


# The Organ & Tissue Donation Process



Wendy Sherry, RN BScN  
Bernard Tremblay, RN  
MUHC Nurse Clinicians for  
Organ & Tissue Donation



# Conflict of Interest

I do not have an affiliation (financial or otherwise) with a commercial entity



# Presentation Goals

- To promote interest in organ & tissue donation
- To provide medical and nursing staff with appropriate tools to facilitate family approach



# Presentation Objectives

- To identify potential organ & tissue donors
- To recognize neurological death
- To advocate for the family's right to be offered the option of donation
- To accept deceased donation as a standard component of end of life care



# End of Life Care Includes Donation

- To ensure that all families of patients dying from an irreversible brain injury are sensitively asked about the option to donate at the appropriate time, while supporting and respecting their individual and cultural needs, as well as their religious beliefs
- To recognize that healthcare professionals' cultural and religious norms can affect the process



# MUHC OTD Program

- A nurse clinician is available 24/7 to assist with the family approach process
- Respect the choice of the individual and/or family members
- Facilitate the donation process
- Quality assurance chart reviews and statistics
- Dissemination of up to date information on OTD for healthcare professionals and the general public
- Evidenced-based practice



# Role of MUHC OTD Nurse Clinician

- Begins when a member of the treating team calls
- Meet with families who verbally express interest in OTD to explain the process
- Obtain consent
- Tailored therapeutic interventions
- End of Life Rituals
- Family bereavement support
- Debriefing and team member support



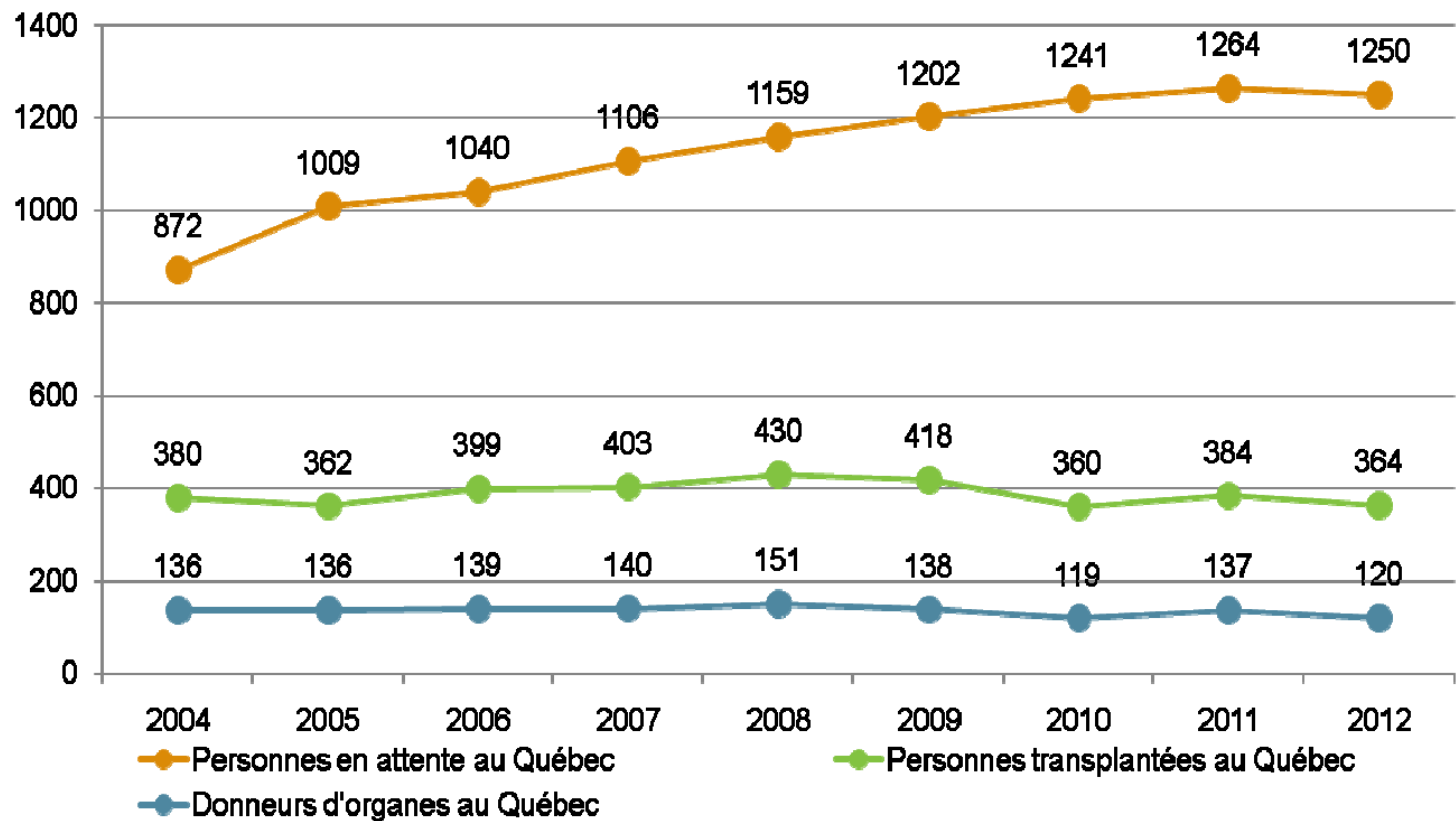
# Quebec Reality

- Over 1250 individuals are awaiting transplant, an average of 50 people die every year
- The MUHC carries out more than 25% of the province's transplants
- Quebec is the only province with a cornea transplant waiting list





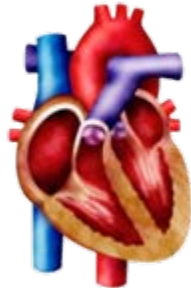
# Comparison of Recipient Waiting list to Realized Deceased Donors in Quebec (2004 to 2012)





# Estimated Waiting Time in 2012

**189  
days**



**770  
days**



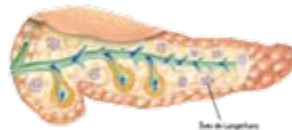
**210  
days**



**1220  
days**



**78  
days**



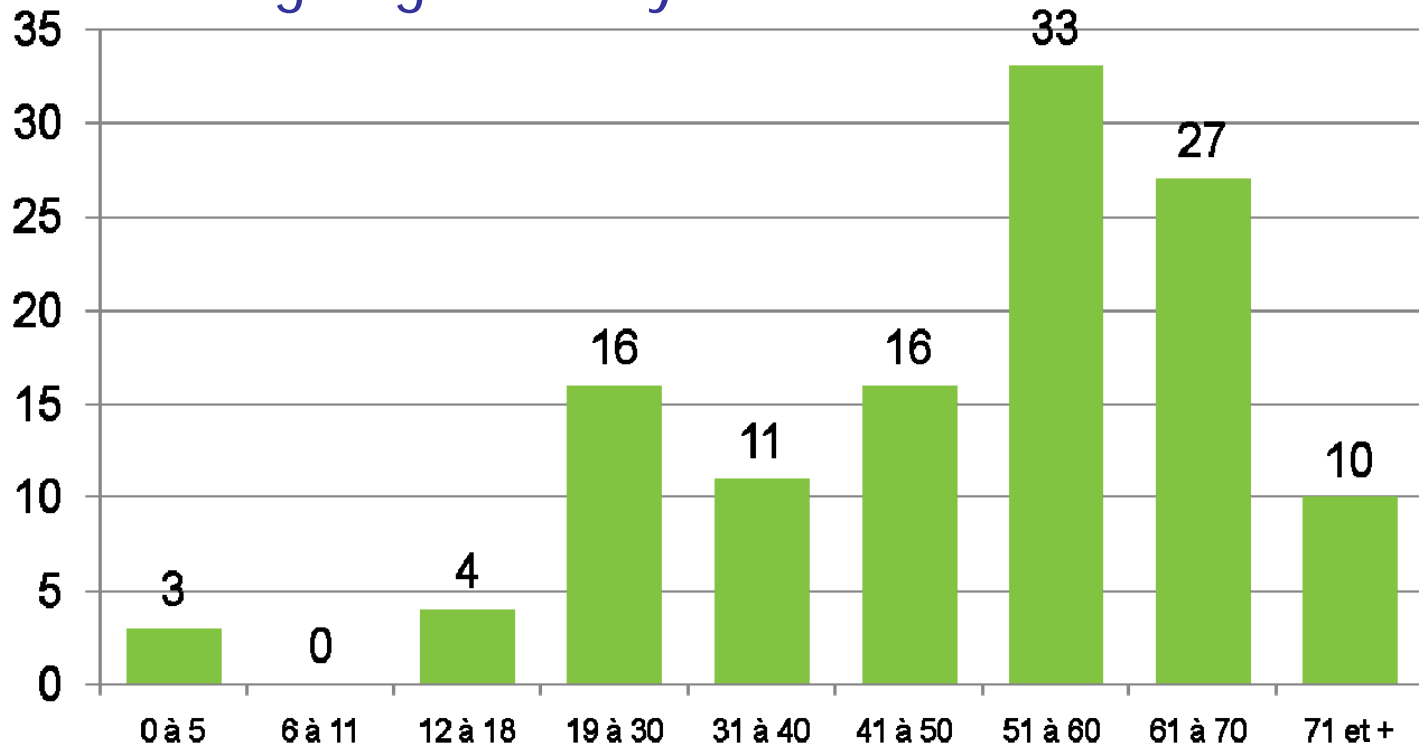
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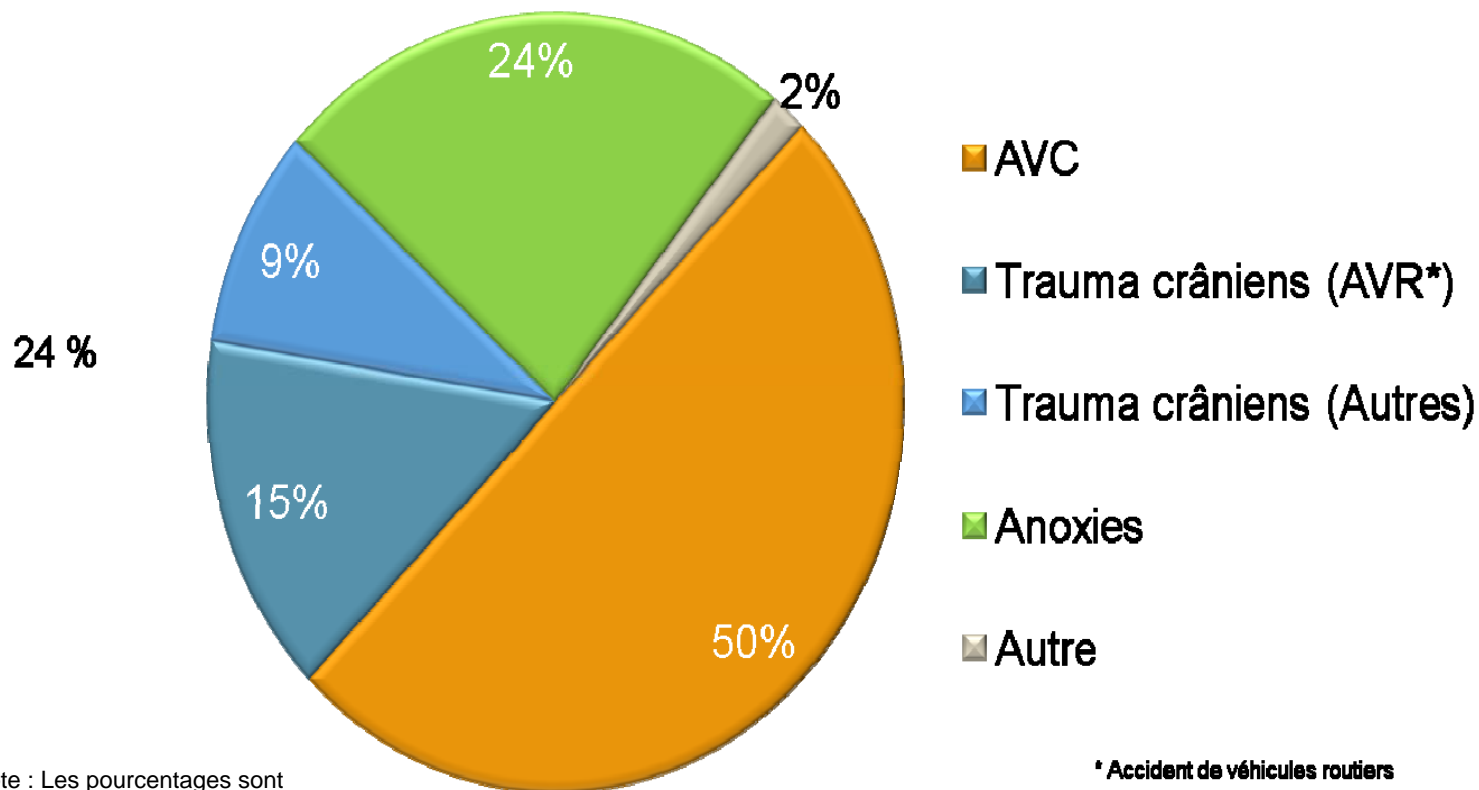
# Number of Organ donors (120) by age group for 2012

Average age: 50.1 years





# Causes of Organ Donor Death in 2012



Note : Les pourcentages sont arrondis à l'unité suivante.

\* Accident de véhicules routiers



# Types of Deceased Donation

## Neurological Determination of Death (NDD)

- MUST meet established criteria
- <2% of deaths
- Can donate organs & tissues

## Donation after Cardiocirculatory Death (DCD)

- “Controlled” death
- ~10% of deaths
- Some organs & tissues



# Definition of NDD

**NDD: Neurological Determination of Death**

**The irreversible loss of the capacity for consciousness combined with the irreversible loss of all brainstem functions, including the capacity to breathe**

**(CCDT, 2003)**



# Definition of Controlled DCD

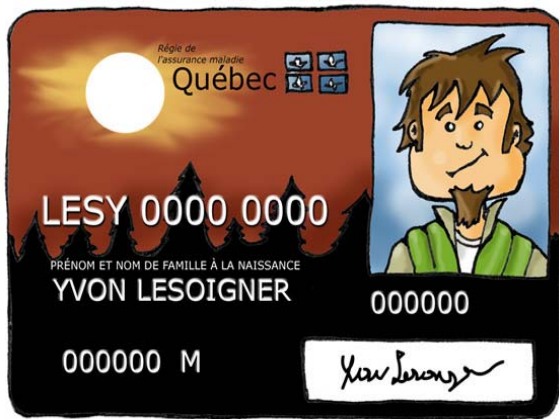
**DCD: Donation after Cardiocirculatory Death**

**Patients who do not fulfill neurological criteria for death and for whom continuing medical care may be considered futile. Death is anticipated to occur imminently upon withdrawal of life-sustaining therapy.**

**(CCDT, 2006: Maastricht Category III)**

# Expressing the Decision to Donate

Signed donation sticker on the Medicare card



Notary Registry



RAMQ Registry







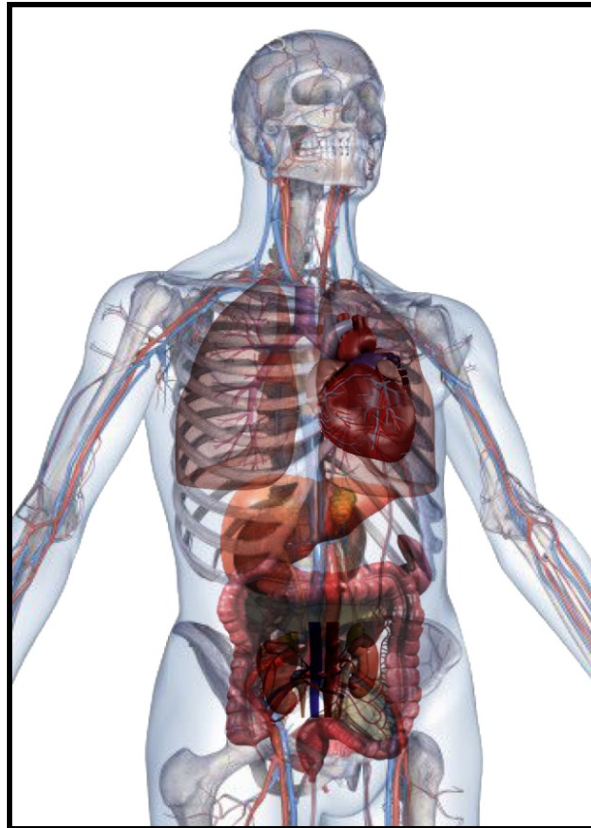
**Most Importantly  
Communicate Your wishes...**



# What Organs & Tissues can be Transplanted?

## Organs

- Heart
- Lungs
- Kidneys
- Liver
- Pancreas
- Bowels



Organ donors can also be tissue donors

## Tissues

- Corneas
- Tendons
- Skin
- Cardiac valves
- Bones
- Veins/ligaments





# Eligibility Criteria

Review is carried out BEFORE approaching family members

- Age
- Medical history
- Travel history (if in patient's chart)
- Discussions with Transplant Québec and / or Héma-Québec prn



# Tissue Donation

Ask the family if they would be interested in talking about tissue donation

The Héma-Québec coordinator will take care of the rest!

**Don**  
d'yeux et de  
tissus

Pour référer un donneur  
d'yeux ou de tissus faites le :

**1 888 366-7338**  
**1 888 DONS DE VIE**



# Tissue Donation

## Primary Exclusion Criteria

- Active systemic infection
- Degenerative neurological diseases
- Blood borne cancers
- HIV virus, AIDS
- Hepatitis B or C
- Sexual orientation
- Social history

## Tissue and Age Groups

- Heart valves: birth to 60 years; min. weight 2.7 kgs (6lbs)
- Skin: 15-70 years
- Tendons: 15-60 years
- Bone: 15-70 years
- Eyes: 2-85 years



# IMPORTANT!

A deceased person can still donate their corneas even if they have a solid tumor cancer with metastases





# The Law and Deceased Donation

## Organ & Tissue Donation

- Death is confirmed by two physicians
- Time of death on SP-3
- Provincial consent form completed by MUHC nurse clinicians
- Chart documentation

## Tissue Donation

- Death is confirmed by one physician
- Provincial consent form completed by Héma-Québec coordinator
- Chart documentation



## The Coroner's Role

Release of body for donation purposes is evaluated on a case by case basis

- Conditional release
- Photocopy of the patient's chart
- Autopsy







# Donor Management Guidelines

**GUIDE** RELATIF À L'ÉVALUATION ET AU MAINTIEN DU DONNEUR ADULTE

TRANSPANT QUÉBEC

**Les ordonnances de base**  
Ces suggestions servent de guide mais ne remplacent aucunement l'approche intégrée au jugement clinique.

**Positionnement du patient** **A**

- i) Tête de lit à 30°
- ii) Mobiliser q 2 h

**Diète** **B**

- i) Gavage standard à 1 kcal/kg/h
- ii) Ne pas initier l'alimentation parentérale. Cependant, continuer si déjà en cours.

**Hydratation** **C**

- i) Soluté 05 % Salin 0,45 % KCl 20 mEq/L à 100 cc/h (diluer soluté isotonique en cas d'hyponatrémie)

**Monitoring minimal requis et objectifs visés** **D**

- i) Moniteur cardiaque
- ii) Canule artérielle; noter la tension artérielle (TA) q 1 h, viser :
  - Tension artérielle moyenne (TAM) 65-90 mmHg
  - TA systolique 100-160 mmHg
  - fréquence cardiaque (FC) 60-120 bpm
- iii) Sauromètre en continu; noter la saturation q 1 h, viser ≥ 95 %
- iv) Tension veineuse centrale (TVC); noter la TVC q 1 h, viser 5-10 mmHg
- v) Sonde urinaire; contrôle strict des ingesta et excrétas, noter la diurèse horaire, viser 0,5-3 cc/kg/h
- vi) Sonde nasogastrique en drainage libre (si non alimenté)
- vii) Glycémies capillaires q 1 h, viser 4-8 mmol/L
- viii) Température corporelle q 4 h, viser 36,0-38,0 °C

**Ventilation** **E**

- i) Mode assisté contrôlé
- ii) Volume courant (VC); 6-8 cc/kg de poids idéal
- iii) Pression positive titré/inspiratoire (PEEP); minimum de 5 à 10 cm H<sub>2</sub>O
- iv) Fréquence ventilatoire pour obtenir une PaCO<sub>2</sub> artérielle entre 35-45 mmHg, si possible
- v) Fraction inspirée en O<sub>2</sub> (FIO<sub>2</sub>) minimale pour une saturation ≥ 95 %

**Soin des yeux** **F**

- i) Maintenir les paupières fermées
- ii) Nettoyer les paupières avec NaCl q 4 h et PRN
- iii) Éviter les corps gras

**Prophylaxie** **G**

- i) Héparine 5000 unités sc aux 12 heures (ou héparine à bas poids moléculaire selon le protocole de l'établissement) et/ou port de bas à compression séquentielle intermittente

**Évaluation du donneur** **H**

	CI de l'identification	CI de prélevement*
<b>Initialement</b>	<ul style="list-style-type: none"><li>• Groupe sanguin + antécéps</li><li>• Poids / Taille</li><li>• Analyse et culture d'urine + hémoculture X2</li><li>• Rx pulmonaire + ECG</li><li>• Gram et culture des sécrétions bronchiques</li></ul>	<ul style="list-style-type: none"><li>• Groupe sanguin + antécéps + cross-match</li><li>• 4 tubes glycoliques en rétro</li><li>• Poids / Taille</li><li>• Analyse et culture d'urine</li><li>• Rx pulmonaire + ECG</li><li>• Gram et culture des sécrétions bronchiques</li><li>• Hémoculture X2</li><li>• Echo abdominale pour donneur &gt; 50 ans</li></ul>
<b>i) q 4 h</b>	FSC, PTE, INR, Na, K, Cl, Urée, créatinine, lactate, saturation veineuse en oxygène (SVO <sub>2</sub> ) si cathéter de l'artère pulmonaire en place (voir section 6), gazométrie artérielle q 2-4 h (voir section X)	
<b>ii) q 8 h</b>	Cl, Mg, Ca, PO <sub>4</sub> , AST, ALT, Ph Alz, bilirubine totale et directe, GGT, LDH, CK, CKMB, troponine I ou T, amylase et lipase	
<b>iii) q 12 h</b>	Analyse d'urine	
<b>iv) q 24 h et PRN</b>	Rx pulmonaire, ECG, protéine, albumine	

\*Sérologie, virologie et hépatites à exclure par l'opérateur de coordination ou le conciliant de l'établissement de Transplant Québec.

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Available on-line via the MUHC intranet, OTD binder and Transplant Québec's web site



# Ischemia Time to Transplant



## Organ Viability

- Heart: 4 to 6 h
- Lungs: 4 to 6 h
- Pancreas: 6 to 12 h
- Liver: 12 to 16 h
- Kidneys: 24 to 48 h



# A few last statistics...

## The oldest

**heart** donor → 66 years

**liver** donor → 88 years

**kidney** donor → 82 years

**lung** donor → 76 years

**pancreas** donor → 50 years

The **youngest** donor → 2 days old



## A few last thoughts...

Utilize a humanistic approach

- Remember that a family needs time to accept and process what they have been told
- Each family is unique
- When a family is well supported and they understand what we are asking of the them, the result will be what best suits the family

**Thank You!**  
**Merci!**

