

Implementation of Donation Advisor - a Personalized Clinical Decision Support Tool for Improved Efficiency and Effectiveness of Deceased Organ Donation and Transplantation

What is this project about?

Project background

Patients with non-recoverable illnesses who are undergoing withdrawal of life sustaining measures can donate organs by a process called donation after circulatory determined death (DCD). However, a challenge related to this population's willingness to donate is the inability to predict accurately if a potential donor will die within an eligible time-period and manner for donation. In addition, it may be painful for families to consent to this process and can limit the availability of organs for donation.

Objectives

This project aims to implement and evaluate a clinical decision support tool, called *Donor Advisor*, in six hospitals, which will assist in identifying potential DCD donors.

Overview of activities

- Implement and evaluate the *Donor Advisor* tool with the consent of families in six hospitals.
- Assess organ suitability via biomedical waveform analysis (i.e. heart rate and blood pressure) to determine physiological patterns associated with organ ischemia.
- Evaluate the *Donor Advisor* tool in collaboration with health care clinicians.
- Assess the experience of DCD patients with respect to the implementation of the *Donor Advisor* tool.

**EXPECTED PROJECT
COMPLETION IN 2022**

How will the project improve the organ donation and transplantation system in Canada?

The project will contribute to:

- Assisting health care teams in identifying potential DCD donors.
- Reducing missed opportunities and enhancing family experience of donation.
- Increasing the number of quality transplantations through a clear indication of likelihood of DCD success prior to withdrawal of life-sustaining measures.
- Providing evidence for the use of the *Donor Advisor* tool as a feasible and cost-effective way to enhance DCD in all donation centres.

The project leads

The project is led by the Children's Hospital in Eastern Ontario Research Institute Inc.(CHEO-RI).



Dr. Sonny Dhanani
Chief, Critical Care, CHEO
Associate Professor, University of
Ottawa

"We are excited to implement this novel tool in multiple centers and get the feedback from Ontario clinicians regarding its feasibility, usability and potential to materially improve donation and transplantation."



Dr. Andrew Seely
Professor, University of Ottawa
Scientist, Ottawa Hospital
Research Institute

The Organ Donation and Transplantation Collaborative is an initiative led by Health Canada with provinces and territories (except Québec), Canadian Blood Services, patients, families, clinicians and researchers. Funded by Health Canada, the project *Implementation of Donation Advisor - a Personalized Clinical Decision Support Tool for Improved Efficiency and Effectiveness of Deceased Organ Donation and Transplantation* contributes to the Collaborative's vision to achieve organ donation and transplantation system improvements that result in better patient outcomes and an increase in the number and quality of successful transplantations. For more information, please consult the Organ Donation and Transplantation Collaborative (the Collaborative) website:

<https://tinyurl.com/ODTCollaborative>.