



Estimating organ donor potential: *a comparable tool to track performance, identify gaps and help save lives*

Presented by:

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Health System Analysis and Emerging Issues

Canadian Institute for Health Information (CIHI)

Solid organs are in short supply

- More than 4,000 Canadians on waiting lists for a solid organ (75% of are waiting for a kidney)
- More than 200 Canadians die/year on waitlist



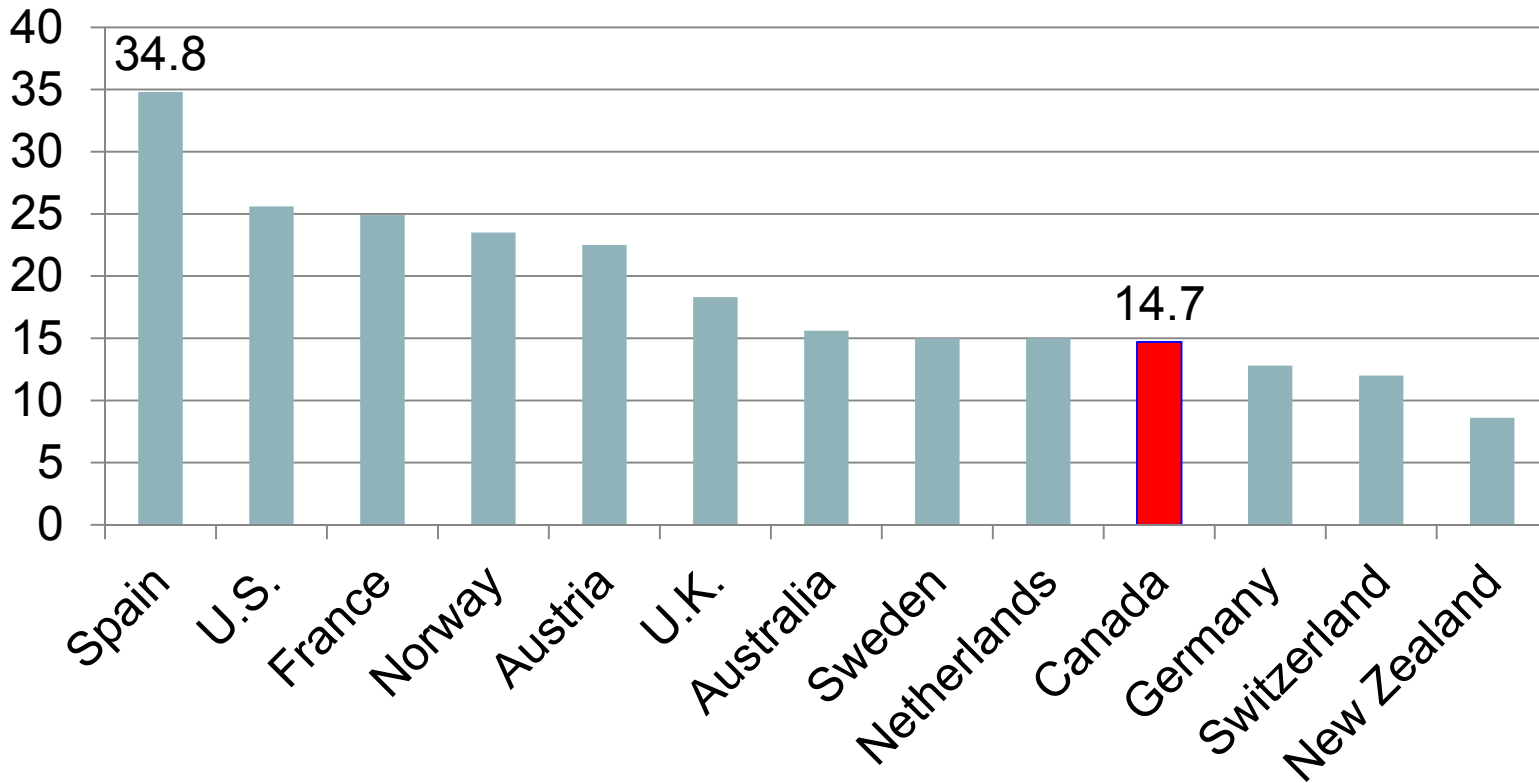
**1 ORGAN DONOR
CAN SAVE 8 LIVES.**

IT ONLY TAKES **2** MINUTES FOR YOU TO REGISTER.



International Deceased Organ Donation Rates

2012 Donors per Million





Research questions

- What is the potential for deceased donation in Canada?
- How effectively are health systems converting potential donors into actual donors?
- What are some opportunities for improvement?
- What are factors associated with conversion?

Methodology

Data sources (CIHI):

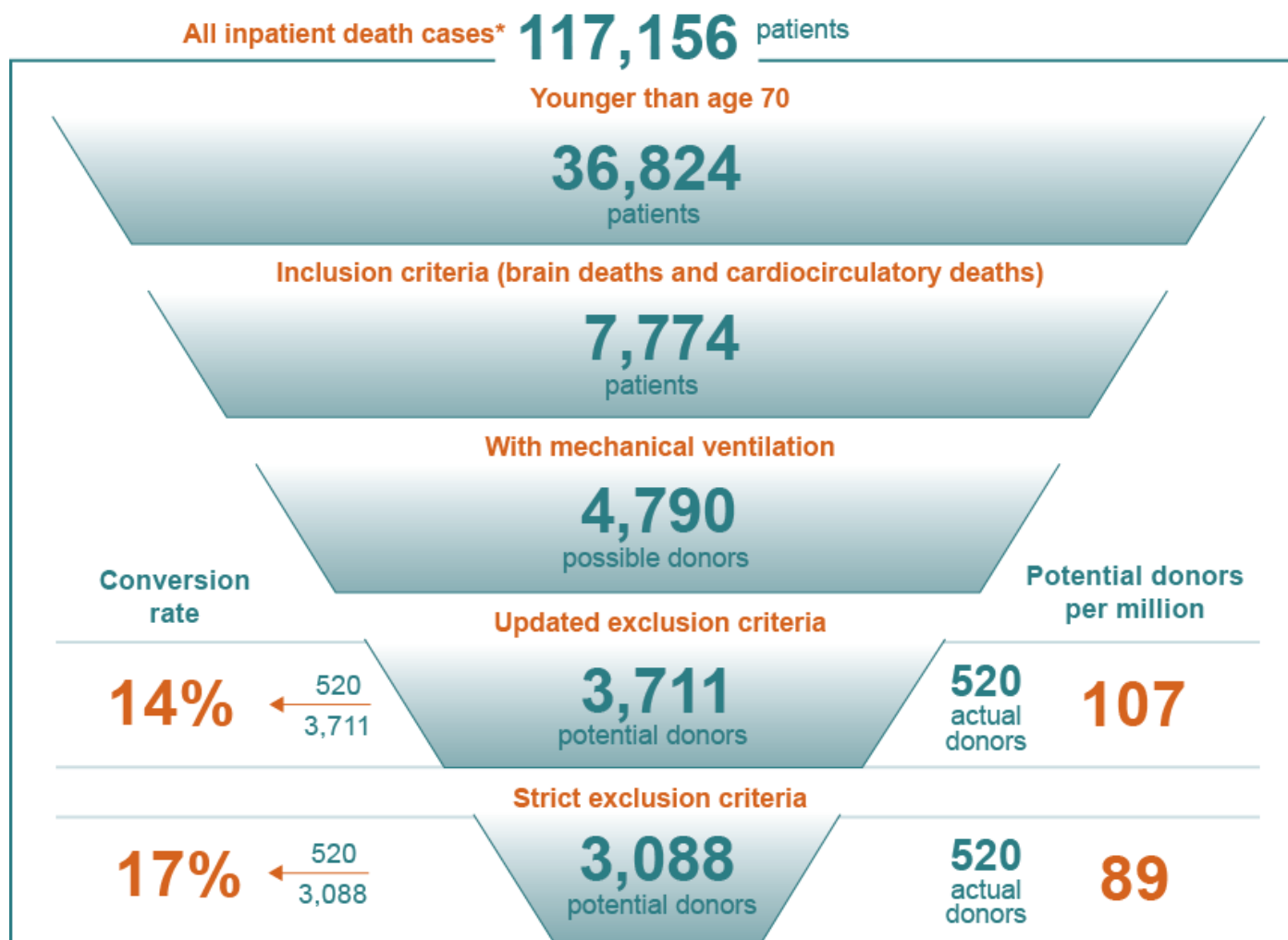
- **Hospital Morbidity Database (HMDB)** to identify potential donors:
 - Brain or cardiocirculatory deaths
 - Mechanical ventilation
 - No medical contraindications to donation
- **Canadian Organ Replacement Register (CORR)** to identify actual donors
- Conversion rate =
$$\frac{\textit{Actual donors}}{\textit{Potential donors}}$$
- Linked data (Ontario only) for regression analysis



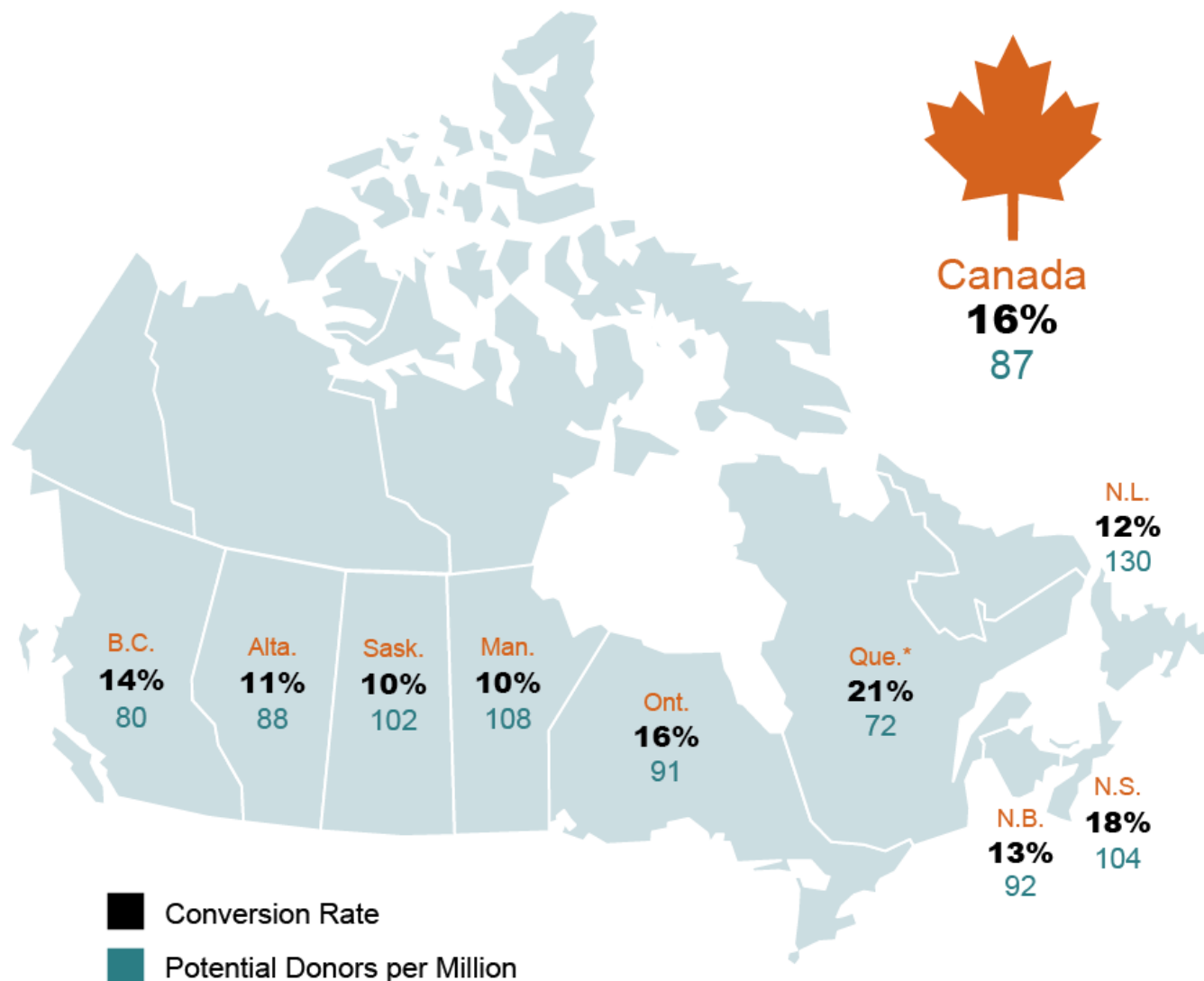
Study limitations

- No data on patient consent
- Discharge abstracts not as complete as full patient charts to determine eligibility... but...
 - Comprehensive: capture all deaths in all hospitals
 - Comparable
 - Repeatable

Pathway to Deceased Organ Donor Potential in Canada, 2012*



Conversion Rates and Potential Donors per Million by Province, 2008 to 2012*

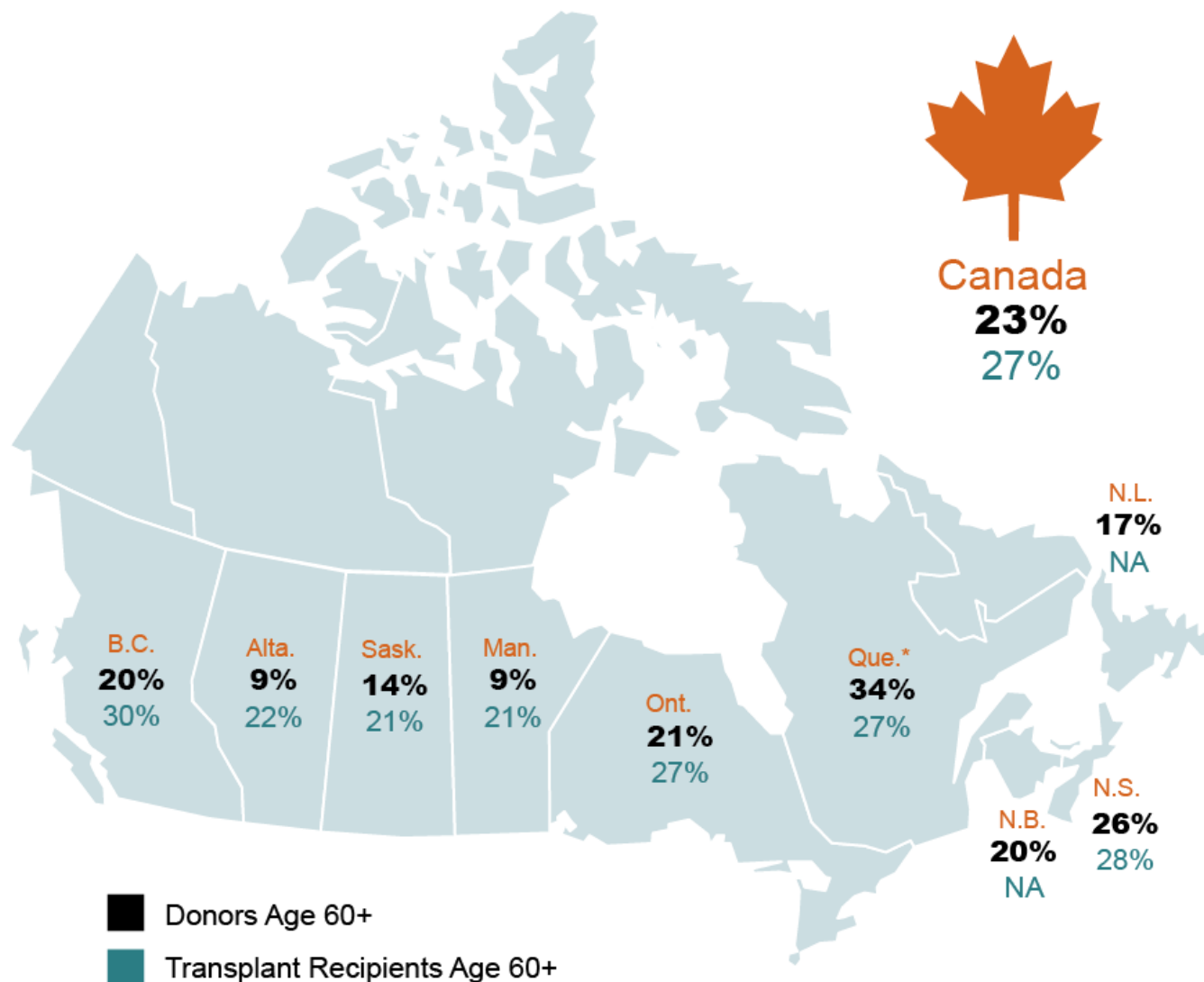


Areas for improvement

1) Donation from older donors:

- Conversion rates of potential donors < 50 were:
 - **2 times** higher than for those age 50 -59
 - **4 times** those aged 60-69
- In Spain, 45% of donors were 60 and older (2009) vs. 23% in Canada (2008-2012)

Percentage of Donors Age 60+ by Province (2008 to 2012)



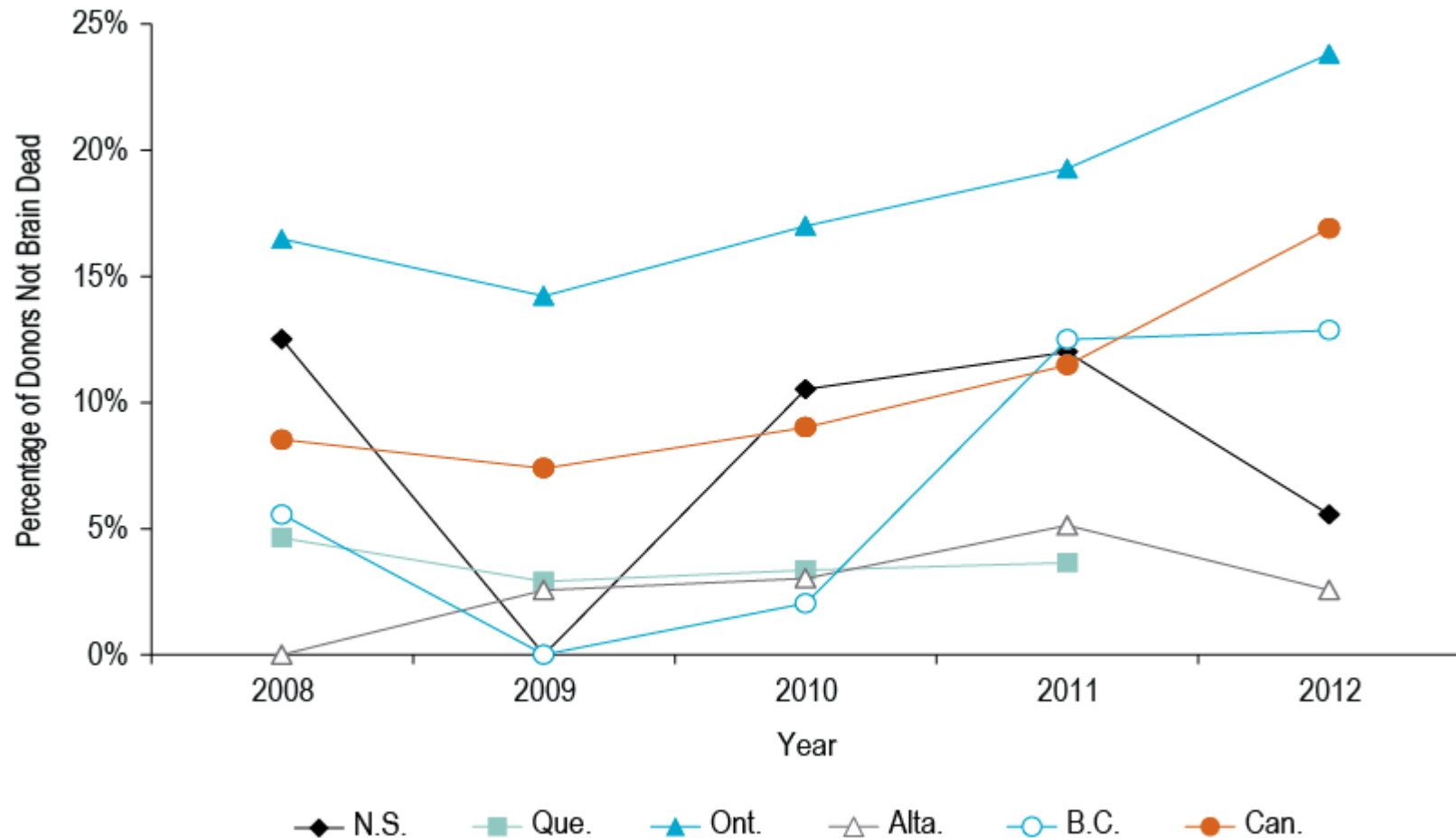


Areas for improvement

2) Donation after cardiocirculatory death (DCD):

- Conversion rates of potential donors after brain death were **6 times** greater than for those with non-heart beating deaths
 - More than half of potential donors had cardiocirculatory deaths
- In the UK, DCD accounted for 40% of deceased donation vs. 17% in Canada (2012)

Cardiocirculatory Death Donors as a % of Total Deceased Donors by Province, 2008 – 2012*



Areas for improvement

3) Organization of hospital care:

- Regression analysis (Ontario) found that:
 - Teaching hospitals were **60% more likely** to convert potential donors than community hospitals
 - Conversion **50% more likely** if patient dies during daytime
- Access to mechanical ventilation (across Canada)
 - **About half** of patients with brain or cardiocirculatory deaths did not become potential donors because they were not mechanically ventilated





Key Messages

- **Wide variation in practice = opportunity for improvements**
 - 2 key areas: DCD and older donors
 - Lack of clear national standard for eligibility criteria
- **More than 3,500 additional organs/year could be made available if potential fully realized**
- **Organization of care can influence donation**
- **Better data required to understand other barriers to potential, e.g. consent**



Opinion / Editorials

Canada's organ donor system is sorely in need of reform: Editorial

Canada's organ donor system is sorely in need of reform says a new report from the Canadian Institute for Health Information. Lives are at stake.



Organ donation in Canada: The large gap between what is and what could be

Thursday, December 18, 2014

THE VANCOUVER SUN

B.C. falls below national organ donation rates, despite increases

Demand from older patients outstrips supply

BY ERIN ELLIS, VANCOUVER SUN DECEMBER 18, 2014



Two-thirds of eligible organ donors in Canada don't get through process: report



Only third of eligible organ donors identified

By Sheryl Ubelacker The Canadian Press



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Thank you!

For full report:

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“Deceased Organ Donor Potential in Canada”
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