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## User Guide

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Due to the pandemic's effect on the transplant system, adjustments have been made for this data reporting cycle and potentially future reporting cycles as well. For transplant programs, this means that SRTR will not include patient follow-up starting from March 12, 2020, the day prior to the emergency declaration, i.e., waitlist survival, transplant rate, and outcomes will not be assessed after that date.

This report contains a wide range of useful information about the kidney transplant program at University of Minnesota Medical Center, Fairview (MNUM). The report has three main sections:

- A. Program Summary
- B. Waiting List Information
- C. Transplant Information

The Program Summary is a one-page summary highlighting characteristics of the program, including the number of candidates on the waiting list, the number of transplants performed at the program, the number of patients being cared for by the program, and patient outcomes, including outcomes while on the waiting list (the transplant rate and the death rate while on the waiting list) and outcomes after transplant (patient and graft survival probabilities). If the program performed transplants in both adults and children, survival probabilities for adults and children (pediatrics) are provided separately. For each of the outcomes measures presented, a comparison is provided showing what would be expected at this program if it were performing as similar programs around the country perform when treating similar patients. More details regarding these outcome measures are provided in Sections B and C of the report.

The Waiting List Information section contains more detailed information on how many candidates are on the waiting list at the program, the types of candidates on the waiting list, how long candidates typically have to wait for a transplant at this program, how frequently candidates successfully receive a transplant, and how often candidates on the waiting list die before receiving a transplant.

Table B1 shows the activity on this program's waiting list during two recent 1-year periods and provides comparisons to all programs within this program's OPTN region (see <http://optn.transplant.hrsa.gov/members/regions.asp> for information on OPTN regions) and the nation as a whole. Tables B2 and B3 describe the candidates on the waiting list at this program, with comparisons to candidates waiting in the same donor service area (OPO/DSA) the OPTN region, and the nation as a whole.

Table B4 shows how many candidates were removed from the waiting list because they received a transplant. The program's transplant rate is calculated as the number of candidates who received a transplant divided by the person-years observed at the program (person-years is a combination of how many candidates were on the waiting list along with how long each candidate was followed since some candidates are not on the waiting list for the entire year). The transplant rate and comparisons to what would be expected at this program are presented in Figures B1 and B2. Figure B1 shows the transplant rate compared to what was expected at this program. The expected transplant rate is an estimate of what we would expect at this program if it were performing transplants at rates similar to other programs in the US with similar candidates on their waiting lists. The expected rate is only an estimate, and is made with a certain level of uncertainty. This uncertainty is shown in Figure B2. Figure B2 displays the ratio of the observed to the expected transplant rate. A ratio of 1 indicates that the



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observed transplant rate was equal to the expected transplant rate, while a ratio less than 1 indicates the observed rate was lower than expected rate and a ratio greater than 1 indicates the observed rate was higher than the expected rate. However, the level of uncertainty must be considered when interpreting these numbers. The 95% interval is also shown on Figure B2. This interval provides a range within which the true ratio of observed to expected transplant rates is likely to be. If this confidence interval includes (crosses) 1.0, then we cannot say that this program's observed transplant rate is different from what would be expected. The observed transplant rate at this program was 23.2 per 100 person-years. Transplant rates are also provided for adult and pediatric patients separately along with comparisons to adult and pediatric rates in the DSA, the OPTN region, and the nation. Transplant rates are also presented excluding transplants from a living donor (Table B4D and Figures B1D-B3D). Please refer to the PSR Technical Methods documentation available at <http://www.srtr.org> for more detail regarding how expected rates are calculated.

The death rate (also known as the mortality rate) for candidates on the waiting list is presented in Table B5 and Figures B4-B6. These data are presented in the same way as the transplant rate data in the previous section. The intent of this table and figures is to describe risk of death once candidates are listed rather than while they are listed, but before they are transplanted. Therefore, time at risk and deaths after removal from the waiting list for reasons other than transplant, transfer to another transplant program, or recovery (no longer needing a transplant), and before any subsequent transplant, are included. As with transplant rates, mortality rates should be interpreted carefully taking into consideration the interval displayed in Figure B5. For a complete description of how observed and expected mortality rates are calculated, please refer to the technical documentation available at <http://www.srtr.org>.

Survival from listing is presented in Table B6 and Figures B7-B9. These data are presented in the same way as the waiting list mortality rate data in the previous section. The intent of this table and figures is to describe risk of death once candidates are listed rather than while they are listed, including after a transplant. As with transplant rates, mortality rates should be interpreted carefully taking into consideration the interval displayed in Figure B8. For a complete description of how observed and expected mortality rates are calculated, please refer to the technical documentation available at <http://www.srtr.org>.

Table B7 presents information on what happens to candidates on the waiting list by three different time points after listing: 6 months, 12 months, and 18 months. The table displays percentages of candidates who have died, been removed from the waiting list, been transplanted, or been transferred or lost-to-follow-up. Tables B8 and B9 provide more detail regarding how many candidates have received a deceased donor transplant by certain time points during the first 3 years after being put on the transplant waiting list. Each row of Tables B8 and B9 presents the percent of candidates who received a deceased donor transplant by each time point. Table B10 presents data on the time it took for different percentages of patients to be transplanted for candidates added to the list between 07/01/2014 and 12/31/2019. The time it took for 5% (the 5th percentile) of patients to receive a transplant at this program was 1.8 months. If "Not Observed" is displayed in the table, then too few candidates received transplants before 06/30/2020 to calculate a particular percentile of transplant times.



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Table B11 contains a summary of the offer acceptance practices of the program. The offer acceptance ratio indicates whether the program is more or less likely to accept offers than the average program. If the offer acceptance ratio is greater than 1.0, then the program tends to accept more offers than average; if the offer acceptance ratio is less than 1.0, then the program tends to accept fewer offers than average. Figure B10 shows the distribution of program offer acceptance rates as well as the offer acceptance rate for this program. Figures B11 - B14 similarly show offer acceptance rates for subsets of offers.

The Transplant Information section begins with descriptions of transplant recipients in Tables C1 and C2. Data on recipients of deceased donor transplants are presented (Tables C1D and C2D); if applicable, data on recipients of living donor transplants are presented separately (Tables C1L and C2L). Comparisons to the region and the nation as a whole are provided. A description of the deceased donors used at this program is provided in Table C3D, along with characteristics of living donors in Table C3L, if applicable. Finally, information on the transplant procedure for deceased and living donor transplants is presented in Tables C4D and C4L, respectively.

Starting with Table C5, transplant outcomes are presented along with comparisons to what would be expected at this program and what happened in the nation as a whole. Tables C5-C10 present information on graft survival (survival of the transplanted organ), with data presented separately for adult and pediatric recipients. Patients are followed from the time of transplant until either failure of the transplanted organ or death, whichever comes first. Please refer to the technical methods for more information on these calculations (<http://www.srtr.org>).

While Tables C5-C10 present data on graft survival, Tables C11-C16 present information on patient survival. For these tables, patients are followed from the time of transplant until death, regardless of whether the transplant is functioning or the patient required another transplant to survive.

Tables C17 and C18 summarize the multiorgan transplant outcomes at this program. The summary statistics in these tables are descriptive and are not risk-adjusted for different donor and candidate characteristics.

Table D1 shows the rates of follow-up for living donors.

Additional information regarding the technical methods and the risk adjustment models used to estimate expected event rates is available on the SRTR website at <http://www.srtr.org>. We welcome and encourage feedback on these reports. Please feel free to share feedback with the SRTR at the following e-mail: [srtr@srtr.org](mailto:srtr@srtr.org).



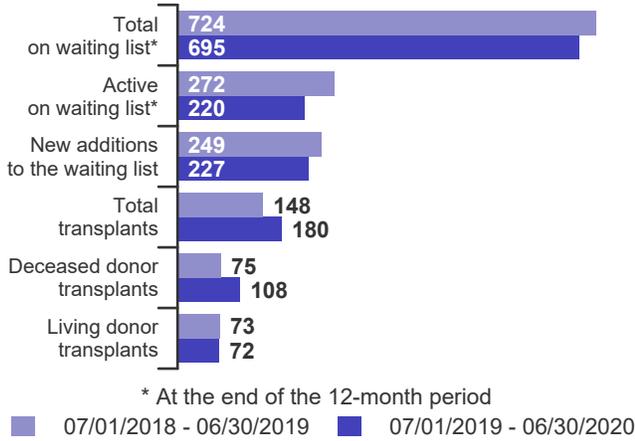
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## A. Program Summary

**Figure A1. Waiting list and transplant activity**

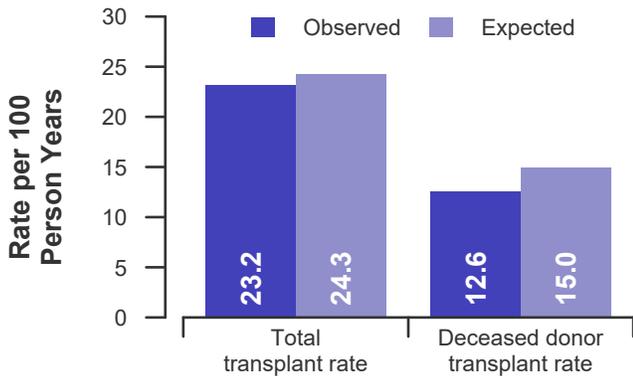


**Table A1. Census of transplant recipients**

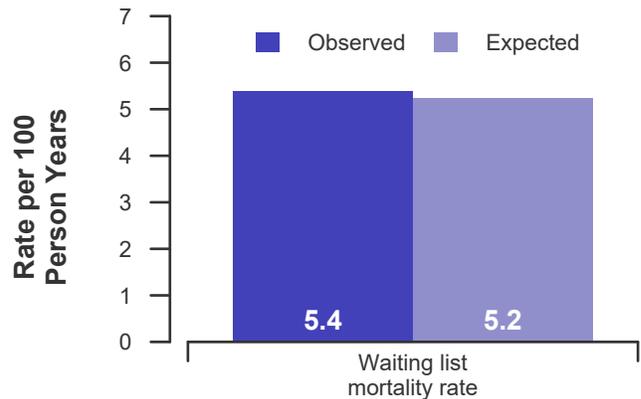
Recipients	07/01/2018-06/30/2019	07/01/2019-06/30/2020
Transplanted at this center	148	180
Followed by this center*	2,405	2,307
...transplanted at this program	2,340	2,243
...transplanted elsewhere	65	64

\* Recipients followed are transplant recipients for whom the center has submitted a post-transplant follow-up form for a transplant that took place before the 12-month interval for each column.

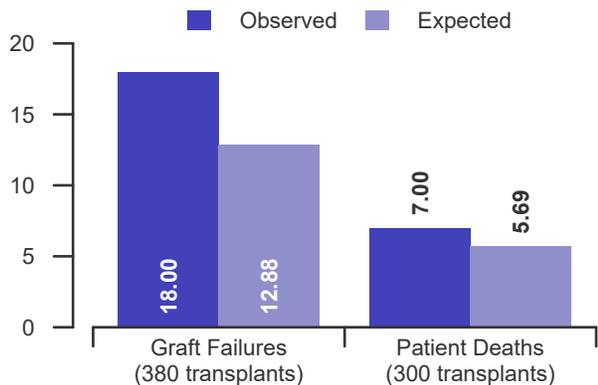
**Figure A2. Transplant rates 07/01/2018 - 03/12/2020**



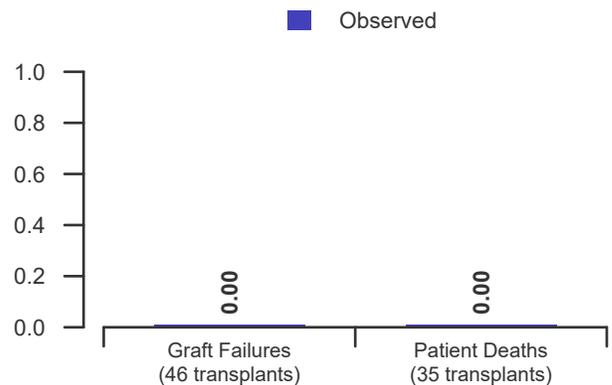
**Figure A3. Waiting list mortality rates 07/01/2018 - 03/12/2020**



**Figure A4. First-year adult graft and patient survival: 07/01/2017 - 12/31/2019**



**Figure A5. First-year pediatric graft and patient survival: 07/01/2017 - 12/31/2019**





## B. Waiting List Information

Table B1. Waiting list activity summary: 07/01/2018 - 06/30/2020

Waiting List Registrations	Counts for this center		Activity for 07/01/2019 to 06/30/2020 as percent of registrants on waiting list on 07/01/2019		
	07/01/2018-06/30/2019	07/01/2019-06/30/2020	This Center (%)	OPTN Region (%)	U.S. (%)
<b>On waiting list at start</b>	721	724	100.0	100.0	100.0
<b>Additions</b>					
New listings at this center	249	227	31.4	41.2	39.3
<b>Removals</b>					
Transferred to another center	8	5	0.7	0.8	1.7
Received living donor transplant*	73	68	9.4	9.3	5.7
Received deceased donor transplant*	74	104	14.4	15.1	16.6
Died	31	25	3.5	3.5	4.1
Transplanted at another center	5	5	0.7	4.1	3.8
Deteriorated	22	11	1.5	4.7	4.0
Recovered	2	5	0.7	0.4	0.2
Other reasons	31	33	4.6	5.7	5.0
<b>On waiting list at end of period</b>	724	695	96.0	97.5	98.2

\* These patients were removed from waiting list with removal code indicating transplant; this may not equal the number of transplants performed at this center during the specified period.



## B. Waiting List Information

**Table B2. Demographic characteristics of waiting list candidates**  
Candidates registered on the waiting list between 07/01/2019 and 06/30/2020

Demographic Characteristic	New Waiting List Registrations 07/01/2019 to 06/30/2020 (%)			All Waiting List Registrations on 06/30/2020 (%)		
	This Center (N=227)	OPTN Region (N=3,033)	U.S. (N=39,776)	This Center (N=695)	OPTN Region (N=7,173)	U.S. (N=99,301)
<b>All (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Ethnicity/Race (%)*</b>						
White	68.7	52.6	41.7	65.5	47.8	35.2
African-American	11.5	22.9	28.5	14.7	27.4	32.1
Hispanic/Latino	6.6	13.9	19.7	4.3	13.0	21.0
Asian	11.0	7.8	8.1	13.5	8.7	9.9
Other	2.2	2.8	1.9	2.0	3.1	1.8
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
<b>Age (%)</b>						
<2 years	0.9	0.2	0.1	0.3	0.1	0.1
2-11 years	1.8	0.6	0.9	1.3	0.5	0.6
12-17 years	4.8	1.6	1.5	2.6	1.2	1.0
18-34 years	18.1	10.9	10.7	12.5	10.7	10.3
35-49 years	13.7	24.5	24.2	20.0	27.4	26.9
50-64 years	34.8	41.4	41.3	41.0	43.7	43.4
65-69 years	16.3	14.2	13.3	16.4	12.3	12.1
70+ years	9.7	6.5	8.1	5.9	4.0	5.6
<b>Gender (%)</b>						
Male	57.3	60.7	62.1	57.4	60.9	62.1
Female	42.7	39.3	37.9	42.6	39.1	37.9

\* Race and ethnicity are reported together as a single data element, reflecting their data collection (either race or ethnicity is required, but not both). Patients formerly coded as white and Hispanic are coded as Hispanic. Race and ethnicity sum to 100%.



## B. Waiting List Information

**Table B3. Medical characteristics of waiting list candidates**

Candidates registered on the waiting list between 07/01/2019 and 06/30/2020

Medical Characteristic	New Waiting List Registrations 07/01/2019 to 06/30/2020 (%)			All Waiting List Registrations on 06/30/2020 (%)		
	This Center (N=227)	OPTN Region (N=3,033)	U.S. (N=39,776)	This Center (N=695)	OPTN Region (N=7,173)	U.S. (N=99,301)
<b>All (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
<b>Blood Type (%)</b>						
O	41.9	46.7	49.1	47.1	53.9	53.8
A	37.9	35.3	32.4	32.4	28.0	27.2
B	14.1	14.2	14.8	17.1	15.9	16.5
AB	6.2	3.8	3.8	3.5	2.2	2.5
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
<b>Previous Transplant (%)</b>						
Yes	26.9	15.8	12.7	29.5	18.6	13.7
No	73.1	84.2	87.3	70.5	81.4	86.3
Unknown	0.0	0.0	0.0	0.0	0.0	0.0
<b>Initial CPRA (%)</b>						
0-9%	65.6	82.1	80.5	65.9	80.0	80.0
10-79%	24.2	11.7	12.4	24.2	13.1	12.6
80+%	10.1	6.2	6.9	9.8	6.9	7.3
Unknown	0.0	0.0	0.2	0.1	0.0	0.1
<b>Primary Disease (%)*</b>						
Glomerular Diseases	26.4	21.1	18.8	23.0	21.3	18.8
Tubular and Interstitial Diseases	8.8	4.6	3.8	7.6	4.9	3.6
Polycystic Kidneys	6.6	8.2	7.5	7.5	7.9	6.9
Congenital, Familial, Metabolic	5.3	2.2	2.1	5.0	2.2	1.8
Diabetes	18.9	27.4	35.4	23.3	28.9	36.9
Renovascular & Vascular Diseases	0.0	0.1	0.2	0.0	0.2	0.2
Neoplasms	0.0	0.4	0.3	0.1	0.3	0.3
Hypertensive Nephrosclerosis	8.8	21.5	19.8	11.5	21.5	21.2
Other	24.7	14.2	11.7	20.6	12.1	9.9
Missing*	0.4	0.3	0.4	1.3	0.6	0.4

\* When "retransplant" is indicated, the primary disease is passed forward from the prior transplant in order to indicate the initial primary disease causing organ failure. "Missing" may include some patients for whom retransplant is indicated but no prior diagnosis can be found.



## B. Waiting List Information

Table B4. Transplant rates: 07/01/2018 - 03/12/2020

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	721	2,457	7,668	100,697
Person Years**	1,226.4	4,228.1	12,681.3	171,846.3
Removals for Transplant	284	988	3,204	38,985
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	687	2,418	7,540	99,206
Person Years**	1,175.9	4,165.8	12,458.7	169,185.1
Removals for transplant	251	943	3,088	37,536
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	34	39	128	1,491
Person Years**	50.5	62.3	222.6	2,661.2
Removals for transplant	33	45	116	1,449

\* Counts in this table may be lower than similar counts in other waiting list tables, such as Table B1. A small percentage (~1%) of patients are found to have died or been transplanted before being removed from the waiting list, so these patients are excluded if the event occurs prior to the start of the study period. Inactive time on the waiting list is included in the calculations for this table.

\*\* Person years are calculated as days (converted to fractional years). The number of days from July 1 or from the date of first wait listing until death, transplant, removal from the waiting list or March 12, 2020.

Figure B1. Observed and expected transplant rates: 07/01/2018 - 03/12/2020

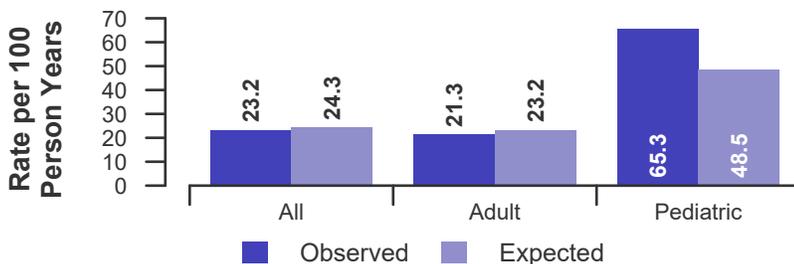


Figure B2. Transplant rate ratio estimate

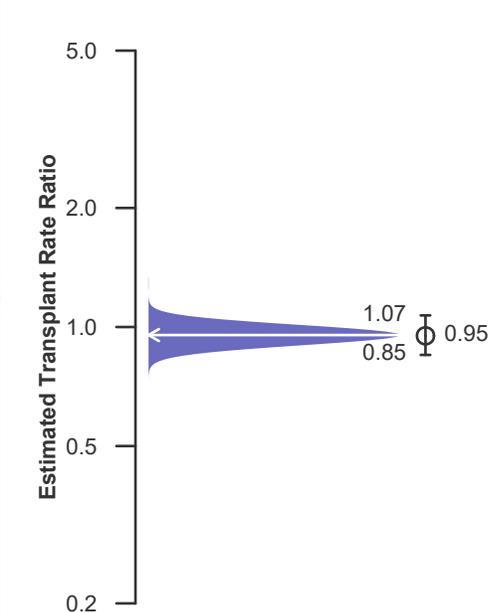
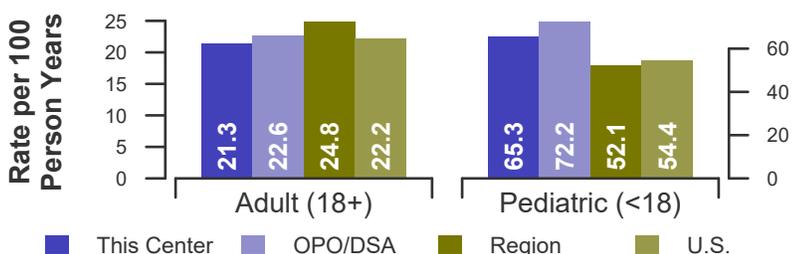


Figure B3. Observed adult (18+) and pediatric (<18) transplant rates: 07/01/2018 - 03/12/2020





## B. Waiting List Information

Table B4D. Deceased donor transplant rates: 07/01/2018 - 03/12/2020

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	721	2,457	7,668	100,697
Person Years**	1,226.4	4,228.1	12,681.3	171,846.3
Removals for Transplant	154	465	1,903	27,603
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	687	2,418	7,540	99,206
Person Years**	1,175.9	4,165.8	12,458.7	169,185.1
Removals for transplant	142	446	1,843	26,609
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	34	39	128	1,491
Person Years**	50.5	62.3	222.6	2,661.2
Removals for transplant	12	19	60	994

\* Counts in this table may be lower than similar counts in other waiting list tables, such as Table B1. A small percentage (~1%) of patients are found to have died or been transplanted before being removed from the waiting list, so these patients are excluded if the event occurs prior to the start of the study period. Inactive time on the waiting list is included in the calculations for this table.

\*\* Person years are calculated as days (converted to fractional years). The number of days from July 1 or from the date of first wait listing until death, transplant, removal from the waiting list or March 12, 2020.

Figure B1D. Observed and expected deceased donor transplant rates: 07/01/2018 - 03/12/2020

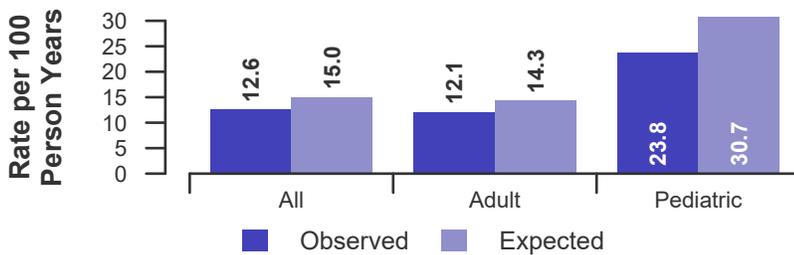


Figure B2D. Deceased donor transplant rate ratio estimate

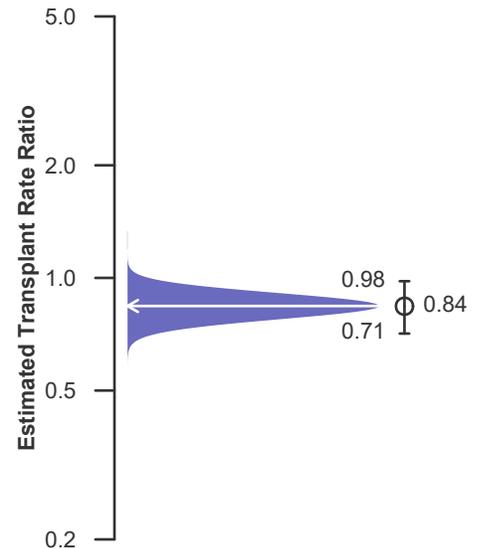
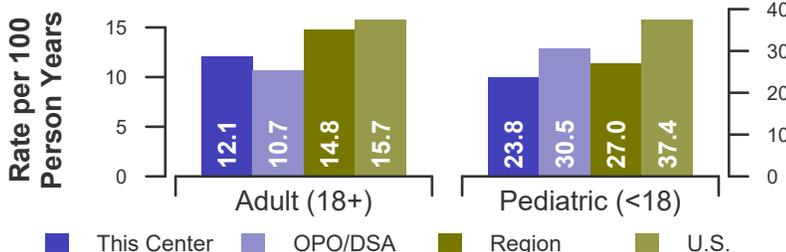


Figure B3D. Observed adult (18+) and pediatric (<18) deceased donor transplant rates: 07/01/2018 - 03/12/2020





## B. Waiting List Information

Table B5. Waiting list mortality rates: 07/01/2018 - 03/12/2020

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Candidates</b>				
Count on waiting list at start*	721	2,457	7,668	100,697
Person Years**	1,300.5	4,466.6	13,655.5	184,662.2
Number of deaths	70	204	626	8,721
<b>Adult (18+) Candidates</b>				
Count on waiting list at start*	687	2,418	7,540	99,206
Person Years**	1,249.9	4,403.4	13,430.5	181,914.0
Number of deaths	70	204	625	8,686
<b>Pediatric (&lt;18) Candidates</b>				
Count on waiting list at start*	34	39	128	1,491
Person Years**	50.7	63.2	225.0	2,748.2
Number of deaths	0	0	1	35

\* Counts in this table may be lower than similar counts in other waiting list tables, such as Table B1. A small percentage (~1%) of patients are found to have died or been transplanted before being removed from the waiting list, so these patients are excluded if the event occurs prior to the start of the study period. Inactive time on the waiting list is included in the calculations for this table.

\*\* Person years are calculated as days (converted to fractional years). The number of days from July 1 or from the date of first wait listing until death, transplant, 60 days after recovery, transfer or March 12, 2020.

Figure B4. Observed and expected waiting list mortality rates: 07/01/2018 - 03/12/2020

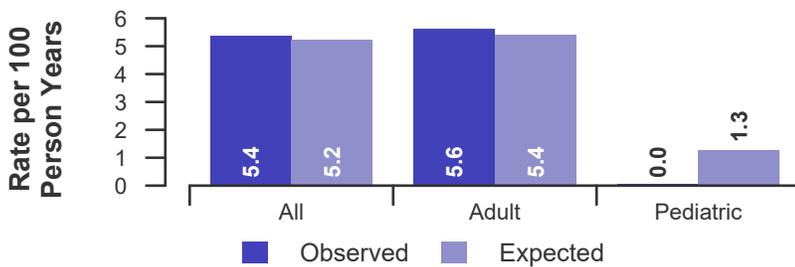


Figure B5. Waiting list mortality rate ratio estimate

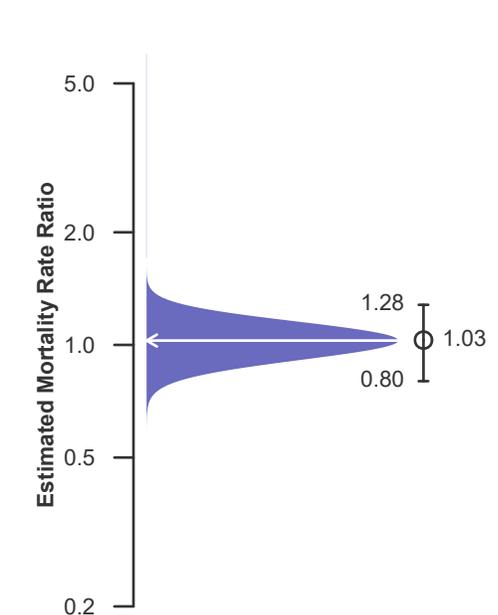
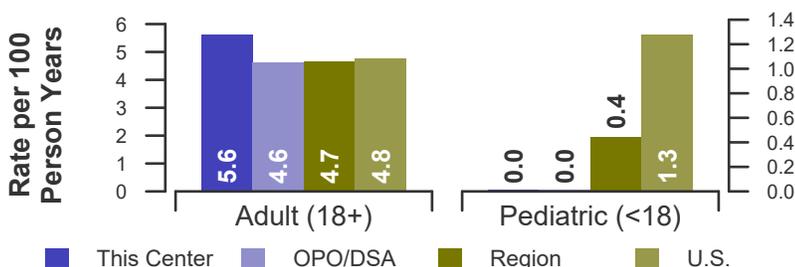


Figure B6. Observed adult (18+) and pediatric (<18) waiting list mortality rates: 07/01/2018 - 03/12/2020





## B. Waiting List Information

Table B6. Rates of patient mortality after listing: 07/01/2018 - 03/12/2020

Waiting List Registrations	This Center	OPO/DSA	Region	U.S.
<b>All Patients</b>				
Count at risk during the evaluation period	2,070	7,320	23,260	288,816
Person-years*	2,745.6	9,840.2	30,765.5	381,306.4
Number of Deaths	107	345	1,232	16,073
<b>Adult (18+) Patients</b>				
Count at risk during the evaluation period	1,928	7,040	22,563	280,336
Person-years*	2,558.7	9,439.3	29,814.0	369,696.7
Number of Deaths	105	340	1,226	16,004
<b>Pediatric (&lt;18) Patients</b>				
Count at risk during the evaluation period	142	280	697	8,480
Person-years*	186.8	400.8	951.4	11,609.7
Number of Deaths	2	5	6	69

\* Person-years are calculated as days (converted to fractional years). The number of days from 07/01/2018, or from the date of first wait listing until death, reaching 7 years after listing or March 12, 2020.

\*\* Patient mortality after listing describes the relative survival experience of patients after listing. It depends on many factors, some of which are outside of the control of the transplant program. For example, availability of organs may not be the same in every part of the country.

Figure B7. Observed and expected rates of patient mortality after listing: 07/01/2018 - 03/12/2020

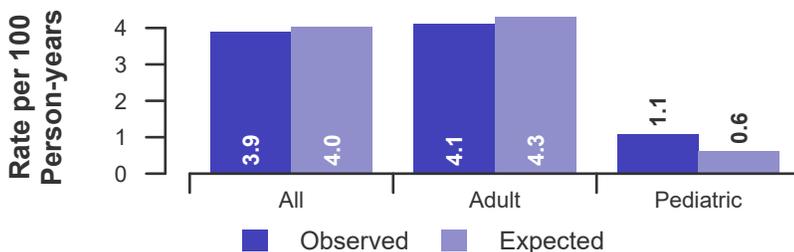


Figure B8. HR estimate of patient mortality after listing

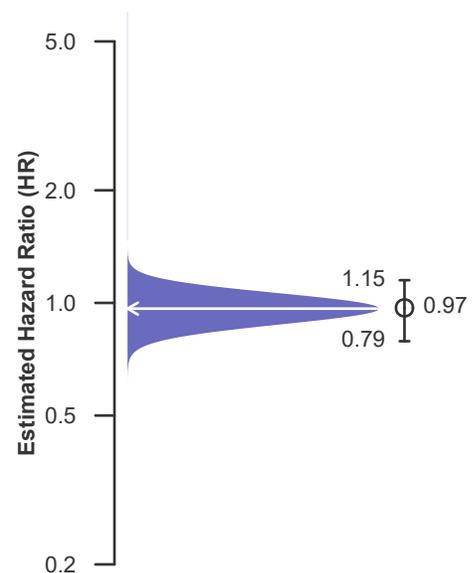
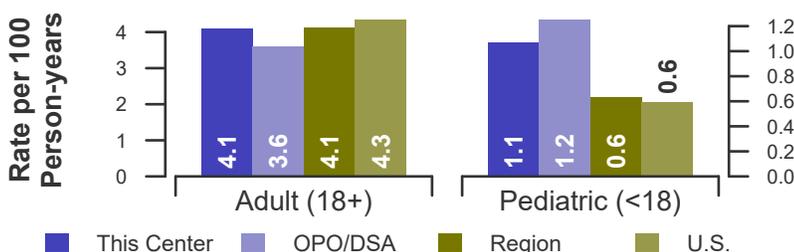


Figure B9. Observed adult (18+) and pediatric (<18) rates of patient mortality after listing: 07/01/2018 - 03/12/2020





## B. Waiting List Information

**Table B7. Waiting list candidate status after listing**  
Candidates registered on waiting list between 01/01/2018 and 12/31/2018

Waiting list status (survival status)	This Center (N=255)			U.S. (N=39,987)		
	Months Since Listing			Months Since Listing		
	6	12	18	6	12	18
<b>Alive on waiting list (%)</b>	86.3	72.5	59.6	77.4	64.2	54.1
<b>Died on the waiting list without transplant (%)</b>	1.2	2.4	3.1	1.0	1.9	2.8
<b>Removed without transplant (%):</b>						
Condition worsened (status unknown)	0.8	1.6	1.6	0.6	1.4	2.4
Condition improved (status unknown)	0.0	0.0	0.0	0.1	0.1	0.2
Refused transplant (status unknown)	0.0	0.4	0.4	0.0	0.1	0.2
Other	0.4	1.6	2.0	0.8	1.6	2.6
<b>Transplant (living donor from waiting list only) (%):</b>						
Functioning (alive)	5.9	10.6	11.0	6.7	10.1	7.7
Failed-Retransplanted (alive)	0.0	0.0	0.0	0.0	0.0	0.0
Failed-alive not retransplanted	0.0	0.0	0.0	0.0	0.0	0.0
Died	0.0	0.0	0.0	0.0	0.1	0.1
Status Yet Unknown**	0.0	0.0	3.5	0.1	0.6	5.0
<b>Transplant (deceased donor) (%):</b>						
Functioning (alive)	4.7	9.4	12.9	11.1	14.6	11.6
Failed-Retransplanted (alive)	0.0	0.0	0.0	0.0	0.0	0.0
Failed-alive not retransplanted	0.0	0.0	0.0	0.0	0.0	0.1
Died	0.4	0.8	1.2	0.2	0.4	0.7
Status Yet Unknown*	0.4	0.4	3.5	1.7	4.0	11.4
<b>Lost or Transferred (status unknown) (%)</b>	0.0	0.4	1.2	0.2	0.7	1.3
<b>TOTAL (%)</b>	100.0	100.0	100.0	100.0	100.0	100.0
Total % known died on waiting list or after transplant	1.6	3.1	4.3	1.2	2.4	3.6
Total % known died or removed as unstable	2.4	4.7	5.9	1.9	3.8	6.0
Total % removed for transplant	11.4	21.2	32.2	19.9	29.9	36.5
Total % with known functioning transplant (alive)	10.6	20.0	23.9	17.8	24.7	19.3

\* Follow-up form covering specified time period not yet completed, and possibly has not become due.



## B. Waiting List Information

**Table B8. Percent of candidates with deceased donor transplants: demographic characteristics**  
Candidates registered on the waiting list between 07/01/2014 and 06/30/2017

Characteristic	Percent transplanted at time periods since listing									
	This Center					United States				
	N	30 day	1 year	2 years	3 years	N	30 day	1 year	2 years	3 years
<b>All</b>	546	3.1	15.4	22.5	29.3	93,662	3.6	16.0	22.6	27.8
<b>Ethnicity/Race*</b>										
White	346	2.3	13.9	21.1	27.5	37,390	3.9	17.0	23.7	28.8
African-American	86	4.7	18.6	24.4	32.6	29,527	3.5	16.2	22.7	27.9
Hispanic/Latino	25	8.0	36.0	40.0	48.0	17,534	3.7	15.6	22.0	27.4
Asian	71	2.8	12.7	21.1	26.8	7,645	2.0	11.2	17.6	23.0
Other	18	5.6	11.1	22.2	33.3	1,566	4.5	19.5	25.9	31.6
Unknown	0	--	--	--	--	0	--	--	--	--
<b>Age</b>										
<2 years	6	0.0	16.7	66.7	66.7	128	5.5	36.7	53.9	68.0
2-11 years	12	16.7	50.0	50.0	66.7	852	8.3	48.4	62.0	70.8
12-17 years	20	5.0	40.0	60.0	75.0	1,407	7.8	49.3	62.2	67.9
18-34 years	66	4.5	16.7	30.3	37.9	9,563	3.5	17.6	25.9	32.9
35-49 years	113	4.4	23.9	31.0	37.2	23,762	3.3	15.0	21.9	27.7
50-64 years	230	2.2	9.6	13.9	19.6	40,111	3.6	14.8	20.7	25.5
65-69 years	68	1.5	8.8	11.8	19.1	12,262	3.7	14.8	20.6	25.1
70+ years	31	0.0	9.7	19.4	25.8	5,577	3.3	15.3	20.9	25.1
<b>Gender</b>										
Male	315	2.2	15.2	22.2	28.3	58,067	3.8	15.6	21.7	26.8
Female	231	4.3	15.6	22.9	30.7	35,595	3.4	16.8	24.0	29.5

\* Race and ethnicity are reported together as a single data element, reflecting their data collection (either race or ethnicity is required, but not both). Patients formerly coded as white and Hispanic are coded as Hispanic. Race and ethnicity sum to 100%.



## B. Waiting List Information

**Table B9. Percent of candidates with deceased donor transplants: medical characteristics**  
Candidates registered on the waiting list between 07/01/2014 and 06/30/2017

Characteristic	Percent transplanted at time periods since listing									
	This Center					United States				
	N	30 day	1 year	2 years	3 years	N	30 day	1 year	2 years	3 years
<b>All</b>	546	3.1	15.4	22.5	29.3	93,662	3.6	16.0	22.6	27.8
<b>Blood Type</b>										
O	241	4.6	15.4	20.7	29.5	46,625	3.3	14.0	19.5	24.0
A	185	2.7	17.3	25.4	31.4	29,375	4.4	19.0	26.9	33.2
B	96	0.0	5.2	13.5	18.8	14,175	2.4	13.1	19.2	24.0
AB	24	4.2	41.7	54.2	54.2	3,487	6.0	30.6	41.5	49.3
<b>Previous Transplant</b>										
Yes	141	2.1	15.6	24.1	33.3	12,856	2.7	16.4	24.4	29.8
No	405	3.5	15.3	22.0	27.9	80,806	3.8	16.0	22.3	27.5
<b>Peak PRA/CPRA</b>										
0-9%	360	3.6	15.6	21.7	28.9	75,317	3.9	15.5	21.6	26.8
10-79%	114	0.9	8.8	16.7	22.8	10,787	2.5	15.7	22.8	28.2
80+%	66	4.5	24.2	34.8	40.9	7,475	2.6	22.4	32.3	37.4
Unknown	0	--	--	--	--	7	100.0	100.0	100.0	100.0
<b>Primary Disease*</b>										
Glomerular Diseases	118	2.5	16.1	26.3	32.2	17,106	2.9	16.8	25.0	31.6
Tubular & Interstitial Diseases	33	9.1	27.3	30.3	42.4	3,474	4.6	19.5	27.3	32.6
Polycystic Kidneys	33	0.0	6.1	12.1	18.2	6,196	2.1	14.6	22.1	28.9
Congenital, Familial, Metabolic	41	7.3	26.8	46.3	56.1	1,840	4.9	29.2	39.0	46.6
Diabetes	150	0.0	6.0	10.7	16.7	32,973	2.4	11.7	16.6	20.7
Renovascular & Vascular Diseases	0	--	--	--	--	142	6.3	20.4	27.5	33.8
Neoplasms	1	0.0	0.0	0.0	0.0	288	5.6	22.2	28.5	34.7
Hypertensive Nephrosclerosis	54	1.9	27.8	27.8	31.5	20,390	3.4	15.9	22.6	28.2
Other	105	6.7	17.1	24.8	32.4	10,889	9.1	25.7	32.9	37.5
Missing*	11	0.0	9.1	18.2	27.3	364	1.4	11.0	16.5	20.9

\* When "retransplant" is indicated, the primary disease is passed forward from the prior transplant in order to indicate the initial primary disease causing organ failure. "Missing" may include some patients for whom retransplant is indicated but no prior diagnosis can be found.



## B. Waiting List Information

**Table B10. Time to transplant for waiting list candidates\***

Candidates registered on the waiting list between 07/01/2014 and 12/31/2019

Percentile	Center	Months to Transplant**		U.S.
		OPO/DSA	Region	
5th	1.8	0.5	0.6	0.9
10th	3.9	2.1	2.1	2.5
25th	11.3	7.2	7.9	9.7
50th (median time to transplant)	37.3	27.1	32.4	42.4
75th	Not Observed	Not Observed	Not Observed	Not Observed

\* If cells contain "Not Observed" fewer than that percentile of patients had received a transplant. For example, the 50th percentile of time to transplant is the time when 50% of candidates have received transplants. If waiting times are long, then the 50th percentile may not be observed during the follow-up period for this table. Also, if more than 50% of candidates are removed from the list due to death or other reasons before receiving transplants, then the 50th percentile of time to transplant will not be observed.

\*\* Censored on 06/30/2020. Calculated as the months after listing, during which the corresponding percent of all patients initially listed had received a transplant.



## B. Waiting List Information

Table B11. Offer Acceptance Practices: 07/01/2019 - 03/12/2020

Offers Acceptance Characteristics	This Center	OPO/DSA	Region	U.S.
<b>Overall</b>				
Number of Offers	4,193	19,981	76,196	1,489,166
Number of Acceptances	80	196	754	11,332
Expected Acceptances	57.4	220.5	806.3	11,315.1
Offer Acceptance Ratio*	1.38	0.89	0.94	1.00
95% Credible Interval**	[1.10, 1.69]	--	--	--
<b>Low-KDRI Donors (KDRI &lt; 1.05)</b>				
Number of Offers	496	2,644	9,710	148,107
Number of Acceptances	30	79	222	3,735
Expected Acceptances	21.3	89.9	247.3	3,727.8
Offer Acceptance Ratio*	1.38	0.88	0.90	1.00
95% Credible Interval**	[0.94, 1.89]	--	--	--
<b>Medium-KDRI Donors (1.05 &lt; KDRI &lt; 1.75)</b>				
Number of Offers	2,784	12,852	49,028	1,024,741
Number of Acceptances	41	98	410	6,217
Expected Acceptances	27.9	100.7	443.4	6,209.0
Offer Acceptance Ratio*	1.44	0.97	0.92	1.00
95% Credible Interval**	[1.04, 1.90]	--	--	--
<b>High-KDRI Donors (KDRI &gt; 1.75)</b>				
Number of Offers	913	4,485	17,458	316,318
Number of Acceptances	9	19	122	1,380
Expected Acceptances	8.3	29.9	115.6	1,378.3
Offer Acceptance Ratio*	1.07	0.66	1.05	1.00
95% Credible Interval**	[0.54, 1.79]	--	--	--
<b>Hard-to-Place Kidneys (Over 100 Offers)</b>				
Number of Offers	3,377	16,822	59,627	1,289,977
Number of Acceptances	6	12	80	1,603
Expected Acceptances	4.2	24.9	92.8	1,598.9
Offer Acceptance Ratio*	1.29	0.52	0.86	1.00
95% Credible Interval**	[0.56, 2.33]	--	--	--

\* The offer acceptance ratio estimates the relative offer acceptance practice of University of Minnesota Medical Center, Fairview (MNUM) compared to the national offer acceptance practice. A ratio above one indicates the program is more likely to accept an offer compared to national offer acceptance practices (e.g., an offer acceptance ratio of 1.25 indicates a 25% more likely to accept an offer), while a ratio below one indicates the program is less likely to accept an offer compared to national offer acceptance practices (e.g., an offer acceptance ratio of 0.75 indicates a 25% less likely to accept an offer).

\*\* As an example, the 95% Credible Interval for the overall offer acceptance ratio, [1.10, 1.69], indicates the location of MNUM's true offer acceptance ratio with 95% probability. The best estimate is 38% more likely to accept an offer compared to national acceptance behavior, but MNUM's performance could plausibly range from 10% higher acceptance up to 69% higher acceptance.



## B. Waiting List Information

Figure B10. Offer acceptance: Overall

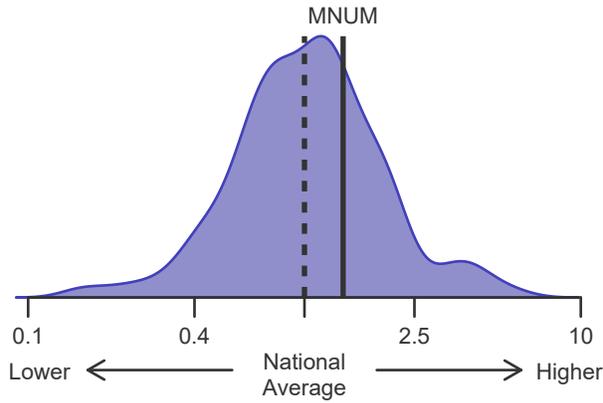


Figure B11. Offer acceptance: Low-KDRI

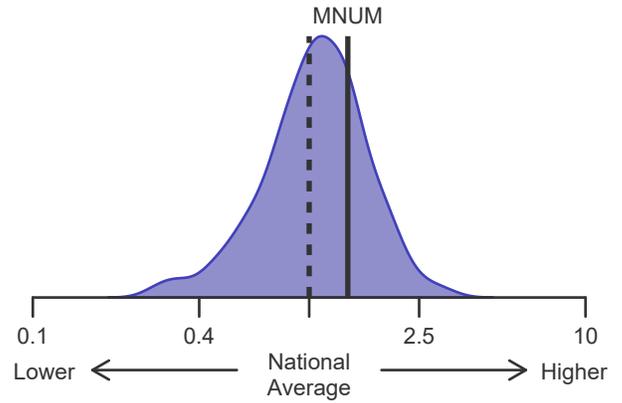


Figure B12. Offer acceptance: Medium-KDRI

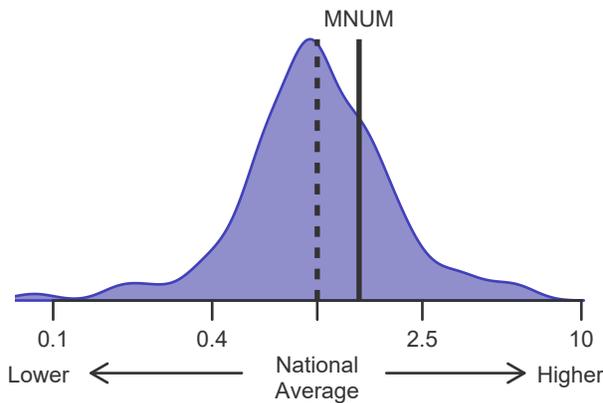


Figure B13. Offer acceptance: High-KDRI

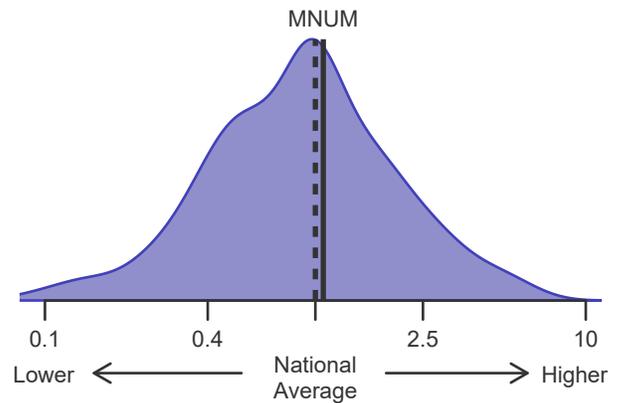
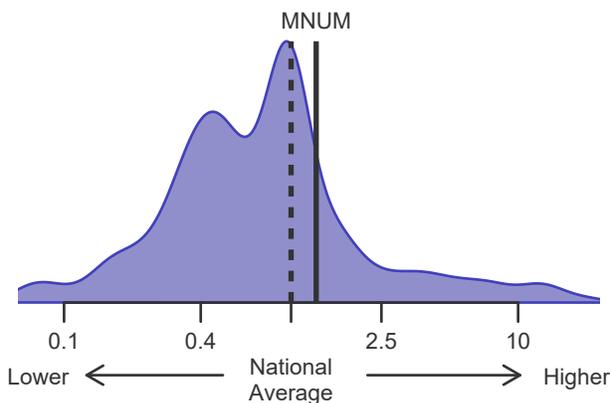


Figure B14. Offer acceptance: Offer number > 100





## C. Transplant Information

**Table C1D. Deceased donor transplant recipient demographic characteristics**  
Patients transplanted between 07/01/2019 and 06/30/2020

Characteristic	Percentage in each category		
	Center (N=108)	Region (N=1,120)	U.S. (N=16,870)
<b>Ethnicity/Race (%)*</b>			
White	53.7	44.4	37.8
African-American	16.7	26.5	32.2
Hispanic/Latino	6.5	17.3	20.3
Asian	19.4	8.9	7.8
Other	3.7	2.9	1.9
Unknown	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	0.0	0.2	0.1
2-11 years	0.9	1.2	1.2
12-17	4.6	2.1	1.6
18-34	14.8	9.6	10.3
35-49 years	17.6	23.8	23.9
50-64 years	37.0	39.5	40.3
65-69 years	14.8	14.5	13.2
70+ years	10.2	9.3	9.5
<b>Gender (%)</b>			
Male	48.1	57.9	60.4
Female	51.9	42.1	39.6

\* Race and ethnicity are reported together as a single data element, reflecting their data collection (either race or ethnicity is required, but not both). Patients formerly coded as white and Hispanic are coded as Hispanic. Race and ethnicity sum to 100%.



## C. Transplant Information

**Table C1L. Living donor transplant recipient demographic characteristics**  
Patients transplanted between 07/01/2019 and 06/30/2020

Characteristic	Percentage in each category		
	Center (N=72)	Region (N=697)	U.S. (N=5,777)
<b>Ethnicity/Race (%)*</b>			
White	83.3	71.7	65.1
African-American	9.7	9.6	12.4
Hispanic/Latino	2.8	10.8	14.7
Asian	4.2	6.2	6.4
Other	0.0	1.7	1.4
Unknown	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	1.4	0.3	0.2
2-11 years	4.2	1.7	1.7
12-17	2.8	1.4	1.7
18-34	16.7	13.9	15.9
35-49 years	20.8	24.4	25.7
50-64 years	30.6	36.3	35.3
65-69 years	12.5	13.2	10.9
70+ years	11.1	8.8	8.7
<b>Gender (%)</b>			
Male	65.3	61.1	62.3
Female	34.7	38.9	37.7

\* Race and ethnicity are reported together as a single data element, reflecting their data collection (either race or ethnicity is required, but not both). Patients formerly coded as white and Hispanic are coded as Hispanic. Race and ethnicity sum to 100%.



## C. Transplant Information

**Table C2D. Deceased donor transplant recipient medical characteristics**  
Patients transplanted between 07/01/2019 and 06/30/2020

Characteristic	Percentage in each category		
	Center (N=108)	Region (N=1,120)	U.S. (N=16,870)
<b>Blood Type (%)</b>			
O	44.4	43.7	45.5
A	34.3	36.6	35.2
B	15.7	14.0	14.1
AB	5.6	5.7	5.3
<b>Previous Transplant (%)</b>			
Yes	28.7	15.2	12.6
No	71.3	84.8	87.4
<b>Peak PRA/CPRA Prior to Transplant (%)</b>			
0-9%	22.2	61.6	61.2
10-79%	38.9	21.1	22.8
80+ %	38.9	17.3	16.0
Unknown	0.0	0.0	0.0
<b>Body Mass Index (%)</b>			
0-20	7.4	10.4	9.4
21-25	35.2	27.1	27.1
26-30	16.7	26.6	30.6
31-35	15.7	21.3	21.1
36-40	5.6	8.8	8.1
41+	0.0	2.7	1.5
Unknown	19.4	3.2	2.2
<b>Primary Disease (%)*</b>			
Glomerular Diseases	26.9	20.9	21.2
Tubular and Interstitial Disease	7.4	4.8	4.0
Polycystic Kidneys	3.7	7.6	7.5
Congenital, Familial, Metabolic	4.6	2.9	2.6
Diabetes	22.2	29.0	30.1
Renovascular & Vascular Diseases	0.0	0.2	0.2
Neoplasms	0.9	0.4	0.4
Hypertensive Nephrosclerosis	8.3	20.5	23.0
Other Kidney	25.0	13.3	10.7
Missing*	0.9	0.4	0.2

\* When "retransplant" is indicated, the primary disease is passed forward from the prior transplant in order to indicate the initial primary disease causing organ failure. "Missing" may include some patients for whom retransplant is indicated but no prior diagnosis can be found.



## C. Transplant Information

**Table C2L. Living donor transplant recipient medical characteristics**  
Patients transplanted between 07/01/2019 and 06/30/2020

Characteristic	Percentage in each category		
	Center (N=72)	Region (N=697)	U.S. (N=5,777)
<b>Blood Type (%)</b>			
O	30.6	40.9	43.4
A	52.8	42.3	38.8
B	12.5	13.3	14.1
AB	4.2	3.4	3.7
<b>Previous Transplant (%)</b>			
Yes	20.8	12.3	10.3
No	79.2	87.7	89.7
<b>Peak PRA/CPRA Prior to Transplant (%)</b>			
0-9%	37.5	73.2	74.8
10-79%	50.0	22.1	20.0
80+ %	12.5	4.7	5.2
Unknown	0.0	0.0	0.0
<b>Body Mass Index (%)</b>			
0-20	12.5	11.0	11.3
21-25	29.2	27.3	27.7
26-30	33.3	30.8	31.6
31-35	22.2	19.4	19.5
36-40	1.4	8.6	7.7
41+	0.0	2.7	1.1
Unknown	1.4	0.1	1.1
<b>Primary Disease (%)*</b>			
Glomerular Diseases	23.6	28.4	28.0
Tubular and Interstitial Disease	8.3	5.6	5.5
Polycystic Kidneys	12.5	13.9	13.1
Congenital, Familial, Metabolic	12.5	4.2	3.8
Diabetes	20.8	25.0	24.8
Renovascular & Vascular Diseases	0.0	0.1	0.3
Neoplasms	0.0	0.6	0.4
Hypertensive Nephrosclerosis	4.2	12.3	15.1
Other Kidney	16.7	9.6	8.9
Missing*	1.4	0.3	0.2

\* When "retransplant" is indicated, the primary disease is passed forward from the prior transplant in order to indicate the initial primary disease causing organ failure. "Missing" may include some patients for whom retransplant is indicated but no prior diagnosis can be found.



## C. Transplant Information

**Table C3D. Deceased donor characteristics**  
Transplants performed between 07/01/2019 and 06/30/2020

Donor Characteristic	Percentage in each category		
	Center (N=108)	Region (N=1,120)	U.S. (N=16,870)
<b>Cause of Death (%)</b>			
Deceased: Stroke	29.6	23.6	22.7
Deceased: MVA	15.7	10.1	13.3
Deceased: Other	54.6	66.3	63.9
<b>Ethnicity/Race (%)*</b>			
White	76.9	71.2	66.8
African-American	7.4	13.6	13.2
Hispanic/Latino	8.3	12.1	15.8
Asian	3.7	1.7	2.9
Other	3.7	1.5	1.2
Not Reported	0.0	0.0	0.0
<b>Age (%)</b>			
<2 years	0.9	1.1	0.8
2-11 years	4.6	3.0	2.5
12-17	5.6	5.4	3.8
18-34	31.5	29.0	33.6
35-49 years	21.3	27.9	31.7
50-64 years	35.2	30.4	25.2
65-69 years	0.9	2.4	2.0
70+ years	0.0	0.8	0.5
<b>Gender (%)</b>			
Male	58.3	64.6	63.0
Female	41.7	35.4	37.0
<b>Blood Type (%)</b>			
O	47.2	45.8	47.2
A	35.2	37.9	37.6
B	14.8	12.1	11.7
AB	2.8	4.2	3.5
Unknown	0.0	0.0	0.0

\* Race and ethnicity are reported together as a single data element, reflecting their data collection (either race or ethnicity is required, but not both). Patients formerly coded as white and Hispanic are coded as Hispanic. Race and ethnicity sum to 100%.



## C. Transplant Information

**Table C3L. Living donor characteristics**  
Transplants performed between 07/01/2019 and 06/30/2020

Donor Characteristic	Percentage in each category		
	Center (N=72)	Region (N=697)	U.S. (N=5,777)
<b>Ethnicity/Race (%)*</b>			
White	87.5	77.5	71.5
African-American	5.6	6.5	7.9
Hispanic/Latino	0.0	11.0	14.0
Asian	1.4	3.4	4.9
Other	5.6	1.6	1.6
Not Reported	0.0	0.0	0.0
<b>Age (%)</b>			
0-11 years	0.0	0.0	0.0
12-17	0.0	0.0	0.0
18-34	20.8	21.5	25.9
35-49 years	34.7	37.0	38.3
50-64 years	37.5	33.9	29.8
65-69 years	4.2	5.2	4.5
70+ years	2.8	2.4	1.5
<b>Gender (%)</b>			
Male	37.5	33.4	35.1
Female	62.5	66.6	64.9
<b>Blood Type (%)</b>			
O	48.6	58.5	62.6
A	43.1	31.9	27.4
B	8.3	8.3	8.6
AB	0.0	1.3	1.4
Unknown	0.0	0.0	0.0

\* Race and ethnicity are reported together as a single data element, reflecting their data collection (either race or ethnicity is required, but not both). Patients formerly coded as white and Hispanic are coded as Hispanic. Race and ethnicity sum to 100%.



## C. Transplant Information

**Table C4D. Deceased donor transplant characteristics**  
Transplants performed between 07/01/2019 and 06/30/2020

Transplant Characteristic	Percentage in each category		
	Center (N=108)	Region (N=1,120)	U.S. (N=16,870)
<b>Cold Ischemic Time (Hours): Local (%)</b>			
Deceased: 0-11 hr	57.4	40.7	34.3
Deceased: 12-21 hr	38.2	49.7	47.8
Deceased: 22-31 hr	2.9	8.7	14.6
Deceased: 32-41 hr	0.0	0.1	1.6
Deceased: 42+ hr	0.0	0.0	0.5
Not Reported	1.5	0.8	1.2
<b>Cold Ischemic Time (Hours): Shared (%)</b>			
Deceased: 0-11 hr	5.0	17.5	9.2
Deceased: 12-21 hr	55.0	50.6	36.3
Deceased: 22-31 hr	32.5	29.6	38.4
Deceased: 32-41 hr	5.0	1.2	11.7
Deceased: 42+ hr	2.5	0.4	3.1
Not Reported	0.0	0.8	1.3
<b>Level of Mismatch (%)</b>			
<b>A Locus Mismatches (%)</b>			
0	19.4	11.1	11.2
1	41.7	38.7	39.7
2	38.9	49.4	48.9
Not Reported	0.0	0.9	0.2
<b>B Locus Mismatches (%)</b>			
0	14.8	7.0	7.0
1	27.8	22.6	25.0
2	57.4	69.6	67.7
Not Reported	0.0	0.9	0.2
<b>DR Locus Mismatches (%)</b>			
0	27.8	14.6	16.0
1	41.7	48.4	47.7
2	30.6	36.2	36.1
Not Reported	0.0	0.9	0.2
<b>Total Mismatches (%)</b>			
0	11.1	4.5	4.5
1	2.8	1.5	1.1
2	8.3	4.4	4.7
3	18.5	13.3	13.9
4	23.1	25.4	27.3
5	19.4	32.3	33.0
6	16.7	17.8	15.2
Not Reported	0.0	0.9	0.2
<b>Procedure Type (%)</b>			
Kidney alone	94.4	92.1	93.8
Kidney and another organ	5.6	7.9	6.2
<b>Dialysis in First Week After Transplant (%)</b>			
Yes	1.9	24.1	28.6
No	98.1	75.8	70.9
Not Reported	0.0	0.1	0.5
<b>Sharing (%)</b>			
Local	63.0	77.1	69.6
Shared	37.0	22.9	30.4
<b>Median Time in Hospital After Transplant*</b>	5.0 Days	5.0 Days	5.0 Days

\* Multiple organ transplants are excluded from this statistic.



## C. Transplant Information

**Table C4L. Living donor transplant characteristics**  
Transplants performed between 07/01/2019 and 06/30/2020

Transplant Characteristic	Percentage in each category		
	Center (N=72)	Region (N=697)	U.S. (N=5,777)
<b>Relation with Donor (%)</b>			
Related	31.9	35.7	37.9
Unrelated	68.1	64.3	61.7
Not Reported	0.0	0.0	0.3
<b>Level of Mismatch (%)</b>			
<b>A Locus Mismatches (%)</b>			
0	13.9	17.8	16.2
1	54.2	49.5	48.6
2	31.9	32.7	31.6
Not Reported	0.0	0.0	3.5
<b>B Locus Mismatches (%)</b>			
0	8.3	10.9	9.7
1	45.8	42.2	41.6
2	45.8	46.8	45.1
Not Reported	0.0	0.1	3.6
<b>DR Locus Mismatches (%)</b>			
0	12.5	17.2	15.1
1	51.4	49.1	48.4
2	36.1	33.7	33.0
Not Reported	0.0	0.0	3.5
<b>Total Mismatches (%)</b>			
0	0.0	5.7	4.3
1	11.1	4.0	4.1
2	5.6	11.3	11.5
3	22.2	23.4	23.0
4	29.2	20.1	18.2
5	18.1	22.2	22.8
6	13.9	13.1	12.5
Not Reported	0.0	0.1	3.6
<b>Procedure Type (%)</b>			
Kidney alone	100.0	100.0	100.0
Kidney and another organ	0.0	0.0	0.0
<b>Dialysis in First Week After Transplant (%)</b>			
Yes	1.4	2.2	2.7
No	98.6	97.8	96.8
Not Reported	0.0	0.0	0.5
<b>Median Time in Hospital After Transplant*</b>	4.0 Days	4.0 Days	4.0 Days

\* Multiple organ transplants are excluded from this statistic.



## C. Transplant Information

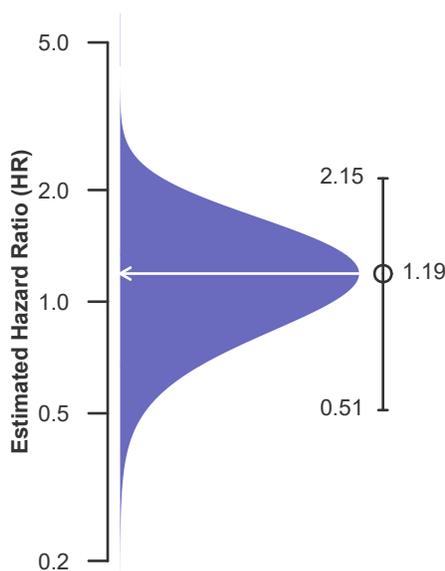
**Table C5. Adult (18+) 1-month survival with a functioning graft**  
Single organ transplants performed between 07/01/2017 and 12/31/2019  
Deaths and retransplants are considered graft failures

	MNUM	U.S.
Number of transplants evaluated	380	50,251
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	98.42%	98.67%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	98.76%	--
Number of observed graft failures (including deaths) during the first month after transplant	6	669
Number of expected graft failures (including deaths) during the first month after transplant	4.72	--
Estimated hazard ratio*	1.19	--
95% credible interval for the hazard ratio**	[0.51, 2.15]	--

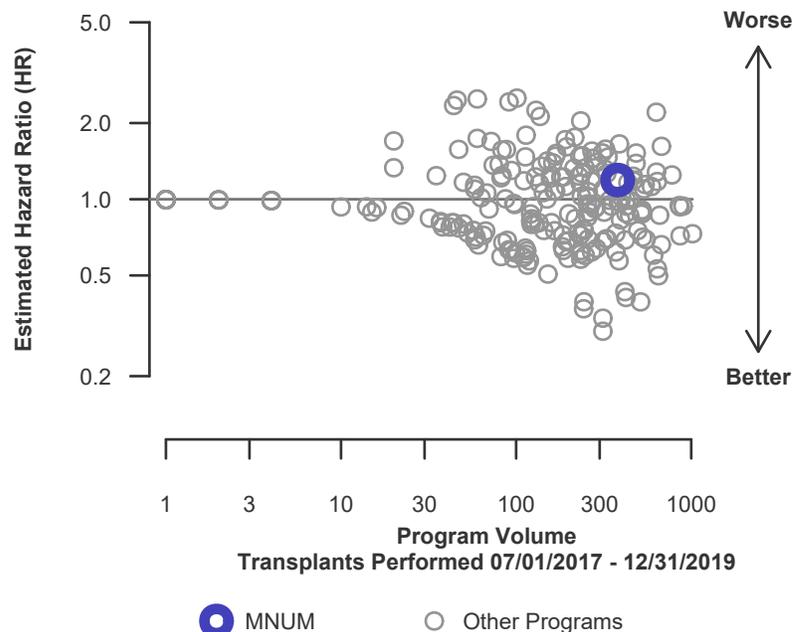
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.51, 2.15], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 19% higher risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 49% reduced risk up to 115% increased risk.

**Figure C1. Adult (18+) 1-month graft failure HR estimate**



**Figure C2. Adult (18+) 1-month graft failure HR program comparison**





## C. Transplant Information

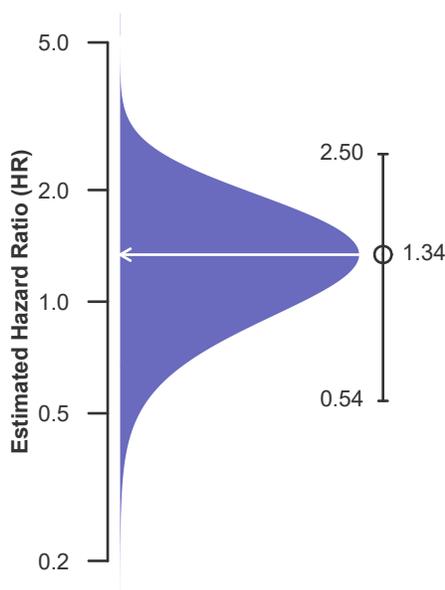
**Table C5D. Adult (18+) 1-month survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2017 and 12/31/2019**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	209	34,632
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	97.61%	98.42%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	98.46%	--
Number of observed graft failures (including deaths) during the first month after transplant	5	547
Number of expected graft failures (including deaths) during the first month after transplant	3.23	--
Estimated hazard ratio*	1.34	--
95% credible interval for the hazard ratio**	[0.54, 2.50]	--

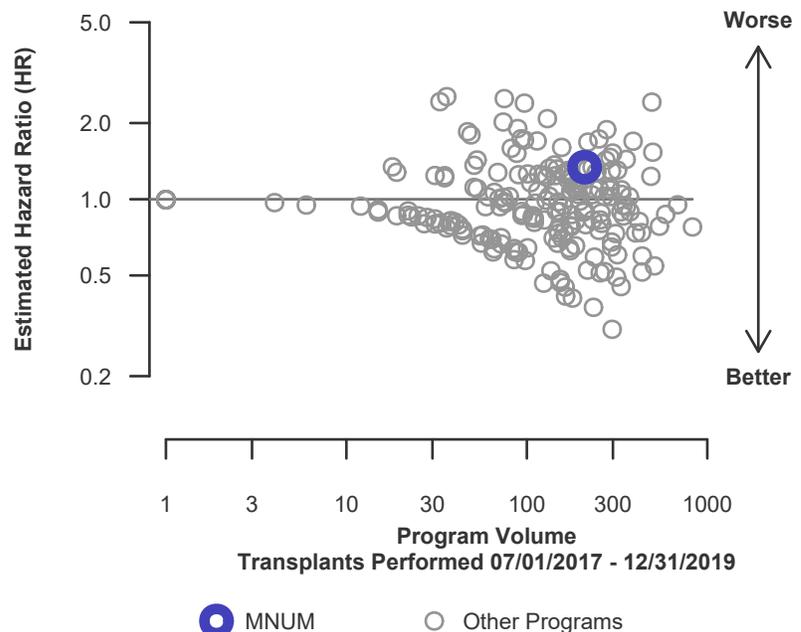
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.54, 2.50], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 34% higher risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 46% reduced risk up to 150% increased risk.

**Figure C1D. Adult (18+) 1-month deceased donor graft failure HR estimate**



**Figure C2D. Adult (18+) 1-month deceased donor graft failure HR program comparison**





## C. Transplant Information

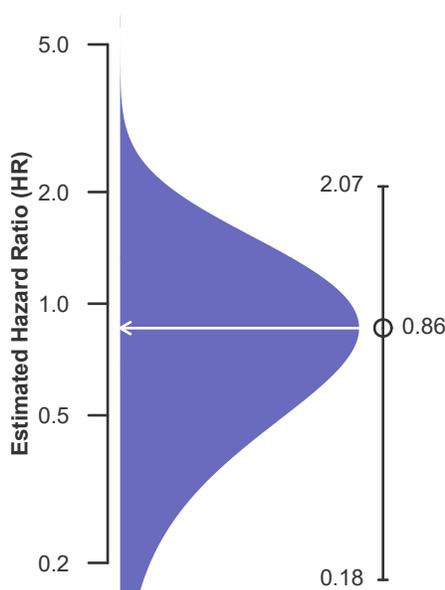
**Table C5L. Adult (18+) 1-month survival with a functioning living donor graft**  
**Single organ transplants performed between 07/01/2017 and 12/31/2019**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	171	15,619
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	99.42%	99.22%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	99.13%	--
Number of observed graft failures (including deaths) during the first month after transplant	1	122
Number of expected graft failures (including deaths) during the first month after transplant	1.49	--
Estimated hazard ratio*	0.86	--
95% credible interval for the hazard ratio**	[0.18, 2.07]	--

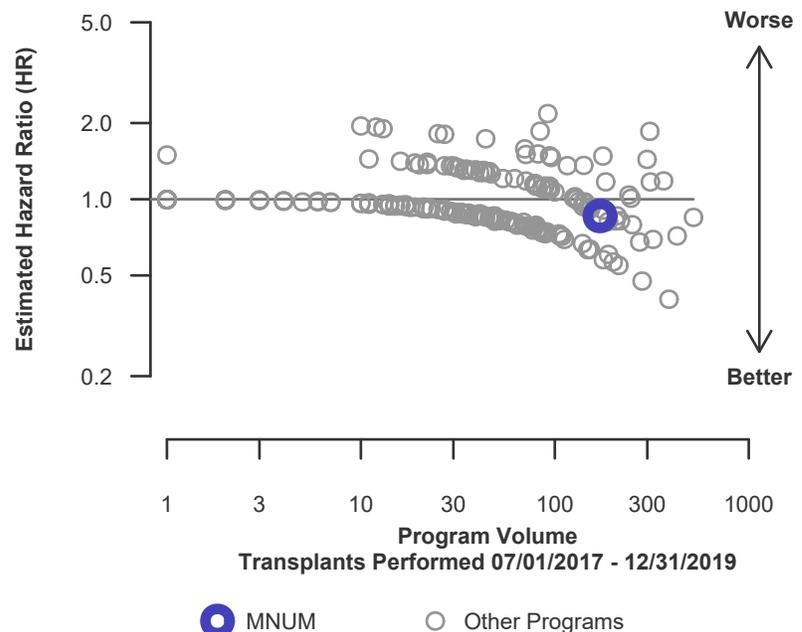
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.18, 2.07], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 14% lower risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 82% reduced risk up to 107% increased risk.

**Figure C1L. Adult (18+) 1-month living donor graft failure HR estimate**



**Figure C2L. Adult (18+) 1-month living donor graft failure HR program comparison**





## C. Transplant Information

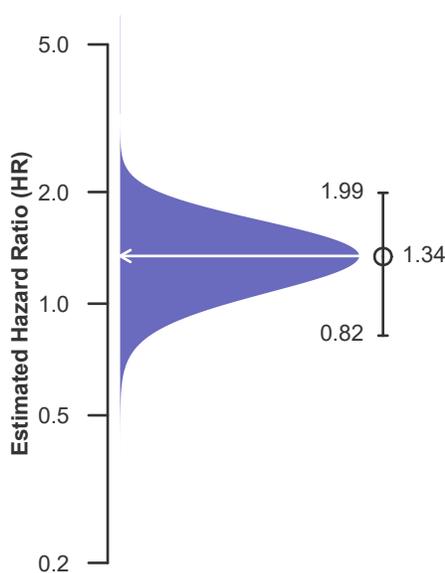
**Table C6. Adult (18+) 1-year survival with a functioning graft**  
Single organ transplants performed between 07/01/2017 and 12/31/2019  
Deaths and retransplants are considered graft failures

	MNUM	U.S.
Number of transplants evaluated	380	50,251
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	94.67%	95.75%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	96.16%	--
Number of observed graft failures (including deaths) during the first year after transplant	18	1,946
Number of expected graft failures (including deaths) during the first year after transplant	12.88	--
Estimated hazard ratio*	1.34	--
95% credible interval for the hazard ratio**	[0.82, 1.99]	--

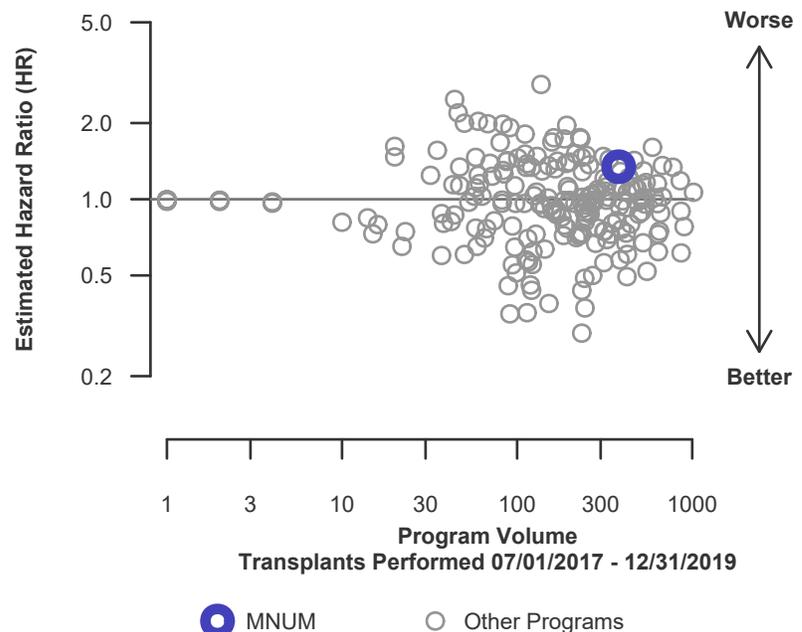
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.82, 1.99], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 34% higher risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 18% reduced risk up to 99% increased risk.

**Figure C3. Adult (18+) 1-year graft failure HR estimate**



**Figure C4. Adult (18+) 1-year graft failure HR program comparison**





## C. Transplant Information

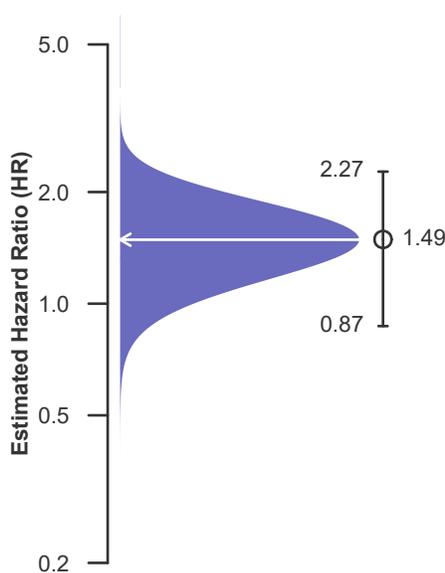
**Table C6D. Adult (18+) 1-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2017 and 12/31/2019**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	209	34,632
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	91.95%	94.73%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	94.83%	--
Number of observed graft failures (including deaths) during the first year after transplant	15	1,661
Number of expected graft failures (including deaths) during the first year after transplant	9.43	--
Estimated hazard ratio*	1.49	--
95% credible interval for the hazard ratio**	[0.87, 2.27]	--

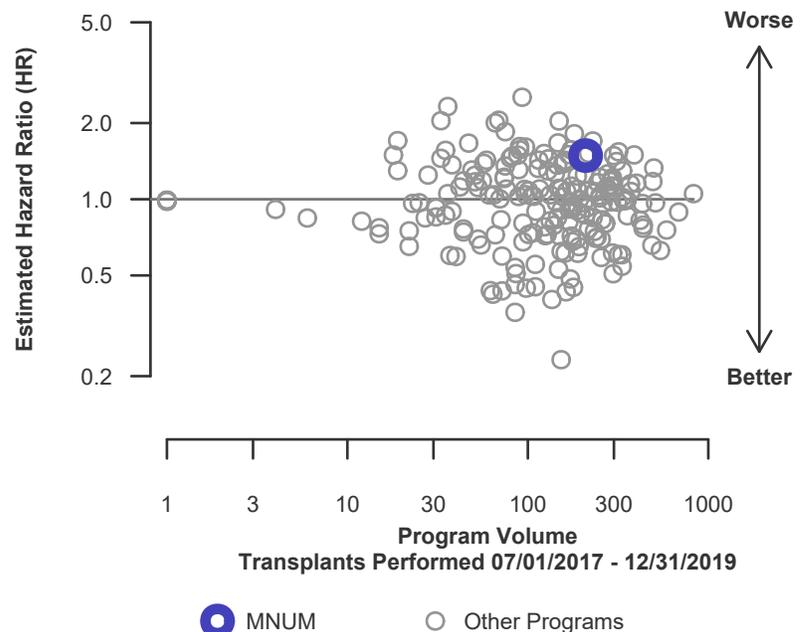
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.87, 2.27], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 49% higher risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 13% reduced risk up to 127% increased risk.

**Figure C3D. Adult (18+) 1-year deceased donor graft failure HR estimate**



**Figure C4D. Adult (18+) 1-year deceased donor graft failure HR program comparison**





## C. Transplant Information

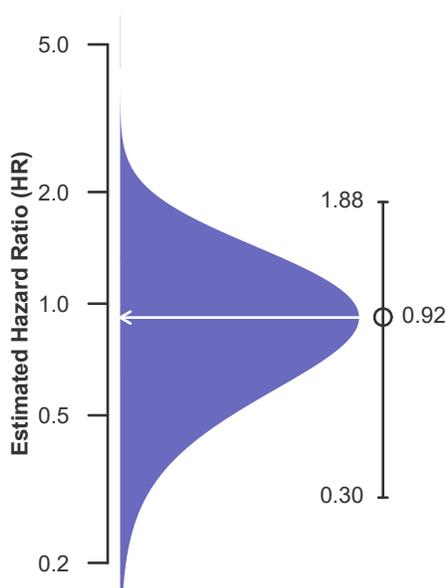
**Table C6L. Adult (18+) 1-year survival with a functioning living donor graft**  
**Single organ transplants performed between 07/01/2017 and 12/31/2019**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	171	15,619
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	97.96%	98.02%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	97.79%	--
Number of observed graft failures (including deaths) during the first year after transplant	3	285
Number of expected graft failures (including deaths) during the first year after transplant	3.45	--
Estimated hazard ratio*	0.92	--
95% credible interval for the hazard ratio**	[0.30, 1.88]	--

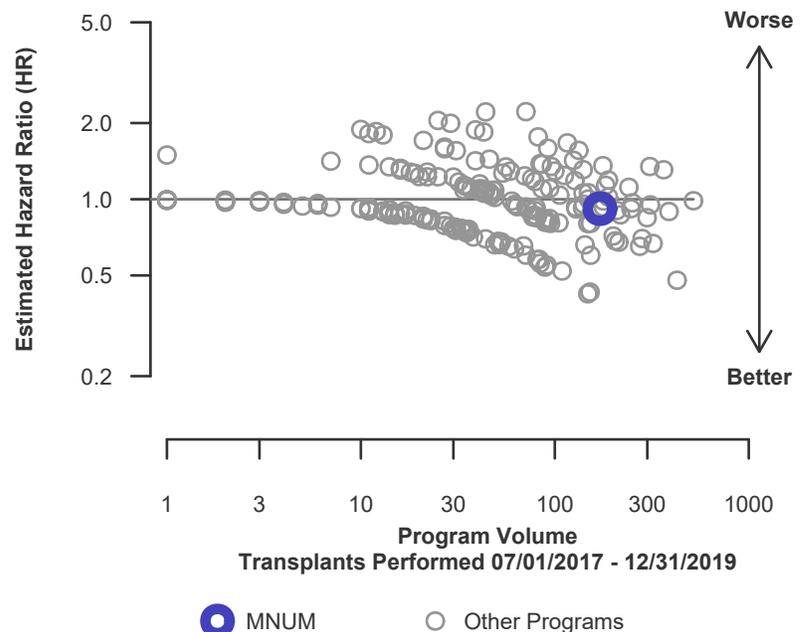
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.30, 1.88], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 8% lower risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 70% reduced risk up to 88% increased risk.

**Figure C3L. Adult (18+) 1-year living donor graft failure HR estimate**



**Figure C4L. Adult (18+) 1-year living donor graft failure HR program comparison**





## C. Transplant Information

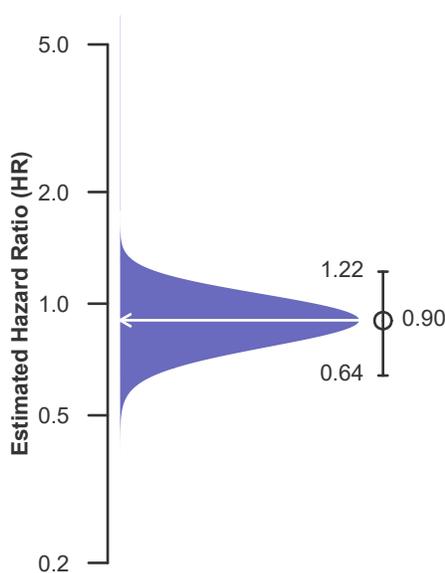
**Table C7. Adult (18+) 3-year survival with a functioning graft**  
Single organ transplants performed between 01/01/2015 and 06/30/2017  
Deaths and retransplants are considered graft failures

	MNUM	U.S.
Number of transplants evaluated	415	42,472
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	91.48%	89.69%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	90.69%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	35	4,352
Number of expected graft failures (including deaths) during the first 3 years after transplant	39.01	--
Estimated hazard ratio*	0.90	--
95% credible interval for the hazard ratio**	[0.64, 1.22]	--

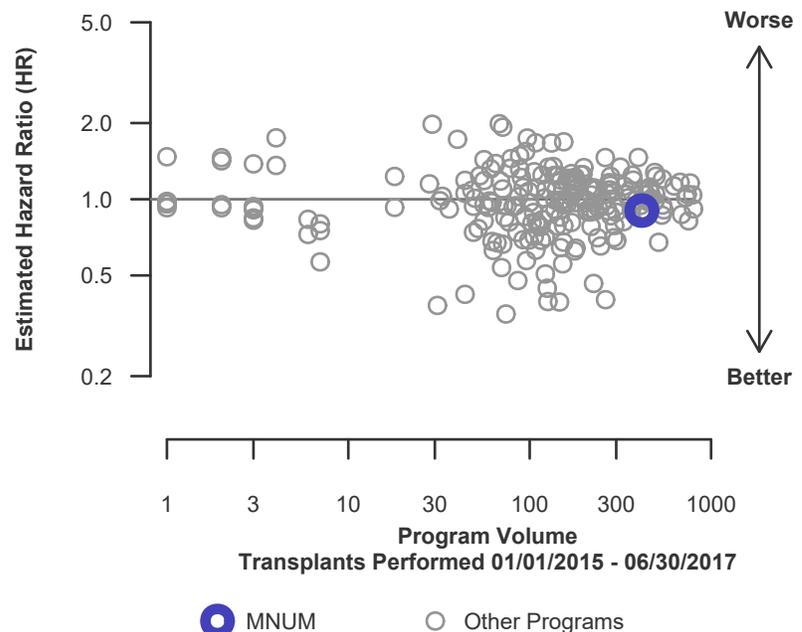
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.64, 1.22], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 10% lower risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 36% reduced risk up to 22% increased risk.

**Figure C5. Adult (18+) 3-year graft failure HR estimate**



**Figure C6. Adult (18+) 3-year graft failure HR program comparison**





## C. Transplant Information

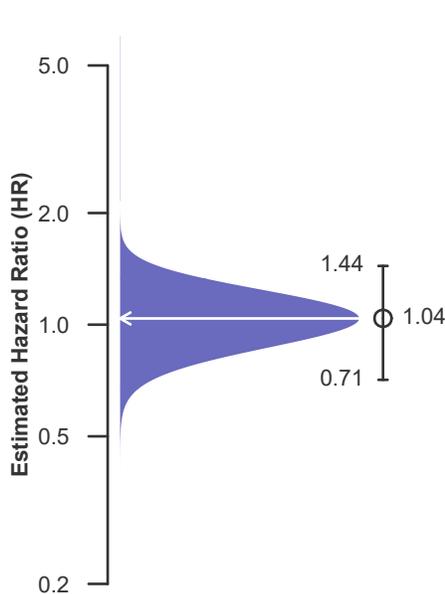
**Table C7D. Adult (18+) 3-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 01/01/2015 and 06/30/2017**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	230	29,060
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	87.34%	87.51%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	87.96%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	29	3,610
Number of expected graft failures (including deaths) during the first 3 years after transplant	27.82	--
Estimated hazard ratio*	1.04	--
95% credible interval for the hazard ratio**	[0.71, 1.44]	--

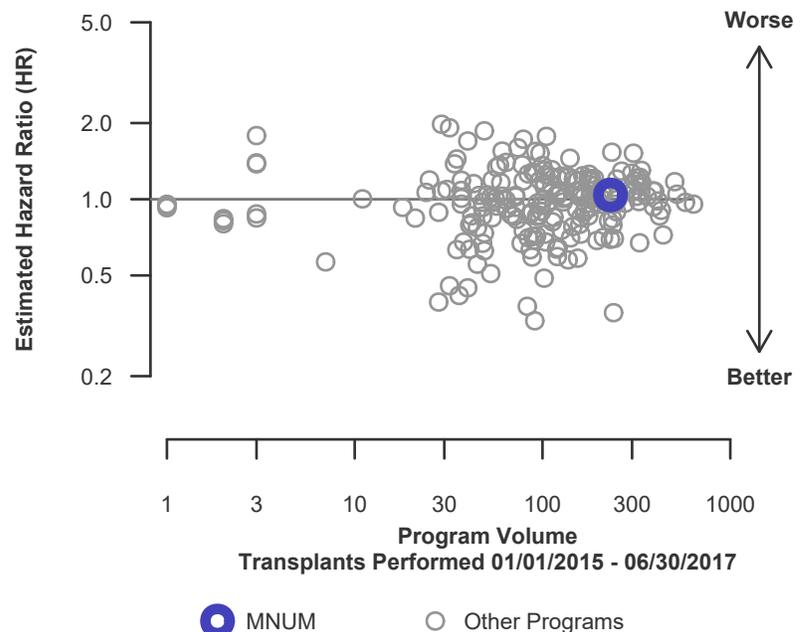
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.71, 1.44], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 4% higher risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 29% reduced risk up to 44% increased risk.

**Figure C5D. Adult (18+) 3-year deceased donor graft failure HR estimate**



**Figure C6D. Adult (18+) 3-year deceased donor graft failure HR program comparison**





## C. Transplant Information

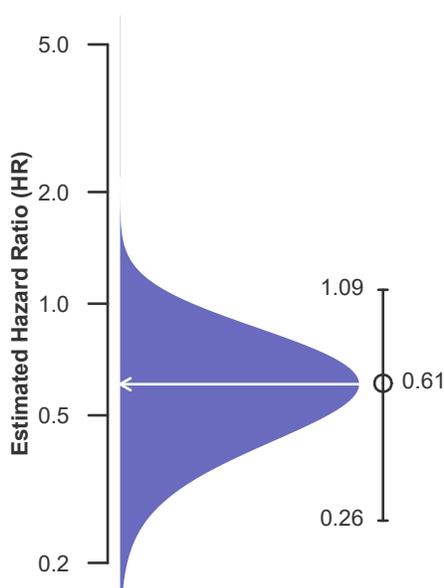
**Table C7L. Adult (18+) 3-year survival with a functioning living donor graft**  
**Single organ transplants performed between 01/01/2015 and 06/30/2017**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	185	13,412
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	96.64%	94.42%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	94.07%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	6	742
Number of expected graft failures (including deaths) during the first 3 years after transplant	11.19	--
Estimated hazard ratio*	0.61	--
95% credible interval for the hazard ratio**	[0.26, 1.09]	--

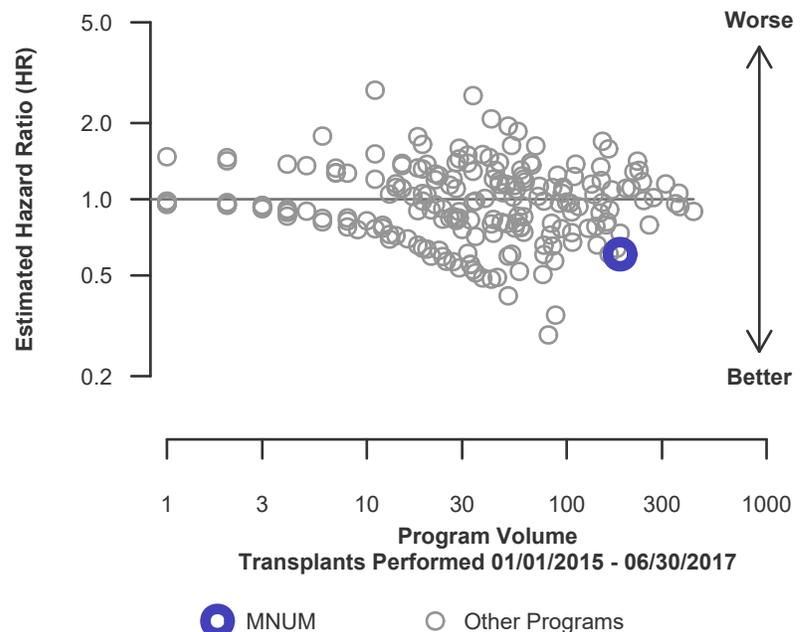
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.26, 1.09], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 39% lower risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 74% reduced risk up to 9% increased risk.

**Figure C5L. Adult (18+) 3-year living donor graft failure HR estimate**



**Figure C6L. Adult (18+) 3-year living donor graft failure HR program comparison**





## C. Transplant Information

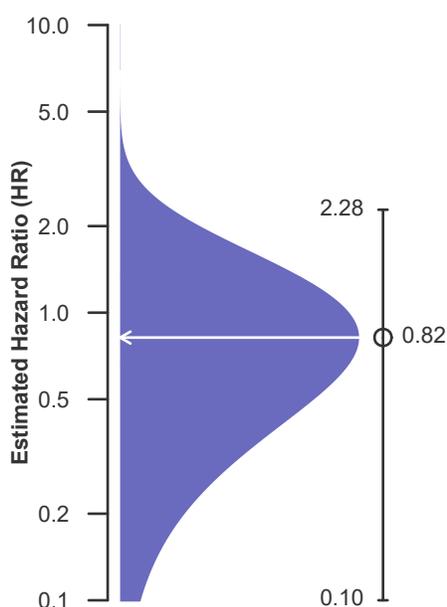
**Table C8. Pediatric (<18) 1-month survival with a functioning graft**  
Single organ transplants performed between 07/01/2017 and 12/31/2019  
Deaths and retransplants are considered graft failures

	MNUM	U.S.
Number of transplants evaluated	46	2,123
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	100.00%	98.92%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	99.05%	--
Number of observed graft failures (including deaths) during the first month after transplant	0	23
Number of expected graft failures (including deaths) during the first month after transplant	0.44	--
Estimated hazard ratio*	0.82	--
95% credible interval for the hazard ratio**	[0.10, 2.28]	--

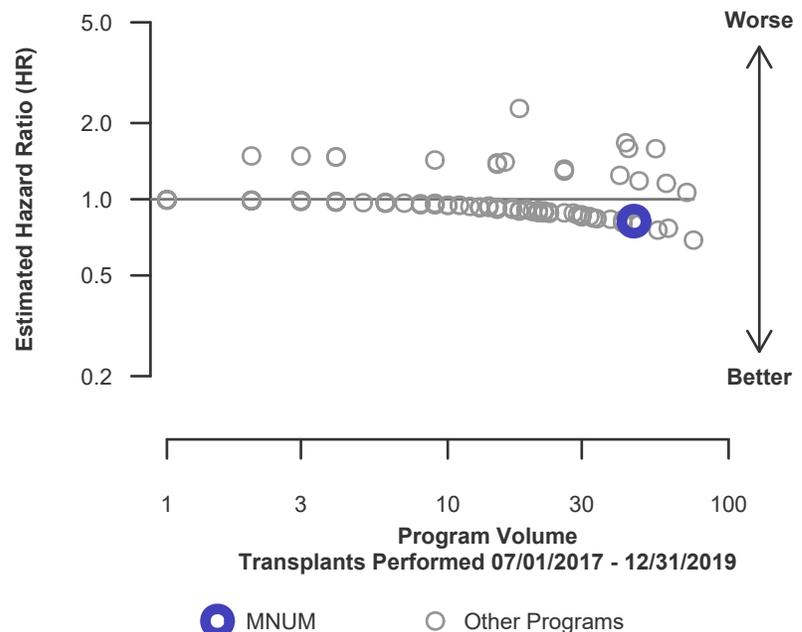
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.10, 2.28], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 18% lower risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 90% reduced risk up to 128% increased risk.

**Figure C7. Pediatric (<18) 1-month graft failure HR estimate**



**Figure C8. Pediatric (<18) 1-month graft failure HR program comparison**





## C. Transplant Information

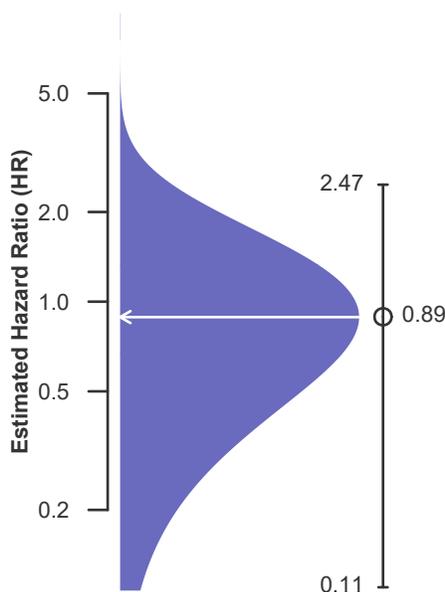
**Table C8D. Pediatric (<18) 1-month survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2017 and 12/31/2019**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	20	1,428
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	100.00%	98.74%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	98.74%	--
Number of observed graft failures (including deaths) during the first month after transplant	0	18
Number of expected graft failures (including deaths) during the first month after transplant	0.25	--
Estimated hazard ratio*	0.89	--
95% credible interval for the hazard ratio**	[0.11, 2.47]	--

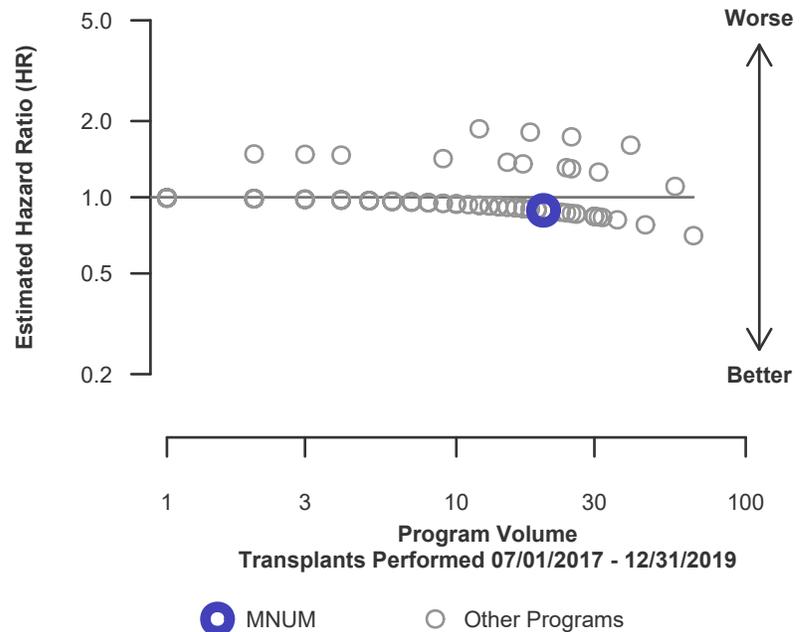
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.11, 2.47], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 11% lower risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 89% reduced risk up to 147% increased risk.

**Figure C7D. Pediatric (<18) 1-month deceased donor graft failure HR estimate**



**Figure C8D. Pediatric (<18) 1-month deceased donor graft failure HR program comparison**





## C. Transplant Information

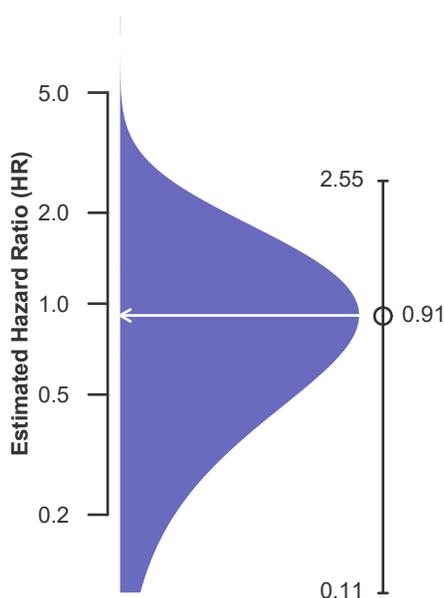
**Table C8L. Pediatric (<18) 1-month survival with a functioning living donor graft**  
**Single organ transplants performed between 07/01/2017 and 12/31/2019**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	26	695
Estimated probability of surviving with a functioning graft at 1 month (unadjusted for patient and donor characteristics)	100.00%	99.28%
Expected probability of surviving with a functioning graft at 1 month (adjusted for patient and donor characteristics)	99.28%	--
Number of observed graft failures (including deaths) during the first month after transplant	0	5
Number of expected graft failures (including deaths) during the first month after transplant	0.19	--
Estimated hazard ratio*	0.91	--
95% credible interval for the hazard ratio**	[0.11, 2.55]	--

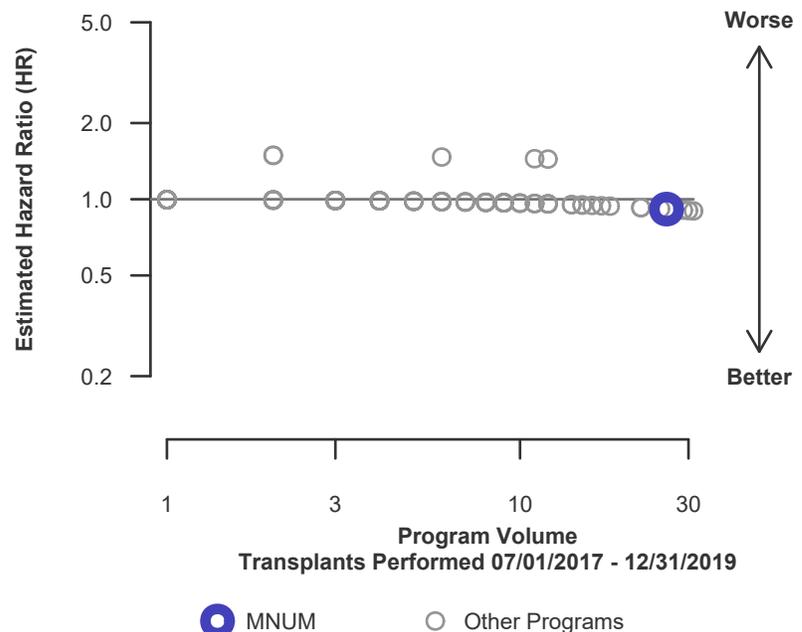
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.11, 2.55], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 9% lower risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 89% reduced risk up to 155% increased risk.

**Figure C7L. Pediatric (<18) 1-month living donor graft failure HR estimate**



**Figure C8L. Pediatric (<18) 1-month living donor graft failure HR program comparison**





## C. Transplant Information

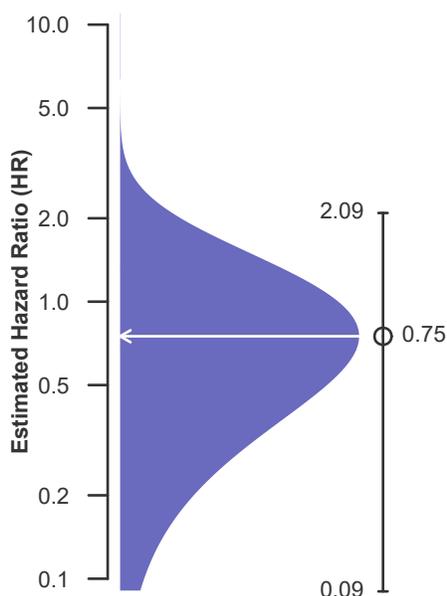
**Table C9. Pediatric (<18) 1-year survival with a functioning graft**  
**Single organ transplants performed between 07/01/2017 and 12/31/2019**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	46	2,123
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	100.00%	98.18%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	98.45%	--
Number of observed graft failures (including deaths) during the first year after transplant	0	36
Number of expected graft failures (including deaths) during the first year after transplant	0.67	--
Estimated hazard ratio*	0.75	--
95% credible interval for the hazard ratio**	[0.09, 2.09]	--

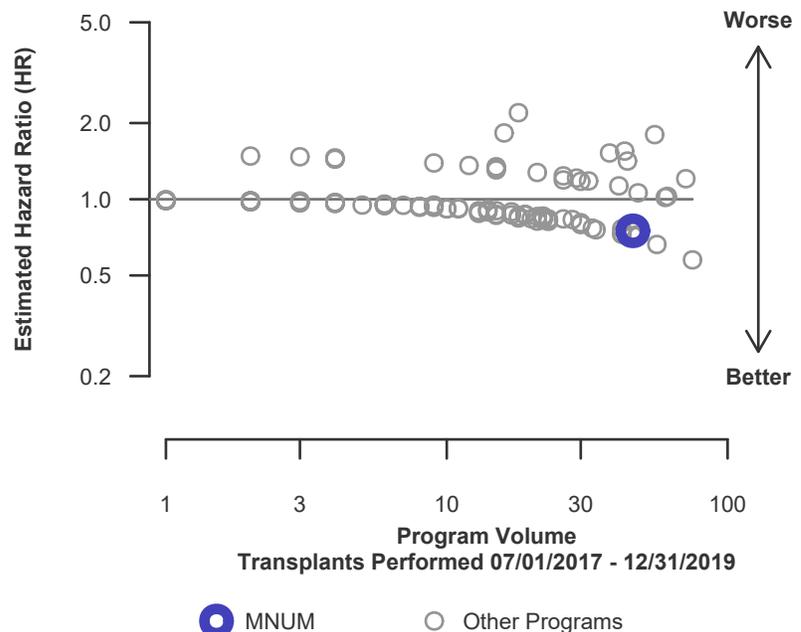
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.09, 2.09], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 25% lower risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 91% reduced risk up to 109% increased risk.

**Figure C9. Pediatric (<18) 1-year graft failure HR estimate**



**Figure C10. Pediatric (<18) 1-year graft failure HR program comparison**





## C. Transplant Information

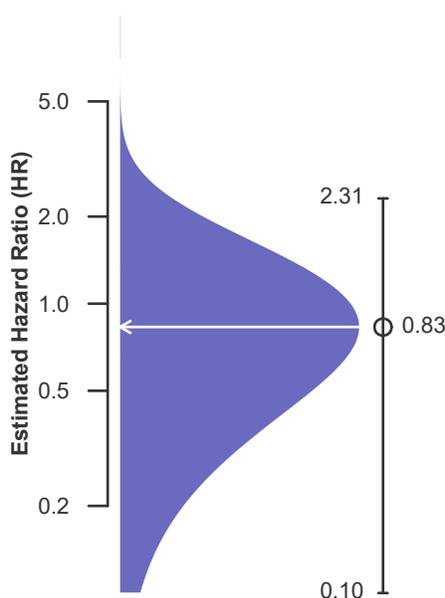
**Table C9D. Pediatric (<18) 1-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 07/01/2017 and 12/31/2019**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	20	1,428
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	100.00%	97.80%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	97.80%	--
Number of observed graft failures (including deaths) during the first year after transplant	0	29
Number of expected graft failures (including deaths) during the first year after transplant	0.41	--
Estimated hazard ratio*	0.83	--
95% credible interval for the hazard ratio**	[0.10, 2.31]	--

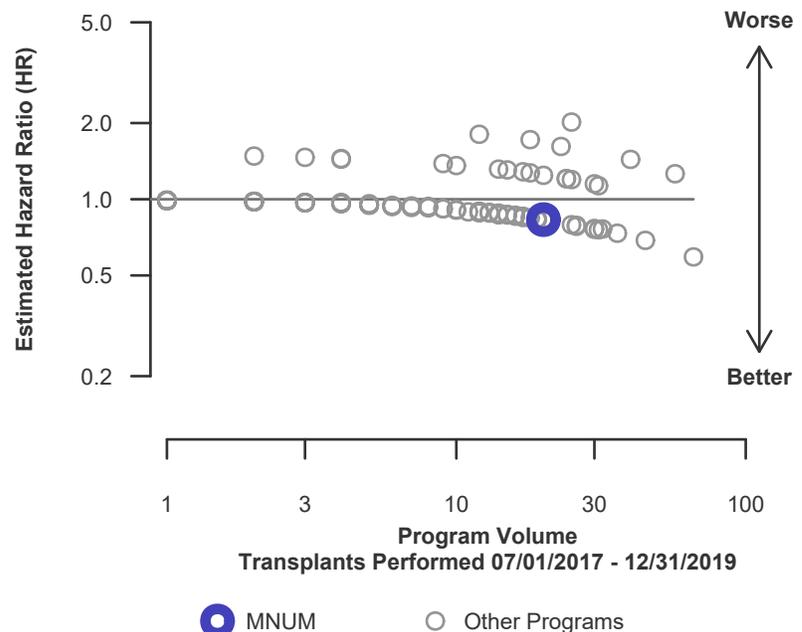
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.10, 2.31], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 17% lower risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 90% reduced risk up to 131% increased risk.

**Figure C9D. Pediatric (<18) 1-year deceased donor graft failure HR estimate**



**Figure C10D. Pediatric (<18) 1-year deceased donor graft failure HR program comparison**





## C. Transplant Information

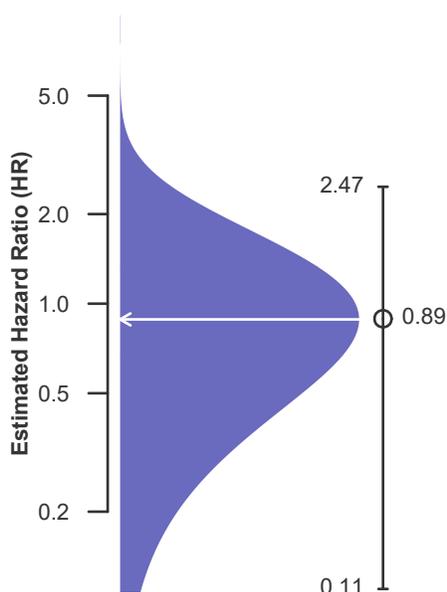
**Table C9L. Pediatric (<18) 1-year survival with a functioning living donor graft**  
**Single organ transplants performed between 07/01/2017 and 12/31/2019**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	26	695
Estimated probability of surviving with a functioning graft at 1 year (unadjusted for patient and donor characteristics)	100.00%	98.95%
Expected probability of surviving with a functioning graft at 1 year (adjusted for patient and donor characteristics)	98.95%	--
Number of observed graft failures (including deaths) during the first year after transplant	0	7
Number of expected graft failures (including deaths) during the first year after transplant	0.26	--
Estimated hazard ratio*	0.89	--
95% credible interval for the hazard ratio**	[0.11, 2.47]	--

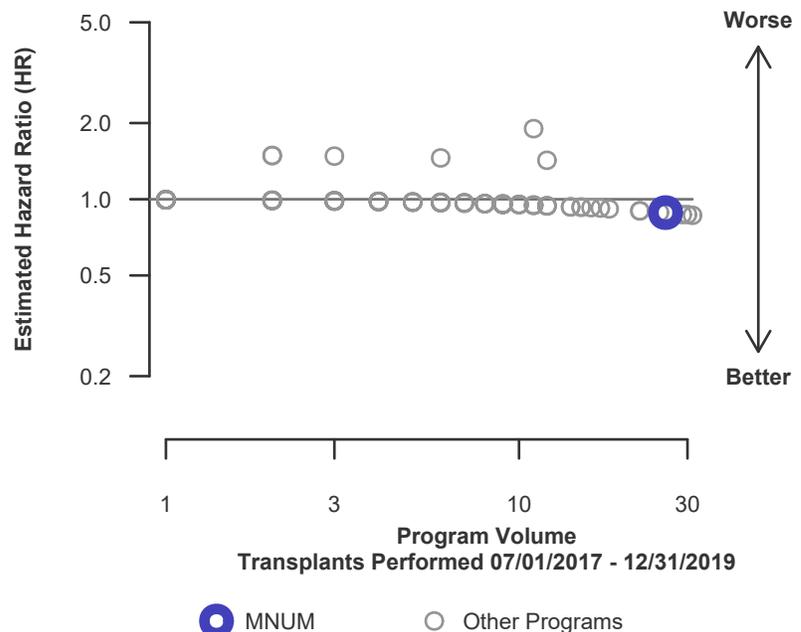
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.11, 2.47], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 11% lower risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 89% reduced risk up to 147% increased risk.

**Figure C9L. Pediatric (<18) 1-year living donor graft failure HR estimate**



**Figure C10L. Pediatric (<18) 1-year living donor graft failure HR program comparison**





## C. Transplant Information

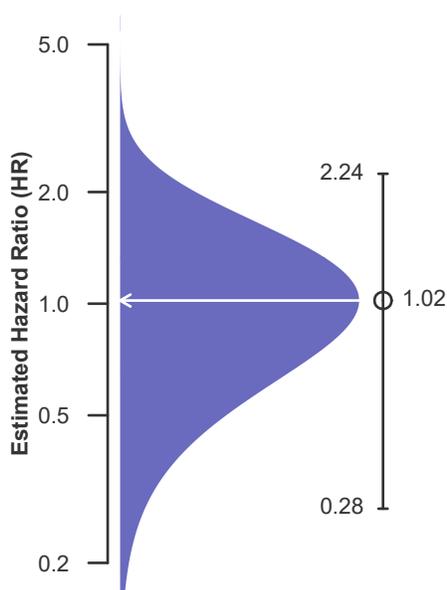
**Table C10. Pediatric (<18) 3-year survival with a functioning graft**  
**Single organ transplants performed between 01/01/2015 and 06/30/2017**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	35	2,049
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	94.29%	93.22%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	94.20%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	2	138
Number of expected graft failures (including deaths) during the first 3 years after transplant	1.92	--
Estimated hazard ratio*	1.02	--
95% credible interval for the hazard ratio**	[0.28, 2.24]	--

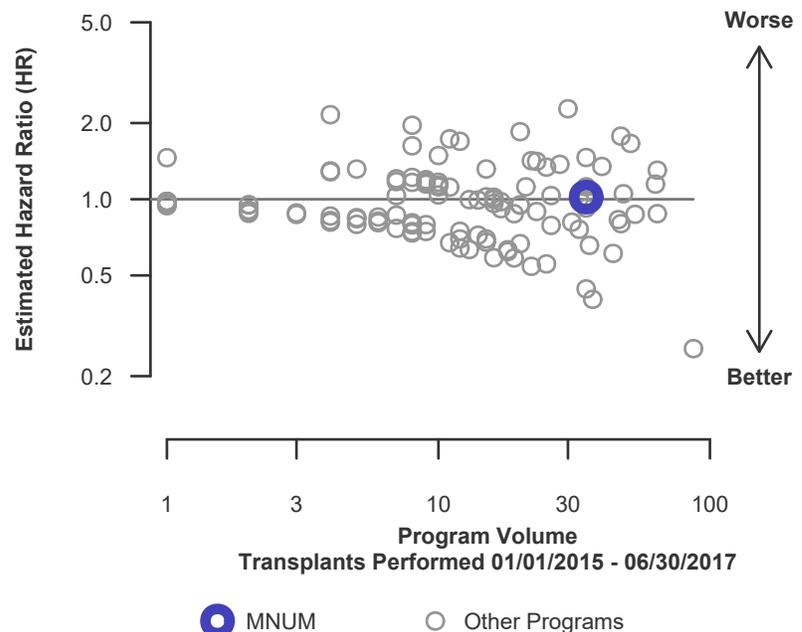
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.28, 2.24], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 2% higher risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 72% reduced risk up to 124% increased risk.

**Figure C11. Pediatric (<18) 3-year graft failure HR estimate**



**Figure C12. Pediatric (<18) 3-year graft failure HR program comparison**





## C. Transplant Information

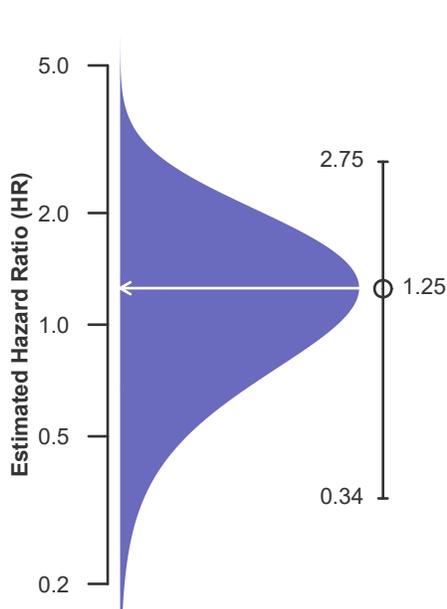
**Table C10D. Pediatric (<18) 3-year survival with a functioning deceased donor graft**  
**Single organ transplants performed between 01/01/2015 and 06/30/2017**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	17	1,403
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	88.24%	91.97%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	92.33%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	2	112
Number of expected graft failures (including deaths) during the first 3 years after transplant	1.19	--
Estimated hazard ratio*	1.25	--
95% credible interval for the hazard ratio**	[0.34, 2.75]	--

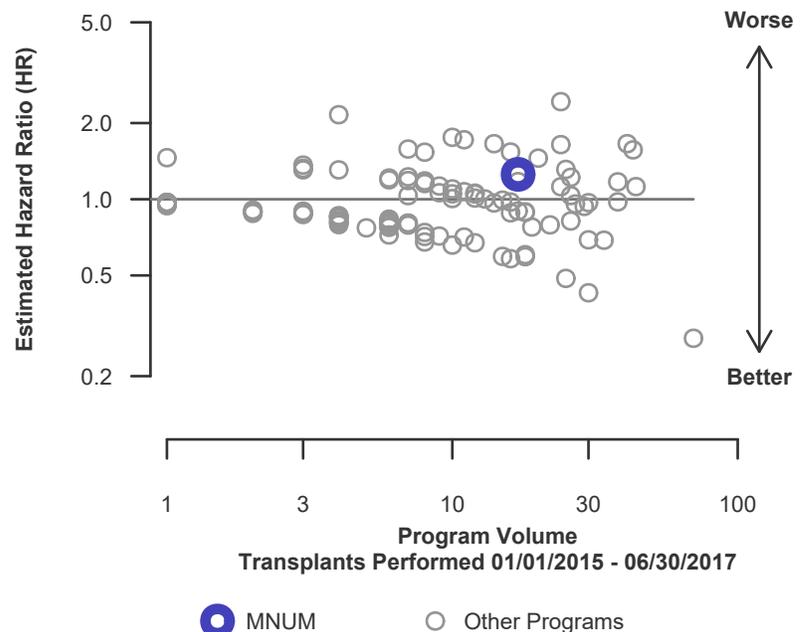
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.34, 2.75], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 25% higher risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 66% reduced risk up to 175% increased risk.

**Figure C11D. Pediatric (<18) 3-year deceased donor graft failure HR estimate**



**Figure C12D. Pediatric (<18) 3-year deceased donor graft failure HR program comparison**





## C. Transplant Information

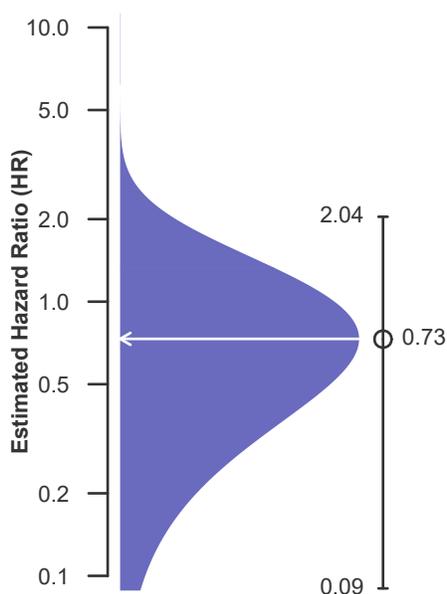
**Table C10L. Pediatric (<18) 3-year survival with a functioning living donor graft**  
**Single organ transplants performed between 01/01/2015 and 06/30/2017**  
**Deaths and retransplants are considered graft failures**

	MNUM	U.S.
Number of transplants evaluated	18	646
Estimated probability of surviving with a functioning graft at 3 years (unadjusted for patient and donor characteristics)	100.00%	95.96%
Expected probability of surviving with a functioning graft at 3 years (adjusted for patient and donor characteristics)	95.96%	--
Number of observed graft failures (including deaths) during the first 3 years after transplant	0	26
Number of expected graft failures (including deaths) during the first 3 years after transplant	0.73	--
Estimated hazard ratio*	0.73	--
95% credible interval for the hazard ratio**	[0.09, 2.04]	--

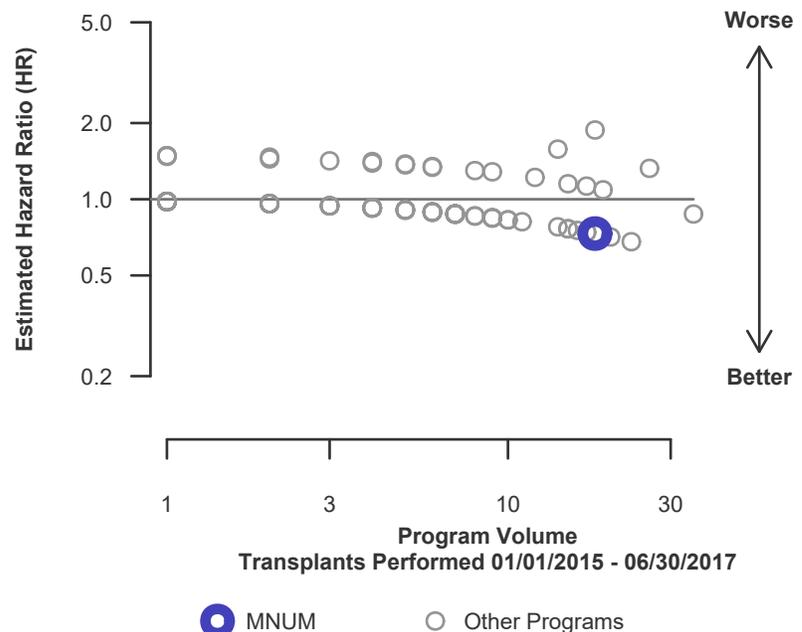
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected graft failure rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected graft failure rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's graft failure rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.09, 2.04], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 27% lower risk of graft failure compared to an average program, but MNUM's performance could plausibly range from 91% reduced risk up to 104% increased risk.

**Figure C11L. Pediatric (<18) 3-year living donor graft failure HR estimate**



**Figure C12L. Pediatric (<18) 3-year living donor graft failure HR program comparison**





## C. Transplant Information

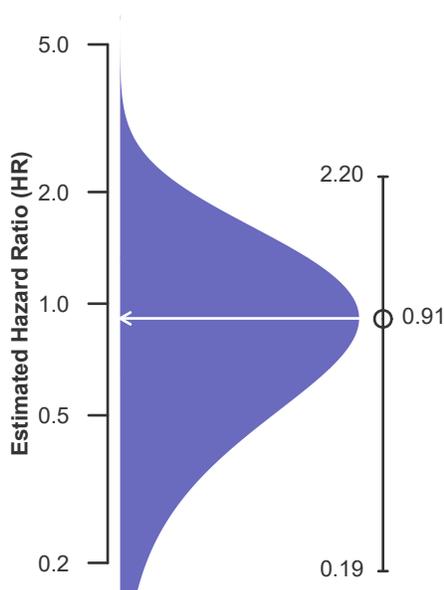
**Table C11. Adult (18+) 1-month patient survival**  
Single organ transplants performed between 07/01/2017 and 12/31/2019  
Retransplants excluded

	MNUM	U.S.
Number of transplants evaluated	300	44,658
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	99.67%	99.56%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.57%	--
Number of observed deaths during the first month after transplant	1	198
Number of expected deaths during the first month after transplant	1.29	--
Estimated hazard ratio*	0.91	--
95% credible interval for the hazard ratio**	[0.19, 2.20]	--

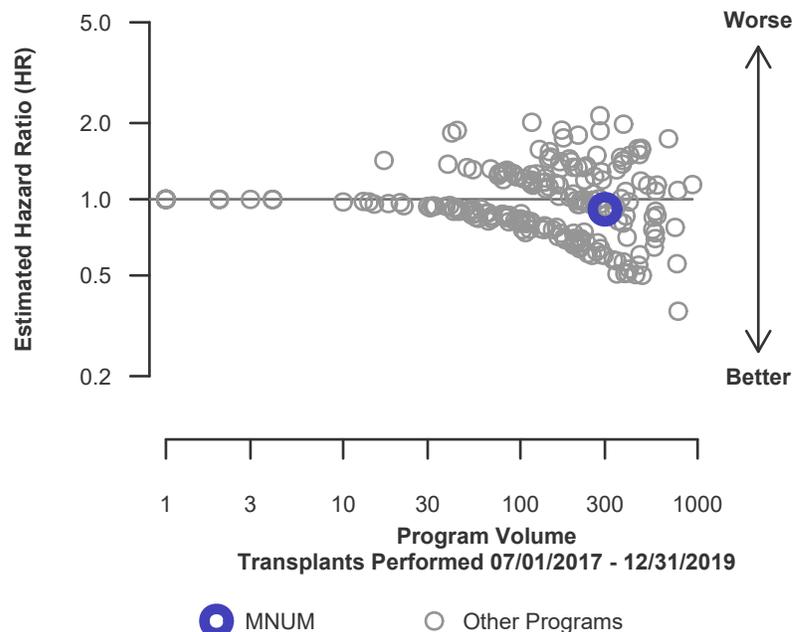
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.19, 2.20], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 9% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 81% reduced risk up to 120% increased risk.

**Figure C13. Adult (18+) 1-month patient death HR estimate**



**Figure C14. Adult (18+) 1-month patient death HR program comparison**





## C. Transplant Information

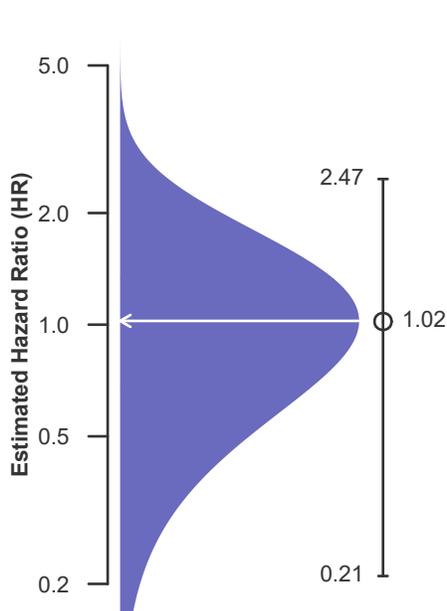
**Table C11D. Adult (18+) 1-month patient survival (deceased donor graft recipients)**  
**Single organ transplants performed between 07/01/2017 and 12/31/2019**  
**Retransplants excluded**

	MNUM	U.S.
Number of transplants evaluated	153	30,522
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	99.35%	99.45%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.39%	--
Number of observed deaths during the first month after transplant	1	167
Number of expected deaths during the first month after transplant	0.93	--
Estimated hazard ratio*	1.02	--
95% credible interval for the hazard ratio**	[0.21, 2.47]	--

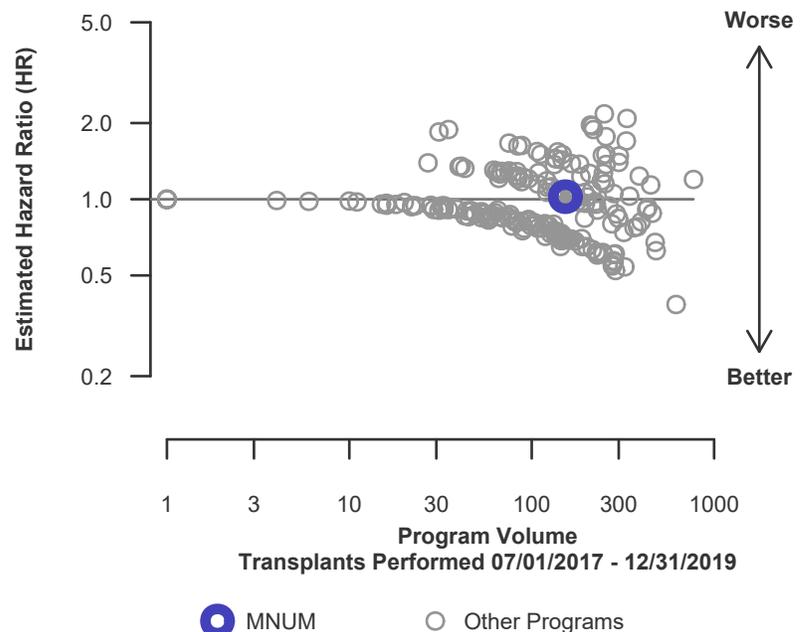
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.21, 2.47], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 2% higher risk of patient death compared to an average program, but MNUM's performance could plausibly range from 79% reduced risk up to 147% increased risk.

**Figure C13D. Adult (18+) 1-month patient death HR estimate (deceased donor grafts)**



**Figure C14D. Adult (18+) 1-month patient death HR program comparison (deceased donor grafts)**





## C. Transplant Information

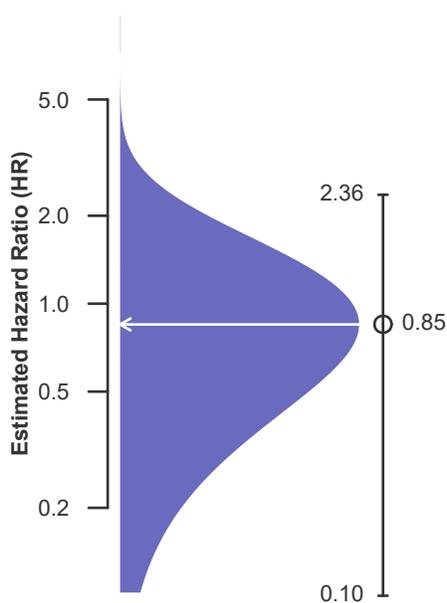
**Table C11L. Adult (18+) 1-month patient survival (living donor graft recipients)  
Single organ transplants performed between 07/01/2017 and 12/31/2019  
Retransplants excluded**

	MNUM	U.S.
Number of transplants evaluated	147	14,136
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	100.00%	99.78%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.76%	--
Number of observed deaths during the first month after transplant	0	31
Number of expected deaths during the first month after transplant	0.36	--
Estimated hazard ratio*	0.85	--
95% credible interval for the hazard ratio**	[0.10, 2.36]	--

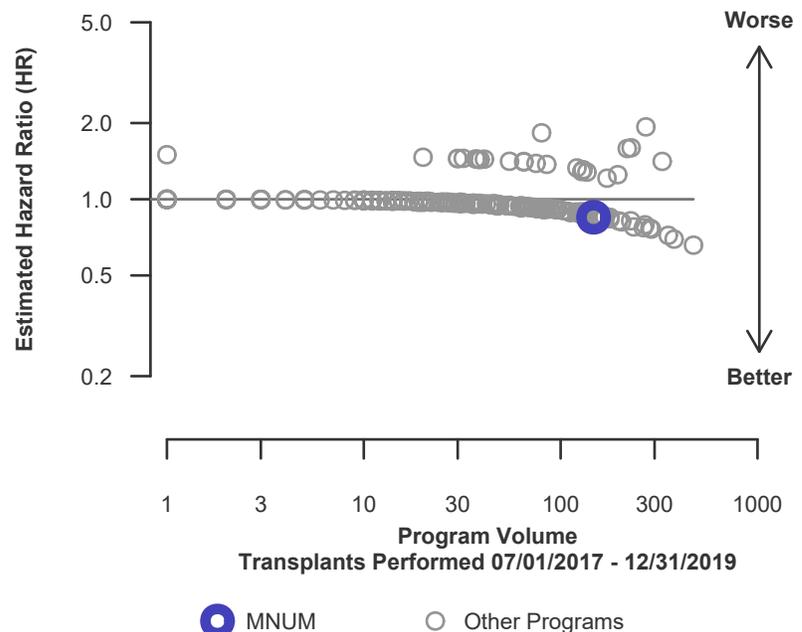
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.10, 2.36], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 15% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 90% reduced risk up to 136% increased risk.

**Figure C13L. Adult (18+) 1-month patient death HR estimate (living donor grafts)**



**Figure C14L. Adult (18+) 1-month patient death HR program comparison (living donor grafts)**





## C. Transplant Information

**Table C12. Adult (18+) 1-year patient survival**

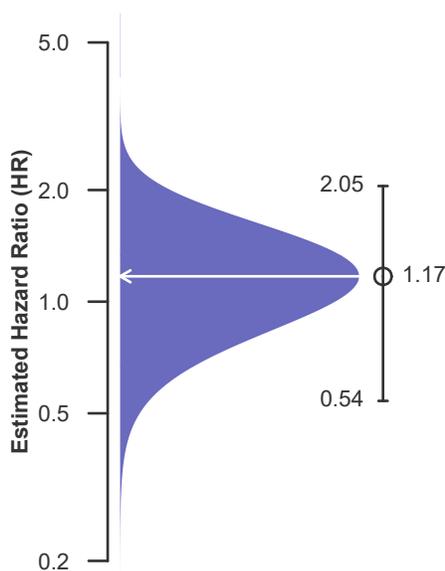
Single organ transplants performed between 07/01/2017 and 12/31/2019  
Retransplants excluded

	MNUM	U.S.
Number of transplants evaluated	300	44,658
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	97.32%	97.61%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	97.74%	--
Number of observed deaths during the first year after transplant	7	943
Number of expected deaths during the first year after transplant	5.69	--
Estimated hazard ratio*	1.17	--
95% credible interval for the hazard ratio**	[0.54, 2.05]	--

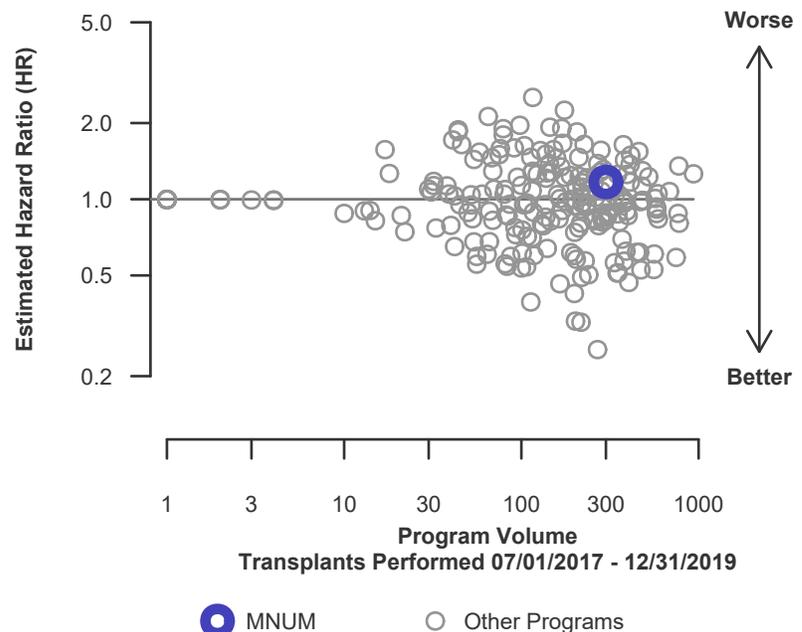
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.54, 2.05], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 17% higher risk of patient death compared to an average program, but MNUM's performance could plausibly range from 46% reduced risk up to 105% increased risk.

**Figure C15. Adult (18+) 1-year patient death HR estimate**



**Figure C16. Adult (18+) 1-year patient death HR program comparison**





## C. Transplant Information

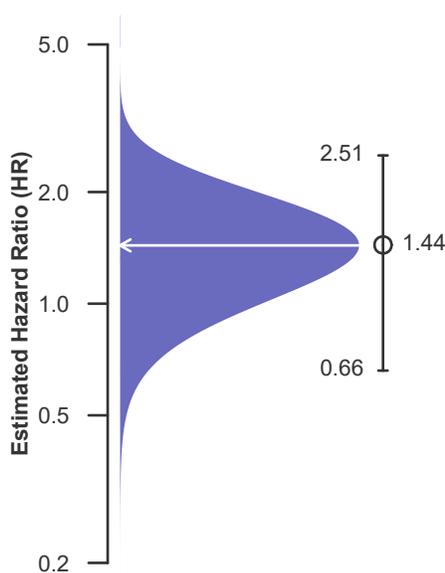
**Table C12D. Adult (18+) 1-year patient survival (deceased donor graft recipients)**  
**Single organ transplants performed between 07/01/2017 and 12/31/2019**  
**Retransplants excluded**

	MNUM	U.S.
Number of transplants evaluated	153	30,522
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	94.67%	96.96%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	96.62%	--
Number of observed deaths during the first year after transplant	7	818
Number of expected deaths during the first year after transplant	4.27	--
Estimated hazard ratio*	1.44	--
95% credible interval for the hazard ratio**	[0.66, 2.51]	--

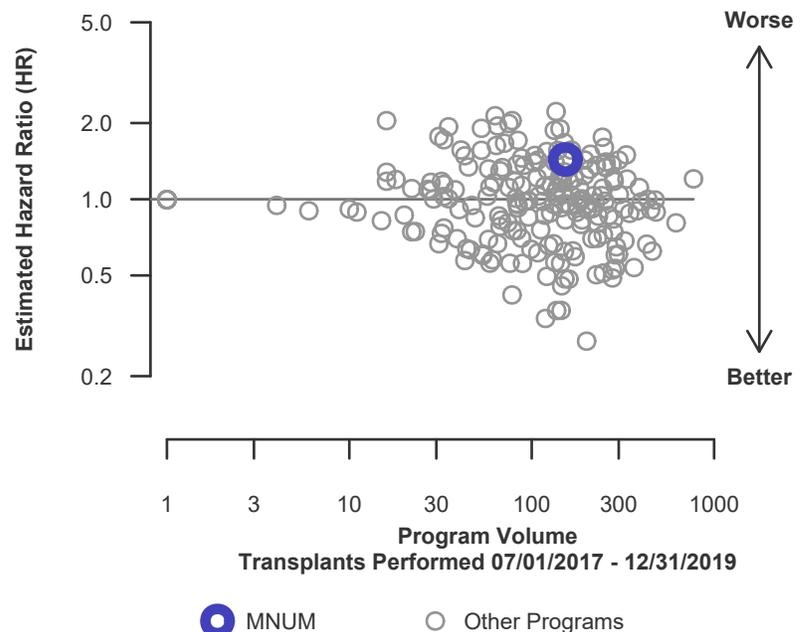
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.66, 2.51], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 44% higher risk of patient death compared to an average program, but MNUM's performance could plausibly range from 34% reduced risk up to 151% increased risk.

**Figure C15D. Adult (18+) 1-year patient death HR estimate (deceased donor grafts)**



**Figure C16D. Adult (18+) 1-year patient death HR program comparison (deceased donor grafts)**





## C. Transplant Information

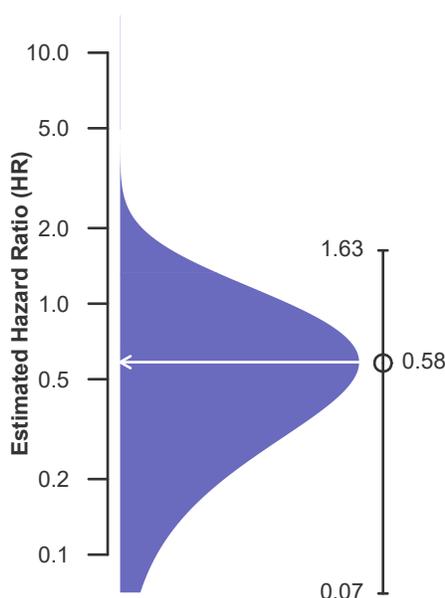
**Table C12L. Adult (18+) 1-year patient survival (living donor graft recipients)  
Single organ transplants performed between 07/01/2017 and 12/31/2019  
Retransplants excluded**

	MNUM	U.S.
Number of transplants evaluated	147	14,136
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	100.00%	99.01%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	98.90%	--
Number of observed deaths during the first year after transplant	0	125
Number of expected deaths during the first year after transplant	1.42	--
Estimated hazard ratio*	0.58	--
95% credible interval for the hazard ratio**	[0.07, 1.63]	--

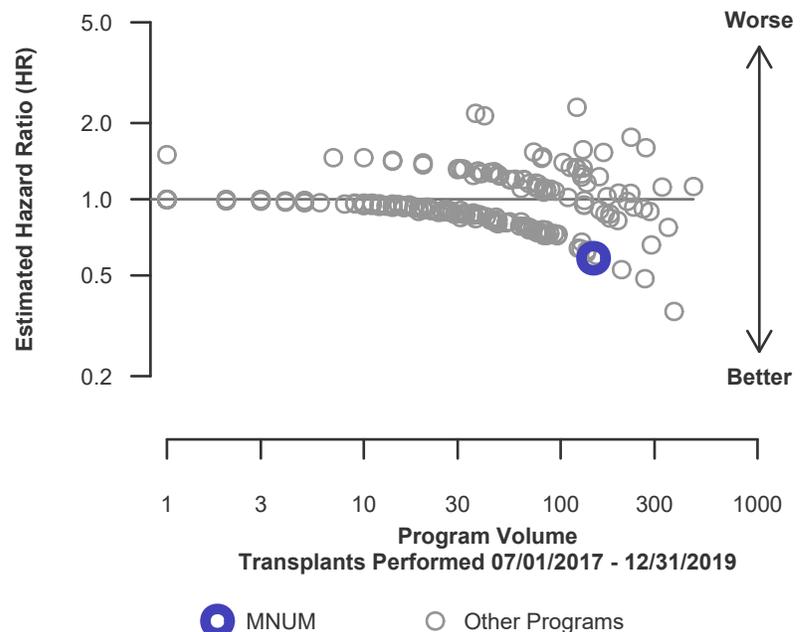
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.07, 1.63], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 42% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 93% reduced risk up to 63% increased risk.

**Figure C15L. Adult (18+) 1-year patient death HR estimate (living donor grafts)**



**Figure C16L. Adult (18+) 1-year patient death HR program comparison (living donor grafts)**





## C. Transplant Information

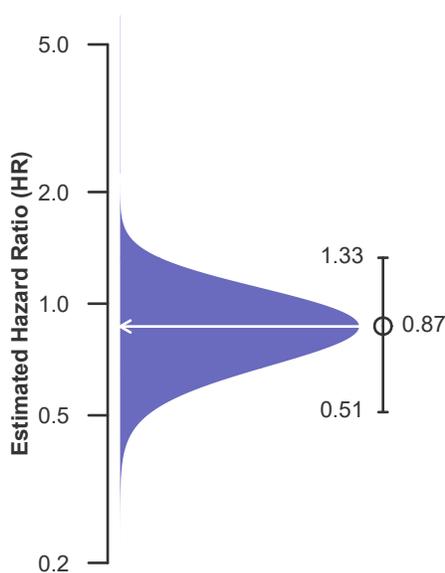
**Table C13. Adult (18+) 3-year patient survival**  
Single organ transplants performed between 01/01/2015 and 06/30/2017  
Retransplants excluded

	MNUM	U.S.
Number of transplants evaluated	321	36,746
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	95.29%	94.00%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	94.53%	--
Number of observed deaths during the first 3 years after transplant	15	2,189
Number of expected deaths during the first 3 years after transplant	17.58	--
Estimated hazard ratio*	0.87	--
95% credible interval for the hazard ratio**	[0.51, 1.33]	--

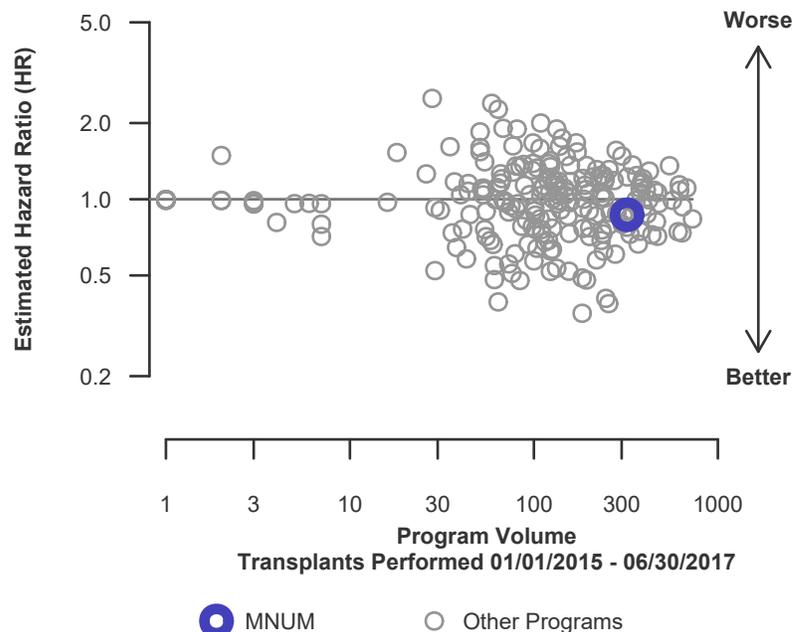
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.51, 1.33], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 13% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 49% reduced risk up to 33% increased risk.

**Figure C17. Adult (18+) 3-year patient death HR estimate**



**Figure C18. Adult (18+) 3-year patient death HR program comparison**





## C. Transplant Information

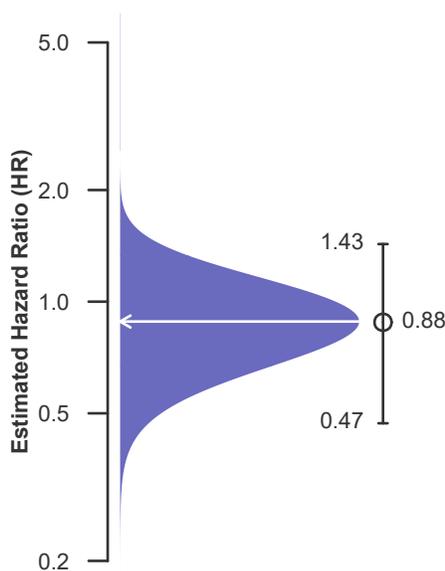
**Table C13D. Adult (18+) 3-year patient survival (deceased donor graft recipients)**  
Single organ transplants performed between 01/01/2015 and 06/30/2017  
Retransplants excluded

	MNUM	U.S.
Number of transplants evaluated	161	24,671
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	93.17%	92.54%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	92.08%	--
Number of observed deaths during the first 3 years after transplant	11	1,829
Number of expected deaths during the first 3 years after transplant	12.71	--
Estimated hazard ratio*	0.88	--
95% credible interval for the hazard ratio**	[0.47, 1.43]	--

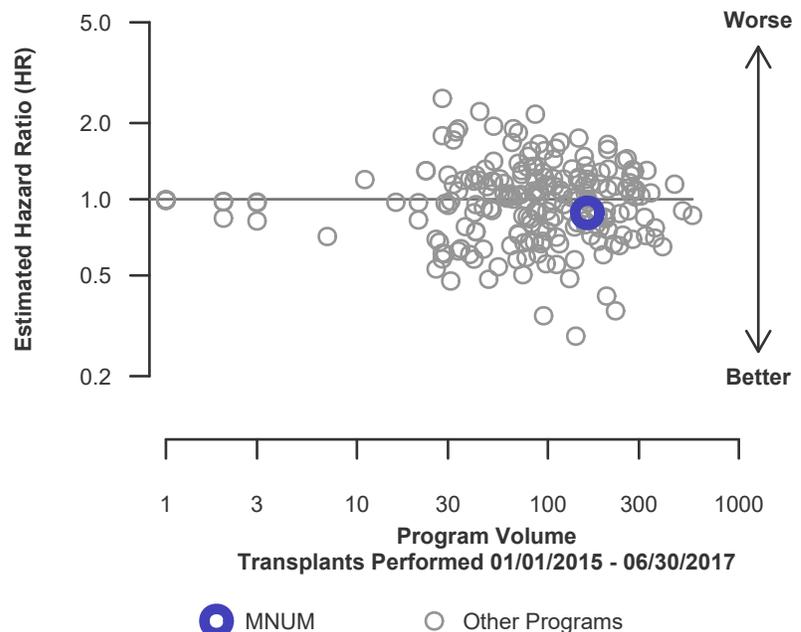
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.47, 1.43], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 12% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 53% reduced risk up to 43% increased risk.

**Figure C17D. Adult (18+) 3-year patient death HR estimate (deceased donor grafts)**



**Figure C18D. Adult (18+) 3-year patient death HR program comparison (deceased donor grafts)**





## C. Transplant Information

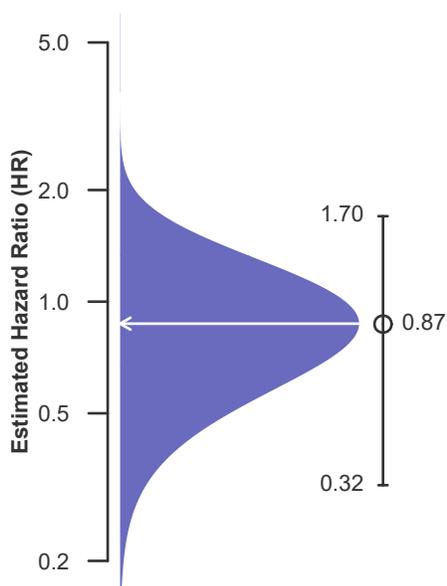
**Table C13L. Adult (18+) 3-year patient survival (living donor graft recipients)**  
Single organ transplants performed between 01/01/2015 and 06/30/2017  
Retransplants excluded

	MNUM	U.S.
Number of transplants evaluated	160	12,075
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	97.41%	96.99%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	97.00%	--
Number of observed deaths during the first 3 years after transplant	4	360
Number of expected deaths during the first 3 years after transplant	4.88	--
Estimated hazard ratio*	0.87	--
95% credible interval for the hazard ratio**	[0.32, 1.70]	--

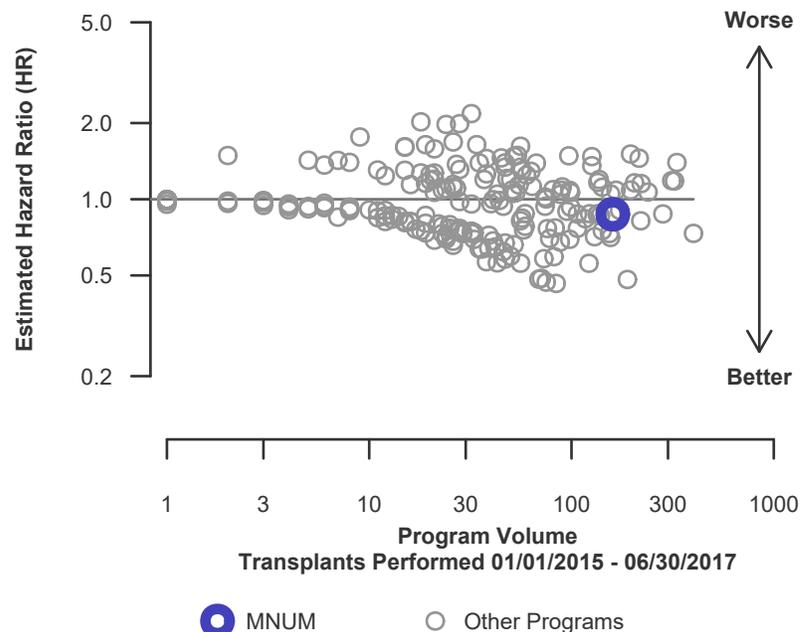
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.32, 1.70], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 13% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 68% reduced risk up to 70% increased risk.

**Figure C17L. Adult (18+) 3-year patient death HR estimate (living donor grafts)**



**Figure C18L. Adult (18+) 3-year patient death HR program comparison (living donor grafts)**





## C. Transplant Information

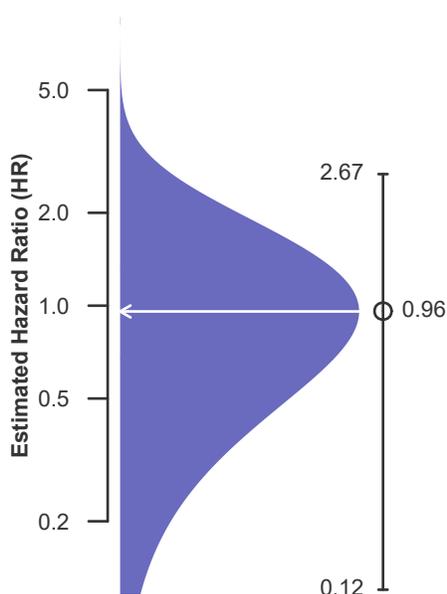
**Table C14. Pediatric (<18) 1-month patient survival**  
Single organ transplants performed between 07/01/2017 and 12/31/2019  
Retransplants excluded

	MNUM	U.S.
Number of transplants evaluated	35	1,938
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	100.00%	99.79%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.75%	--
Number of observed deaths during the first month after transplant	0	4
Number of expected deaths during the first month after transplant	0.09	--
Estimated hazard ratio*	0.96	--
95% credible interval for the hazard ratio**	[0.12, 2.67]	--

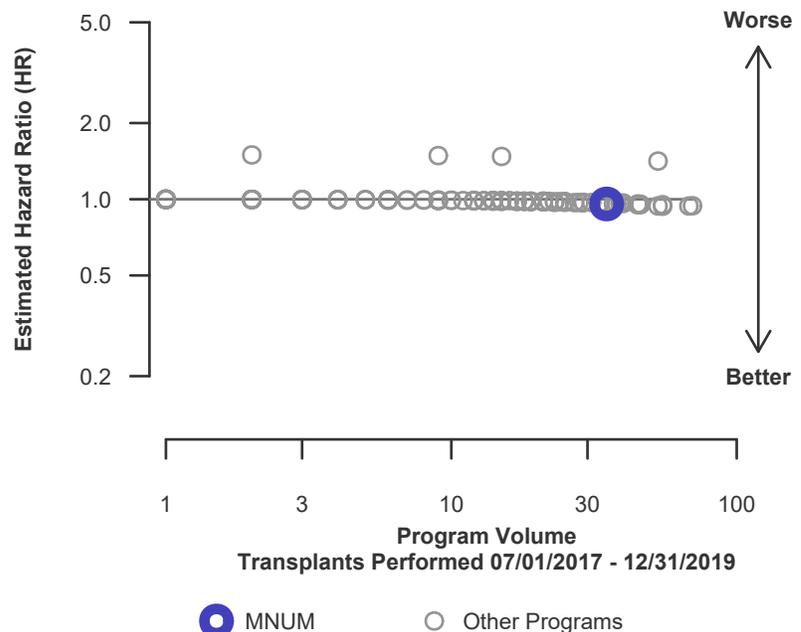
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.12, 2.67], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 4% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 88% reduced risk up to 167% increased risk.

**Figure C19. Pediatric (<18) 1-month patient death HR estimate**



**Figure C20. Pediatric (<18) 1-month patient death HR program comparison**





## C. Transplant Information

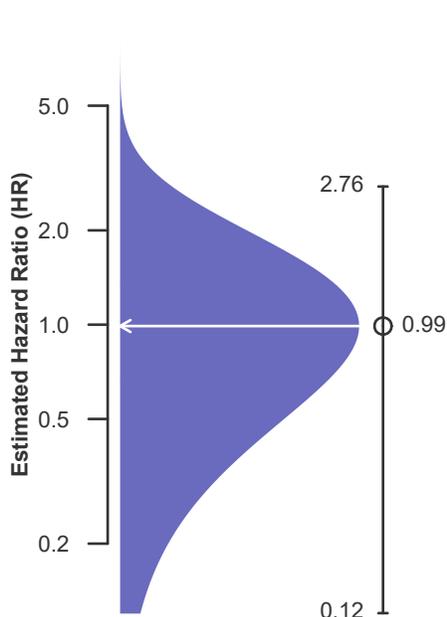
**Table C14D. Pediatric (<18) 1-month patient survival (deceased donor graft recipients)**  
**Single organ transplants performed between 07/01/2017 and 12/31/2019**  
**Retransplants excluded**

	MNUM	U.S.
Number of transplants evaluated	13	1,290
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	100.00%	99.84%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.85%	--
Number of observed deaths during the first month after transplant	0	2
Number of expected deaths during the first month after transplant	0.02	--
Estimated hazard ratio*	0.99	--
95% credible interval for the hazard ratio**	[0.12, 2.76]	--

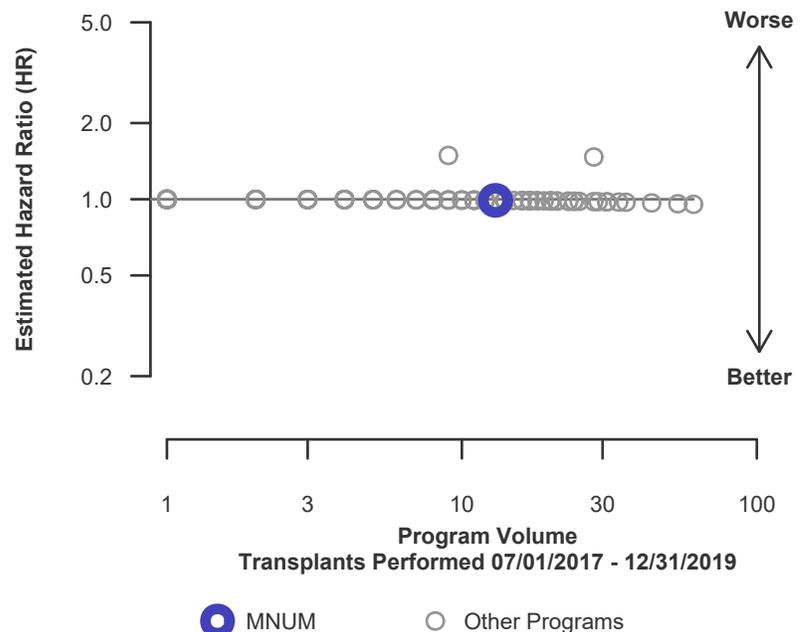
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.12, 2.76], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 1% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 88% reduced risk up to 176% increased risk.

**Figure C19D. Pediatric (<18) 1-month patient death HR estimate (deceased donor grafts)**



**Figure C20D. Pediatric (<18) 1-month patient death HR program comparison (deceased donor grafts)**





## C. Transplant Information

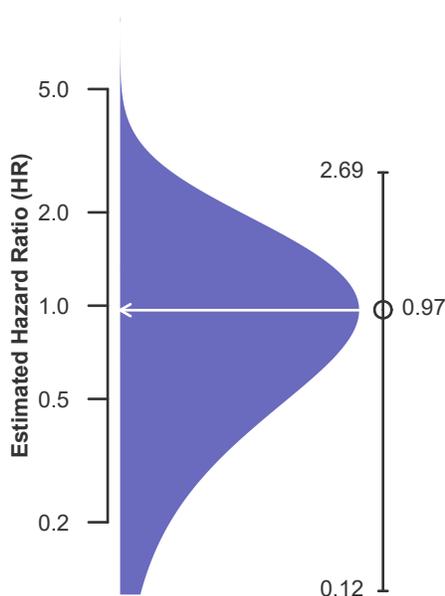
**Table C14L. Pediatric (<18) 1-month patient survival (living donor graft recipients)**  
Single organ transplants performed between 07/01/2017 and 12/31/2019  
Retransplants excluded

	MNUM	U.S.
Number of transplants evaluated	22	648
Estimated probability of surviving at 1 month (unadjusted for patient and donor characteristics)	100.00%	99.69%
Expected probability of surviving at 1 month (adjusted for patient and donor characteristics)	99.69%	--
Number of observed deaths during the first month after transplant	0	2
Number of expected deaths during the first month after transplant	0.07	--
Estimated hazard ratio*	0.97	--
95% credible interval for the hazard ratio**	[0.12, 2.69]	--

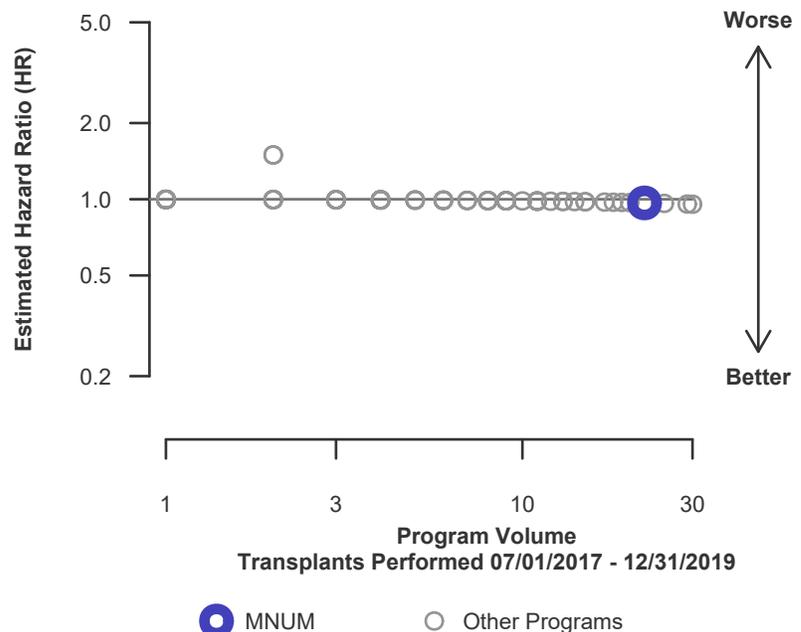
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.12, 2.69], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 3% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 88% reduced risk up to 169% increased risk.

**Figure C19L. Pediatric (<18) 1-month patient death HR estimate (living donor grafts)**



**Figure C20L. Pediatric (<18) 1-month patient death HR program comparison (living donor grafts)**





## C. Transplant Information

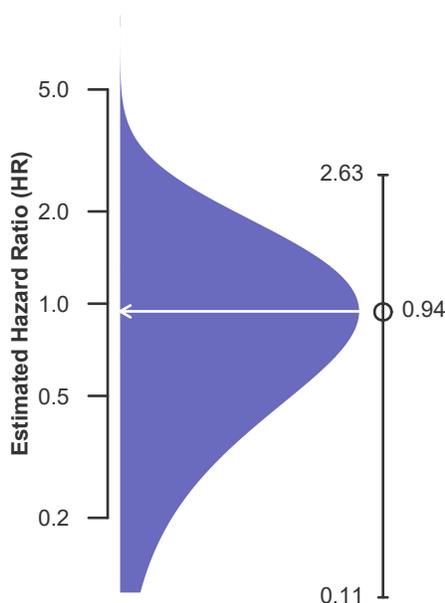
**Table C15. Pediatric (<18) 1-year patient survival**  
Single organ transplants performed between 07/01/2017 and 12/31/2019  
Retransplants excluded

	MNUM	U.S.
Number of transplants evaluated	35	1,938
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	100.00%	99.61%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	99.64%	--
Number of observed deaths during the first year after transplant	0	7
Number of expected deaths during the first year after transplant	0.12	--
Estimated hazard ratio*	0.94	--
95% credible interval for the hazard ratio**	[0.11, 2.63]	--

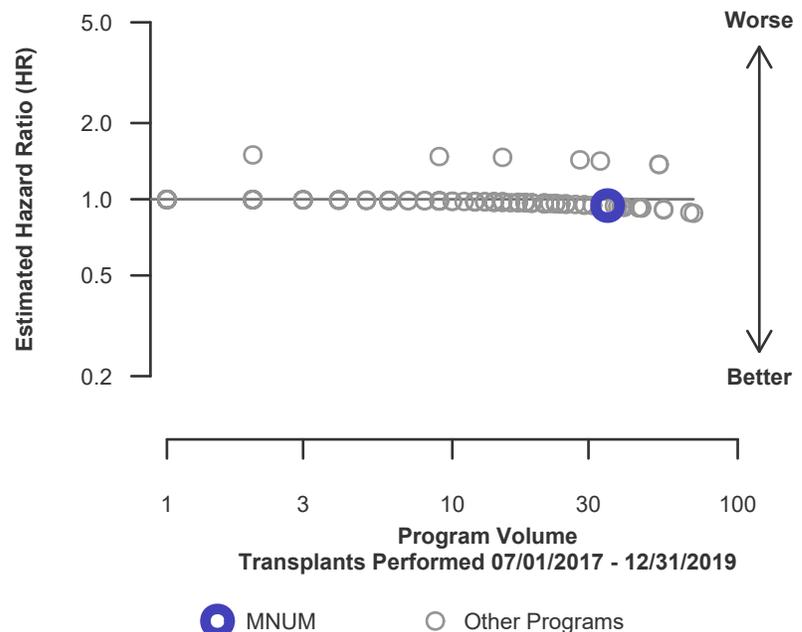
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.11, 2.63], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 6% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 89% reduced risk up to 163% increased risk.

**Figure C21. Pediatric (<18) 1-year patient death HR estimate**



**Figure C22. Pediatric (<18) 1-year patient death HR program comparison**





## C. Transplant Information

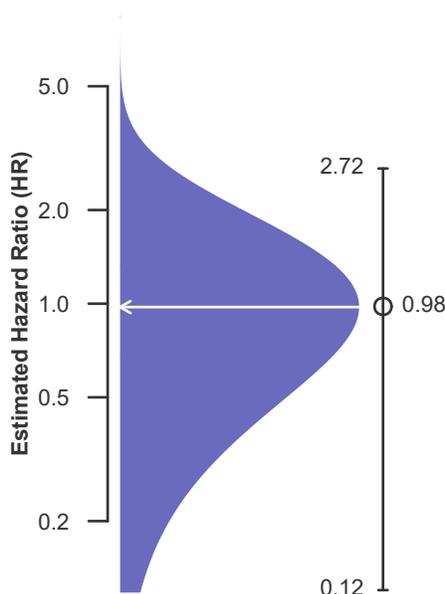
**Table C15D. Pediatric (<18) 1-year patient survival (deceased donor graft recipients)**  
Single organ transplants performed between 07/01/2017 and 12/31/2019  
Retransplants excluded

	MNUM	U.S.
Number of transplants evaluated	13	1,290
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	100.00%	99.56%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	99.57%	--
Number of observed deaths during the first year after transplant	0	5
Number of expected deaths during the first year after transplant	0.05	--
Estimated hazard ratio*	0.98	--
95% credible interval for the hazard ratio**	[0.12, 2.72]	--

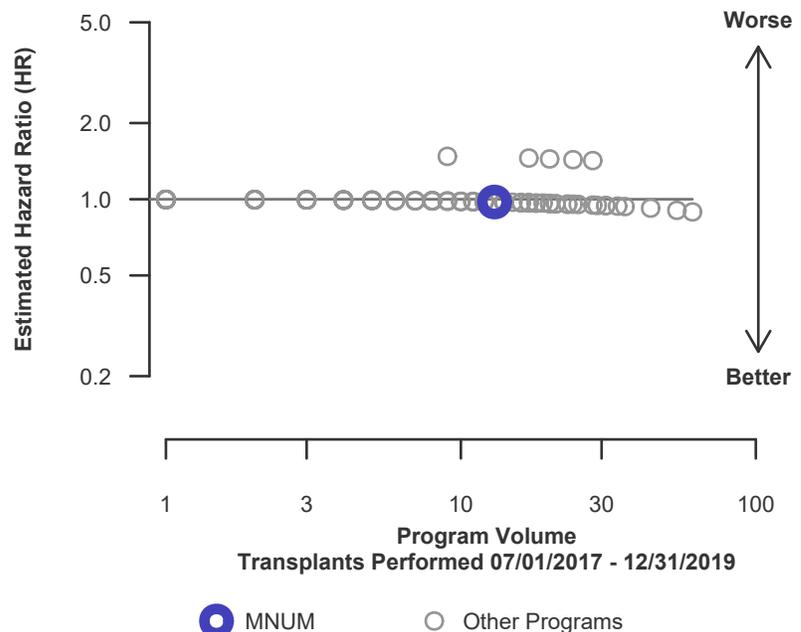
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.12, 2.72], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 2% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 88% reduced risk up to 172% increased risk.

**Figure C21D. Pediatric (<18) 1-year patient death HR estimate (deceased donor grafts)**



**Figure C22D. Pediatric (<18) 1-year patient death HR program comparison (deceased donor grafts)**





## C. Transplant Information

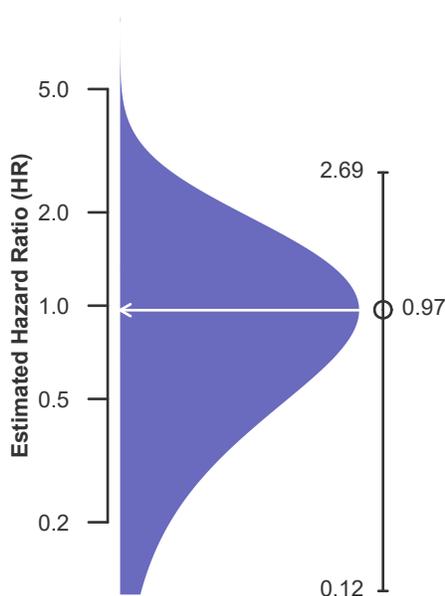
**Table C15L. Pediatric (<18) 1-year patient survival (living donor graft recipients)**  
Single organ transplants performed between 07/01/2017 and 12/31/2019  
Retransplants excluded

	MNUM	U.S.
Number of transplants evaluated	22	648
Estimated probability of surviving at 1 year (unadjusted for patient and donor characteristics)	100.00%	99.69%
Expected probability of surviving at 1 year (adjusted for patient and donor characteristics)	99.69%	--
Number of observed deaths during the first year after transplant	0	2
Number of expected deaths during the first year after transplant	0.07	--
Estimated hazard ratio*	0.97	--
95% credible interval for the hazard ratio**	[0.12, 2.69]	--

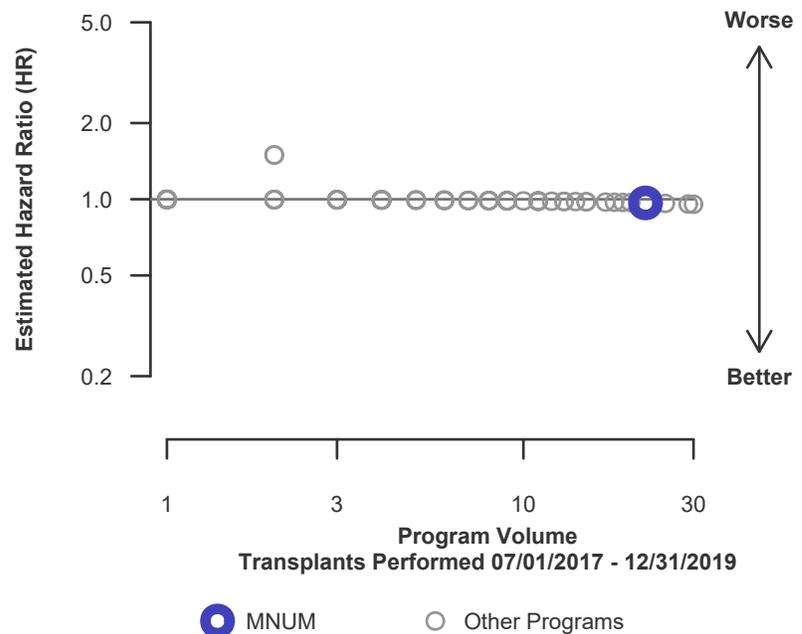
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.12, 2.69], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 3% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 88% reduced risk up to 169% increased risk.

**Figure C21L. Pediatric (<18) 1-year patient death HR estimate (living donor grafts)**



**Figure C22L. Pediatric (<18) 1-year patient death HR program comparison (living donor grafts)**





## C. Transplant Information

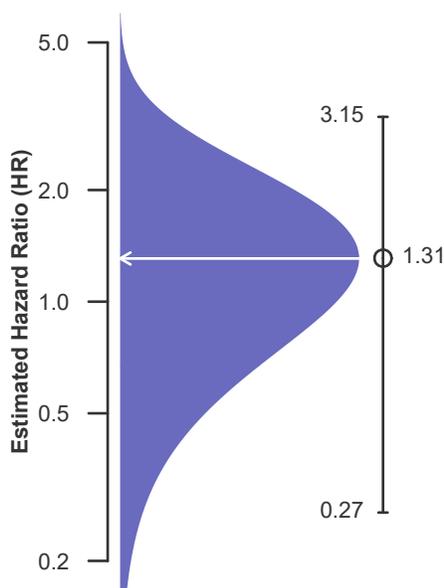
**Table C16. Pediatric (<18) 3-year patient survival**  
Single organ transplants performed between 01/01/2015 and 06/30/2017  
Retransplants excluded

	MNUM	U.S.
Number of transplants evaluated	29	1,841
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	96.55%	99.02%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	98.96%	--
Number of observed deaths during the first 3 years after transplant	1	18
Number of expected deaths during the first 3 years after transplant	0.29	--
Estimated hazard ratio*	1.31	--
95% credible interval for the hazard ratio**	[0.27, 3.15]	--

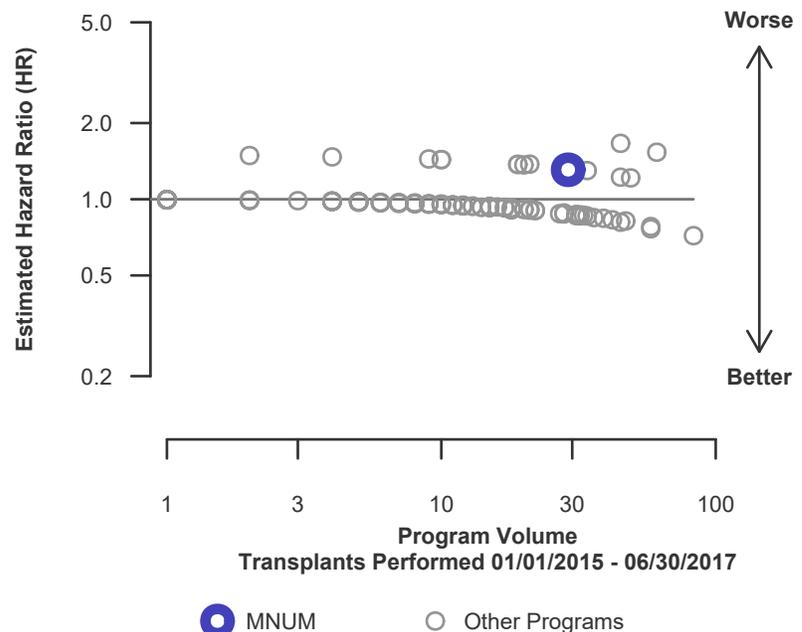
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.27, 3.15], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 31% higher risk of patient death compared to an average program, but MNUM's performance could plausibly range from 73% reduced risk up to 215% increased risk.

**Figure C23. Pediatric (<18) 3-year patient death HR estimate**



**Figure C24. Pediatric (<18) 3-year patient death HR program comparison**





## C. Transplant Information

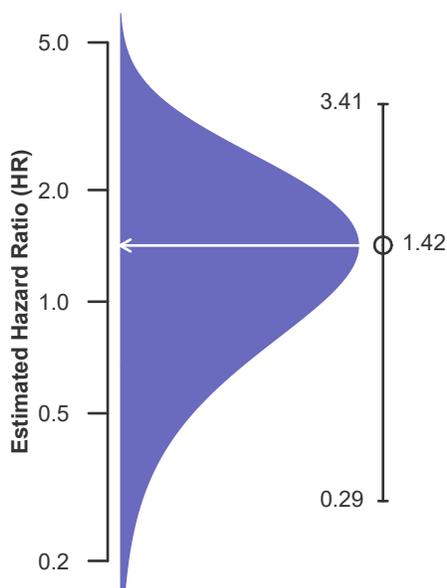
**Table C16D. Pediatric (<18) 3-year patient survival (deceased donor graft recipients)**  
Single organ transplants performed between 01/01/2015 and 06/30/2017  
Retransplants excluded

	MNUM	U.S.
Number of transplants evaluated	14	1,248
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	92.86%	99.12%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	99.12%	--
Number of observed deaths during the first 3 years after transplant	1	11
Number of expected deaths during the first 3 years after transplant	0.12	--
Estimated hazard ratio*	1.42	--
95% credible interval for the hazard ratio**	[0.29, 3.41]	--

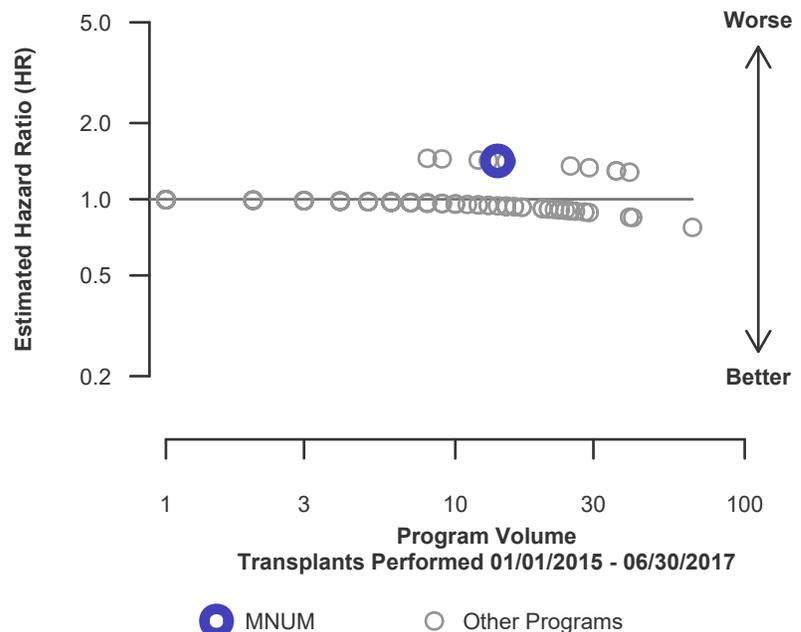
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.29, 3.41], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 42% higher risk of patient death compared to an average program, but MNUM's performance could plausibly range from 71% reduced risk up to 241% increased risk.

**Figure C23D. Pediatric (<18) 3-year patient death HR estimate (deceased donor grafts)**



**Figure C24D. Pediatric (<18) 3-year patient death HR program comparison (deceased donor grafts)**





## C. Transplant Information

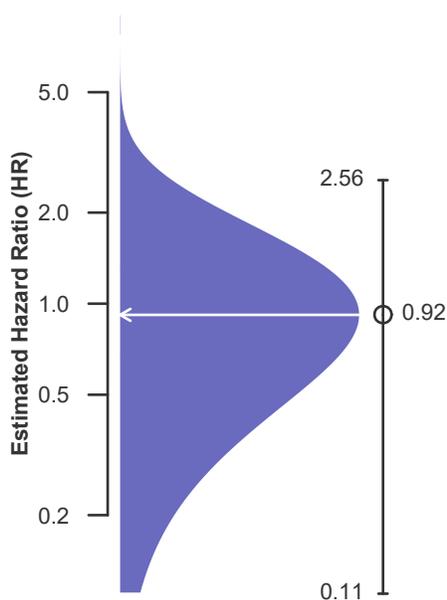
**Table C16L. Pediatric (<18) 3-year patient survival (living donor graft recipients)**  
Single organ transplants performed between 01/01/2015 and 06/30/2017  
Retransplants excluded

	MNUM	U.S.
Number of transplants evaluated	15	593
Estimated probability of surviving at 3 years (unadjusted for patient and donor characteristics)	100.00%	98.82%
Expected probability of surviving at 3 years (adjusted for patient and donor characteristics)	98.82%	--
Number of observed deaths during the first 3 years after transplant	0	7
Number of expected deaths during the first 3 years after transplant	0.18	--
Estimated hazard ratio*	0.92	--
95% credible interval for the hazard ratio**	[0.11, 2.56]	--

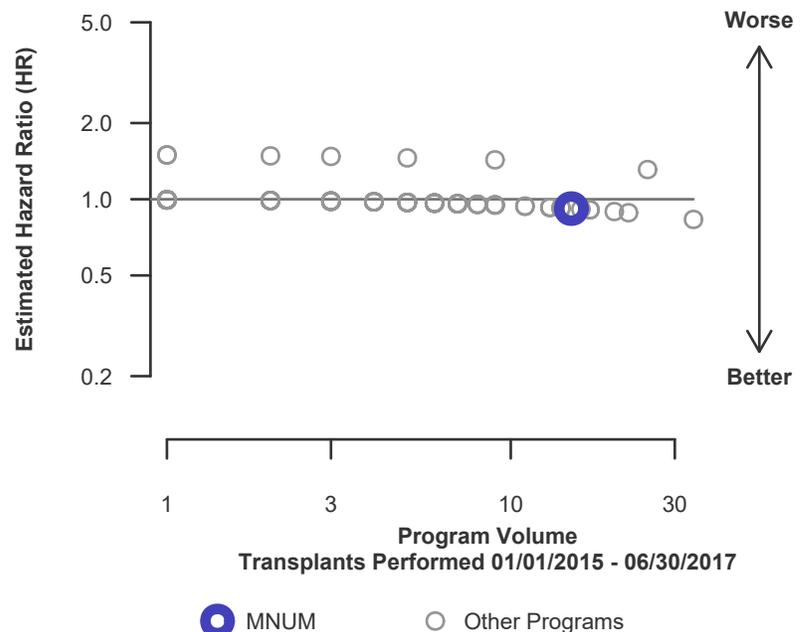
\* The hazard ratio provides an estimate of how University of Minnesota Medical Center, Fairview (MNUM)'s results compare with what was expected based on modeling the transplant outcomes from all U.S. programs. A ratio above 1 indicates higher than expected patient death rates (e.g., a hazard ratio of 1.5 would indicate 50% higher risk), and a ratio below 1 indicates lower than expected patient death rates (e.g., a hazard ratio of 0.75 would indicate 25% lower risk). If MNUM's patient death rate were precisely the expected rate, the estimated hazard ratio would be 1.0.

\*\* The 95% credible interval, [0.11, 2.56], indicates the location of MNUM's true hazard ratio with 95% probability. The best estimate is 8% lower risk of patient death compared to an average program, but MNUM's performance could plausibly range from 89% reduced risk up to 156% increased risk.

**Figure C23L. Pediatric (<18) 3-year patient death HR estimate (living donor grafts)**



**Figure C24L. Pediatric (<18) 3-year patient death HR program comparison (living donor grafts)**





## C. Transplant Information

Table C17. Multi-organ transplant graft survival: 07/01/2017 - 12/31/2019

### Adult (18+) Transplants

Transplant Type	First-Year Outcomes					
	Transplants Performed		Kidney Graft Failures		Estimated Kidney Graft Survival	
	MNUM-TX1	USA	MNUM-TX1	USA	MNUM-TX1	USA
Kidney-Heart	2	507	2	76	0.0%	84.7%
Kidney-Liver	5	1,691	0	179	100.0%	88.9%
Kidney-Pancreas	67	2,109	3	76	95.3%	96.2%

### Pediatric (<18) Transplants

No pediatric (<18) multi-organ transplants were performed

Table C18. Multi-organ transplant patient survival: 07/01/2017 - 12/31/2019

### Adult (18+) Transplants

Transplant Type	First-Year Outcomes					
	Transplants Performed		Patient Deaths		Estimated Patient Survival	
	MNUM-TX1	USA	MNUM-TX1	USA	MNUM-TX1	USA
Kidney-Heart	2	507	2	58	0.0%	88.3%
Kidney-Liver	5	1,691	0	147	100.0%	90.8%
Kidney-Pancreas	67	2,109	3	46	95.1%	97.6%

### Pediatric (<18) Transplants

No pediatric (<18) multi-organ transplants were performed



## D. Living Donor Information

Table D1. Living donor summary: 07/01/2017 - 06/30/2020

Living Donor Follow-Up	This Center			United States		
	07/2017-06/2018	07/2018-06/2019	07/2019-12/2019	07/2017-06/2018	07/2018-06/2019	07/2019-12/2019
<b>Number of Living Donors</b>	75	65	44	6,151	6,685	3,483
<b>6-Month Follow-Up</b>						
Donors due for follow-up	75	65	44	6,150	6,682	3,468
Timely clinical data	65 86.7%	49 75.4%	31 70.5%	5,395 87.7%	5,832 87.3%	2,529 72.9%
Timely lab data	57 76.0%	56 86.2%	34 77.3%	5,213 84.8%	5,629 84.2%	2,252 64.9%
<b>12-Month Follow-Up</b>						
Donors due for follow-up	74	65		6,148	6,681	
Timely clinical data	60 81.1%	49 75.4%		5,095 82.9%	5,075 76.0%	
Timely lab data	54 73.0%	51 78.5%		4,818 78.4%	4,562 68.3%	
<b>24-Month Follow-Up</b>						
Donors due for follow-up	74			6,147		
Timely clinical data	40 54.1%			4,134 67.3%		
Timely lab data	47 63.5%			3,575 58.2%		

Follow-up completion standards through 2 years post-donation were implemented in policy on February 1, 2013.