

For children weighing over 60 kg or who are post-pubertal, please refer to the adult organ donor assessment and management guide

Standard orders The following are recommendations only and are not intended to replace an integrated approach to clinical judgement. Patient positioning A1 • Head of bed elevated at 30 ° A2 • Turn and position q2h **Nutrition** B1 • Standard tube feeding B2 • Do not initiate parenteral nutrition. However, do not discontinue if already initiated **Hydration** c1 • D5 Saline 0.9 or 0.45 % or RL according to sodium level, KCl 20-60 mEq/L according to potassium level. Rate of administration may vary according to maintenance needs. The rate and type of IV fluids may vary according to sodium and potassium levels as well as enteral nutrition tolerance. Target homeostasis. Minimal monitoring required and targeted goals D1 • Cardiac monitor D4 • Urinary catheter: strictly monitor intake and output D2 • Arterial line; monitor blood pressure (BP) q1h, document hourly urine output, target 0.5-3.0 mL/kg/h D5 • Nasogastric tube to gravity drainage (if unfed) target: ➤ Heart rate (HR) D6 • Capillary blood glucose levels\* q1h, target 6-10 mmol/L > Systolic and diastolic BP according to age and D7 • Body temperature q4h, target 35-37.5 °C hemodynamics (see Section 1.8) D3 • Continuous arterial oxygen saturation (SaO<sub>2</sub>) monitoring, document SaO<sub>2</sub> q1h, target ≥ 95 % Blood glucose: If capillary blood glucose within normal range and stable, levels may be monitored q2h, then q4h. Ventilation E1 • Controlled mechanical ventilation E4 • If possible, adjust respiratory frequency to obtain arterial PaCO<sub>2</sub> between 35-45 mmHg E2 • Tidal volume (TV); 5-8 mL/kg of ideal weight E5 • Minimum fraction of inspired oxygen (FiO₂) to maintain SaO₂ ≥ 95 % E3 • Positive end-expiratory pressure (PEEP); 5 cm H<sub>2</sub>O and above Eye care F1 • Keep eyelids closed F2 • Avoid oily or greasy substances **Prophylaxis** G1 • Pharmacological thromboprophylaxis according to standard indications. If contraindicated, use mechanical thromboprophylaxis. **Donor assessment** H1 Identifying or retrieval centre \* • CK, CK-MB, or Troponin I/T · Blood group + antibodies + crossmatch (4 units of packed red blood cells in reserve, at retrieval centre) Abdominal ultrasound, if requested by Transplant Québec · Weight / Height Echocardiogram, if requested by Transplant Québec · Urinalysis and urine culture (albumin / creatinine ratio) Abdominal and thoracic CT scan, if requested by Transplant · Blood cultures X 2 Arterial blood gas, AST, ALT, alkaline phosphatase total and · Sputum gram stain and culture direct Bilirubin, GGT, LDH, amylase, lipase, Na, K, glucose, · Chest X-ray and EKG Initially urea, creatinine, lactate, CBC, PTT, INR, Cl, Mg, Ca, PO<sub>4</sub> · Albumin / protein CK, CK-MB, or Troponin I/T q8h x 24h H2 q8h If patient unstable, continue monitoring CK, CK-MB, or Troponin I/T q8h AST, ALT, Alkaline phosphatase, total and direct Bilirubin, GGT, LDH, amylase, lipase, Na, K, glucose, urea, creatinine, CBC, Н3 q12h PTT, INR, lactate, arterial blood gas **H4** q24h Chest X-ray, EKG, Cl, Mg, Ca, PO<sub>4</sub> **H5** q72h Blood cultures X 2, sputum gram stain and culture, urine culture

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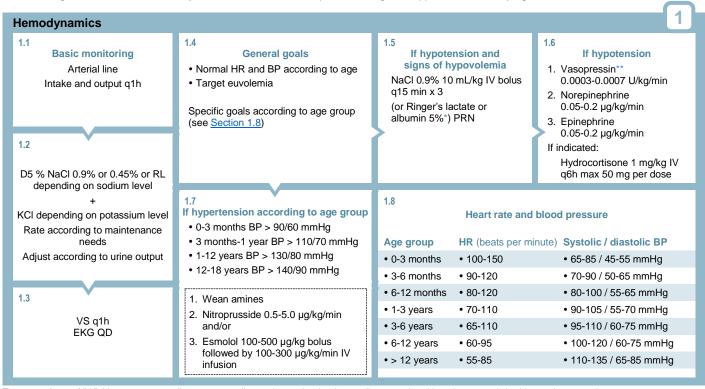
<sup>\*</sup> Serology, virology, and tissue typing with Transplant Québec clinical coordinator / advisor's approval.



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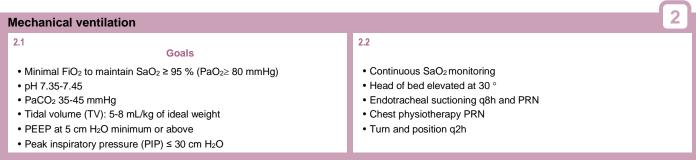
### Management criteria and goals

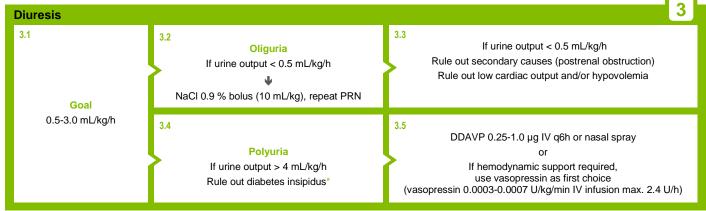
The following are recommendations only and are not intended to replace an integrated approach to clinical judgement.



The rate and type of IV fluids may vary according to serum sodium and potassium levels as well as enteral nutrition tolerance and should target homeostasis.

<sup>\*\*</sup> Vasopressin is the number one recommended agent for hemodynamically unstable patients, except if instability is primarily due to left ventricular dysfunction. In such cases, norepinephrine is the number one recommended agent.





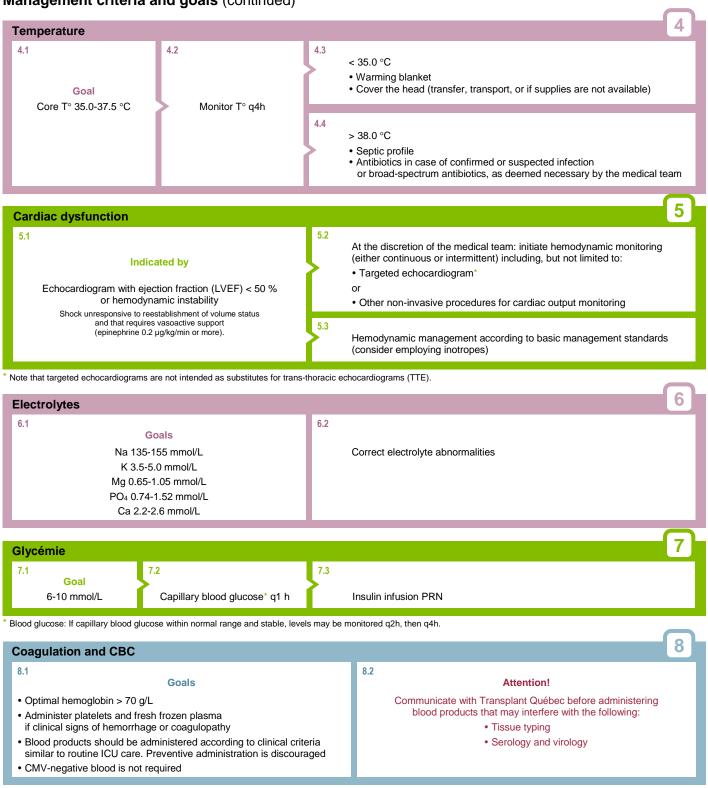
<sup>\*</sup> Diabetes insipidus: Urine output > 4 mL/kg/h, Na ≥ 145 mmol/L, serum osmolarity ≥ 300 mOsm, urine osmolarity ≤ 200 mOsm, urine specific gravity < 1.005

<sup>\*</sup> Recommendation: The use of hydroxyethyl starch products should be avoided.



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# Management criteria and goals (continued)





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## Appendix (Recruitment)

Organs previously deemed inadmissible for transplant may necessitate recruitment manoeuvres to regain function.

The following are recommendations only and are not intended to replace an integrated approach to clinical judgement.

# Lung donor

- X1 Perform lung challenge test\*
- X2 Arterial blood gas ± q2h and pulmonary recruitment PRN
  - (according to the lung transplant program, with approval of the intensivist)
- X3 Avoid pulmonary edema
- X4 Early bronchoscopy (Gram stain and culture), if interest from lung transplant program
- X5 Chest X-ray QD and PRN

- \* Lung challenge test
  - X1.1 Ventilate with 100 % FiO<sub>2</sub>, minimum PEEP of 5 cm H<sub>2</sub>O, and tidal volume of 8-10 mL/kg of ideal weight
  - X1.2 Arterial blood gas after 20 minutes (benchmark blood gases)

#### **Heart donor\***

- Y1 Perform EKG
- Y2 Troponin I or T q12h, CK, CK-MB q8h
- Y3 Perform an echocardiogram according to orders from the heart transplant program
- Y4 Avoid administering significant inotrope support
- Y5 Notify if inotrope needs increase

#### References:

- 1. Ball IM, Hornby L, Rochwerg B, et al. *Management of the neurologically deceased organ donor: A Canadian clinical practice guideline*. CMAJ. 2020 April 6; 192(14):E361-E369. DOI:10.1503/cmaj.190631.
- 2. Nakagawa BP, Shemie SD, Dryden-Palmer K, Parshuram CS, Brierley J. Organ Donation Following Neurologic and Circulatory Determination of Death. Pediatric Critical Care Medicine. 2018; 19:S26-S32. DOI:10.1097/PCC.0000000000001518.1.
- Weiss MJ, Blanco AP, Ben Gelbart. Special issues in pediatric deceased organ donation. Intensive Care Medicine. February 2019:1-3. DOI:10.1007/s00134-019-05523-2.

The Transplant Québec team would like to thank everyone who participated in the revision of this document.

To download or print this guide: www.transplantquebec.ca/maintien-et-evaluation

This guide is overseen by Transplant Québec and is revised periodically.

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<sup>\*</sup> If donor presents with a patent foramen ovale or an ASD (atrial septal defect) use IV in-line filter