

Type	Canadian Transplant Registry
Program	Inter-provincial Sharing: Kidney, Highly Sensitized Patients
Policy Title	Inter-provincial Balancing

Policy Number	CTR.50.004
Version (Date)	v2.0
Committee Review	Kidney Transplant Advisory Committee (2016-02-12)
Committee Endorsement	Kidney Transplant Advisory Committee (2016-03-30), Donation and Transplantation Administrators Advisory Committee (2015-10-24), Organ Donation and Transplantation Expert Advisory Committee (2015-11-27)
Provincial/Territorial Sign-Off	2016-12-01 (See Appendix A)
Effective Date	2016-12-01

Purpose

The Canadian Transplant Registry (CTR) identifies transplant opportunities across Canada for kidney transplant candidates who are highly sensitized to Human Lymphocyte Antigens (HLA). This policy describes the process for managing the number of kidneys shared between provinces under *the Inter-provincial Sharing: Kidney, Highly Sensitized Patients* program. Inter-provincial balancing ensures equitable sharing of kidneys among participants of the HSP Program by maintaining thresholds limiting the number of exports of kidneys by any one province.

Policy

1. Exports and Imports

1.1 An export is counted once a kidney(s) is/are procured, determined to be of transplantable quality by the originating site, and left the donor center with the intent of being shipped to a transplant centre that has accepted the kidney, regardless of whether the kidney is ultimately transplanted into the designated recipient or another recipient or not transplanted at all.

1.1.1 Export counts are awarded to the province/region of the donor's Organ Donation Organization (ODO).

1.1.2 One export is counted per kidney shipped except in the case of an en bloc or double kidney offer where a single recipient receives both kidneys, in which case only a single export is counted.

1.1.3 If an offer of an en bloc or double kidney is accepted for a single recipient and subsequently transplanted into two different recipients, two exports (and two imports) are counted.

1.2 An import¹ is counted once a kidney/kidneys is/are transplanted, regardless of whether the kidney (s) is/are transplanted into the designated recipient or a different recipient.

1.2.1 Import counts are awarded to the province/region of the recipient's Provincial Health Number (PHN).

1.3 If the kidney is shipped but not transplanted, the export is counted but the import is *not* counted.

2. Export Threshold

2.1 To facilitate inter-provincial balancing, thresholds are established for each province/region² as an upper limit of the number of kidneys they are obliged to export (out of province) under the HSP Program.

2.2 The export threshold for each province/region is determined based on a percentage of its three year average number of donors. Thresholds are currently set at 5% of each province/region's 2012-2014 deceased donor averages as reported by the Canadian Organ Replacement Registry (CORR).

Province/Region	Export Threshold
British Columbia	3
Alberta	2
Saskatchewan	1
Manitoba	1
Ontario	12
Québec	7
Atlantic Canada	2

3. Offer Requirement when at Export Threshold

3.1 The CTR identifies and ranks all potential recipients who match with a donor. Upon presenting potential recipient matches, the CTR alerts the user to the export balance for the donor province/region, if applicable.

3.2 A province/region must offer a donor kidney if its export balance is less than its export threshold.

3.3 If the donor province/region's balance is equal to or greater than its export threshold, it is not required to offer a donor kidney to another province, but may choose to do so.

¹ There is no upper limit to imports (i.e., import threshold). Although imports are not considered in interprovincial balancing, they are tracked for the purpose of monitoring interprovincial activity and net import/export activity.

² Nova Scotia, New Brunswick, Prince Edward Island and Newfoundland & Labrador participate in the inter-provincial balancing as one region, Atlantic Canada.

4. Inter-Provincial Balances

- 4.1 The CTR is programmed to provide a real-time balance of inter-provincial kidney transfers. A Balancing Report is available on-line in the CTR, or by request to the CTR Customer Solutions team to provide real-time balances and activity by province/region.
- 4.2 A province/region's inter-provincial balance is the net of all imports less exports since the launch of the *Inter-provincial Sharing: Kidney, Highly Sensitized Patients* program.
- 4.2.1 A positive balance (e.g., +3) indicates a greater number of imports than exports.
- 4.2.2 A negative balance (e.g., -2) indicates a greater number of exports than imports. (Example: Province A has imported 11 kidneys and exported 13 kidneys since the launch of *Inter-provincial Sharing: Kidney, Highly Sensitized Patients* program. Its balance is -2.)
- 4.3 Balances are between a province/region and the rest of Canada, not between 2 provinces/regions.
- 4.3.1 The balance accounts for only those inter-provincial transfers that take place through participation in the *Inter-provincial Sharing: Kidney, Highly Sensitized Patients* program. All kidney allocations that take place outside the program are not counted.
- 4.4 To minimize organs being shipped unnecessarily, the matching algorithm for the *Inter-provincial Sharing: Kidney, Highly Sensitized Patients* program gives priority to recipients in the same province/region as the donor.
- 4.4.1 Kidney allocations within the same province/region as the donor have no net effect on imports, exports, or balancing, even though it may occur as part of the *Inter-provincial Sharing: Kidney, Highly Sensitized Patients* program.

5. Governance

- 5.1 This Inter-provincial Balancing Policy, including provincial/regional thresholds, will be reviewed bi-annually, at a minimum, by the Kidney Transplant Advisory Committee (KTAC).
- 5.2 Policy changes must be approved by the ODTEAC and the designated provincial donation and transplantation agency/program authorities who have legislated responsibility for donation and transplantation service delivery.
- 5.3 Policy changes may be proposed by Canadian Blood Services, KTAC, ODTEAC or any participating province/region.
- 5.3.1 Requests for review of proposals or modifications to HSP balancing should be made to Canadian Blood Services.
- 5.3.2 Any disputes regarding HSP balancing should be referred to Canadian Blood Services for analysis and, if required, consideration by the KTAC and/or ODTEAC.

References
<ol style="list-style-type: none"> 1. Balancing reviewed by NKRAC (September 2011) 2. Balancing presented at ODTEAC (January 2012) 3. Canadian Highly Sensitized Patient and Living Donor Paired Exchange Registries: Task Force Discussion Document (October 2005) 4. Assessment and Management of Immunologic Risk in Transplantation. A Canadian Council for Donation and Transplantation Consensus Forum Report and Recommendations (January 2005) 5. Kidney Allocation in Canada: A Canadian Forum Report and Recommendations (February 2007) 6. HSP Discussion Document 2016-001 HSP Export Thresholds (April 2016)

Version History		
Version	Date	Comments /Changes
v2.0	2016 12 01	Revised according to discussion at KTAC Meeting on 2015-09-24 and 2016-05-18: <ol style="list-style-type: none"> 1. Concept of an import threshold removed 2. Revisions to export threshold numbers based on 2012-2014 deceased donor numbers 3. Net balance calculation clarified 4. Added specificity in terms of export count (i.e., whatever “type” of kidney is shipped, it is ONE export if is transplanted into one recipient) 5. Emphasis that requirement to offer does not apply when a province/region is at its export threshold 6. Emphasis that when what is shipped is not ultimately used, there is no import 7. Minor edits to align with new policy template and language
v1.2	2013 01 10	Minor edits
v1.0	2012 10 09	Moved to Official Documents Folder
v1.0	2012 06	Presented to ODTEAC
v1.0	2012 03 30	Original version

Appendix A – Provincial/Territorial Sign-Off v2.0

Version	Jurisdiction	Clinical Authority			Administrative Authority		
		Name	Title	Date	Name	Title	Date
v2.0	British Columbia	Dr. David Landsberg	Provincial Medical Director, Transplantation	2016-11-25	Edward Ferre	Provincial Operations Director	2016-11-25
v2.0	Edmonton	Dr. Norman Kneteman	Director, Division of Transplantation	2016-09-28	Deanna Paulson	Executive Director, NARP & Transplant Services	2016-09-28
v2.0	Calgary	Dr. Lee Anne Tibbles	Acting Medical Director, SARP, ALTRA	2016-10-20	Carol Easton	Executive Director, SARP, ALTRA	2016-09-14
v2.0	Saskatchewan	Dr. Ahmed Shoker	Medical Director	2016-09-27	Carol Brown	Interim Director, SK. Transplant Program	2016-09-29
v2.0	Manitoba	Dr. Peter Nickerson	Medical Director (TM-AKP)	2016-09-07	Kim Werestuik	Manager of Patient Care	2016-09-07
v2.0	Ontario	Dr. Jeff Zaltzman	CMO TGLN	2016-09-06	Ronnie Gavsie	CEO TGLN	2016-09-06
v2.0	Québec	Dr. Michel Carrier	Medical Director – Transplantation	2016-11-09	Louis Beaulieu	General Director – Transplant Quebec	2016-11-09
v2.0	New Brunswick	Dr. Robert Adams	Medical Director	2016-11-14	Mary Gatien	Director, NB Organ and Tissue Program	2016-11-14
v2.0	Nova Scotia	Dr. Ian Alwayn	Surgical Head	2016-12-01	Brian Butt	Director	2016-12-01
v2.0	Newfoundland	Dr. Brendan Barrett	Medical Director, Kidney Program	2016-09-26	Janet Templeton	Regional Director	2016-09-23