Supplemental Table 1. “SPOKE” CENTER ECMO CHECKLIST

* **Order blood** for ECMO circuit priming and for emergency (2 adults packed RBCs) O
* **Provide a scrub nurse** O
* **Investigations to be made**:

Cranial ultrasound O

Echocardiogram O

Chest x-ray O

* **Recent lab tests**:

Hb, WBC, Platelets, CRP, PCT, Alb, ionized Ca, Cr, Urea, Bilirubine O

Lactate, APTT, prothrombin complex, Fibrinogen, D-dimer, Antithrombin O

Arterial blood gas O

Cardiac enzymes O

* **Patient preparation**:

CVC (leave neck access free, available for ECMO implant) O

Arterial -line O

Securely fixed endotracheal tube O

Indwelling catheter O

Space to set up the ECMO system and sterile instrument back table O

Height adjustable incubator with no matress O

Metal utility cart O

IV pole on casters O

External defibrillator (neonatal) O

* Alert in advance the **radiology technician** to be available for x-ray after implant O
* **Relatives/parents** should be available to obtain full informed consent O

Supplemental Table 2. Pre-HandS demographic data form (for physisican)

* Hub Center\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Spoke Center\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Pt demographic
* Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ DOB\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Gender\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Contact \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Weight Gestational Age
* Reason for HandS Transfer
* Prematurity
* Respiratory failure
* RDS
* MAS
* PNX
* CDH
* Apnea
* Bronchioltis
* Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Cardiac Failure
* Neurological disorder
* Surgical
* Other cause
* Level of severity of clinical conditions:
* Mild
* Moderate

SevereSupplemental Table 3. Pediatric HandS ECMO transfer form (for Pediatric ICU nurse)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | At 1st call | At SPOKE | During transfer | At HUB |
| Cyanosis |  |  |  |  |
| Icterus |  |  |  |  |
| Paleness |  |  |  |  |
| RDS |  |  |  |  |
| Shock |  |  |  |  |
| epilepsy |  |  |  |  |
| Hypo/hyperactivity |  |  |  |  |
| Urine output? |  |  |  |  |
| Body Temperature (degrees C) |  |  |  |  |
| HR |  |  |  |  |
| RR |  |  |  |  |
| Transcutaneous SatO2 |  |  |  |  |
| PA |  |  |  |  |
| Htc % |  |  |  |  |
| pH |  |  |  |  |
| pO2 |  |  |  |  |
| pCO2 |  |  |  |  |
| HCO3 |  |  |  |  |
| ABE |  |  |  |  |
| FiO2 |  |  |  |  |
| Mechanical ventilation |  |  |  |  |
| CPAP |  |  |  |  |
| Intubation AMBU vent |  |  |  |  |
| Intubation mech Vent. |  |  |  |  |
| PI/PEEP |  |  |  |  |
| RR (if mechanical vent) |  |  |  |  |
| Tidal |  |  |  |  |
| CXR |  |  |  |  |
| Echocardiography |  |  |  |  |
| Cerebral US |  |  |  |  |
| Lines  Vein  Umbelical artery  NG tube |  |  |  |  |
| Chest tube |  |  |  |  |
| Medication list |  |  |  |  |
| PGE1 |  |  |  |  |
| Surfactant done? |  |  |  |  |
| CPR ? |  |  |  |  |

Supplemental Table 4. Pediatric HandS ECMO data form (for the pefusionist)

* Hub Center\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Spoke Center\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Pt demographic
* First and Last Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* DOB\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Gestational Age\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Gender\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ BSA \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Weight \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Height \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Reason for HandS Transfer: Diagnosis\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Prematurity
* Respiratory failure
* RDS
* MAS
* PNX
* CDH
* Apnea
* Bronchioltis
* Other\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Cardiac Failure
* Neurological disorder
* Surgical
* Other cause
* ECMO details
* Pump type\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* ECMO circuit type \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Oxygenator type \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Site of arterial cannulation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Type or arterial cannula (size)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Site of venous cannulation\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Type of venous cannula (size)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Type of Priming\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Flow (l/min)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Cannulation time(min)\_\_\_\_\_\_\_
* TAT (min)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_EIT (min)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Wean off? y/n \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ECMO duration (days)\_\_\_\_\_\_\_\_\_\_
* Date of end ECMO\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Outcome: alive/dead
* Complications:
* None
* Hemorrhage/thrombosis
* Cannula dislocation
* Stroke
* Infection
* Change of ECMO: y/n
* Other