time, and a comment field. Red boxes highlight the 'Total Doses Given' and 'Incremental Bolus Doses Given' fields.

3. **ECLS Anticoagulation Infusion Protocols:** Either a Heparin or Bivalirudin infusion will be ordered. There are multiple protocols. Ensure that you follow the appropriate protocol reference from the PP.

PCM Documentation

1. **Follow up Lab for Heparin (Anti-Xa or aPTT) or Bivalirudin Infusion (aPTT or DTI)** are ordered through PCM charting.

The image shows a screenshot of the PCM charting interface. The left sidebar lists various charting options, including Patient Vital Signs, IV Drips, Measurements, and Systems Assessment. The main table displays lab results for the ECLS Anticoag Protocol. A red box highlights the 'ECLS Anticoag Protocol' section, which includes a list of protocols and their corresponding goals.

- a. ***Note:** 2 consecutive lab results at goal are needed before ordering 12-hour lab draws.

2. **Pre-Procedure Checklist:** Percutaneous cannulation will be performed at bedside in CCU. Document the pre-procedure timeout within the **Procedural Sedation** band. All sedation medications to be documented on the MAW, not in the PCM Procedural Sedation Medication section.

3. **New fields in PCM:**

- a. **StO2 (Tissue Oxygen Saturation)** monitoring were added to the Hemodynamics section. Up to 4 locations can be monitored for tissue perfusion. Manually chart the results.
- b. **Arterial waveform pulsatility:** Assessment of native cardiac function. Document as pulsatile, dampened, or flat.
- c. **MAP Doppler:** ECMO promotes laminar flow and cuff pressures will not be accurate. Utilize arterial line and/or MAP doppler for blood pressure monitoring.

Other Tips

- Remind providers to discontinue phases of the ECLS PowerPlan when no longer needed.
- The whole PP should be discontinued by the provider after decannulation orders are completed.