

BC Provincial ECLS Transport Working Document

SITUATION

- Patient Profile
- Isolation

MISSION

- Origin
- Destination
- Transport Mode

EQUIPMENT

- ECLS
- Adjuncts
- Transport

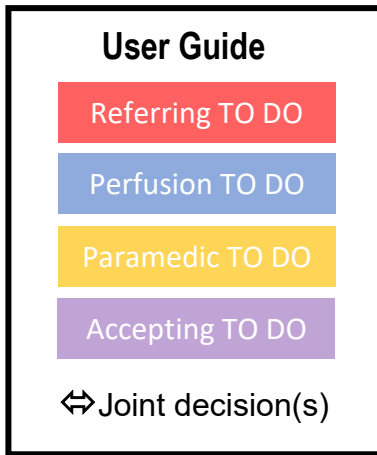
ADMINISTRATION

- Referral Team
- Transport Team
- Accepting Team

COMMUNICATION

- Referral Team
- Transport Team
- PTN
- Accepting Team

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SITUATION

- **Patient:** age, weight, relevant comorbidities. MD/RN
- **Isolation:** none, contact, droplet, airborne. RN

MISSION

- **Origin:**
- **Destination:**
- **Transport Mode:** Perfusion ↔ Paramedic
 - General Considerations: minimizing patient transfers between ambulances/aircraft should be considered when selecting mode(s) of transport.
 - Ground Ambulance: confirm appropriate size and stretcher mount.
 - Air Ambulance: for distances > 150 km consider rotary-wing (helicopter) air ambulance.
 - Air Ambulance: for distances > 300 km (150 nautical miles) consider fixed-wing air ambulance.
 - Other:

EQUIPMENT (See Appendix 1 at the end of this document)

- **ECLS:** specify type e.g. ECMO, VAD, IABP, other.
- **ECMO:** specify mode, configuration, machine type. Primary vs Secondary transport.
- **Adjuncts:** specify additional equipment, e.g. heater, ECLS adjunct, blood products, other.



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- **Transport:** specify transport equipment needs:

- Stretcher
- Tray(s)
- Pumps
- Ventilator
- Monitor/defibrillator
- Power source(s)
- Heat source(s)
- Blood products
- Medication – maintenance
- Medication – emergency/rescue
- ECMO – transport equipment

Perfusion



Paramedic

ADMINISTRATION

MD/RN



Perfusion

- **Referral Team:**

- Charge RN: human resources/staffing for transport.
- MD: sedation goals, hemodynamic goals, ECMO parameters, anticoagulation, blood products.
- Perfusionist: ECMO/ECLS tube length for transport, power sourcing, need for heater, oxygen source.
- RN: maintenance medication infusions, PRN medications, rescue/emergency medications.
- RT: ventilator settings.
- Unit Clerk: full chart, relevant diagnostic imaging/tests, consent(s).

- **Transport Team:**

Perfusion



Paramedic

- General Considerations: Crew Resource Management (CRM) and explicit roles and responsibilities prior to, and during all patient transfers and transport.
- MD: MD typically *not* needed for transport. ***Who is primary contact for on-line medical support if needed during transport*** (referring, EPOS, accepting?)
- Perfusionist: roles and responsibilities during transport.
- RN: roles and responsibilities during transport.
- RT: roles and responsibilities during transport.
- Paramedic: roles and responsibilities during transport. Explicitly note if PCP vs CCP crew.

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- **Accepting Team:**



- Charge RN: confirm critical care and human resources available and ready.
- MD: confirm accepting MRP and consulting MDs aware, anticipate medical and resuscitative needs.
- Perfusionist: confirm have compatible circuit/machinery and/or plan for transfer.
- RN: anticipate medical and resuscitative needs.
- RT: anticipate medical and resuscitative needs.
- Unit Clerk: confirm relevant documentation, diagnostic results, contacts and consents received.

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COMMUNICATION

- **Referral Team:**

- Charge RN: confirm operational readiness for movement and release of human resources (RN, RT, perfusion, MD, etc.)
- MD: MRP-to-MRP communication prior to departure and for handover once arrived at destination site. Family updated.
- Perfusionist: confirm have compatible circuit/machinery and/or plan for transfer.
- RN: communicate current and anticipated medical and resuscitative needs.
- RT: communicate current and anticipated medical and resuscitative needs.
- Unit Clerk: fax/copy results to/for accepting site.

- **Transport Team:**

- MD: MD typically *not* needed for transport. Who is primary contact for on-line medical support if needed during transport.
- Perfusionist: CRM roles and responsibilities during transfer and transport.
- RN: CRM roles and responsibilities during transfer and transport.
- RT: CRM roles and responsibilities during transfer and transport.
- Paramedic: CRM roles and responsibilities during transfer and transport. Explicitly note if PCP vs CCP crew.

- **Accepting Team:**

- Charge RN: confirm operational readiness for accepting patient on ECLS.
- MD: confirm operational readiness for accepting patient on ECLS, including any consulting MD services. Family updated.
- Perfusionist: confirm have compatible circuit/machinery and/or plan for transfer.
- RN: confirm ready to receive and support current and anticipated medical and resuscitative needs.
- RT: confirm ready to receive and support current and anticipated medical and resuscitative needs.
- Unit Clerk: confirm has received relevant documentation, diagnostic results, contacts and consents.

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Appendix 1: Minimal mobile ECMO equipment for consideration.

- Suitable blood pump, centrifugal or roller.
- Membrane oxygenator, appropriate for the patient size.
- Device(s) for heating and regulating circuit blood temperature (less critical for adult transports).
- Medical gas tanks, regulators, hoses, connectors, flow meters, and blenders for provision and adjustment of blended sweep gas to the oxygenator.
- Venous and arterial pressure monitoring device(s), according to center-specific practices
- Point-of-care anticoagulation/lab monitoring equipment, as indicated.
- Emergency pump or manual control mechanism in the event of primary pump failure or power failure.
- Uninterruptable power source(s) capable of meeting the electrical power needs of all equipment during transfer between vehicles and in the event of vehicle power source failure (*Note: personnel must be familiar with the voltage, current, and power requirements of all equipment*).
- Portable ultrasound machine, if not provided by the referring facility.