

Canadian Blood Services Submission to the Saskatchewan Standing Committee on Human Services

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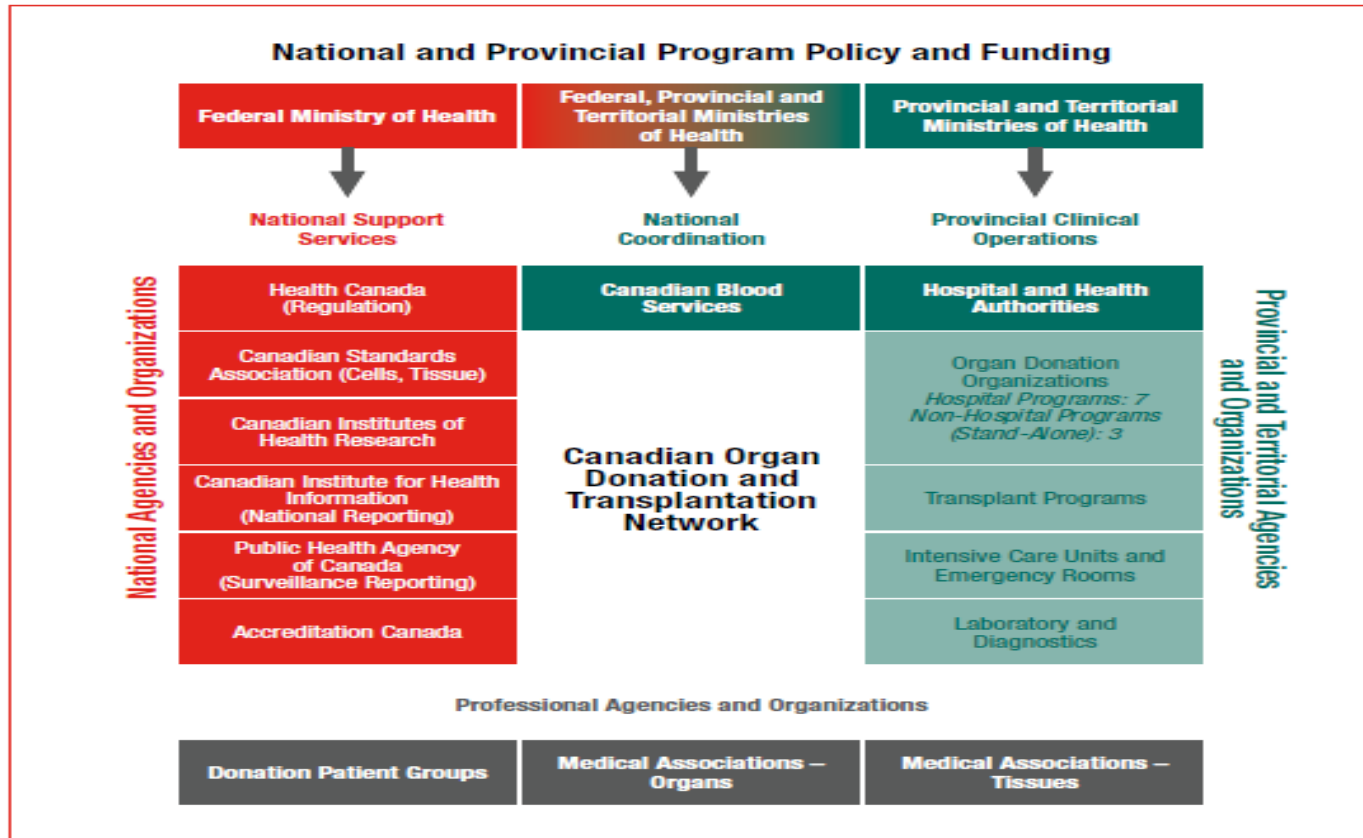
Sept. 12, 2016



Canadian Blood Services

- Biologics manufacturer and clinical services provider
- More than the national blood system:
 - Since 2008, responsible for leadership and coordination for Canada's organ and tissue donation and transplantation system

Canada's organ donation and transplantation system



National donation and transplantation programs and services

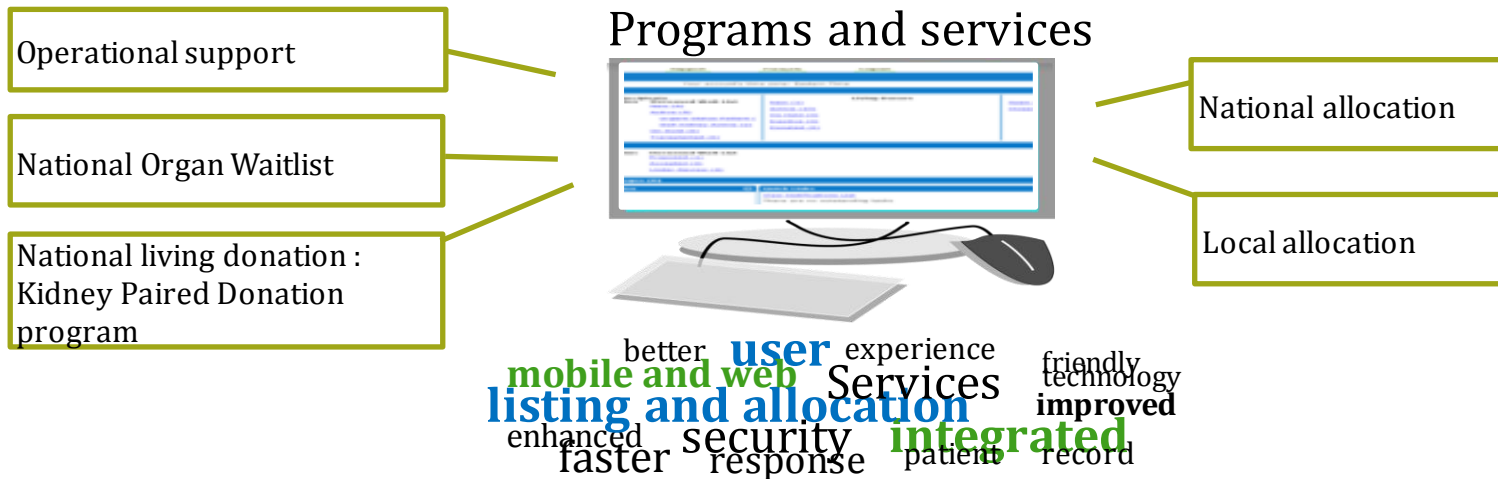
Areas of focus



What is the Canadian Transplant Registry?

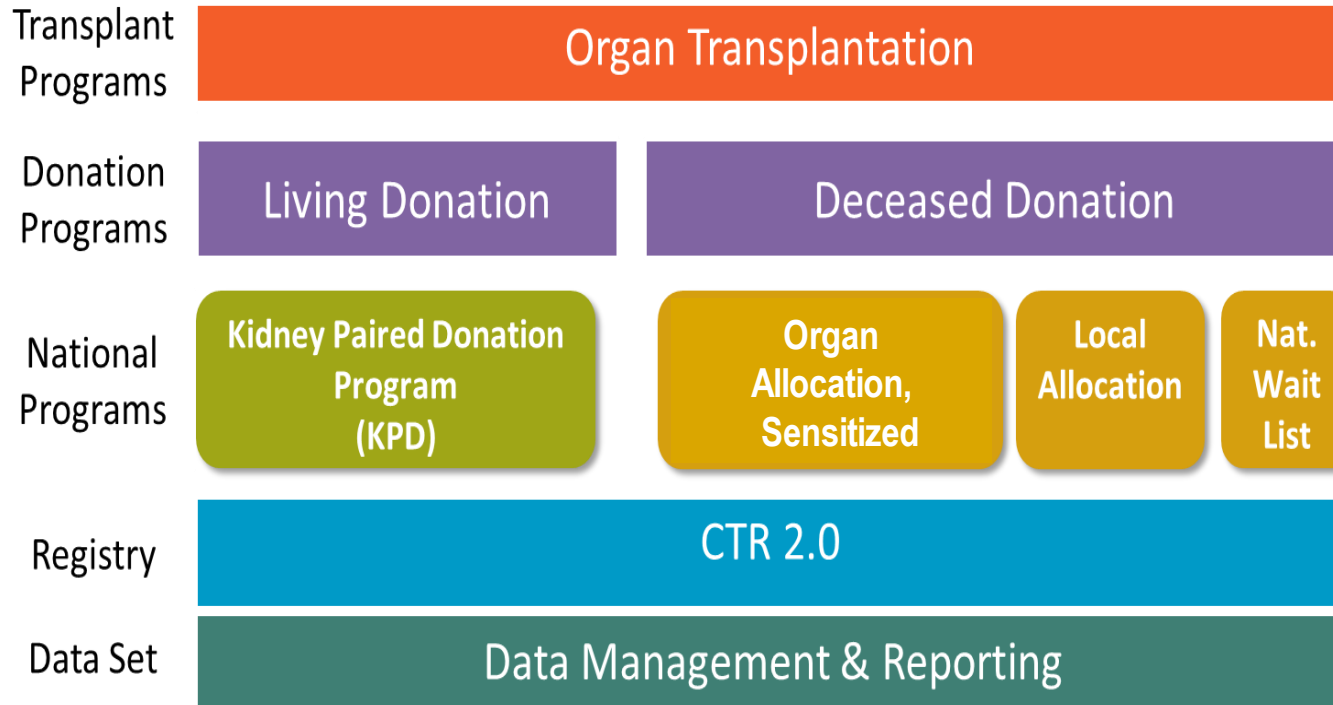
- National web-based computer program that links organ donors with potential recipients
- Helps allocate living and deceased donor organs:
 - ✓ nationally
 - ✓ provincially
 - ✓ regionally
 - ✓ by organ
 - ✓ by program
- Generates data needed to improve transplant system performance

What does a new integrated Canadian Transplant Registry have to offer?

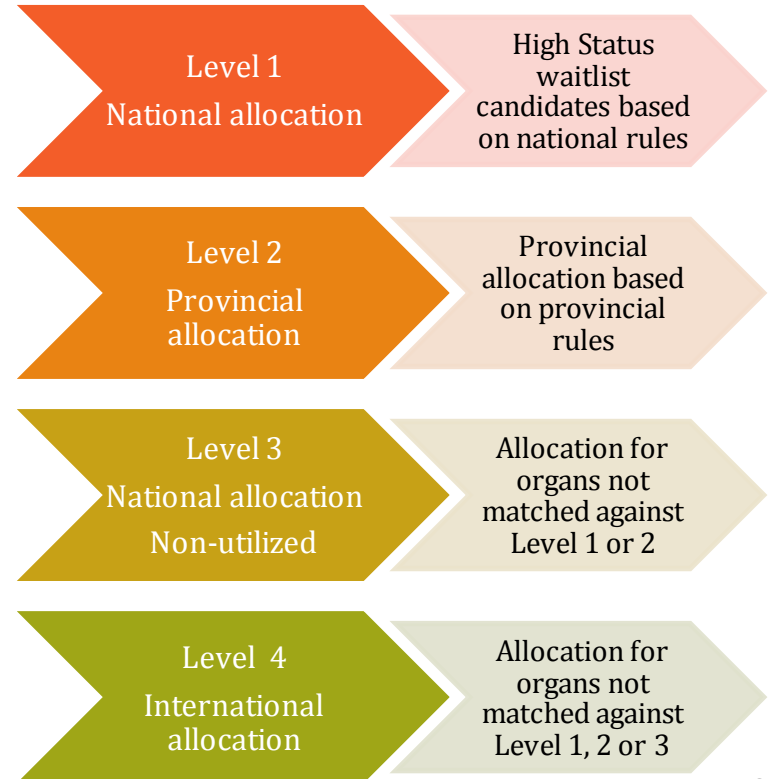
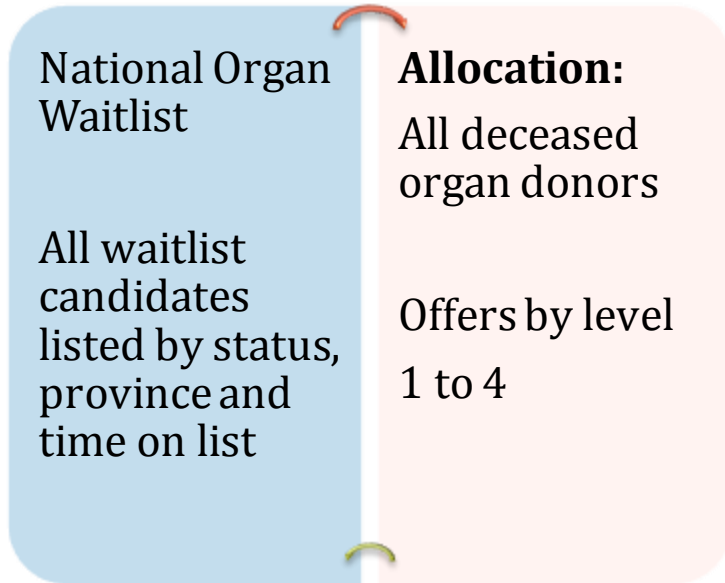


Canadian Transplant Registry patient programs and services

Integrated network



Waitlist and allocation



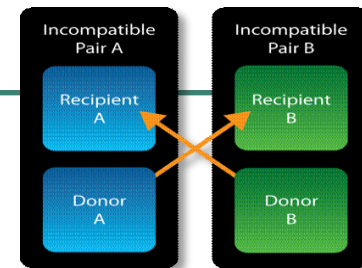
Improving access to transplants for current and future patients

Canadian Transplant Registry

National Patient Programs

Kidney Paired Donation (KPD) - Launched 2008

- Creates transplant opportunities for recipients who have an incompatible living donor
- **These donors were previously lost**
- 452 transplants completed (as of Aug. 15, 2016)
- **Represents 13% / year of all donations from living donors in Canada**



National Organ Waitlist (NOW) – Launched 2012

- Real-time, online national listing of patients waiting for heart, lung, liver, pancreas, small bowel, stomach, and multi-organ transplants
- Replaced paper-based London Health Sciences Waitlist
- 6,863 patients listed, 739 currently active (as of Aug. 15, 2016)

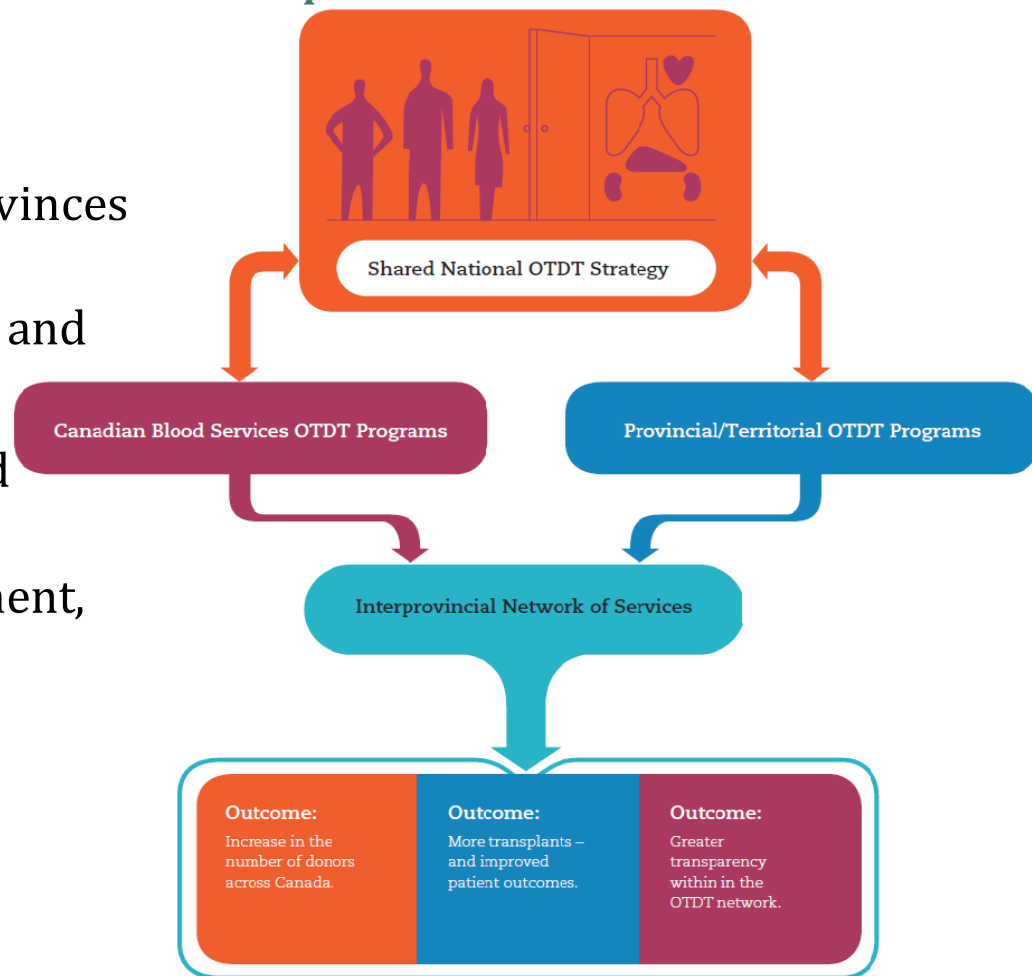
Highly Sensitized Patient (HSP) program (national kidney allocation) – Launched 2013

- Highly sensitized patients comprise ~ 20% of provincial waitlists, but historically receive <1% of available donor organs – **these patients waited years (e.g., 16+) or died waiting**
- There is a national agreement to share kidneys for highly sensitized kidney patients → **Equitable access**
- 247 transplants complete (Aug. 15, 2016)

Improving access to transplants for current and future patients

OTDT program

- National leadership role in all provinces and territories
 - Leading practices, professional and public education
 - Strategic plan development and implementation
 - System performance improvement, data and analytics
 - Canadian Transplant Registry, patient programs and services



Organ Donation and Transplantation in Canada: System Progress Report 2006–2015



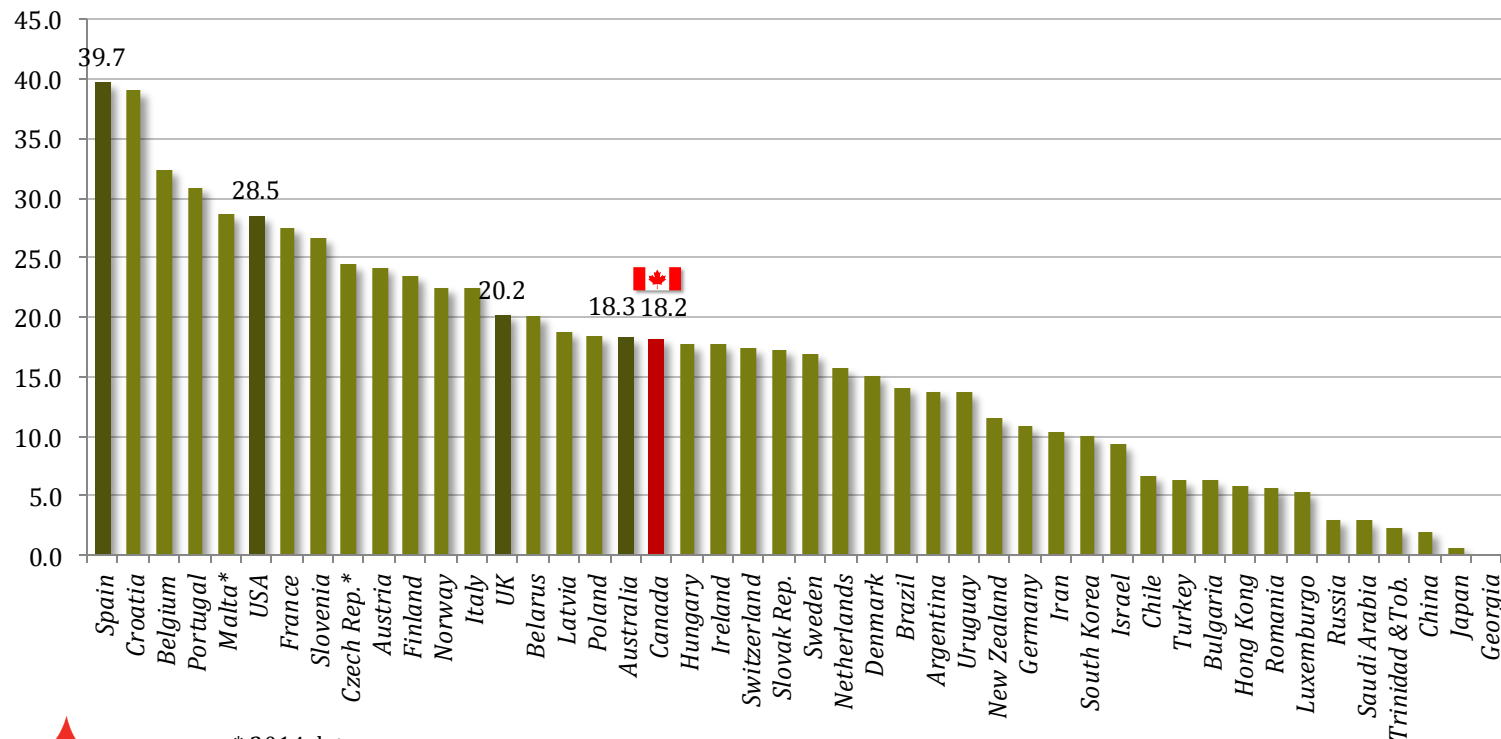
System Progress Report

Key findings

- Canada's organ donation and transplantation rates are on the rise
- Since 2006:
 - National rate of deceased donation is up by 29 per cent; now among Top 20 in the world
 - Number of transplants has increased by 23 per cent in Canada
 - Three provinces in Canada (B.C., Ont. and Alta.) are close to reaching nationally set first-tier living donation targets for 2015 (20 dpmp)

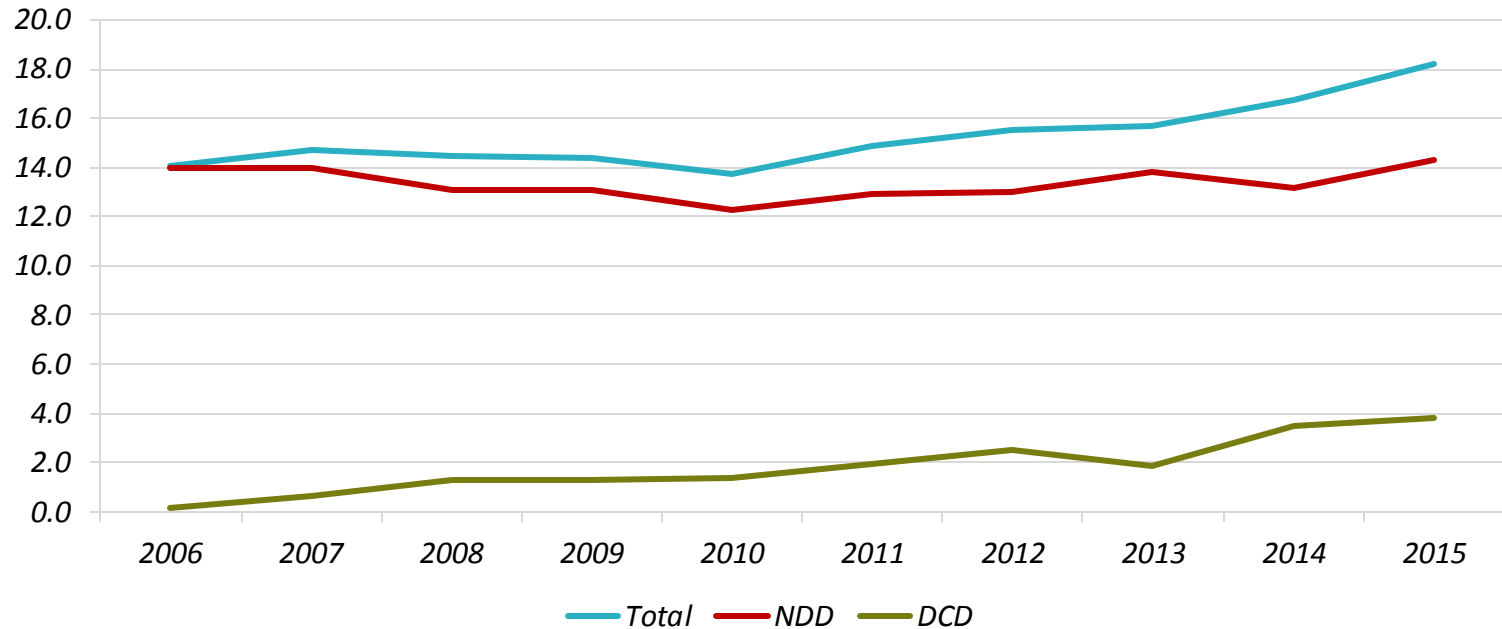
Donation from deceased donors

International deceased donation rates 2015



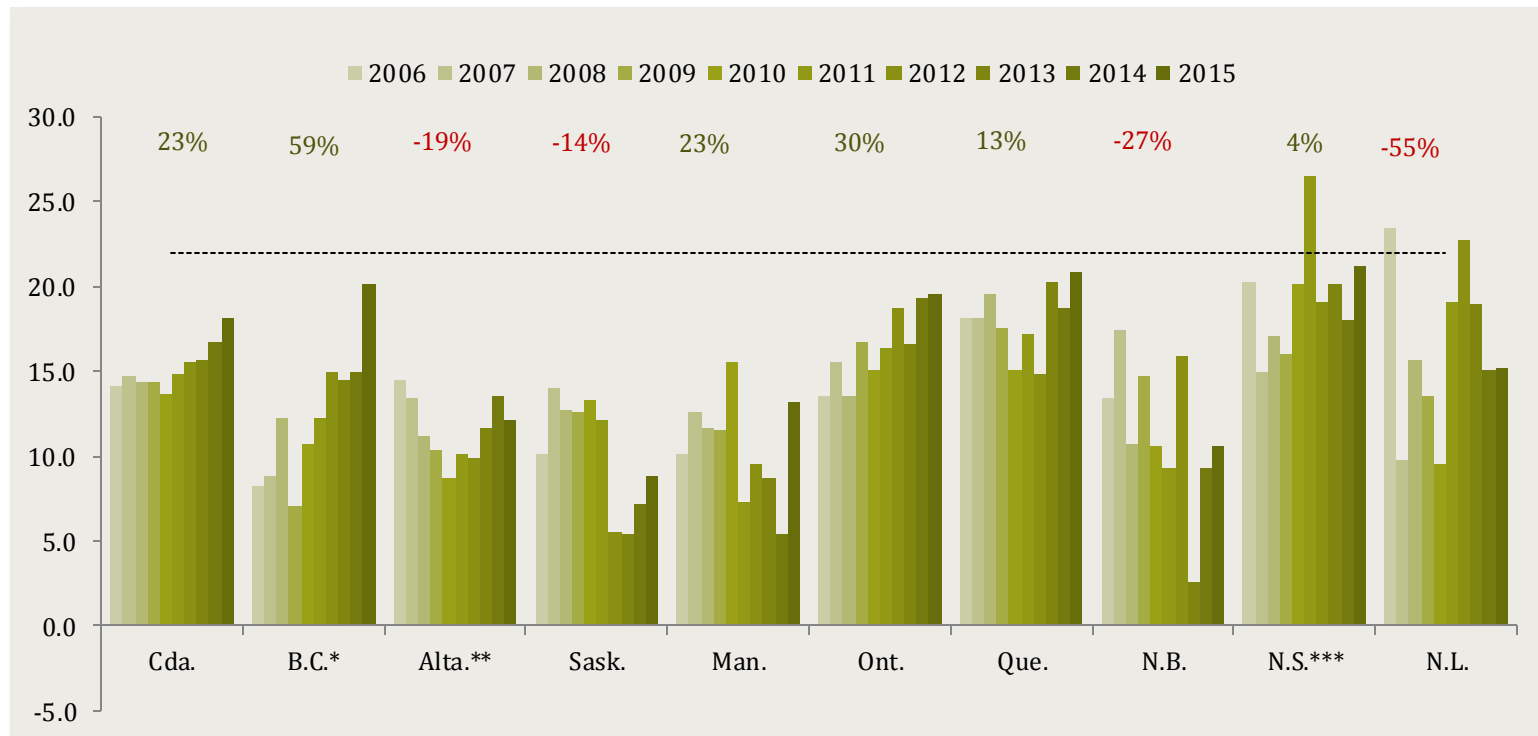
* 2014 data

Deceased donors (dpmp) in Canada



Donation from deceased donors

Deceased donation by province (pmp)



22.0
target

Notes

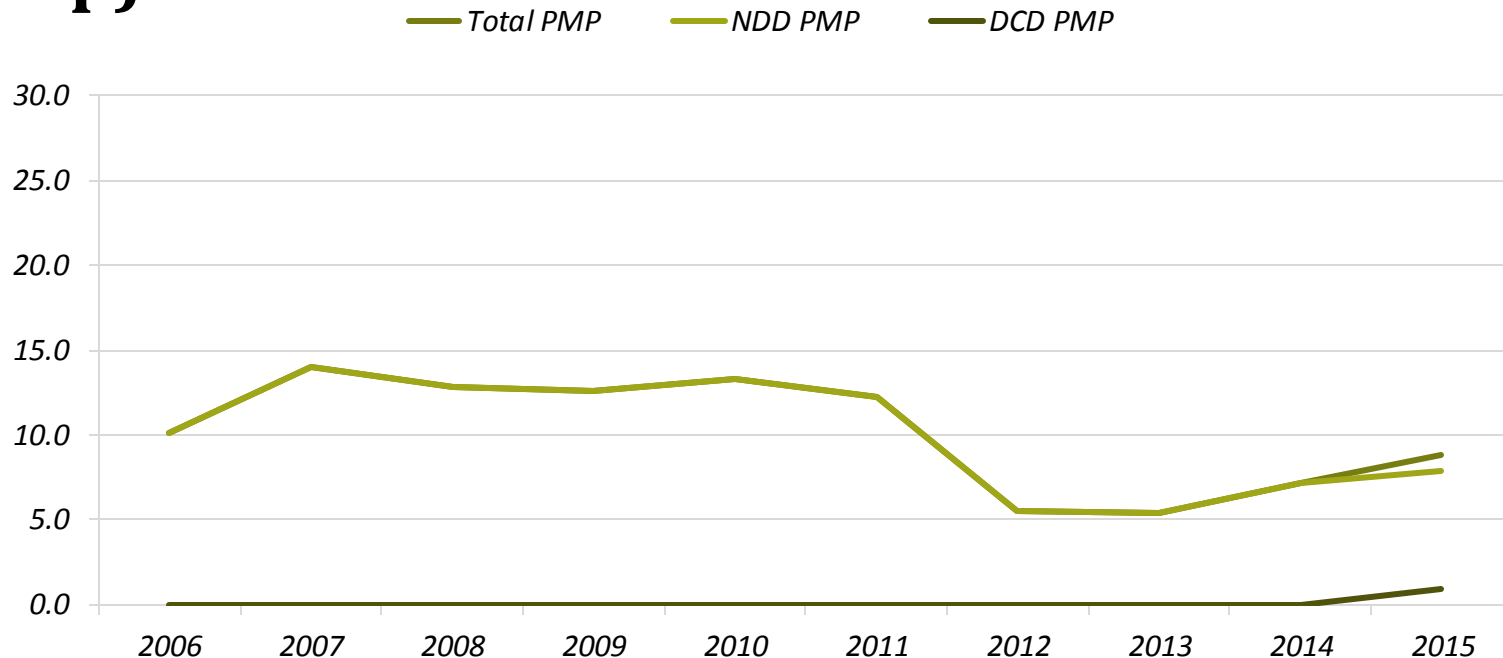
*Rates for B.C. — population of Yukon is included

**Rates for Alberta --populations of NWT and Nunavut are included

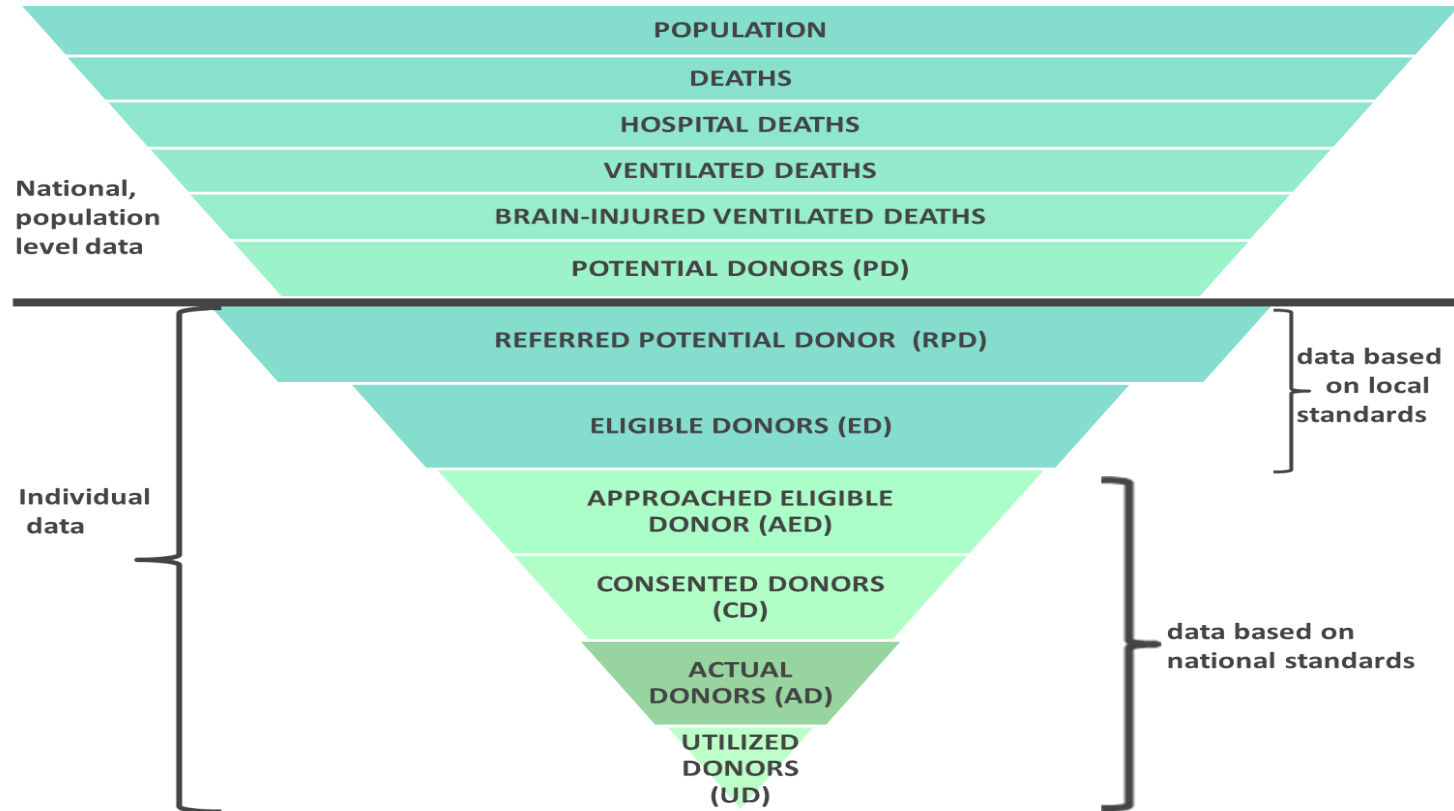
*** Rate for Nova Scotia – population of PEI is included

Deceased donation

Deceased donation performance in Saskatchewan (pmp)

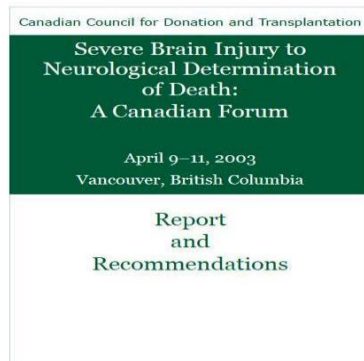


Deceased donation information pyramid*



*adapted from the Australian Government, Australian Organ and Tissue Donation and Transplantation Authority, Annual Report 2013-2014, Figure 8: Australia's potential organ donor population.

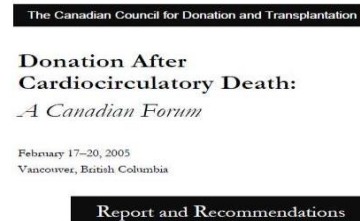
Canadian deceased donation leading practice recommendations 2003–2015



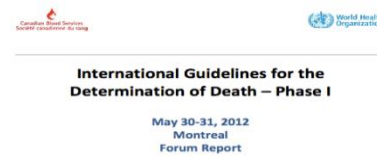
Shemie et al, CMAJ 2006



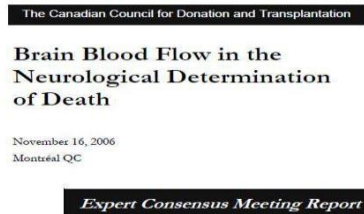
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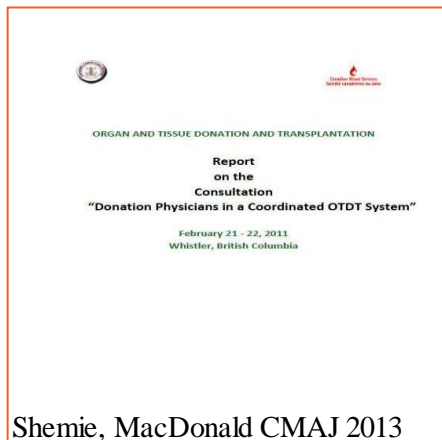
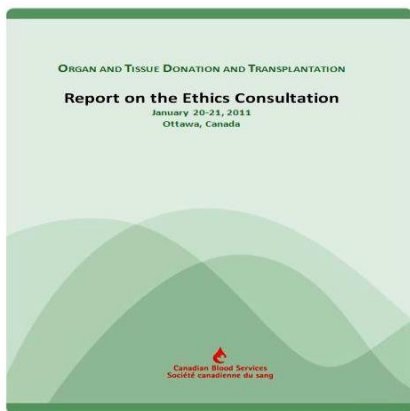
Shemie et al, CMAJ 2006



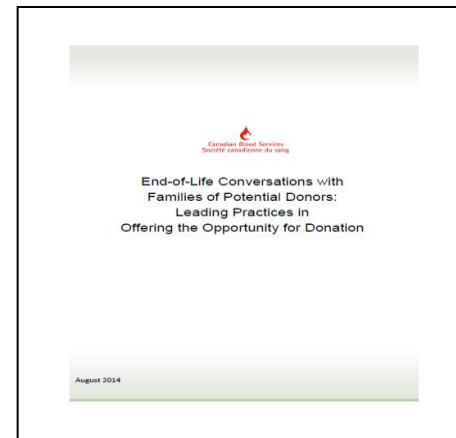
Shemie et al, Int Care Med, 2014



Shemie et al, Can J Neurol Scie 2008



Shemie, MacDonald CMAJ 2013



System improvement

Factors contributing to higher donation rates (2015)

	B.C.	ALTA.	SASK.	MAN.	ONT.	QUE.	N.B.	N.S.	N.L.
Mandatory Referral	●	●*	●	●	●	●	●	●	●
Donation Physicians	●	●	●	●	●	●	●	●	●
NDD Leading Practices	●	●	●	●	●	●	●	●	●
DCD Programs	●	●	●	●	●	●	●	●	●
(% DCD donors)	(25%)	(13%)	(10%)	(0%)	(31%)	(11%)	(0%)	(15%)	(0%)
Donor Management LP	●	●	●	●	●	●	●	●	●
Deceased Donors (DPMP)	20.1**	12.2***	8.8	13.1	19.5	20.8	10.6	21.2****	15.2
(Number of donors)	(95)	(52)	(10)	(17)	(269)	(172)	(8)	(20)	(8)
2011-2015 % change DPMP	76	33	-17	89	22	26	14	-20	-20

● Implementation complete or near completion

● Implementation in progress

● Implementation not started

* Mandatory consideration

** Population of Yukon included in calculation of this rate.

*** Populations of Nunavut and the Northwest Territories included in calculation of this rate.

**** Donors from Prince Edward Island included in calculation of this rate.

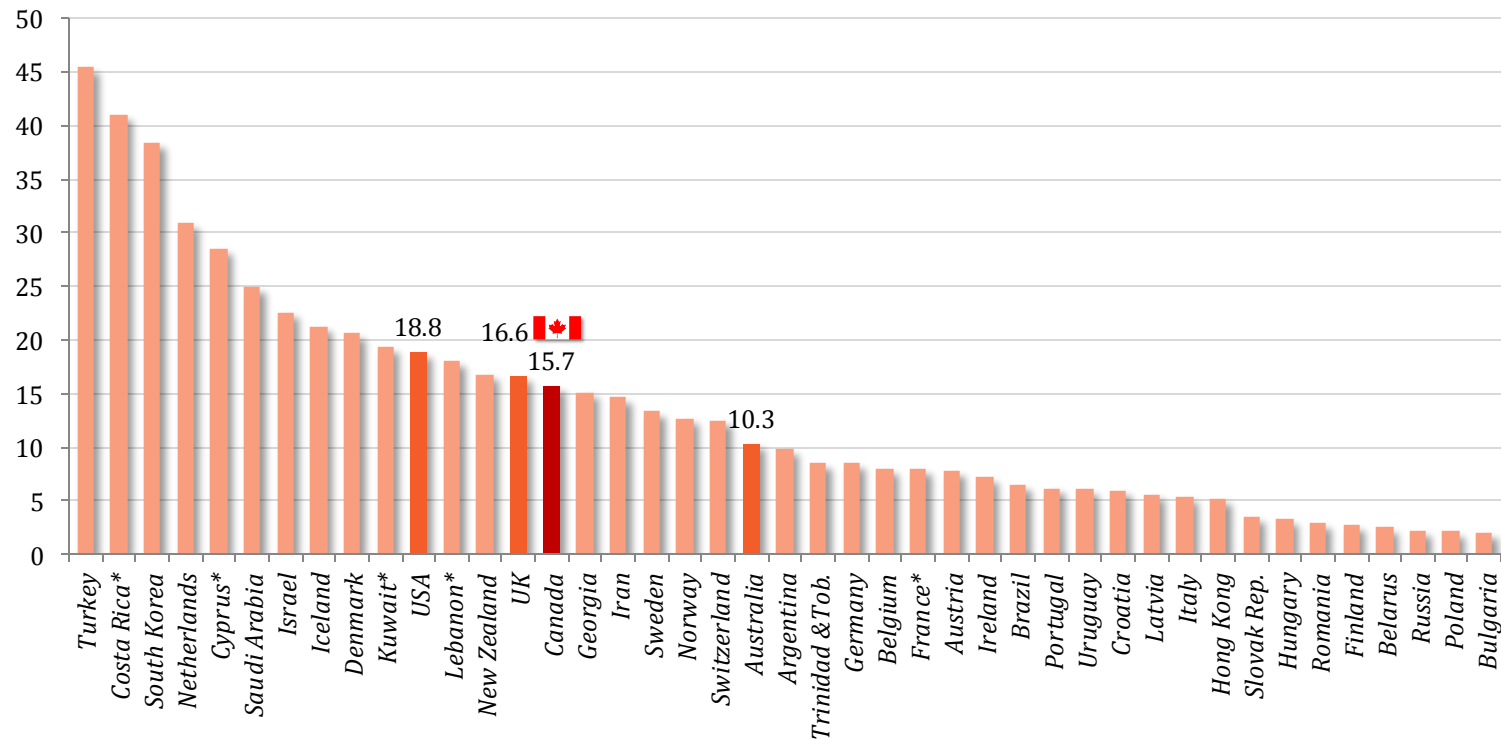
Donation from living donors



Canadian Blood Services
it's in you to give

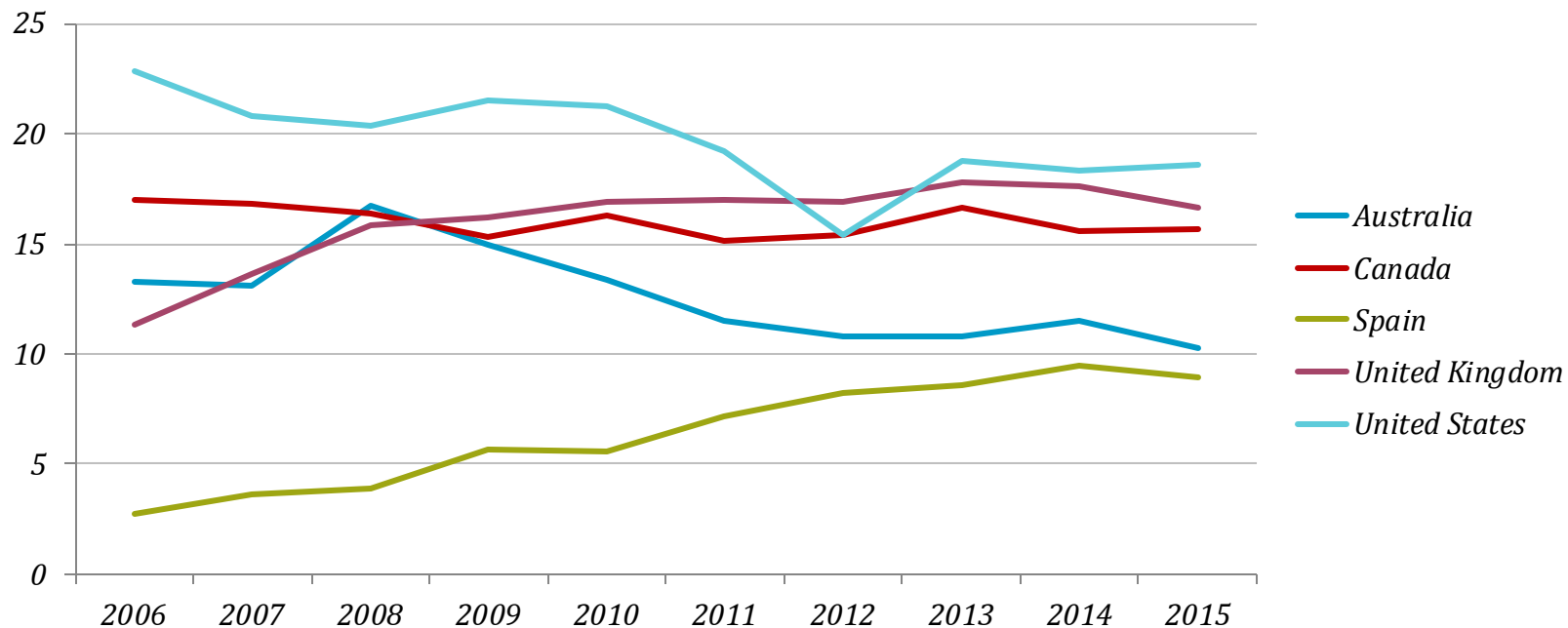
Donation from living donors

Worldwide Actual Living Organ Donors 2015 (pmp)



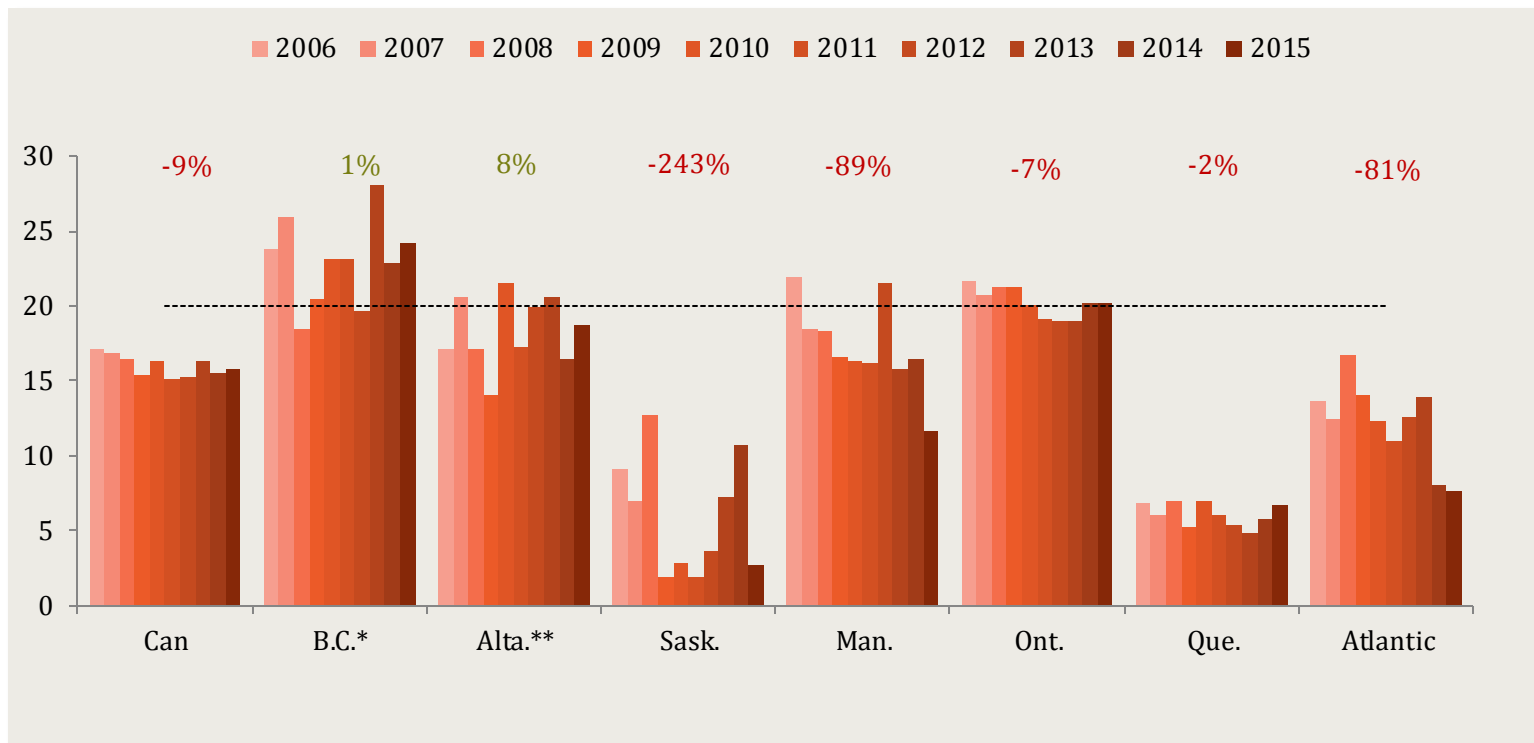
* 2014 data

Worldwide Actual Living Organ Donors 2015 (pmp)



Donation from living donors

Living donation by province (pmp)



20.0
target

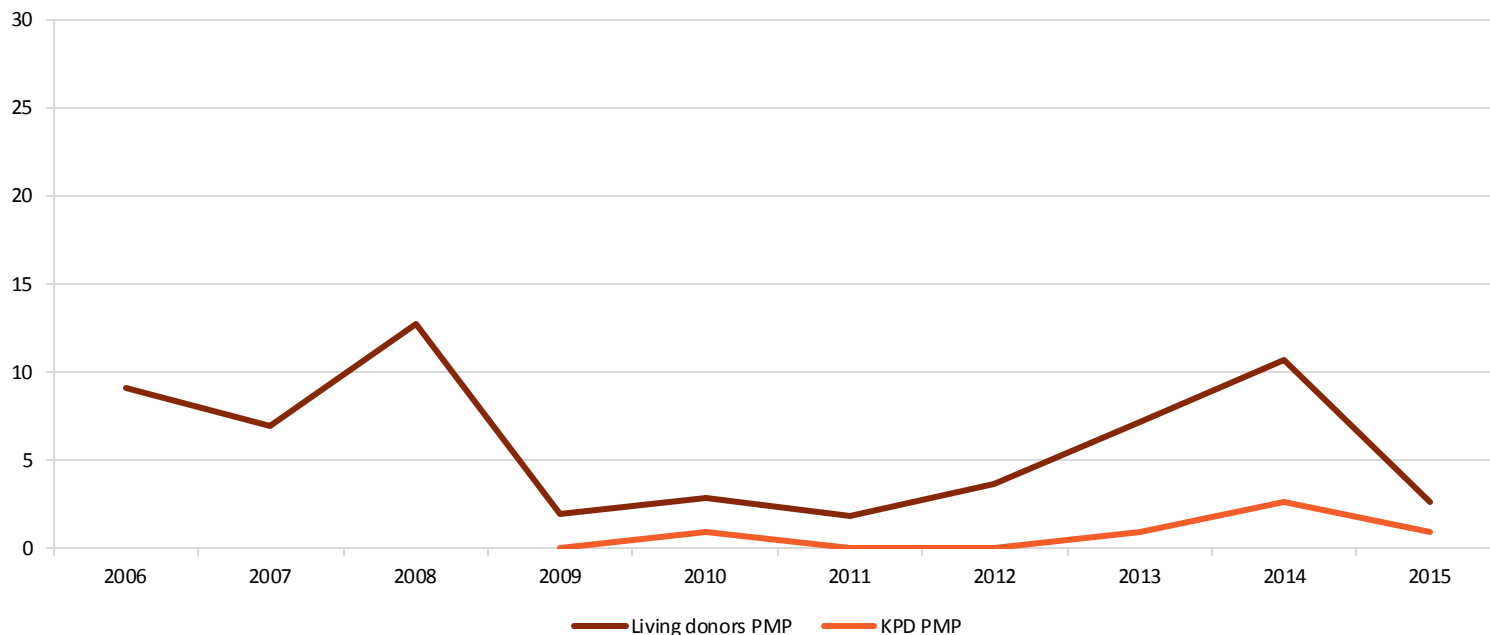
Notes

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**Rates for Alberta -- Populations of NWT & Nunavut are included

Atlantic includes New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and Labrador.

Living donation performance in Saskatchewan (pmp)

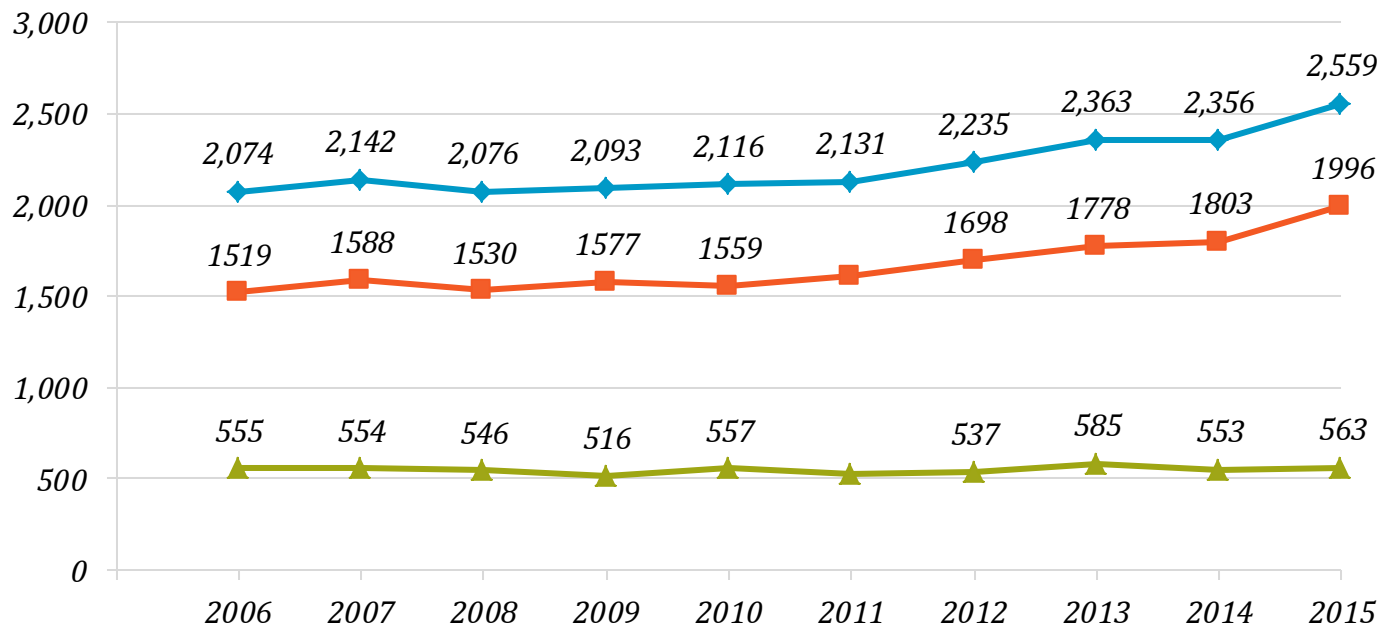


Best practices: Living donation

- Decrease lengthy work-up times for donors and recipients
- Strategic program reviews for organ donation organizations and transplant programs
- Support for patients pre- and post-transplant
- National programs that support living donors
- Testing and medical diagnostics

Transplantation

Transplants in Canada 2006–2015



↑23%

*In all
transplants*

↑31%

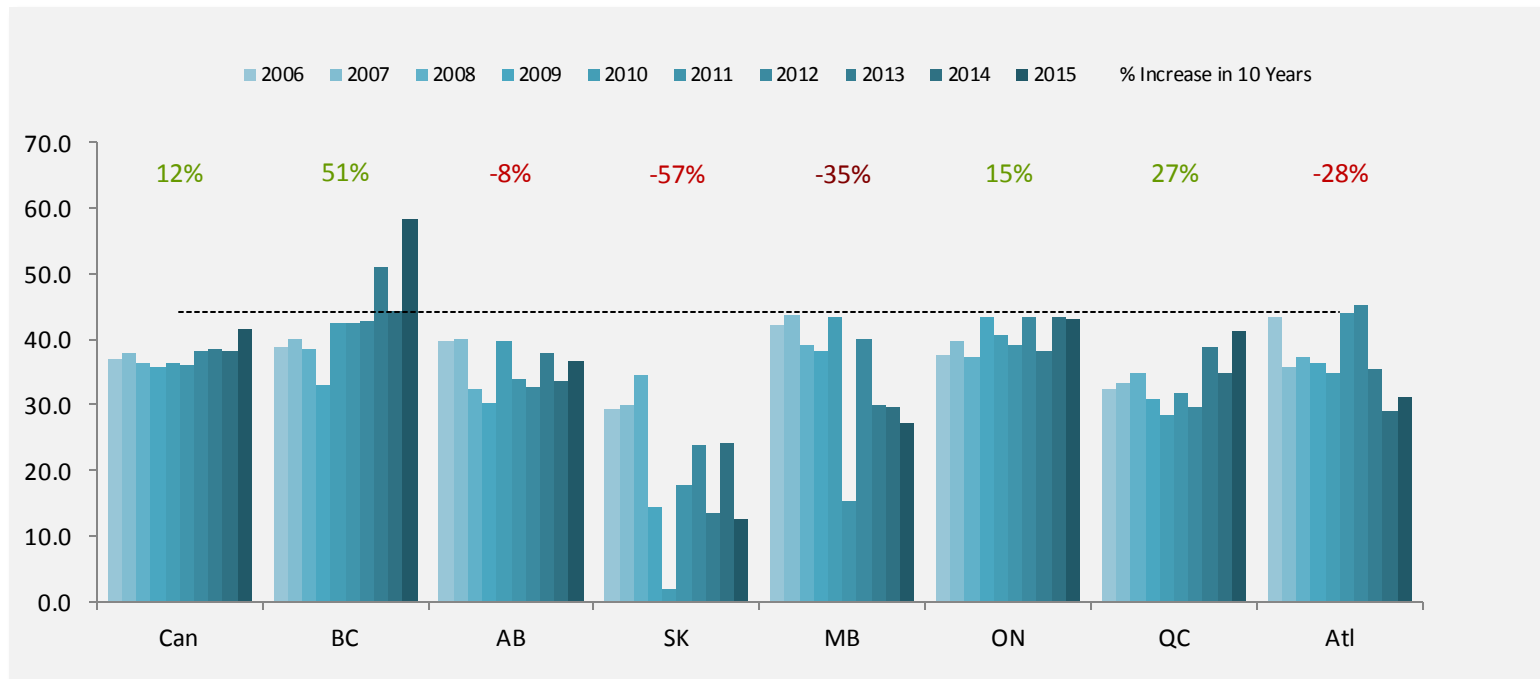
*deceased donor
transplants*

↑1%

*living donor
transplants*

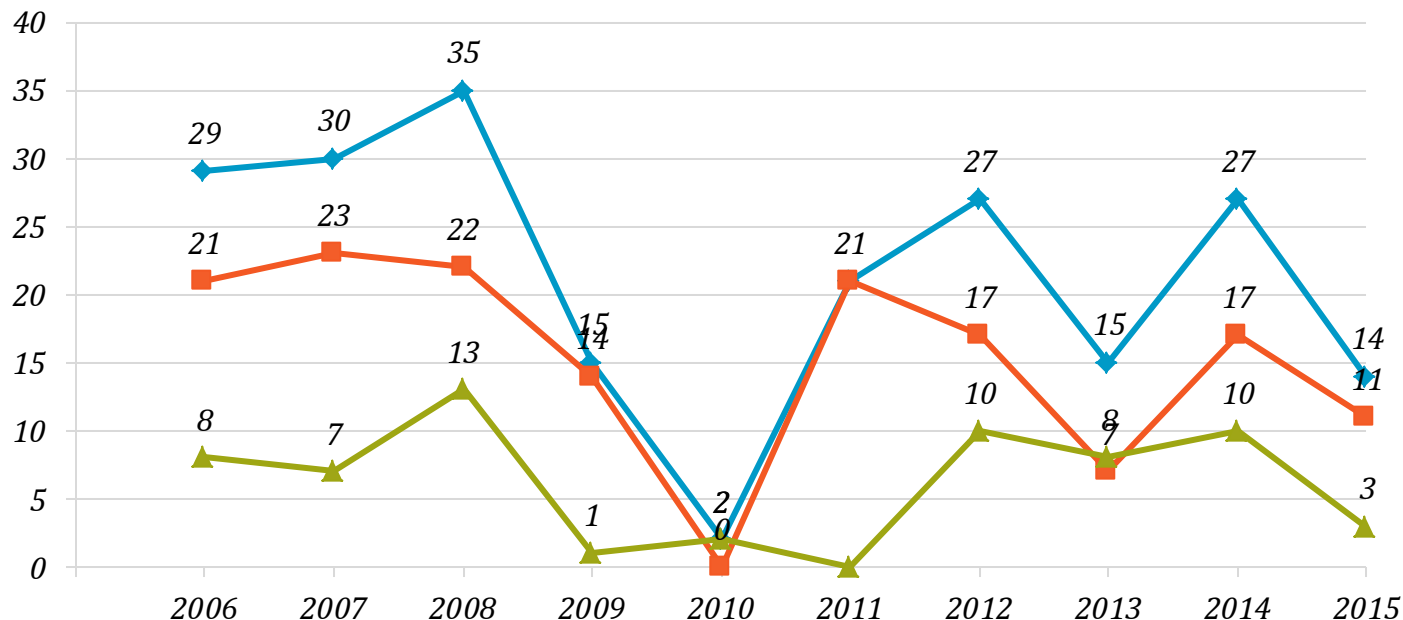
Kidney transplants (pmp)

From deceased and living donors



44.0
Target

Transplants in Saskatchewan 2006–2015



↓52%

*In all
transplants*

↓48%

*deceased donor
transplants*

↓63%

*living donor
transplants*

2014 Prevalent End-Stage Kidney Disease Patients

	B.C.	Alta.	Sask.	Man.	Ont.
Pop (million) 2014	4.675405	4.200960	1.122283	1.280242	13.677687
Transplants pmp	560.1	506.3	421.5	520.2	528.8
Dialysis pmp	657.9	553.2	767.2	1107.6	815.7
Total ESRD pmp	1218.0	1059.5	1090.9	1627.8	1344.5

Burden of end-stage kidney disease equal in Alta. and Sask.

- Sask. more reliant on dialysis rather than transplant
- Therefore cost burden is greater in Sask. versus Alta.

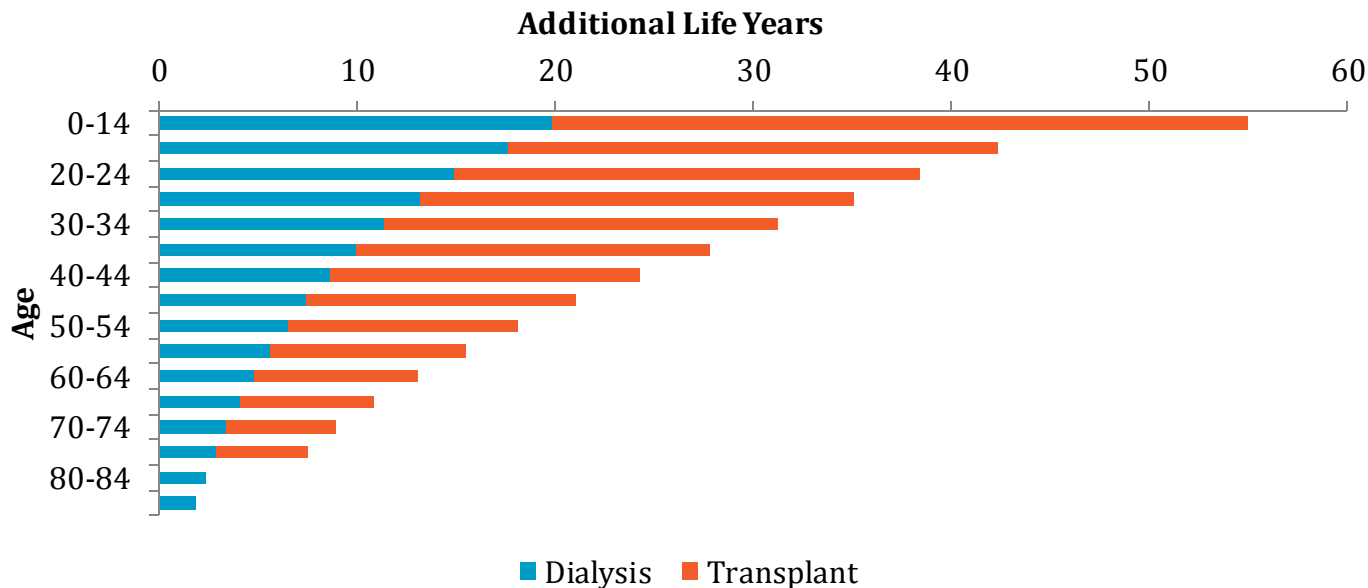
Benefits of kidney transplant



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it's in you to give

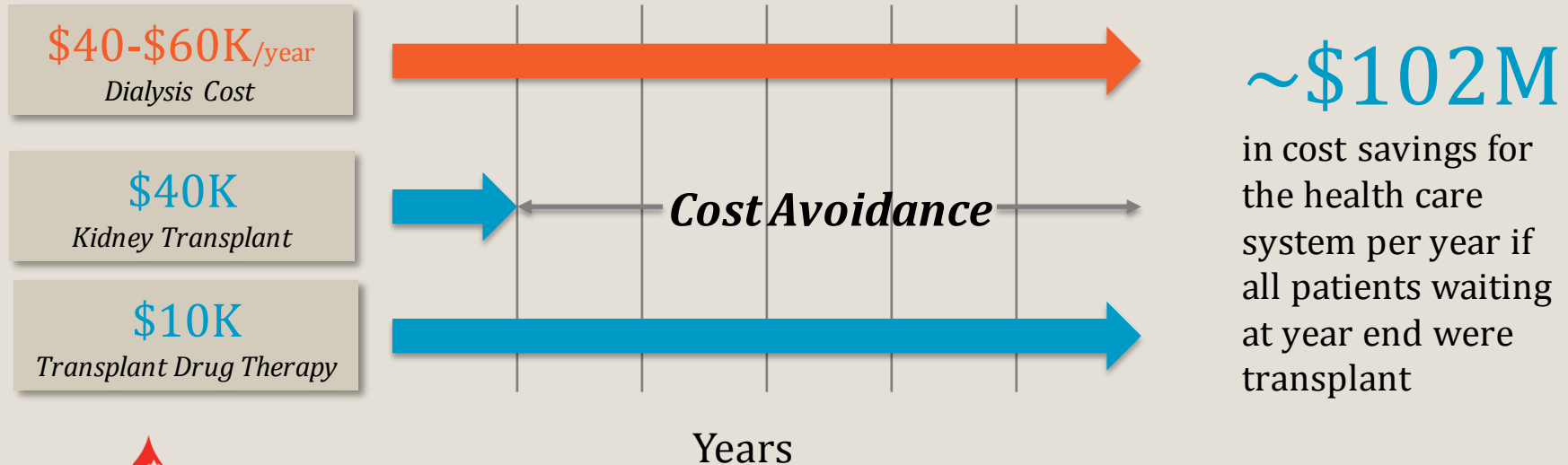
Expected life years – Remaining on Dialysis versus receiving a transplant

(Based on age of onset of end-stage kidney disease)



Benefits of kidney transplant

“Transplantation is the most cost-effective treatment for end-stage kidney disease.”



Opportunities for program improvement

Challenges and opportunities

Deceased donation

- Mandatory referral with death audit and accountability
- DCD and NDD optimization
- Donation specialist

Living donation

- Resourced to optimize capacity (provincial and national [kidney paired donation])
- Timely access to testing and donor evaluations



Challenges and opportunities

Transplantation

- Lack of reliable data on transplantation and outcomes
- Varying criteria used to list patients, allocate and accept organs

System optimization

- Improvement strategy with clear targets and measures
- Rapid adoption of leading practices



Challenges and opportunities

- Customization— different challenges require unique strategies
- National and international best practices — provinces that have applied Canadian and international recommendations are seeing improvements
- Sustained focus — improvement can be volatile as it evolves
- Continued investment in the system— adequately resourced programs and staffing models
- Benchmarks — improvements must be tracked and adjusted





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it's in you to give