Donor Management –
A Canadian Perspective

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COI / Bias

Trillium Gift of Life Network
the problems
Organs Required by Canadians in 2013

Donations and Need

- Heart: 192 transplants, 167 on waiting list, 20 deaths while waiting
- Lungs: 247 transplants, 314 on waiting list, 52 deaths while waiting
- Kidneys*: 1,419 transplants, 3,382 on dialysis waiting list, 88 deaths while waiting
- Liver: 509 transplants, 498 on waiting list, 86 deaths while waiting

- Transplants
- Waiting List
- Deaths While Waiting

24,114 Canadians were on dialysis waiting list
17,817 Canadians had a working kidney transplant
What we know (& don’t)  Never No Strategy  Heparin in DCD
organ yield
The Impact of Meeting Donor Management Goals on the Number of Organs Transplanted per Expanded Criteria Donor
A Prospective Study From the UNOS Region 5 Donor Management Goals Workgroup

Madhukar S. Patel, MD, MBA, ScM; John Zatarain, MD; Salvador De La Cruz, MD; Mitchell B. Sally, MD; Tyler Ewing, BS; Megan Crutchfield, MPH; C. Kristian Enestvedt, MD; Darren J. Malinoski, MD

Published online July 23, 2014.

↑ DMGs met → ↑ Organs per donor
Effect of a Lung Protective Strategy for Organ Donors on Eligibility and Availability of Lungs for Transplantation

A Randomized Controlled Trial

Luciana Mascia, MD, PhD

Context: Many potential donor lungs deteriorate between the time of brain death

TV 6-8 mL/kg
PEEP 8-10 cm H₂O
CPAP for apnea

NNT = 4

↑ # eligible / recovered lungs
no difference in survival
Organ donor management in Canada: recommendations of the forum on Medical Management to Optimize Donor Organ Potential

Sam D. Shemie, Heather Ross, Joe Pagliarello, Andrew J. Baker, Paul D. Greig, Tracy Brand, Sandra Cockfield, Shaf Keshavjee, Peter Nickerson, Vivek Rao, Cameron Guest, Kimberly Young, Christopher Doig; on behalf of the Pediatric Recommendations Group

In collaboration with the Canadian Critical Care Society, the Canadian Association of Transplantation and the Canadian Society of Transplantation, the Canadian Council for Donation and Transplantation (CCDT) sponsored a forum entitled “Medical Management to Optimize donor management guidelines; and material from related conferences and workshops) • To develop expert consensus recommendations for organ-protective therapies in the ICU and intraoperative management of the organ donor

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Standard Therapy

Hemodynamics (PAC)

(Lung Protective Ventilation)

Hormonal Therapy

Steroids

T4

Vasopressin
A systematic review and meta-analysis of clinical trials of thyroid hormone administration to brain dead potential organ donors*

Peter S. Macdonald, MD, PhD; Anders Aneman, MD, PhD; Deepak Bhonagiri, MD; Daryl Jones, BSc (Hons), MD; Gerry O'Callaghan, MB, BCh, BAO; William Silvester, MBBS; Alasdair Watson, MBBS; Geoffrey Dobb, BSc, MBBS


No role for routine T4

Current recommendations in marginal donors = marginal evidence

No evidence of harm
Corticosteroids in the management of brain-dead potential organ donors: a systematic review

S. Dupuis¹,²,³*, J.-A. Amiel¹,², M. Desgroseilliers¹,⁵, D. R. Williamson¹,³, Z. Thiboutot⁶, K. Serri⁴,⁷, M. M. Perreault¹,², P. Marsolais⁴,⁷ and A. J. Frenette¹,³

Low quality, conflicting evidence

Relatively universally supported

No evidence of harm
Management of the Brain-Dead Organ Donor: A Systematic Review and Meta-Analysis

Tatiana H. Rech,¹ Rafael B. Moraes,¹ Daisy Crispim,² Mauro A. Czepielewski,² and Cristiane B. Leitão²,³

(Transplantation 2013;95: 966–974)

Vasopressin did not help kidney fn

T3 no benefit to hemodynamics

Convenience of vasopressin?

No evidence of harm

¹ Present Address: Hospital Santa Casa de Misericórdia de Joinville, Joinville, Santa Catarina, Brazil
² Hospital Santa Casa de Misericórdia de Joinville, Joinville, Santa Catarina, Brazil
³ Department of Surgery, Federal University of Santa Catarina, Florianópolis, Santa Catarina, Brazil
Evidence for hormone therapy poor, but given

Lung protective strategy

\[ \uparrow \] \# lungs transplanted

Achieving DMG = \[ \uparrow \] organ yield
Organ Procurement Rates (%)

Time from Declaration

Time for organ recovery

Wait
Treat
See

Figure 3 The values of left ventricular ejection fraction at study entry (Early LVEF %), and following 2 days (Final LVEF %) of hormonal treatment. At individual potential donor analysis, the improvement was more obvious in hearts with worse function at baseline.
Evidence for hormone therapy poor, but given

Lung protective strategy
↑ # lungs transplanted

Achieving DMG =
↑ organ yield

Time to procurement important
What we know (& don’t)

Never No Strategy

Heparin in DCD
Never No Strategy

54 yo male, 20 py smoker

Challenge gas: PaO2 420, PEEP 5

Flattened diaphragms, lungs declined
16 hours

LVEF 15%

↓ NE Dob

LVEF 55%
Never No Strategy

Time

Optimization of organ function

Have the conversation!
What we know (& don’t)

Never No Strategy

Heparin in DCD
DCD Case

64 yof intraparenchymal hemorrhage

prognosis uncertain, family decide WLST

previously expressed wish to family to donate
Requested by transplanters

Given by physicians 5 mins before WLST

Dose is 500 to 1000 units per kilo
**Consent to Donate Organs and/or Tissues**

**TGLN ID #:**

Select Applicable Consent Situation
- Patient Substitute consenting on behalf of the patient because of belief that is what the patient would have wanted.
- Patient Substitute affirmiting/supporting the patient's documented wish to donate (attached).
- No Patient Substitute available (documented wishes attached).
- Phone Consent. (Please see reverse for Witness Signatures)

**A. TO BE COMPLETED BY THE PATIENT’S SUBSTITUTE**

(Refer to “Guidelines” (4) on page 3 of this document)

I, __________________________, being the (CAPACITY OR RELATIONSHIP TO PATIENT) of __________________________, being the (NAME OF PATIENT) ________ of __________________________, hereby consent to the removal of organs and/or tissues for the purpose of transplantation as indicated in the box below.

Donated Organ(s) and/or Tissue(s) – Please select Option 1 or 2 by putting a check (✓) in the corresponding box

<table>
<thead>
<tr>
<th>Option 1: All organs and tissues listed below.</th>
<th>Option 2: Only the organ(s) and/or tissue(s) checked (✓) in the box below.</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Heart</td>
<td>☐ Pancreas</td>
</tr>
<tr>
<td>☐ Kidneys</td>
<td>☐ Pancreas for Islets</td>
</tr>
<tr>
<td>☐ Lungs</td>
<td>☐ Heart for Valves, Pericardium, Aorta</td>
</tr>
<tr>
<td>☐ Stomach</td>
<td>☐ Bone and Connective Tissue</td>
</tr>
<tr>
<td>☐ Small Bowel</td>
<td>☐ Vessels for future transplant</td>
</tr>
<tr>
<td>☐ Liver</td>
<td>☐ Skin</td>
</tr>
</tbody>
</table>

Additional donated organs or tissue for transplantation (please specify in writing if indicated)

<table>
<thead>
<tr>
<th>Composite Tissue*</th>
<th>Date: DAY MONTH YEAR</th>
<th>Time:</th>
</tr>
</thead>
<tbody>
<tr>
<td>__________________</td>
<td>__________________</td>
<td></td>
</tr>
</tbody>
</table>

*this type of transplantation has been explained to me __________________ (initial of patient substitute) Date: DAY MONTH YEAR TIME

* this type of transplantation has been explained to me __________________ (initial of patient substitute) Date: DAY MONTH YEAR TIME

**Other Mark**

**Ongoing for transplantation, they may be used for the purpose(s) I have checked below:**

<table>
<thead>
<tr>
<th>Medical Education</th>
<th>Medical Research</th>
</tr>
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<tbody>
<tr>
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<table>
<thead>
<tr>
<th>☐ Scientific Research</th>
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</table>

**Other Mark**
Explicit consent

Für the good of patient

Double effect - Good intention

Unlikely heparin causes death
Heparin

Scientific benefit to transplantation not clear

Transparency with family/HCPs

We are ready to tackle this scientifically.
What we know (& don’t)

Never No Strategy

Heparin in DCD
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