

For DCC Heart Offers to U.S. Hospitals

From: Ontario Health (Trillium Gift of Life Network [TGLN])

Re: Offer of Heart from a Death Determination by Circulatory Criteria (DCC) Donor

Ontario currently does not transplant hearts from DCC donors. Eligible DCC donor hearts will be offered to the United Network for Organ Sharing (UNOS) and allocated as per UNOS allocation policies. The accepting Organ Procurement Organizations (OPOs) from the United States of America (U.S.) must complete and submit the form under Appendix A to OH-TGLN_CSC@ontariohealth.ca.

Ontario Health (TGLN) Acceptance Requirements:

Ontario Health (TGLN) reserves the right to decline a DCC heart acceptance if the accepting program is unable to meet Ontario Health (TGLN) requirements (including but not limited to):

- Inability to recover within pre-determined timelines
- Inability to provide proof of credentialing and licensure (if applicable)
- Inability to provide the requisite equipment and the requested equipment documentation.

Ontario DCC Process Details

To accompany the clinical information regarding the heart offer, please see below for details on DCC processes in Ontario, Canada:

Withdrawal of Life Sustaining Measures (WLSM) / Invasive Physiologic Support

- This occurs at an agreed upon time (family, hospital, recovery teams) and at a location in close proximity to the operating room, with usually less than 2 minutes travel time after death is determined by two physicians according to the *Gift of Life Act*.
- We do not use timing of death prediction tools and actively discourage their use in general.
- The hospital team determines end of life care (palliative medications, timing of extubation) without advice or requests from the recovery teams. Transplant teams usually request either 500 units/kg or 1000 units/kg of heparin be administered 5 minutes prior to withdrawal of support. The dose is determined by the abdominal recovery team.
- Ontario Health (TGLN) staff facilitate transfer and communication of timed events (extubation, vital signs, determination of death.)
- By policy and Ontario law, clear separation of the donation support teams and any personnel related to transplant are required during this phase and afterwards.
- Recovery teams are staged in the operating room or close to the OR (in a sterile core hallway).
- Preparation and draping of the patient or positioning of the patient during the withdrawal of life sustaining measures process is not done in Canada.
- Current practice is to wait up to 3 hours for the patient to die. Organ viability is determined by individual transplant teams based on their own criteria.

If applicable, in addition to the WLSM/Invasive Physiologic Support details above the following are specific to DCC following Medical Assistance in Dying (MAID):

DCC following MAID

- This occurs at an agreed upon time as determined by the patient, MAID provider, recovery hospital and recovery teams.
- The selected time of the MAID provision is not flexible. It is crucial that the recovery teams arrive at the recovery hospital at least 1 hour prior to the planned MAID provision.
- The MAID provider, in collaboration with the patient, determines and administers the end of life medications.

Death Determination by Circulatory Criteria

- Death is determined when:
 - a. Absence of pulse pressure monitored by a continuously functioning arterial line; AND
 - b. Absence of respiratory effort (apnea);
AND
 - c. Absence of palpable pulse at the beginning and end of the 5-minute observation period
- A 5-minute “hands off period” is observed in all cases. The patient will not be moved or transferred during this period.
- Two physicians completely outside of the transplant process are required to determine death.

Operating Room Set Up

- Recovery teams must arrive at the recovery hospital 1 hour prior to the withdrawal time or MAID provision time if applicable.
- Recovery teams may be required to bring a sternal saw and retractor if not available at the donor hospital.
- Thoraco-Abdominal normothermic regional perfusion is currently **not** permitted in Ontario.
- Recovery teams will be provided regular updates on patient condition post-WLSM
- When lungs are being recovered, an anesthesiologist or respiratory therapist will provide for reintubation and lung inflation after death is determined.
- Inflation of the lung is permitted after death determination. Tidal volume ventilation must not occur until 10 minutes post death determination. At no time is *in situ* cardiac massage permitted.
- An Ontario Health (TGLN) Surgical Recovery Coordinator is present for the duration of the recovery OR and facilitates the packaging and transportation of recovered organs. However, the heart team must bring all required supplied and be prepared to be entirely self-sufficient in recovery.
- OR staff (scrub nurse, circulating nurse, anesthesia) is provided by the recovery hospital.
- A surgical note describing the recovery must be left at the hospital prior to departure. The following should be included on the form: hospital name, date of recovery, patient name, MRN, team members and roles, procedure description and machine used.

Post-Transplant Donor Family & Recipient Communication

- The Gift of Life Act prohibits the identification of the patient as a donor without the donor’s consent which is usually not obtainable.
- Connection between the recipient and donor is not possible under current law in Ontario.
- Our coordinators will connect with the program to confirm successful transplant within 24 hours.
- Culture result follow up will be provided to transplant programs by the Provincial Resource Centre (PRC) Staff as soon as results are available.
- The recipient or family may wish to write a letter of thanks or communicate an update to the family. The communication is facilitated and anonymized by our family services department who can be reached at familyservices@ontariohealth.ca

Sharing Donor Imaging

Images are shared in one of two forms:

- via *PocketHealth* link with a password (this is sent in an email separate to this)
- via *Synclink*
- Images without an extension are in DICOM format and need to be read using a DICOM viewer.
- For Mac/Apple computers, the downloadable *BeeDICOM* viewer works well.
- For PCs, there are many (including MicroDicom, dicomviewer.net, and others).
- It is possible the echo images will also appear in a different format for viewing.

Appendix A

U.S. OPO Recovery Program who have accepted a heart from a DCC donor in Ontario: Please complete the section below in full and email the completed document to OH-TGLN_CSC@ontariohealth.ca.

Following the submission of this form, a Clinical Services Coordinator will schedule a Recovery Team Huddle via **Telephone Conference Call**. This call should **include the recovering surgeon and perfusion specialist** who will operate the machine. As DCC heart retrieval is new in Canada, this call is required to coordinate the logistics of DCC heart recovery in Ontario and prepare your team for arrival and retrieval of the heart at an Ontario hospital.

Name of U.S. Recovery Program: _____ Date: Click or tap to enter a date.	
UNOS ID: _____	MATCH ID: _____
Recipient Age: _____	Gender: <input type="checkbox"/> M / <input type="checkbox"/> F
Perfusion Machine Ontario Health (TGLN) requires the following equipment related information to be submitted prior to recovery. 1. Name of extracorporeal perfusion machine that will be used to transport the heart: _____	
2. Required attachments: <input type="checkbox"/> Confirmation that the device conforms to the Canadian Standards Association (CSA) and/or International Electrotechnical Commission (IEC) standards (e.g. photo of Intertek Sticker on machine)	
Recovery Team Names and Credentialing Information Recovery team names and related credentialing information is required by the donor hospital ahead of the team's arrival. If this information is not provided, recovery team members may be denied access to donor operating rooms by the recovery hospital. 3. How many team members will be attending the donor OR? _____	
4. Names of Surgeons and Personnel attending and role(s):	
Name (first, last)	Role(s)
_____	_____
_____	_____
_____	_____
5. Required attachments for all members: <input type="checkbox"/> Copies of all medical licenses to practice in the receiving state <input type="checkbox"/> A copy of evidence of malpractice insurance (if applicable)	
Note: that team members are required to bring the following with them to the recovery hospital:	
<ul style="list-style-type: none">• Photo ID from their practicing hospital or organization• Copy of medical license and malpractice insurance	
<i>Team members may be required to sign a form indicating they will abide by hospital policies and procedures on arrival at the donor hospital.</i>	
Operating Room 6. Ontario teams ask recovery teams to wait up to 3 hours after Withdrawal of Lifesaving Measures (WSLM). Is this acceptable to you? <input type="checkbox"/> Y / <input type="checkbox"/> N Comment (if applicable): _____	
7. Typical definition of fWIT is SBP below 50 to flush of the organ (with a clock restart if the SBP rebounds in the first 5 minutes). Is this the definition of fWIT you will use during recovery? <input type="checkbox"/> Y / <input type="checkbox"/> N Comment (if applicable): _____	
<i>Note: If you are the only program retrieving an organ from the donor, you must close all incisions.</i>	
Transportation and Travel to Canada <u>Booking and Communicating Transportation</u>	

Your program is responsible for arranging air and ground transportation to and from the donor hospital. All expenses related to the recovery team including travel, equipment, consumables, and supplies is the responsibility of the U.S. OPO.

Prior to booking any travel to clarify logistical requirements, contact Ontario Health (TGLN)'s PRC staff at 1-888-603-1399 (toll-free) to notify us of your travel times and transportation arrangements. This request is important to ensure that we are fully respecting the donor family's WLSM timelines. Further, this will inform timing for the Recovery Team Huddle and ensure all details of recovery are properly aligned.

It is necessary to arrive **at the recovery hospital** a minimum of **one hour** prior to the time set for WLSM or MAID provision for an in-person huddle with OR and surgical staff. If you do not arrive by this time, it is possible that the OR will proceed without your attendance.

8. Do you need Ontario Health (TGLN) support in arranging ground transportation? **Y** / **N**
Comment (if applicable): _____

9. When is your arrival time?
Date: Click or tap to enter a date. **Time (Eastern Time):** Click or tap here to enter text.

Cross Border Travel Considerations

It is the responsibility of the U.S. OPO to ensure that all members of the recovery team, equipment, consumables, and supplies meet current requirements for cross border travel and admission to Canada as per the Canada Border Services Agency. Ontario Health (TGLN) highly suggests that pre-clearance approval is obtained so as not to delay recovery timelines.

Equipment and Supplies

Blood Collection

10. Does your team require blood from the donor hospital blood bank? **Y** / **N**
a. If so, how many units of cross-matched packed red blood cells should be available?

11. Do you require the red blood cells to be washed? **Y** / **N**

Note: *The recovery team must bring all other required supplies and perfusion/preservation solutions.*

Submitter Name: _____

Role/Title: _____

Recovery Program/Agency: _____

Contact Number: _____

Contact Email: _____