**Organ Donor Management**

**Recommended PPO**

**PEDIATRIC Circulatory Death (DCD)**

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**Note:** These orders apply to newborn to 16 years; intended for care provided within a Pediatric/Neonatal Intensive Care Unit. Dosages and infusion rates listed below reflect those used at BC Children’s Pediatric ICU and apply to children less than or equal to 60 kg, beyond which adult dosing should apply.

Contact BC Children’s Hospital PICU 604-875-2133 for any questions.

- ✔ = Always applicable
- □ = Check if applicable

Date: ______________  Time: ________

**Admission Instruction**

- ✔ Comfort Care Note x2 in chart (by 2 attending physicians)
- ✔ Contact initiated with BC Transplant
- ✔ Consent for Organ Donation obtained by BCT coordinator
- ✔ Code Status: Full therapy except cardiopulmonary resuscitation

**SECTION I. GUIDELINE FOR POTENTIAL DCD PATIENT UNTIL WITHDRAWAL OF LIFE SUPPORT**

**MONITORING**

- ✔ Complete patient **actual** height and weight. Record on BCT Physical Assessment Form (Available on [www.transplant.bc.ca](http://www.transplant.bc.ca))
- ✔ Urine output q1h
- ✔ HR, BP, temperature, pulse oximetry q1h
- ✔ Arterial pressure monitor continuous

**PATIENT CARE**

- ✔ Central venous catheter
- ✔ Urine catheter
- ✔ Maintain head of bed greater than 30 degrees
- ✔ Targeted temperature management goal 35.5 – 37.5°C
- ✔ NG/OG to low intermittent suction if feeds contraindicated or not tolerated

**LABORATORY INVESTIGATIONS**

- ✔ Send blood for tissue typing and serology (use BC Transplant “Red Blood Box”)
- ✔ Blood Type/Screen

**Initial Bloodwork, then q8h**

- ✔ ABG
- ✔ Na, K, Cl,Bicarb, SCr, Urea, Ca, Mg, PO4, Lactate, CrCl, eGFR, CBC, glucose
- ✔ INR/PTT, AST, ALT, TBil, DBil, ALP, GGT, LDH, Total Protein
- ✔ Albumin, Amylase/Lipase, CK, Troponin (I or T)

**General Targets:**

- Age-related norms for pulse and blood pressure (BP)
- CVP 6-10 mmHg (fluid resuscitation to maintain normovolemia)
- Urine Output 0.5 to 3 mL/kg/h
- Hemoglobin (Hgb): above 70 g/L

If planned kidney donation:

- □ SCr, Urea, eGFR, glucose Q8H

If planned liver donation:

- □ INR/PTT, AST, ALT, TBil, DBil, ALP, GGT, LDH, Total Protein, Amylase/Lipase, Albumin Q8H

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Date (dd/mm/yyyy)  Time  Prescriber’s Signature  Printed Name or College ID #
Goal hemoglobin greater than 70 g/L. Notify physician and BCT if <70 g/L
Monitor platelet level. Notify physician and BCT if < 10 (consider transfusion)
Urinalysis including specific gravity, routine and micro baseline and Q24h
Urine microalbumin/creatinine (ACR) ratio baseline and PRN as requested

**DIAGNOSTICS**

☑ CXR daily
☐ CT of chest and abdomen (if requested by BC Transplant: High resolution – Non contrast)
☐ Bronchoscopy (if requested by BC Transplant)
  
- complete Bronchoscopy form available on [www.transplant.bc.ca](http://www.transplant.bc.ca)

**NUTRITION**

☑ Continue feeds if already initiated. Initiate unless contraindicated. (Hold feed 8 hours prior to recovery surgery)
☑ If patient on parenteral nutrition, consult dietician for direction

**INTRAVENOUS**

☑ Total fluid intake at ___________ mL/h
☑ Fluid type: _______________

(As per standard fluid management protocols – 80% maintenance)

**RESPIRATORY MANAGEMENT**

- Lung recruitments not indicated for spontaneous breathing patients but consider gradual increases of PEEP
- Goal to optimize PEEP for individual patient
- Pulmonary toileting and chest physio (as per site policy)

☑ Continue mechanical ventilation as per previous orders

*OR*

☐ Mechanical ventilation as follows:
  
- Mode _______________
- Tidal volume 6mL/kg OR pressure limit at ________ (cm H2O) as applicable
- PEEP 10 and adjust to meet patient requirements

☑ Adjust FiO2 to maintain SaO2 greater than or equal to 95% Maintain PaO2 greater than 70 mmHg with minimal effective FiO2.
☑ Maintain pH 7.35 to 7.45
☐ O2 challenge: 100% FiO2 with PEEP 10 (do not reduce PEEP if at a higher level) initial and q6h (may discontinue if lungs are not accepted)
MEDICATIONS

Hemodynamic Monitoring and Therapy:

**Hemodynamic Monitoring and Therapy:**

- **Reference:** from [https://www.pedscases.com/pediatric-vital-signs-reference-chart](https://www.pedscases.com/pediatric-vital-signs-reference-chart)

Notify physician if outside of general target parameters

**Management of Hypotension:** Target BP: ____/_____

- Check _vasopressin_ __________ milliunit/kg/min (0.3 to 2 milliunit/kg/min) IV infusion Max. dose: 40 milliunit/min
- Check _epinephrine_ __________ mcg/kg/min IV infusion (0.01 to 0.2 mcg/kg/min; caution with doses greater than 0.2 mcg/kg/min; max 1 mcg/kg/min)
- Check _NOREpinephrine_ __________ mcg/kg/min IV infusion (0.01 to 0.2 mcg/kg/min; caution with doses greater than 0.2 mcg/kg/min; max 2 mcg/kg/min)

**Management of Hypertension:** Target BP: ____/_____

**Age-related Treatment Thresholds for Arterial Hypertension:**

- Newborns to 3 months greater than 90/60
- 3 months to 1 year greater than 110/70
- 1 year to 12 years greater than 130/80
- 12 years to 18 years greater than 140/90

  a. Wean inotropes and vasopressors
  
  b. If necessary start:

  - Check _nitroprusside_ __________ mcg/kg/min (0.5 to 5 mcg/kg/min) OR
  - Check _esmolol_ __________ mcg/dose (500 mcg/kg/dose) IV bolus over 1-2 min

  Followed by __________ mcg/kg/min (50 to 300 mcg/kg/min) IV infusion
**Diabetes Insipidus (DI)** *(MD to confirm diagnosis, less common in DCD patients)*

Defined as urine output greater than 3 mL/kg/h associated with:
- increasing serum sodium greater than 145 mmol/L and/or
- increasing serum osmolarity greater than 300 mosM, and/or
- decreasing urine osmolarity less than or equal to 200 mosM

If Diabetes Insipidus present, titrate therapy to urinary output less than 3 mL/kg/h

- vasopressin __________ milliunit/kg/min (0.02-0.05 milliunit/kg/min) IV infusion
  - Max. dose: 0.2 milliunit/kg/min

**INFECTION SURVEILLANCE AND TREATMENT**

Examine patient each shift for new skin lesions suggestive of viral, fungal or bacterial infection

- On daily rounds review for potential new infection.
- Treat any new suspected or confirmed viral, fungal or bacterial infection and notify BC Transplant
  - Influenza test (Flu A/B/RSV) (Tracheal aspirate) **all donors** (during flu season only, typically Dec 1 to Mar 31)
  - COVID-19 test (requires dual source – NP swab and ET specimen test as indicated by BC Transplant). Must be completed within 5 days of recovery surgery.
  - HSV/VZV (oral and genital) swabs of any potential herpetic lesions, as appropriate

- **Cultures - all cultures to be done at baseline and then q48h**
  - Sputum gram stain and culture
  - Blood culture *(Refer to current BCCH Pediatric Blood Culture Guide for appropriate collection quantities)*
  - Urine culture
  - Culture all drain sites

- MRSA and VRE screens (also screen all drain sites for MRSA) as per hospital policy

**Antifungals and Antibiotics**

- Consult pharmacy for renal dosing of all antibiotics in presence of impaired renal function
- If lungs **not** considered, treat any known or suspected infections as per ICU direction
- If lungs are being considered treat with the following:

  - fluconazole 6 mg/kg/dose (max 400 mg) IV q24h
  - vancomycin (15 mg/kg) _____________ mg IV q6h
    *(round to nearest 250 mg) (consult pharmacy for renal dosing in presence of AKI)*

  **And one** of the following:
  - pipercillin-tazobactam 75 mg/kg/dose of pipercillin component (max 4 g/dose) IV q6h
    *(OR)*
  - meropenem 20 mg/kg/dose (max 2 g/dose) IV q8h (If documented or suspected penicillin anaphylaxis or history of Extended Spectrum Beta-Lactamase (ESBL) organisms)
SECTION II. WITHDRAWAL OF LIFE SUPPORT

- Consult ICU for Comfort Care orders

☐ Heparin 400 units/kg __________________ units IV
push when SBP less than 60 mmHg at impending death (RN to consult with ICU attending for timing of administration)

Symptom Management

Pain/discomfort

☐ Morphine _________(0-20 mcg/kg/hour) IV infusion
☐ Morphine _________(0.05-0.1 mg/kg) IV q30min prn
☐ Midazolam _________(0-100 mcg/kg/hour) IV infusion
☐ Midazolam _________(0.05-0.1 mg/kg) IV q30min prn

☐ Other ___________________________________________________
☐ Other ___________________________________________________
☐ Other ___________________________________________________