

5.0 PATIENT TRANSPORT

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The Patient Transport section will address the following recommendation statement: The transport service(s) should be promptly notified if the decision is made to transfer the patient to another hospital for definitive hemorrhage control. If required, the patient should be transferred as soon as and as safely as possible by appropriate staff and transport resources, to an institution where definitive hemorrhage control can be performed (Statement number 10).

This section will include additional information regarding: (1) Facilitation of Early Transfer (2) Patient Information Needed for Safe Handover (3) Patient Preparation (4) Transfusion Medicine.

5.1 Facilitation of Early Transfer

The transport medicine environment is challenging. To carry out the transport safely, the patient may need interventions prior to transport that would not be performed if the patient was not transported out to another hospital.

Can the patient receive definitive hemorrhage control in current facility?

If not:

1. Consider need for immediate transfer to definitive care setting
2. If transfer required, initiate request for transfer (Criticall 1-800-668-4357). Refer to Adult Appendix H.

To minimize the time the transport crew needs to prepare the patient for transport, please consider the following before the crew arrives:

1. Patient information
2. Patient preparation
3. Will blood components / products be necessary during patient transport?

If yes, contact the Transfusion Medicine Laboratory (TML) of sending facility immediately to have the blood components / products prepared.

Note: a dedicated transport team or transport personnel may not always be available to transport the patient.

5.2 Patient information

Have clinician available to communicate pertinent details to the dispatcher, transport physician or crew and answer further questions as required.

Physician to physician communication is often helpful, and Ornge has Transport Medicine Physician (TMP) for this purpose (if being transported by Ornge).

Communication by the sending physician:

- Determine care required in transport
- Communicate directly with receiving physician
- Ensure patient is optimized for transfer
- Make copies of all documentation for the transport crew to bring to the receiving hospital.



Communication with the receiving physician:

- Accept patient, ensure receiving facility can accommodate patient
- Provide advice if requested or necessary
- Notify relevant services - Admitting, Emergency Department (ED), Operating Room (OR), Diagnostic Imaging (DI), Intensive Care Unit (ICU), TML of patient's anticipated time of arrival.

Refer to MHP Checklist/Handover tool in Adult Appendix C and Pediatric Appendix E.

Note: there are space limitations in the transport vehicle that may preclude taking more than one box of blood

5.3 Patient Preparation

To minimize the time the transport crew spends preparing the patient for transport, a number of things can be done prior to the crew's arrival.

Consider the following as you prepare your patient for transport:

- Secure airway if compromised oxygenation / ventilation, or altered level of consciousness
- Recent arterial blood gas if mechanically ventilated
- Good intravenous access (≥ 2 large bore peripheral IVs)
- Consider a central and / or arterial line
- Insert urinary catheter and / or gastric tube if indicated
- Adequate supply of blood and blood products packaged for transport
- Spinal motion restrictions if concerned
- Splint extremity fractures if present
- Prevent inadvertent hypothermia: monitor temperature q30minutes
- Warm blankets, change q30minutes and immediately before handover to Emergency Medical Services (EMS)

5.4 Transfusion Medicine Laboratory

The TML of the sending hospital should notify TML of the Receiving hospital of the MHP and any pertinent patient information. If blood components / products are necessary during patient transport ensure they are packaged and documented properly to ensure continuation of traceability.

[Shipment of Blood Components/Products Accompanying a Patient](#)

[Interhospital Transfer Form - Blood Components/Products Accompanying a Patient](#)



Pediatric

Any pediatric MHP activation or risk of activation in a non-definitive hospital care setting requires contact with specialized services (e.g., CritiCall in the province of Ontario) to provide care guidance and facilitate transfer to a pediatric definitive hospital care setting as soon as possible. For more information please refer to pediatric section 15.0 and associated learning aids (CritiCall "Cheat Sheet" and inter-hospital patient handover tool) located in the Adult appendices.



PREPARING THE MHP PATIENT FOR TRANSPORT

To carry out transport safely, the patient may require interventions prior to transport. To minimize time the transport crew needs to prepare the patient for transport, please consider preparing or carrying out the following items before the crew arrives:



Pre-Transport Checklist

Action	Initials
Patient information	
<input type="checkbox"/> Incident history and relevant past medical history	
<input type="checkbox"/> Medications and allergies	
<input type="checkbox"/> Treatment and response to treatment	
<input type="checkbox"/> Equipment, ongoing infusions and therapies required during transport	
<input type="checkbox"/> Recent vital signs and pertinent physical findings	
<input type="checkbox"/> 12-lead ECGs (when pertinent)	
<input type="checkbox"/> Lab test results	
<input type="checkbox"/> Diagnostic imaging results – crew may wish to view images	
<input type="checkbox"/> Resuscitation status: DNR or advanced directives	
<input type="checkbox"/> Complete and copy documentation for products transfused and accompanying patient <input type="checkbox"/> TXA _____ grams <input type="checkbox"/> Number of blood components transfused ____ RBCs ____ FP ____ Plts ____ Grams of Fibrinogen concentrate ____ IU of PCC <input type="checkbox"/> Total IV crystalloid and/or colloid and urine output <input type="checkbox"/> Temperature * refer to MHP Checklist/Handover Tool in appendices ** Note: space limitations in the transport vehicle may preclude taking more than one box of blood	
Patient Preparation	
<input type="checkbox"/> Secure airway if compromised oxygenation / ventilation, or altered level of consciousness	
<input type="checkbox"/> Recent arterial blood gas if mechanically ventilated	
<input type="checkbox"/> Good intravenous access (≥ 2 large bore peripheral IVs)	
<input type="checkbox"/> Consider a central and / or arterial line	
<input type="checkbox"/> Insert urinary catheter and / or gastric tube if indicated	
<input type="checkbox"/> Adequate supply of blood products packaged for transport	
<input type="checkbox"/> Spinal motion restrictions if concerned	
<input type="checkbox"/> Splint extremity fractures if present	
<input type="checkbox"/> Prevent inadvertent hypothermia: monitor temperature q30 minutes Warm blankets change q30 and immediately before handover to EMS	



MHP Patient Transport



Pre-hospital, Pre-activation

- Consider notifying Transfusion Service of need for blood components if patient meets MHP activation criteria



MHP Activation

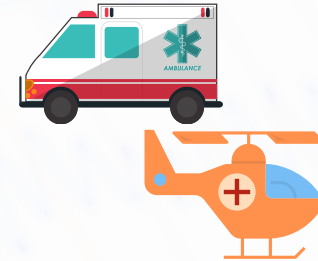
- Follow algorithm for hospital size to activate MHP
- Can definitive hemorrhage control be achieved at current hospital site?
- If not, consider need for immediate transfer to definitive care setting
- Initiate call for transfer



Initiate request CriteCall Ontario

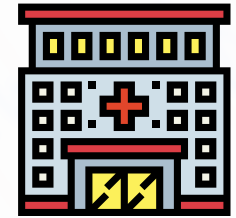
1-800-668-4357 (HELP)

- CriteCall will gather information and connect sending facility staff with appropriate transport agency
- Inform Transfusion Service to package blood components for transport



Transport Patient

- Transport by land or air may involve local paramedic/ambulance service or Ornge
- Continue MHP during transport if within the scope of practice of the transport team
- Maintain original packaging of blood components to avoid wastage



Definitive care hospital setting

- Transfusion Service of sending hospital should communicate with Transfusion Service of receiving hospital - pertinent patient information
- Return unused blood components to Transfusion Service at receiving hospital



WHEN TO TRANSFER THE MASSIVELY BLEEDING PATIENT



Patient experiencing
or at high risk of
massive hemorrhage



1. Poor BP response to fluids
2. Obvious bleeding
3. Hypotension

Or use local
activation
criteria

CAN YOUR FACILITY ACHIEVE HEMOSTASIS ?

ACHIEVE
SOURCE
CONTROL



STOCK
REQUIRED
BLOOD AND
BLOOD
PRODUCTS



LABORATORY
TESTING TO
MONITOR
HEMOSTASIS

By any of the following:

- Caesarean Deliveries
- Laparotomy
- Treatment of Open Fractures
- Vascular Emergencies
- Esophageal, Gastric, Uterine and Aortic Balloon Tamponade
- Tourniquets and Pelvic Binders
- Hemostatic Gauze

Know your blood and
blood product inventory

Consumption of blood
products outpaces ability to
restock inventory (from
nearby hospital or CBS)

Does your facility
routinely test for:

CBC
INR
aPTT (at baseline only)
Fibrinogen,
Electrolytes,
Calcium (ionized),
Arterial or Venous blood gas
(pH and base excess)
Lactate

If No Then:

TRANSFER PATIENT IMMEDIATELY TO A FACILITY THAT CAN

IF TIMELY TRANSFER NOT AVAILABLE THEN CONTACT YOUR LABORATORY TO ORDER BLOOD AND BLOOD PRODUCTS FROM NEARBY HOSPITAL OR CBS (WHICHEVER IS QUICKER) UNTIL TRANSFER AVAILABLE