



Death Prediction and Physiology after Removal of Therapy The DePPaRT Study

Frequently Asked Questions - General

Q: What is donation after cardiac death (DCD)?

A: “Cardiac death”, “cardiovascular death”, or “cardio-circulatory death” occurs when the cardiovascular system (heart and lungs) stop working. This means no more blood is being moved around the body, and the organs, muscles (including the heart), and brain are no longer getting any oxygen and therefore cannot function. Usually this happens after a decision has been made to remove a person from life support (support to help them breathe and/or to help blood move around the body). At the time of declaration of cardio-circulatory death, a person will not be receiving any medical interventions. Donation after cardiac death is when organs are procured following a declaration of cardio-circulatory death.

Q: How is DCD different from donation after brain death?

A: “Brain death”, or a neurological determination of death, occurs when the brain permanently ceases all functioning. In many cases, when the brain is no longer functioning and when a person is declared brain dead, other organs and vital systems of the body such as the circulation and breathing can still be maintained through machines. Organs donated from a person who is declared brain dead can be provided with oxygen and kept functioning up until the moment of organ procurement. In organ donation after declaration of cardio-circulatory death this is not the case, since life sustaining interventions are removed before the person dies. In donation after cardio-circulatory death, there is a period where organs can be deprived of oxygen and could be damaged if the period of time between withdrawal of life sustaining therapy and declaration of death takes too long.

Q: Why do we need to improve rates of DCD?

A: In the past few decades in Canada, donation of organs after a declaration of brain death has been the most common way that people donate organs after death. Fortunately, the diagnosis of brain death is not very common, and is becoming even less common as we improve the uptake of safety measures such as seatbelts and helmets. At the same time, increasing numbers of Canadians are ending up on the transplant waiting list after years of suffering from chronic diseases such as diabetes, cirrhosis, and heart disease. The numbers of organs procured from donation after brain death is not enough to keep up with the number of people who are waiting for a

transplant. Therefore, in order to continue to help patients who are on the waiting list for organ transplants, we need to increase the number of organs that are procured from other categories of donors, including donation after cardio-circulatory death.

Q: How can we improve rates of DCD?

A: We need more information. While many people are certainly keen on working towards improving the rates of DCD, there are a number of questions about DCD that cause some people to hesitate about embracing this category of donors. Providing more information to help answer some of these questions will help transplant centers, physicians, potential donors, and their families to make informed decisions about choosing to donate organs after cardio-circulatory death. In addition to answering these core questions, we also need to gather more information about the best methods of performing DCD.

Q: What are the areas where we need more information about DCD?

A: The major remaining questions regarding DCD have to do with the definition and declaration of cardio-circulatory death, the period of time to wait before organ procurement begins, and how to predict whether the time from withdrawal of life sustaining therapy to death will be short enough to ensure that organs will not be damaged.

Q: Will the DePPaRT study be able to answer these questions?

A: The DePPaRT study will collect detailed information about the process of withdrawal of life sustaining interventions and the period after the declaration of cardio-circulatory death. Information of this kind has never been collected in such detail before. The data collected will be valuable for the ongoing discussion of questions regarding DCD, and will provide information to help policy makers to make decisions about how DCD is done in Canada. Our goal is that by helping to address the questions and concerns surrounding DCD that we will help to move the practice of DCD forward in Canada and worldwide.