

Eliminate Use of DSA and Region from Pancreas Allocation 3 Month Post-Implementation Monitoring Report

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By:

Nang Thu Thu Kyaw, PhD, Amanda Robinson, MS
Alice Toll, MS, Katrina Gauntt, MS
UNOS Research Department

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Executive Summary

This report presents data describing the US organ transplantation system before and after the removal of Donation Service Area (DSA) and OPTN region from deceased donor kidney-pancreas (KP) and pancreas (PA) allocation. The analyses include data on waiting list registrations, transplant recipients, and deceased donors submitted to the OPTN between January 15, 2021 and May 14, 2021. Data are current as of June 11, 2021 and are subject to change based on future submission or correction.

Waiting List

Overall waiting list volume remained stable for both KP and PA (**Figure 1 and 34 and Table 1 and 34**) and active registration status slightly increased for PA (**Figure 35 and Table 35**) between January and April 2021. Registrations added to the waiting list slightly increased for KP and decreased for PA after policy implementation (**Figure 3 and 36 and Table 3 and 36**).

The overall KP transplant rate increased from 47 to 56 transplants per 100 patient years after policy implementation (**Figure 11 and Table 11**). The directionality of these changes align with the KPSAM analysis used to inform the development of this policy. Additionally, increases in rates were seen for the following subpopulations some of which aligned with the KPSAM results:

- Registrations age 18-34 years and 35-49 years (**Figure 12 and Table 12**)
- Male (**Figure 13 and Table 13**)
- Asian and Hispanic race/ethnicity (**Figure 14 and Table 14**)
- CPRA 0%, 20-79% and 80-97% (**Figure 15 and Table 15**)

The overall PA transplant rate also increased from 16 to 20 transplants per 100 patient years after policy implementation (**Figure 44 and Table 44**).

Deceased Donor Transplants

The total number of deceased donor KP transplants increased from 192 to 231 after policy implementation, directionality as predicted by the KPSAM (**Figure 16 and Table 16**). Increases in KP transplant volume were observed for:

- Age at transplant 35-49 years (**Figure 18 and Table 18**)
- Hispanic race/ethnicity (**Figure 19 and Table 19**)

The total number of deceased donor PA transplants increased from 23 to 32 after policy implementation (**Figure 46 and Table 46**).

Median time on the waiting list for deceased donor transplant decreased from 0.57 to 0.45 years for KP transplant. For PA, median time on the waiting list for deceased donor transplant increased from 0.40 to 0.82 years, suggesting that candidates with longer waiting times are getting transplanted (**Figure 20 and 50 and Table 20 and 50**).

Median distance from the donor hospital to the transplant center increased from 67 to 100 NM for KP and decreased from 176 to 119 NM for PA after policy implementation (**Figure 28 and 58 and Table 28 and 58**). There was a slight decrease in the proportion of transplants occurring within 250 NM of the donor hospital for KP and no change for PA (**Figure 26 and 56 and Table 26 and 56**). For both KP and PA, more transplants occurred at centers outside the recovering OPO's DSA after policy implementation which aligns with the KPSAM analysis (**Figure 27 and 57 and Table 27 and 57**). Changes in transplant volume varied across OPTN region (**Figure 29 and 59 and Table 29 and 59**).

Utilization and Efficiency of Allocation

The number of deceased pancreas donors recovered increased from 213 to 237 after policy implementation (**Figure 60 and Table 63**). There was an increase in the number and proportion of pancreas donors age <18 years recovered (**Figure 63 and Table 66**). The discard rate for pancreas decreased from 27.70% to 18.57% (**Figure 64 and Table 67**).

Non-local acceptance rate increased by 45% from pre- to post-policy (**Table 68**), suggesting that the OPTN Pancreas Transplantation Committee's decision to remove the non-local indicator from the KPSAM acceptance model was justified based on anticipated, and now realized, behavior.

Donors Recovered in Alaska

There were no pancreata recovered and transplanted for deceased donors recovered in Alaska.

Facilitated Pancreas Allocation

The number of programs qualified for facilitated allocation increased from 44 to 53 after policy implementation (**Table 69**). The overall frequency of facilitated pancreas allocation decreased from 32 to 28 (**Figure 64** and **Table 70**) and distinct pancreas donors allocated using facilitated placement decreased from 29 to 26 (**Figure 65**) after policy implementation.

Background

The OPTN implemented several policy changes on March 15, 2021 in order to remove DSA and region from pancreas allocation. The primary policy replaced DSA and region with a 250 nautical mile (NM) fixed circle and added proximity points to a candidate's total allocation score. As the DSA was no longer used, the policy for facilitated placement of pancreata was changed to the new facilitated pancreas criteria to transplanting two pancreata procured 250 NM or further from the transplant program in the previous two years.

Two supplemental policies went into effect the same day. As DSA boundaries were no longer used for organ allocation, the first policy change replaced the donor hospital with Seattle-Tacoma (Sea-Tac) International Airport as the center of the 250 NM circle used in the allocation of pancreas recovered in Alaska. This policy change aimed to maximize the utilization of deceased donor organs procured in the state of Alaska and avoid unnecessary delays in placement.

The second policy change sought to provide consistency with the Board-approved changes to remove DSA and region from kidney and pancreas allocation policies. These changes were intended to promote efficiency and organ utilization by providing options for the host OPO when the kidney, pancreas or kidney-pancreas is released by the originally accepting transplant program. Specific procedure is dependent on the organ in need of reallocation.

Strategic Plan Goal

Increase equity in access to transplant.

Committee Request

These policies will be formally evaluated approximately 3 months, 6 months, 1 year, and 2 years post-implementation. The following metrics, and any subsequently requested by the Committee, will be evaluated as data become available. Appropriate lags will be applied, per typical OPTN conventions, to account for time delay in institutions reporting data to UNet and compared to an appropriate pre-policy cohort to assess performance before and after implementation of this policy. To assess the policy's impact on pediatric populations as well as the geographic variation in pediatric populations, when feasible, metrics will be stratified by pediatric age groupings, DSA and OPTN Region. Any metrics not presented in this report will be examined in a subsequent analysis.

Waiting List

1. Total kidney-pancreas and pancreas registrations on the waiting list (snapshot by month)
2. Kidney-pancreas and pancreas registrations added to the list, overall and by age, gender, ethnicity, cPRA, blood type, and insurance status at time of listing
3. Percent of candidates in active status
4. Waitlist mortality per 100 patient years, overall and by candidate age, gender, ethnicity, cPRA, blood type

Transplant

1. Donor, recipient and transplant characteristics: N and % of transplants by recipient age, ethnicity, waiting time (days on the waiting list), ABO, cPRA, HLA-ABDR mismatch level, diagnosis, DCD, inside/outside fixed circle, preservation time and cold ischemic time (CIT).
 - Distribution of kidney-pancreas and pancreas travel distance (NM), overall and by inside/outside fixed circle
2. Change in access by location: N and % of transplants by share type (local/regional/national), OPTN region, Donation Service Area (DSA), transplant center, state
3. Deceased donor transplants per 100 patient years by recipient age, ethnicity, ABO, cPRA, HLA-ABDR mismatch level, and DSA
4. Variance in deceased donor transplant rate across DSA
5. Rates of receiving kidney-pancreas and pancreas offers per 100 patient years by recipient age, ethnicity, ABO, cPRA, and HLA-ABDR mismatch level

Utilization and Efficiency of Allocation

1. Number pancreas donors recovered for transplantation
2. Number and percent of pancreas recovered but not utilized (discarded), overall
3. Number and percent of pancreas discarded by discard reason
4. Number and percent pancreas with a final acceptance
5. Offer acceptance per 100 patient years by recipient age, ethnicity, waiting time (days on the waiting list), ABO, cPRA, and inside/outside fixed circle among organs with a final acceptance.
6. Distribution of sequence number of final acceptor
7. Distribution of time between electronic offer and cross-clamp
8. Number and percent by cPRA, of kidney-pancreas and pancreas offers refused due to a positive cross-match

Outcomes

- One and two year post-transplant graft and patient survival rates, overall and stratified by recipient age, gender, ethnicity, cPRA, blood type, HLA-ABDR mismatch, CIT and preservation time.

Facilitated Pancreas Allocation

1. N and percent of programs that qualify for facilitated pancreas allocation
2. Frequency of facilitated allocation use by OPOs
3. Transplant volumes that laced with facilitated pancreas allocation

Donors Recovered in Alaska

1. N and percent of pancreas donors recovered in Alaska
2. N and percent of pancreata recovered in Alaska
3. N and percent of pancreas transplants performed from donors recovered in Alaska
4. N and percent of pancreata transplanted inside/outside fixed circle of Sea-Tac.
5. Distribution of pancreas travel distance (NM) for transplants performed from donors recovered in Alaska

Released Organs

1. Overall and by OPTN Region (and KDPI if KP)
 - N and percent of organs with a final acceptance
 - N and percent of organs for which an acceptance came from an import match run
2. For accepted organs (overall and stratified by OPTN region and accepting patient cPRA)
 - Transplanted with the accepting candidate
 - Transplanted with a different candidate at the accepting center
 - Transplanted at a different center
 - Discarded

Data and Methods

Data Sources

This analysis is based on OPTN data as of June 11, 2021. Candidate information were submitted through Waitlist and on the Transplant Candidate Registration. Recipient and transplant data were submitted on the Transplant Recipient Registration. Donor data were submitted in DonorNet and on the Deceased Donor Registration. Data are subject to change based on future submission or correction.

OPTN Policy 18.1 defines the following data submission requirements for transplant centers and OPOs:

- Submission of the transplant candidate registration (TCR) within 30 days of listing
- Submission of the transplant recipient registration (TRR) within 60 days of waiting list removal
- Submission of the deceased donor registration (DDR) within 30 days organ disposition submission
- Potential transplant recipient offers within 30 days of the match run date

Because some additions, transplants, and donor recoveries after policy implementation were still within this submission window at the time of this analysis, there are substantial missing data for some of the fields submitted on the forms listed above.

Cohort

All kidney-pancreas and pancreas alone registrations listed, ever waiting, or transplanted between January 15, 2021 and May 14, 2021 were included in this analysis, as were all deceased pancreas donors recovered during this time. These dates were chosen to ensure policy eras were of uniform length.

Policy eras were defined as:

- Pre-Policy: January 15, 2021 to March 14, 2021
- Post-Policy: March 15, 2021 to May 14, 2021

Methods

Transplant rates were defined as the number of waiting list removals due to deceased donor pancreas transplant divided by the total amount of time on the waiting list (active and inactive) for registrations ever waiting during the study period. These results are presented as transplants per 100 patient years.

Discard rate was defined as the number of deceased donor pancreata recovered for the purpose of transplant, but not transplanted, divided by the total number of pancreata recovered for transplant.

Utilization rate was defined as the number of pancreata transplanted divided by the total number of available pancreata.

To determine the offer acceptance rate, we identified the pancreas or kidney-pancreas acceptance for each donor pancreas. The first acceptance was constrained to match runs submitted during the cohort. These acceptances were then cross-referenced against the reported transplants from the donor ID. Offers to islet candidates were excluded. Acceptance rates were defined as the number of any pancreas offers divided by the number of accepted for kidney-pancreas or pancreas during the study period.

Note on the COVID-19 Pandemic

The World Health Organization (WHO) declared COVID-19 a pandemic on March 11, 2020 and a national state of emergency was declared in the U.S. on March 13, 2020. All of the data cited in this report were reported to thr OPTN after the declaration of this national emergency. Given the impact that has been seen on the U.S. (see data trends at unos.org/covid), the true impact of this policy change is very challenging to determine.

Results

Kidney-Pancreas

Waiting List

Figure 1 and **Table 1** show the number of registrations waiting for a kidney-pancreas on the last day of each month from January 15, 2021 to May 14, 2021. Waiting list volume changed very little after policy implementation.

Figure 1: Kidney-Pancreas Registrations Waiting on the Last Day of Each Month, January 15, 2021-May 14, 2021

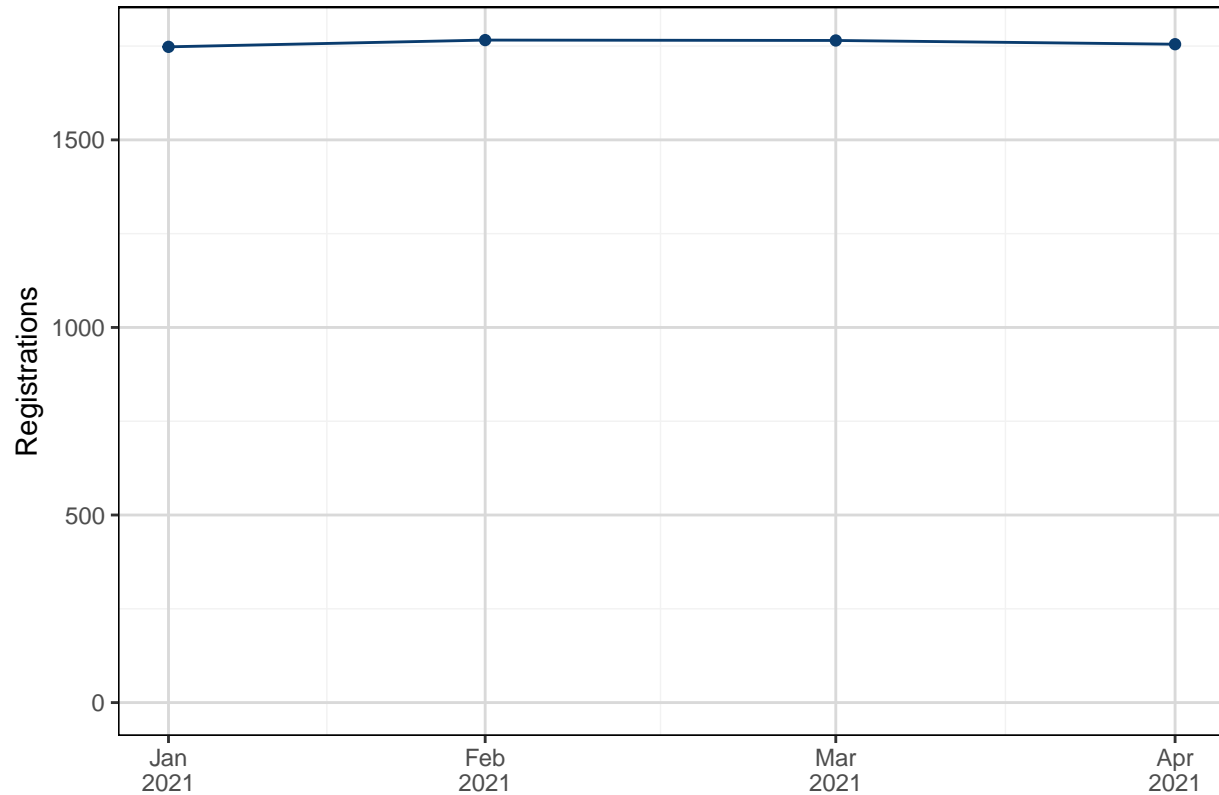


Table 1: Kidney-Pancreas Registrations Waiting on the Last Day of Each Month, January 15, 2021-May 14, 2021

Date	Registrations
January 2021	1748
February 2021	1766
March 2021	1765
April 2021	1755

Figure 2 and **Table 2** show the percentage of registrations waiting for a kidney-pancreas on the last day of each month from January 15, 2021 to May 14, 2021 by status. Roughly 45% of registrations were in active status both before and after policy implementation.

Figure 2: Kidney-Pancreas Registrations Waiting on the Last Day of Each Month by Status, January 15, 2021-May 14, 2021

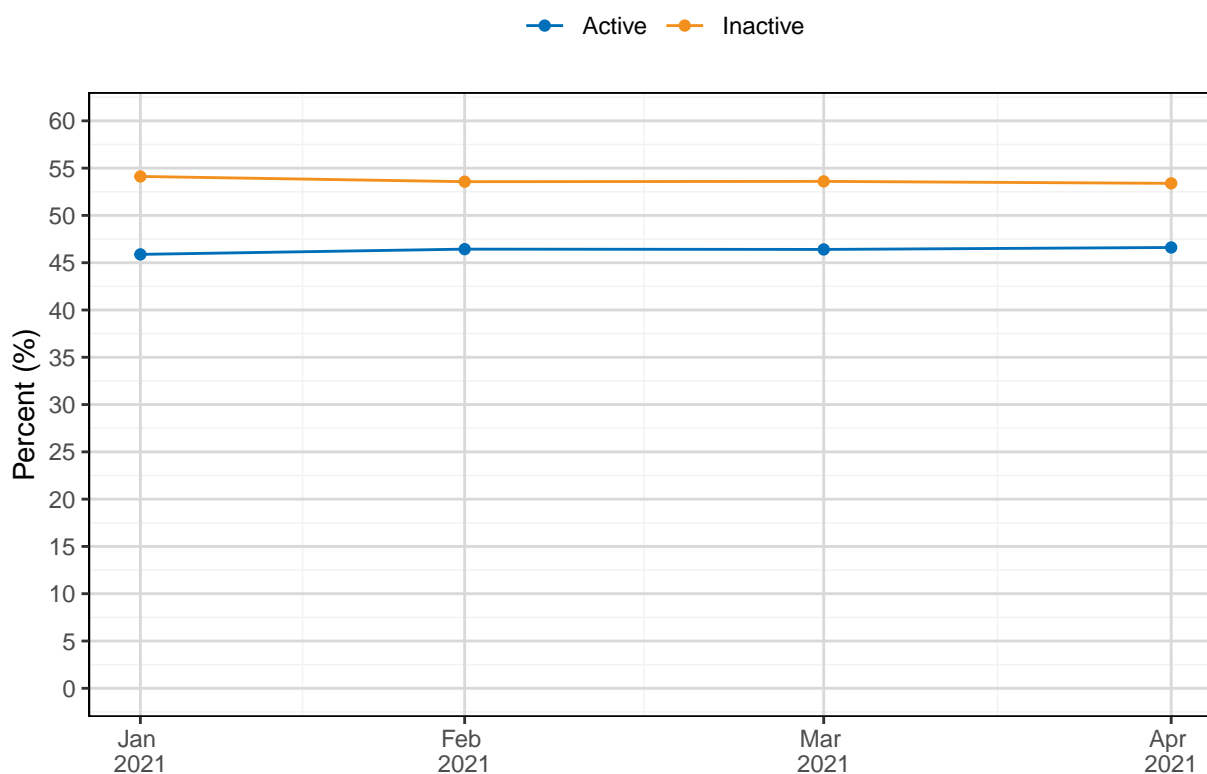


Table 2: Kidney-Pancreas Registrations Waiting on the Last Day of Each Month by Status, January 15, 2021-May 14, 2021

Date	Active		Inactive		Total	
	N	%	N	%	N	%
January 2021	802	45.88	946	54.12	1748	100.00
February 2021	820	46.43	946	53.57	1766	100.00
March 2021	819	46.40	946	53.60	1765	100.00
April 2021	818	46.61	937	53.39	1755	100.00

Figure 3 and **Table 3** show total kidney-pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era. There were 246 registrations added to the waiting list in the two months preceding implementation, and another 268 added after.

Figure 3: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era

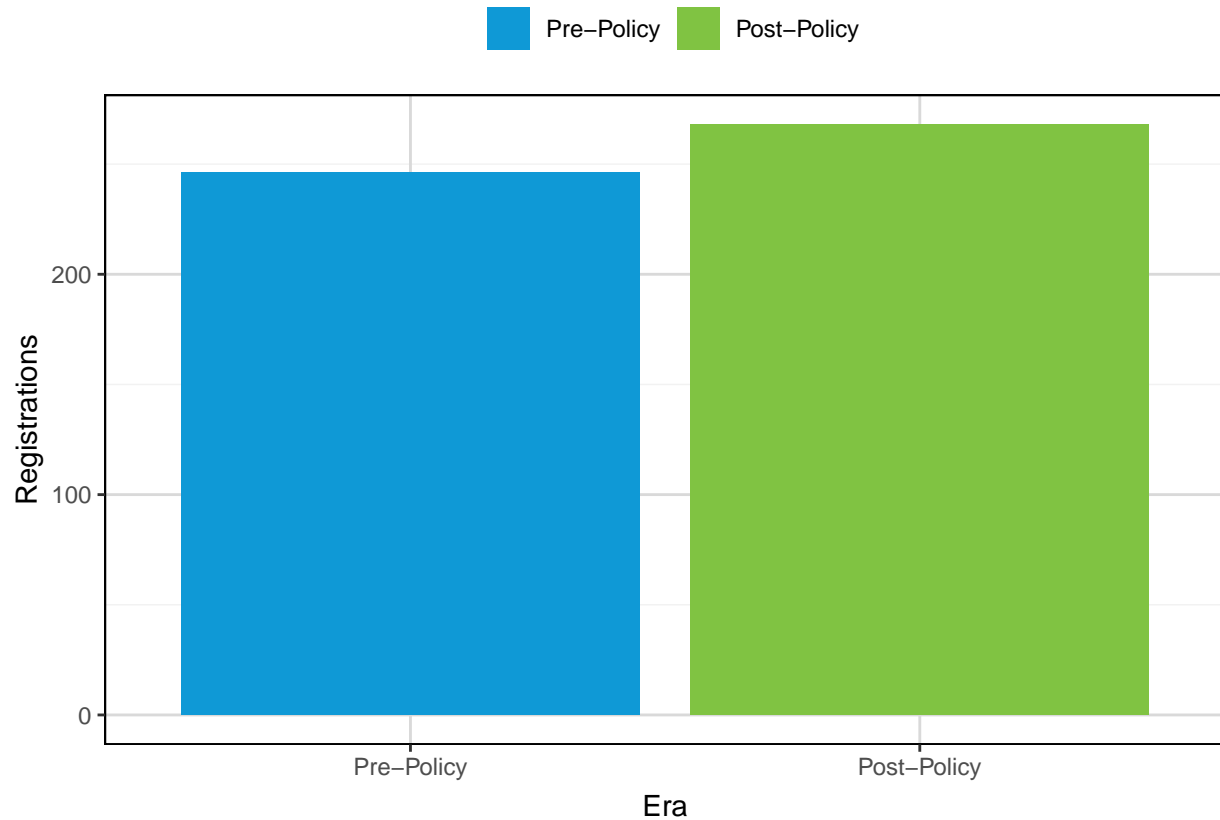


Table 3: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era

Era	Registrations
Pre-Policy	246
Post-Policy	268

Figure 4 and **Table 4** show kidney-pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and age at listing. There were no pediatric registrations added in pre-policy and only two pediatric registrations added in the post-policy. Candidates aged 35-49 years accounted for the majority of waiting list additions overall both pre- and post-policy and increased from 46.75% to 53.73%.

Figure 4: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Age at Listing

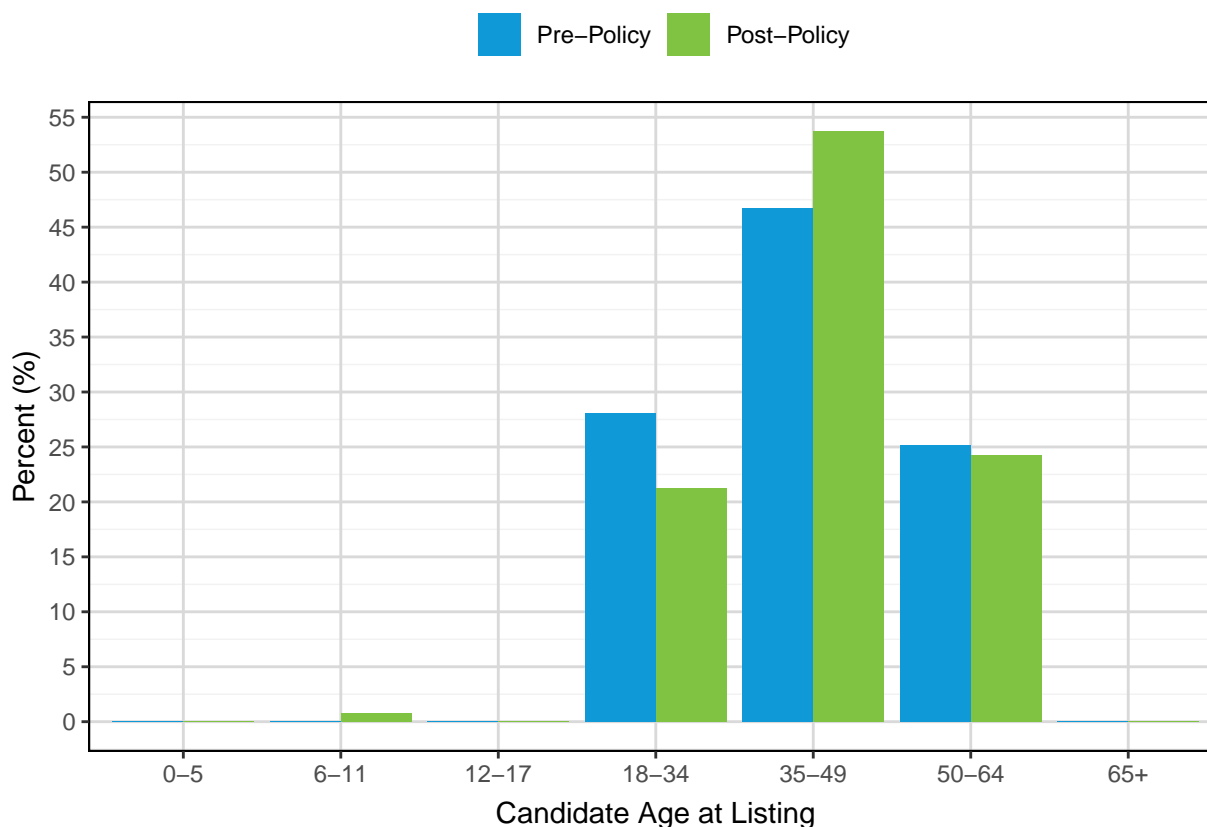


Table 4: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Age at Listing

Age at Listing	Pre-Policy		Post-Policy	
	N	%	N	%
0-5	0	0.00	0	0.00
6-11	0	0.00	2	0.75
12-17	0	0.00	0	0.00
18-34	69	28.05	57	21.27
35-49	115	46.75	144	53.73
50-64	62	25.20	65	24.25
65+	0	0.00	0	0.00
Total	246	100.00	268	100.00

Figure 5 and **Table 5** show kidney-pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and gender. The number and proportion of additions slightly decreased for female and increased for male in post-policy compared to pre-policy.

Figure 5: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Gender

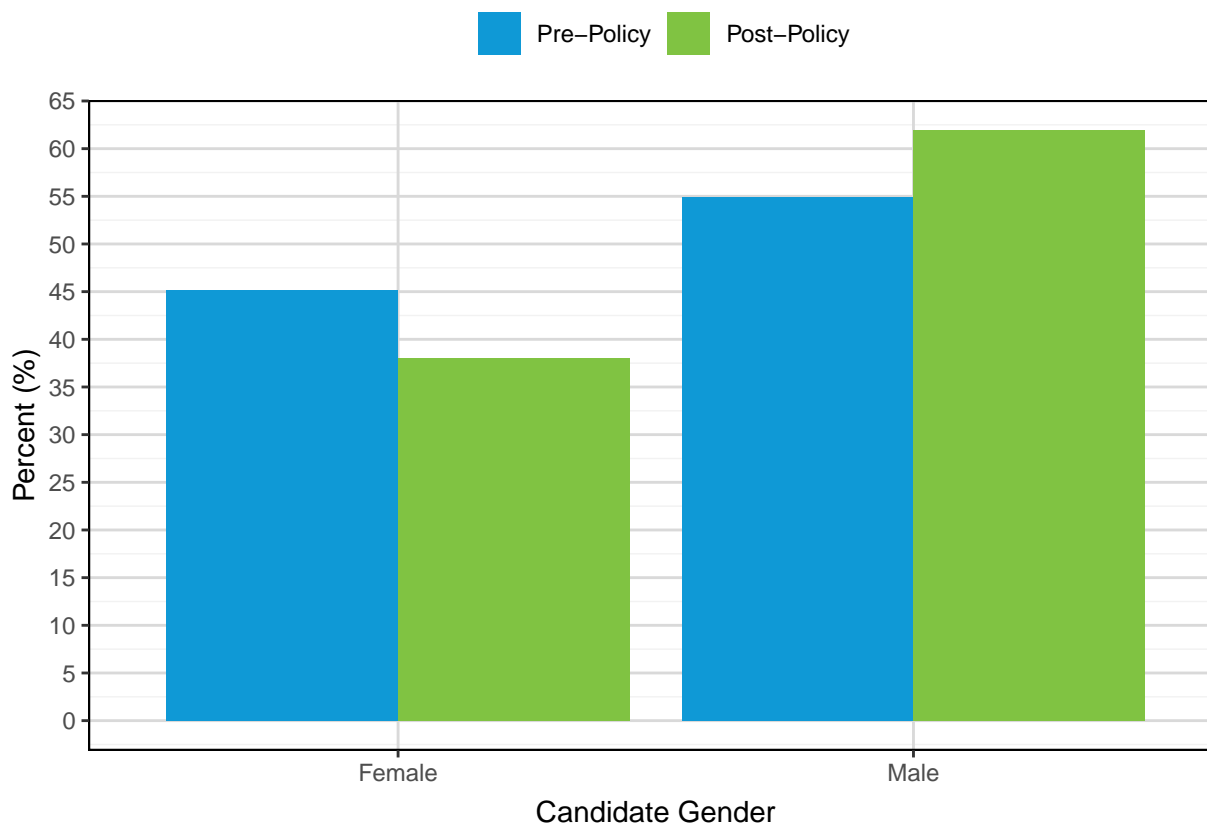


Table 5: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Gender

Gender	Pre-Policy		Post-Policy	
	N	%	N	%
Female	111	45.12	102	38.06
Male	135	54.88	166	61.94
Total	246	100.00	268	100.00

Figure 6 and **Table 6** show kidney-pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and ethnicity. The proportion of additions for Hispanic candidates after the policy change increased, from 14.23% to 21.27%. The proportion of waiting list additions for Asian candidates decreased after policy implementation from 7.72% to 3.36%.

Figure 6: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Ethnicity

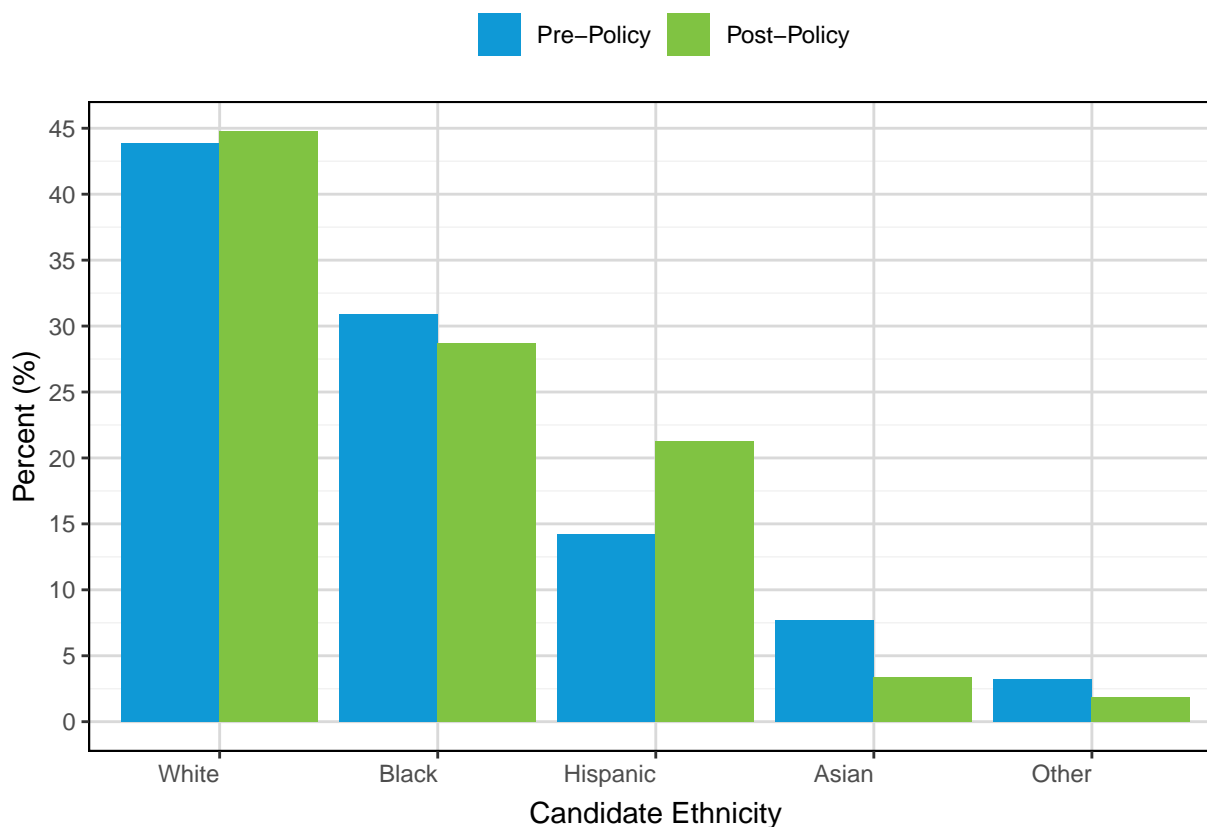


Table 6: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Ethnicity

Ethnicity	Pre-Policy		Post-Policy	
	N	%	N	%
White	108	43.90	120	44.78
Black	76	30.89	77	28.73
Asian	19	7.72	9	3.36
Hispanic	35	14.23	57	21.27
Other	8	3.25	5	1.87
Total	246	100.00	268	100.00

Figure 7 and **Table 7** show kidney-pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and blood type. The proportion of blood type A and AB additions slightly increased and the proportion of B and O additions slightly decreased although the volume of blood type O additions increased after the policy change.

Figure 7: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Blood Type

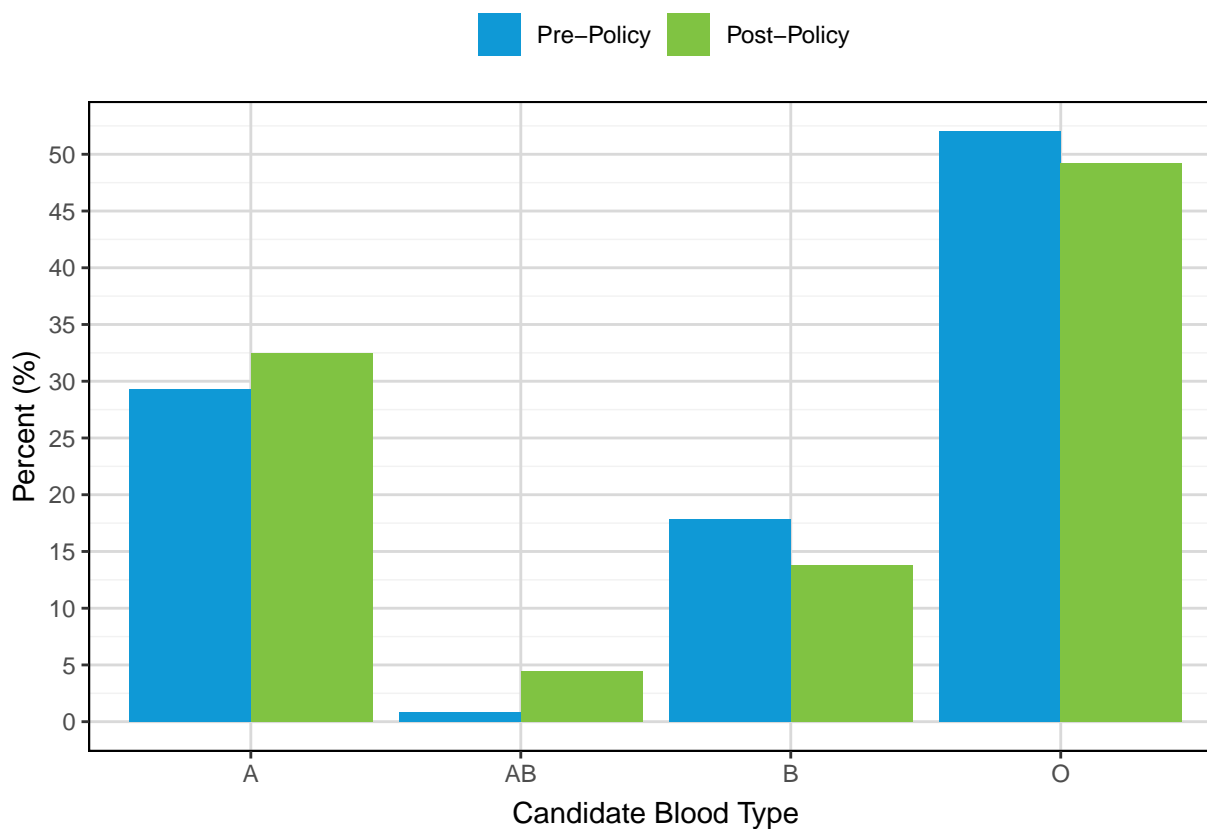


Table 7: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Blood Type

Blood Type	Pre-Policy		Post-Policy	
	N	%	N	%
A	72	29.27	87	32.46
AB	2	0.81	12	4.48
B	44	17.89	37	13.81
O	128	52.03	132	49.25
Total	246	100.00	268	100.00

Figure 8 and **Table 8** show kidney-pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and CPRA at listing. The proportion of 0% CPRA increased from 66.26% to 69.78% and 20-79% CPRA decreased from 17.89% to 13.81% after policy implementation.

Figure 8: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and CPRA

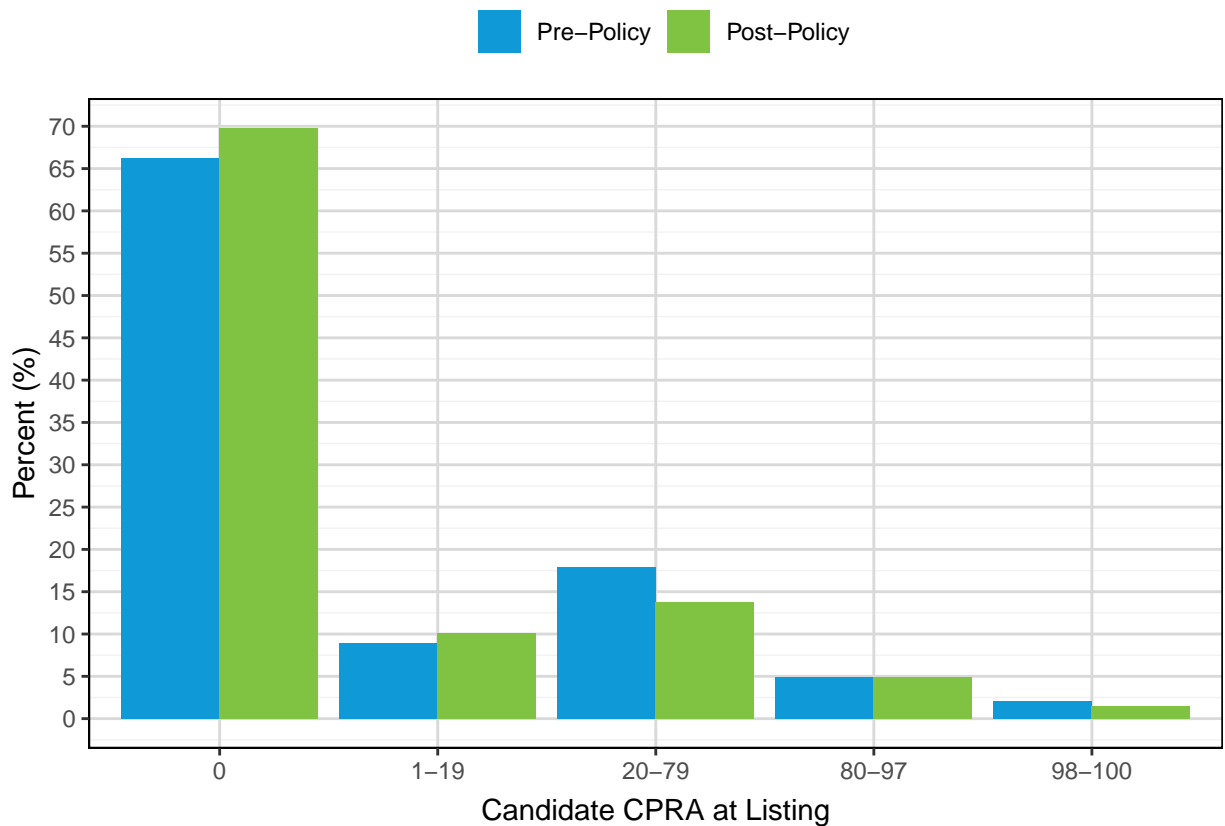


Table 8: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and CPRA

CPRA	Pre-Policy		Post-Policy	
	N	%	N	%
0	163	66.26	187	69.78
1-19	22	8.94	27	10.07
20-79	44	17.89	37	13.81
80-97	12	4.88	13	4.85
98-100	5	2.03	4	1.49
Total	246	100.00	268	100.00

Figure 9 and **Table 9** show kidney-pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and insurance status at listing. The proportion of candidates using both public and private insurance decreased from 50.81% to 47.39% and 45.12% to 40.30% respectively however the volume did not change notably after policy change.

Figure 9: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Insurance Status at Listing

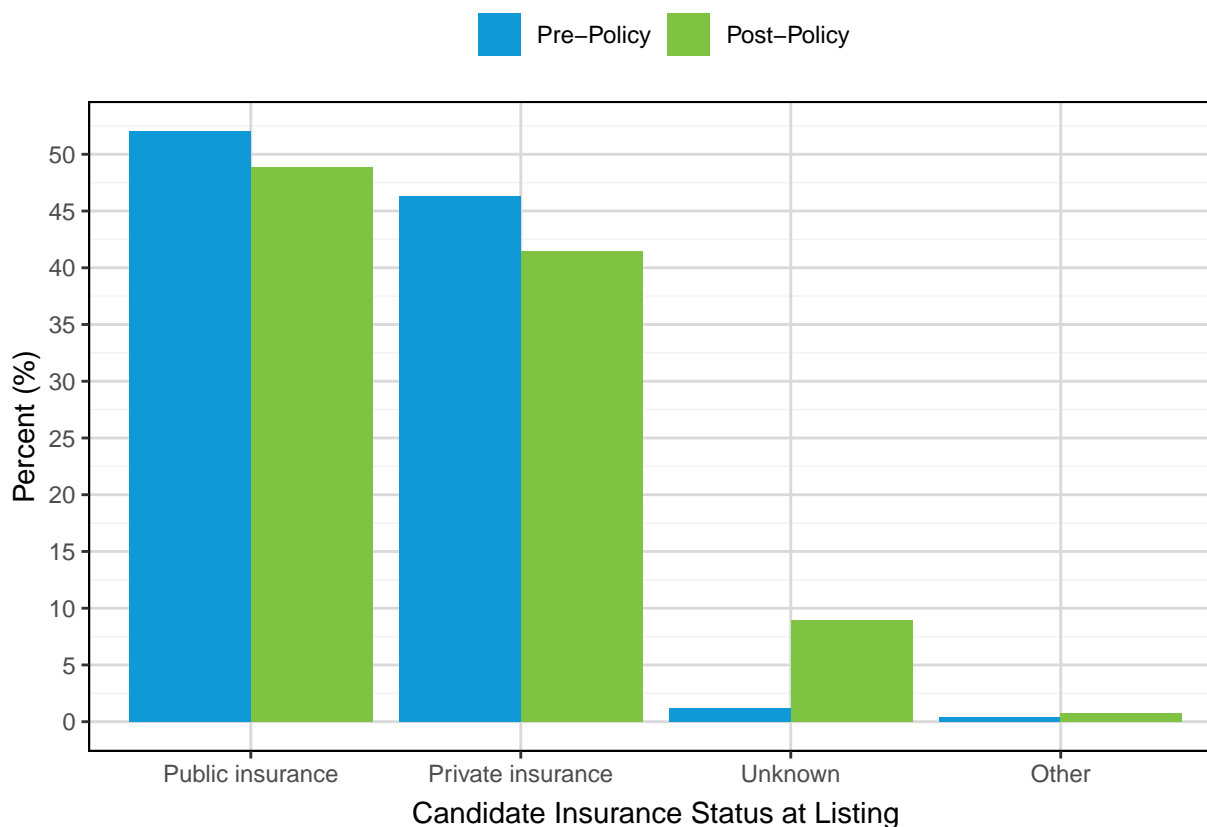


Table 9: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Insurance Status at Listing

Insurance at Listing	Pre-Policy		Post-Policy	
	N	%	N	%
Public insurance	128	52.03	131	48.88
Private insurance	114	46.34	111	41.42
Unknown	3	1.22	24	8.96
Other	1	0.41	2	0.75
Total	246	100.00	268	100.00

Figure 10 and **Table 10** show kidney-pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and primary diagnosis. The majority of the candidates listed were diagnosed with diabetes at listing in both pre and post-policy eras.

Figure 10: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Diagnosis

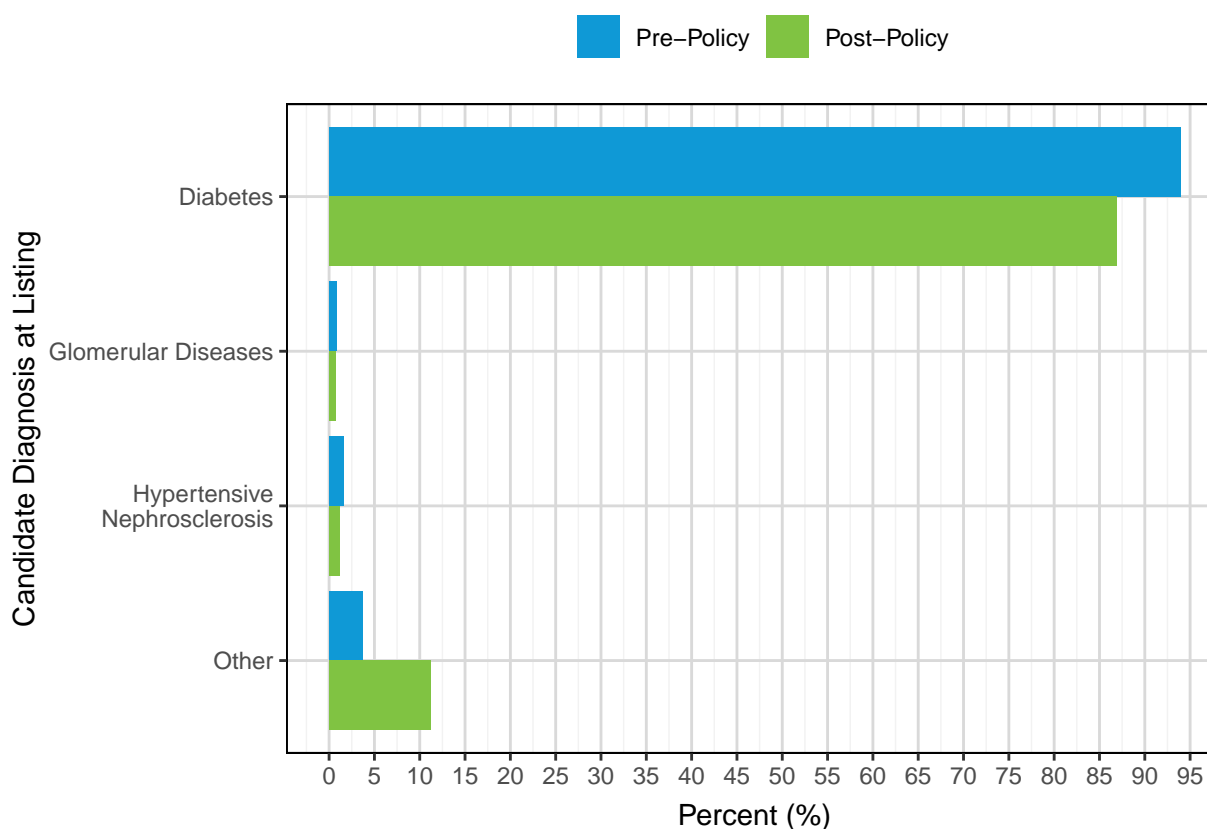


Table 10: Kidney-Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Diagnosis

Diagnosis	Pre-Policy		Post-Policy	
	N	%	N	%
Diabetes	231	93.90	233	86.94
Glomerular Diseases	2	0.81	2	0.75
Hypertensive Nephrosclerosis	4	1.63	3	1.12
Other	9	3.66	30	11.19
Total	246	100.00	268	100.00

Figure 11 and **Table 11** show deceased donor transplants per 100 patient years for kidney-pancreas registrations ever waiting between January 15, 2021 and May 14, 2021 by policy era. There were 128 kidney-pancreas transplanted pre-policy and 157 post-policy. The overall deceased donor kidney-pancreas transplant rate increased from 46.93 transplants to 55.79 transplants per 100 patients years.

Figure 11: Transplants per 100 Patients Years for Kidney-Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era

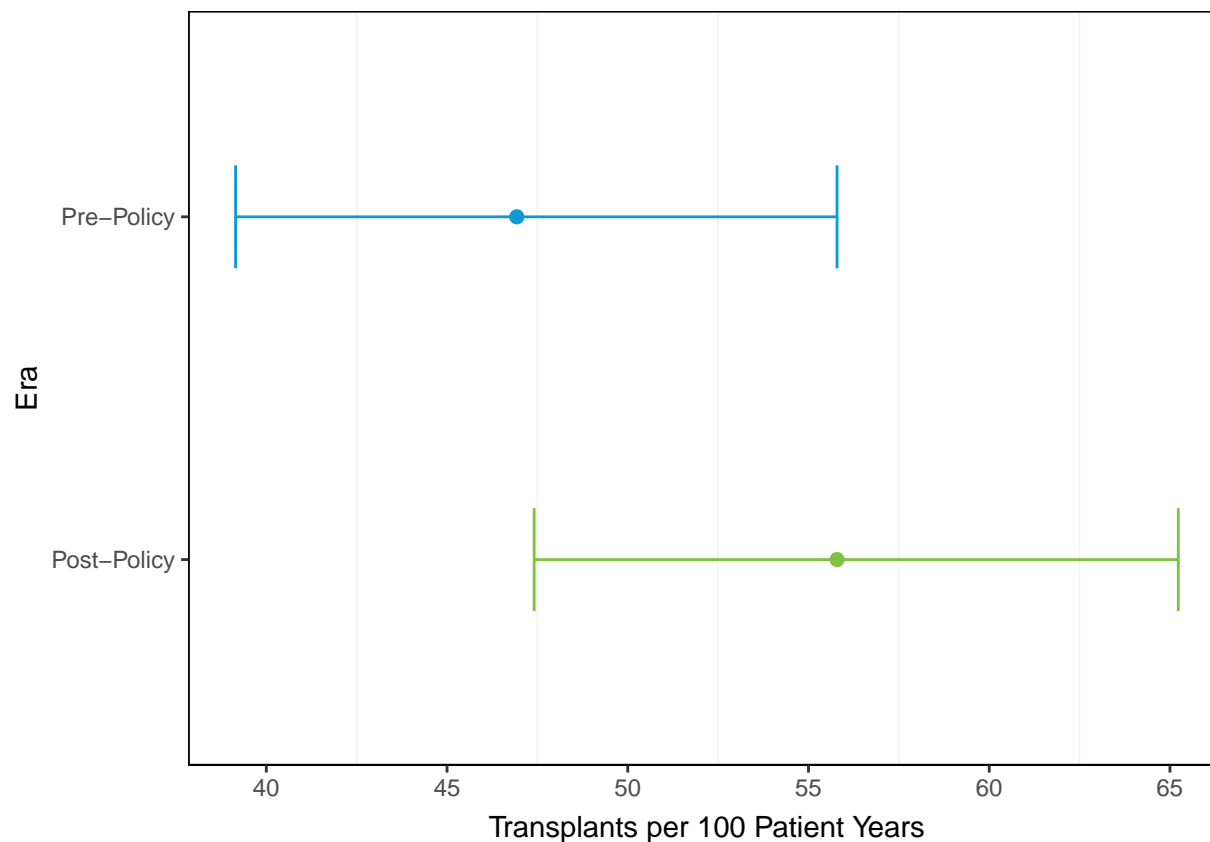


Table 11: Transplants per 100 Patients Years for Kidney-Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era

Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
Pre-Policy	1896	128	46.93	(39.15, 55.79)
Post-Policy	1942	157	55.79	(47.41, 65.23)

Figure 12 and **Table 12** show deceased donor transplants per 100 patient years for kidney-pancreas registrations ever waiting between January 15, 2021 and May 14, 2021 by policy era and age at listing. The deceased donor kidney-pancreas transplant rate for registrations aged 18-34 years and 35-49 years at listing increased from 42.52 to 50.51 and 47.54 to 61.15 transplants per 100 patient years respectively. There was no deceased donor transplant in registrations aged 0-17 years and very little change in transplant rate for registrations aged 50-64 years.

Figure 12: Transplants per 100 Patients Years for Kidney-Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era and Age at Listing

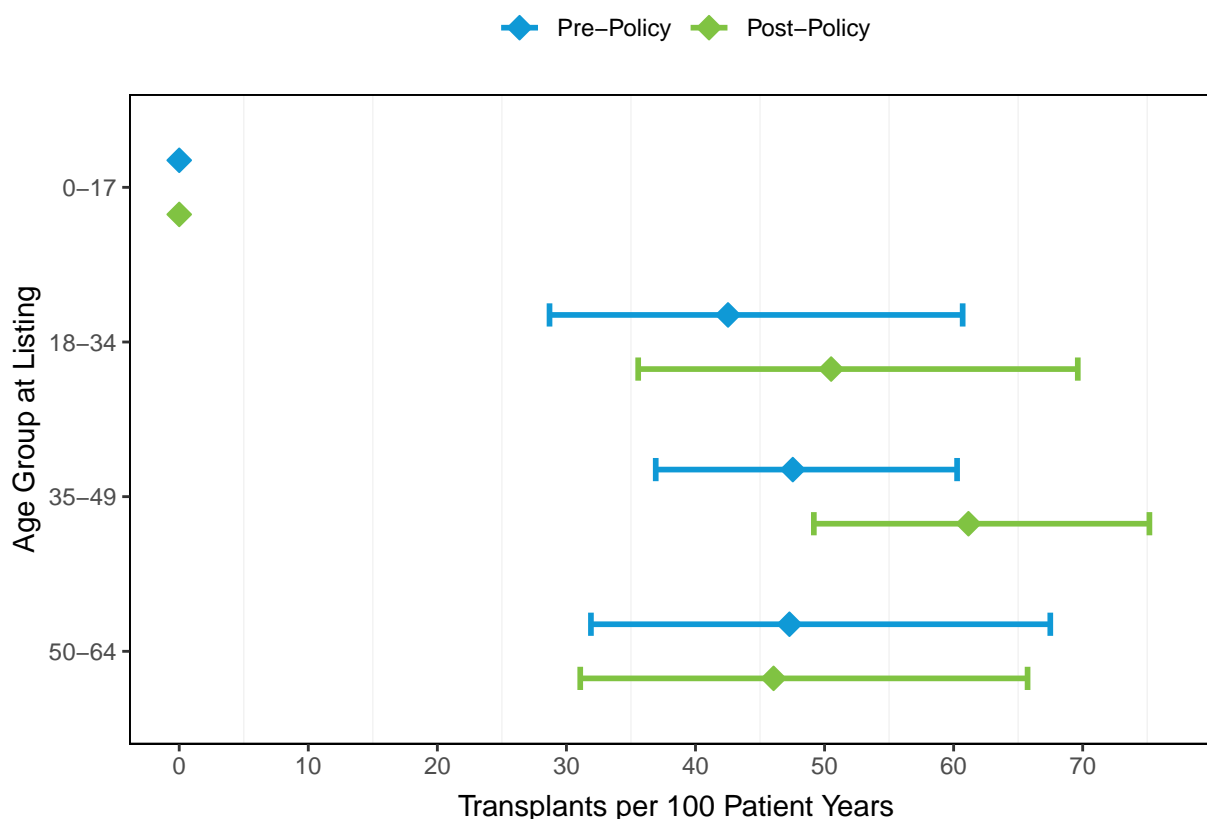


Table 12: Transplants per 100 Patients Years for Kidney-Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era and Age at Listing

Age at Listing	Era	Registrations	Transplants	Transplants per 100 Patient Years	(95% CI)
0-17	Pre-Policy	3	0	0.00	-
	Post-Policy	4	0	0.00	-
18-34	Pre-Policy	491	30	42.52	(28.69, 60.7)
	Post-Policy	495	37	50.51	(35.56, 69.62)
35-49	Pre-Policy	991	68	47.54	(36.92, 60.27)
	Post-Policy	1023	90	61.15	(49.17, 75.17)
50-64	Pre-Policy	445	30	47.28	(31.9, 67.49)
	Post-Policy	456	30	46.05	(31.07, 65.73)

Figure 13 and **Table 13** show deceased donor transplants per 100 patient years for kidney-pancreas registrations ever waiting between January 15, 2021 and May 14, 2021 by policy era and gender. The transplant rate for both female and male registrations increased from 44.31 to 47.71 and 49.06 to 62.46 transplants per 100 patient years respectively.

Figure 13: Transplants per 100 Patients Years for Kidney-Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era and Gender

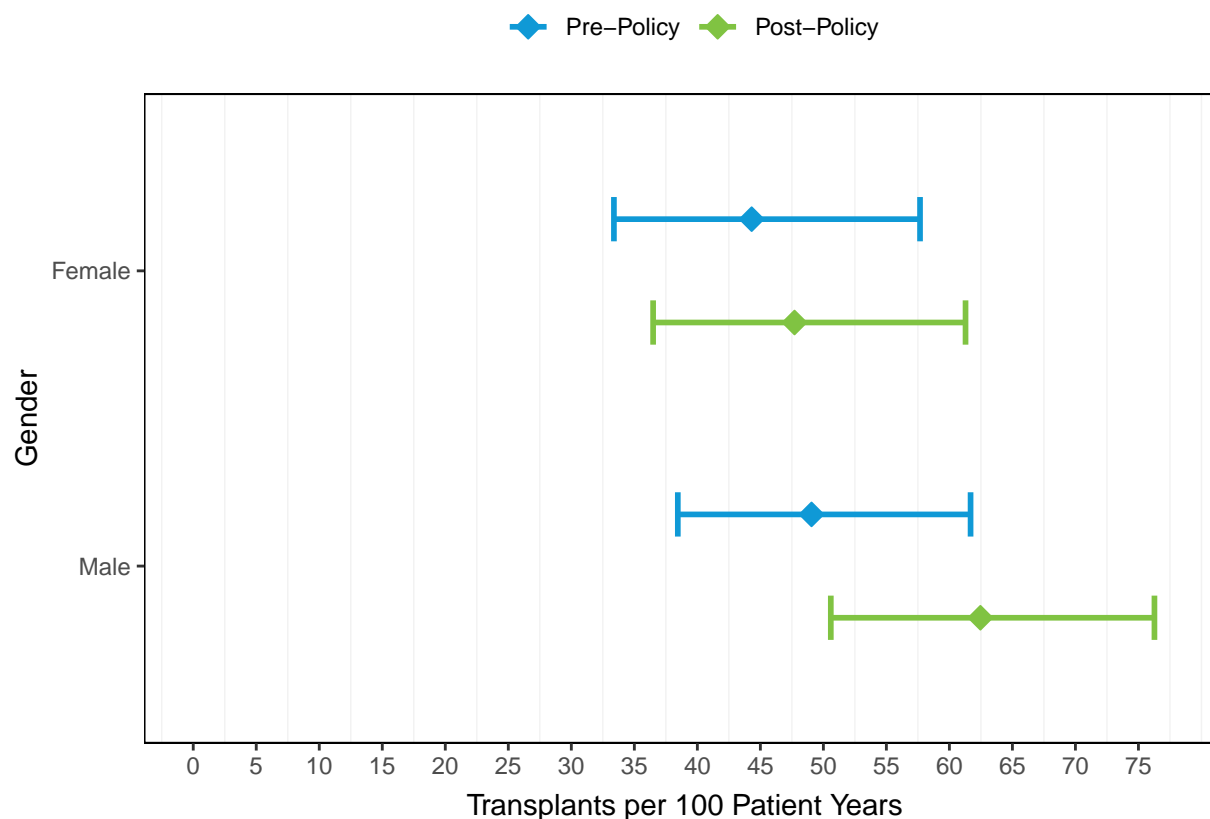


Table 13: Transplants per 100 Patients Years for Kidney-Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era and Gender

Gender	Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
Female	Pre-Policy	859	55	44.31	(33.38, 57.67)
	Post-Policy	860	61	47.71	(36.49, 61.28)
Male	Pre-Policy	1038	73	49.06	(38.45, 61.68)
	Post-Policy	1083	96	62.46	(50.59, 76.27)

Figure 14 and **Table 14** show deceased donor transplants per 100 patient years for kidney-pancreas registrations ever waiting between January 15, 2021 and May 14, 2021 by policy era and race/ethnicity. The transplant rate for all races/ethnicities increased and notably for Asian and Hispanic candidates from 49.09 to 68.71 and 41.88 to 62.25 transplants per 100 patient years respectively. It is important to note that the confidence intervals may be very wide due to small sample size.

Figure 14: Transplants per 100 Patients Years for Kidney-Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era and Race/ethnicity

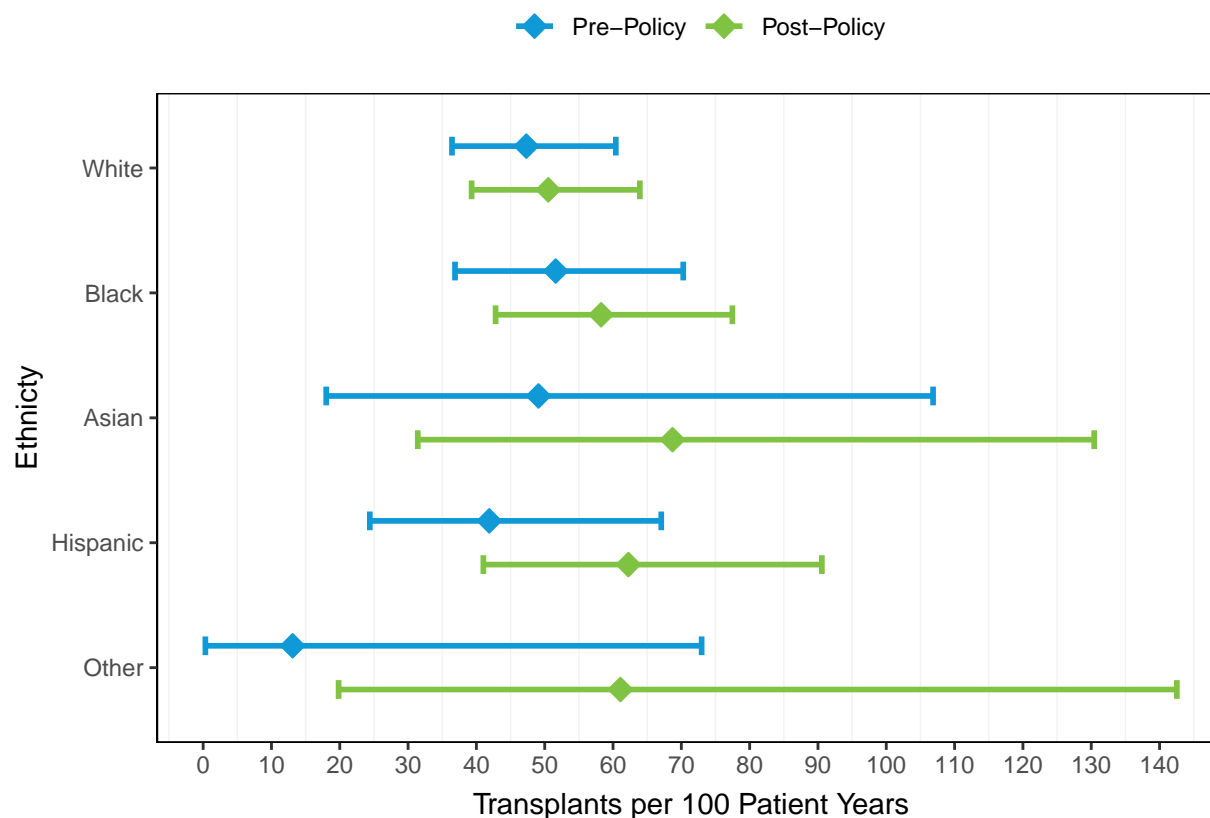


Table 14: Transplants per 100 Patients Years for Kidney-Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era and Race/ethnicity

Race/ethnicity	Era	Registrations	Transplants	Transplants per 100 Patient Years	(95% CI)
White	Pre-Policy	931	64	47.31	(36.43, 60.41)
	Post-Policy	932	69	50.52	(39.3, 63.93)
Black	Pre-Policy	543	40	51.61	(36.87, 70.28)
	Post-Policy	561	47	58.26	(42.81, 77.47)
Asian	Pre-Policy	87	6	49.09	(18.02, 106.85)
	Post-Policy	87	9	68.71	(31.42, 130.43)
Hispanic	Pre-Policy	285	17	41.88	(24.4, 67.06)
	Post-Policy	311	27	62.25	(41.02, 90.57)
Other	Pre-Policy	54	1	13.10	(0.33, 72.97)
	Post-Policy	55	5	61.08	(19.83, 142.53)

Figure 15 and **Table 15** show deceased donor transplants per 100 patient years for kidney-pancreas registrations ever waiting between January 15, 2021 and May 14, 2021 by policy era and CPRA at listing. Transplant rates in registrations with CPRA 0%, 20-79% and 80-97% increased and CPRA 1-19% decreased after policy implementation, though sample size is small.

Figure 15: Transplants per 100 Patients Years for Kidney-Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era and CPRA at Listing

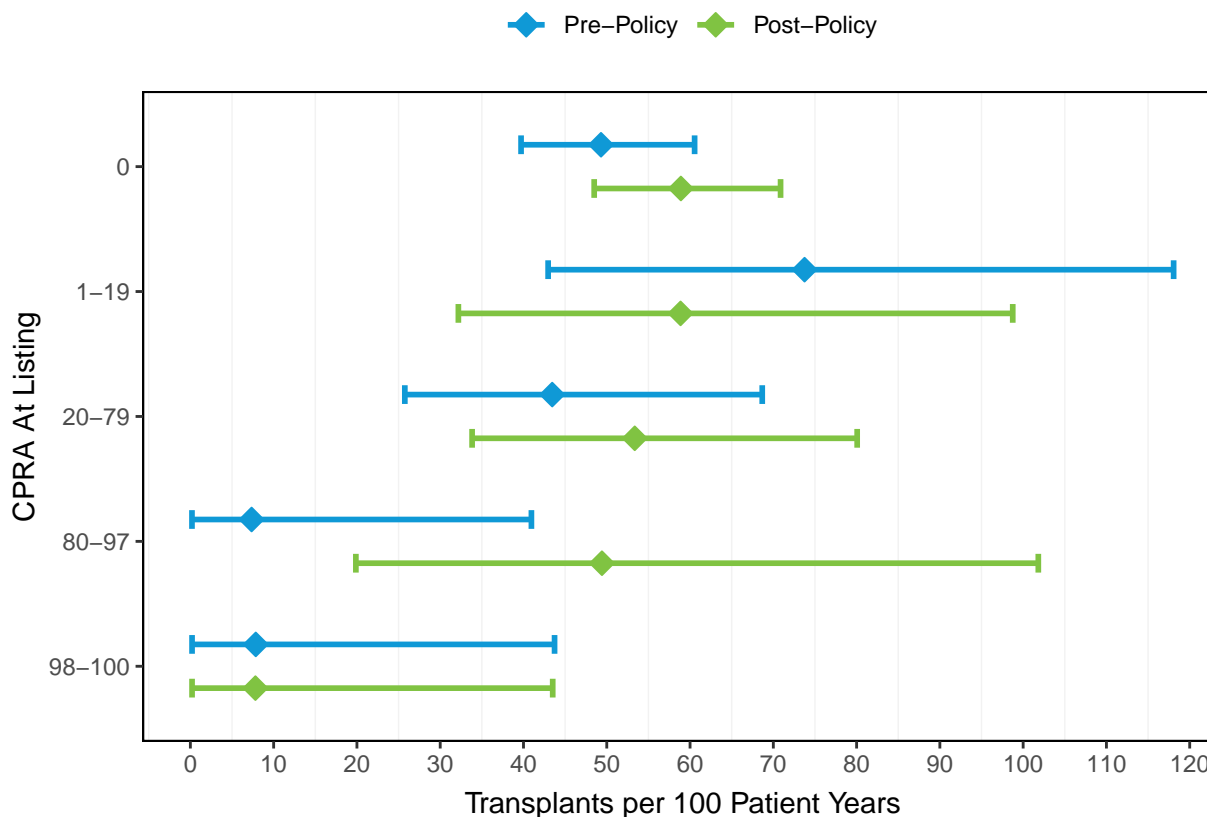


Table 15: Transplants per 100 Patients Years for Kidney-Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era and CPRA at Listing

CPRA	Era	Registrations	Transplants	Transplants per 100 Patient Years	(95% CI)
0	Pre-Policy	1282	91	49.31	(39.71, 60.55)
	Post-Policy	1320	112	58.90	(48.49, 70.87)
1-19	Pre-Policy	163	17	73.75	(42.96, 118.07)
	Post-Policy	165	14	58.86	(32.18, 98.75)
20-79	Pre-Policy	293	18	43.45	(25.75, 68.67)
	Post-Policy	297	23	53.36	(33.83, 80.07)
80-97	Pre-Policy	93	1	7.35	(0.19, 40.95)
	Post-Policy	96	7	49.42	(19.87, 101.82)
98-100	Pre-Policy	86	1	7.85	(0.2, 43.73)
	Post-Policy	83	1	7.81	(0.2, 43.51)
Unknown	Pre-Policy	10	0	0.00	-
	Post-Policy	10	0	0.00	-

Deceased Donor Transplants

Figure 16 and **Table 16** show deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era. There were 192 transplants performed in the two months preceding policy implementation, and 231 performed in the two months after implementation.

Figure 16: Deceased Donor Kidney-Pancreas Transplants January 15, 2021- May 14, 2021 by Policy Era

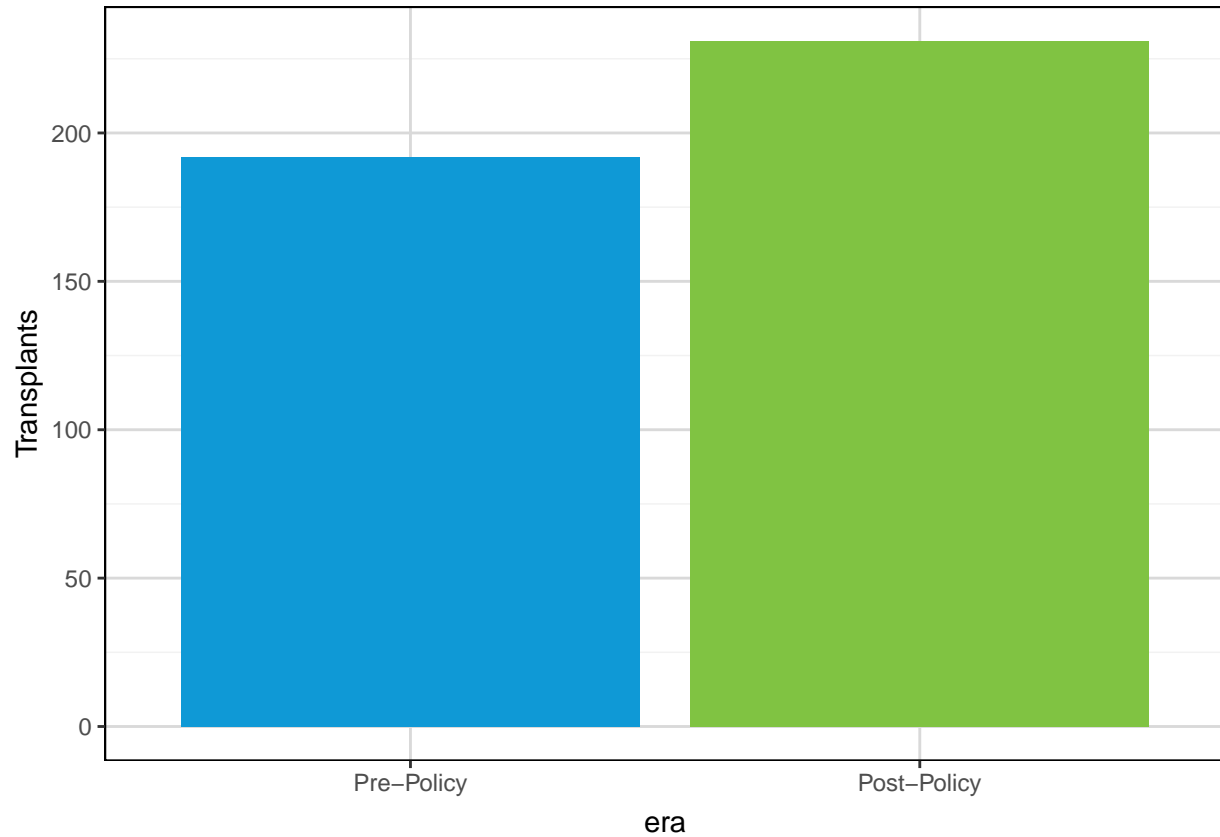
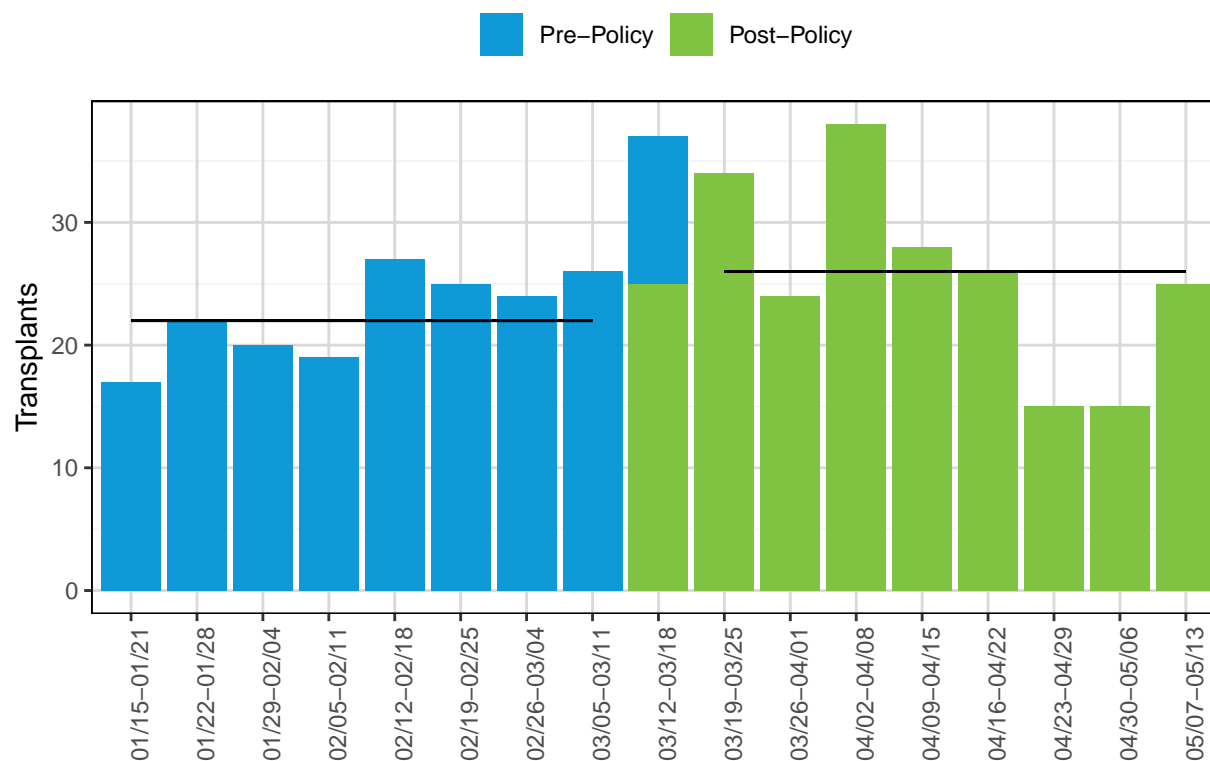


Table 16: Deceased Donor Kidney-Pancreas Transplants January 15, 2021- May 14, 2021 by Policy Era

Era	Transplants
Pre-Policy	192
Post-Policy	231

Figure 17 and **Table 17** show weekly deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021. The average number of transplants per week was 22 pre-policy and 26 post-policy.

Figure 17: Weekly Deceased Donor Kidney-Pancreas Transplants January 15, 2021-May 14, 2021 by Policy Era



Lines represent the average number of transplants per week.

Table 17: Weekly Deceased Donor Kidney-Pancreas Transplants January 15, 2021-May 14, 2021

Weeks	Transplants
01/15-01/21	17
01/22-01/28	22
01/29-02/04	20
02/05-02/11	19
02/12-02/18	27
02/19-02/25	25
02/26-03/04	24
03/05-03/11	26
03/12-03/18	37
03/19-03/25	34
03/26-04/01	24
04/02-04/08	38
04/09-04/15	28
04/16-04/22	26
04/23-04/29	15
04/30-05/06	15
05/07-05/13	25

Figure 18 and **Table 18** show deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and recipient age at transplant. The proportion of transplants to recipients aged 35 to 49 years increased from 53.65% to 58.87%, and the proportion of transplants to recipients aged 50 to 64 years decreased from 26.04% to 21.65%, though the volume remained identical. The proportion of transplants to recipients aged 18-34 years remained similar.

Figure 18: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Recipient Age at Transplant

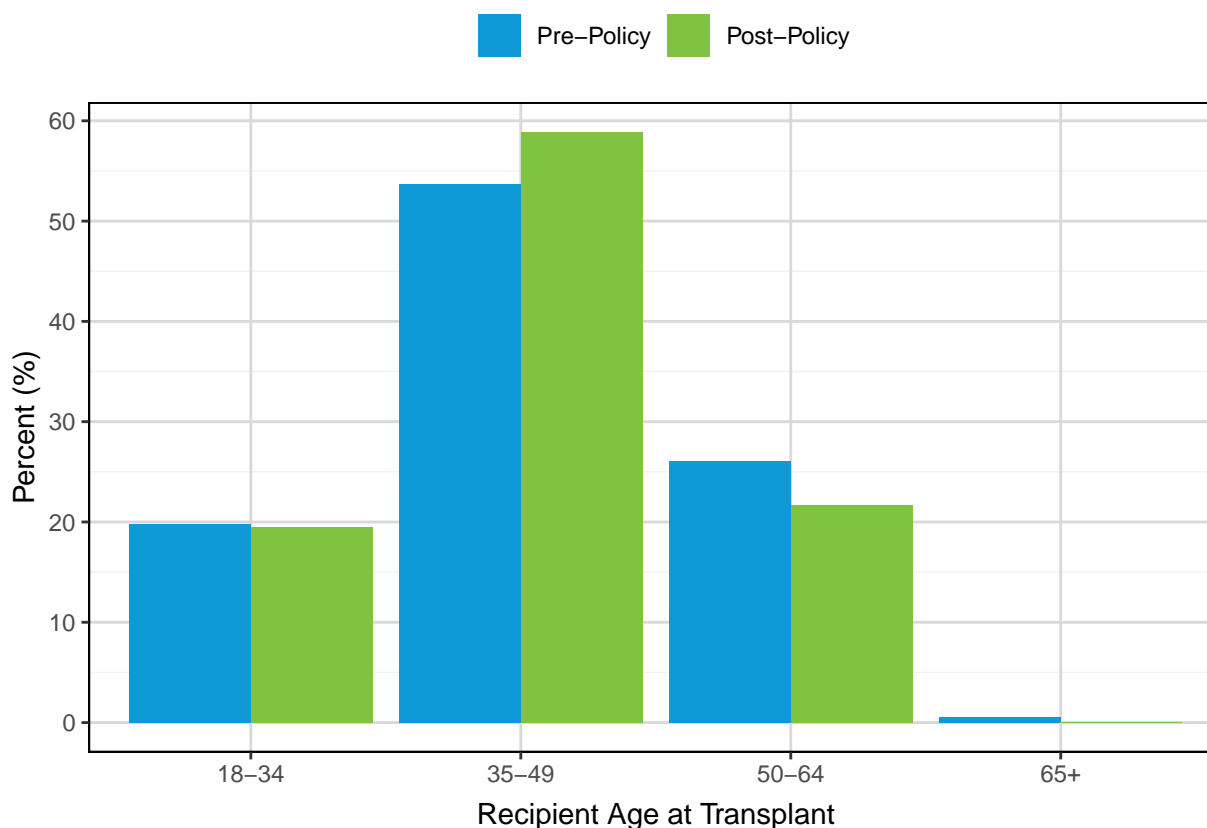


Table 18: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Recipient Age at Transplant

Age at Transplant	Pre-Policy		Post-Policy	
	N	%	N	%
18-34	38	19.79	45	19.48
35-49	103	53.65	136	58.87
50-64	50	26.04	50	21.65
65+	1	0.52	0	0.00
Total	192	100.00	231	100.00

Figure 19 and **Table 19** show deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and recipient ethnicity. The proportion of transplants to Hispanic and Other recipients increased from 16.15% to 18.18% and 0.52% to 3.03 respectively. The proportion of transplants to White and Black recipients decreased from 46.88% to 45.45% and 31.77% to 29.00%, though volumes were higher in the post-policy era.

Figure 19: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Recipient Ethnicity

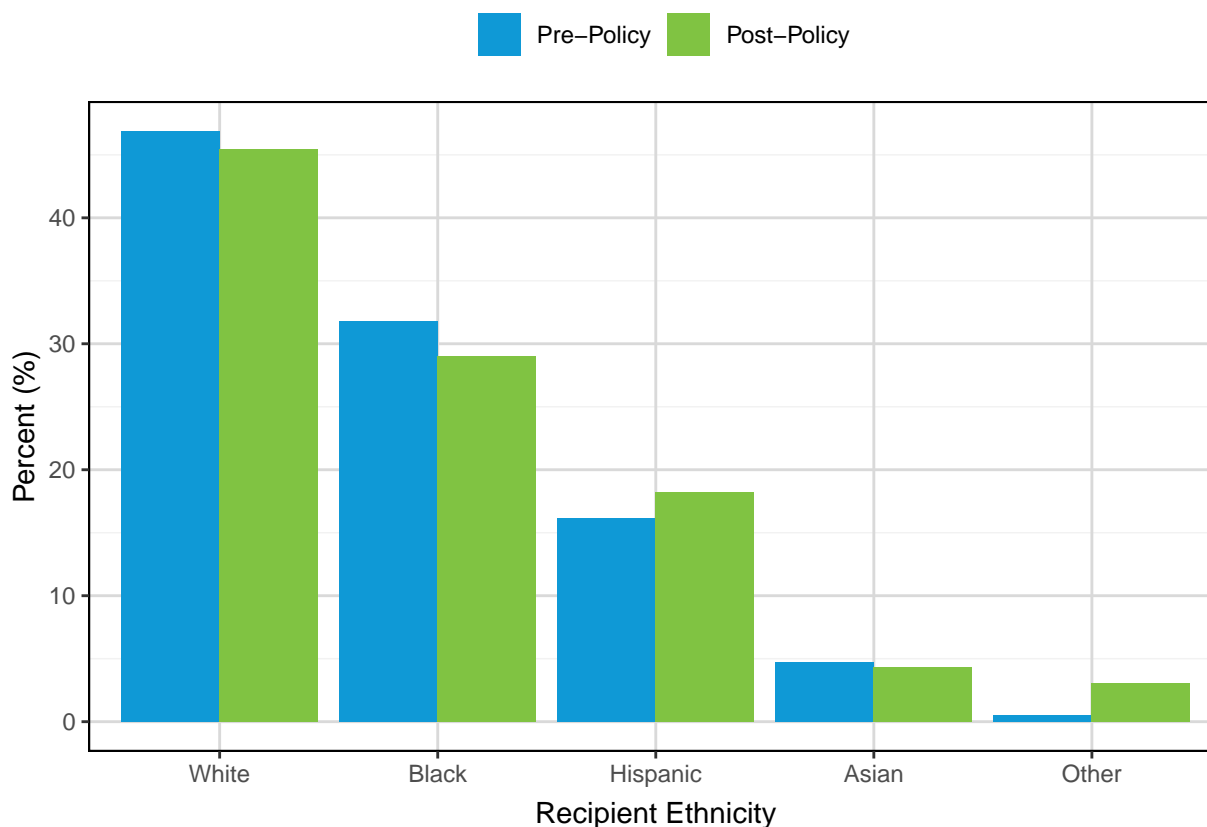


Table 19: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Recipient Ethnicity

Ethnicity	Pre-Policy		Post-Policy	
	N	%	N	%
White	90	46.88	105	45.45
Black	61	31.77	67	29.00
Hispanic	31	16.15	42	18.18
Asian	9	4.69	10	4.33
Other	1	0.52	7	3.03
Total	192	100.00	231	100.00

Figure 20 and **Table 20** show the distribution of waiting time in years for deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era. The median time kidney-pancreas recipients were on the waiting list to transplant decreased from 0.57 to 0.45 years after policy implementation.

Figure 20: Distribution of Waiting Time for Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era

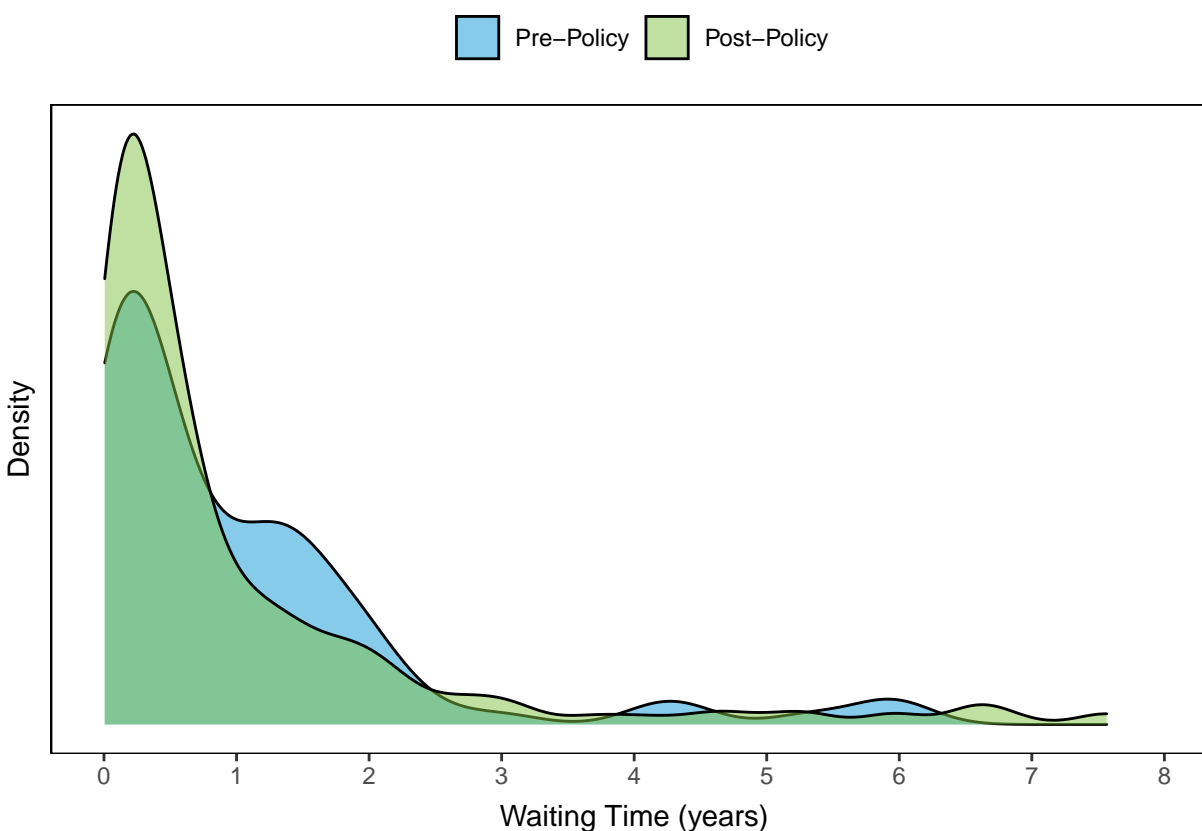


Table 20: Distribution of Waiting Time for Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	192	0	0.01	0.15	0.57	1.03	1.39	6.03
Post-Policy	231	0	0.01	0.15	0.45	1.01	1.14	7.56

Figure 21 and **Table 21** show deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and recipient blood type. The majority of recipients were type O both before and after the policy change. The proportion of transplants slightly decreased among type B and O from 13.02% to 12.12% and 53.12% to 51.08% respectively after policy implementation, though volumes were higher compared to pre-policy.

Figure 21: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Recipient Blood Type

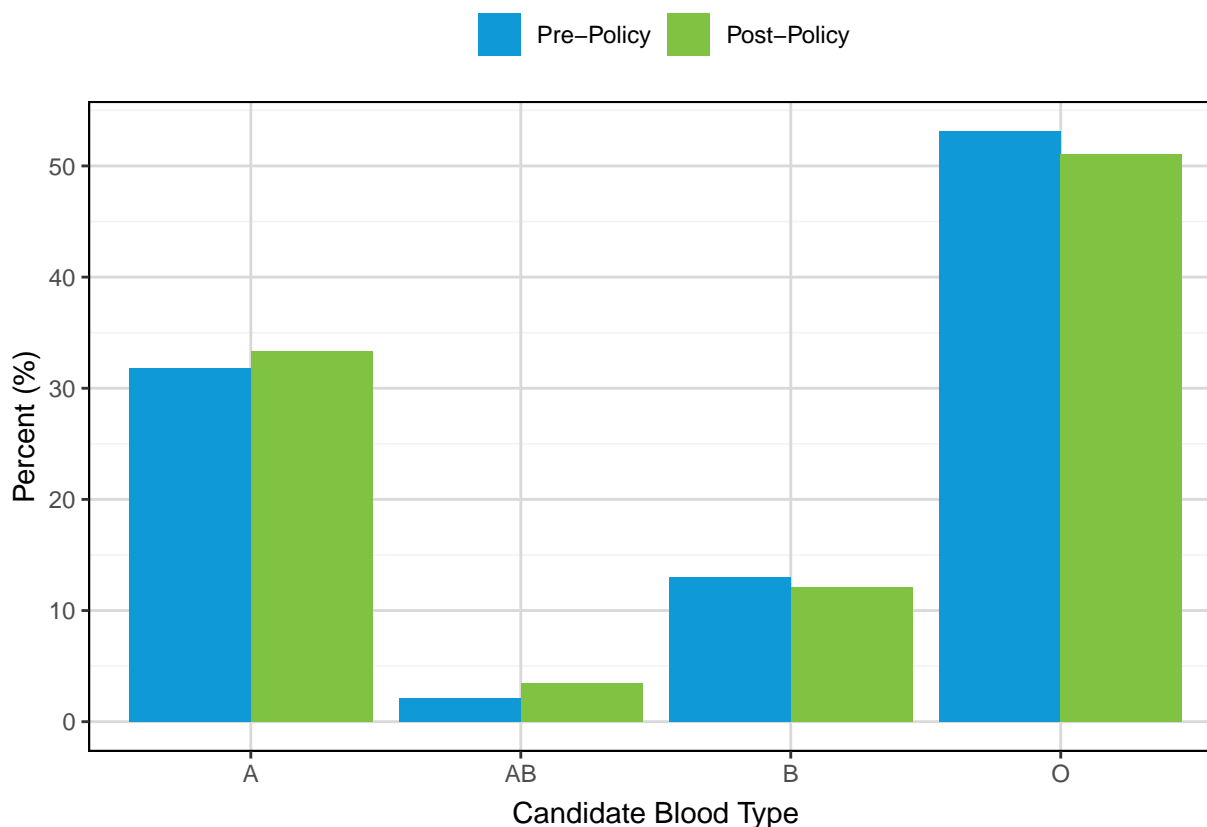


Table 21: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Recipient Blood Type

Blood Type	Pre-Policy		Post-Policy	
	N	%	N	%
A	61	31.77	77	33.33
AB	4	2.08	8	3.46
B	25	13.02	28	12.12
O	102	53.12	118	51.08
Total	192	100.00	231	100.00

Figure 22 and **Table 22** show deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and CPRA at transplant. The proportion recipients with CPRA 20-79% decreased from 15.62% to 12.12%. The proportion of recipients with CPRA 80-97% increased from 3.65% to 5.68% after policy implementation, though volume remained fairly stable.

Figure 22: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and CPRA

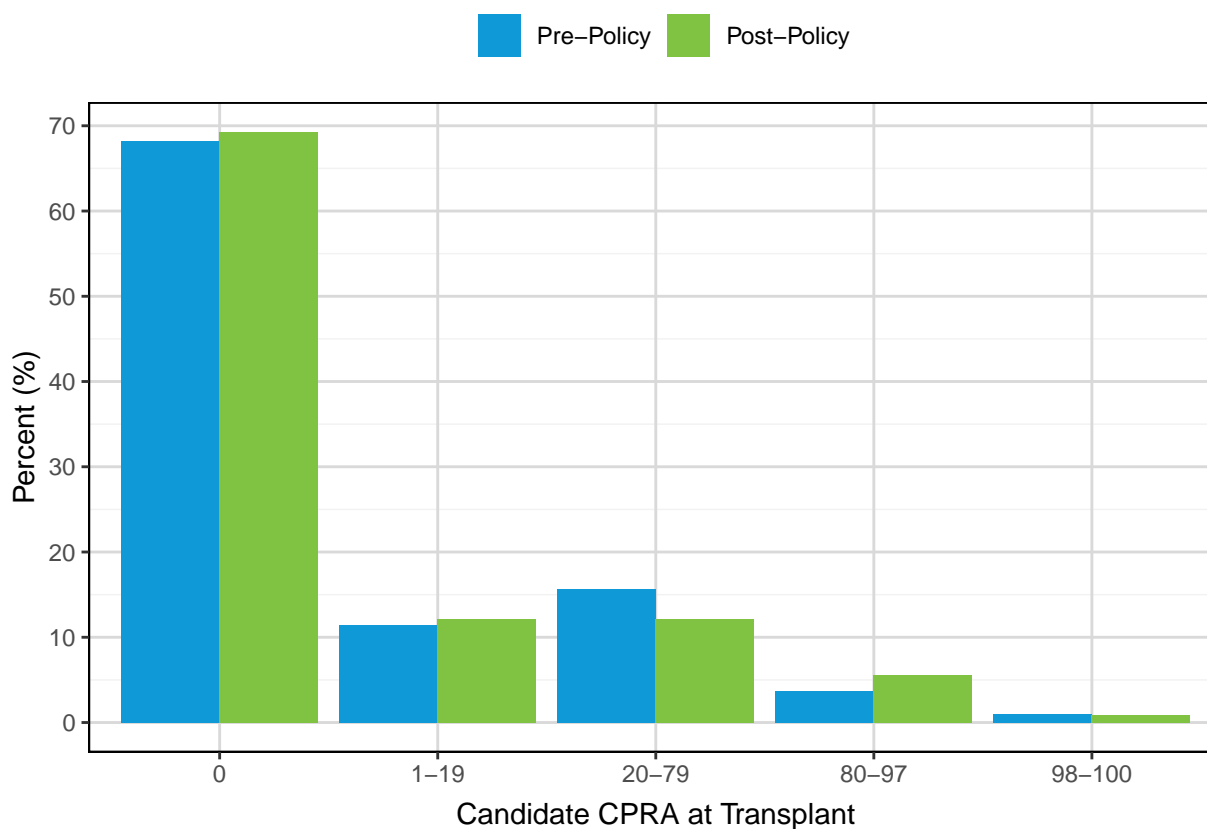


Table 22: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and CPRA

CPRA %	Pre-Policy		Post-Policy	
	N	%	N	%
0	131	68.23	160	69.26
1-19	22	11.46	28	12.12
20-79	30	15.62	28	12.12
80-97	7	3.65	13	5.63
98-100	2	1.04	2	0.87
Total	192	100.00	231	100.00

Figure 23 and **Table 23** show deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and level of HLA mismatch. Changes in transplant proportions varied by HLA mismatch level.

Figure 23: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and HLA Mismatch

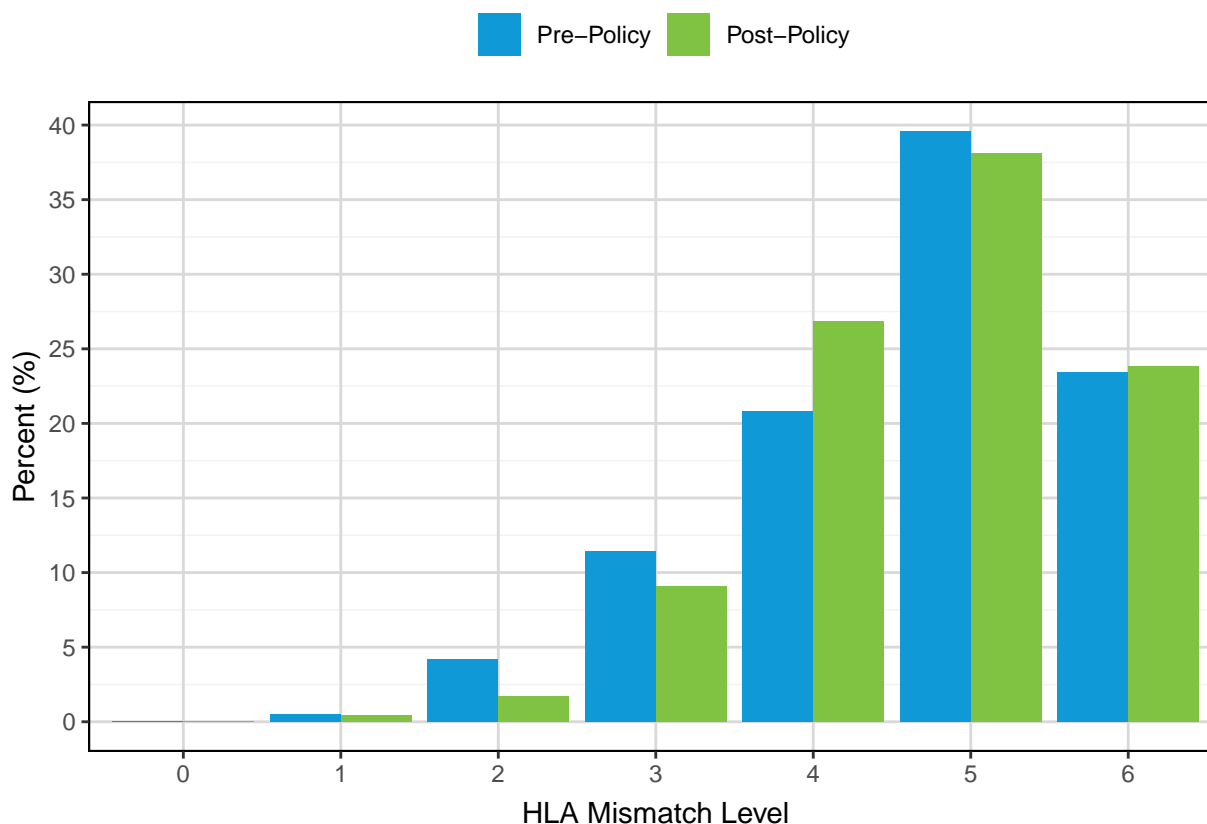


Table 23: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and HLA Mismatch

HLA Mismatch Level	Pre-Policy		Post-Policy	
	N	%	N	%
0	0	0.00	0	0.00
1	1	0.52	1	0.43
2	8	4.17	4	1.73
3	22	11.46	21	9.09
4	40	20.83	62	26.84
5	76	39.58	88	38.10
6	45	23.44	55	23.81
Total	192	100.00	231	100.00

Figure 24 and **Table 24** show deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and primary diagnosis. The proportion of transplants to recipients diagnosed with diabetes decreased from 97.40% to 96.10% after policy implementation, though volume was higher compared to pre-policy.

Figure 24: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Diagnosis

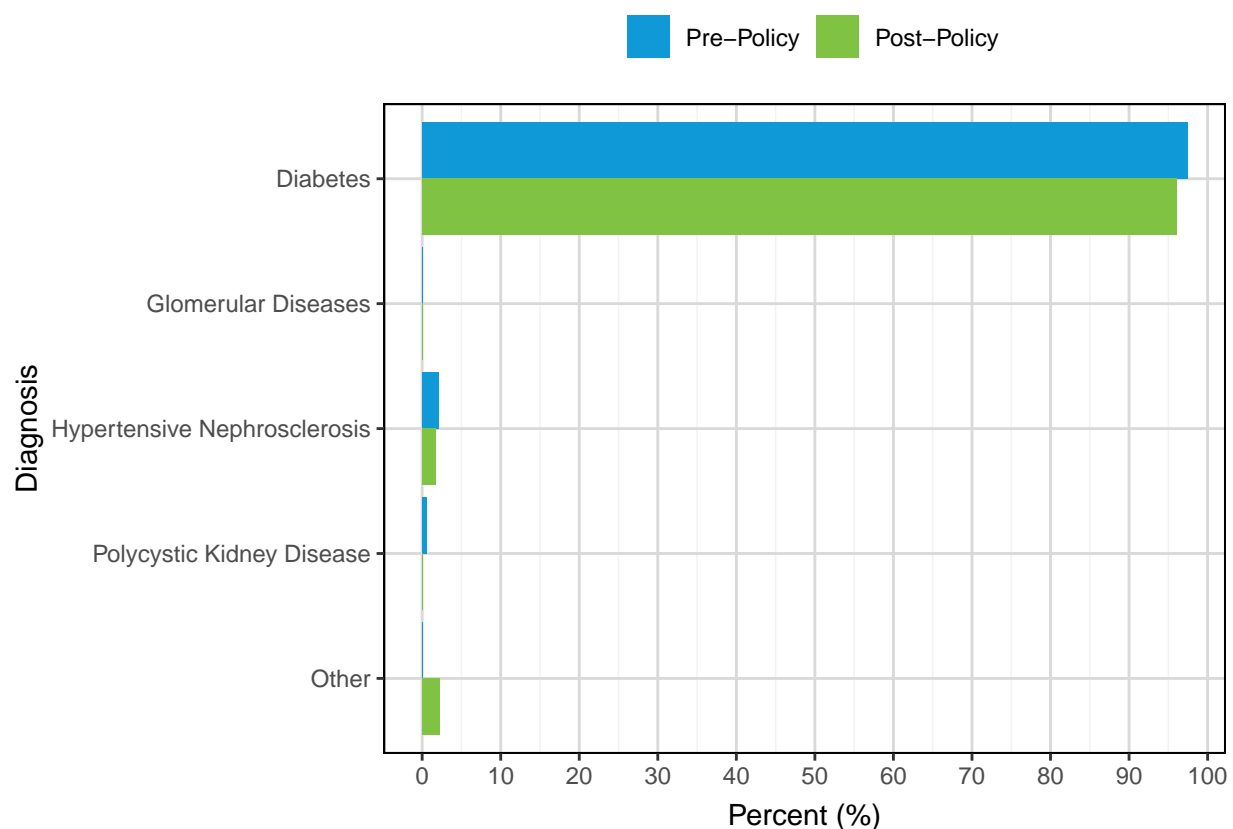


Table 24: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Diagnosis

Diagnosis	Pre-Policy		Post-Policy	
	N	%	N	%
Diabetes	187	97.40	222	96.10
Glomerular Diseases	0	0.00	0	0.00
Hypertensive Nephrosclerosis	4	2.08	4	1.73
Polycystic Kidney Disease	1	0.52	0	0.00
Other	0	0.00	5	2.16
Total	192	100.00	231	100.00

Figure 25 and **Table 25** show deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and donor DCD status. The proportion of transplants used kidney-pancreas recovered from DCD donors in pre-policy was 2.08% and in post-policy was 4.76%.

Figure 25: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and DCD Status

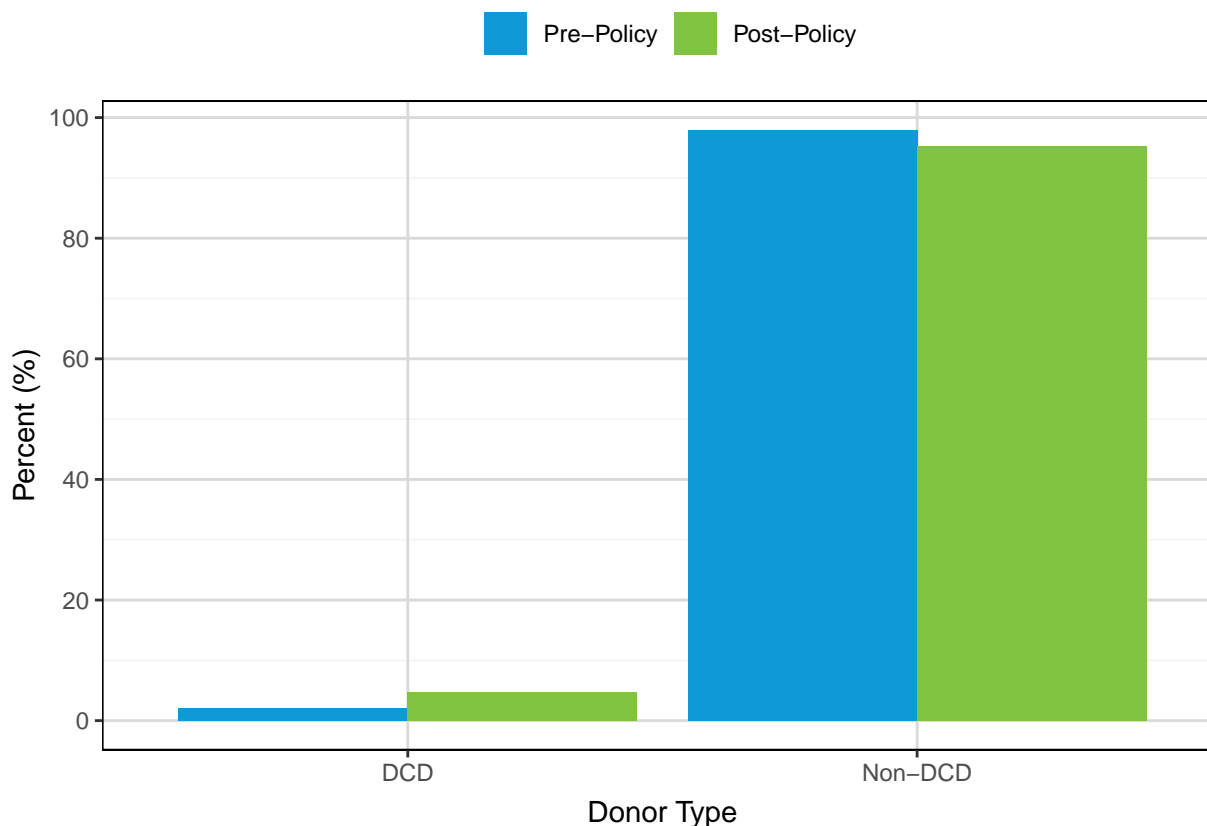


Table 25: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and DCD Status

	Pre-Policy		Post-Policy	
	N	%	N	%
DCD Donor	4	2.08	11	4.76
Non-DCD	188	97.92	220	95.24
Total	192	100.00	231	100.00

Figure 26 and **Table 26** show deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and donor distance from donor hospital. The proportion of transplants within 250 NM of the donor hospital slightly decreased from 83.85% to 81.39% after policy implementation.

Figure 26: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Distance from Donor Hospital

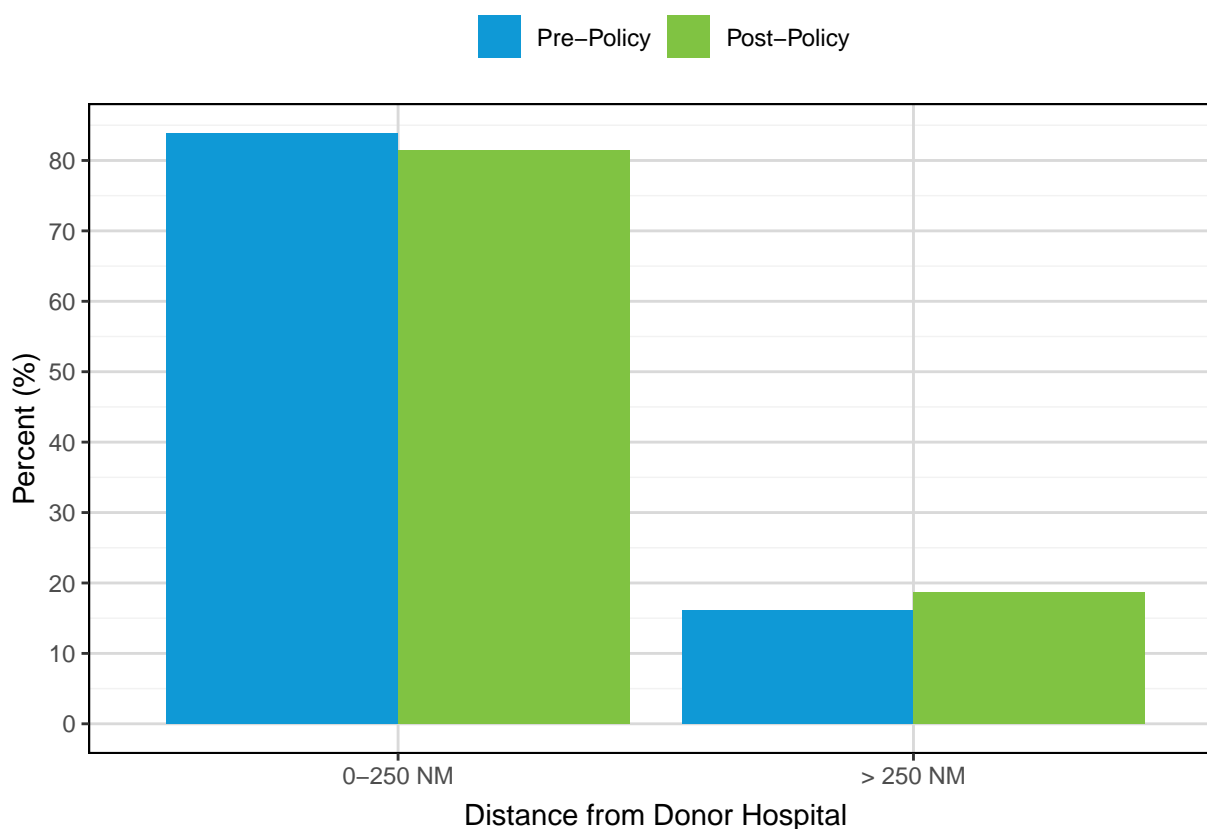


Table 26: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Distance from Donor Hospital

DCD Donor	Pre-Policy		Post-Policy	
	N	%	N	%
0-250 NM	161	83.85	188	81.39
> 250 NM	31	16.15	43	18.61
Total	192	100.00	231	100.00

Figure 27 and **Table 27** show deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and share type. The proportion of transplants using organs procured in the same DSA as the transplant hospital decreased from 69.27% to 41.56% after the policy change. The proportion of regional and national shares increased from 13.54% to 26.41% and 17.19% to 32.03% respectively.

Figure 27: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Share Type

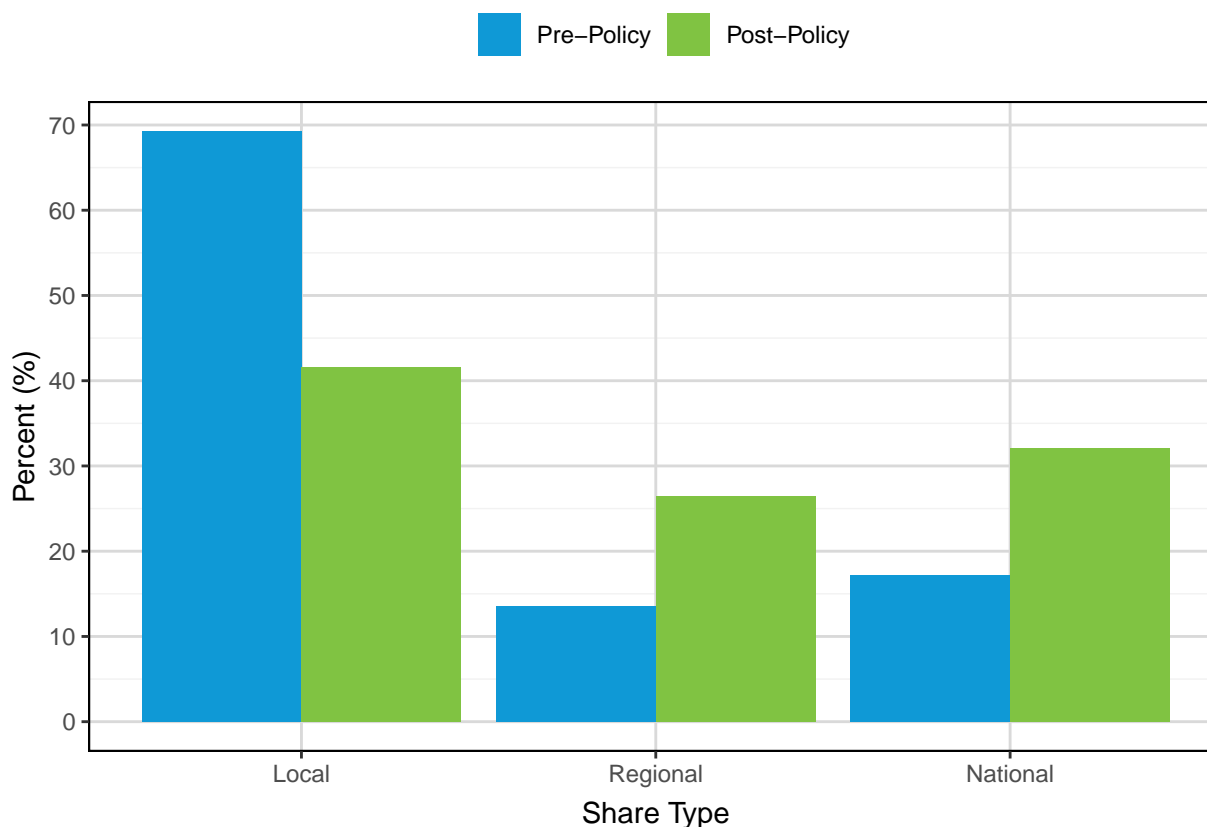


Table 27: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Share Type

Share Type	Pre-Policy		Post-Policy	
	N	%	N	%
Local	133	69.27	96	41.56
Regional	26	13.54	61	26.41
National	33	17.19	74	32.03
Total	192	100.00	231	100.00

Figure 28 and **Table 28** show the distribution of distance in NM from donor hospital for deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era. Median distance from donor hospital increased from 67 NM to 100 NM after policy implementation.

Figure 28: Distribution of Distance from Donor Hospital for Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era

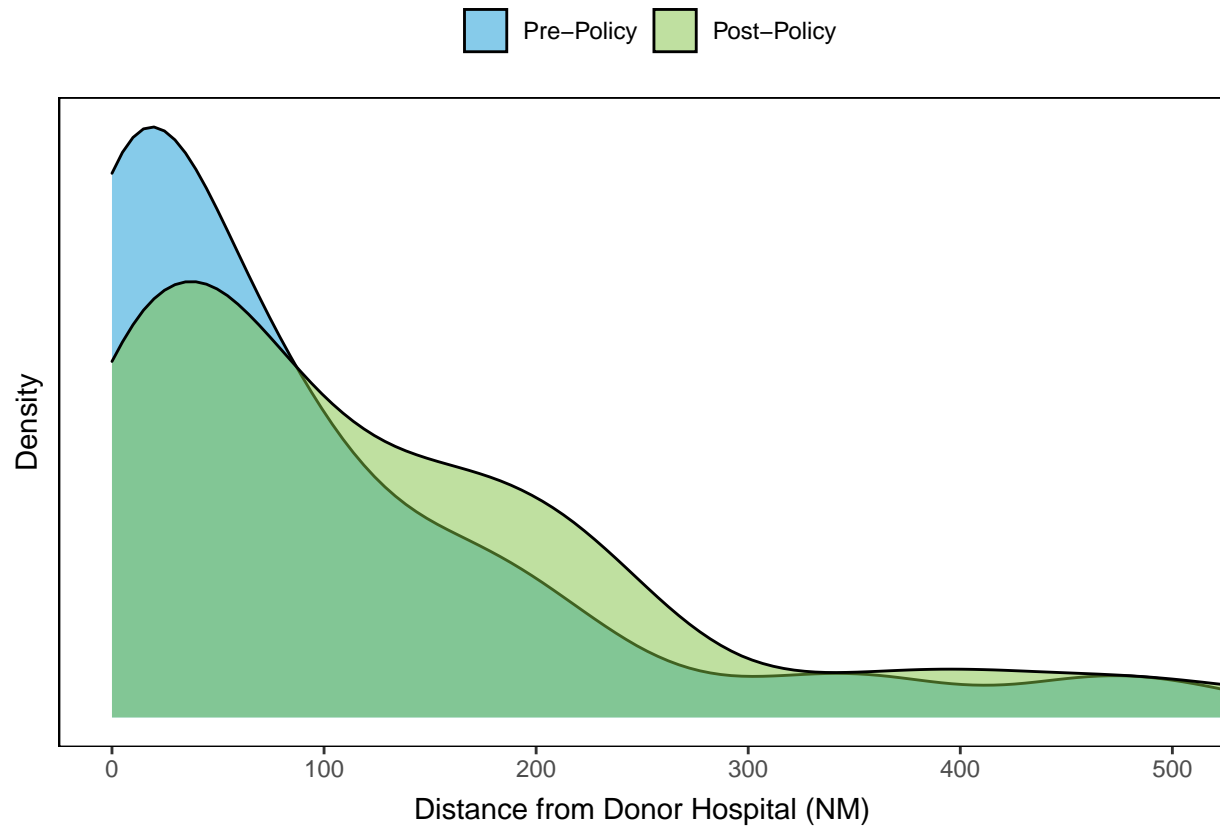


Table 28: Distribution of Distance from Donor Hospital for Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	192	0	0	6.75	67	168.8385	168.25	2529
Post-Policy	231	0	0	28.50	100	185.3290	224.00	1125

Figure 29 and **Table 29** show deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and OPTN region. There was a notable increase in transplants in Regions 4, 5 and 7, and a notable decrease in Regions 2 and 10.

Figure 29: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Region

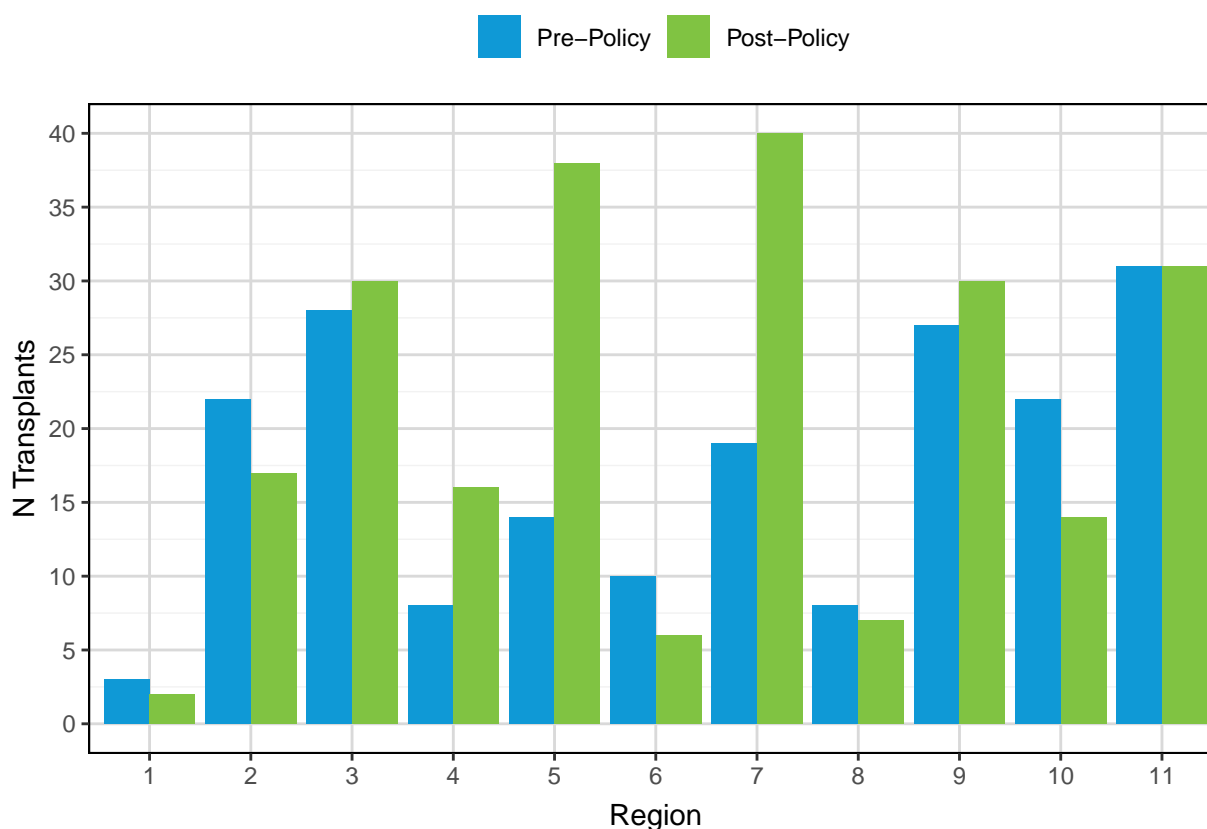


Table 29: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Region

Region	Pre-Policy		Post-Policy	
	N	%	N	%
1	3	1.56	2	0.87
2	22	11.46	17	7.36
3	28	14.58	30	12.99
4	8	4.17	16	6.93
5	14	7.29	38	16.45
6	10	5.21	6	2.60
7	19	9.90	40	17.32
8	8	4.17	7	3.03
9	27	14.06	30	12.99
10	22	11.46	14	6.06
11	31	16.15	31	13.42
Total	192	100.00	231	100.00

Figure 30 shows deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and DSA. Of 54 DSAs with kidney-pancreas transplant programs, the number of kidney-pancreas transplants increased in 29 DSAs after policy implementation, and decreased in 22 DSAs. **Table 30** shows transplants by policy era and DSA.

Figure 30: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and DSA

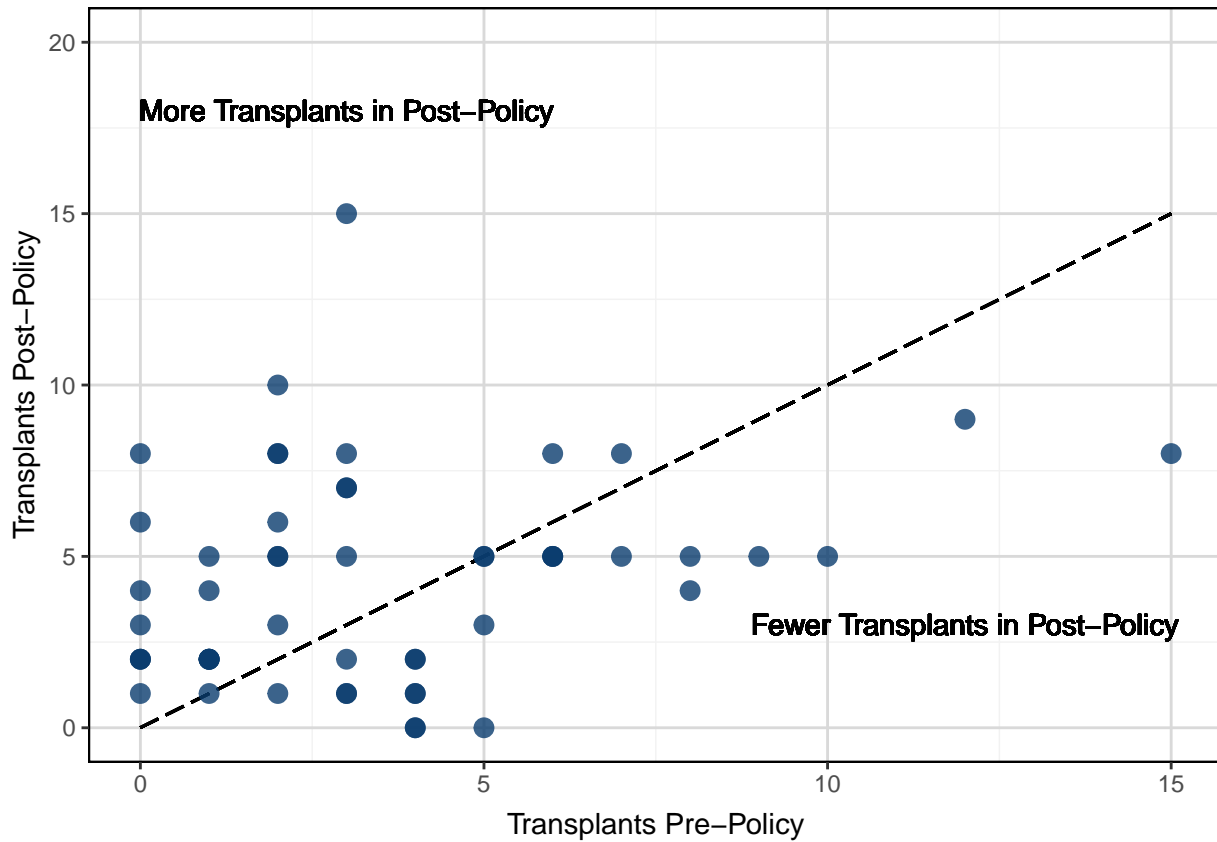


Table 30: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and DSA

DSA	Pre-Policy		Post-Policy	
	N	%	N	%
ALOB	2	1.04	6	2.60
AROR	1	0.52	2	0.87
AZOB	2	1.04	8	3.46
CADN	3	1.56	15	6.49
CAGS	2	1.04	3	1.30
CAOP	6	3.12	5	2.16
CASD	0	0.00	1	0.43
CORS	1	0.52	1	0.43
DCTC	2	1.04	1	0.43
FLFH	5	2.60	5	2.16
FLUF	1	0.52	2	0.87
FLWC	2	1.04	5	2.16
GALL	7	3.65	5	2.16
HIOP	1	0.52	2	0.87
IAOP	3	1.56	1	0.43
ILIP	7	3.65	8	3.46
INOP	3	1.56	7	3.03
KYDA	3	1.56	1	0.43
LAOP	4	2.08	2	0.87
MAOB	6	3.12	5	2.16
MDPC	3	1.56	5	2.16
MIOP	8	4.17	5	2.16
MNOP	0	0.00	8	3.46
MOMA	3	1.56	7	3.03
MSOP	5	2.60	3	1.30
MWOB	2	1.04	10	4.33
NCCM	4	2.08	1	0.43
NCNC	15	7.81	8	3.46
NEOR	0	0.00	6	2.60
NJTO	2	1.04	5	2.16
NMOP	0	0.00	2	0.87
NVLV	0	0.00	2	0.87
NYAP	0	0.00	4	1.73
NYFL	0	0.00	2	0.87
NYRT	10	5.21	5	2.16
OHLB	8	4.17	4	1.73
OHLC	4	2.08	0	0.00
OHLP	1	0.52	2	0.87
OHOV	5	2.60	0	0.00
OKOP	1	0.52	5	2.16
ORUO	4	2.08	0	0.00
PADV	12	6.25	9	3.90
PATF	3	1.56	2	0.87
PRLL	6	3.12	5	2.16
SCOP	3	1.56	8	3.46
TNDS	2	1.04	8	3.46
TNMS	1	0.52	4	1.73
TXGC	9	4.69	5	2.16

(continued)

DSA	N	%	N	%
TXSA	0	0.00	3	1.30
TXSB	5	2.60	5	2.16
UTOP	1	0.52	2	0.87
VATB	4	2.08	2	0.87
WALC	6	3.12	8	3.46
WIDN	4	2.08	1	0.43
Total	192	100.00	231	100.00

Figure 31 shows deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and transplant center. Of 89 centers, the number of transplants increased at 43 centers after policy implementation, and decreased at 35 centers. **Table 31** shows kidney-pancreas transplants by policy era and transplant center.

Figure 31: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Transplant Center

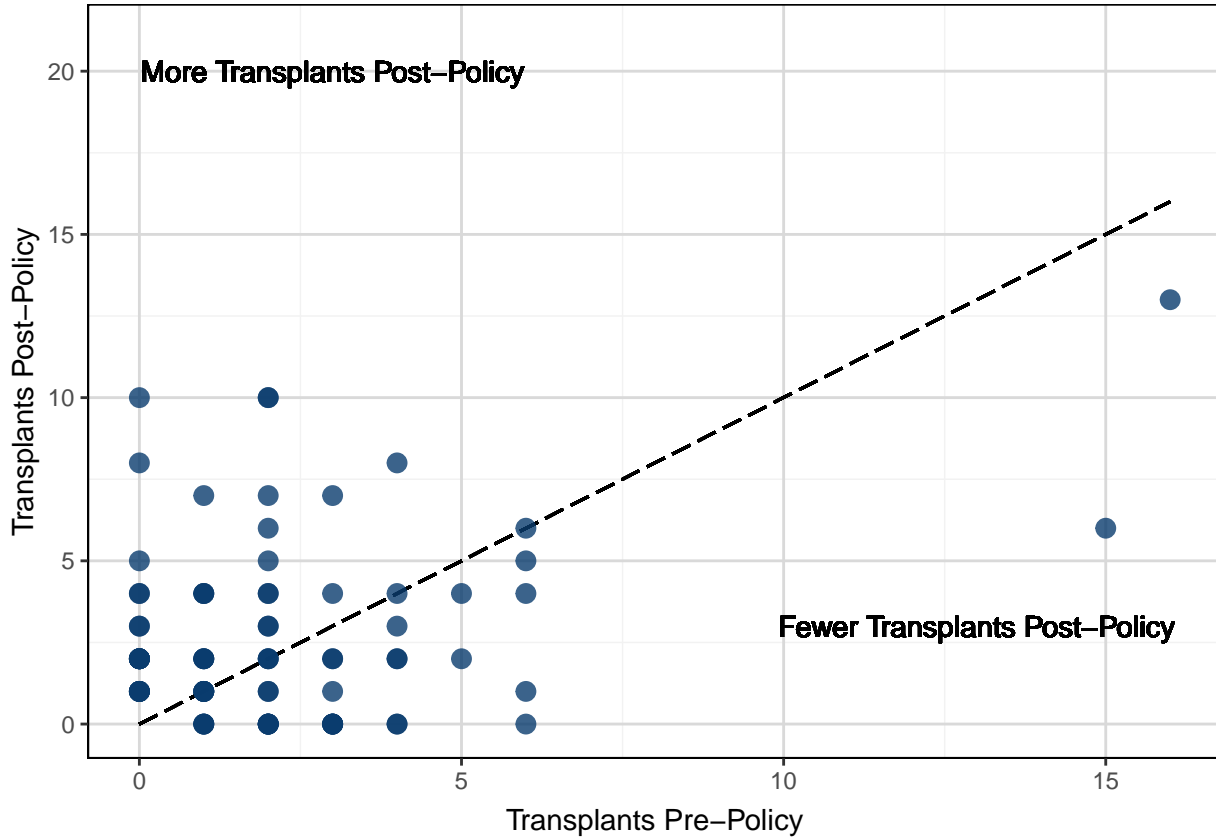


Table 31: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Transplant Center

Transplant Center	Pre-Policy		Post-Policy	
	N	%	N	%
ALUA-TX1	2	1.04	0	0.00
AZMC-TX1	2	1.04	10	4.33
CACS-TX1	0	0.00	2	0.87
CAIM-TX1	3	1.56	0	0.00
CALL-TX1	1	0.52	2	0.87
CAPM-TX1	2	1.04	10	4.33
CASF-TX1	1	0.52	7	3.03
CASH-TX1	2	1.04	0	0.00
CASU-TX1	0	0.00	5	2.16
CAUC-TX1	2	1.04	0	0.00
COUC-TX1	1	0.52	0	0.00
DCGU-TX1	6	3.12	1	0.43
FLFH-TX1	2	1.04	3	1.30
FLJM-TX1	1	0.52	1	0.43
FLSL-TX1	3	1.56	2	0.87
FLTG-TX1	1	0.52	4	1.73
GAEM-TX1	4	2.08	0	0.00
GAPH-TX1	0	0.00	8	3.46
HIQM-TX1	0	0.00	2	0.87
IAIV-TX1	2	1.04	3	1.30
ILLU-TX1	1	0.52	2	0.87
ILNM-TX1	3	1.56	4	1.73
ILPL-TX1	0	0.00	3	1.30
ILSF-TX1	0	0.00	2	0.87
ILUC-TX1	3	1.56	0	0.00
ILUI-TX1	2	1.04	7	3.03
INIM-TX1	6	3.12	6	2.60
KSUK-TX1	2	1.04	1	0.43
KYJH-TX1	1	0.52	0	0.00
KYUK-TX1	2	1.04	0	0.00
LAOF-TX1	2	1.04	5	2.16
LATU-TX1	1	0.52	1	0.43
LAWK-TX1	3	1.56	1	0.43
MAMG-TX1	0	0.00	2	0.87
MAPB-TX1	3	1.56	0	0.00
MDJH-TX1	0	0.00	3	1.30
MDUM-TX1	5	2.60	4	1.73
MIUM-TX1	6	3.12	0	0.00
MNMC-TX1	0	0.00	10	4.33
MNUM-TX1	4	2.08	8	3.46
MOBH-TX1	3	1.56	2	0.87
MORH-TX1	0	0.00	1	0.43
MSUM-TX1	3	1.56	0	0.00
NCBG-TX1	15	7.81	6	2.60
NCCM-TX1	2	1.04	0	0.00
NCDU-TX1	2	1.04	4	1.73
NCEC-TX1	2	1.04	1	0.43
NCMH-TX1	0	0.00	1	0.43

(continued)

Transplant Center	N	%	N	%
NJLL-TX1	1	0.52	1	0.43
NJRW-TX1	2	1.04	2	0.87
NJSB-TX1	1	0.52	0	0.00
NYCP-TX1	0	0.00	1	0.43
NYEC-TX1	0	0.00	4	1.73
NYMA-TX1	16	8.33	13	5.63
NYMS-TX1	3	1.56	0	0.00
NYNY-TX1	2	1.04	6	2.60
NYUC-TX1	6	3.12	4	1.73
NYUM-TX1	0	0.00	2	0.87
OHCC-TX1	4	2.08	4	1.73
OHOU-TX1	4	2.08	2	0.87
OHUH-TX1	2	1.04	2	0.87
OKBC-TX1	0	0.00	1	0.43
OKMD-TX1	0	0.00	2	0.87
ORUO-TX1	2	1.04	0	0.00
PALV-TX1	0	0.00	1	0.43
PAPT-TX1	0	0.00	2	0.87
PATJ-TX1	0	0.00	1	0.43
PATU-TX1	2	1.04	0	0.00
PAUP-TX1	5	2.60	2	0.87
PRSJ-TX1	6	3.12	5	2.16
SCMU-TX1	3	1.56	7	3.03
TNMH-TX1	2	1.04	4	1.73
TNVU-TX1	1	0.52	4	1.73
TXAS-TX1	1	0.52	1	0.43
TXHD-TX1	0	0.00	4	1.73
TXMC-TX1	0	0.00	2	0.87
TXMH-TX1	4	2.08	2	0.87
TXSW-TX1	2	1.04	2	0.87
TXTX-TX1	1	0.52	2	0.87
UTLD-TX1	1	0.52	1	0.43
UTMC-TX1	0	0.00	1	0.43
VAMC-TX1	1	0.52	2	0.87
VAUV-TX1	0	0.00	2	0.87
WASM-TX1	3	1.56	0	0.00
WAUW-TX1	4	2.08	3	1.30
WAVM-TX1	1	0.52	1	0.43
WISE-TX1	4	2.08	0	0.00
WISL-TX1	1	0.52	0	0.00
WIUW-TX1	1	0.52	4	1.73
Total	192	100.00	231	100.00

Figure 32 shows deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and state. Of 35 states, the number of transplants increased in 17 states after policy implementation, and the number of transplants decreased in 16 states. **Table 32** shows kidney-pancreas transplants by policy era and state.

Figure 32: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and State

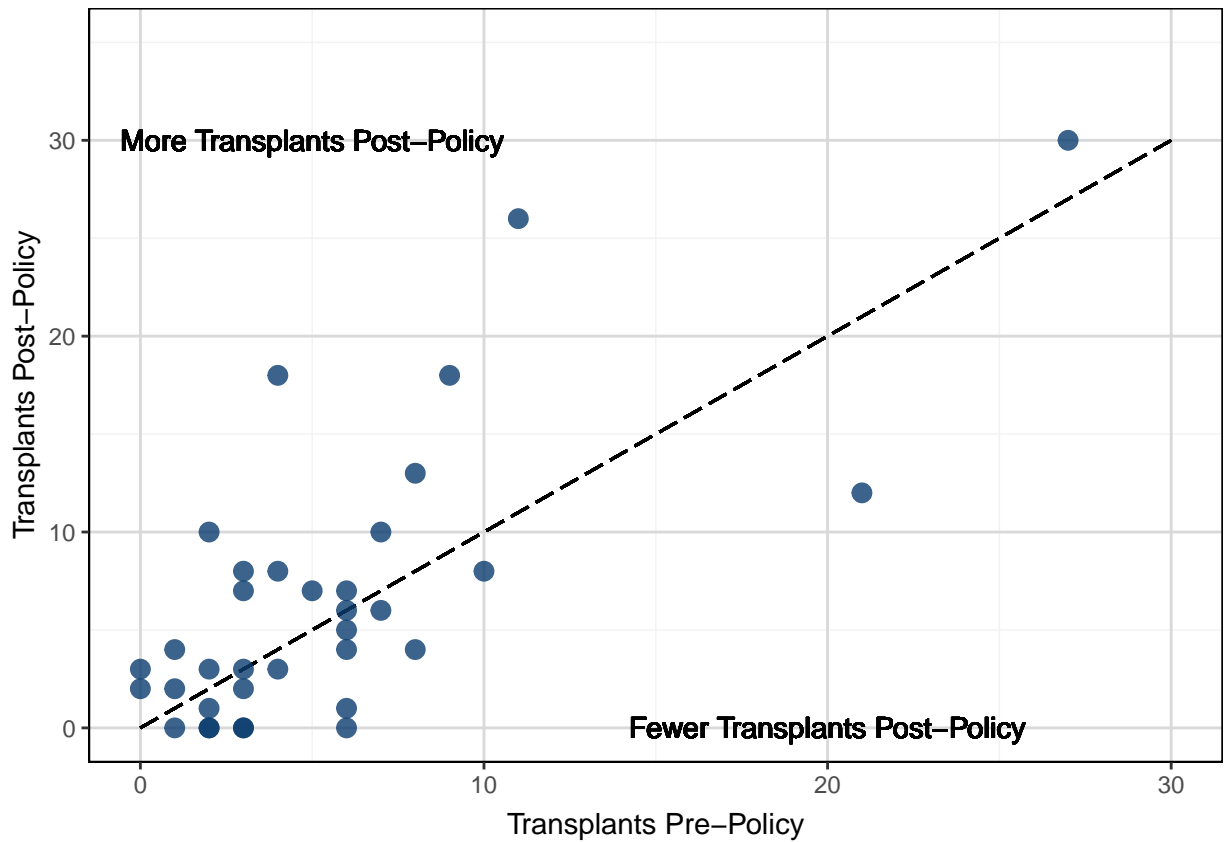


Table 32: Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and State

State	Pre-Policy		Post-Policy	
	N	%	N	%
Alabama	2	1.04	0	0.00
Arizona	2	1.04	10	4.33
California	11	5.73	26	11.26
Colorado	1	0.52	0	0.00
Dist. Of Columbia	6	3.12	1	0.43
Florida	7	3.65	10	4.33
Georgia	4	2.08	8	3.46
Hawaii	0	0.00	2	0.87
Illinois	9	4.69	18	7.79
Indiana	6	3.12	6	2.60
Iowa	2	1.04	3	1.30
Kansas	2	1.04	1	0.43
Kentucky	3	1.56	0	0.00
Louisiana	6	3.12	7	3.03
Maryland	5	2.60	7	3.03
Massachusetts	3	1.56	2	0.87
Michigan	6	3.12	0	0.00
Minnesota	4	2.08	18	7.79
Mississippi	3	1.56	0	0.00
Missouri	3	1.56	3	1.30
New Jersey	4	2.08	3	1.30
New York	27	14.06	30	12.99
North Carolina	21	10.94	12	5.19
Ohio	10	5.21	8	3.46
Oklahoma	0	0.00	3	1.30
Oregon	2	1.04	0	0.00
Pennsylvania	7	3.65	6	2.60
Puerto Rico	6	3.12	5	2.16
South Carolina	3	1.56	7	3.03
Tennessee	3	1.56	8	3.46
Texas	8	4.17	13	5.63
Utah	1	0.52	2	0.87
Virginia	1	0.52	4	1.73
Washington	8	4.17	4	1.73
Wisconsin	6	3.12	4	1.73
Total	192	100.00	231	100.00

Figure 33 and **Table 33** show the distribution of cold ischemic time in hours for deceased donor kidney-pancreas transplants from January 15, 2021 to May 14, 2021 by policy era. Median cold ischemic time increased from 9.45 to 10.42 hours after policy implementation. **Please note** OPTN Policy 18.1 requires transplant centers to submit the Transplant Recipient Registration (TRR) within 60 days of waiting list removal. Many records are missing cold ischemic time due to outstanding TRRs. See **Table 33** below for volume of missing data at time of the analysis.

Figure 33: Distribution of Cold Ischemic Time for Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era

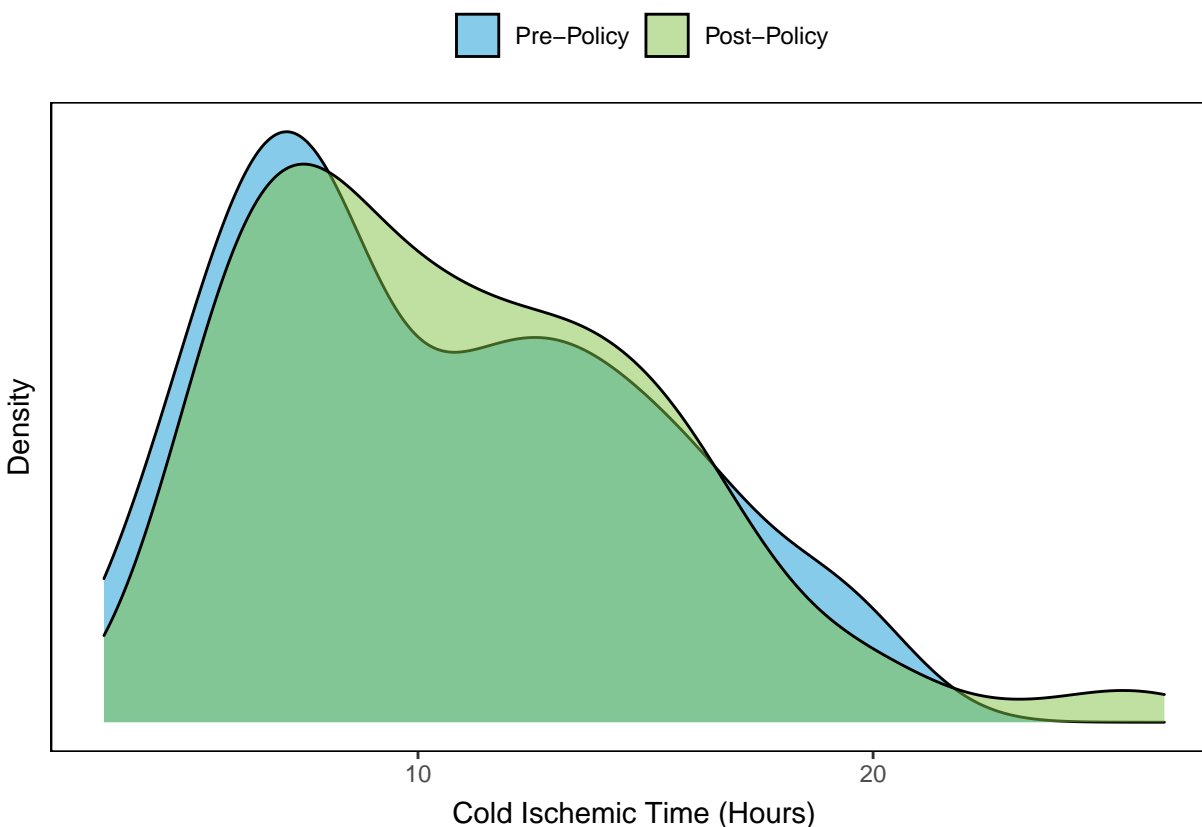


Table 33: Distribution of Cold Ischemic Time for Deceased Donor Kidney-Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	192	47	3.1	7.05	9.45	10.52959	13.8600	20.42
Post-Policy	231	67	4.1	7.26	10.36	11.01305	13.7025	26.40

Pancreas

Waiting List

Figure 34 and Table 34 show the number of registrations waiting for a pancreas on the last day of each month from January 15, 2021 to May 14, 2021. Waiting list volume changed very little after policy implementation.

Figure 34: Pancreas Registrations Waiting on the Last Day of Each Month, January 15, 2021-May 14, 2021

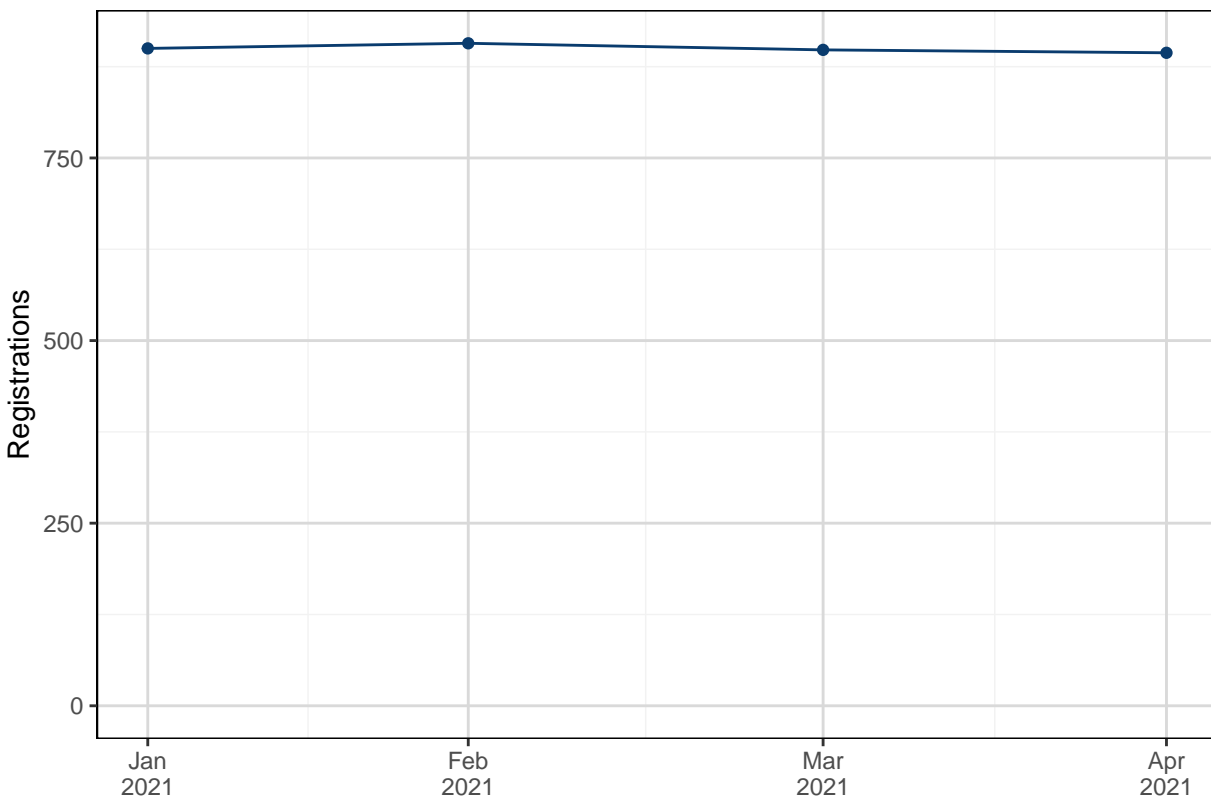


Table 34: Pancreas Registrations Waiting on the Last Day of Each Month, January 15, 2021-May 14, 2021

Date	Registrations
January 2021	900
February 2021	907
March 2021	898
April 2021	894

Figure 35 and **Table 35** show the percentage of registrations waiting for a pancreas on the last day of each month from January 15, 2021 to May 14, 2021 by status. The proportion of active status slightly increased after policy implementation

Figure 35: Pancreas Registrations Waiting on the Last Day of Each Month by Status, January 15, 2021-May 14, 2021

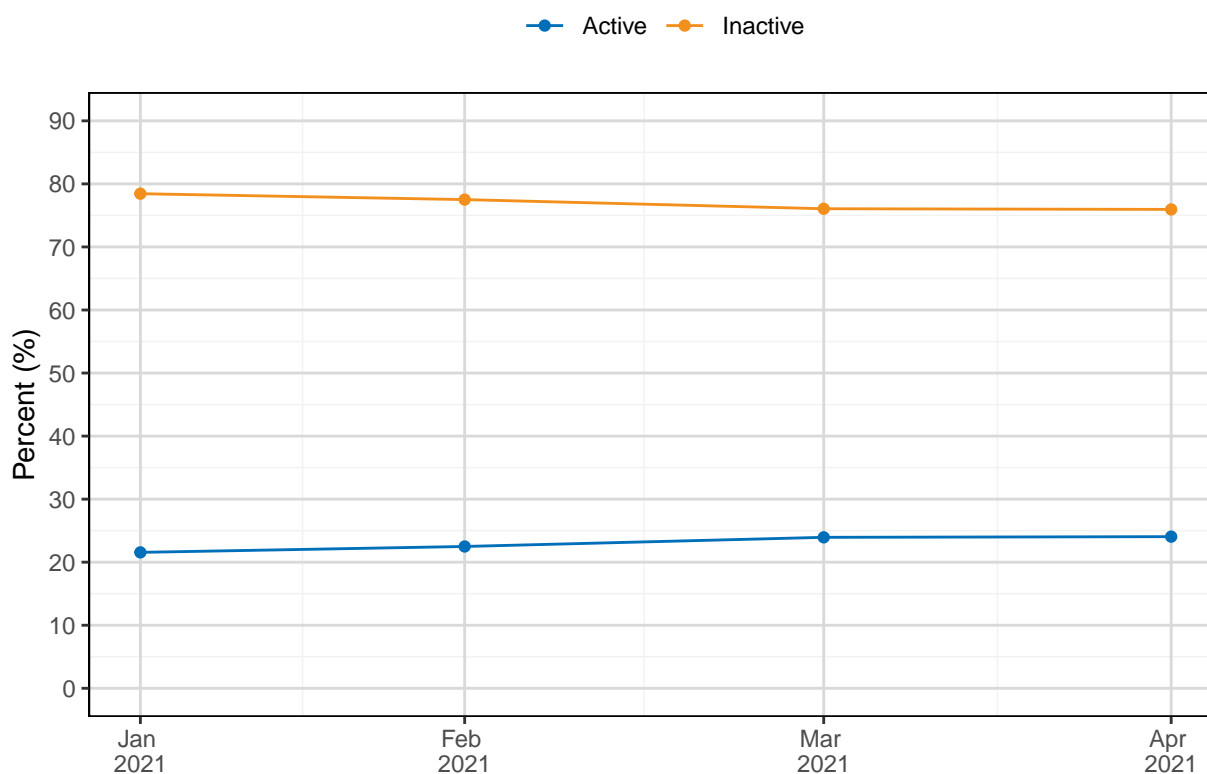


Table 35: Pancreas Registrations Waiting on the Last Day of Each Month by Status, January 15, 2021-May 14, 2021

Date	Active		Inactive		Total	
	N	%	N	%	N	%
January 2021	194	21.56	706	78.44	900	100.00
February 2021	204	22.49	703	77.51	907	100.00
March 2021	215	23.94	683	76.06	898	100.00
April 2021	215	24.05	679	75.95	894	100.00

Figure 36 and **Table 36** show total pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era. There were 107 registrations added to the waiting list in the two months preceding implementation, and another 103 added after.

Figure 36: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era

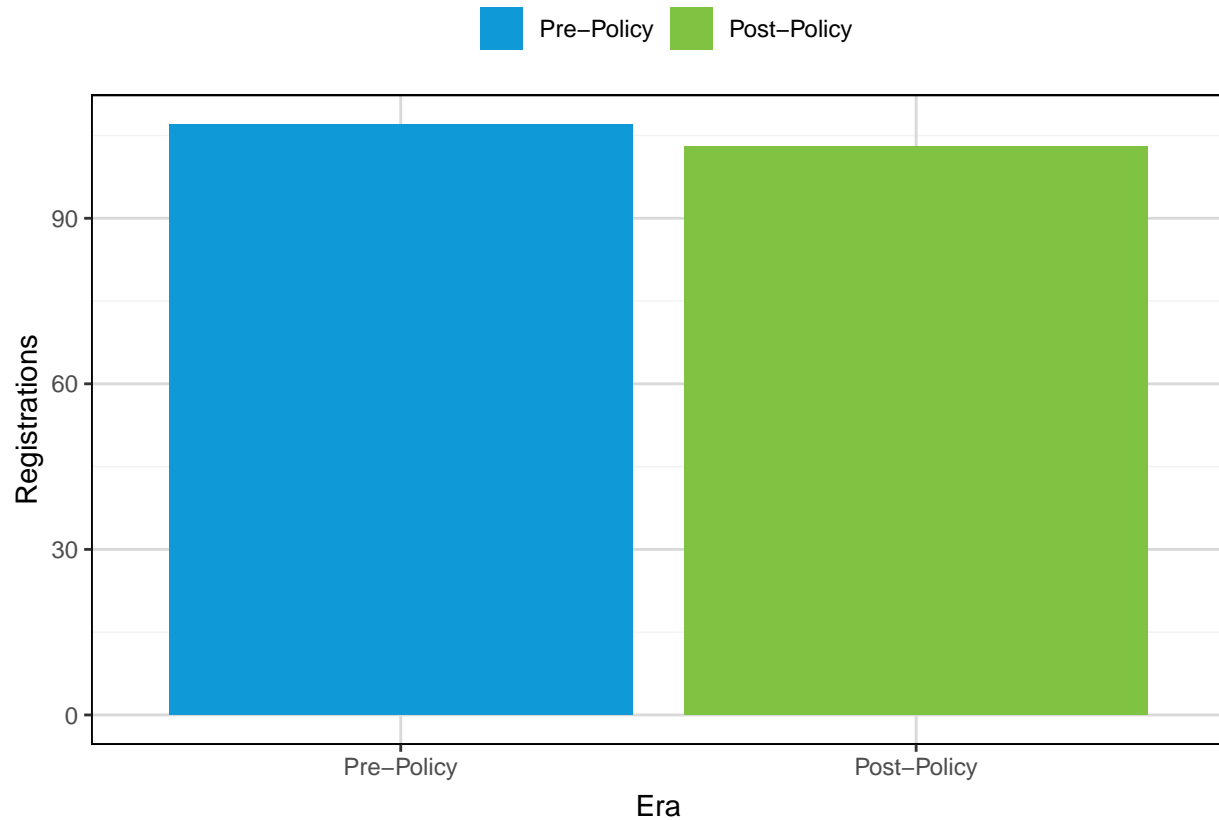


Table 36: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era

Era	Registrations
Pre-Policy	107
Post-Policy	103

Figure 37 and **Table 37** show pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and age at listing. For adult candidates, the volume of waiting list additions decreased for each age group. Candidates aged 35-49 years accounted for the majority of waiting list additions overall both pre- and post-policy at 39.25% and 37.86% respectively.

The volume of pediatric additions increased for each group after policy implementation.

Figure 37: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Age at Listing

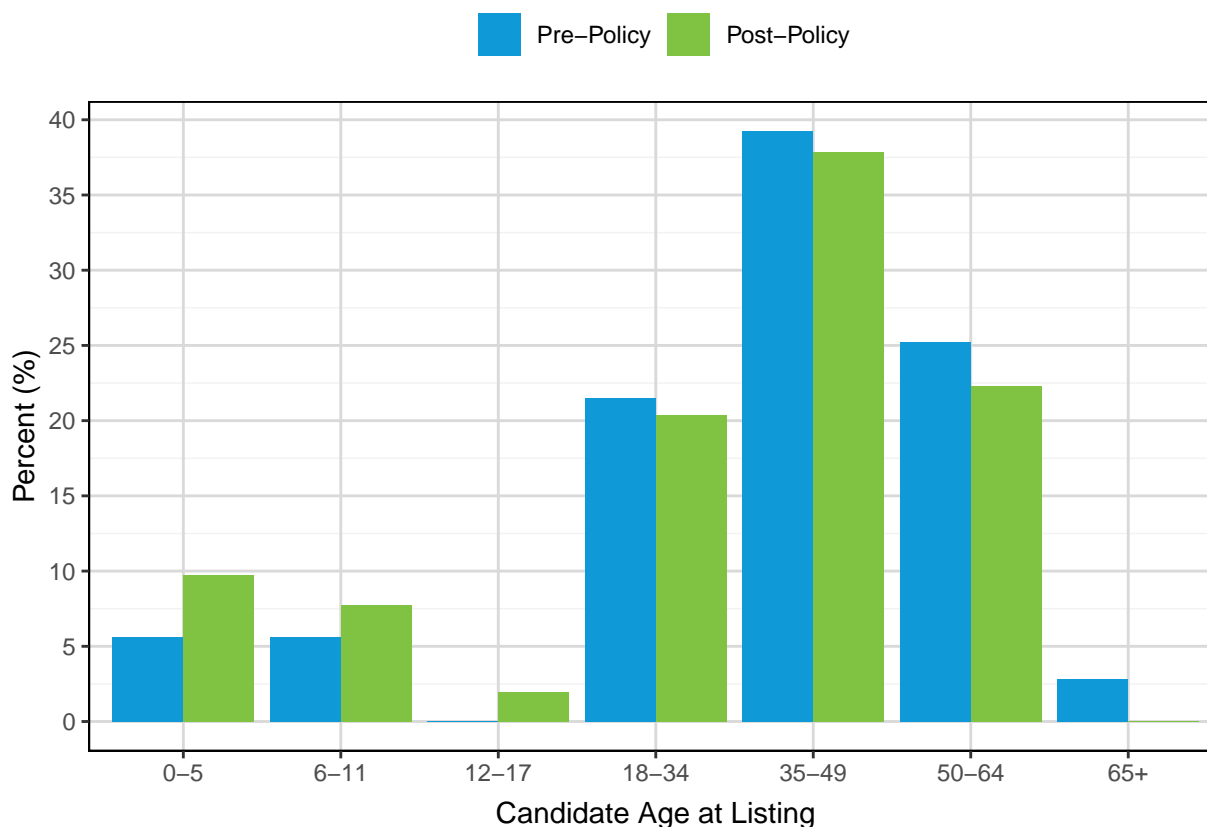


Table 37: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Age at Listing

Age at Listing	Pre-Policy		Post-Policy	
	N	%	N	%
0-5	6	5.61	10	9.71
6-11	6	5.61	8	7.77
12-17	0	0.00	2	1.94
18-34	23	21.50	21	20.39
35-49	42	39.25	39	37.86
50-64	27	25.23	23	22.33
65+	3	2.80	0	0.00
Total	107	100.00	103	100.00

Figure 38 and **Table 38** show pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and gender. The number and proportion of additions slightly decreased for female and increased for male after policy implementation.

Figure 38: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Gender

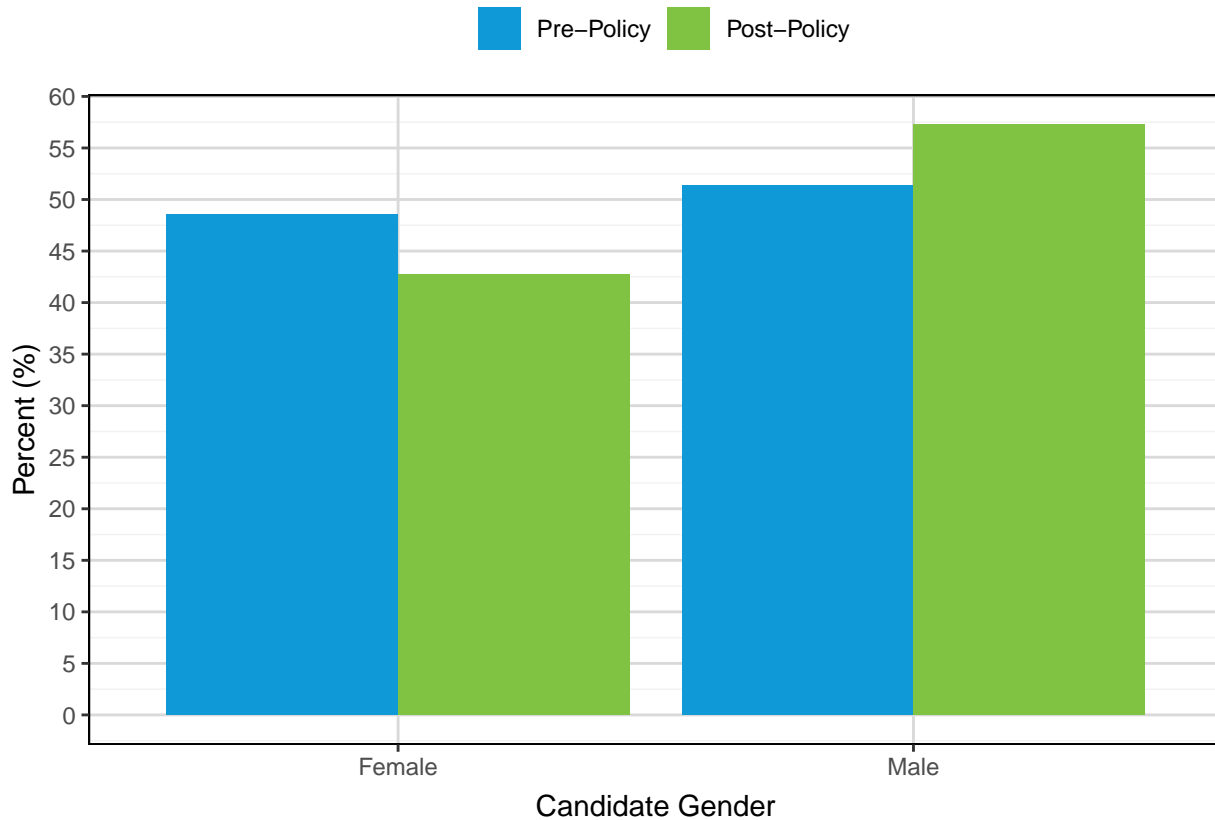


Table 38: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Gender

Gender	Pre-Policy		Post-Policy	
	N	%	N	%
Female	52	48.60	44	42.72
Male	55	51.40	59	57.28
Total	107	100.00	103	100.00

Figure 39 and **Table 39** show pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and race/ethnicity. The proportion of additions for Asian candidates after the policy change increased, from 0.93% to 9.71%. The proportion and volume of waiting list additions of other races/ethnicities decreased after implementation.

Figure 39: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Race/ethnicity

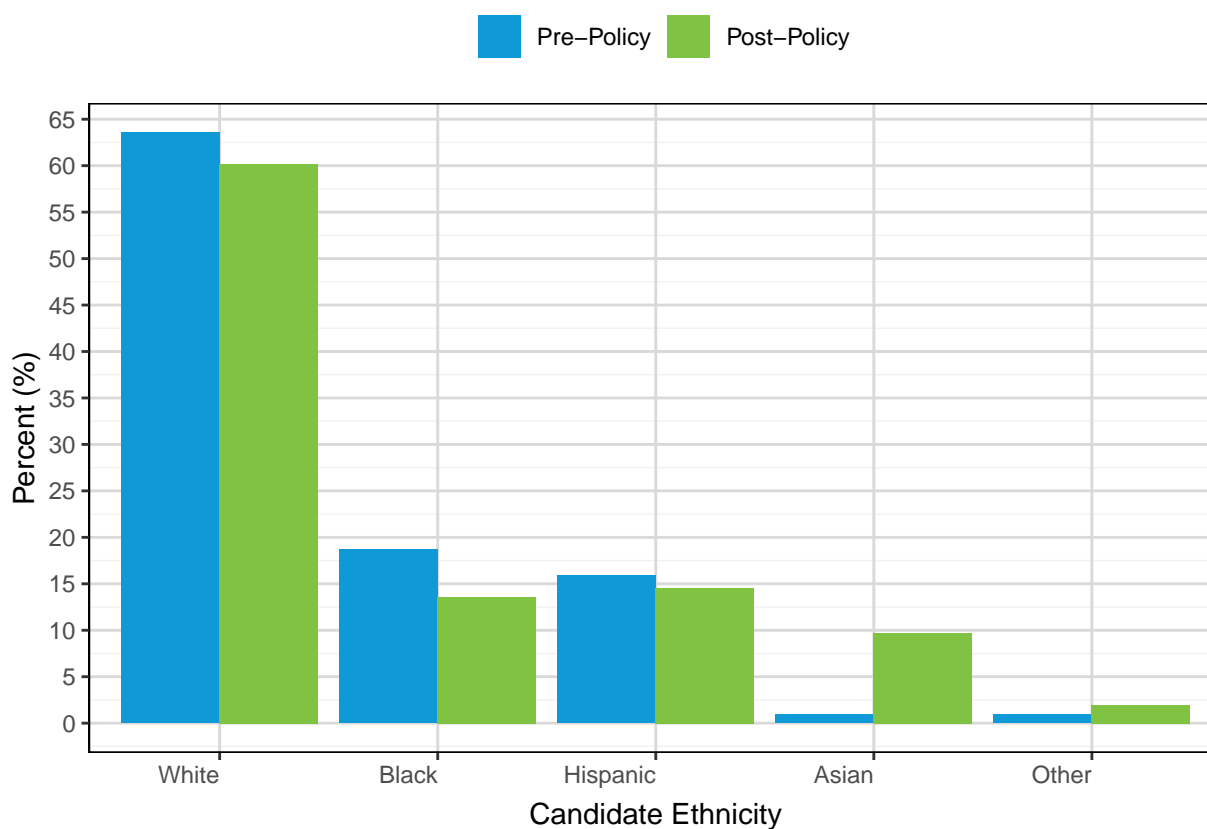


Table 39: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Ethnicity

Ethnicity	Pre-Policy		Post-Policy	
	N	%	N	%
White	68	63.55	62	60.19
Black	20	18.69	14	13.59
Asian	1	0.93	10	9.71
Hispanic	17	15.89	15	14.56
Other	1	0.93	2	1.94
Total	107	100.00	103	100.00

Figure 40 and **Table 40** show pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and blood type. The proportion of blood type AB and B additions increased after the policy change, from 3.74% to 6.80% and 8.41% to 18.45% respectively. The proportion of A and O additions decreased after the policy change, from 42.99% to 36.89% and 44.86% to 37.86% respectively.

Figure 40: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Blood Type

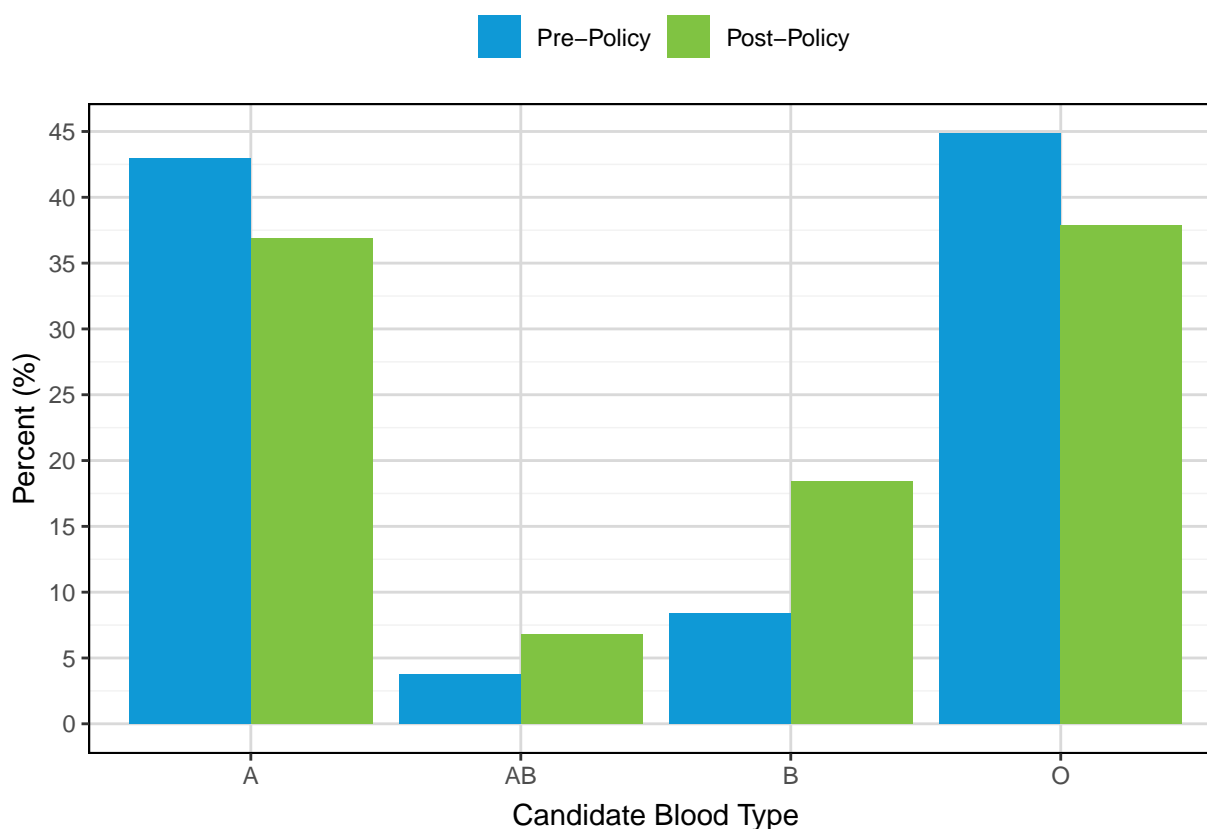


Table 40: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Blood Type

Blood Type	Pre-Policy		Post-Policy	
	N	%	N	%
A	46	42.99	38	36.89
AB	4	3.74	7	6.80
B	9	8.41	19	18.45
O	48	44.86	39	37.86
Total	107	100.00	103	100.00

Figure 41 and **Table 41** show pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and CPRA at listing. The distribution of CPRA at listing did not change notably except for CPRA 1-19% which decreased from 6.54% to 2.91% after policy implementation.

Figure 41: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and CPRA

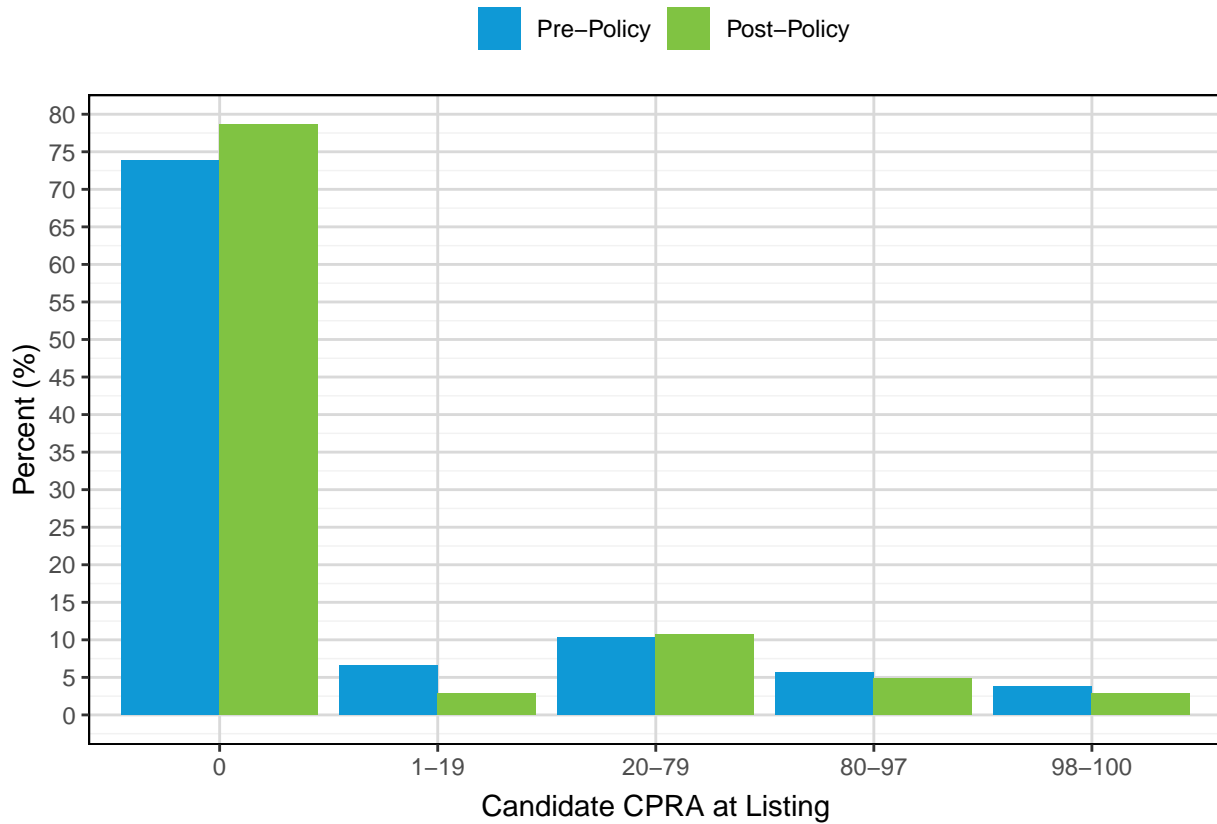


Table 41: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and CPRA

CPRA	Pre-Policy		Post-Policy	
	N	%	N	%
0	79	73.83	81	78.64
1-19	7	6.54	3	2.91
20-79	11	10.28	11	10.68
80-97	6	5.61	5	4.85
98-100	4	3.74	3	2.91
Total	107	100.00	103	100.00

Figure 42 and **Table 42** show pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and insurance status at listing. Candidates using public insurance decreased and those using private insurance increased after policy change.

Figure 42: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Insurance Status at Listing

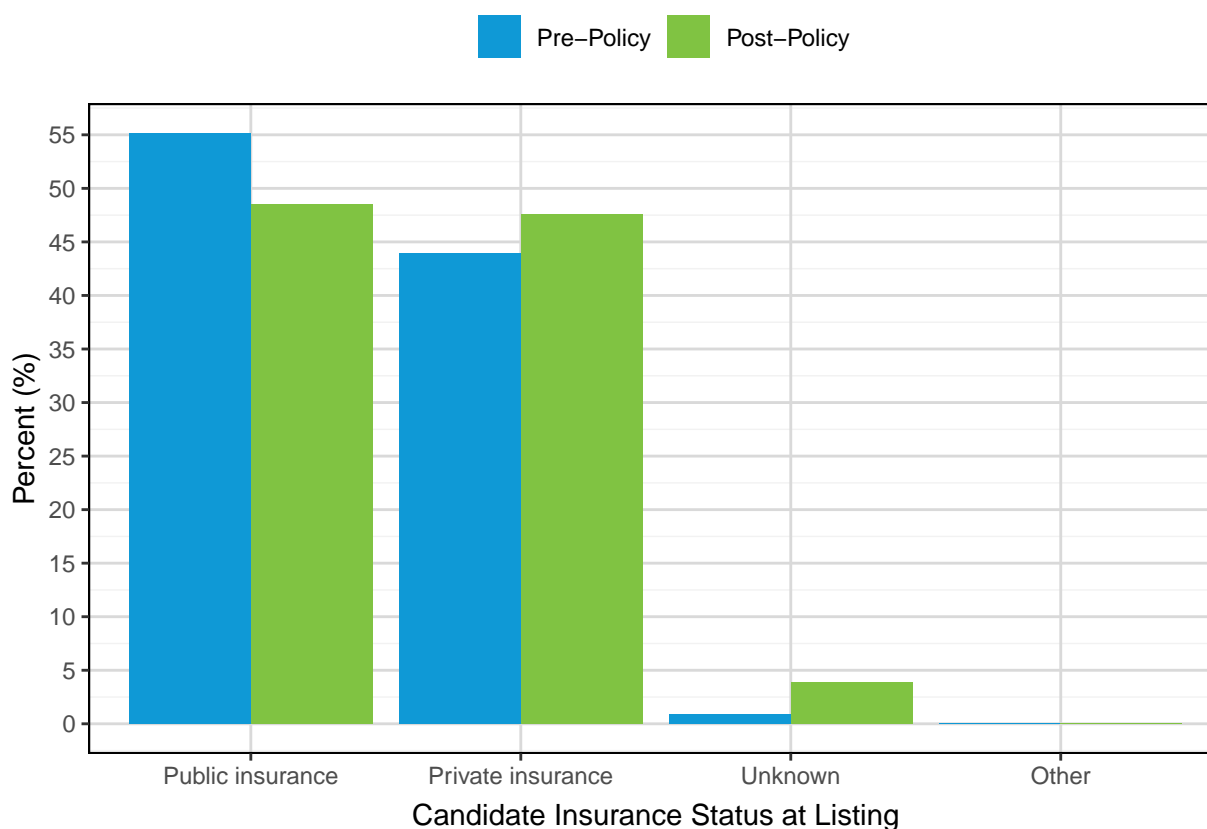


Table 42: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Insurance Status at Listing

Insurance at Listing	Pre-Policy		Post-Policy	
	N	%	N	%
Public insurance	59	55.14	50	48.54
Private insurance	47	43.93	49	47.57
Unknown	1	0.93	4	3.88
Other	0	0.00	0	0.00
Total	107	100.00	103	100.00

Figure 43 and **Table 43** show pancreas registrations added to the waiting list from January 15, 2021 to May 14, 2021 by policy era and primary diagnosis. The proportion of registrations with type 1 diabetes mellitus decreased from 38.32% to 22.33% after policy implementation.

Figure 43: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Diagnosis

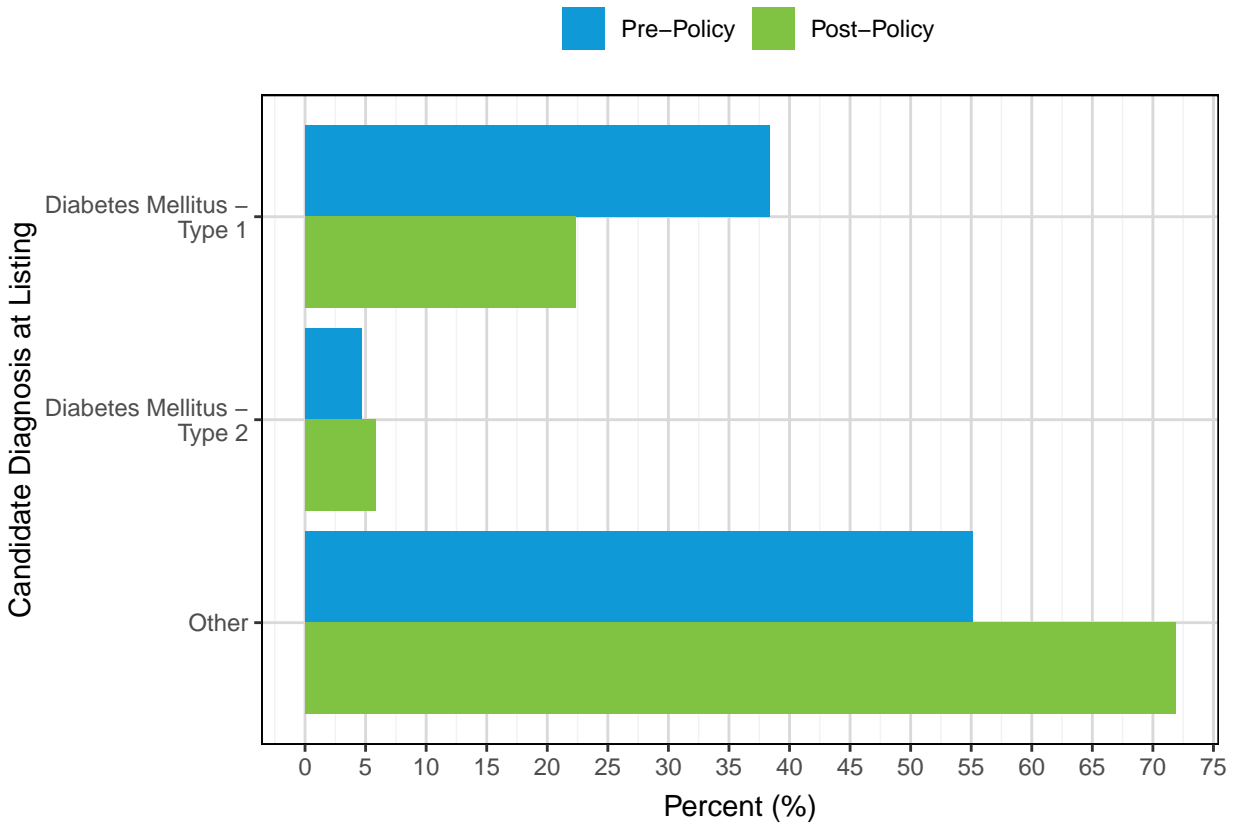


Table 43: Pancreas Registrations Added January 15, 2021-May 14, 2021 by Policy Era and Diagnosis

Diagnosis	Pre-Policy		Post-Policy	
	N	%	N	%
Diabetes Mellitus - Type 1	41	38.32	23	22.33
Diabetes Mellitus - Type 2	5	4.67	6	5.83
Other	61	57.01	74	71.84
Total	107	100.00	103	100.00

Figure 44 and **Table 44** show deceased donor transplants per 100 patient years for pancreas registrations ever waiting between January 15, 2021 and May 14, 2021 by policy era. There were 23 pancreas transplanted pre-policy and 30 post-policy. The overall deceased donor pancreas transplant rate increased from 15.91 to 20.21 transplants per 100 patients years.

Figure 44: Transplants per 100 Patients Years for Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era

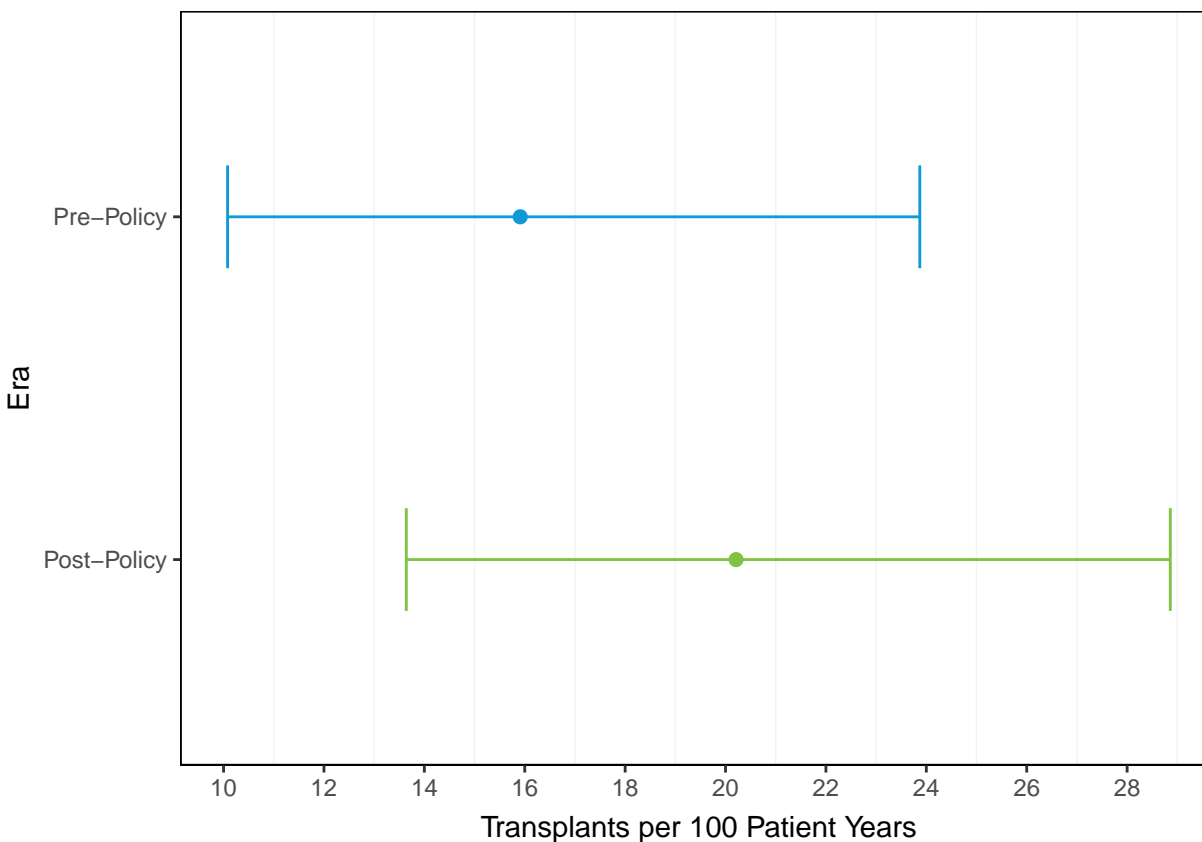


Table 44: Transplants per 100 Patients Years for Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era

Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
Pre-Policy	965	23	15.91	(10.08, 23.87)
Post-Policy	970	30	20.21	(13.64, 28.86)

Figure 45 and **Table 45** show deceased donor transplants per 100 patient years for pancreas registrations ever waiting between January 15, 2021 and May 14, 2021 by policy era and gender. The transplant rate for female registrations increased from 19.12 to 25.42 transplants per 100 patient years, and the rate for male registrations increased from 12.61 to 14.93.

Figure 45: Transplants per 100 Patients Years for Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era and Gender

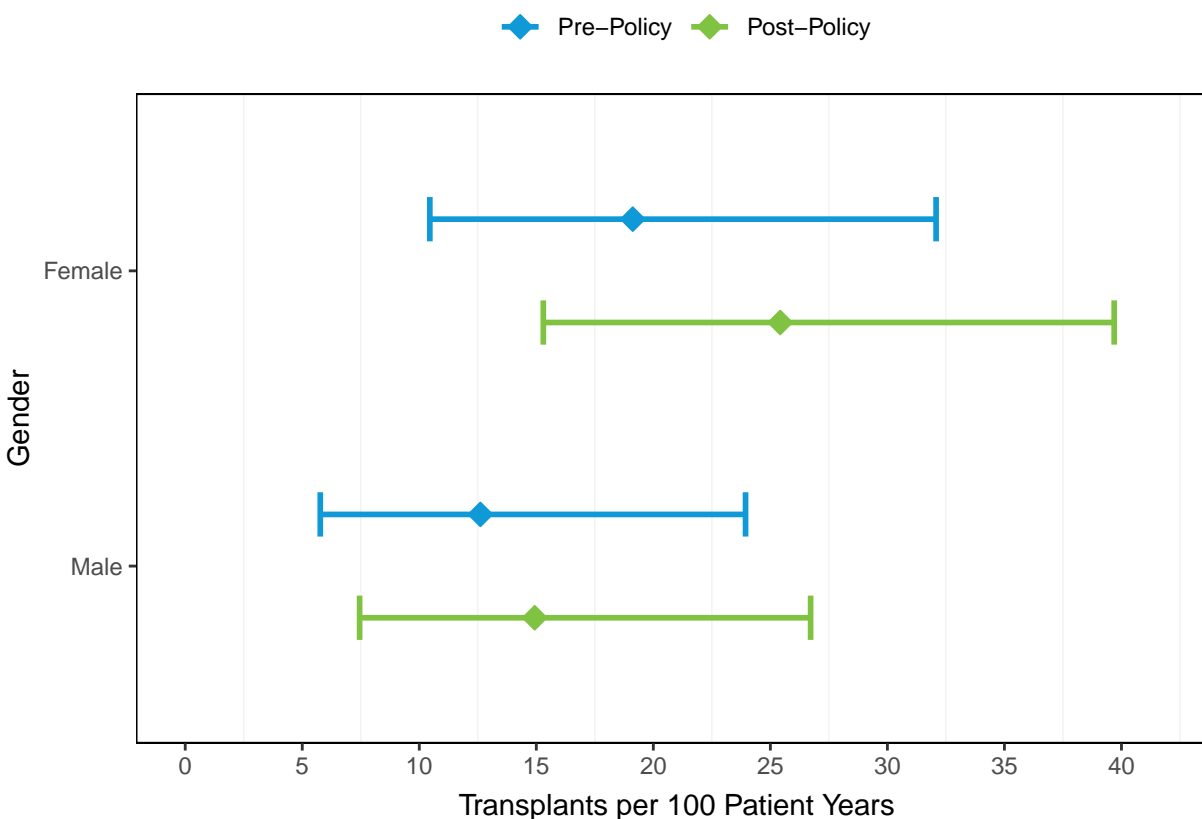


Table 45: Transplants per 100 Patients Years for Pancreas Registrations Ever Waiting January 15, 2021-May 14, 2021 by Policy Era and Gender

Gender	Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
Female	Pre-Policy	486	14	19.12	(10.45, 32.08)
	Post-Policy	485	19	25.42	(15.3, 39.69)
Male	Pre-Policy	479	9	12.61	(5.77, 23.94)
	Post-Policy	485	11	14.93	(7.45, 26.72)

Deceased Donor Transplants

Figure 46 and **Table 46** show deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era. There were 23 transplants performed in the two months preceding policy implementation, and 32 performed in the two months after implementation.

Figure 46: Deceased Donor Pancreas Transplants January 15, 2021- May 14, 2021 by Policy Era

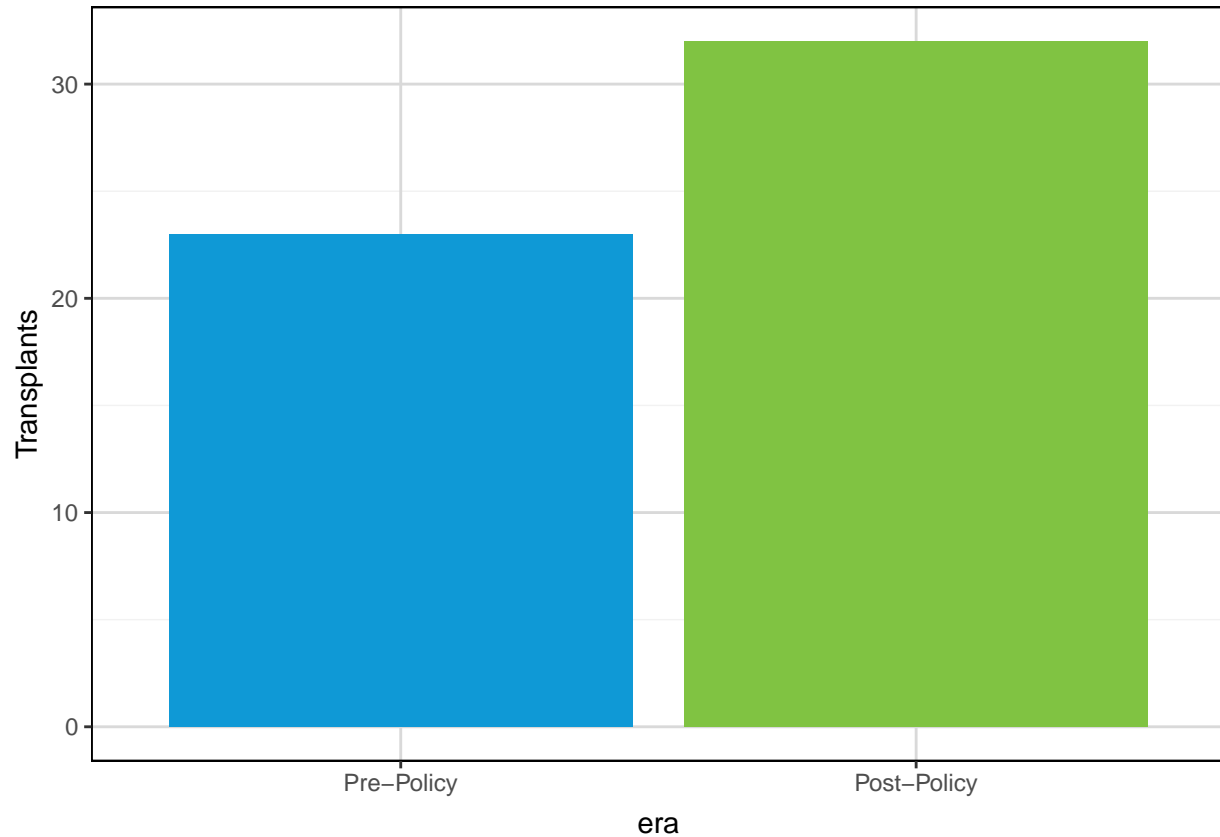
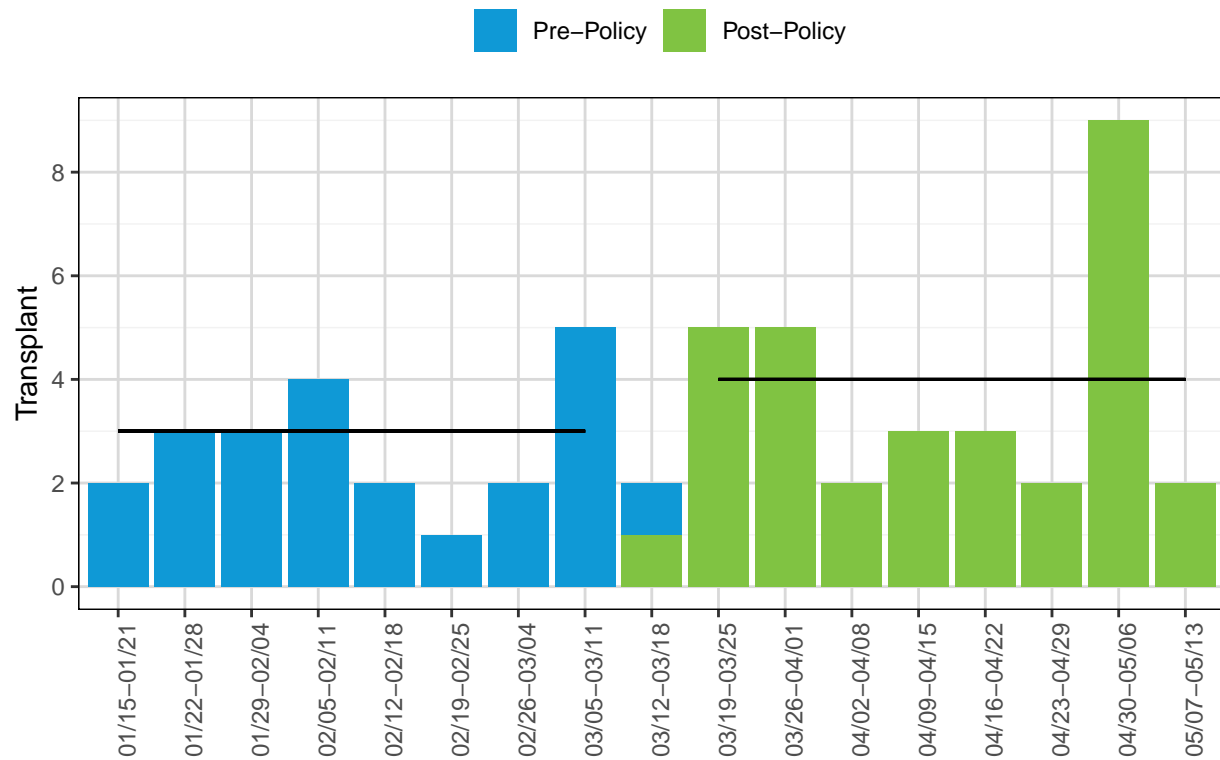


Table 46: Deceased Donor Pancreas Transplants January 15, 2021- May 14, 2021 by Policy Era

Era	Transplants
Pre-Policy	23
Post-Policy	32

Figure 47 and **Table 47** show weekly deceased donor pancreas transplants from January 15, 2021 to May 14, 2021. The average number of transplants per week was 3 pre-policy and 4 post-policy.

Figure 47: Weekly Deceased Donor Pancreas Transplants January 15, 2021-May 14, 2021 by Policy Era



Lines represent the average number of transplants per week.

Table 47: Weekly Deceased Donor Pancreas Transplants January 15, 2021-May 14, 2021

Weeks	Transplants
01/15-01/21	2
01/22-01/28	3
01/29-02/04	3
02/05-02/11	4
02/12-02/18	2
02/19-02/25	1
02/26-03/04	2
03/05-03/11	5
03/12-03/18	2
03/19-03/25	5
03/26-04/01	5
04/02-04/08	2
04/09-04/15	3
04/16-04/22	3
04/23-04/29	2
04/30-05/06	9
05/07-05/13	2

Figure 48 and **Table 48** show deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and recipient age at transplant. The proportion of transplants in 0-5 year and 35-49 age groups increased from 4.35% to 12.50% and 21.74% to 50.00% after policy implementation respectively, though counts remained small.

Figure 48: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Recipient Age at Transplant

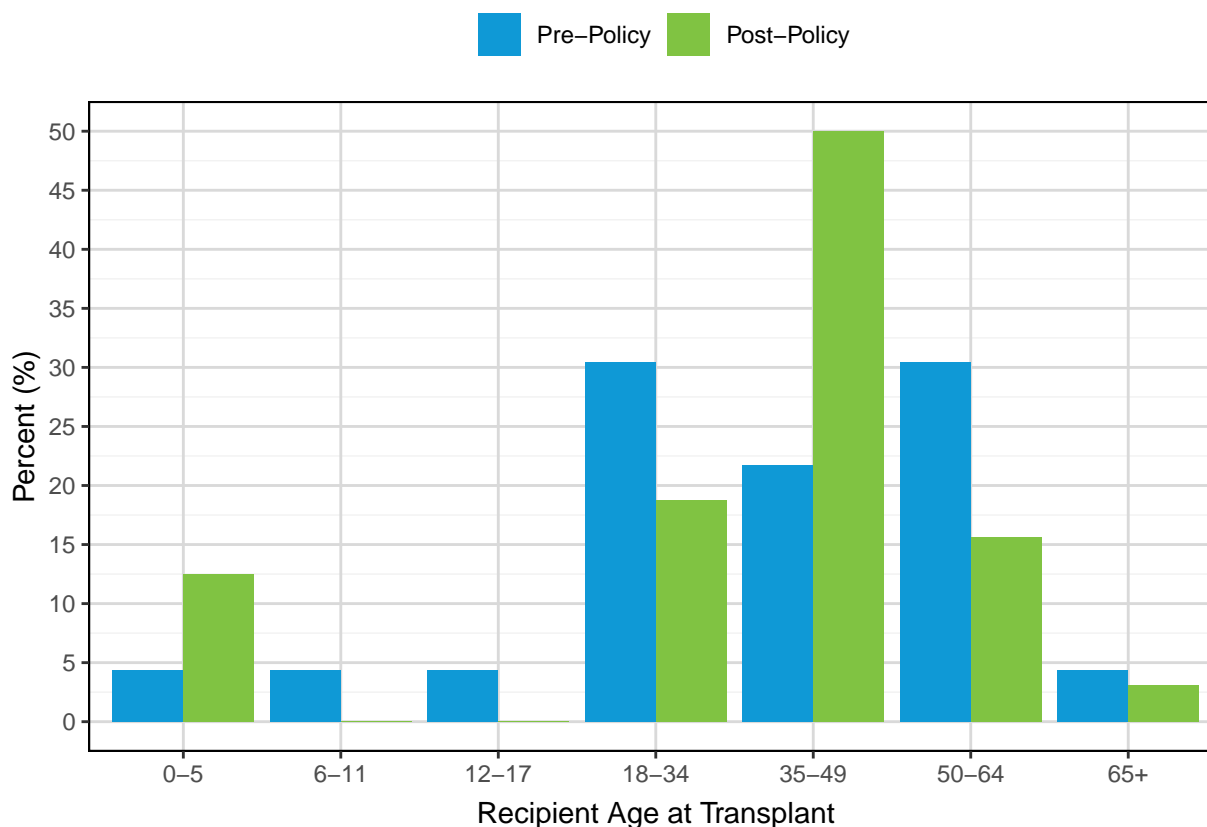


Table 48: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Recipient Age at Transplant

Age at Transplant	Pre-Policy		Post-Policy	
	N	%	N	%
0-5	1	4.35	4	12.50
6-11	1	4.35	0	0.00
12-17	1	4.35	0	0.00
18-34	7	30.43	6	18.75
35-49	5	21.74	16	50.00
50-64	7	30.43	5	15.62
65+	1	4.35	1	3.12
Total	23	100.00	32	100.00

Figure 49 and **Table 49** show deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and recipient race/ethnicity. The proportion of transplants to Black recipients increased from 8.7% to 15.62%. The proportion of transplants to Hispanic recipients decreased from 17.39% to 9.38%, though the volume was similar.

Figure 49: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Recipient Race/ethnicity

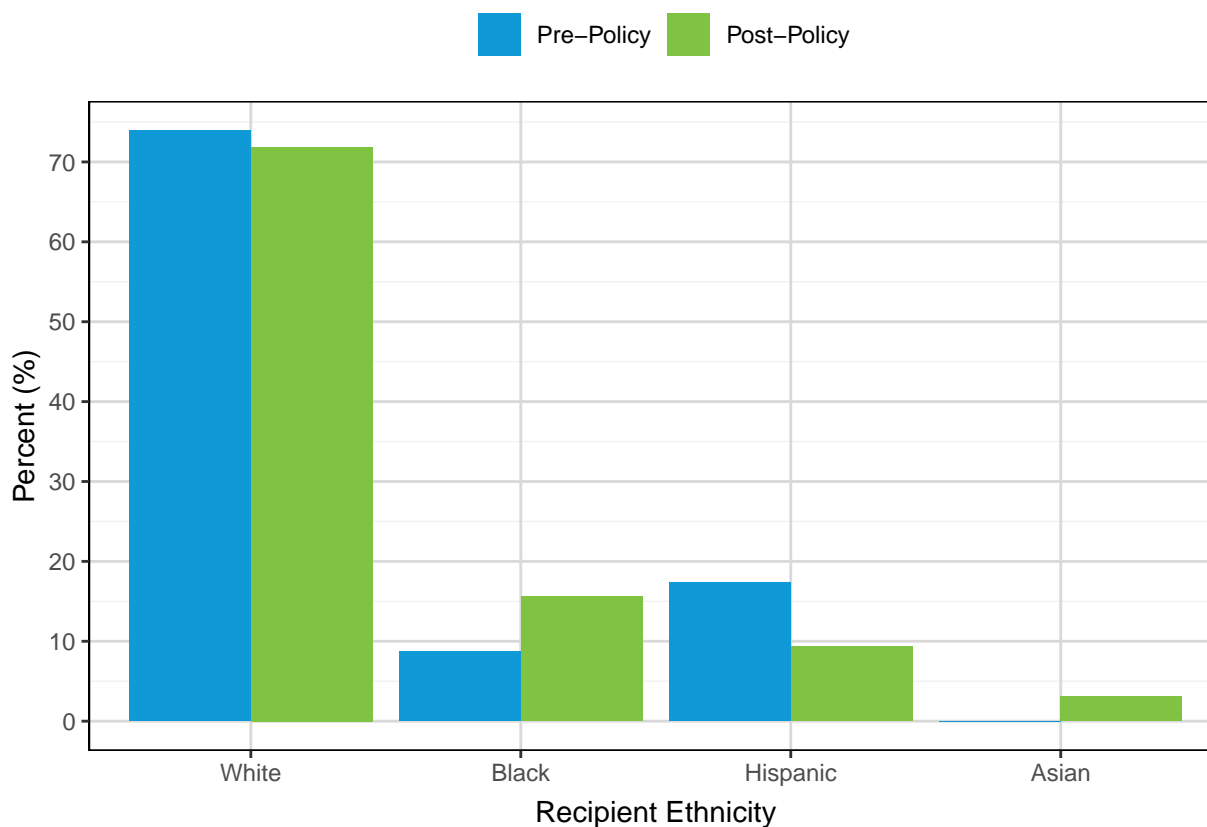


Table 49: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Recipient Ethnicity

Ethnicity	Pre-Policy		Post-Policy	
	N	%	N	%
White	17	73.91	23	71.88
Black	2	8.70	5	15.62
Hispanic	4	17.39	3	9.38
Asian	0	0.00	1	3.12
Total	23	100.00	32	100.00

Figure 50 and **Table 50** show the distribution of waiting time in years for deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era. Recipient time on the waiting list increased from 0.40 to 0.82 years after policy implementation, meaning more recipients with longer waiting times are being transplanted.

Figure 50: Distribution of Waiting Time for Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era

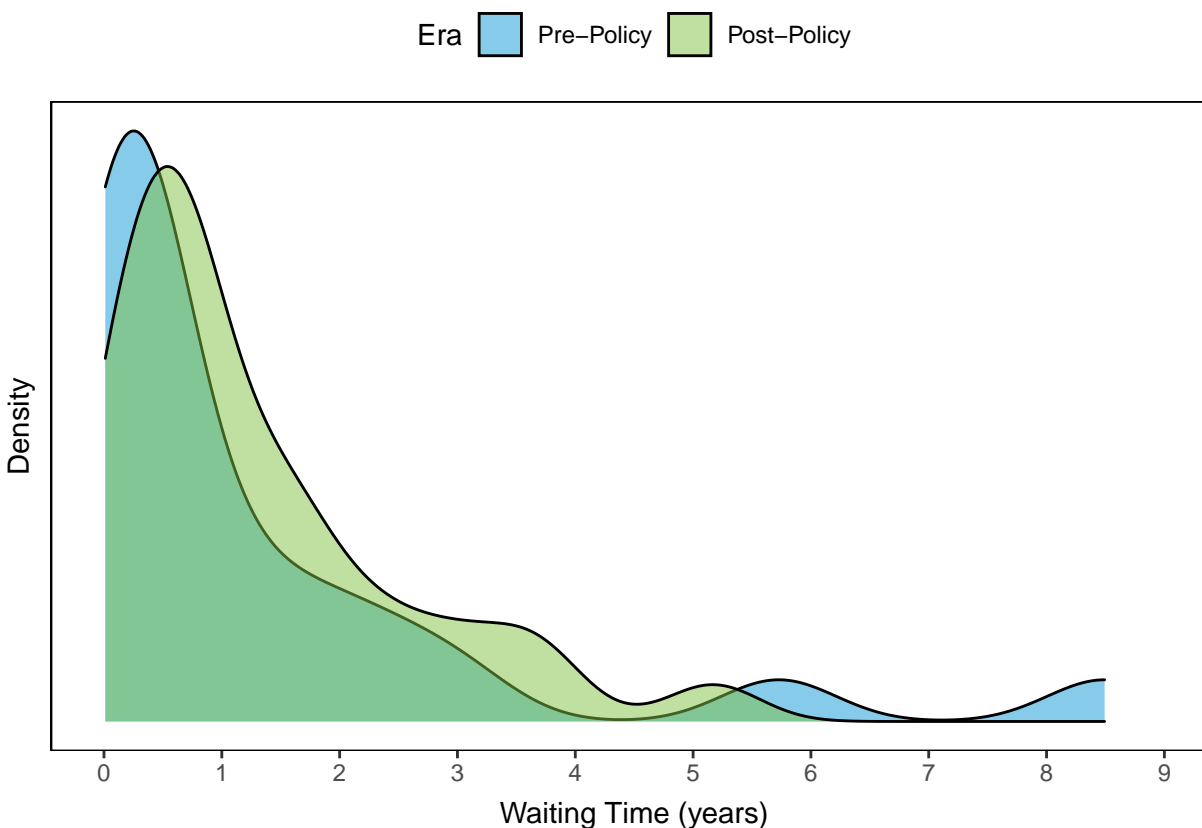


Table 50: Distribution of Waiting Time for Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	23	0	0.02	0.16	0.40	1.29	1.51	8.49
Post-Policy	32	0	0.01	0.51	0.82	1.28	1.69	5.17

Figure 51 and **Table 51** show deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and recipient blood type. The proportion of transplants to type O recipients increased after policy implementation from 34.78% to 59.38% and decreased for type A recipients from 60.87% to 25.00%.

Figure 51: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Recipient Blood Type

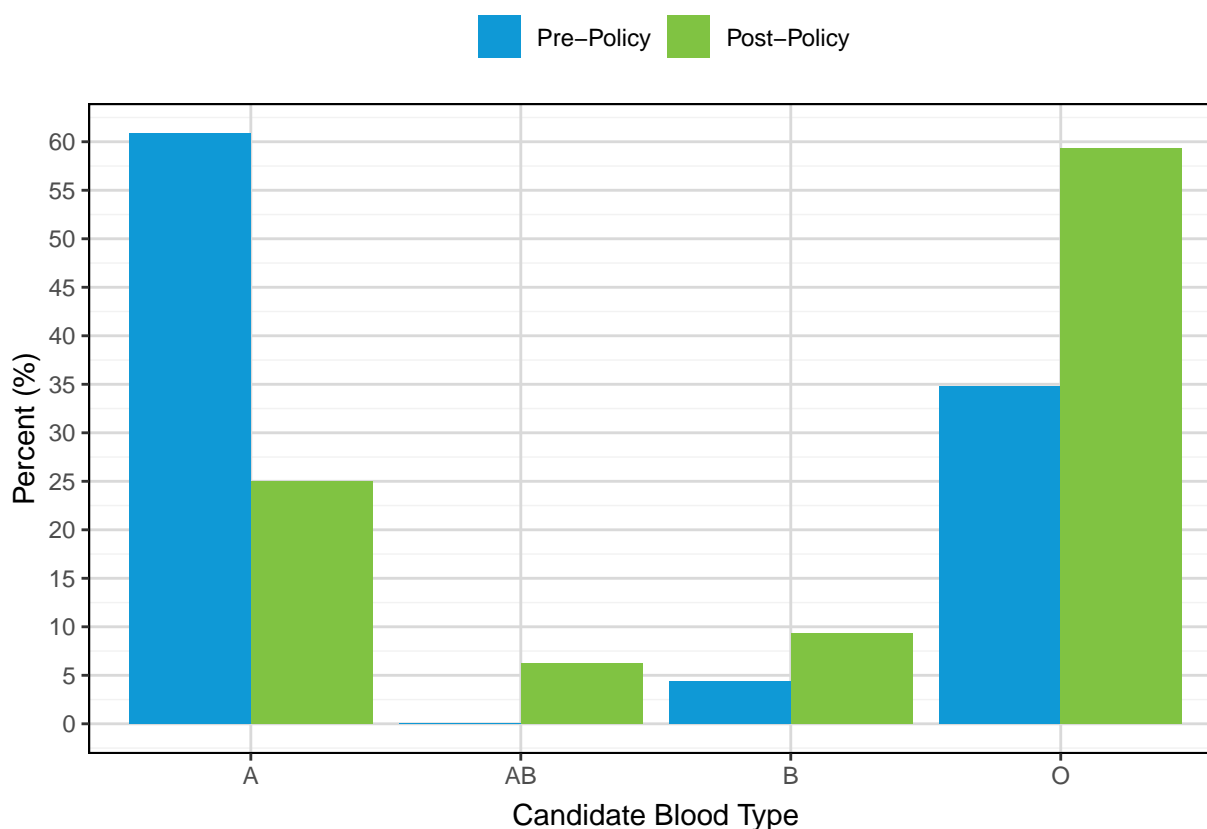


Table 51: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Recipient Blood Type

Blood Type	Pre-Policy		Post-Policy	
	N	%	N	%
A	14	60.87	8	25.00
AB	0	0.00	2	6.25
B	1	4.35	3	9.38
O	8	34.78	19	59.38
Total	23	100.00	32	100.00

Figure 52 and **Table 52** show deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and CPRA at transplant. The proportion recipients with CPRA 0% decreased from 73.91% to 65.62%. The proportion of recipients with CPRA 20-79% increased from 4.35% to 15.62% after policy implementation, though counts remain very small.

Figure 52: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and CPRA

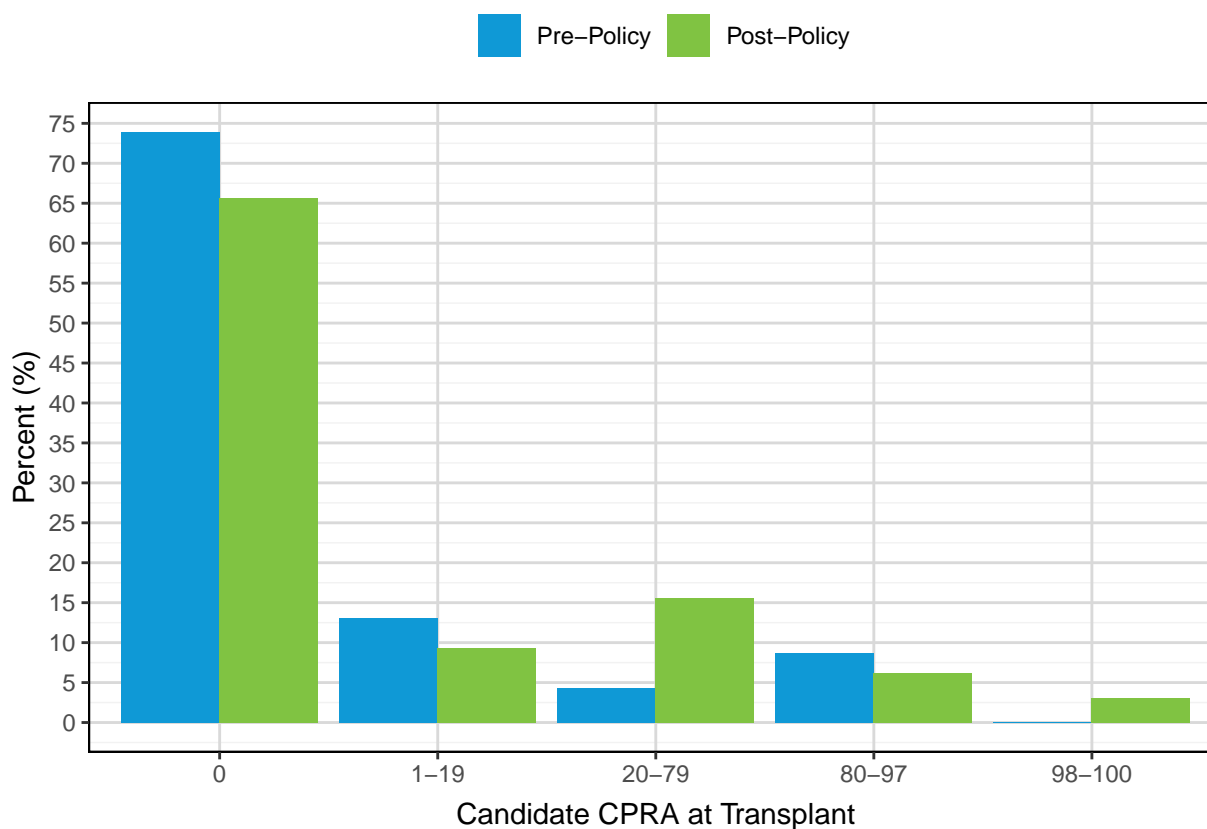


Table 52: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and CPRA

CPRA %	Pre-Policy		Post-Policy	
	N	%	N	%
0	17	73.91	21	65.62
1-19	3	13.04	3	9.38
20-79	1	4.35	5	15.62
80-97	2	8.70	2	6.25
98-100	0	0.00	1	3.12
Total	23	100.00	32	100.00

Figure 53 and **Table 53** show deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and level of HLA mismatch. The proportion of ABDR mismatch level 3 and 5 transplants increased after policy implementation, 0% to 21.74% and 12.50% to 43.48%. The proportion of ABDR mismatch level 4 transplants decreased after policy implementation, from 50.00% to 8.70%.

Figure 53: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and HLA Mismatch

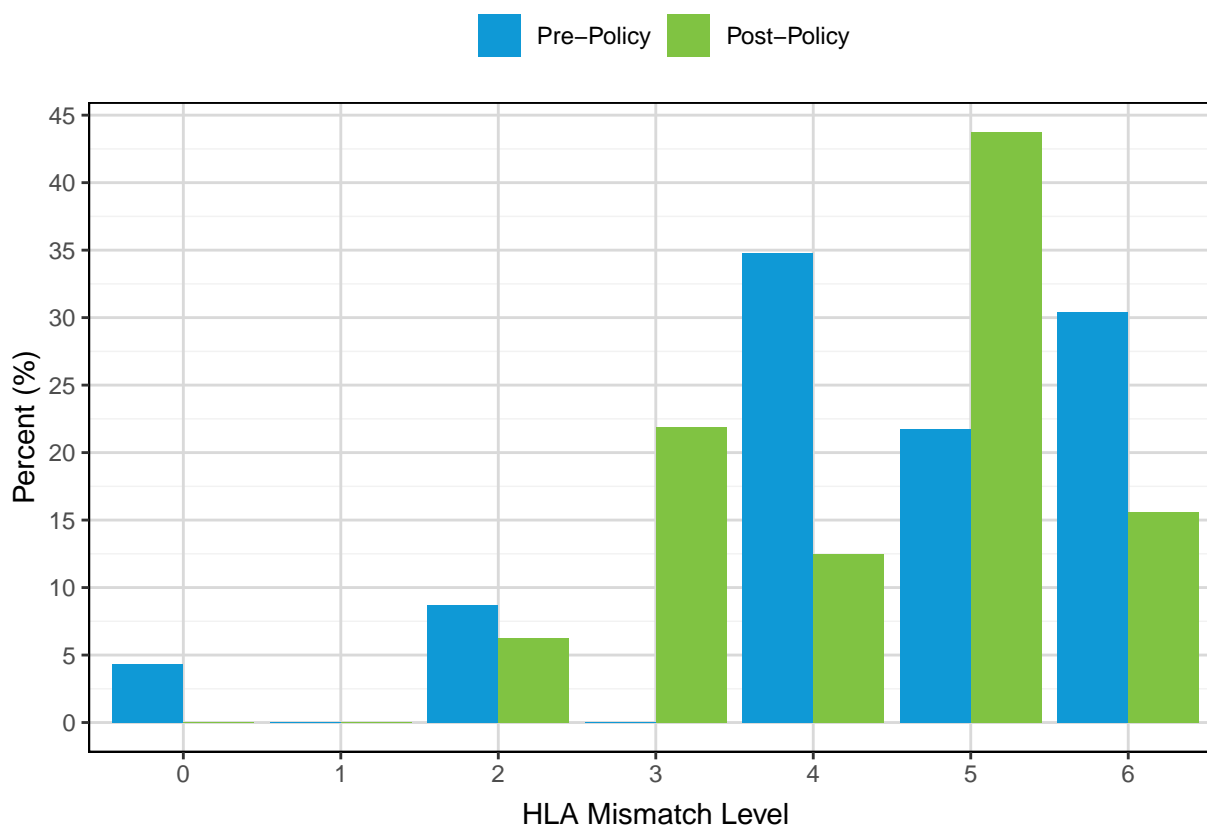


Table 53: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and HLA Mismatch

HLA Mismatch Level	Pre-Policy		Post-Policy	
	N	%	N	%
0	1	4.35	0	0.00
1	0	0.00	0	0.00
2	2	8.70	2	6.25
3	0	0.00	7	21.88
4	8	34.78	4	12.50
5	5	21.74	14	43.75
6	7	30.43	5	15.62
Total	23	100.00	32	100.00

Figure 54 and **Table 54** show deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and primary diagnosis. The proportion of transplants to recipients diagnosed with type 1 diabetes mellitus increased from 47.83% to 62.50%.

Figure 54: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Diagnosis

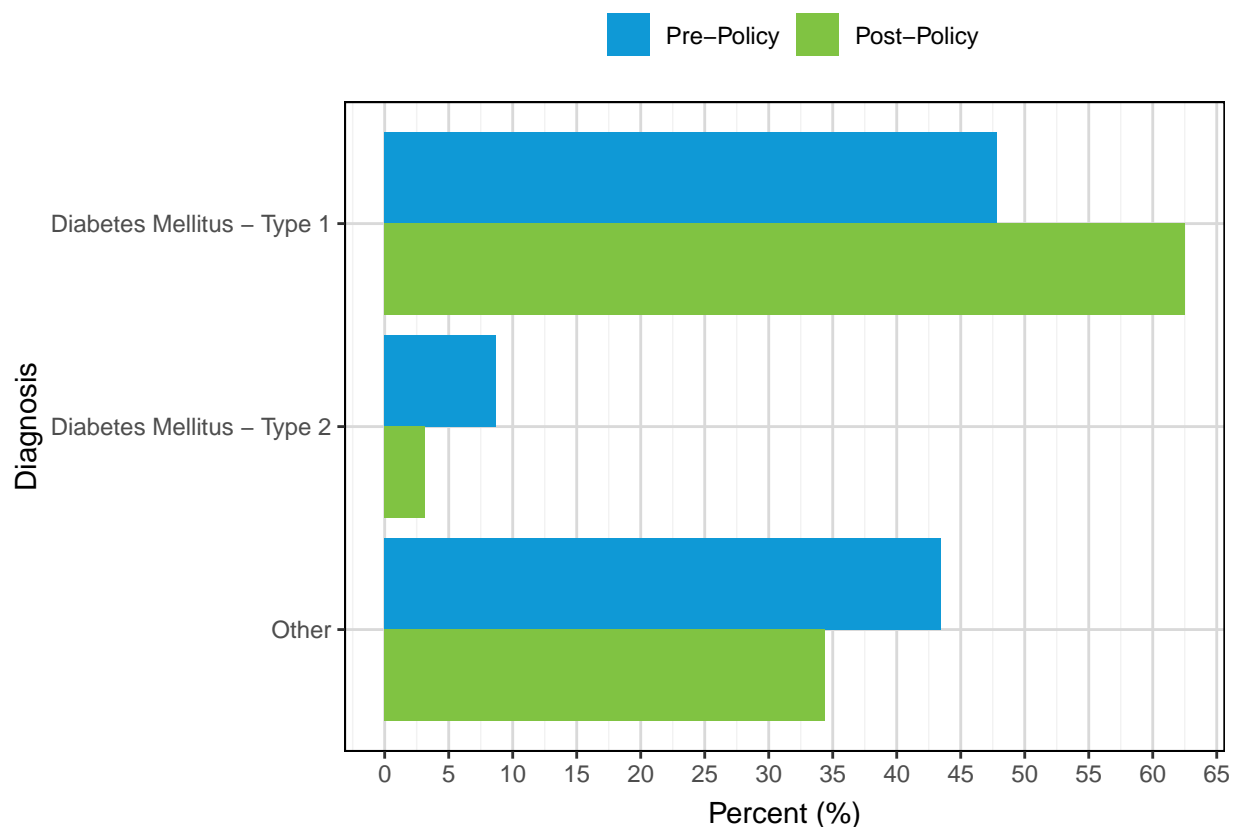


Table 54: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Diagnosis

Diagnosis	Pre-Policy		Post-Policy	
	N	%	N	%
Diabetes Mellitus - Type 1	11	47.83	20	62.50
Diabetes Mellitus - Type 2	2	8.70	1	3.12
Other	10	43.48	11	34.38
Total	23	100.00	32	100.00

Figure 55 and **Table 55** show deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and donor DCD status. There were no DCD pancreas transplants in pre-policy and one DCD pancreas transplant in post-policy.

Figure 55: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and DCD Status

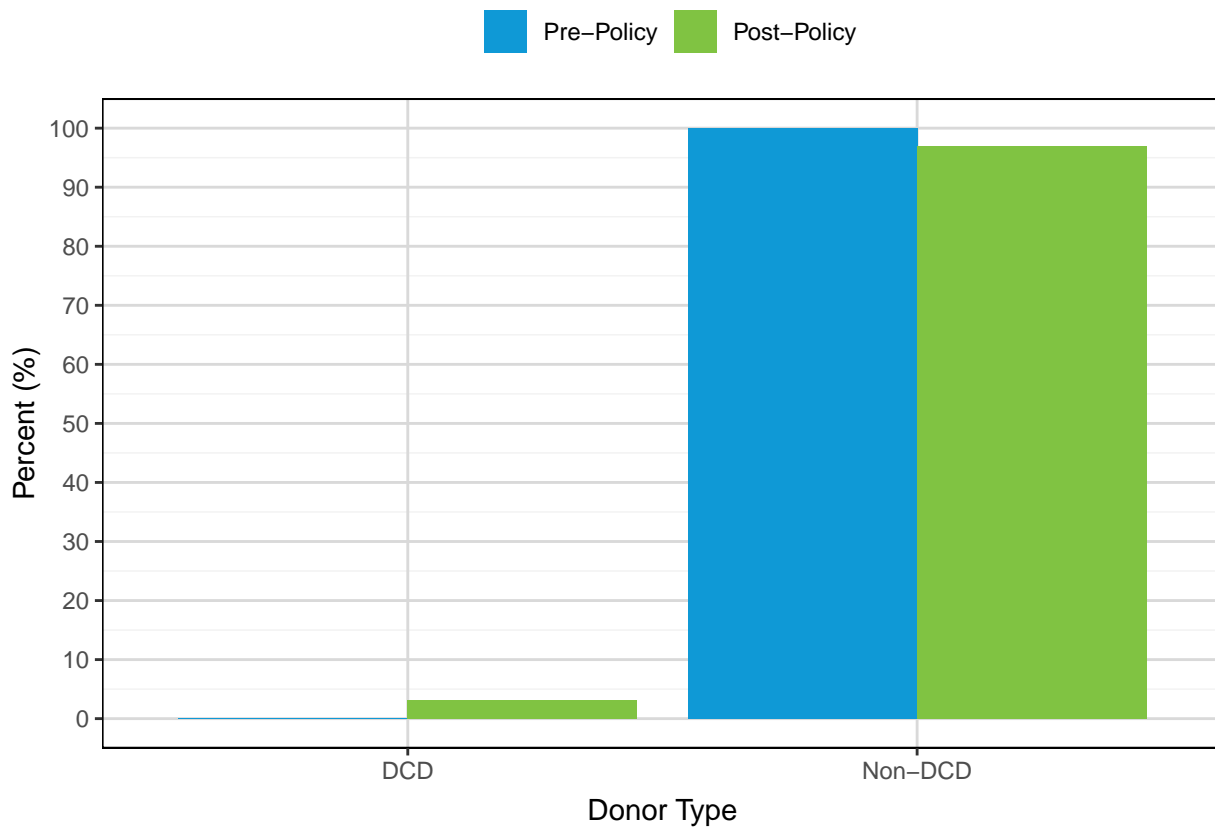


Table 55: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and DCD Status

DCD Donor	Pre-Policy		Post-Policy	
	N	%	N	%
DCD	0	0.00	1	3.12
Non-DCD	23	100.00	31	96.88
Total	23	100.00	32	100.00

Figure 56 and **Table 56** show deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and donor distance from donor hospital. The proportion of transplants within 250 NM and outside of 250 NM were similar pre- and post-policy implementation.

Figure 56: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Distance from Donor Hospital

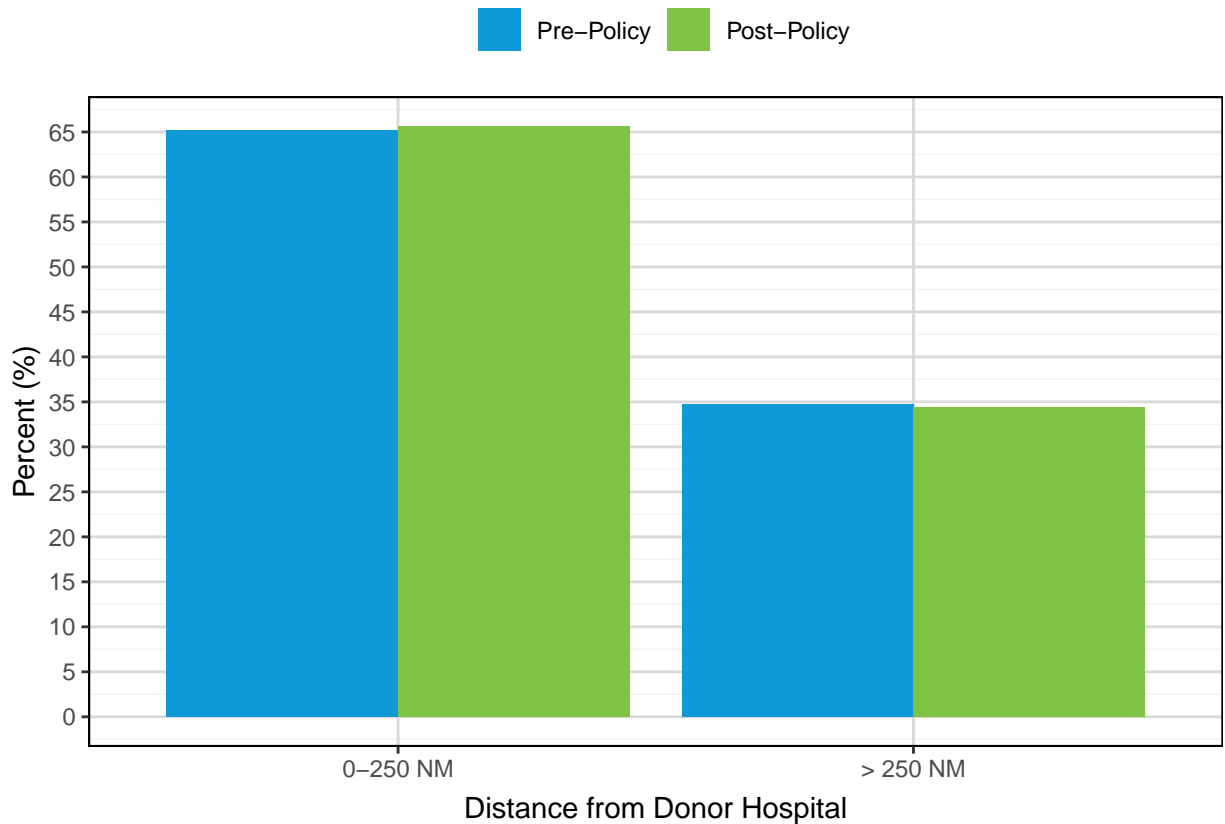


Table 56: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Distance from Donor Hospital

DCD Donor	Pre-Policy		Post-Policy	
	N	%	N	%
0-250 NM	15	65.22	21	65.62
> 250 NM	8	34.78	11	34.38
Total	23	100.00	32	100.00

Figure 57 and **Table 57** show deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and share type. The proportion of transplants using organs procured in the same DSA as the transplant hospital decreased from 47.83% to 34.38% after the policy change. The proportion of national shares increased from 34.78% to 46.8%.

Figure 57: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Share Type

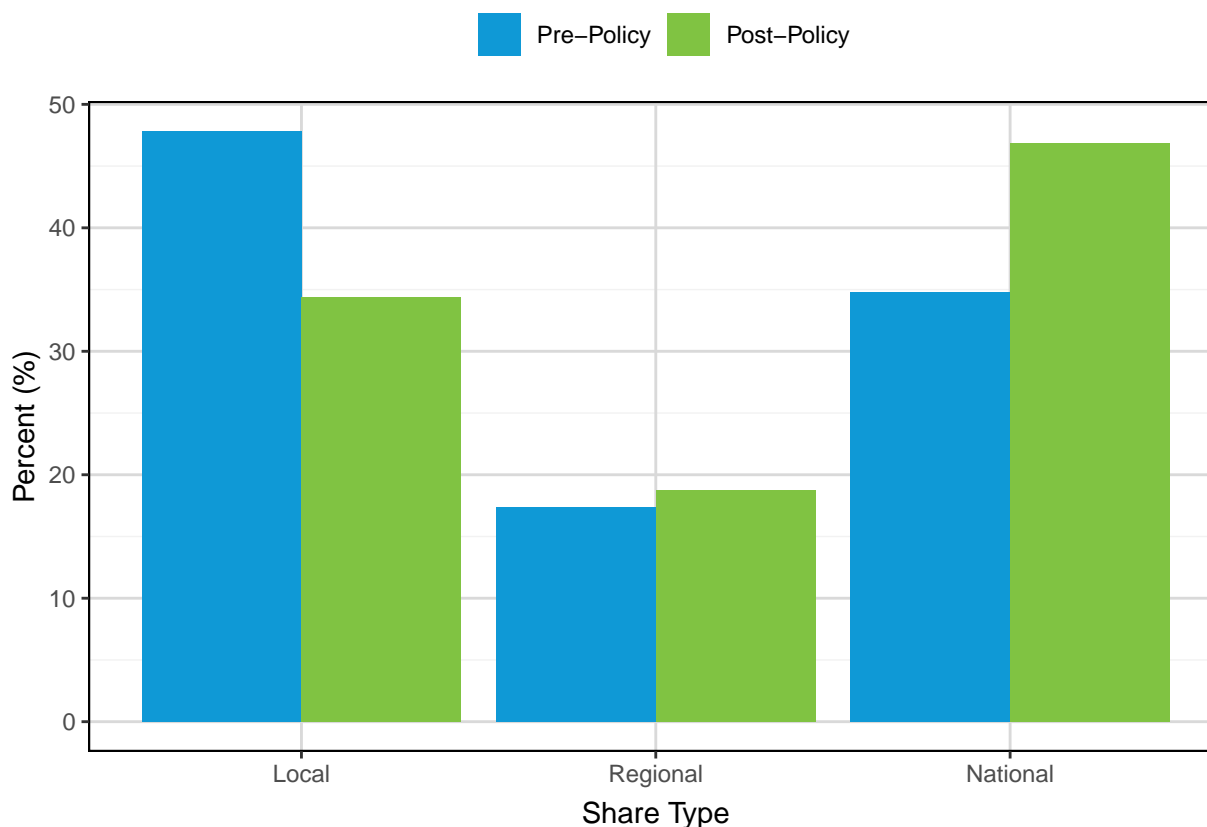


Table 57: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Share Type

Share Type	Pre-Policy		Post-Policy	
	N	%	N	%
Local	11	47.83	11	34.38
Regional	4	17.39	6	18.75
National	8	34.78	15	46.88
Total	23	100.00	32	100.00

Figure 58 and **Table 58** show the distribution of distance in NM from donor hospital for deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era. Median distance from donor hospital decreased from 176 NM to 119 NM after policy implementation.

Figure 58: Distribution of Distance from Donor Hospital for Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era

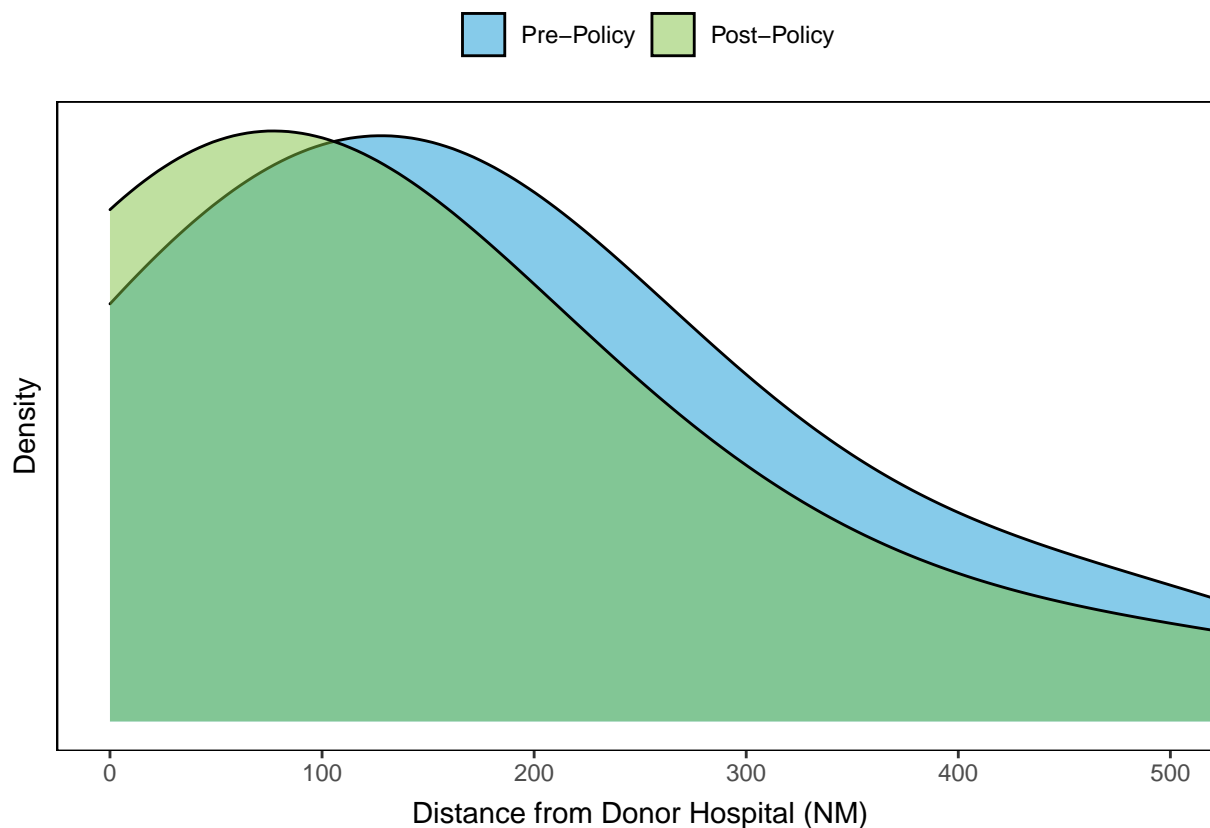


Table 58: Distribution of Distance from Donor Hospital for Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	23	0	0	110.50	176	332.7391	408.00	1653
Post-Policy	32	0	0	49.25	119	317.3750	410.75	1397

Figure 59 and **Table 59** show deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and OPTN region. The volume of pancreas transplants varied by Regions and policy era.

Figure 59: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Region

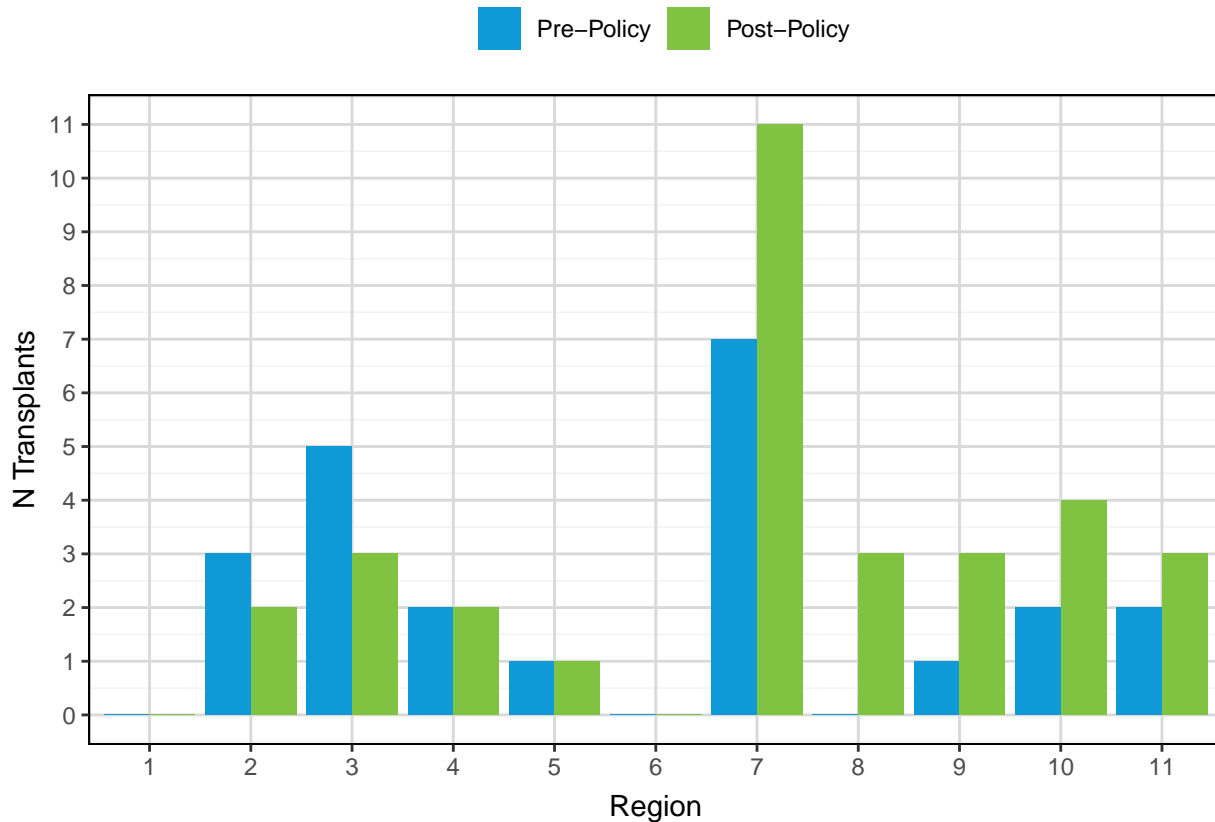


Table 59: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Region

Region	Pre-Policy		Post-Policy	
	N	%	N	%
1	0	0.00	0	0.00
2	3	13.04	2	6.25
3	5	21.74	3	9.38
4	2	8.70	2	6.25
5	1	4.35	1	3.12
6	0	0.00	0	0.00
7	7	30.43	11	34.38
8	0	0.00	3	9.38
9	1	4.35	3	9.38
10	2	8.70	4	12.50
11	2	8.70	3	9.38
Total	23	100.00	32	100.00

Table 60 shows deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and DSA. The number of transplants increased in 16 DSAs after policy implementation, and the number of transplants decreased in 9 DSAs.

Table 60: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and DSA

DSA	Pre-Policy		Post-Policy	
	N	%	N	%
ALOB	1	4.35	1	3.12
AROR	1	4.35	0	0.00
AZOB	0	0.00	1	3.12
CADN	1	4.35	0	0.00
CAOP	0	0.00	1	3.12
DCTC	1	4.35	0	0.00
FLFH	1	4.35	2	6.25
FLMP	1	4.35	3	9.38
FLUF	1	4.35	0	0.00
FLWC	1	4.35	1	3.12
ILIP	0	0.00	4	12.50
INOP	3	13.04	1	3.12
MDPC	0	0.00	1	3.12
MIOP	0	0.00	1	3.12
MNOP	2	8.70	0	0.00
MWOB	1	4.35	1	3.12
NCNC	0	0.00	1	3.12
NJTO	0	0.00	1	3.12
NYAP	0	0.00	1	3.12
NYRT	0	0.00	1	3.12
OHLB	1	4.35	1	3.12
OHOV	1	4.35	0	0.00
ORUO	0	0.00	1	3.12
SCOP	1	4.35	0	0.00
TNDS	1	4.35	1	3.12
TNMS	0	0.00	1	3.12
TXGC	1	4.35	2	6.25
TXSA	0	0.00	1	3.12
TXSB	2	8.70	0	0.00
WALC	1	4.35	1	3.12
WIUW	1	4.35	3	9.38
Total	23	100.00	32	100.00

Table 61 shows deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and transplant center. The number of transplants increased at 13 centers after policy implementation, and the number of transplants decreased at 8 centers.

Table 61: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and Transplant Center

Transplant Center	Pre-Policy		Post-Policy	
	N	%	N	%
CACS-TX1	0	0.00	1	3.12
CASU-TX1	1	4.35	0	0.00
DCGU-TX1	2	8.70	1	3.12
FLJM-TX1	3	13.04	2	6.25
FLSL-TX1	2	8.70	1	3.12
ILNM-TX1	0	0.00	3	9.38
ILPL-TX1	0	0.00	1	3.12
ILUC-TX1	1	4.35	0	0.00
INIM-TX1	2	8.70	2	6.25
MNMC-TX1	1	4.35	1	3.12
MNUM-TX1	1	4.35	1	3.12
MOBH-TX1	0	0.00	2	6.25
NCBG-TX1	0	0.00	1	3.12
NEUN-TX1	0	0.00	1	3.12
NJSB-TX1	0	0.00	1	3.12
NYCP-TX1	1	4.35	1	3.12
NYEC-TX1	0	0.00	1	3.12
NYNY-TX1	0	0.00	1	3.12
OHCC-TX1	0	0.00	2	6.25
PACH-TX1	1	4.35	0	0.00
SCMU-TX1	2	8.70	1	3.12
TNMH-TX1	0	0.00	1	3.12
TXHS-TX1	0	0.00	1	3.12
TXSW-TX1	1	4.35	1	3.12
TXTX-TX1	1	4.35	0	0.00
WIUW-TX1	4	17.39	5	15.62
Total	23	100.00	32	100.00

Table 62 shows deceased donor pancreas transplants from January 15, 2021 to May 14, 2021 by policy era and state. The number of transplants increased in 9 states after policy implementation, and the number of transplants decreased in 4 states.

Table 62: Deceased Donor Pancreas Transplants from January 15, 2021-May 14, 2021 by Policy Era and State

State	Pre-Policy		Post-Policy	
	N	%	N	%
California	1	4.35	1	3.12
Dist. Of Columbia	2	8.70	1	3.12
Florida	5	21.74	3	9.38
Illinois	1	4.35	4	12.50
Indiana	2	8.70	2	6.25
Minnesota	2	8.70	2	6.25
Missouri	0	0.00	2	6.25
Nebraska	0	0.00	1	3.12
New Jersey	0	0.00	1	3.12
New York	1	4.35	3	9.38
North Carolina	0	0.00	1	3.12
Ohio	0	0.00	2	6.25
Pennsylvania	1	4.35	0	0.00
South Carolina	2	8.70	1	3.12
Tennessee	0	0.00	1	3.12
Texas	2	8.70	2	6.25
Wisconsin	4	17.39	5	15.62
Total	23	100.00	32	100.00

Utilization and Efficiency of Allocation

Figure 60 and Table 63 show total pancreas donors recovered from January 15, 2021 to May 14, 2021 by policy era. There were 213 pancreas donors recovered pre-policy, and another 237 recovered post-policy.

Figure 60: Pancreas Donors Recovered January 15, 2021 - May 14, 2021 by Policy Era

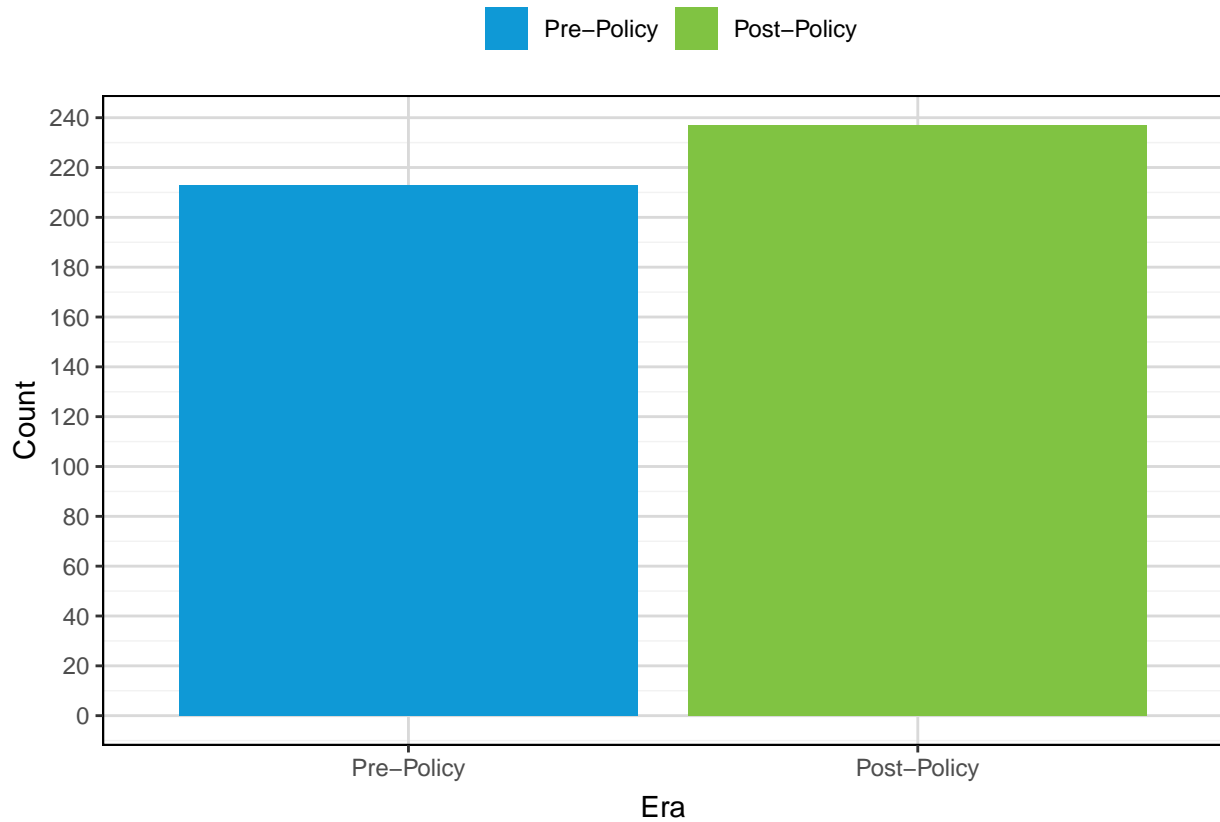
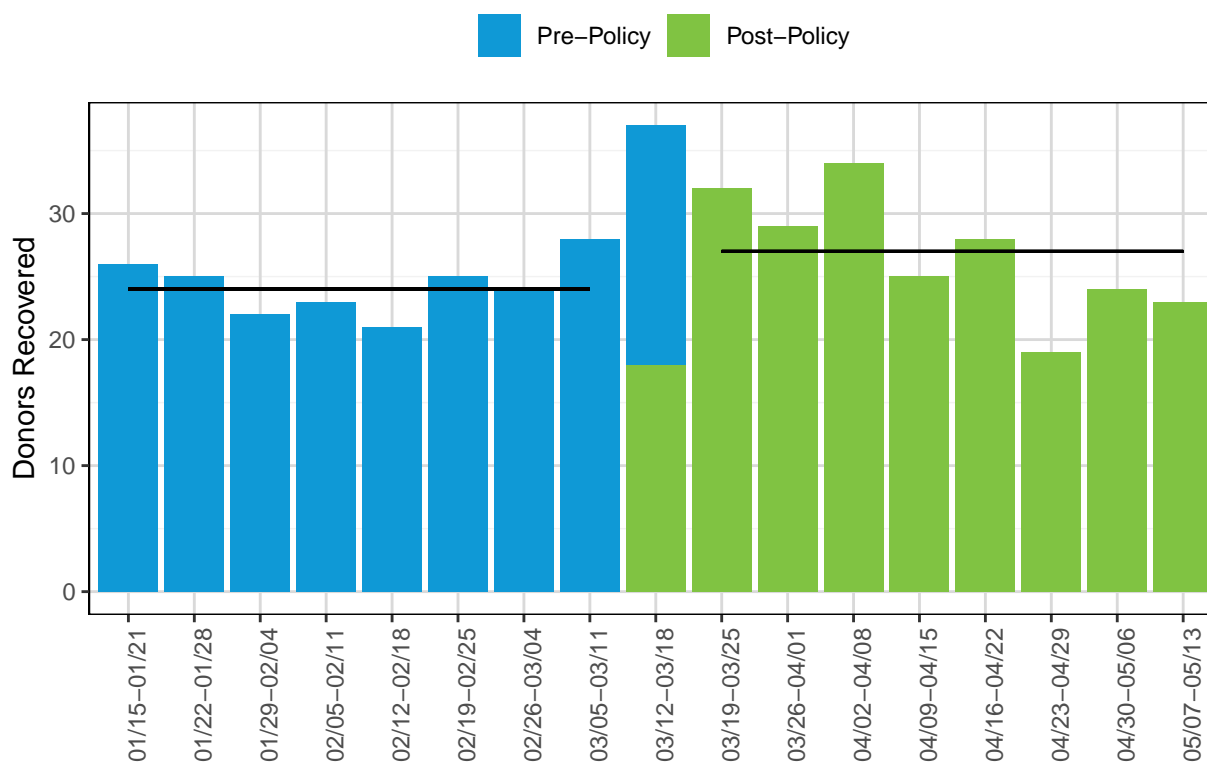


Table 63: Pancreas Donors Recovered January 15, 2021 - May 14, 2021 by Policy Era

Era	Pancreas Donors Recovered
Pre-Policy	213
Post-Policy	237

Figure 61 and **Table 64** show weekly deceased pancreas donors recovered from January 15, 2021 to May 13, 2021. The average number of pancreas donors recovered per week was 24 pre-policy and 27 post-policy.

Figure 61: Weekly Deceased Pancreas Donors Recovered January 15, 2021-May 13, 2021 by Policy Era



Lines represent the average number of donors per week.

Table 64: Weekly Deceased Pancreas Donors Recovered January 15, 2021-May 13, 2021

Weeks	Donors Recovered
01/15-01/21	26
01/22-01/28	25
01/29-02/04	22
02/05-02/11	23
02/12-02/18	21
02/19-02/25	25
02/26-03/04	24
03/05-03/11	28
03/12-03/18	37
03/19-03/25	32
03/26-04/01	29
04/02-04/08	34
04/09-04/15	25
04/16-04/22	28
04/23-04/29	19
04/30-05/06	24
05/07-05/13	23

Figure 62 and **Table 65** show deceased pancreas donors recovered from January 15, 2021 to May 14, 2021 by DCD status and policy era. There was a slight increase in the proportion of DCD donors recovered post-implementation from 3.76% to 5.06%, a total increase of 4 donors.

Figure 62: Deceased Pancreas Donors Recovered January 15, 2021 - May 14, 2021 by DCD Status and Policy Era

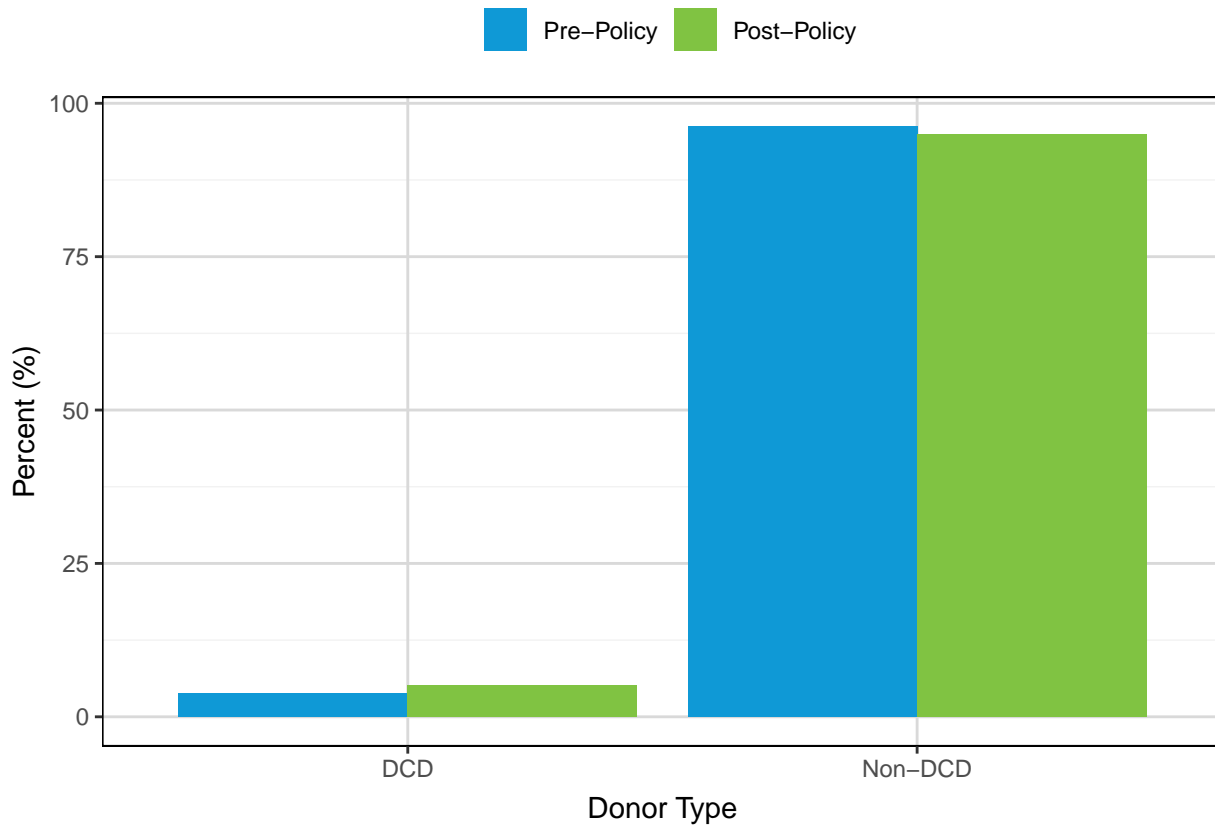


Table 65: Deceased Pancreas Donors Recovered January 15, 2021 - May 14, 2021 by DCD Status and Policy Era

Donor Type	Pre-Policy		Post-Policy	
	N	%	N	%
DCD	8	3.76	12	5.06
Non-DCD	205	96.24	225	94.94
Total	213	100.00	237	100.00

Figure 63 and **Table 66** show deceased pancreas donors recovered from January 15, 2021 to May 14, 2021 by age and policy era. The total number of donors increased in all age groups after policy implementation except 18-34 years group. The proportion of donors aged <18 years increased from 14.08% to 20.68% after the policy change. The proportion of donors aged 18 to 34 years decreased from 70.89% to 63.71%, but volume remained stable.

Figure 63: Deceased Pancreas Donors Recovered January 15, 2021 - May 14, 2021 by Donor Age and Policy Era

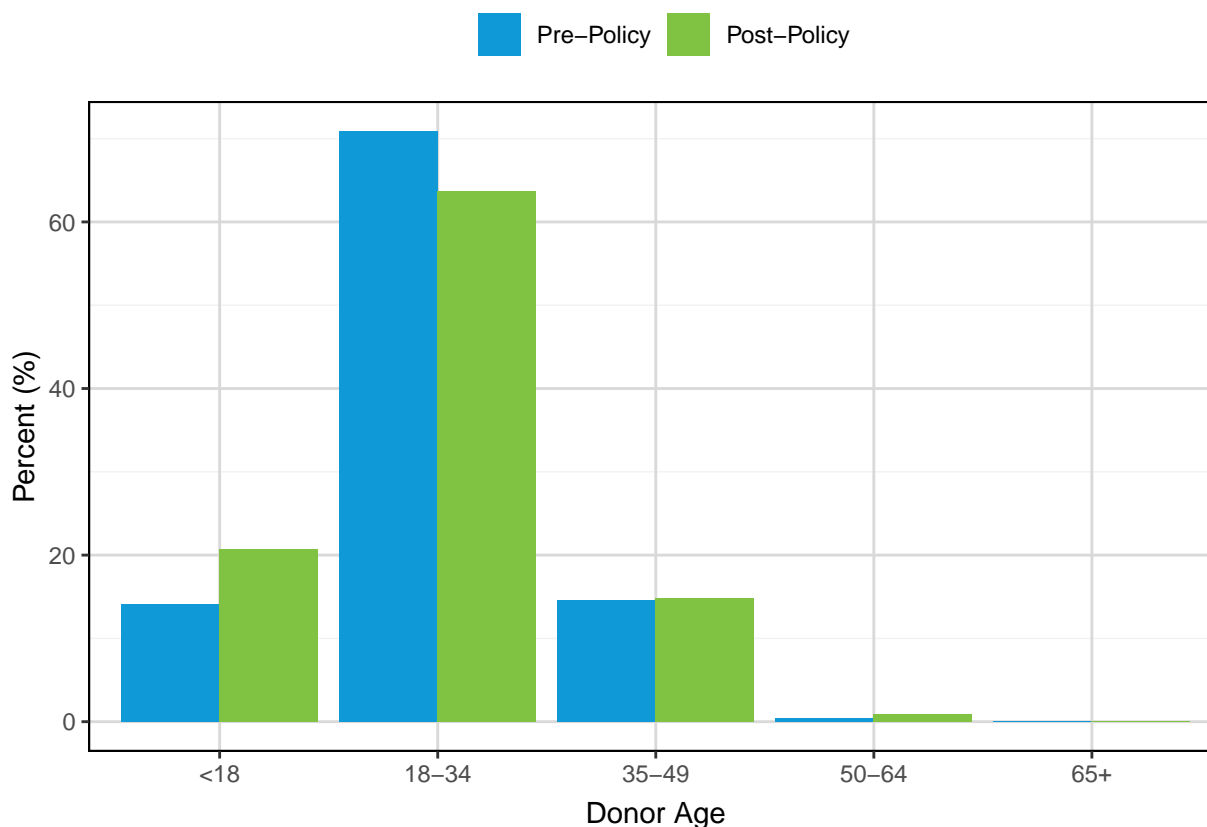


Table 66: Deceased Pancreas Donors Recovered January 15, 2021 - May 14, 2021 by Donor Age and Policy Era

Donor Age	Pre-Policy		Post-Policy	
	N	%	N	%
<18	30	14.08	49	20.68
18-34	151	70.89	151	63.71
35-49	31	14.55	35	14.77
50-64	1	0.47	2	0.84
65+	0	0.00	0	0.00
Total	213	100.00	237	100.00

Figure 64 and **Table 67** show discard rates for deceased donor pancreas recovered from January 15, 2021 to May 14, 2021 by policy era. Overall the pancreas discard rate dropped from 27.70% to 18.57% post-policy.

Figure 64: Discard Rates for Deceased Donor Pancreas Recovered January 15, 2021 - May 14, 2021 by Policy Era

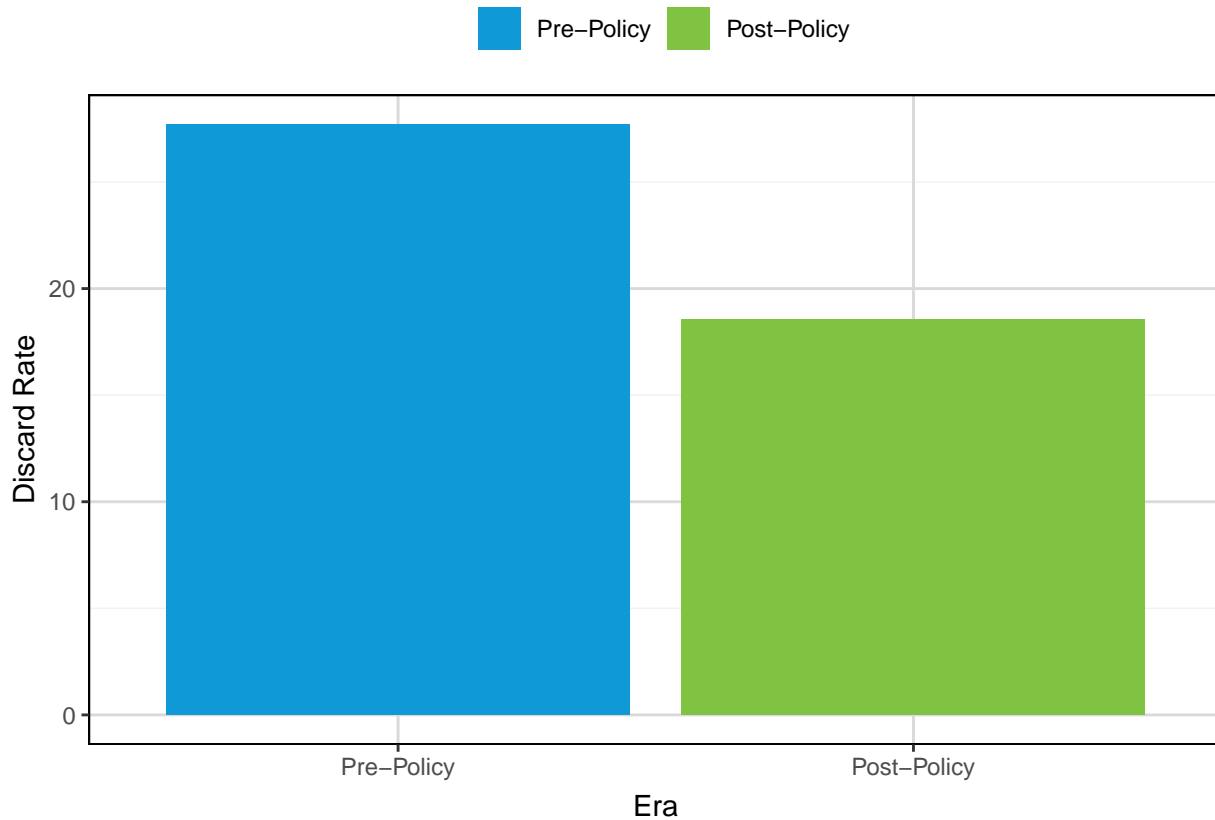


Table 67: Discard Rates for Deceased Donor Pancreas Recovered January 15, 2021 - May 14, 2021 by Policy Era

Era	Pancreata Recovered	Pancreata Not TXed	Discard Rate
Pre-Policy	213	59	27.70
Post-Policy	237	44	18.57

Table 67 shows deceased donor pancreas recovered but not transplanted from January 15, 2021 to May 14, 2021 by discard reason and policy era. There were 103 pancreas discarded and the most common reason for discard both pre- and post-policy implementation was “Other” followed by “Anatomical abnormalities” across both policy eras. The proportion of “Anatomical abnormalities” decreased from 27.12% to 22.73% after policy implementation.

Table 67: Deceased Donor Pancreas Recovered but Not Transplanted January 15, 2021 - May 14, 2021 by Discard Reason and Policy Era

Discard Reason	Pre-Policy		Post-Policy	
	N	%	N	%
Other, specify	23	38.98	17	38.64
Anatomical abnormalities	16	27.12	10	22.73
No recipient located - list exhausted	8	13.56	5	11.36
Diseased organ	2	3.39	5	11.36
Vascular damage	4	6.78	1	2.27
Poor organ function	2	3.39	2	4.55
Organ trauma	1	1.69	2	4.55
Organ not as described	1	1.69	1	2.27
Recipient determined to be unsuitable for TX in OR	2	3.39	0	0.00
Warm ischemic time too long	0	0.00	1	2.27
Missing	0	0.00	0	0.00
Total	59	100.00	44	100.00

Table 68 shows pancreas acceptance rates among matches with at least one kidney-pancreas or pancreas acceptance from January 15, 2021 to May 14, 2021 by policy era and offer type. The number of any pancreas offers increased from 347 to 406 for local and from 892 to 1702 for non-local after policy implementation. Acceptance of local offers, defined as accepted by transplant center within the same DSA as the donor, dropped from 29.11% to 17.49% after policy implementation. Acceptance of non-local offers increased from 4.48% to 6.52%. The non-local acceptance rate increased by 45%, suggesting that the OPTN Pancreas Transplantation Committee's decision to remove the non-local indicator from the KPSAM acceptance model was justified based on anticipated, and now realized, behavior.

Table 68: Pancreas Acceptance Rates Among Matches with at Least one Acceptance January 15, 2021 - May 14, 2021 by Policy Era and Offer Type

Offer Type	Pre-Policy			Post-Policy			Relative Risk
	N Offers	N Accepted	% Accepted	N Offers	N Accepted	% Accepted	
Local	347	101	29.11%	406	71	17.49%	0.60
Non-Local	892	40	4.48%	1702	111	6.52%	1.45

Donors Recovered in Alaska

There were no pancreata recovered and transplanted from deceased donors recovered in Alaska from January 15, 2021 to May 14, 2021.

Facilitated Pancreas Allocation

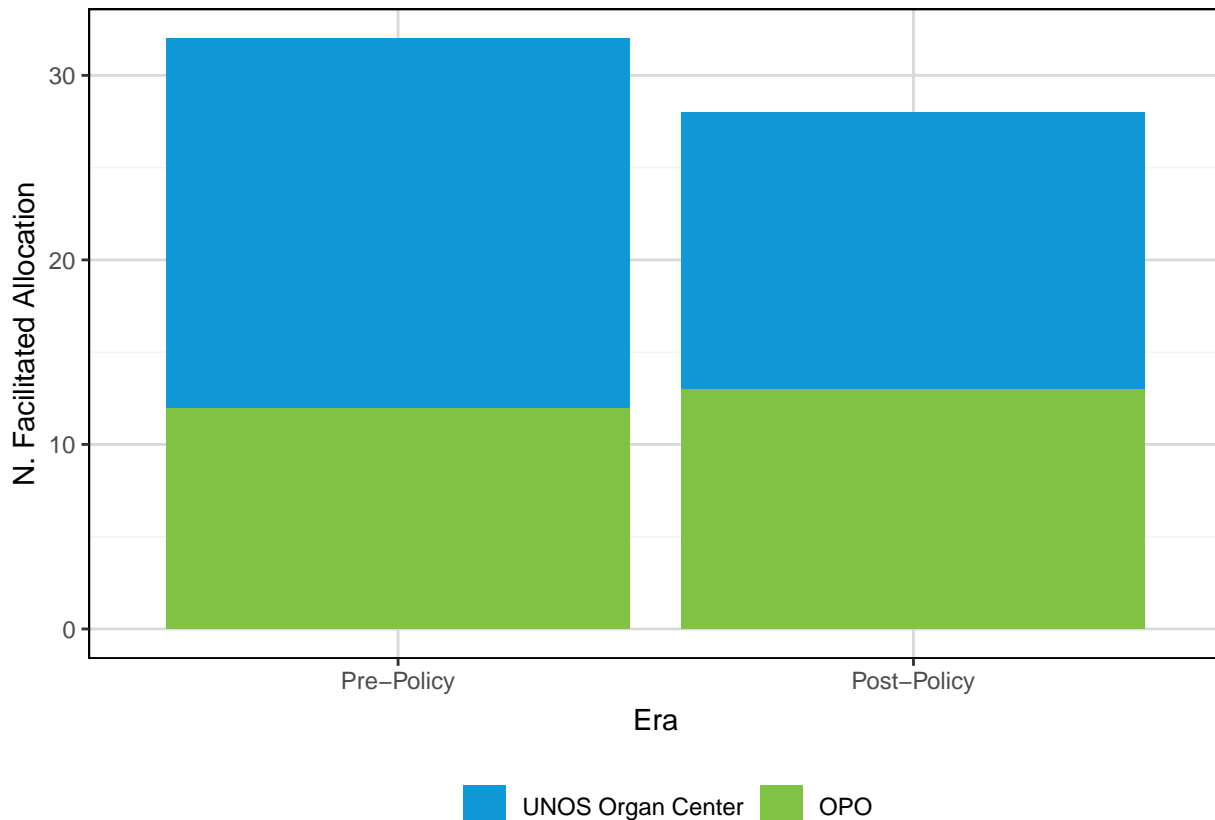
Table 69 shows the number of programs qualified for facilitated placement. Pre-policy, 44 programs qualified for facilitated placement and 53 programs qualified in post-policy. 39 programs qualified for facilitated placement in pre-policy were also qualified in the post-policy period and an additional 14 programs qualified post-policy that did not qualify pre-policy.

Table 69: Number of Programs that Qualified for Facilitated Pancreas Allocation Pre and Post Policy

Qualify in Pre-policy	Qualify in Post-policy		
	Yes	No	Total
Yes	39	5	44
No	14	0	14
Total	53	5	58

Figure 64 and Table 70 show the frequency that facilitated pancreas allocation was used. Pre-policy, OPOs performed 12 and the UNOS Organ Center performed 20 facilitated pancreas placement attempts. Post-policy, OPOs performed 13 and UNOS Organ Center performed 15 facilitated pancreas placement attempts.

Figure 64 and Table 70: Frequency of Facilitated Pancreas Allocation Used by OPOs and UNOS Organ Center Pre and Post Policy



Program Type	Era	N. Facilitated Allocation
Pre-Policy	OPO	12
Pre-Policy	UNOS Organ Center	20
Post-Policy	OPO	13
Post-Policy	UNOS Organ Center	15

Figure 65 show the number of distinct pancreas donors allocated using facilitated placement. Pancreata from 29 donors and 26 donors were allocated using facilitated pancreas allocation during pre- and post-policy respectively.

Figure 65: Number of Distinct Pancreas Donors Allocated using Facilitated Pancreas Allocation Pre and Post policy

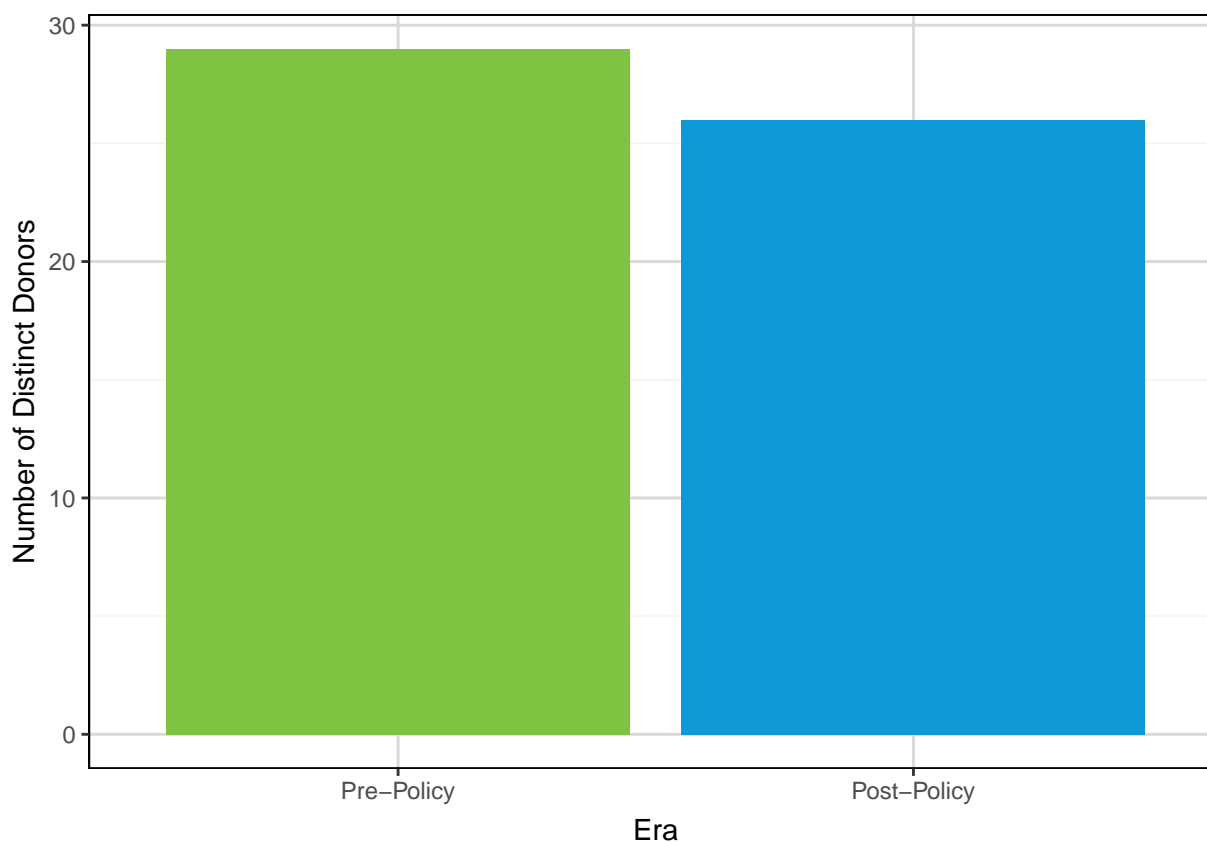


Table 71 shows the number of distinct donors and pancreas transplants that occurred using facilitated allocation. During pre-policy, two pancreata from UNOS Organ Center were transplanted using facilitated pancreas allocation and one pancreas transplanted occurred from an OPO placement in the post-policy era.

Table 71: Transplant Volumes that Laced with Facilitated Pancreas Allocation by OPOs and Organ Center Pre and Post policy

Era	Program Type	N. Facilitated Pancreas Allocation	N. Transplant
Pre-Policy	OPO	12	0
Pre-Policy	UNOS Organ Center	20	2
Post-Policy	OPO	13	1
Post-Policy	UNOS Organ Center	15	0

Conclusion

Increases in both kidney-pancreas and pancreas transplant, pancreas donors recovered and the offer acceptance rate of non-local offers were observed after the removal of DSA and OPTN Region from kidney-pancreas and pancreas allocation, though may not be attributable to the change in OPTN policy and volumes remain low, specifically for pancreas. Many observed changes for kidney-pancreas, based on early data, show alignment with the KPSAM analysis used during the development of this policy, such as overall increases in kidney-pancreas transplant and various sub-populations. Additionally, pancreas volumes were expected to decrease and counts remain small. The OPTN Pancreas Committee will continue to monitor this policy as data become available.