

OPTN Pancreas Transplantation Committee

Descriptive Data Request

Eliminate Use of DSA and Region from Pancreas Allocation 1 Year Post-Implementation Monitoring Report

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Contents

Executive Summary	3
Background	4
Strategic Plan Goal	4
Committee Request	4
Data and Methods	5
Data Sources	5
Cohort	6
Methods	6
Note on the COVID-19 Pandemic	6
Results	7
Kidney-Pancreas	7
Equity in Access to Transplant	8
Geography	14
Post-Transplant Outcomes	23
Released Organs	26
Pancreas	27
Equity in Access to Transplant	28
Geography	34
Post-Transplant Outcomes	43
Released Organs	45
Efficient Allocation and Utilization of Organs	46
Donors Recovered in Alaska	55

Facilitated Pancreas Allocation	55
Conclusion	57
Appendix	58
Additional Kidney-Pancreas Information	58
Additional Pancreas Information	112
Additional Information on Efficient Allocation and Utilization of Organs	142

Executive Summary

This report presents data describing the U.S. 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 March 15, 2020 and March 14, 2022. Data are as of June 10, 2022 and are subject to change based on future submission or correction.

Equity in Access to Transplant

Kidney-pancreas (KP) and pancreas (PA) transplant volumes were similar in the 1 year pre- vs post-policy (KP: 820 vs 816; PA: 134 vs 138), despite kidney-pancreas simulated allocation model (KPSAM) projections of an increase in KP and a corresponding decrease in PA transplants. The overall KP transplant rate decreased slightly post-policy (102 vs 100 transplants per 100 active patient years) (**Figure 1 & Table 1**), while the overall PA transplant rate increased (63 vs 66 transplants per 100 active patient years) (**Figure 19 & Table 17**); these changes were not statistically significant. There were no statistically significant differences in transplant rates by candidate age group, gender, race/ethnicity, CPRA at listing, or blood type after policy implementation for KP (**Figures 2-6 & Tables 2-6**) or PA (**Figures 20-24 & Tables 18-22**).

Geography

As expected, more transplants occurred at hospitals outside the recovering OPO's DSA after implementation (KP: 33% vs 58%; PA: 59% vs 68%) (**Figure 9 & Table 9; Figure 27 & Table 25**), but the majority stayed within 250 NM of the donor hospital (KP: 80% vs 85%; PA: 57% vs 63%) (**Figure 7 & Table 7; Figure 25 & Table 23**). Changes in transplant volume varied across OPTN region (**Figure 10 & Table 10; Figure 28 & Table 26**). Median distance from donor hospital to transplant hospital increased from 79 NM to 110 NM for KP (**Figure 8 & Table 8**), while median distance decreased from 174 NM to 138 NM for PA (**Figure 26 & Table 24**). Median pancreas preservation time increased from 9.2 to 10.5 hours for KP (**Figure 15 & Table 12**); there was no change in median preservation time for PA (8.1 hours) (**Figure 29 & Table 30**).

Post-Transplant Outcomes

There were no statistically significant differences in the probability of patient, kidney graft, or pancreas graft survival for KP recipients at six months post-transplant after policy implementation (**Figures 16-18 & Tables 13-15**). Similarly, there were no statistically significant differences in the probability of patient or pancreas graft survival for PA recipients at six months post-transplant (**Figures 30-31 & Tables 31-32**).

Efficient Utilization and Allocation of Organs

The overall pancreas discard rate increased from 22.7% to 26.5% after policy implementation (**Figure 32 & Table 34**). The overall offer rate from pancreas/kidney-pancreas match runs increased from approximately 12 to 14 offers per active patient year (**Figure 33 & Table 36**). The overall offer acceptance rate decreased from 79 to 68 acceptances per 1000 offers (**Table 36 & Figure 34**). The median sequence number of final acceptor increased from 3 (IQR: 1-9) to 5 (IQR: 2-15) after implementation (**Figure 37 & Table 39**).

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. Since the DSA was no longer used to allocate pancreata, the policy for facilitated pancreas allocation was also changed.

Two supplemental policies went into effect the same day. 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. The specific procedure is dependent on the organ in need of reallocation.

This report describes the impact of these policy changes in the 1 year since implementation.

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 the OPTN Computer System and compared to an appropriate pre-policy cohort to assess performance before and after implementation of this policy.

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. % 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 hospital, 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 % of programs that qualify for facilitated pancreas allocation
2. Frequency of facilitated allocation use by OPOs
3. Transplant volumes that placed with facilitated pancreas allocation

Alaska

1. N and % of kidney and pancreas donors recovered in Alaska
2. N and % of kidneys and pancreata recovered in Alaska
3. N and % of kidney and pancreas transplants performed from donors recovered in Alaska
4. N and % of kidneys and pancreata transplanted inside/outside fixed circle of Sea-Tac.
5. Distribution of kidney and 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 % of organs with a final acceptance
 - N and % 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 10, 2022. Candidate information were submitted through the OPTN Waiting List and on the Transplant Candidate Registration (TCR). Recipient and transplant data were submitted on the Transplant Recipient Registration (TRR) and Transplant Recipient Follow-up (TRF). Donor data were submitted in the OPTN Donor Data and Matching System and on the Deceased Donor Registration (DDR). Match run data analyzed came from the OPTN Donor Data and Matching System. Data are subject to change based on future submission or correction.

Cohort

All kidney-pancreas and pancreas alone registrations listed, ever waiting, or transplanted between March 15, 2020 and March 14, 2022 were included in this analysis, as were all deceased kidney-pancreas or 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: March 15, 2020 to March 14, 2021
- Post-Policy: March 15, 2021 to March 14, 2022

Methods

Waiting list mortality rates were defined as the number of deaths on the waiting list divided by the total amount of time on the waiting list (active or inactive) for registrations ever waiting between March 15, 2020 and March 14, 2022. These results are presented as deaths per 100 patient years. Deaths were defined as:

- Removals from the waiting list due to death
- Death within 14 days of waiting list removal as reported to the OPTN or identified via verified external death data sources

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

To determine the disposition of pancreata from pancreas matches with a final acceptance, we identified the first pancreas acceptance for each donor's pancreas. To determine the disposition of kidneys and pancreata from kidney-pancreas matches with a final acceptance, we identified the first kidney-pancreas or pancreas acceptance for each donor's pancreas and left or right kidney. 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. Each accepted kidney and pancreas were then classified as being transplanted with the initially accepting patient, a different patient at the accepting center, a patient at a different center, discarded, or not recovered.

Offer rates were defined as the number of offers from pancreas/kidney-pancreas match runs divided by the total amount of time in active status on the waiting list for pancreas or kidney-pancreas registrations ever waiting during the study period. These results are presented as offers per active patient year. Offers include both pancreas alone and kidney-pancreas offers. This analysis only includes match runs with a final acceptance, and does not include offers after the final acceptance.

Acceptance rates were defined as the number of offers with a final acceptance divided by the total number of offers from pancreas/kidney-pancreas match runs. These results are presented as acceptances per 1000 offers.

Unadjusted post-transplant patient and graft survival were examined using Kaplan-Meier methodology. The cohort for survival analyses was restricted to transplant recipients with at least 6 months of follow-up time (transplants performed on or before September 30, 2021).

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 the 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 may be challenging to determine.

Results

Kidney-Pancreas

This section describes key metrics for monitoring the removal of DSA and OPTN region from KP allocation. Additional KP waiting list, transplant, and post-transplant outcomes data may be found in the **Appendix**.

The overall KP transplant rate decreased slightly post-policy (102 vs 100 transplants per 100 active patient years); this decrease was not statistically significant (**Figure 1** and **Table 1**). There were no statistically significant differences in transplant rates by candidate age group, gender, race/ethnicity, CPRA at listing, or blood type after policy implementation (**Figures 2-6** & **Tables 2-6**). Changes in transplant volume varied across OPTN region (**Figure 10** & **Table 10**).

As expected, more KP transplants occurred at hospitals outside the recovering OPO's DSA after implementation (33% vs 58%) (**Figure 9** & **Table 9**), but the majority stayed within 250 NM of the donor hospital (80% vs 85%) (**Figure 7** & **Table 7**). Median distance from donor hospital to transplant hospital increased from 79 NM to 110 NM (**Figure 8** & **Table 8**). Median kidney cold ischemic time increased from 9.2 to 10.4 hours (**Figure 14** & **Table 11**) and median pancreas preservation time (time between procurement cross-clamp and recipient organ reperfusion) increased from 9.2 to 10.5 hours (**Figure 15** & **Table 12**).

There were no statistically significant differences in the probability of patient, kidney graft, or pancreas graft survival for KP recipients at 6 months post-transplant after policy implementation (**Figures 16-18** & **Tables 13-15**).

Equity in Access to Transplant

Figure 1 and **Table 1** show deceased donor transplants per 100 active patient years for kidney-pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era. The overall deceased donor kidney-pancreas transplant rate decreased slightly post-policy from 102 to 100 transplants per 100 active patient years. This decrease was not statistically significant.

Figure 1: Transplants per 100 Active Patient Years for Kidney-Pancreas Registrations Ever Waiting March 15, 2020-March 14, 2022 by Policy Era

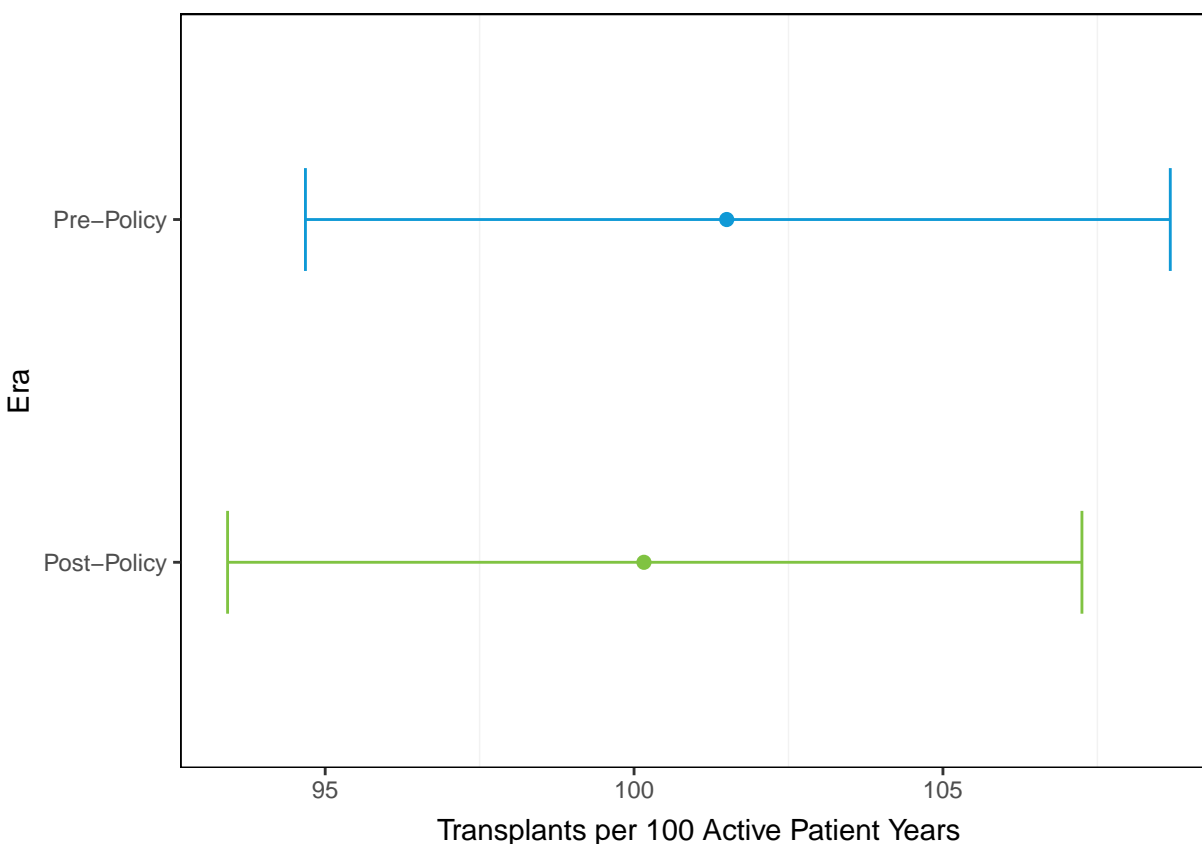
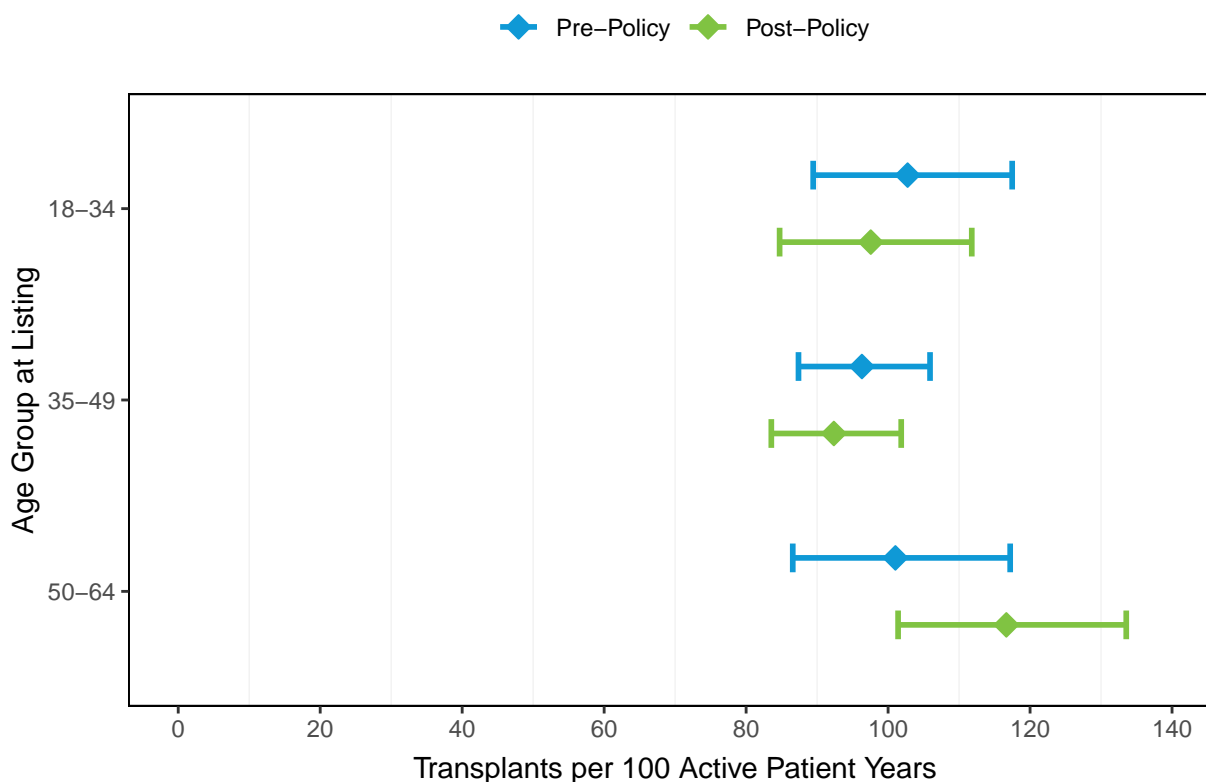


Table 1: Transplants per 100 Active Patient Years for Kidney-Pancreas Registrations Ever Waiting March 15, 2020-March 14, 2022 by Policy Era

Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
Pre-Policy	2072	822	101.50	(94.68, 108.68)
Post-Policy	2137	821	100.16	(93.42, 107.25)

Figure 2 and **Table 2** show deceased donor transplants per 100 active patient years for kidney-pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and age at listing. The deceased donor kidney-pancreas transplant rate increased post-policy for the 50-64 age group, while the transplant rates for the 0-17, 18-34, 35-49, and 65+ age groups decreased. These changes were not statistically significant.

Figure 2: Transplants per 100 Active Patient Years for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Age at Listing



0-17 and 65+ age groups omitted from figure due to small number of events and wide confidence intervals.

Table 2: Transplants per 100 Active Patient Years for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Age at Listing

Age at Listing	Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
0-17	Pre-Policy	7	4	143.00	(38.96, 366.13)
	Post-Policy	4	1	38.79	(0.98, 216.12)
18-34	Pre-Policy	557	214	102.75	(89.45, 117.48)
	Post-Policy	537	207	97.56	(84.72, 111.79)
35-49	Pre-Policy	1121	426	96.31	(87.38, 105.91)
	Post-Policy	1137	402	92.36	(83.55, 101.85)
50-64	Pre-Policy	439	174	101.03	(86.57, 117.2)
	Post-Policy	495	210	116.66	(101.41, 133.55)
65+	Pre-Policy	4	4	364.09	(99.2, 932.21)
	Post-Policy	8	1	46.26	(1.17, 257.75)

Figure 3 and **Table 3** show deceased donor transplants per 100 active patient years for kidney-pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and gender. The transplant rate for female registrations decreased post-policy from 91 to 87 transplants per 100 active patient years, while the transplant rate for male registrations increased from 110 to 111 transplants per 100 active patient years. These changes were not statistically significant.

Figure 3: Transplants per 100 Active Patient Years for Kidney-Pancreas Registrations Ever Waiting March 15, 2020-March 14, 2022 by Policy Era and Gender

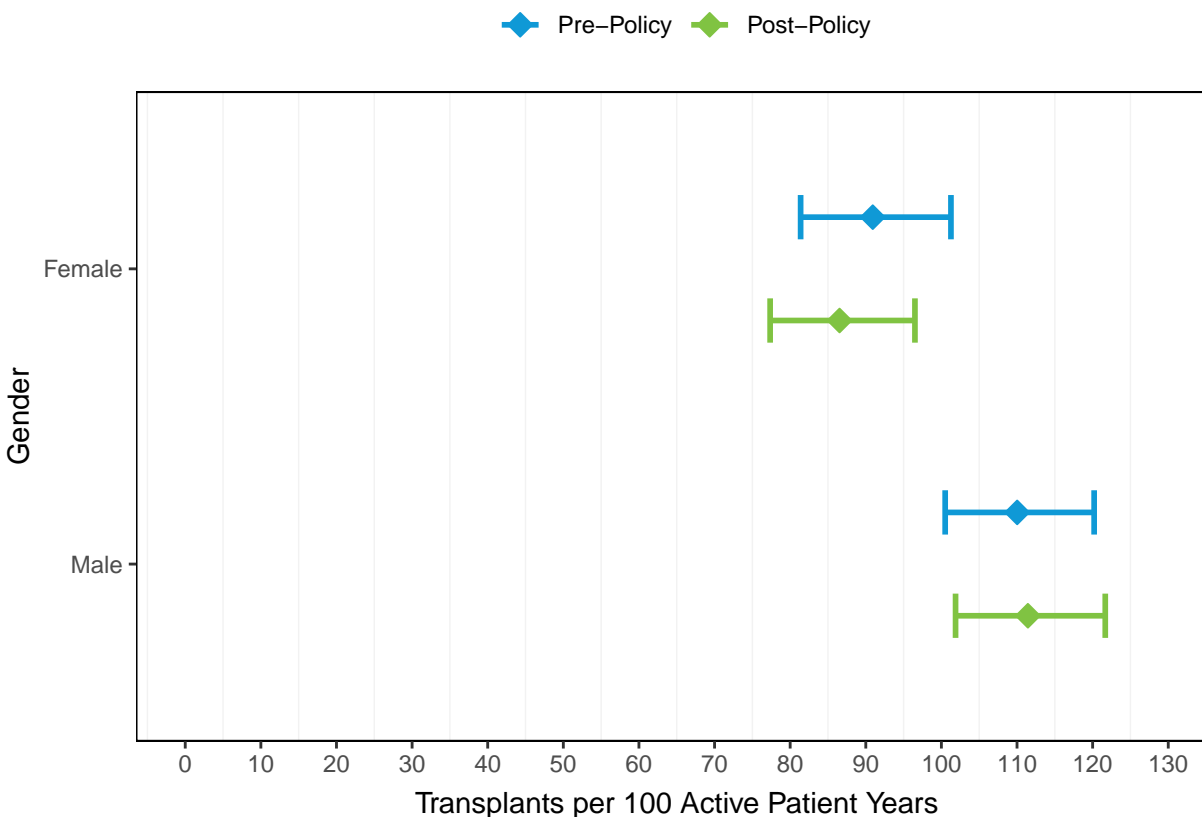


Table 3: Transplants per 100 Active Patient Years for Kidney-Pancreas Registrations Ever Waiting March 15, 2020-March 14, 2022 by Policy Era and Gender

Gender	Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
Female	Pre-Policy	899	331	90.92	(81.38, 101.26)
	Post-Policy	908	323	86.53	(77.35, 96.5)
Male	Pre-Policy	1174	491	110.02	(100.5, 120.2)
	Post-Policy	1230	498	111.44	(101.87, 121.67)

Figure 4 and **Table 4** show deceased donor transplants per 100 active patient years for kidney-pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and candidate race/ethnicity. Transplant rates increased for candidates of Black, Non-Hispanic; Asian, Non-Hispanic; and Other, Non-Hispanic race/ethnicity while transplant rates decreased for White, Non-Hispanic and Hispanic/Latino candidates. These changes were not statistically significant.

Figure 4: Transplants per 100 Active Patient Years for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Race/Ethnicity

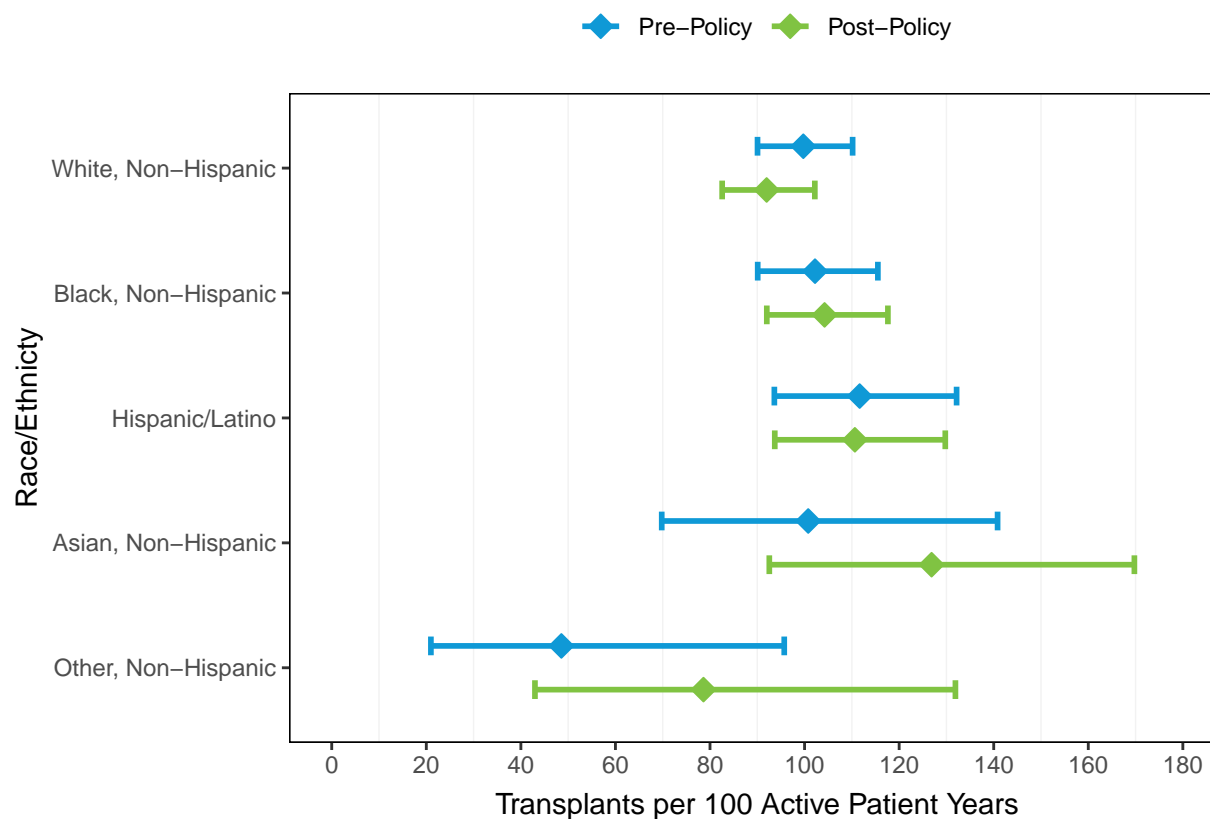


Table 4: Transplants per 100 Active Patient Years for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Race/Ethnicity

Race/Ethnicity	Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
White, Non-Hispanic	Pre-Policy	987	388	99.73	(90.05, 110.16)
	Post-Policy	970	348	91.98	(82.57, 102.17)
Black, Non-Hispanic	Pre-Policy	641	257	102.21	(90.09, 115.5)
	Post-Policy	666	263	104.23	(92.01, 117.62)
Hispanic/Latino	Pre-Policy	322	135	111.65	(93.61, 132.15)
	Post-Policy	373	151	110.64	(93.7, 129.76)
Asian, Non-Hispanic	Pre-Policy	91	34	100.77	(69.79, 140.82)
	Post-Policy	94	45	126.86	(92.54, 169.75)
Other, Non-Hispanic	Pre-Policy	37	8	48.57	(20.97, 95.7)
	Post-Policy	38	14	78.62	(42.98, 131.9)

Figure 5 and **Table 5** show deceased donor transplants per 100 active patient years for kidney-pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and CPRA at listing. The transplant rate increased post-policy for registrations in the CPRA 80-97% group, and decreased for registrations in the 0%, 1-19%, 20-79%, and 98-100% groups. These changes were not statistically significant.

Figure 5: Transplants per 100 Active Patient Years for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and CPRA at Listing

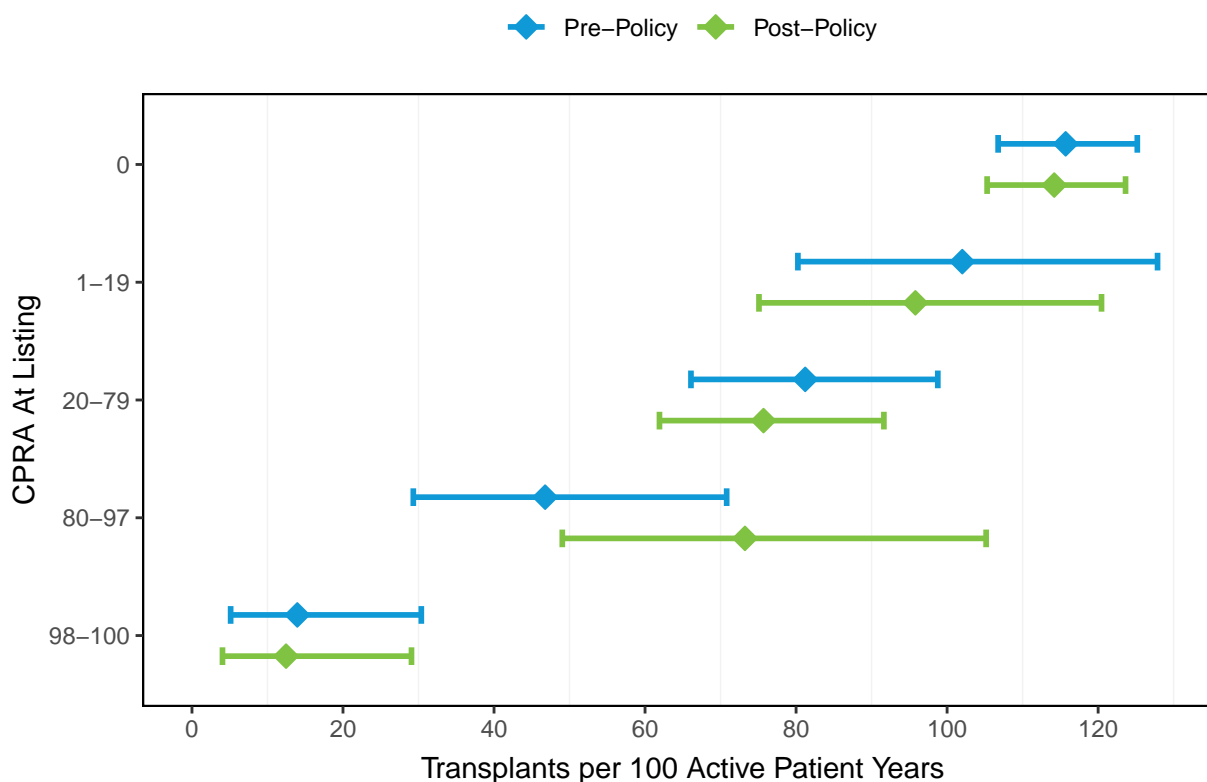


Table 5: Transplants per 100 Active Patient Years for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and CPRA at Listing

CPRA (%)	Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
0	Pre-Policy	1447	618	115.70	(106.76, 125.19)
	Post-Policy	1443	609	114.19	(105.3, 123.63)
1-19	Pre-Policy	182	75	102.01	(80.24, 127.87)
	Post-Policy	218	73	95.80	(75.09, 120.45)
20-79	Pre-Policy	303	100	81.21	(66.08, 98.77)
	Post-Policy	325	105	75.69	(61.91, 91.63)
80-97	Pre-Policy	102	22	46.77	(29.31, 70.81)
	Post-Policy	108	29	73.23	(49.04, 105.17)
98-100	Pre-Policy	74	6	13.95	(5.12, 30.37)
	Post-Policy	72	5	12.46	(4.04, 29.07)
Unknown	Pre-Policy	6	1	22.09	(0.56, 123.1)
	Post-Policy	4	0	0.00	-

Figure 6 and **Table 6** show deceased donor transplants per 100 active patient years for kidney-pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and candidate blood type. Transplant rates increased post-policy for blood type B and AB candidates, and decreased for blood type A and O candidates. These changes were not statistically significant.

Figure 6: Transplants per 100 Active Patient Years for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Blood Type

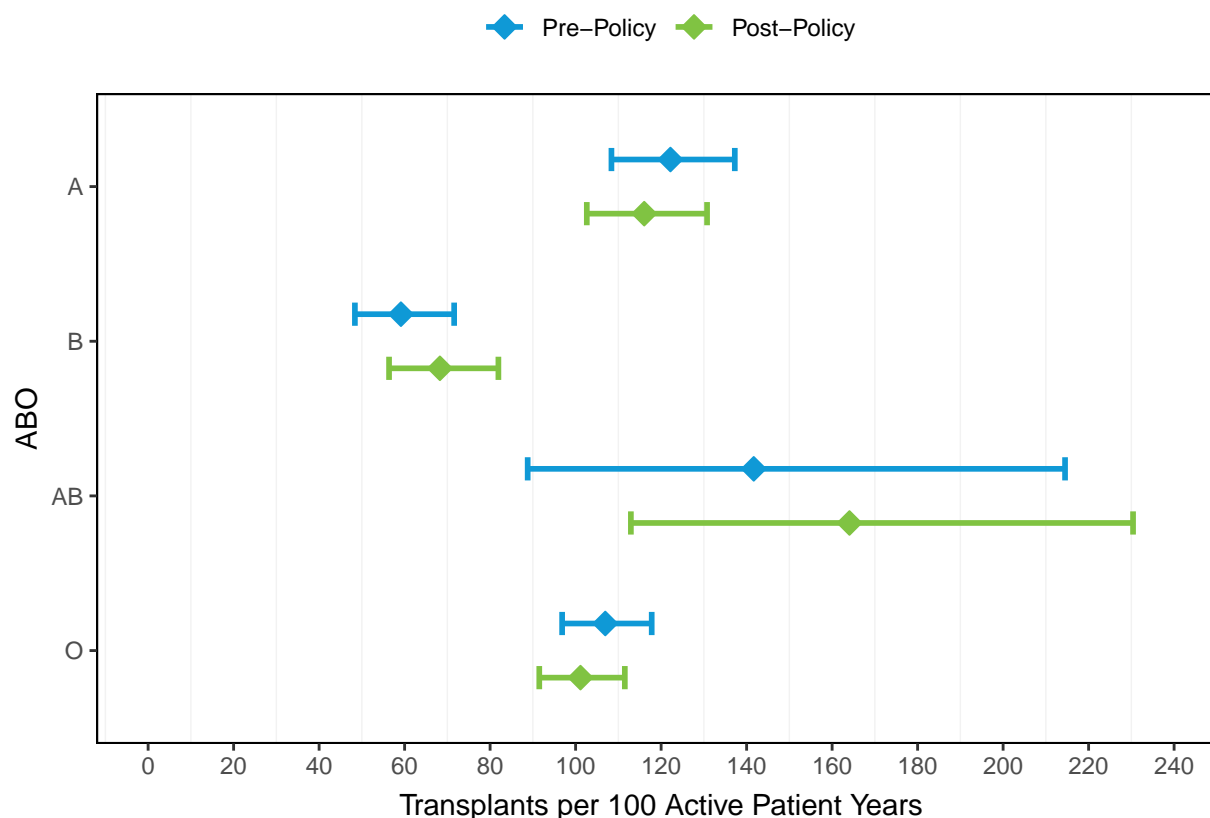


Table 6: Transplants per 100 Active Patient Years for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Blood Type

ABO	Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
A	Pre-Policy	642	284	122.18	(108.38, 137.24)
	Post-Policy	661	270	116.05	(102.62, 130.75)
B	Pre-Policy	370	105	59.14	(48.37, 71.59)
	Post-Policy	357	115	68.26	(56.36, 81.94)
AB	Pre-Policy	47	22	141.67	(88.79, 214.49)
	Post-Policy	75	33	164.06	(112.93, 230.4)
O	Pre-Policy	1013	411	106.94	(96.85, 117.8)
	Post-Policy	1044	403	101.14	(91.5, 111.51)

Geography

Figure 7 and **Table 7** show the number of deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and distance from donor hospital to the transplant hospital. The proportion of transplants within 250 NM of the donor hospital increased from 80% to 85% after policy implementation.

Figure 7: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Distance from Donor Hospital

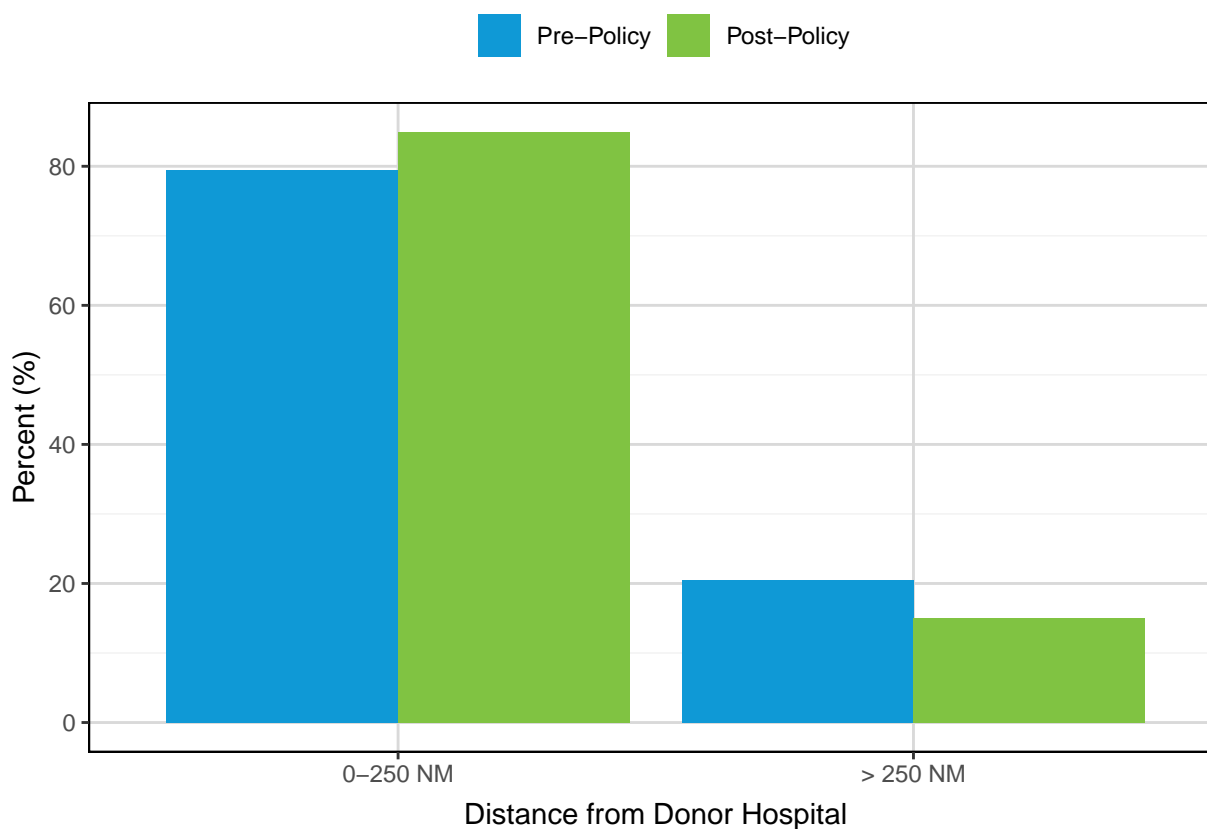


Table 7: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Distance from Donor Hospital

Distance	Pre-Policy		Post-Policy	
	N	%	N	%
0-250 NM	652	79.51	693	84.93
> 250 NM	168	20.49	123	15.07
Total	820	100.00	816	100.00

Figure 8 and **Table 8** show the distribution of distance in NM from the donor hospital to the transplant hospital for deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era. Median distance from donor hospital increased from 79 NM to 110 NM after policy implementation.

Figure 8: Distribution of Distance from Donor Hospital for Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era

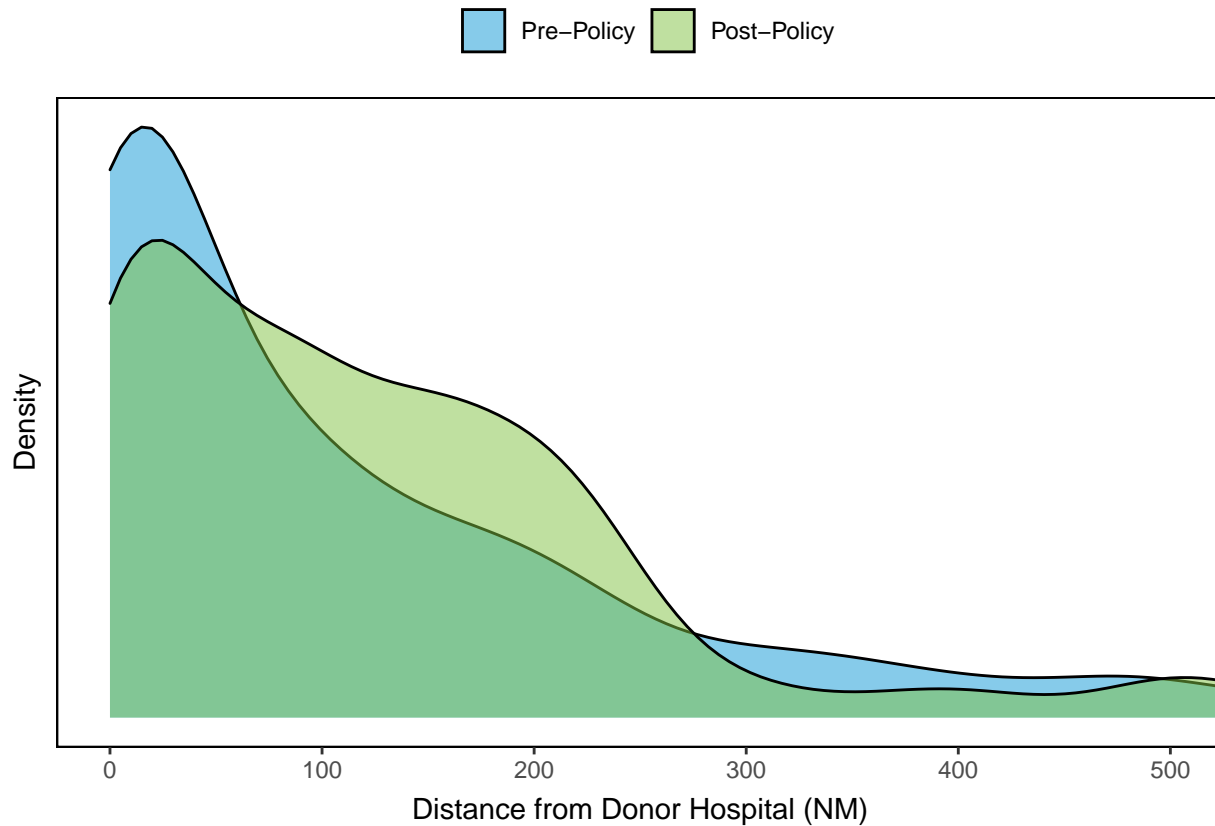


Table 8: Distribution of Distance from Donor Hospital for Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	820	0	0	8	78.5	169.8	207.0	2529
Post-Policy	816	0	0	30	109.5	174.1	203.2	1897

Figure 9 and **Table 9** show deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and share type. The proportion of transplants using organs procured in the same DSA as the transplant hospital decreased from 67% to 42% after the policy change. The proportion of regional and national shares increased from 18% to 26% and from 15% to 32%, respectively.

Figure 9: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Share Type

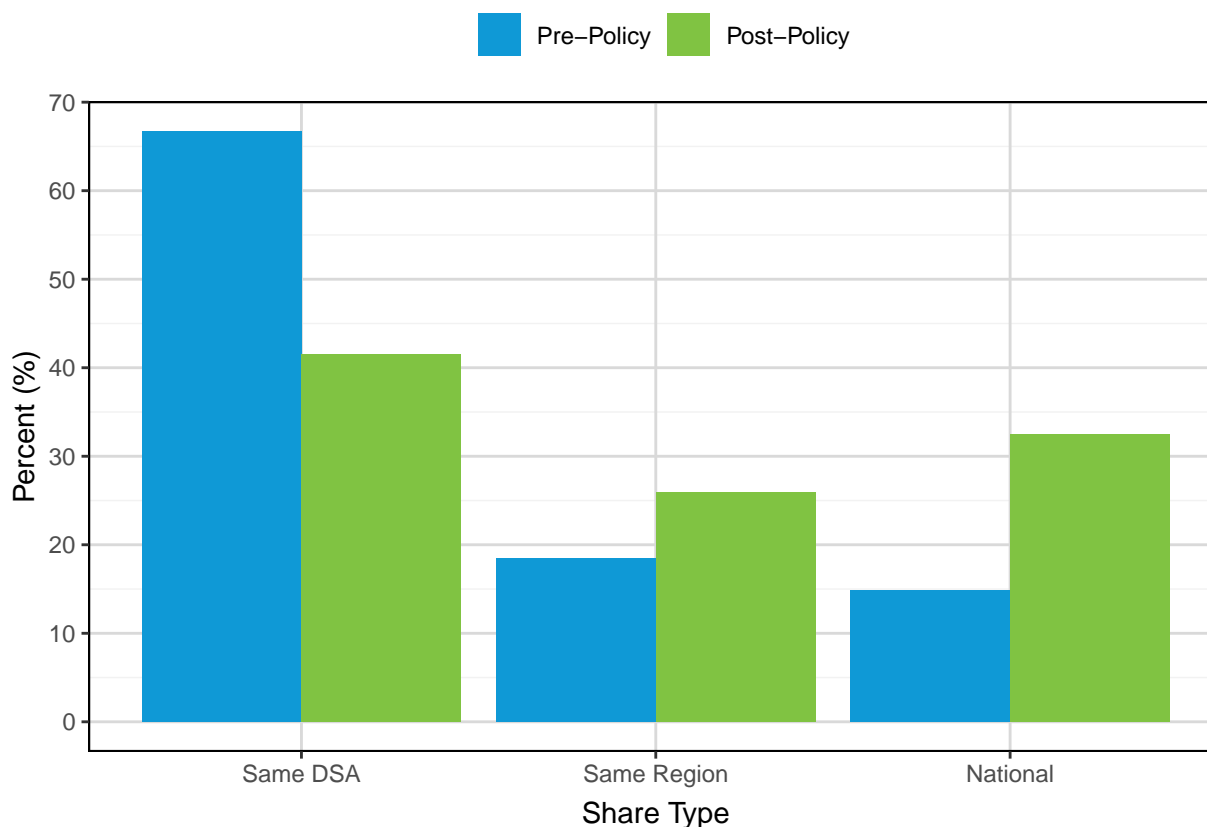


Table 9: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Share Type

Share Type	Pre-Policy		Post-Policy	
	N	%	N	%
Same DSA	547	66.71	339	41.54
Same Region	151	18.41	212	25.98
National	122	14.88	265	32.48
Total	820	100.00	816	100.00

Figure 10 and **Table 10** show deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and OPTN region. Transplant volume increased in 5 regions, and decreased in 6 regions.

Figure 10: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Region

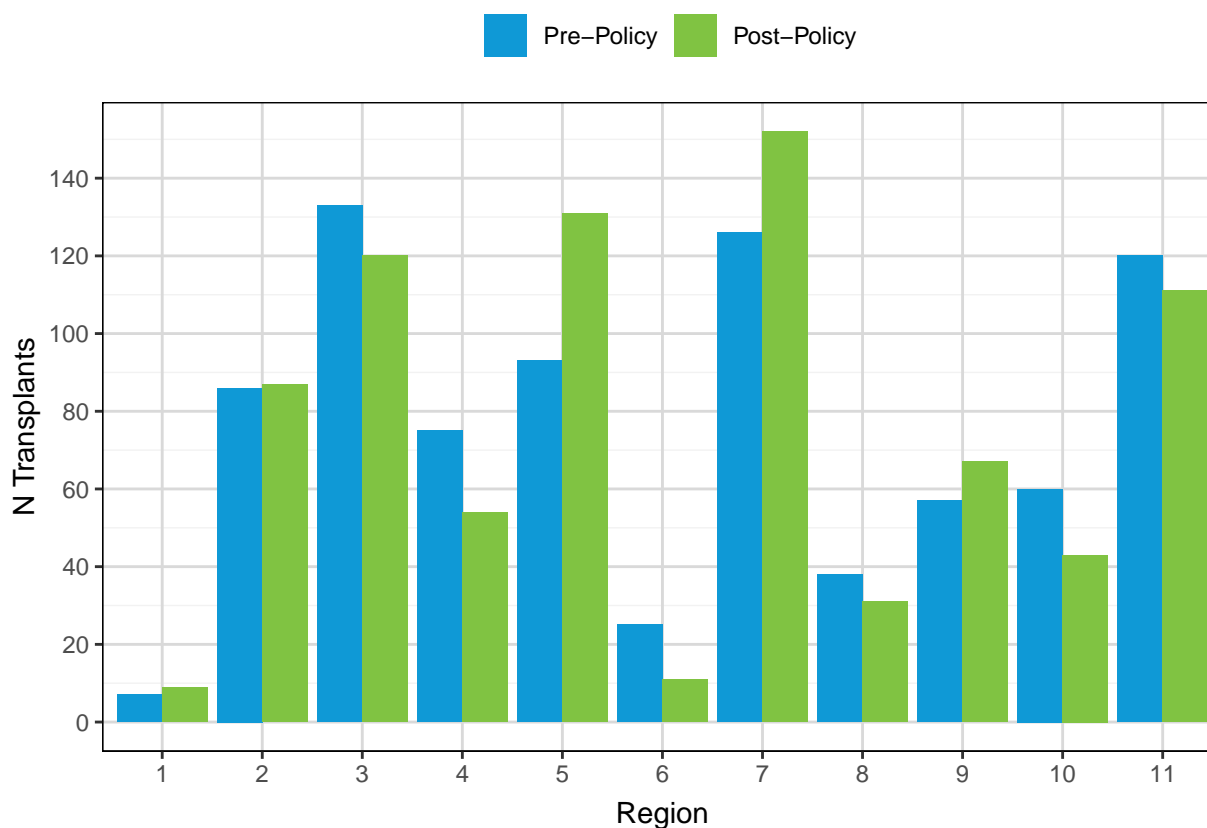


Table 10: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Region

Region	Pre-Policy		Post-Policy	
	N	%	N	%
1	7	0.85	9	1.10
2	86	10.49	87	10.66
3	133	16.22	120	14.71
4	75	9.15	54	6.62
5	93	11.34	131	16.05
6	25	3.05	11	1.35
7	126	15.37	152	18.63
8	38	4.63	31	3.80
9	57	6.95	67	8.21
10	60	7.32	43	5.27
11	120	14.63	111	13.60
Total	820	100.00	816	100.00

Figure 11 shows deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and DSA. Of 53 DSAs with at least one kidney-pancreas transplant during the cohort, transplant volume increased in 18 DSAs and decreased in 32 DSAs; 3 DSAs saw no change in transplant volume. The **Appendix** includes a table with the number of transplants performed in each DSA by policy era.

Figure 11: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and DSA

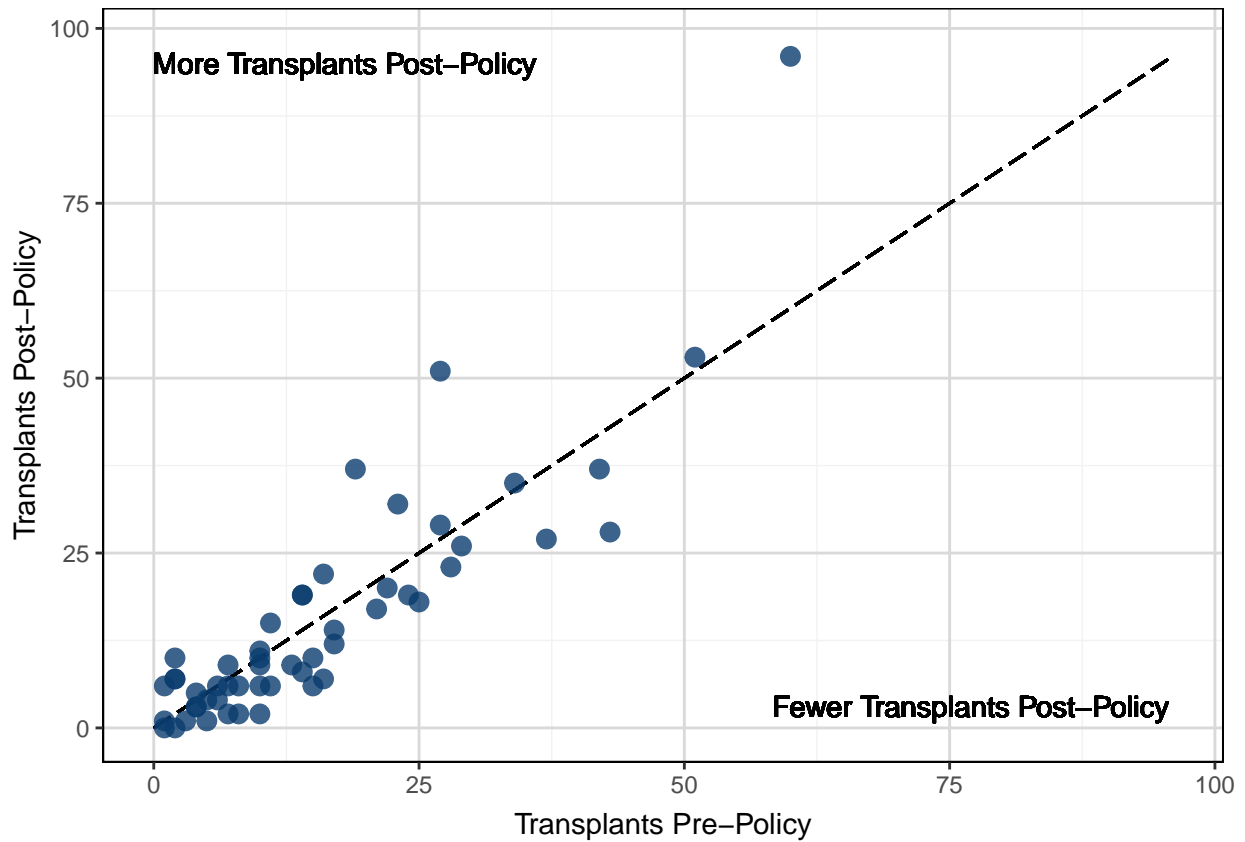


Figure 12 shows deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and transplant hospital. Of 113 hospitals with at least one kidney-pancreas transplant during the cohort, the number of transplants increased at 41 hospitals after policy implementation, and decreased at 63 hospitals; 9 hospitals saw no change in transplant volume. The **Appendix** includes a table with the number of transplants performed by each transplant hospital by policy era.

Figure 12: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Transplant Hospital

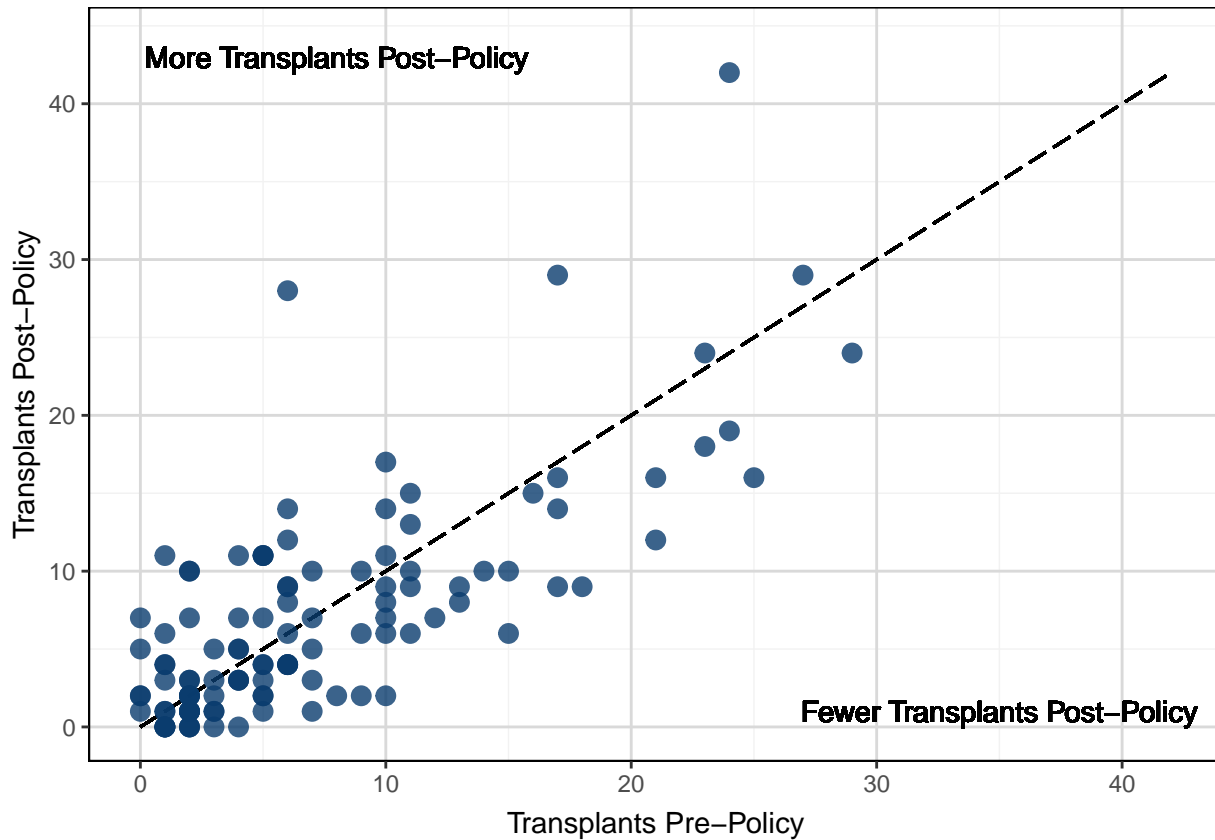


Figure 13 shows deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and state. Of 38 states with at least one kidney-pancreas transplant during the cohort, the number of transplants increased in 12 states after policy implementation, and decreased in 24 states; 2 states saw no change in transplant volume. The **Appendix** includes a table with the specific number of transplants performed in each state by policy era.

Figure 13: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and State

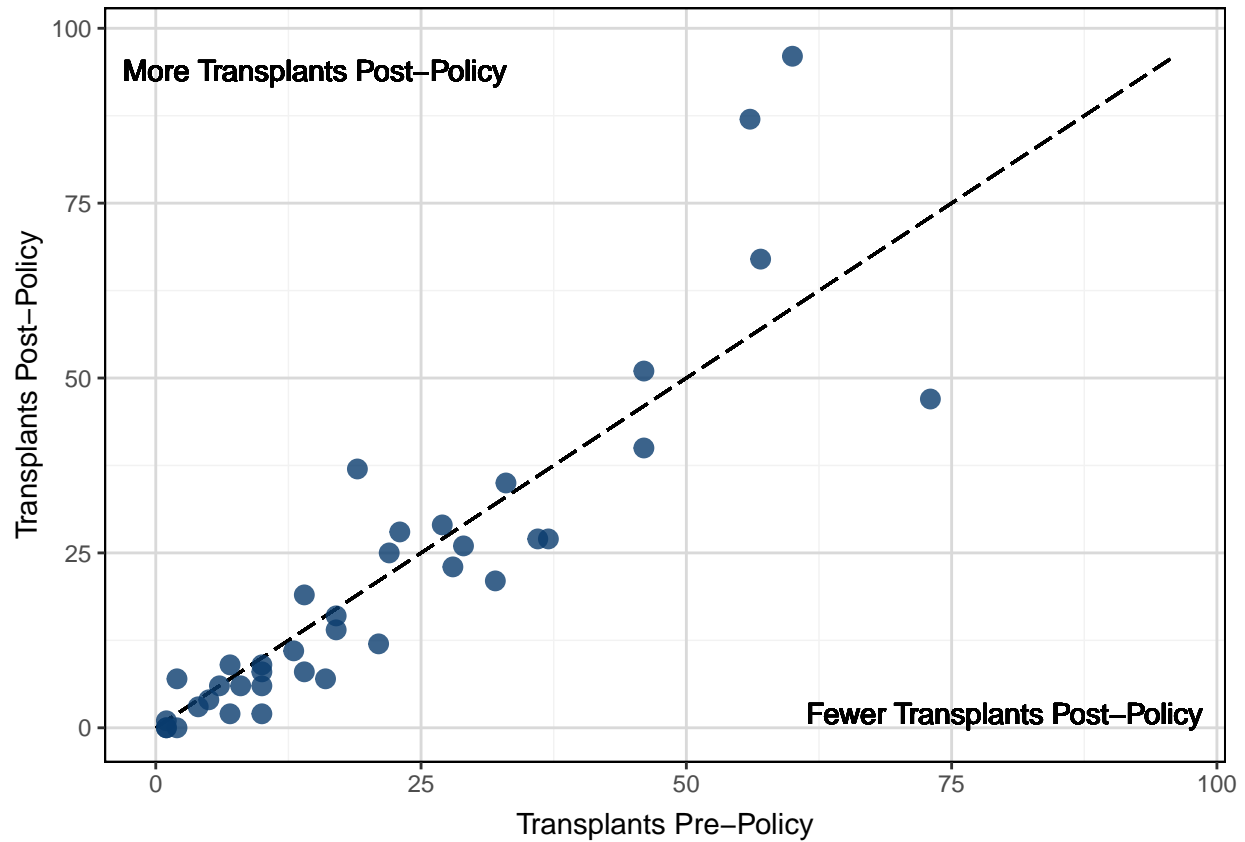
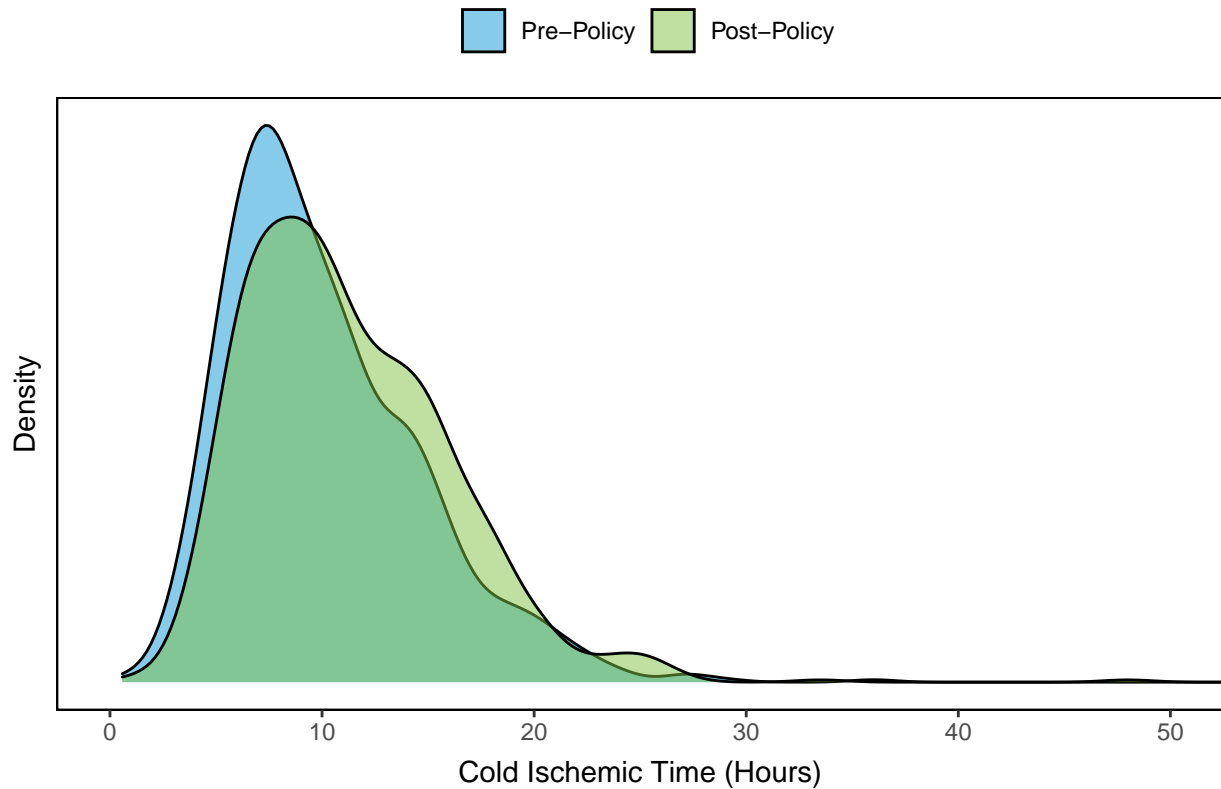


Figure 14 and **Table 11** show the distribution of kidney cold ischemic time in hours for deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era. Median cold ischemic time increased from 9.2 to 10.4 hours after policy implementation.

Figure 14: Distribution of Kidney Cold Ischemic Time for Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era



View restricted to CIT <50 hours.

Table 11: Distribution of Kidney Cold Ischemic Time for Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	820	8	0.8	6.8	9.2	10.1	12.9	36
Post-Policy	816	32	0.6	7.6	10.4	11.4	14.3	99

Figure 15 and **Table 12** show the distribution of pancreas preservation time (time between procurement cross-clamp to recipient organ reperfusion) in hours for deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era. Median preservation time increased from 9.2 to 10.5 hours after policy implementation.

Figure 15: Distribution of Pancreas Preservation Time for Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era

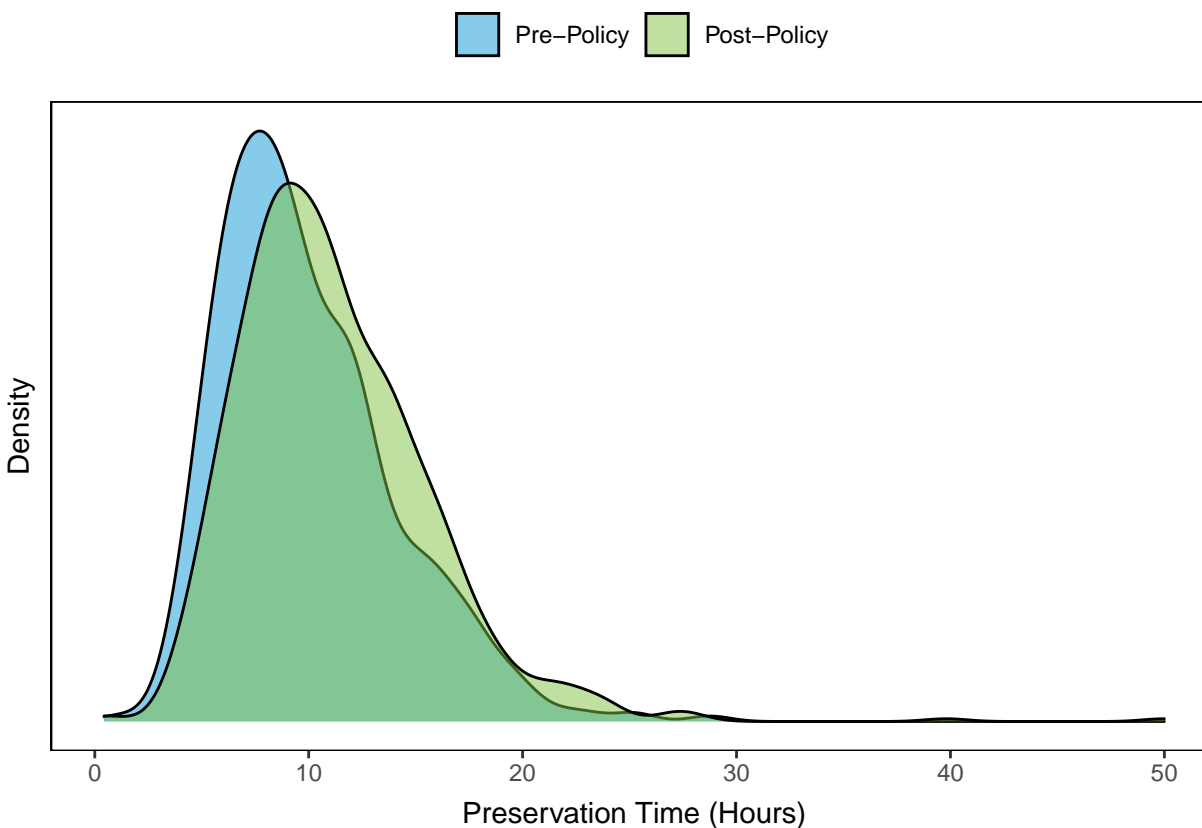


Table 12: Distribution of Pancreas Preservation Time for Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	820	13	1.0	6.9	9.2	10.0	12.2	29
Post-Policy	816	35	0.4	8.1	10.5	11.2	13.7	50

Post-Transplant Outcomes

Patient Survival

Figure 16 and **Table 13** show six month post-transplant patient survival for deceased donor kidney-pancreas transplants by policy era. The cohort for survival analyses was restricted to transplant recipients with at least 6 months of follow-up time (transplants performed on or before September 30, 2021). There was no change in the probability of patient survival at six months post-transplant after policy implementation (97.3%). Additional information about post-transplant patient survival, including stratifications by recipient characteristics, is provided in the **Appendix**.

Figure 16: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era

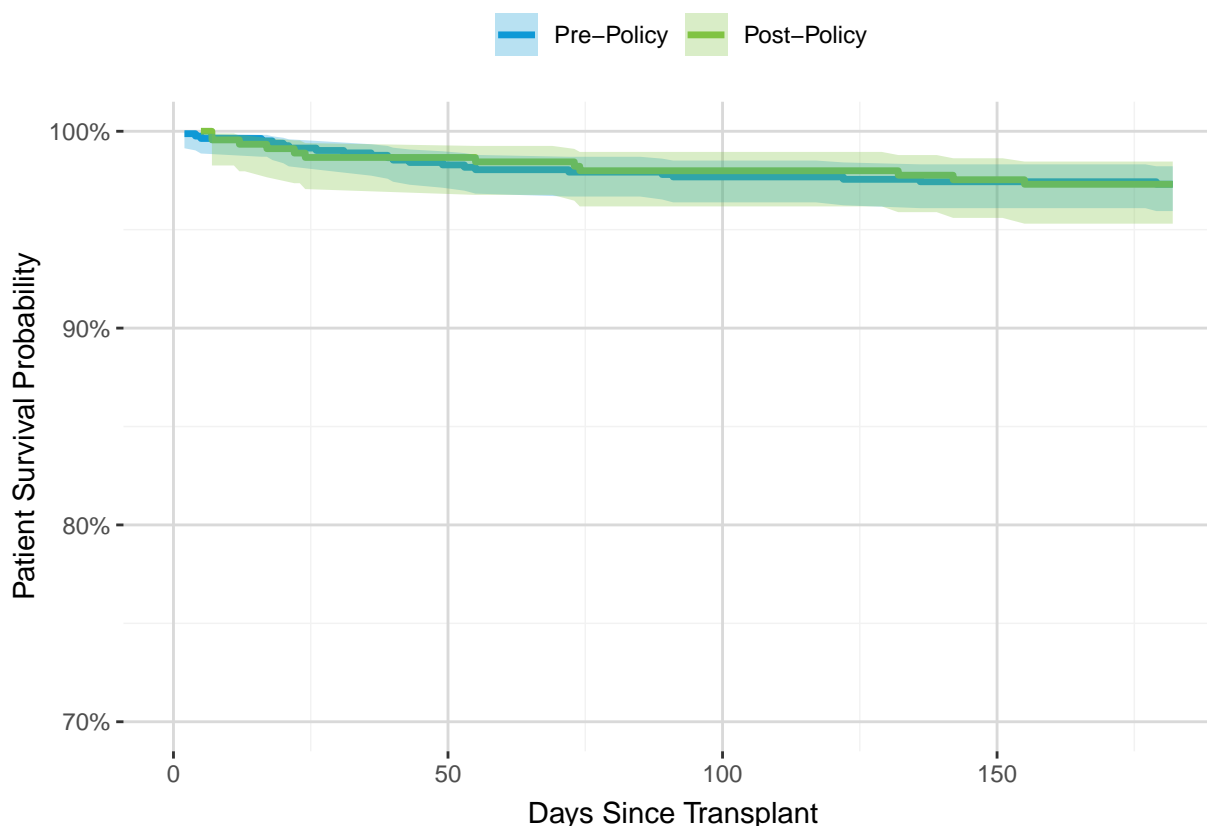


Table 13: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era

Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
Pre-Policy	820	22	784	97.3	(95.9, 98.2)
Post-Policy	464	12	306	97.3	(95.3, 98.5)

Kidney Graft Survival

Figure 17 and **Table 14** show six month post-transplant kidney graft survival for deceased donor kidney-pancreas transplants by policy era. There was no change in the probability of kidney graft survival at six months post-transplant after policy implementation (96.5% vs 96.4%). Additional information about post-transplant kidney graft survival, including stratifications by recipient characteristics, is provided in the **Appendix**.

Figure 17: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era

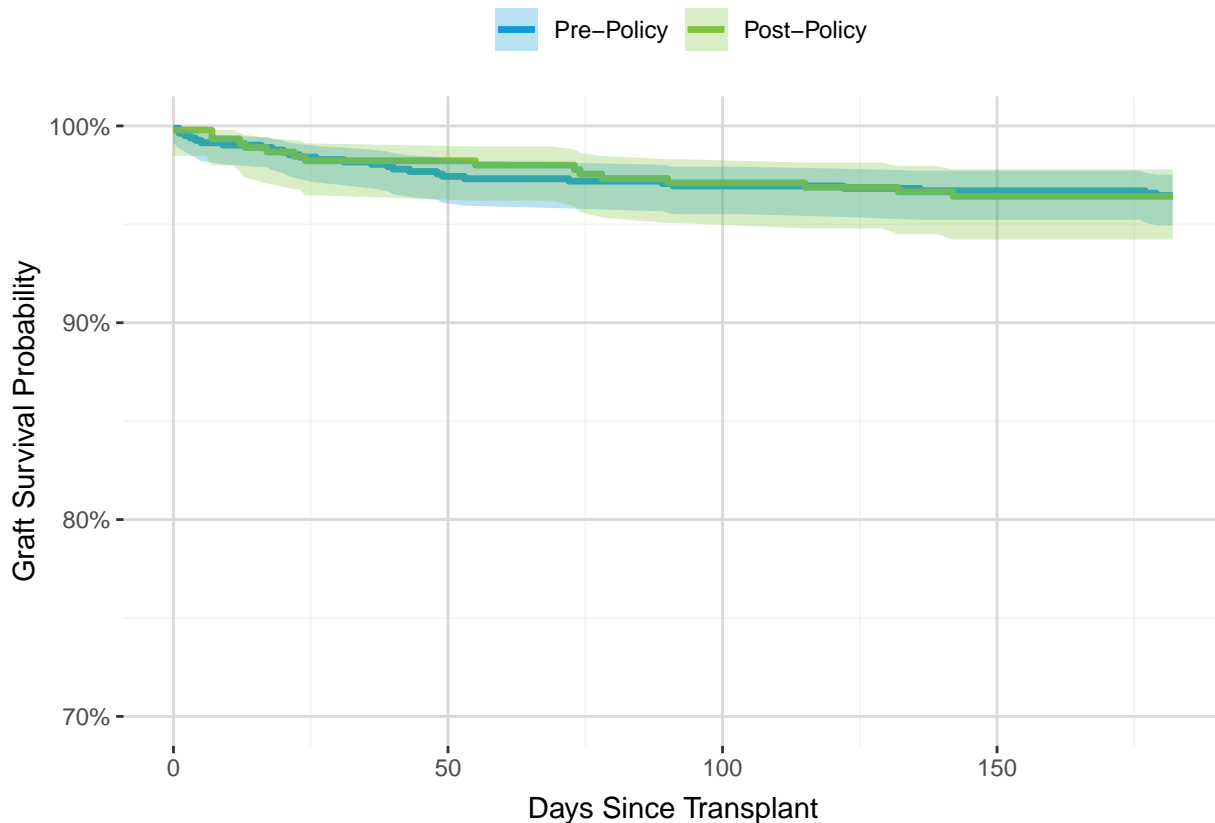


Table 14: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era

Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Pre-Policy	820	29	780	96.5	(94.9, 97.5)
Post-Policy	464	16	303	96.4	(94.2, 97.8)

Pancreas Graft Survival

Figure 18 and **Table 15** show six month post-transplant pancreas graft survival for deceased donor kidney-pancreas transplants by policy era. The probability of pancreas graft survival at six months post-transplant increased from 91.0% to 93.4% after policy implementation. This change was not statistically significant. Additional information about post-transplant pancreas graft survival, including stratifications by recipient characteristics, is provided in the **Appendix**.

Figure 18: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era

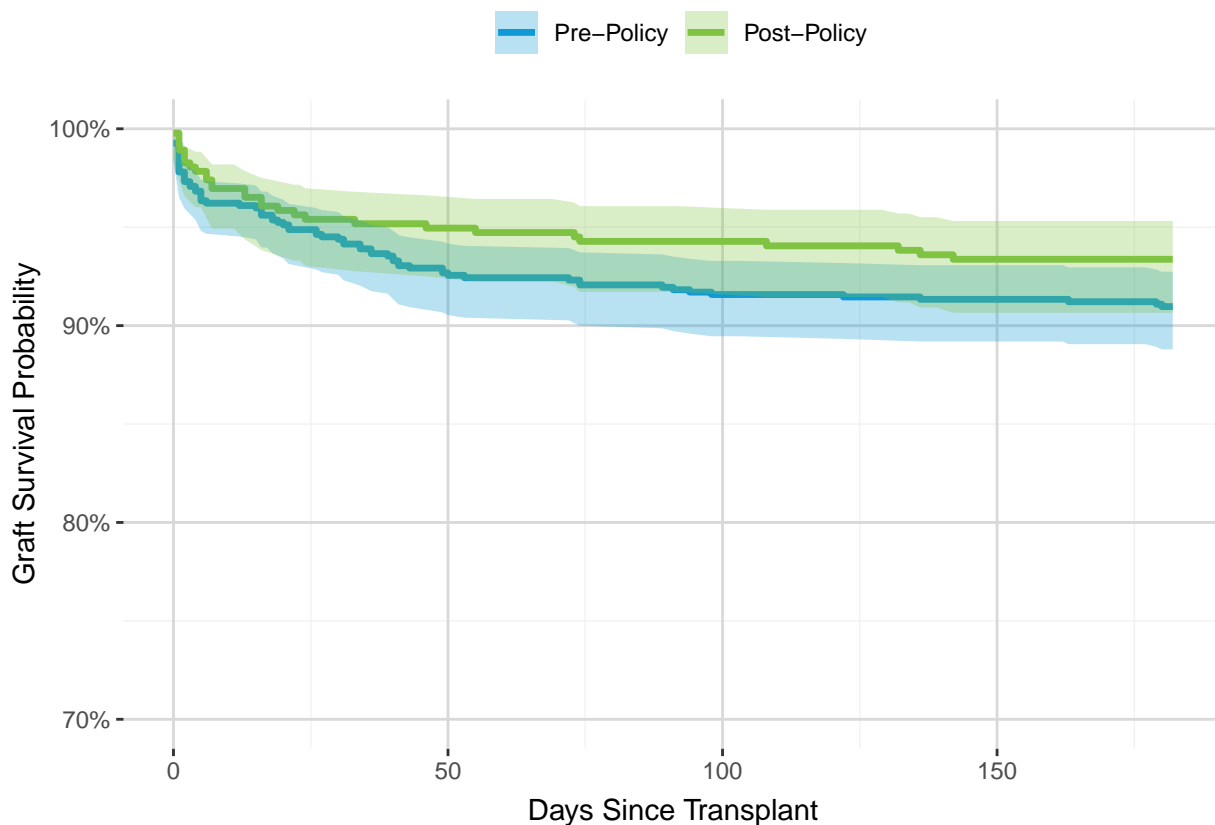


Table 15: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era

Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Pre-Policy	820	74	737	91	(88.8, 92.7)
Post-Policy	464	30	294	93.4	(90.7, 95.3)

Released Organs

Table 16 shows the disposition of kidneys and pancreata from kidney-pancreas matches with a final acceptance by policy era. The majority of kidneys and pancreata with a final acceptance were transplanted to the originally accepting patient both pre- and post-policy. The overall proportion of kidneys and pancreata that were transplanted to the originally accepting patient decreased post-policy from 86.3% to 81.9% for kidney, and from 87.6% to 83.6% for pancreas.

Table 16: Disposition of Kidneys and Pancreata from Kidney-Pancreas Matches with a Final Acceptance March 15, 2020-March 14, 2022 by Policy Era

Organ	Era	N	Same Patient	Same Center	Different Center	Discard	Non-Recovery
Kidney	Pre-Policy	854	737 (86.3%)	40 (4.7%)	60 (7.0%)	2 (0.2%)	15 (1.8%)
	Post-Policy	889	728 (81.9%)	43 (4.8%)	85 (9.6%)	7 (0.8%)	26 (2.9%)
Pancreas	Pre-Policy	831	728 (87.6%)	30 (3.6%)	17 (2.0%)	21 (2.5%)	35 (4.2%)
	Post-Policy	868	726 (83.6%)	22 (2.5%)	35 (4.0%)	23 (2.6%)	62 (7.1%)

Pancreas

This section describes key metrics for monitoring the removal of DSA and OPTN region from PA allocation. Additional PA waiting list, transplant, and post-transplant outcomes data may be found in the **Appendix**.

The overall PA transplant rate increased slightly after policy implementation (63 vs 66 transplants per 100 active patient years); this decrease was not statistically significant (**Figure 19 & Table 17**). There were no statistically significant differences in transplant rates by candidate age group, gender, race/ethnicity, CPRA at listing, or blood type after implementation (**Figures 20-24 & Tables 18-22**). Changes in transplant volume varied across OPTN region (**Figure 28 & Table 26**).

As expected, more PA transplants occurred at hospitals outside the recovering OPO's DSA after implementation (59% vs 68%) (**Figure 27 & Table 25**), but the majority stayed within 250 NM of the donor hospital (57% vs 63%) (**Figure 25 & Table 23**). Median distance from donor hospital to transplant hospital decreased from 174 NM to 138 NM (**Figure 26 & Table 24**). There was no change in median pancreas preservation time (time between procurement cross-clamp and recipient organ reperfusion) (8.1 hours) (**Figure 29 & Table 30**).

There were no statistically significant differences in the probability of patient or pancreas graft survival for PA recipients at 6 months post-transplant after policy implementation (**Figures 30-31 & Tables 31-32**).

Equity in Access to Transplant

Figure 19 and **Table 17** show deceased donor transplants per 100 active patient years for pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era. The overall deceased donor pancreas transplant rate increased post-policy from 63 to 66 transplants per 100 active patient years. This increase was not statistically significant.

Figure 19: Transplants per 100 Active Patient Years for Pancreas Registrations Ever Waiting March 15, 2020-March 14, 2022 by Policy Era

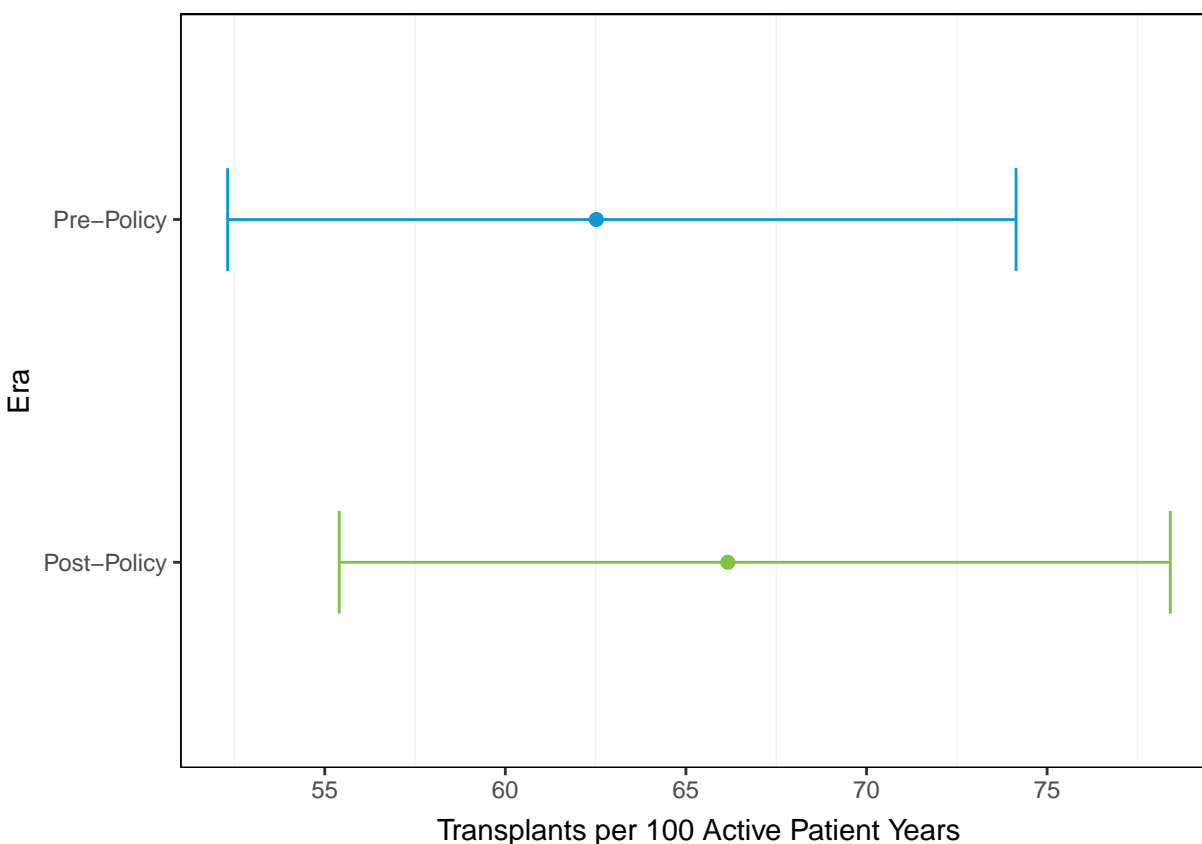
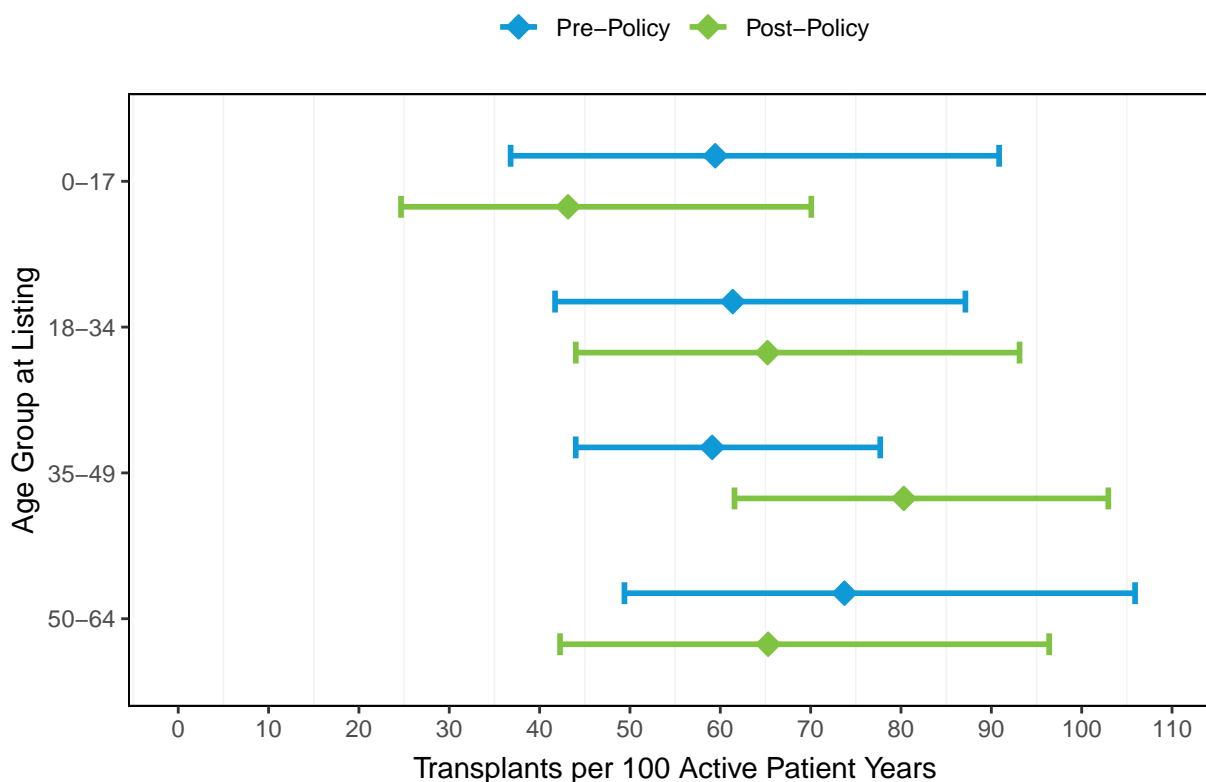


Table 17: Transplants per 100 Active Patient Years for Pancreas Registrations Ever Waiting March 15, 2020-March 14, 2022 by Policy Era

Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
Pre-Policy	490	132	62.52	(52.31, 74.14)
Post-Policy	473	133	66.16	(55.4, 78.41)

Figure 20 and **Table 18** show deceased donor transplants per 100 active patient years for pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and age at listing. Transplant rates increased post-policy for the 18-34 and 35-49 age groups, while transplant rates decreased for candidates in the 0-17, 50-64, and 65+ age groups. These changes were not statistically significant.

Figure 20: Transplants per 100 Active Patient Years for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Age at Listing



65+ age group omitted from figure due to small number of events and wide confidence intervals.

Table 18: Transplants per 100 Active Patient Years for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Age at Listing

Age at Listing	Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
0-17	Pre-Policy	66	21	59.44	(36.79, 90.86)
	Post-Policy	70	16	43.15	(24.66, 70.07)
18-34	Pre-Policy	118	31	61.38	(41.71, 87.13)
	Post-Policy	119	30	65.23	(44.01, 93.12)
35-49	Pre-Policy	208	51	59.10	(44, 77.7)
	Post-Policy	196	62	80.31	(61.57, 102.95)
50-64	Pre-Policy	99	29	73.74	(49.39, 105.91)
	Post-Policy	91	25	65.30	(42.26, 96.4)
65+	Pre-Policy	6	2	140.38	(17, 507.12)
	Post-Policy	7	2	70.60	(8.55, 255.03)

Figure 21 and **Table 19** show deceased donor transplants per 100 active patient years for pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and gender. The transplant rate increased post-policy for female registrations from 63.4 to 69.7 transplants per 100 active patient years, and for male registrations from 61.6 to 62.7 transplants per 100 active patient years. These increases were not statistically significant.

Figure 21: Transplants per 100 Active Patient Years for Pancreas Registrations Ever Waiting March 15, 2020-March 14, 2022 by Policy Era and Gender

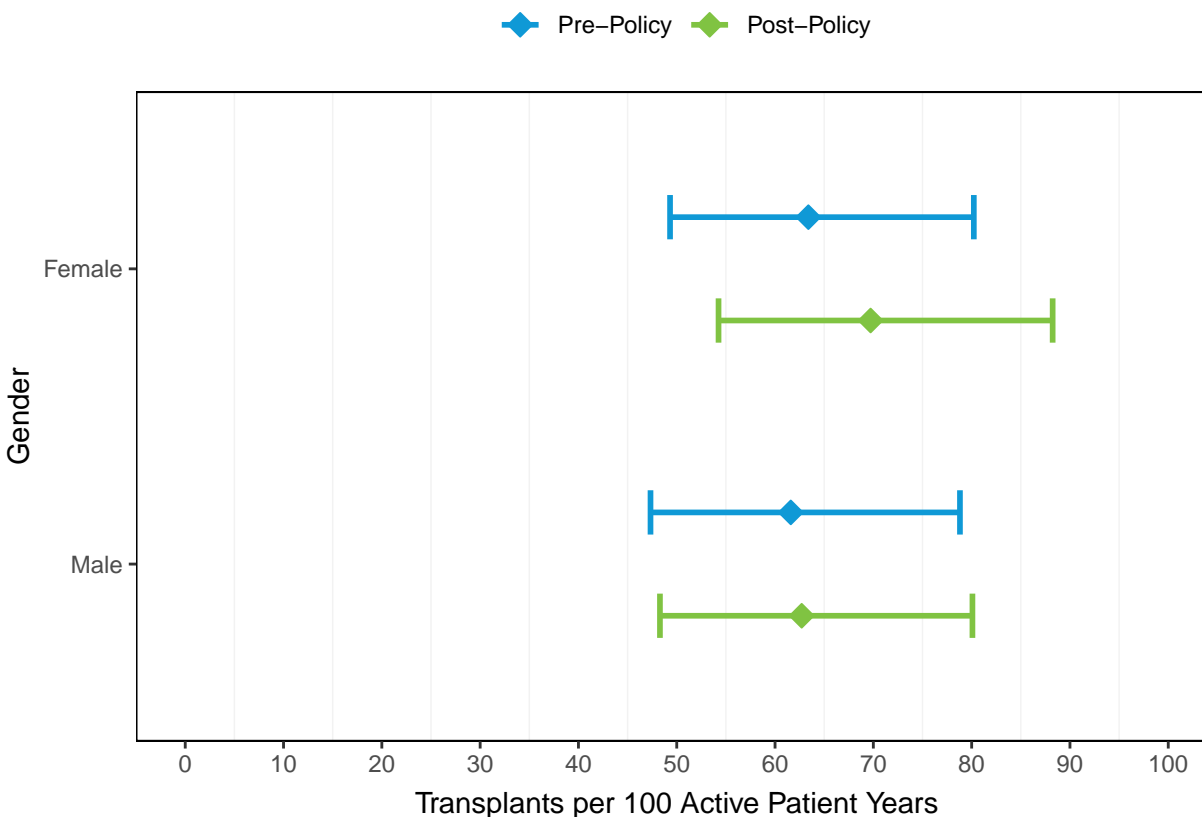
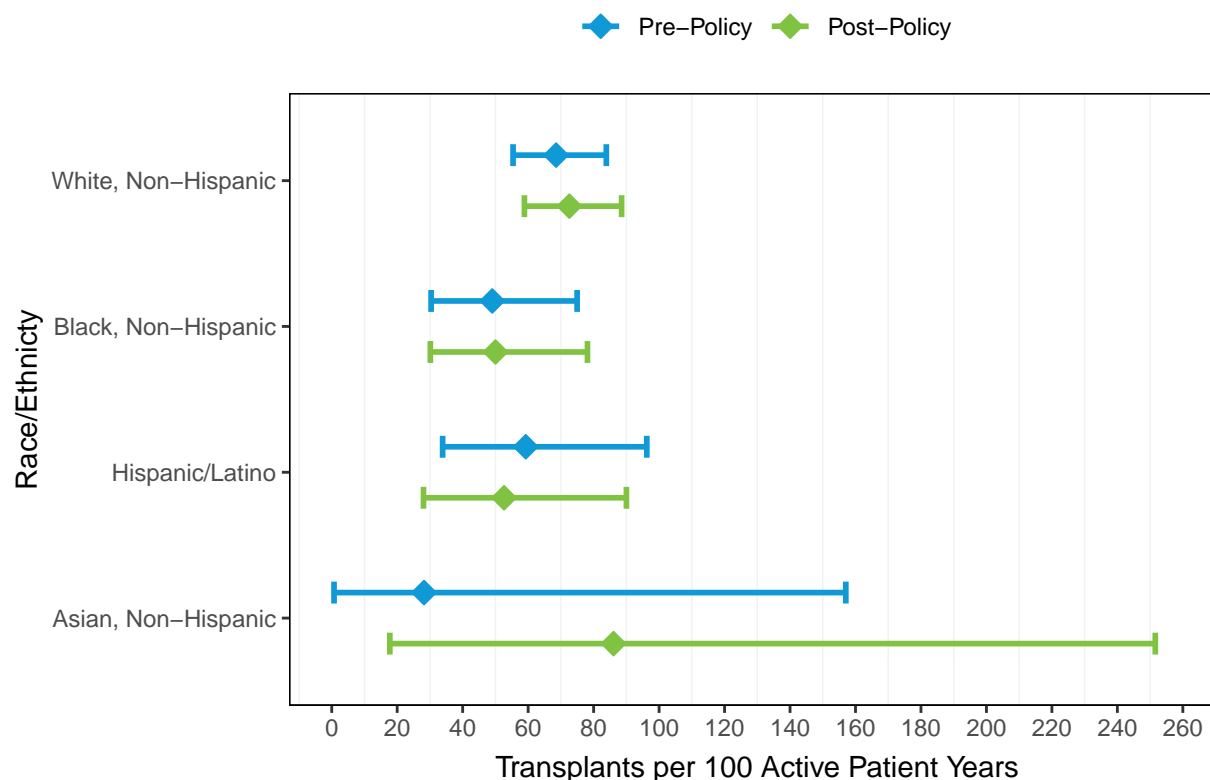


Table 19: Transplants per 100 Active Patient Years for Pancreas Registrations Ever Waiting March 15, 2020-March 14, 2022 by Policy Era and Gender

Gender	Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
Female	Pre-Policy	244	69	63.39	(49.32, 80.22)
	Post-Policy	236	69	69.72	(54.25, 88.24)
Male	Pre-Policy	246	63	61.60	(47.33, 78.81)
	Post-Policy	237	64	62.71	(48.29, 80.08)

Figure 22 and **Table 20** show deceased donor transplants per 100 active patient years for pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and race/ethnicity. Transplant rates increased for White, Non-Hispanic; Black, Non-Hispanic; and Asian, Non-Hispanic candidates, while the transplant rate decreased for Hispanic/Latino candidates. These changes were not statistically significant, and the wide confidence intervals are reflective of small event counts.

Figure 22: Transplants per 100 Active Patient Years for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Race/Ethnicity



Other, Non-Hispanic omitted from figure due to small number of events and wide confidence intervals.

Table 20: Transplants per 100 Active Patient Years for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Race/Ethnicity

Race/Ethnicity	Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
White, Non-Hispanic	Pre-Policy	325	94	68.54	(55.39, 83.88)
	Post-Policy	320	97	72.58	(58.86, 88.55)
Black, Non-Hispanic	Pre-Policy	97	21	49.04	(30.36, 74.96)
	Post-Policy	82	19	50.03	(30.12, 78.12)
Hispanic/Latino	Pre-Policy	60	16	59.27	(33.88, 96.25)
	Post-Policy	59	13	52.64	(28.03, 90.02)
Asian, Non-Hispanic	Pre-Policy	6	1	28.19	(0.71, 157.04)
	Post-Policy	9	3	86.08	(17.75, 251.58)
Other, Non-Hispanic	Pre-Policy	3	0	0.00	-
	Post-Policy	4	1	80.40	(2.04, 447.94)

Figure 23 and **Table 21** show deceased donor transplants per 100 active patient years for pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and CPRA at listing. Transplant rates increased post-policy for registrations in the 0%, 80-97%, and 98-100% groups, and decreased for registrations in the CPRA 1-19% and 20-79% groups. These changes were not statistically significant and the wide confidence intervals are reflective of small event counts.

Figure 23: Transplants per 100 Active Patient Years for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and CPRA at Listing

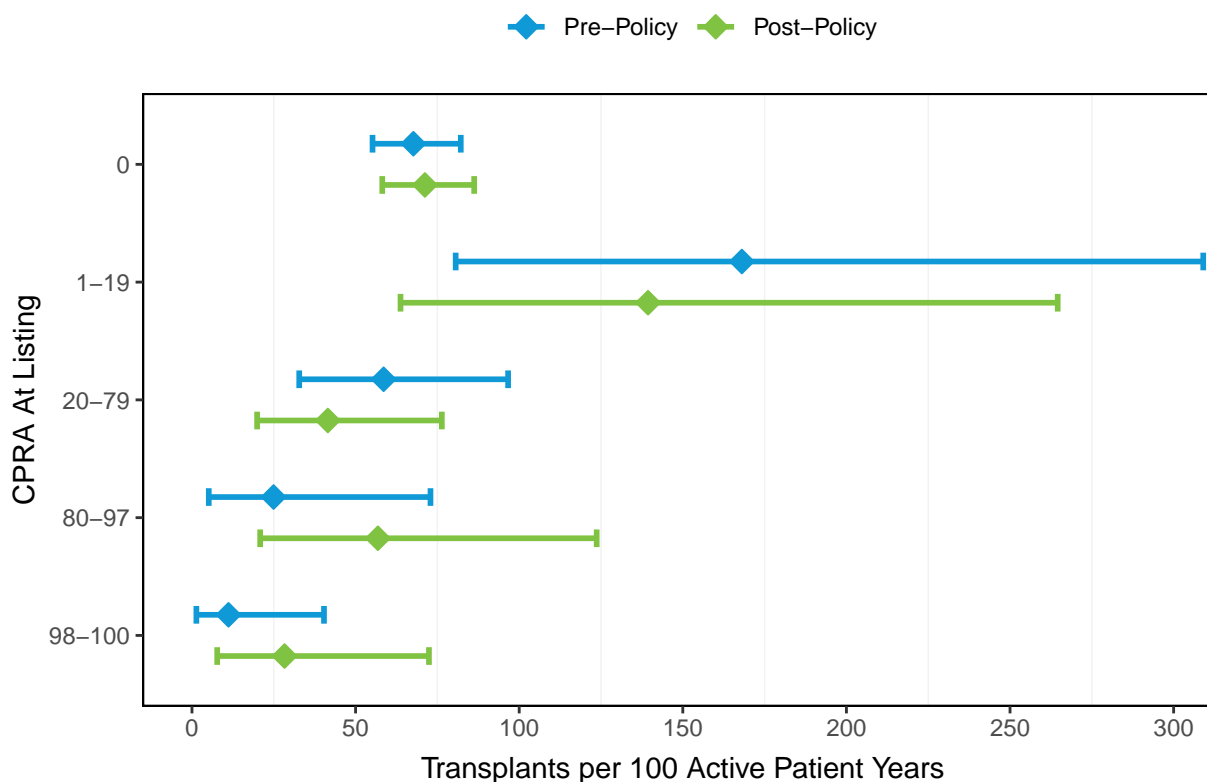


Table 21: Transplants per 100 Active Patient Years for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and CPRA at Listing

CPRA (%)	Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
0	Pre-Policy	356	102	67.67	(55.18, 82.15)
	Post-Policy	350	104	71.19	(58.16, 86.25)
1-19	Pre-Policy	22	10	168.05	(80.59, 309.05)
	Post-Policy	21	9	139.37	(63.73, 264.57)
20-79	Pre-Policy	57	15	58.57	(32.78, 96.61)
	Post-Policy	56	10	41.52	(19.91, 76.36)
80-97	Pre-Policy	25	3	24.94	(5.14, 72.89)
	Post-Policy	23	6	56.82	(20.85, 123.68)
98-100	Pre-Policy	32	2	11.17	(1.35, 40.35)
	Post-Policy	27	4	28.29	(7.71, 72.43)

Figure 24 and **Table 22** show deceased donor transplants per 100 active patient years for pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and candidate blood type. Transplant rates increased for blood type B and O candidates after policy implementation, and decreased for blood type A and AB candidates. These changes were not statistically significant.

Figure 24: Transplants per 100 Active Patient Years for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Blood Type

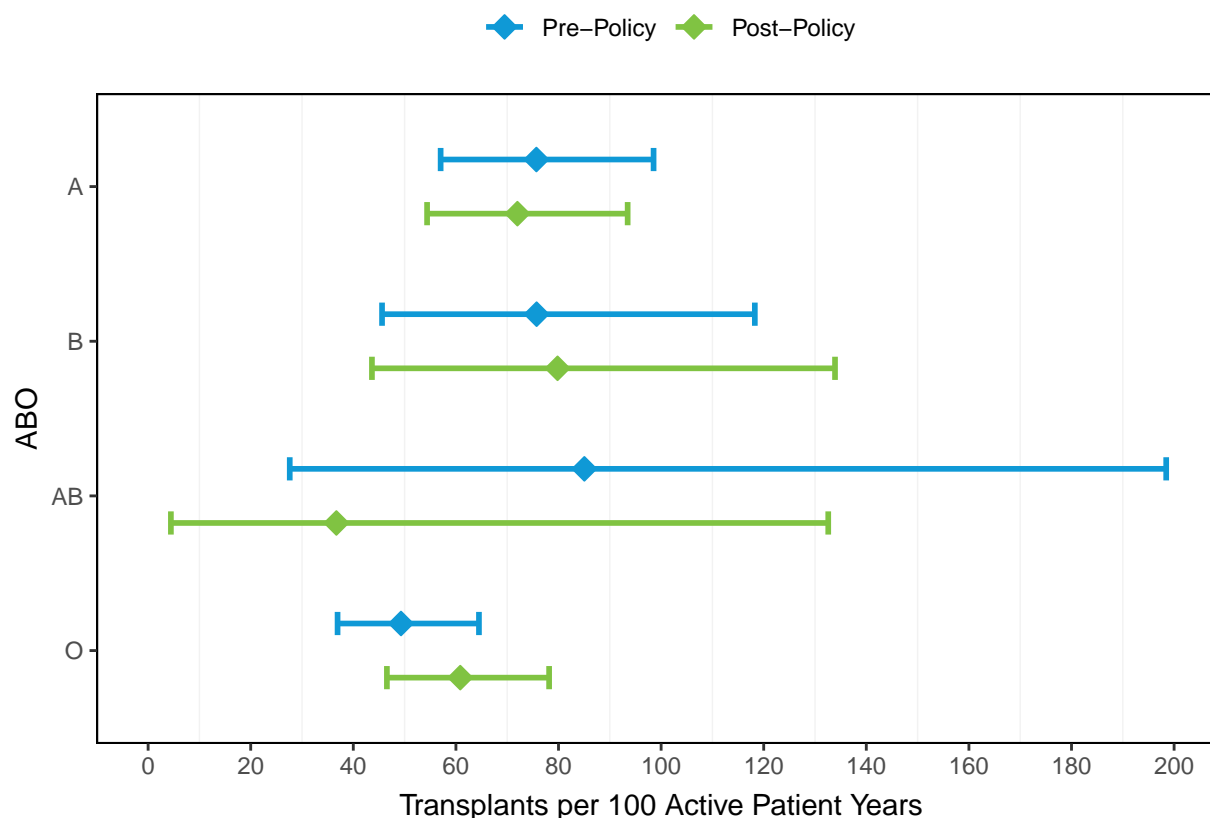


Table 22: Transplants per 100 Active Patient Years for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Blood Type

ABO	Era	Registrations	Transplants	Transplants per 100 Patient Years	95% CI
A	Pre-Policy	178	55	75.69	(57.02, 98.53)
	Post-Policy	181	56	71.99	(54.38, 93.48)
B	Pre-Policy	63	19	75.73	(45.6, 118.27)
	Post-Policy	51	14	79.81	(43.63, 133.9)
AB	Pre-Policy	19	5	85.04	(27.61, 198.46)
	Post-Policy	14	2	36.70	(4.44, 132.58)
O	Pre-Policy	230	53	49.30	(36.93, 64.49)
	Post-Policy	227	61	60.85	(46.55, 78.17)

Geography

Figure 25 and **Table 23** show deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and distance from donor hospital. The proportion of transplants within 250 NM of the donor hospital increased post-policy from 57% to 63%.

Figure 25: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Distance from Donor Hospital

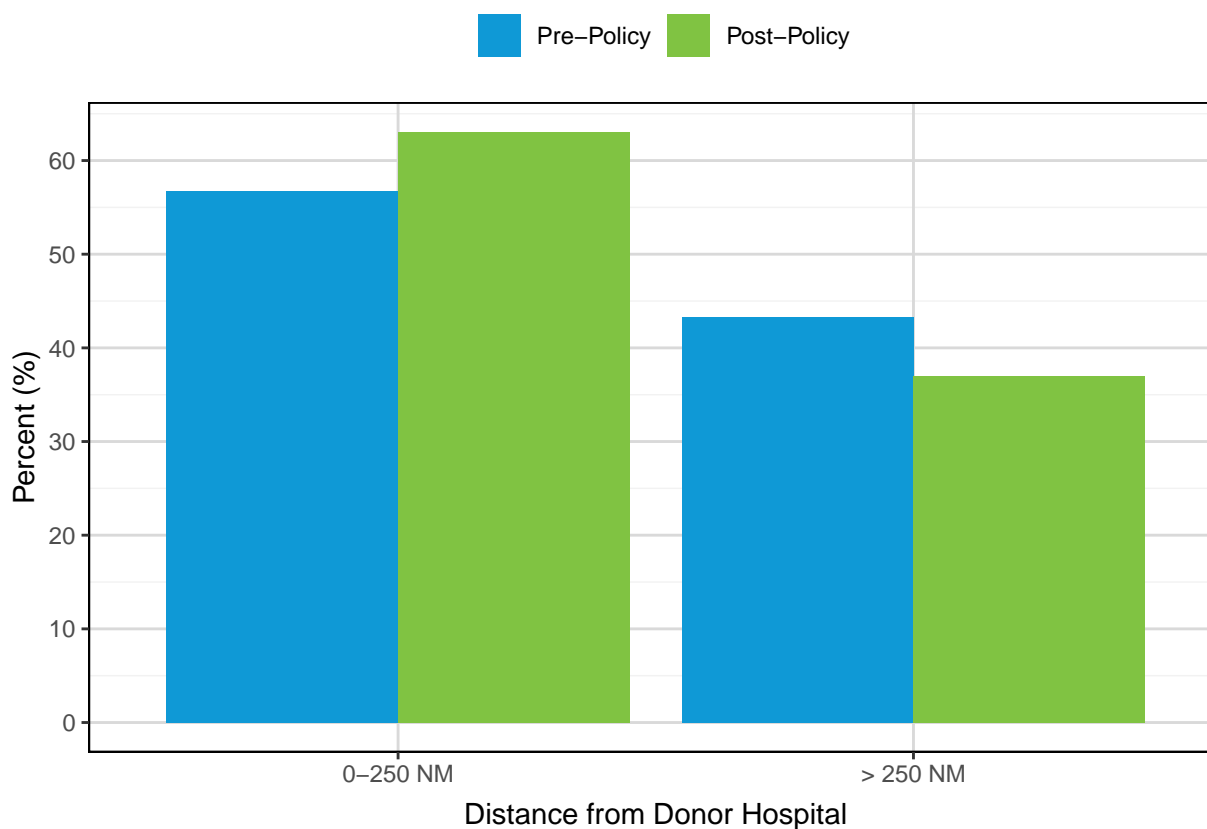


Table 23: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Distance from Donor Hospital

Distance	Pre-Policy		Post-Policy	
	N	%	N	%
0-250 NM	76	56.72	87	63.04
> 250 NM	58	43.28	51	36.96
Total	134	100.00	138	100.00

Figure 26 and **Table 24** show the distribution of distance in NM from the donor hospital to the transplant hospital for deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era. Median distance from donor hospital decreased from 174 NM to 138 NM after policy implementation.

Figure 26: Distribution of Distance from Donor Hospital for Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era

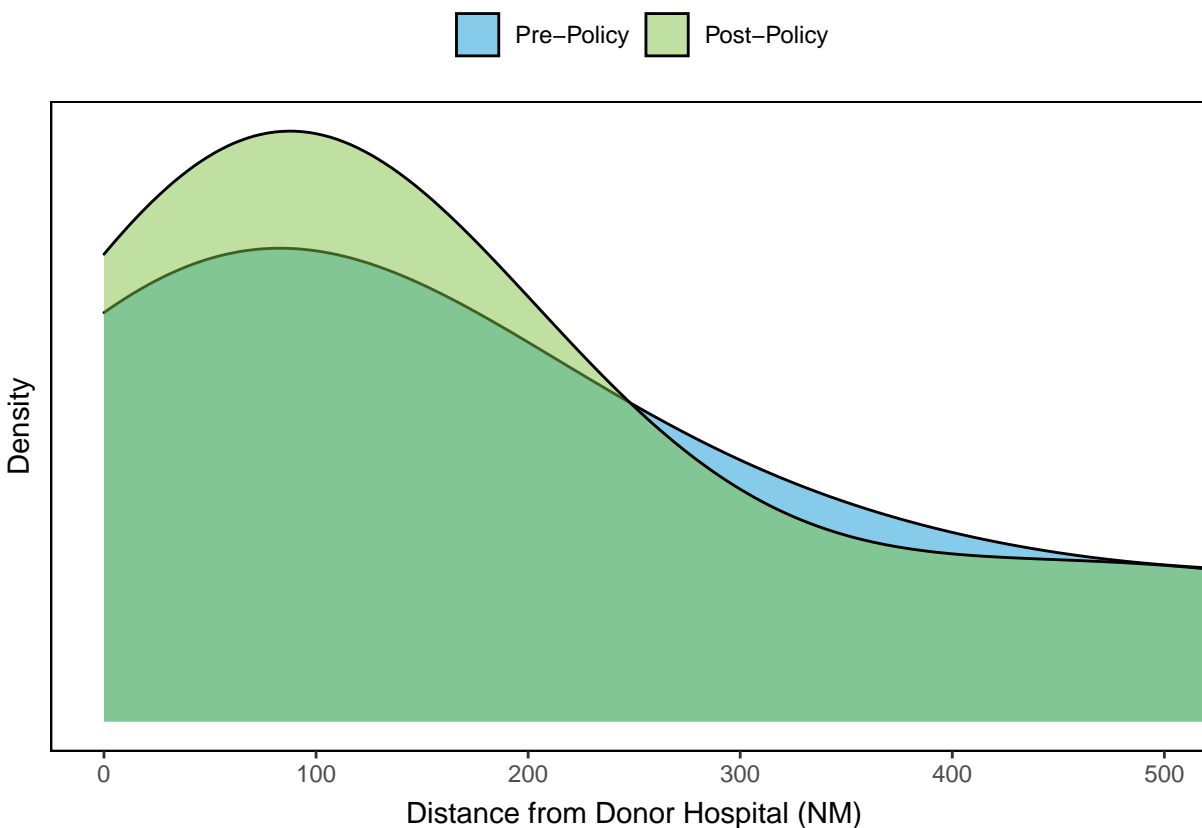


Table 24: Distribution of Distance from Donor Hospital for Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	134	0	0	60.50	174.0	332.8	578.5	1653
Post-Policy	138	0	0	67.75	137.5	299.1	496.2	1397

Figure 27 and **Table 25** show deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and share type. The proportion of transplants using organs procured in the same DSA as the transplant hospital decreased from 41% to 32% after the policy change. The proportion of regional and national shares increased from 19% to 27% and from 40% to 41%, respectively.

Figure 27: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Share Type

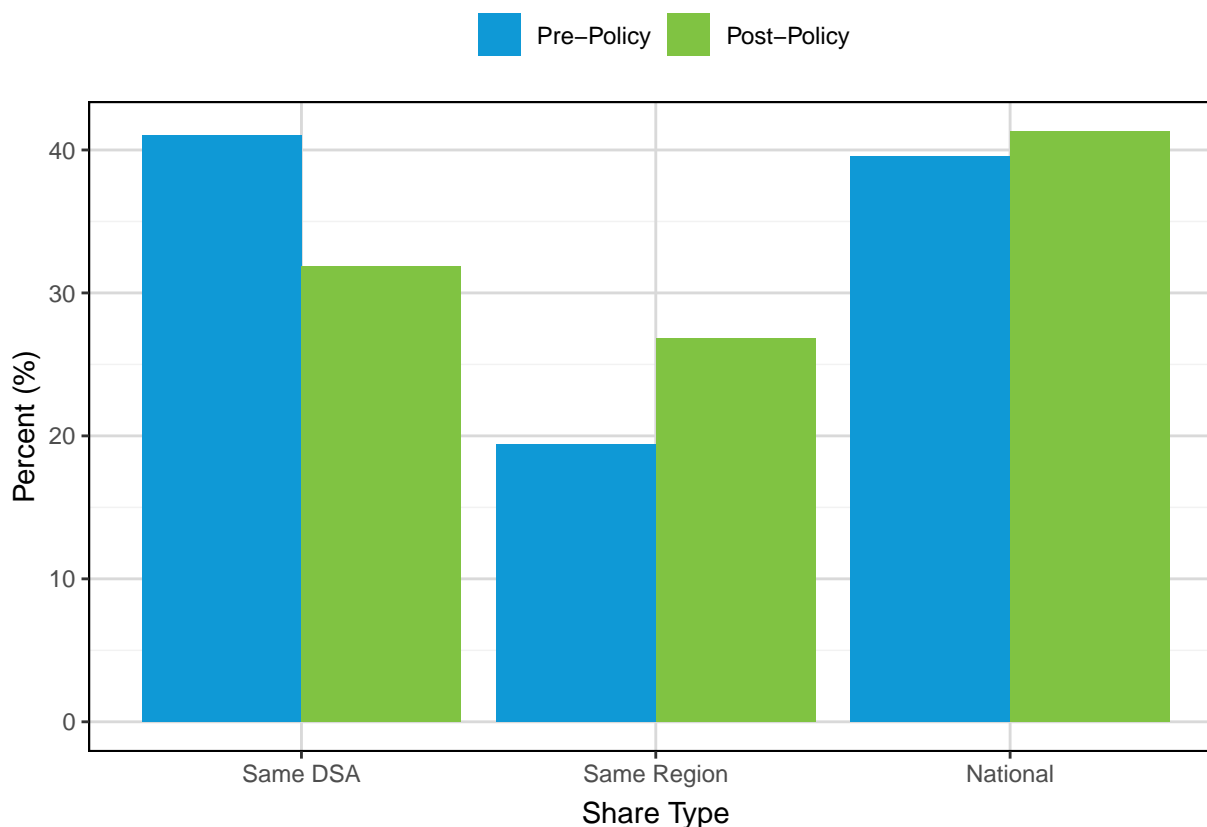


Table 25: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Share Type

Share Type	Pre-Policy		Post-Policy	
	N	%	N	%
Same DSA	55	41.04	44	31.88
Same Region	26	19.40	37	26.81
National	53	39.55	57	41.30
Total	134	100.00	138	100.00

Figure 28 and **Table 26** show deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and OPTN region. Transplant volume increased in 4 regions, decreased in 3 regions, and remained the same in 4 regions.

Figure 28: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Region

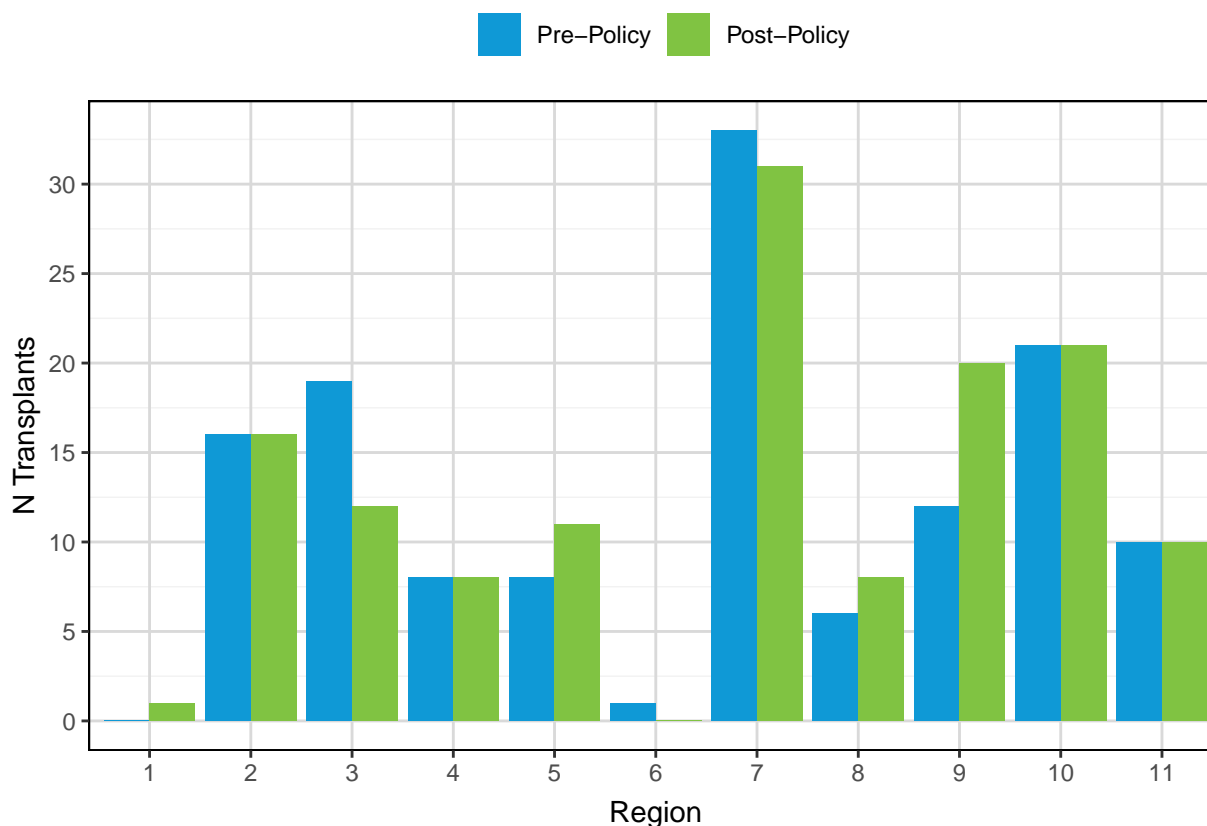


Table 26: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Region

Region	Pre-Policy		Post-Policy	
	N	%	N	%
1	0	0.00	1	0.72
2	16	11.94	16	11.59
3	19	14.18	12	8.70
4	8	5.97	8	5.80
5	8	5.97	11	7.97
6	1	0.75	0	0.00
7	33	24.63	31	22.46
8	6	4.48	8	5.80
9	12	8.96	20	14.49
10	21	15.67	21	15.22
11	10	7.46	10	7.25
Total	134	100.00	138	100.00

Table 27 shows deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and DSA. Of 39 DSAs with at least one pancreas transplant during the cohort, the number of transplants increased in 16 DSAs after policy implementation, and decreased in 17 DSAs; 6 DSAs saw no change in transplant volume.

Table 27: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and DSA

DSA	Pre-Policy	Post-Policy	% Change
AZOB	0	2	*
CADN	2	2	0.00
CAOP	4	6	50.00
CASD	0	1	*
CORS	1	0	-100.00
DCTC	4	5	25.00
FLFH	0	1	*
FLMP	10	9	-10.00
FLUF	6	2	-66.67
FLWC	1	0	-100.00
GALL	1	0	-100.00
ILIP	8	8	0.00
INOP	8	8	0.00
LAOP	1	0	-100.00
MAOB	0	1	*
MDPC	4	3	-25.00
MIOP	4	2	-50.00
MNOP	8	12	50.00
MOMA	0	4	*
NCNC	2	4	100.00
NEOR	5	4	-20.00
NJTO	1	1	0.00
NYAP	1	1	0.00
NYFL	1	6	500.00
NYRT	10	12	20.00
NYWN	0	1	*
OHLB	3	7	133.33
OHOV	6	4	-33.33
PADV	3	5	66.67
PATF	4	2	-50.00
SCOP	4	1	-75.00
TNMS	0	3	*
TXGC	3	2	-33.33
TXSA	1	2	100.00
TXSB	4	4	0.00
UTOP	2	0	-100.00
VATB	4	2	-50.00
WALC	1	0	-100.00
WIUW	17	11	-35.29
Total	134	138	2.99

Table 28 shows deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and transplant hospital. Of 63 transplant hospitals with at least one pancreas transplant during the cohort, the number of transplants increased at 27 hospitals after policy implementation, and decreased at 29 hospitals; 7 transplant hospitals saw no change in transplant volume.

Table 28: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Transplant Hospital

Transplant Hospital	Pre-Policy	Post-Policy	% Change
AZUA-TX1	0	2	*
CACS-TX1	0	2	*
CALL-TX1	3	4	33.33
CAPC-TX1	0	1	*
CAPM-TX1	0	1	*
CASH-TX1	0	1	*
CASU-TX1	2	0	-100.00
CAUC-TX1	1	0	-100.00
COUC-TX1	1	0	-100.00
DCGU-TX1	4	4	0.00
FLFH-TX1	0	1	*
FLJM-TX1	10	9	-10.00
FSL-TX1	6	2	-66.67
FLTG-TX1	1	0	-100.00
GAPH-TX1	1	0	-100.00
ILNM-TX1	2	3	50.00
ILPL-TX1	0	1	*
ILSF-TX1	0	1	*
ILUC-TX1	2	0	-100.00
ILUI-TX1	4	3	-25.00
INIM-TX1	8	8	0.00
LAWK-TX1	1	0	-100.00
MAMG-TX1	0	1	*
MDUM-TX1	4	3	-25.00
MIHF-TX1	2	2	0.00
MIUM-TX1	2	0	-100.00
MNMC-TX1	3	8	166.67
MNUM-TX1	5	4	-20.00
MOBH-TX1	0	4	*
NCBG-TX1	1	1	0.00
NCDU-TX1	1	3	200.00
NEUN-TX1	5	4	-20.00
NJHK-TX1	1	0	-100.00
NJSB-TX1	0	1	*
NYAM-TX1	1	1	0.00
NYCP-TX1	4	7	75.00
NYEC-TX1	0	1	*
NYFL-TX1	1	1	0.00
NYMA-TX1	1	1	0.00
NYMS-TX1	4	2	-50.00
NYNY-TX1	0	2	*
NYUC-TX1	1	0	-100.00
NYUM-TX1	0	5	*
OHCC-TX1	3	7	133.33

(continued)

Transplant Hospital	Pre-Policy	Post-Policy	% Change
OHCM-TX1	3	2	-33.33
OHUC-TX1	3	2	-33.33
PAAE-TX1	0	2	*
PACH-TX1	4	2	-50.00
PATJ-TX1	1	0	-100.00
PAUP-TX1	2	3	50.00
SCMU-TX1	4	1	-75.00
TNMH-TX1	0	3	*
TXHD-TX1	0	1	*
TXHS-TX1	1	2	100.00
TXMH-TX1	3	2	-33.33
TXSW-TX1	2	3	50.00
TXTX-TX1	2	0	-100.00
UTLD-TX1	1	0	-100.00
UTMC-TX1	1	0	-100.00
VAFH-TX1	0	1	*
VAUV-TX1	4	2	-50.00
WAUW-TX1	1	0	-100.00
WIUW-TX1	17	11	-35.29
Total	134	138	2.99

Table 29 shows deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and state. Of 27 states with at least one pancreas transplant during the cohort, the number of transplants increased in 9 states after policy implementation, and decreased in 12 states; 6 states saw no change in transplant volume.

Table 29: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and State

State	Pre-Policy	Post-Policy	% Change
Arizona	0	2	*
California	6	9	50.00
Colorado	1	0	-100.00
Dist. Of Columbia	4	4	0.00
Florida	17	12	-29.41
Georgia	1	0	-100.00
Illinois	8	8	0.00
Indiana	8	8	0.00
Louisiana	1	0	-100.00
Maryland	4	3	-25.00
Massachusetts	0	1	*
Michigan	4	2	-50.00
Minnesota	8	12	50.00
Missouri	0	4	*
Nebraska	5	4	-20.00
New Jersey	1	1	0.00
New York	12	20	66.67
North Carolina	2	4	100.00
Ohio	9	11	22.22
Pennsylvania	7	7	0.00
South Carolina	4	1	-75.00
Tennessee	0	3	*
Texas	8	8	0.00
Utah	2	0	-100.00
Virginia	4	3	-25.00
Washington	1	0	-100.00
Wisconsin	17	11	-35.29
Total	134	138	2.99

Figure 29 and **Table 30** show the distribution of pancreas preservation time (time between procurement cross-clamp to recipient organ reperfusion) in hours for deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era. There was no change in median preservation time after policy implementation (8.1 hours).

Figure 29: Distribution of Pancreas Preservation Time for Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era

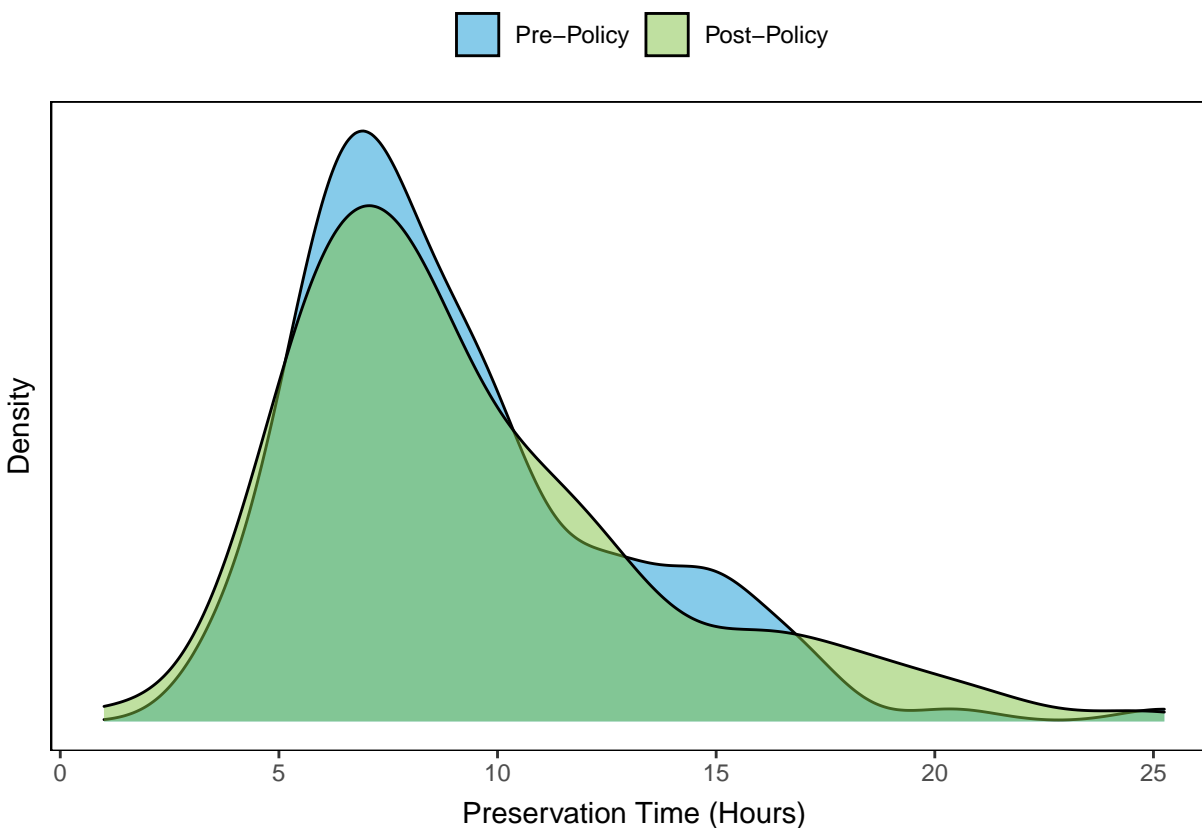


Table 30: Distribution of Pancreas Preservation Time for Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	134	3	3.5	6.5	8.1	9.1	10.6	25.2
Post-Policy	138	5	1.0	6.3	8.1	9.4	11.3	24.8

Post-Transplant Outcomes

Patient Survival

Figure 30 and **Table 31** show six month post-transplant patient survival for deceased donor pancreas transplants by policy era. The cohort for survival analyses was restricted to transplant recipients with at least 6 months of follow-up time (transplants performed on or before September 30, 2021). The probability of patient survival at six months post-transplant decreased from 92.3% to 89.1% after policy implementation. This decrease was not statistically significant. Additional information about post-transplant patient survival, including stratifications by recipient characteristics, is provided in the **Appendix**.

Figure 30: Six Month Post-Transplant Patient Survival for Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era

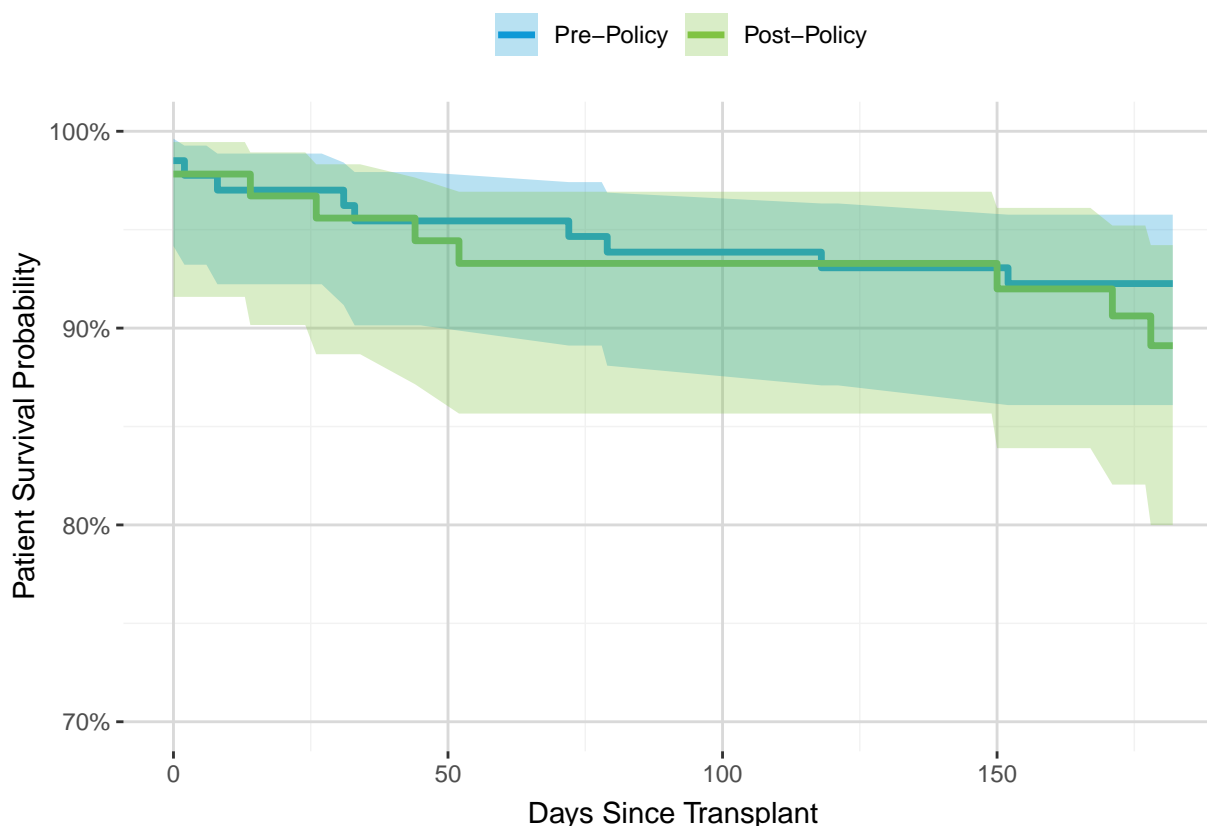


Table 31: Six Month Post-Transplant Patient Survival for Pancreas Transplants by Policy Era

Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
Pre-Policy	134	10	115	92.3	(86.1, 95.8)
Post-Policy	92	9	55	89.1	(80, 94.2)

Pancreas Graft Survival

Figure 31 and **Table 32** show six month post-transplant pancreas graft survival for deceased donor pancreas transplants by policy era. The probability of pancreas graft survival at six months post-transplant decreased from 85.1% to 79.7% after policy implementation. This decrease was not statistically significant. Additional information about post-transplant pancreas graft survival, including stratifications by recipient characteristics, is provided in the **Appendix**.

Figure 31: Six Month Post-Transplant Pancreas Graft Survival for Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era

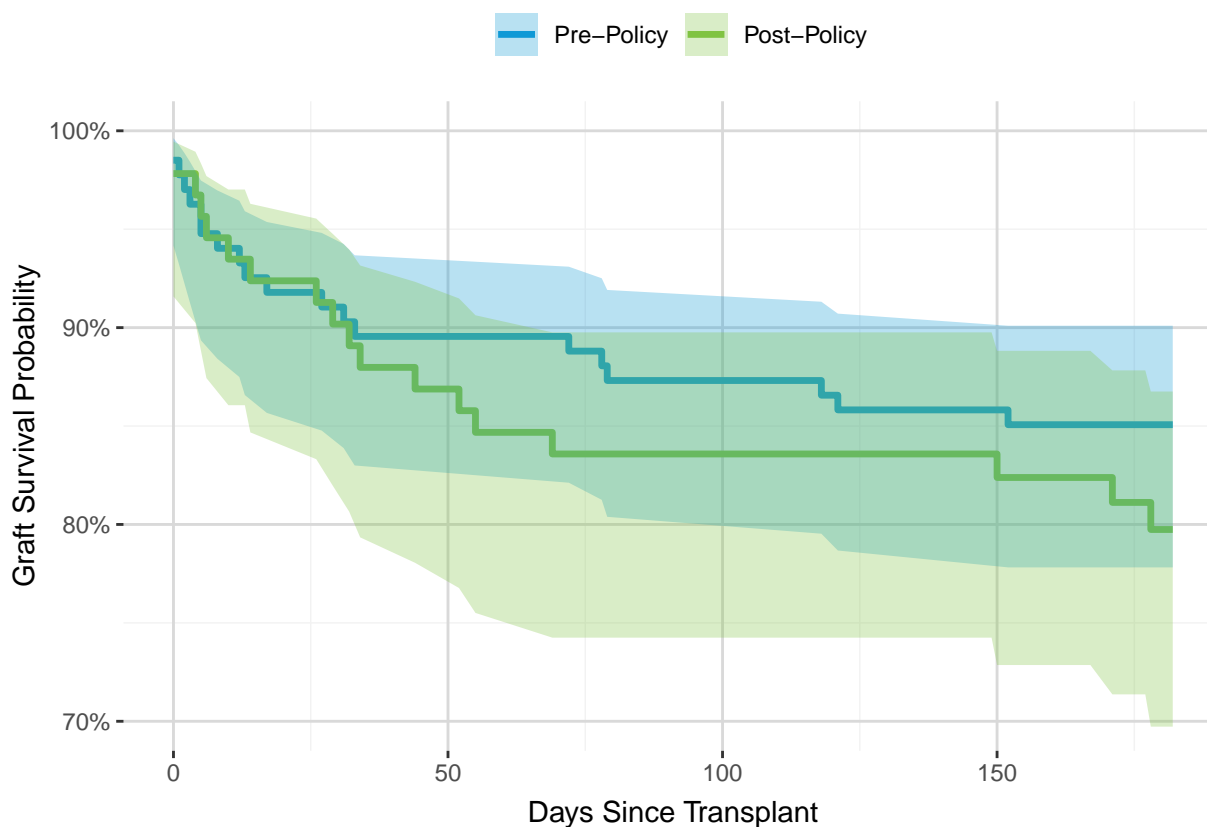


Table 32: Six Month Post-Transplant Pancreas Graft Survival for Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era

Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Pre-Policy	134	20	113	85.1	(77.8, 90.1)
Post-Policy	92	18	54	79.7	(69.7, 86.8)

Released Organs

Table 33 shows the disposition of pancreata from pancreas matches with a final acceptance by policy era. The overall proportion of pancreata that were transplanted to the originally accepting patient decreased post-policy from 50.5% to 43.8%.

There were four released pancreata where the local placement bypass code was executed to allocate at the transplant hospital where it was originally accepted.

Table 33: Disposition of Pancreata from Pancreas Matches with a Final Acceptance March 15, 2020-March 14, 2022 by Policy Era and OPTN Region

Era	N	Same Patient	Same Center	Different Center	Discard	Non-Recovery
Pre-Policy	184	93 (50.5%)	2 (1.1%)	11 (6.0%)	25 (13.6%)	53 (28.8%)
Post-Policy	217	95 (43.8%)	3 (1.4%)	7 (3.2%)	34 (15.7%)	78 (35.9%)

Efficient Allocation and Utilization of Organs

This section describes key metrics for monitoring efficiency in allocation and utilization of pancreata since the removal of DSA and OPTN region from allocation. Additional data may be found in the **Appendix**.

The overall pancreas discard rate increased from 22.7% to 26.5% after policy implementation (**Figure 32 & Table 34**). The overall offer rate from pancreas/kidney-pancreas match runs increased from approximately 12 to 14 offers per active patient year (**Figure 33 & Table 36**). The overall offer acceptance rate decreased from 79 to 68 acceptances per 1000 offers (**Table 36 & Figure 34**). The median sequence number of final acceptor increased from 3 (IQR: 1-9) to 5 (IQR: 2-15) after implementation (**Figure 37 & Table 39**).

Figure 32 and **Table 34** show discard rates for deceased donor pancreata recovered for transplant from March 15, 2020 to March 14, 2022 by policy era. The overall pancreas discard rate increased post-policy from 22.7% to 26.5%.

Figure 32: Discard Rates for Deceased Donor Pancreas Recovered for Transplant March 15, 2020 - March 14, 2022 by Policy Era

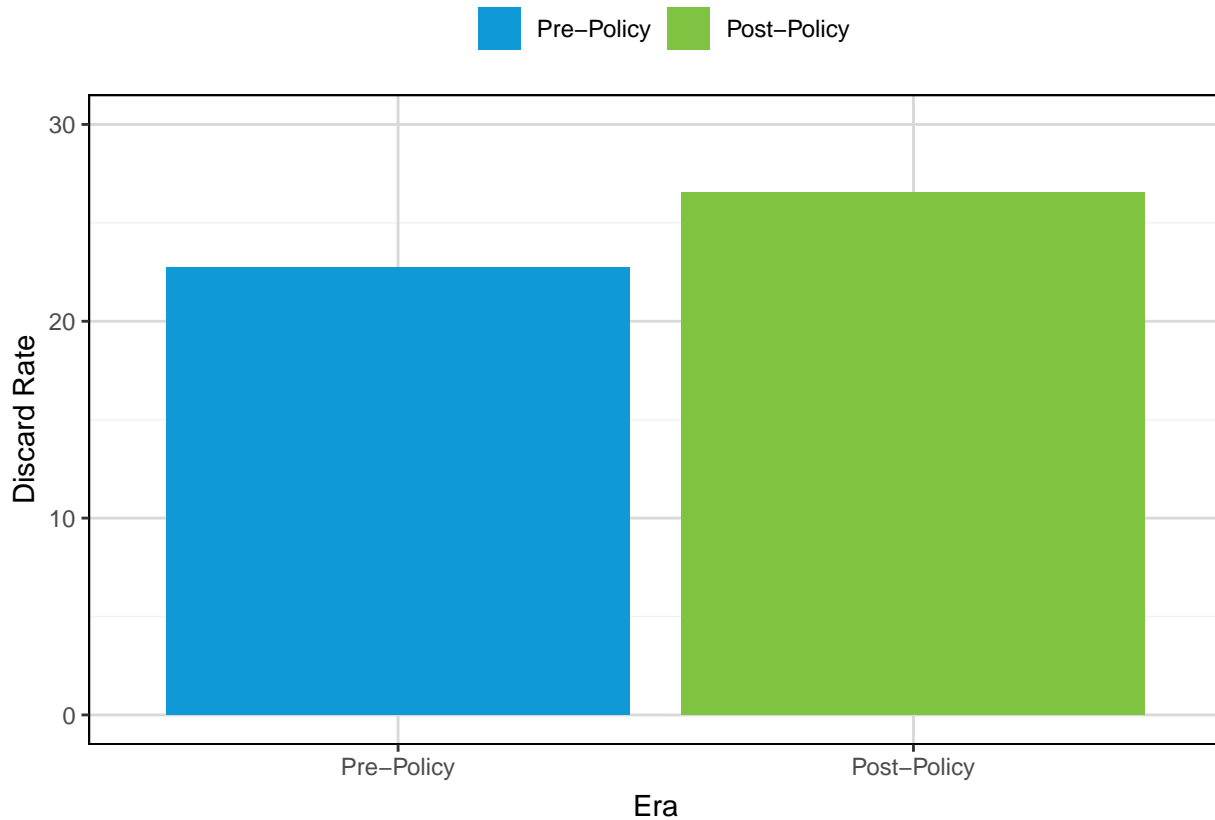


Table 34: Discard Rates for Deceased Donor Pancreas Recovered for Transplant March 15, 2020 - March 14, 2022 by Policy Era

Era	Pancreata Recovered	Pancreata Not TXed	Discard Rate
Pre-Policy	1245	283	22.73
Post-Policy	1319	350	26.54

Table 35 shows deceased donor pancreata recovered but not transplanted from March 15, 2020 to March 14, 2022 by discard reason and policy era. A total of 283 pancreata were discarded pre-policy, and 350 were discarded post-policy. The most common reason for pancreas discard in both policy eras was “Other” followed by “Anatomical abnormalities”. The proportion of discards for “Other” reasons decreased post-policy from 34.3% to 30.0%. The proportion of discards due to “Anatomical abnormalities” decreased from 24.4% to 23.1%.

Table 35: Deceased Donor Pancreas Recovered but Not Transplanted March 15, 2020-March 14, 2022 by Discard Reason and Policy Era

Discard Reason	Pre-Policy		Post-Policy	
	N	%	N	%
Other, specify	97	34.28	105	30.00
Anatomical abnormalities	69	24.38	81	23.14
No recipient located - list exhausted	41	14.49	56	16.00
Diseased organ	18	6.36	21	6.00
Poor organ function	13	4.59	23	6.57
Vascular damage	13	4.59	19	5.43
Recipient determined to be unsuitable for TX in OR	13	4.59	7	2.00
Organ trauma	7	2.47	10	2.86
Too old on ice	4	1.41	11	3.14
Warm ischemic time too long	2	0.71	8	2.29
Organ not as described	4	1.41	5	1.43
Infection	1	0.35	2	0.57
Donor Medical history	0	0.00	2	0.57
Biopsy findings	1	0.35	0	0.00
Total	283	100.00	350	100.00

Figure 33 and **Table 36** show offers per active patient year for pancreas/kidney-pancreas match runs from March 15, 2020 to March 14, 2022 by policy era. The overall offer rate increased from approximately 12 offers per active patient year to approximately 14 offers per active patient year after policy implementation.

Figure 33: Offers per Active Patient Year for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era

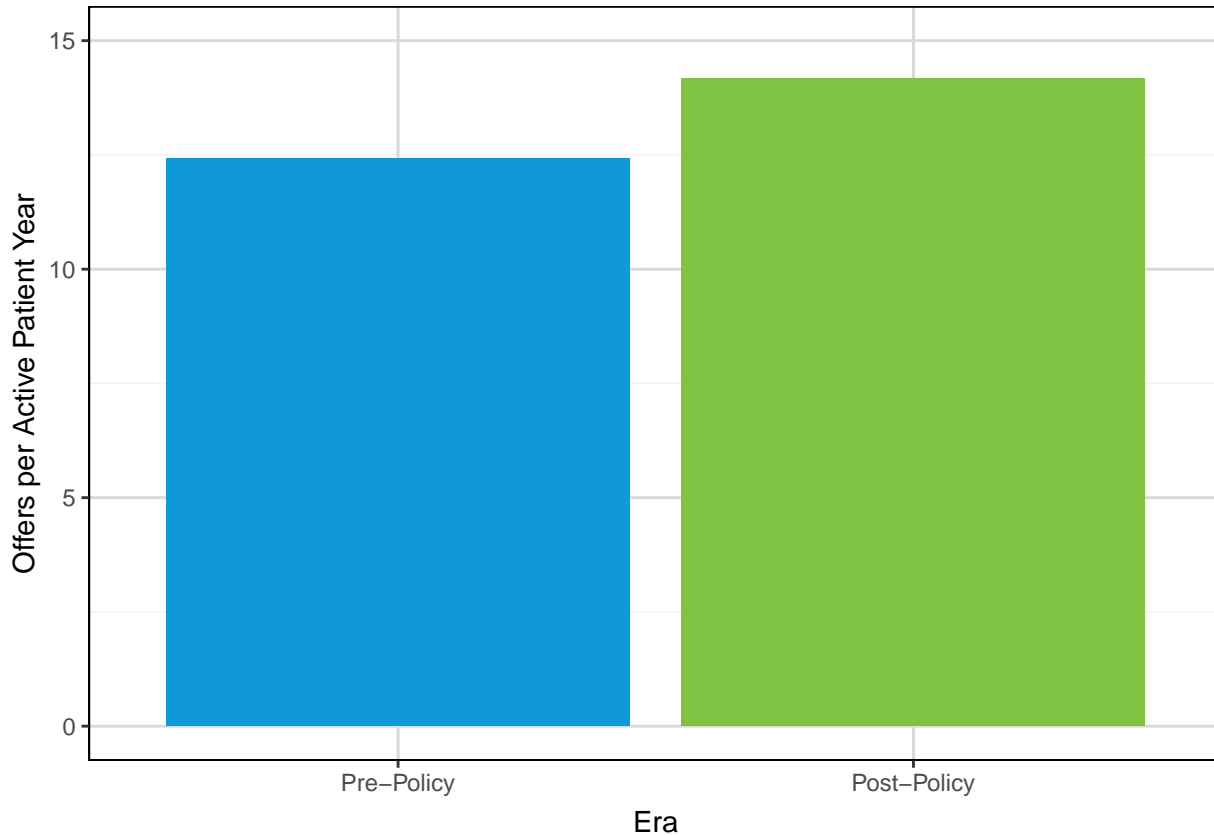


Table 36: Offer and Acceptance Rates for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era

Era	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	1020.98	12680	998	12.42	78.71
Post-Policy	1020.74	14470	982	14.18	67.86

Figure 34 shows acceptances per 1000 offers for pancreas/kidney-pancreas match runs from March 15, 2020 to March 14, 2022 by policy era. The overall acceptance rate decreased from 79 to 68 acceptances per 1000 offers after policy implementation.

Figure 34: Acceptances per 1000 Offers for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era

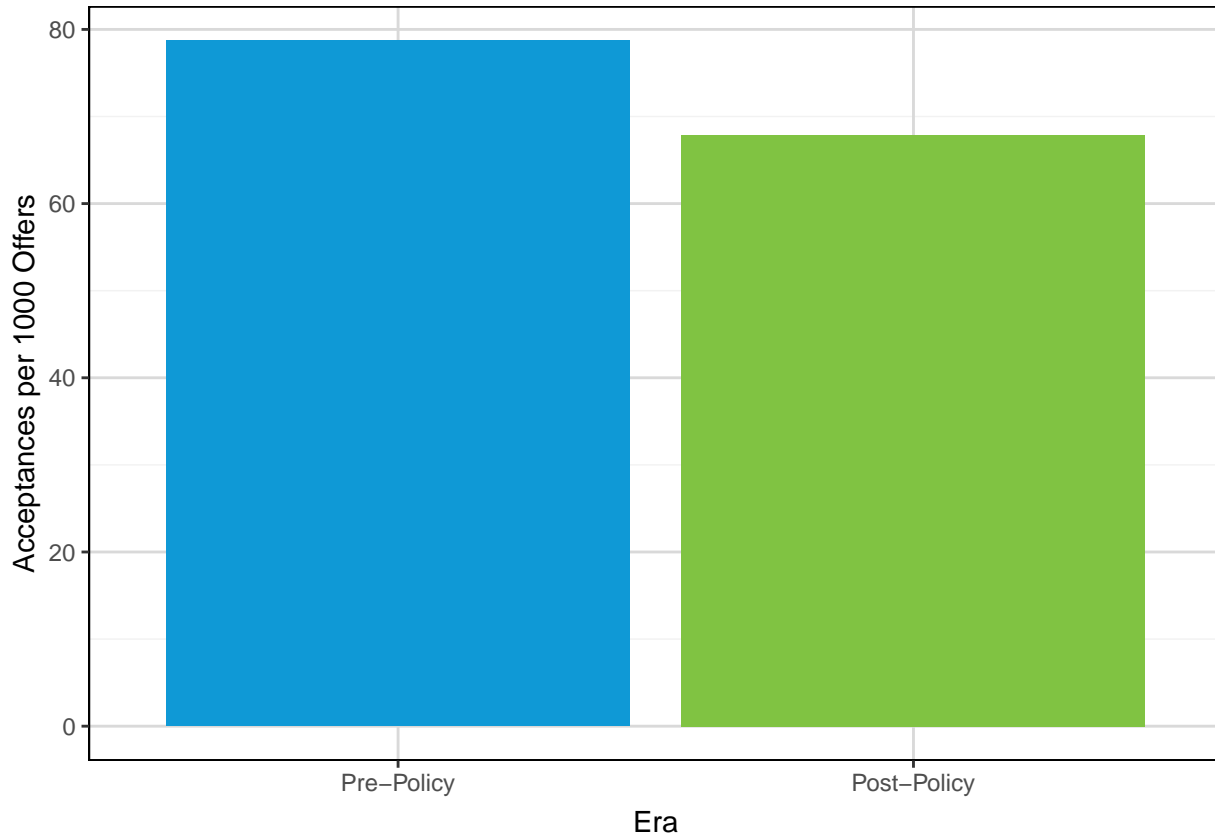


Figure 35 and **Table 37** show acceptances per 1000 offers for pancreas/kidney-pancreas match runs from March 15, 2020 to March 14, 2022 by policy era and share type. The acceptance rate for organs recovered in the same DSA as the potential transplant recipient's center decreased from 241 to 167 acceptances per 1000 offers after policy implementation. The acceptance rate for organs recovered outside the same DSA as the potential transplant recipient increased from 36 to 49 acceptances per 1000 offers.

Figure 35: Acceptances per 1000 Offers for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and Share Type

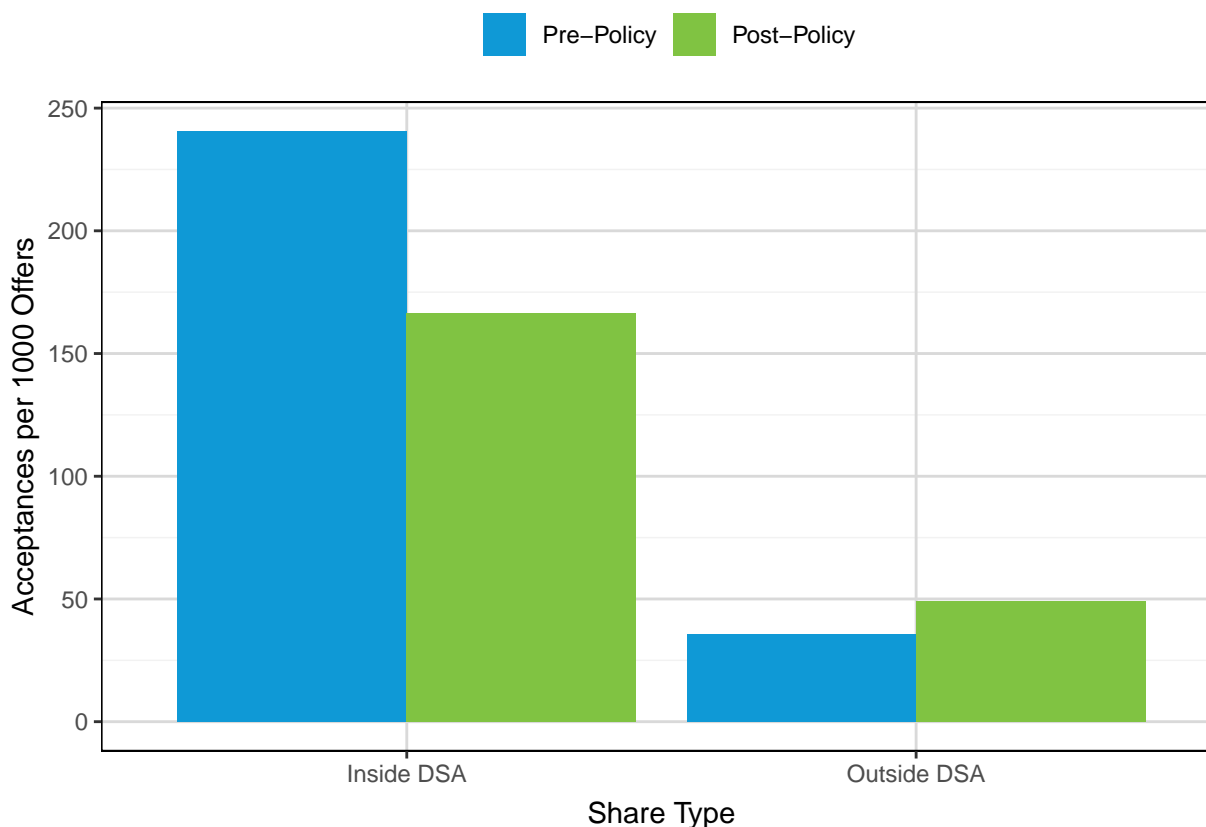


Table 37: Acceptances per 1000 Offers for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and Share Type

Share Type	Pre-Policy			Post-Policy		
	Offers	Acceptances	Acceptances per 1000 Offers	Offers	Acceptances	Acceptances per 1000 Offers
Inside DSA	2656	639	240.59	2323	387	166.59
Outside DSA	10024	359	35.81	12147	595	48.98

Figure 36 and **Table 38** show acceptances per 1000 offers for pancreas/kidney-pancreas match runs from March 15, 2020 to March 14, 2022 by policy era and distance. The acceptance rate for offers within 250 NM of the donor hospital decreased from 77 to 55 acceptances per 1000 offers. The acceptance rate for offers > 250 NM increased from 79 to 72 acceptances per 1000 offers.

Figure 36: Acceptances per 1000 Offers for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and Distance

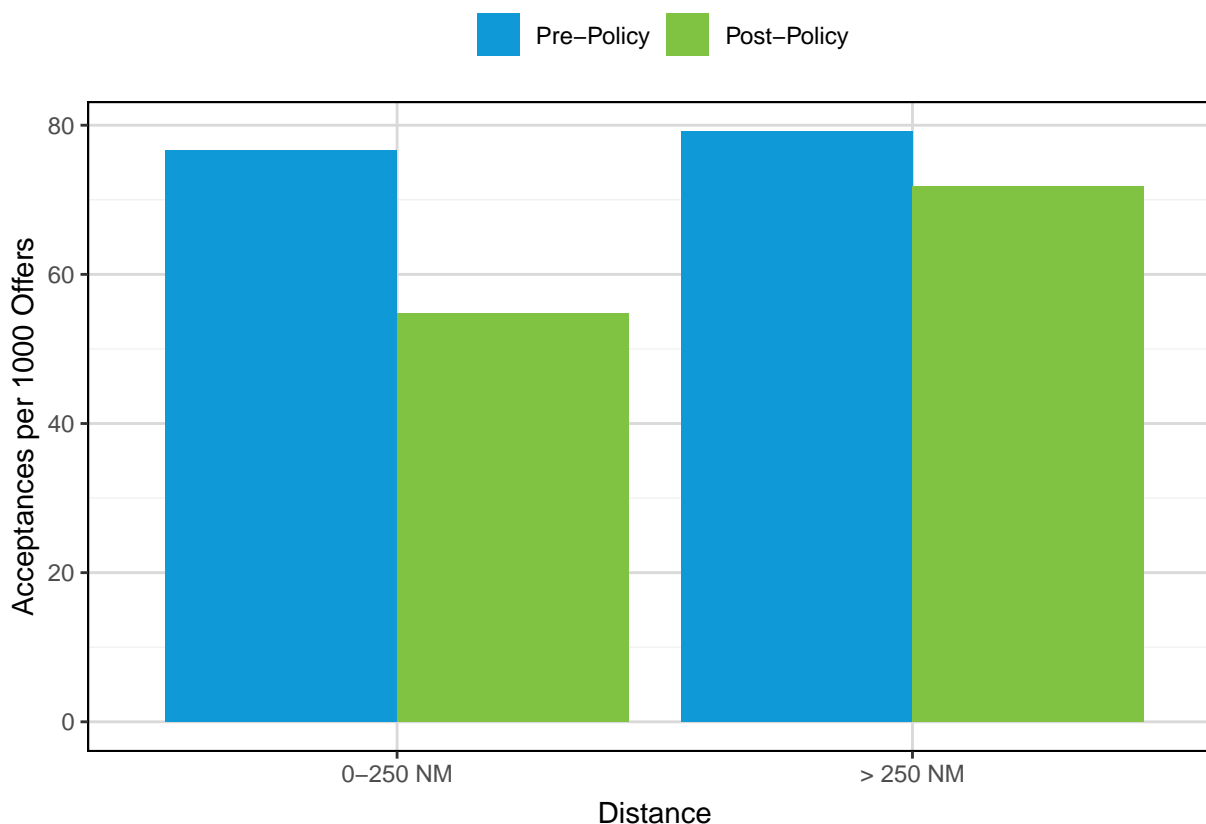


Table 38: Acceptances per 1000 Offers for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and Distance

Distance	Pre-Policy			Post-Policy		
	Offers	Acceptances	Acceptances per 1000 Offers	Offers	Acceptances	Acceptances per 1000 Offers
0-250 NM	2324	178	76.59	3378	185	54.77
> 250 NM	10356	820	79.18	11092	797	71.85

Figure 37 shows the distribution of sequence number of the final acceptor for pancreas/kidney-pancreas match runs. The median sequence number of final acceptor increased from 3 to 5 after policy implementation.

Figure 37: Distribution of Sequence Number of Final Acceptor for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era

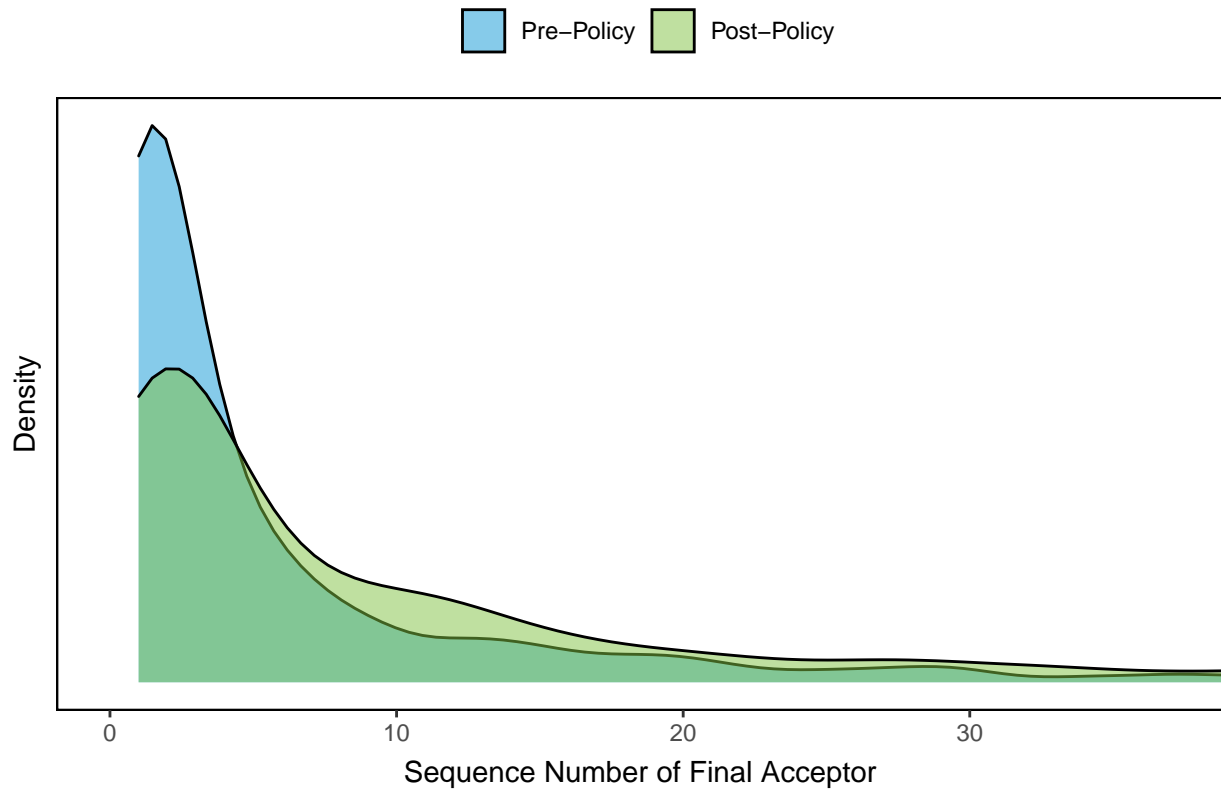


Table 39: Distribution of Sequence Number of Final Acceptor for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era

Era	N	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	998	1	1	3	12.7	9	242
Post-Policy	982	1	2	5	14.7	15	235

Figure 38 and **Table 40** show the distribution of time from first electronic offer to cross-clamp for pancreas/kidney-pancreas match runs. Median time from first offer to cross-clamp increased from 28.2 hours to 31.2 hours after implementation.

Figure 38: Distribution of Hours from First Offer to Cross-Clamp for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era

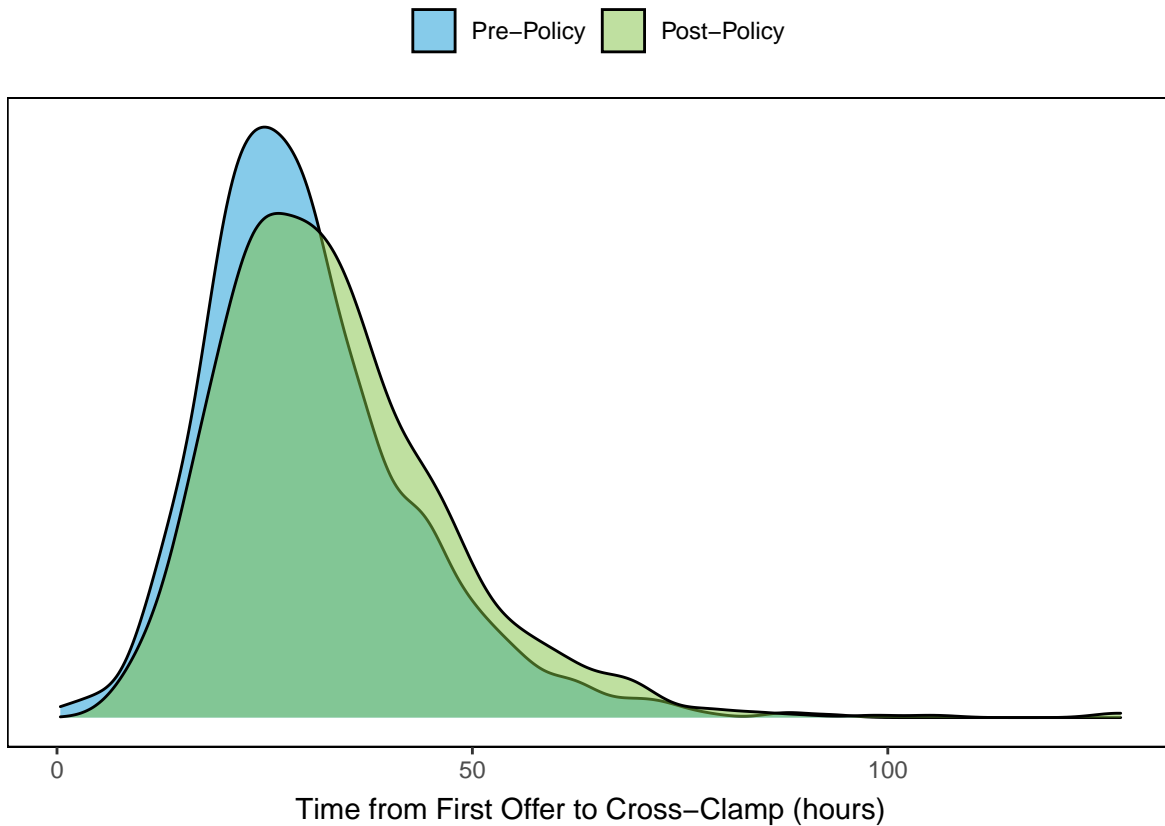


Table 40: Distribution of Hours from First Offer to Cross-Clamp for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era

Era	N	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	998	0.40	21.68	28.21	30.33	36.55	93.37
Post-Policy	982	6.33	23.60	31.22	33.41	40.74	128.03

Donors Recovered in Alaska

Pre-policy, three donors in Alaska had pancreata recovered. None were transplanted. Post-policy, there were no donors in Alaska with pancreata recovered or transplanted.

Facilitated Pancreas Allocation

Figure 39 shows the number of programs qualified to receive facilitated pancreas offers by policy era. A total of 44 programs qualified for facilitated placement pre-policy, and 53 programs qualified post-policy. 39 programs qualified for facilitated placement in both policy eras, while 5 programs qualified for facilitated placement in the pre-policy era only, and 14 programs qualified in the post-policy era only.

Figure 39: Number of Programs that Qualified for Facilitated Pancreas Allocation March 15, 2020 - March 14, 2022 by Policy Era

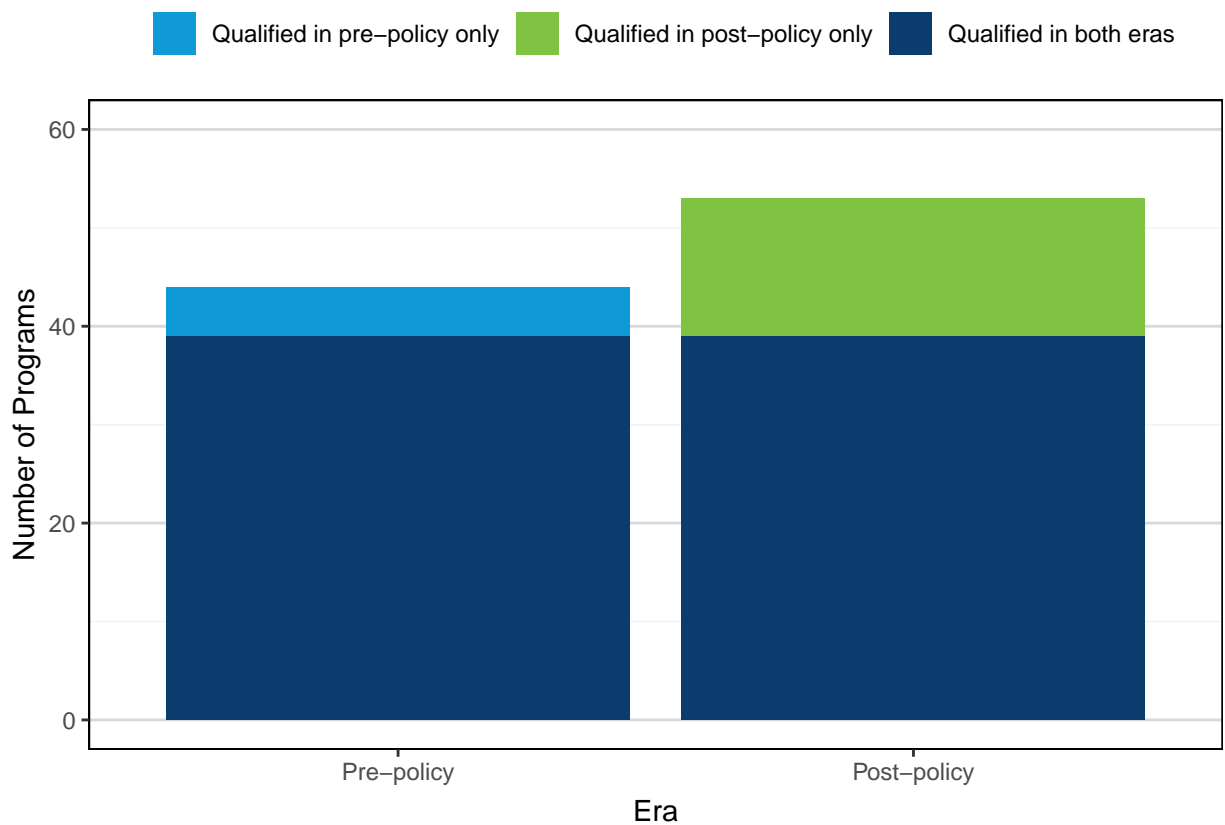


Figure 40 and **Table 41** show the number of times facilitated pancreas allocation was used by policy era. Pre-policy, OPOs and the Organ Center used facilitated allocation 79 and 98 times, respectively, for a total of 177 facilitated placement attempts. Post-policy, OPOs and the Organ Center used facilitated allocation 57 and 97 times, respectively, for a total of 154 facilitated placement attempts.

Figure 40: Frequency of Facilitated Pancreas Allocation March 15, 2020 - March 14, 2022 by Policy Era

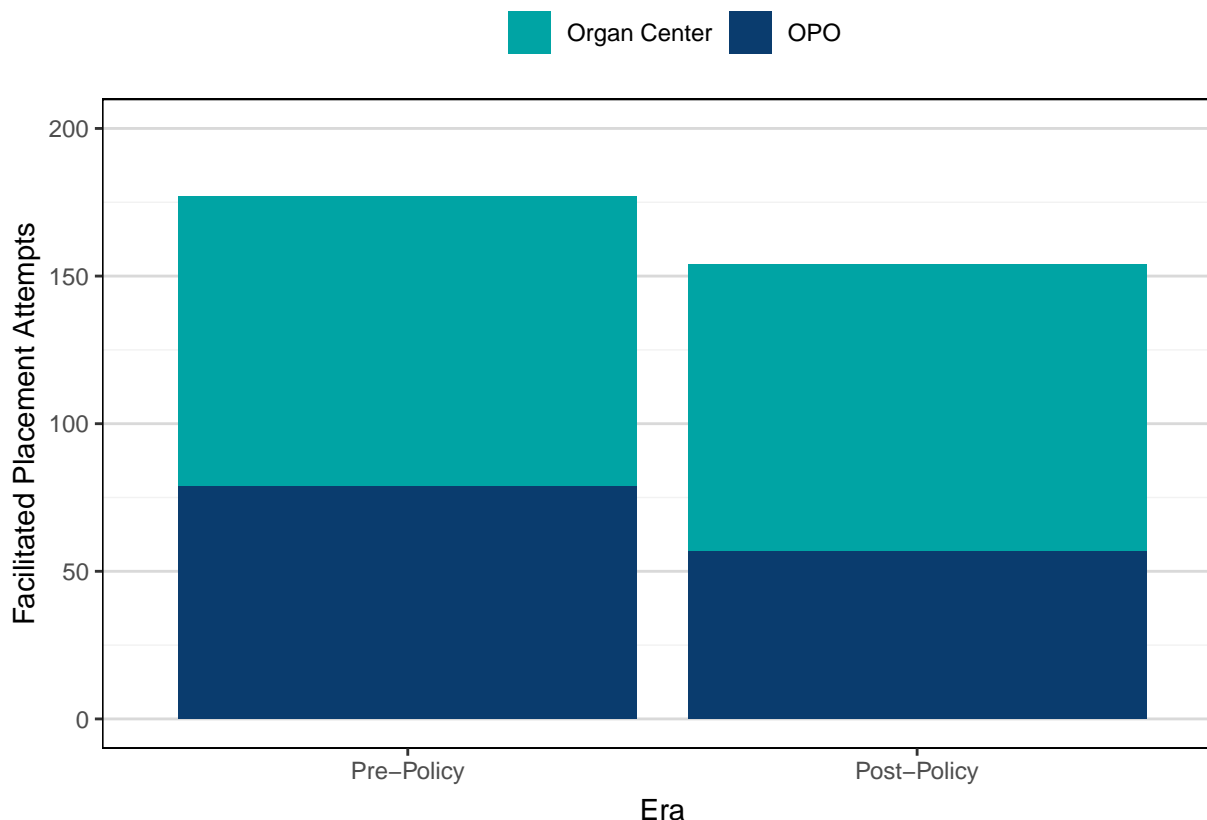


Table 41: Frequency of Facilitated Pancreas Allocation March 15, 2020 - March 14, 2022 by Policy Era

	Pre-Policy	Post-Policy
OPO	79 (44.6%)	57 (37.0%)
Organ Center	98 (55.4%)	97 (63.0%)
Total	177 (100.0%)	154 (100.0%)

Table 42 describes the frequency of pancreas transplants resulting from facilitated pancreas allocation by policy era. A total of 11 transplants resulted from facilitated pancreas allocation pre-policy, and 6 transplants resulted from facilitated pancreas allocation post-policy.

Table 42: Number of Transplants Resulting From Facilitated Pancreas Allocation March 15, 2020 - March 14, 2022 by Policy Era

Era	Donors	Transplants
Pre-Policy	175	11
Post-Policy	153	6

Conclusion

The removal of DSA and OPTN region from pancreas and kidney-pancreas allocation has resulted in broader distribution of pancreata. While more KP and PA were allocated outside the recovering OPO's DSA, the majority stayed within 250 NM. There was little change in KP or PA transplant volumes in the 1 year post-policy, despite KPSAM projections of an increase in KP transplants and a corresponding decrease in PA transplants. There were no statistically significant differences in the probability of patient or graft survival for KP or PA recipients at six months post-transplant after policy implementation. The OPTN Pancreas Transplantation Committee will continue to monitor the policy's impact as data become available.

Appendix

Additional Kidney-Pancreas Information

Waiting List

Figure A1 and **Table A1** show the number of registrations waiting for a kidney-pancreas on the last day of each month from March 15, 2020 to March 14, 2022. There was little change in waiting list volume after policy implementation.

Figure A1: Kidney-Pancreas Registrations Waiting on the Last Day of Each Month, March 15, 2020-March 14, 2022

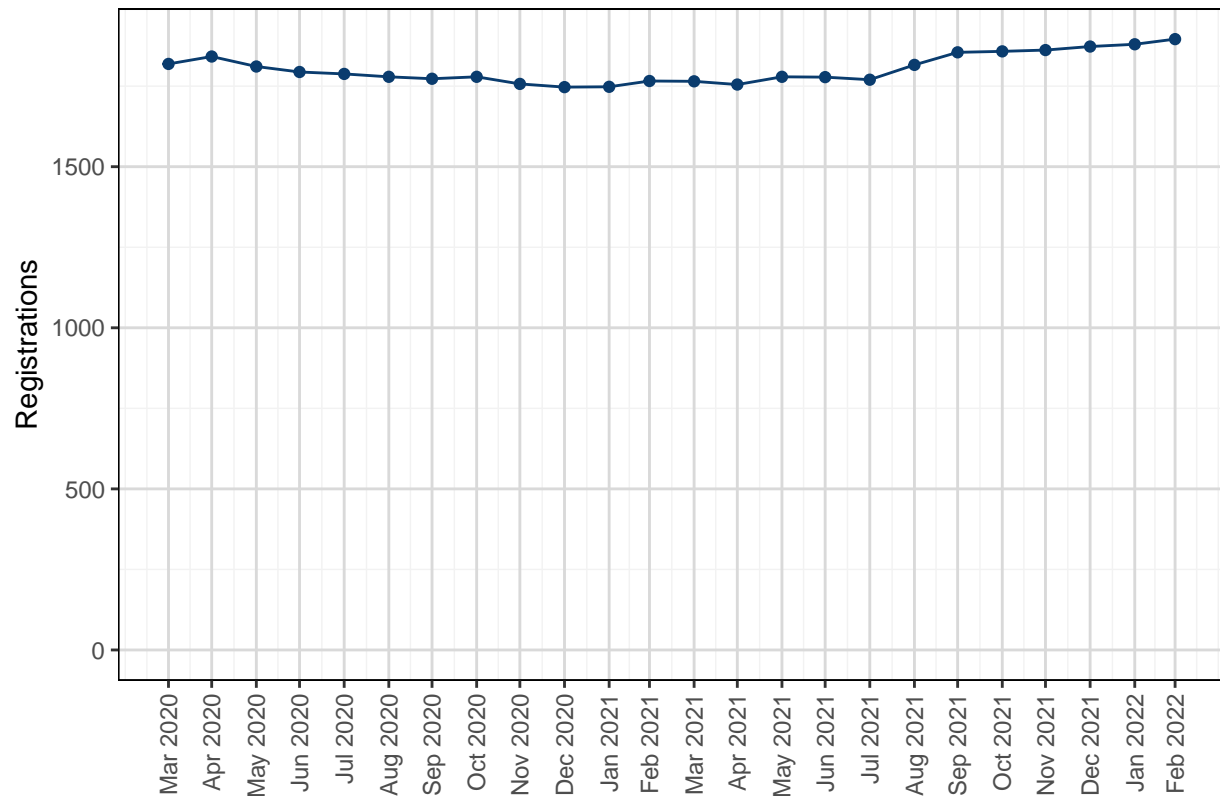


Table A1: Kidney-Pancreas Registrations Waiting on the Last Day of Each Month, March 15, 2020-March 14, 2022

Date	Registrations
March 2020	1819
April 2020	1842
May 2020	1811
June 2020	1794
July 2020	1788
August 2020	1779
September 2020	1773
October 2020	1779
November 2020	1757
December 2020	1747
January 2021	1748
February 2021	1766
March 2021	1765
April 2021	1755
May 2021	1779
June 2021	1778
July 2021	1770
August 2021	1816
September 2021	1855
October 2021	1858
November 2021	1862
December 2021	1873
January 2022	1880
February 2022	1896

Figure A2 and **Table A2** show the percentage of registrations waiting for a kidney-pancreas on the last day of each month from March 15, 2020 to March 14, 2022 by status. The proportion of registrations in active status increased slightly after policy implementation.

Figure A2: Kidney-Pancreas Registrations Waiting on the Last Day of Each Month by Status, March 15, 2020-March 14, 2022

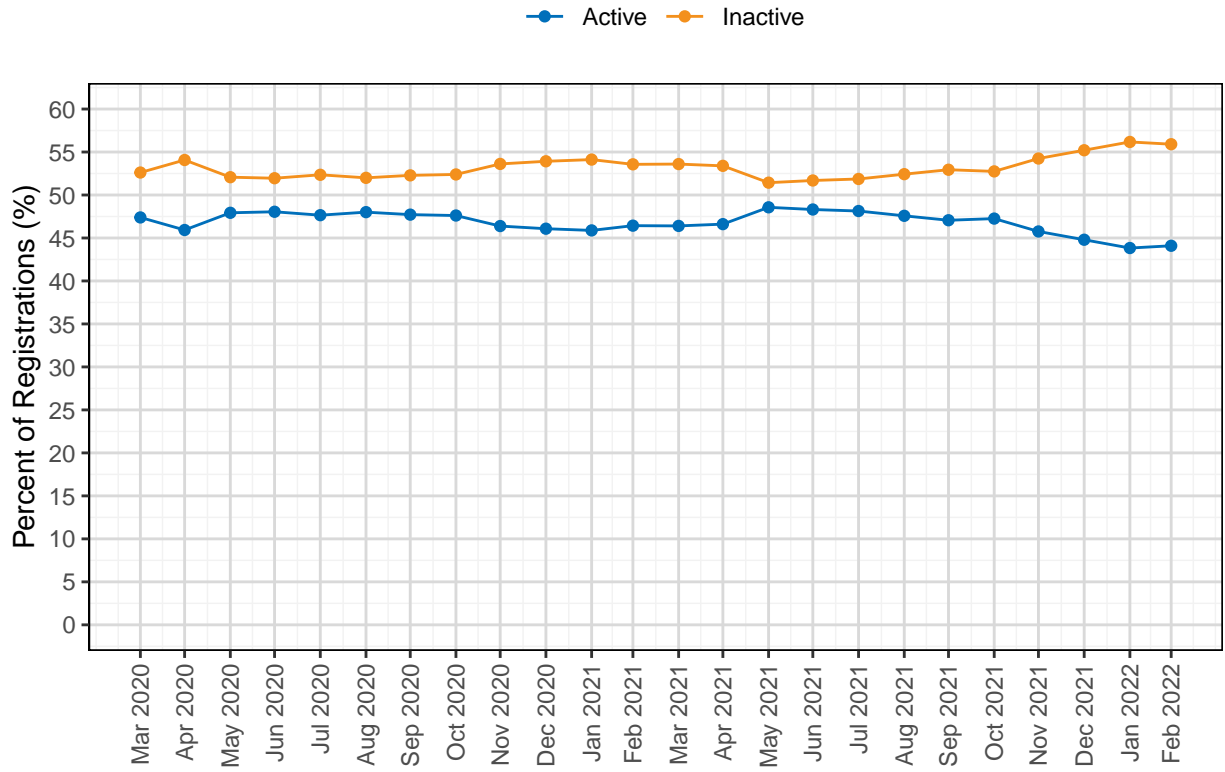


Table A2: Kidney-Pancreas Registrations Waiting on the Last Day of Each Month by Status, March 15, 2020-March 14, 2022

Date	Active		Inactive		Total	
	N	%	N	%	N	%
March 2020	862	47.39	957	52.61	1819	100.00
April 2020	846	45.93	996	54.07	1842	100.00
May 2020	868	47.93	943	52.07	1811	100.00
June 2020	862	48.05	932	51.95	1794	100.00
July 2020	852	47.65	936	52.35	1788	100.00
August 2020	854	48.00	925	52.00	1779	100.00
September 2020	846	47.72	927	52.28	1773	100.00
October 2020	847	47.61	932	52.39	1779	100.00
November 2020	815	46.39	942	53.61	1757	100.00
December 2020	805	46.08	942	53.92	1747	100.00
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
May 2021	864	48.57	915	51.43	1779	100.00
June 2021	859	48.31	919	51.69	1778	100.00
July 2021	852	48.14	918	51.86	1770	100.00
August 2021	864	47.58	952	52.42	1816	100.00
September 2021	873	47.06	982	52.94	1855	100.00
October 2021	878	47.26	980	52.74	1858	100.00
November 2021	852	45.76	1010	54.24	1862	100.00
December 2021	839	44.79	1034	55.21	1873	100.00
January 2022	824	43.83	1056	56.17	1880	100.00
February 2022	836	44.09	1060	55.91	1896	100.00

Figure A3 and **Table A3** show total kidney-pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era. There were 1317 registrations added to the waiting list in the pre-policy era, and 1506 added in the post-policy era.

Figure A3: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era

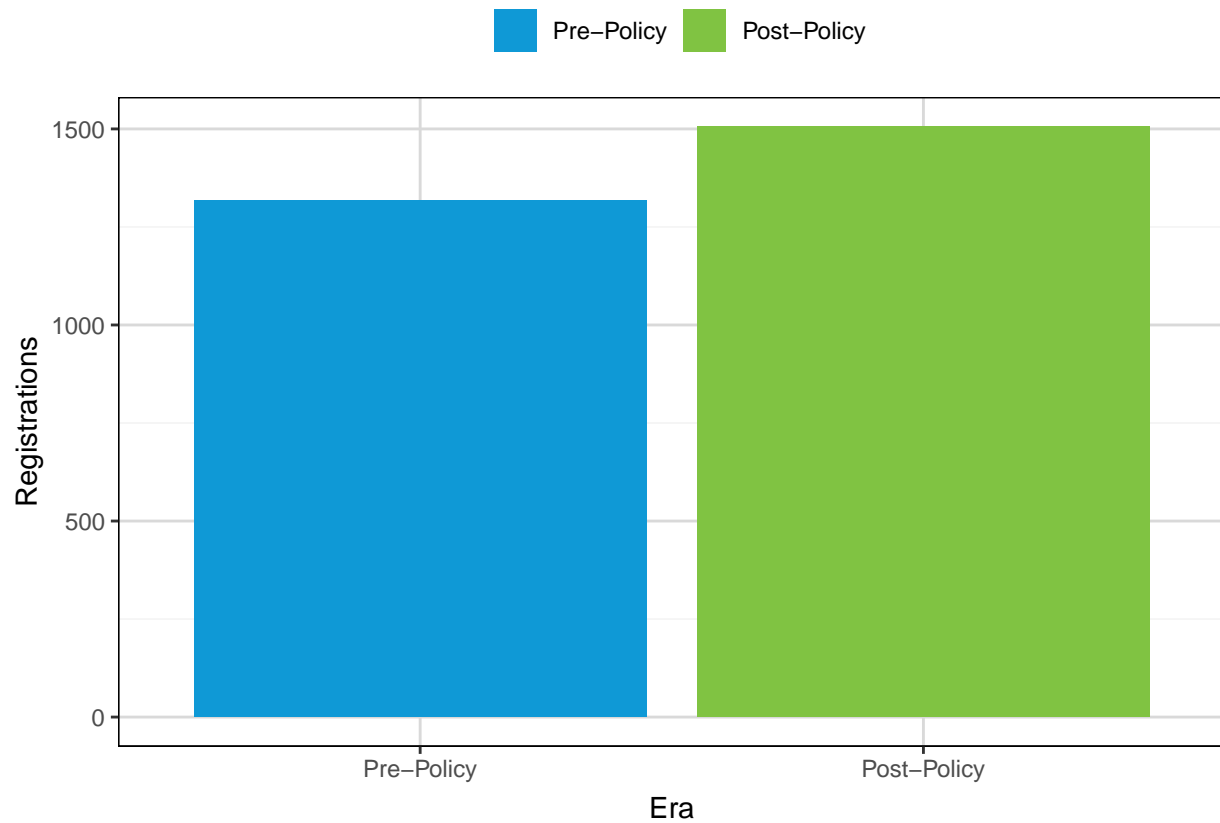


Table A3: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era

Era	Registrations
Pre-Policy	1317
Post-Policy	1506

Figure A4 and **Table A4** show kidney-pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and age at listing. Candidates aged 35-49 years accounted for the majority of waiting list additions overall both pre- and post-policy, and there was little change in the distribution of candidate age at listing after policy implementation.

Figure A4: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Age at Listing

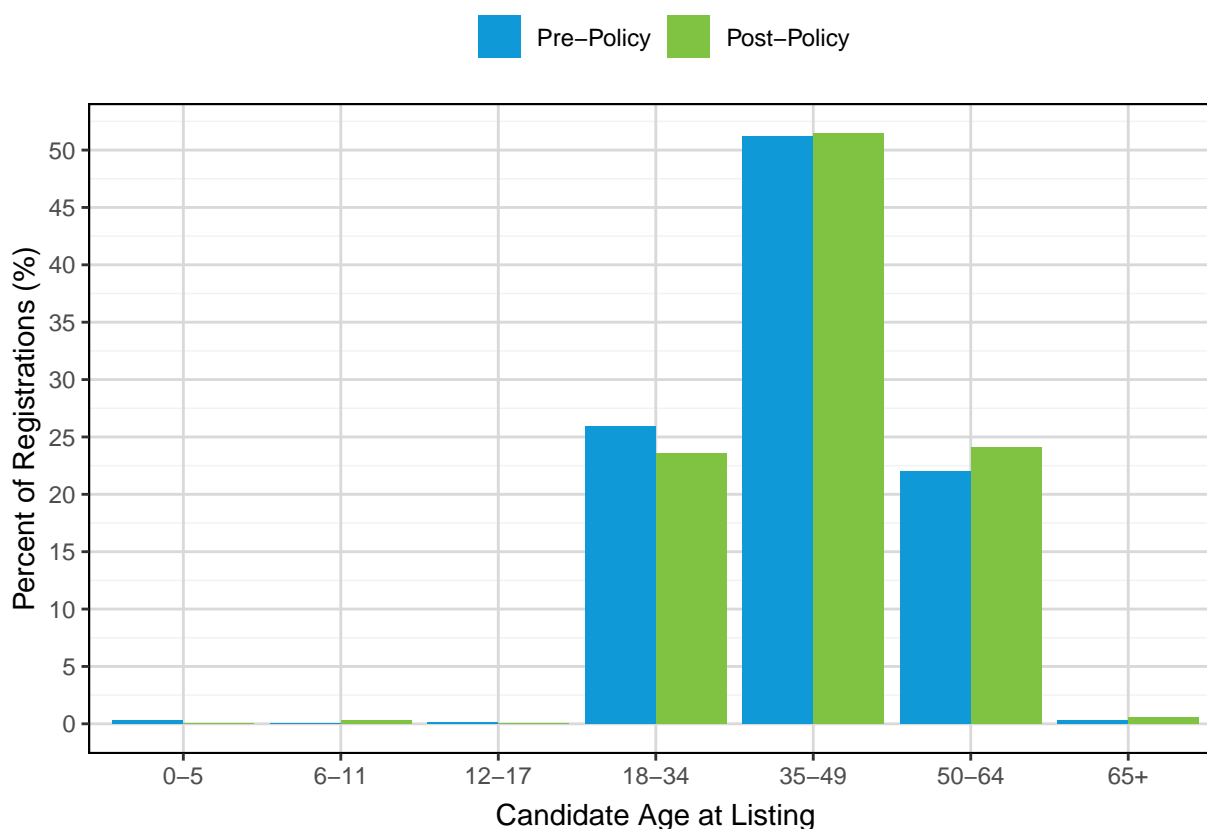


Table A4: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Age at Listing

Age at Listing	Pre-Policy		Post-Policy	
	N	%	N	%
0-5	4	0.30	0	0.00
6-11	1	0.08	4	0.27
12-17	2	0.15	1	0.07
18-34	342	25.97	355	23.57
35-49	674	51.18	775	51.46
50-64	290	22.02	363	24.10
65+	4	0.30	8	0.53
Total	1317	100.00	1506	100.00

Figure A5 and **Table A5** show kidney-pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and gender. The number of waiting list additions increased for both male and female candidates after implementation. The proportion of registrations added for female candidates decreased post-policy from 44.0% to 40.4%.

Figure A5: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Gender

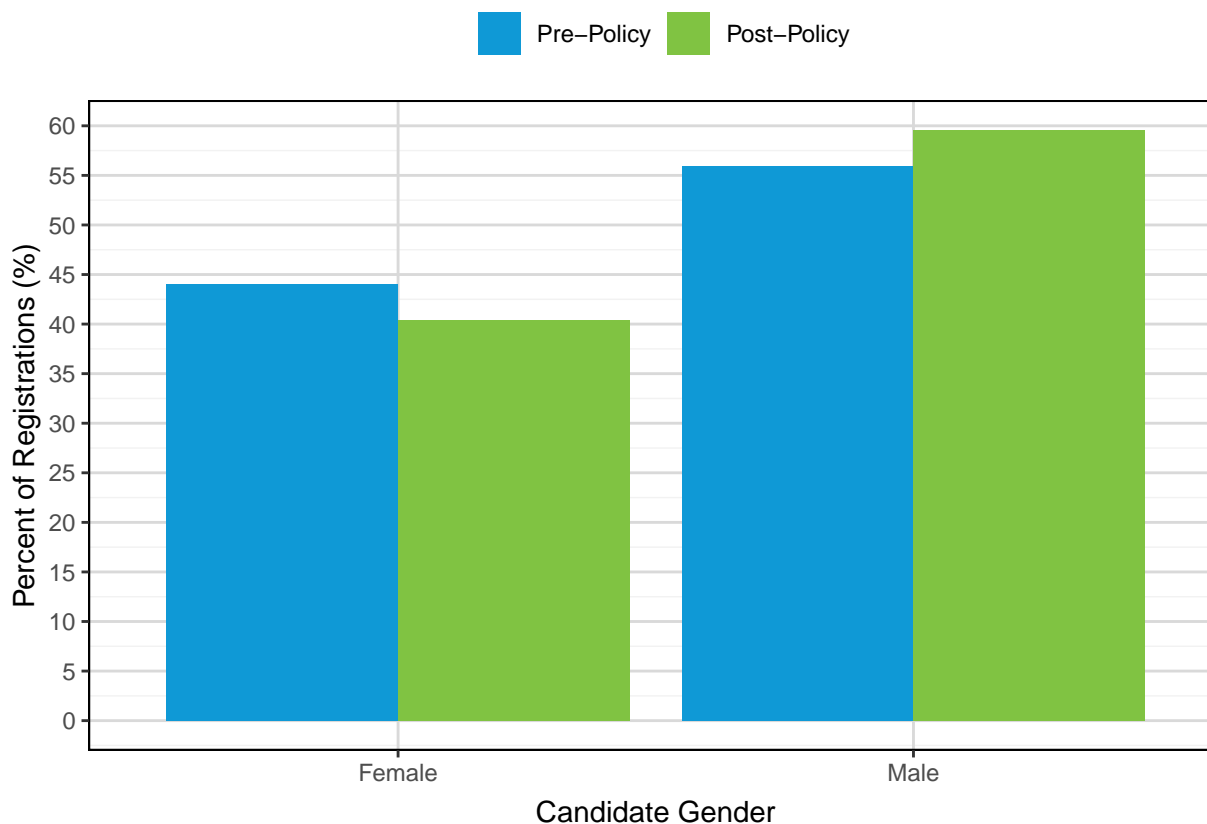


Table A5: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Gender

Gender	Pre-Policy		Post-Policy	
	N	%	N	%
Female	580	44.04	609	40.44
Male	737	55.96	897	59.56
Total	1317	100.00	1506	100.00

Figure A6 and **Table A6** show kidney-pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and candidate race/ethnicity. The proportion of waiting list additions for Hispanic/Latino candidates increased post-policy from 15.8% to 19.0%. There was little change in the proportion of waiting list additions for other racial/ethnic groups post-policy.

Figure A6: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Race/Ethnicity

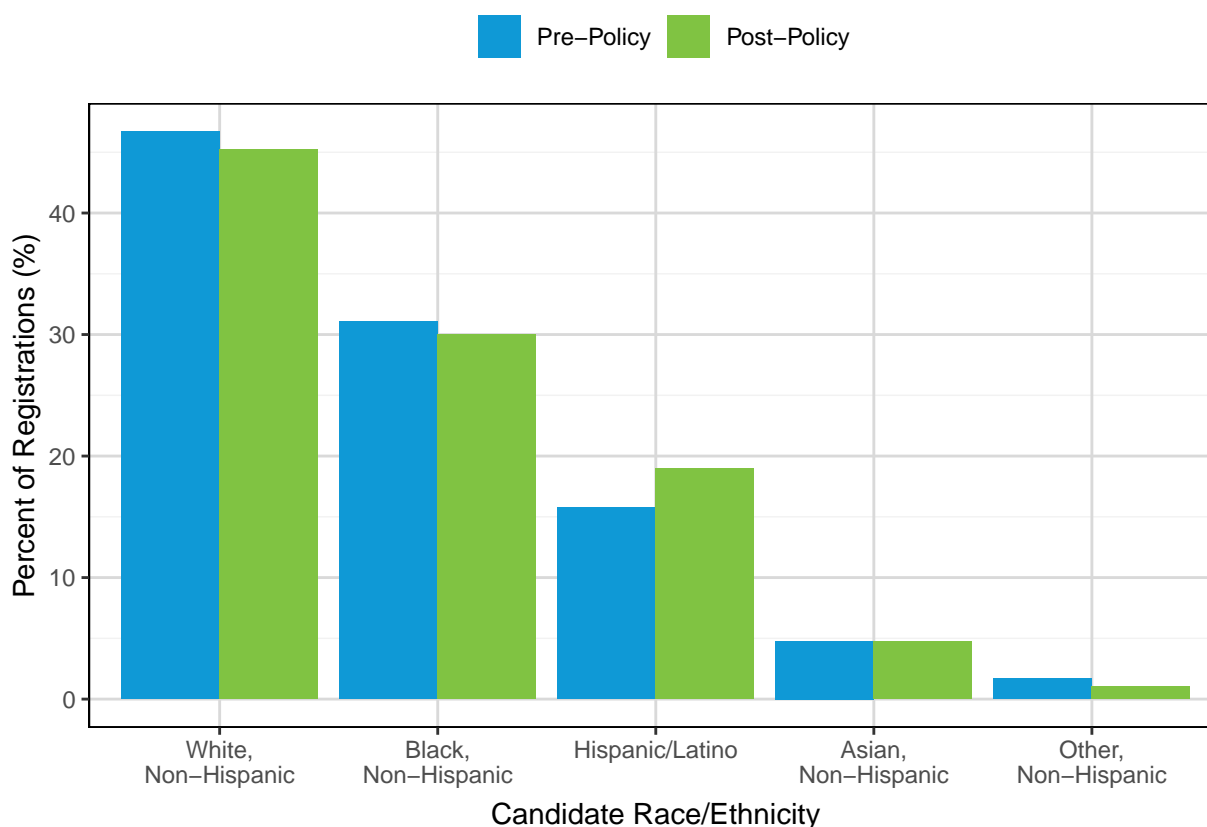


Table A6: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Race/Ethnicity

Race/Ethnicity	Pre-Policy		Post-Policy	
	N	%	N	%
White, Non-Hispanic	615	46.70	681	45.22
Black, Non-Hispanic	409	31.06	452	30.01
Hispanic/Latino	208	15.79	286	18.99
Asian, Non-Hispanic	63	4.78	71	4.71
Other, Non-Hispanic	22	1.67	16	1.06
Total	1317	100.00	1506	100.00

Figure A7 and **Table A7** show kidney-pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and blood type. There was little change in the proportion of waiting list additions by candidate blood type after policy implementation.

Figure A7: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Blood Type

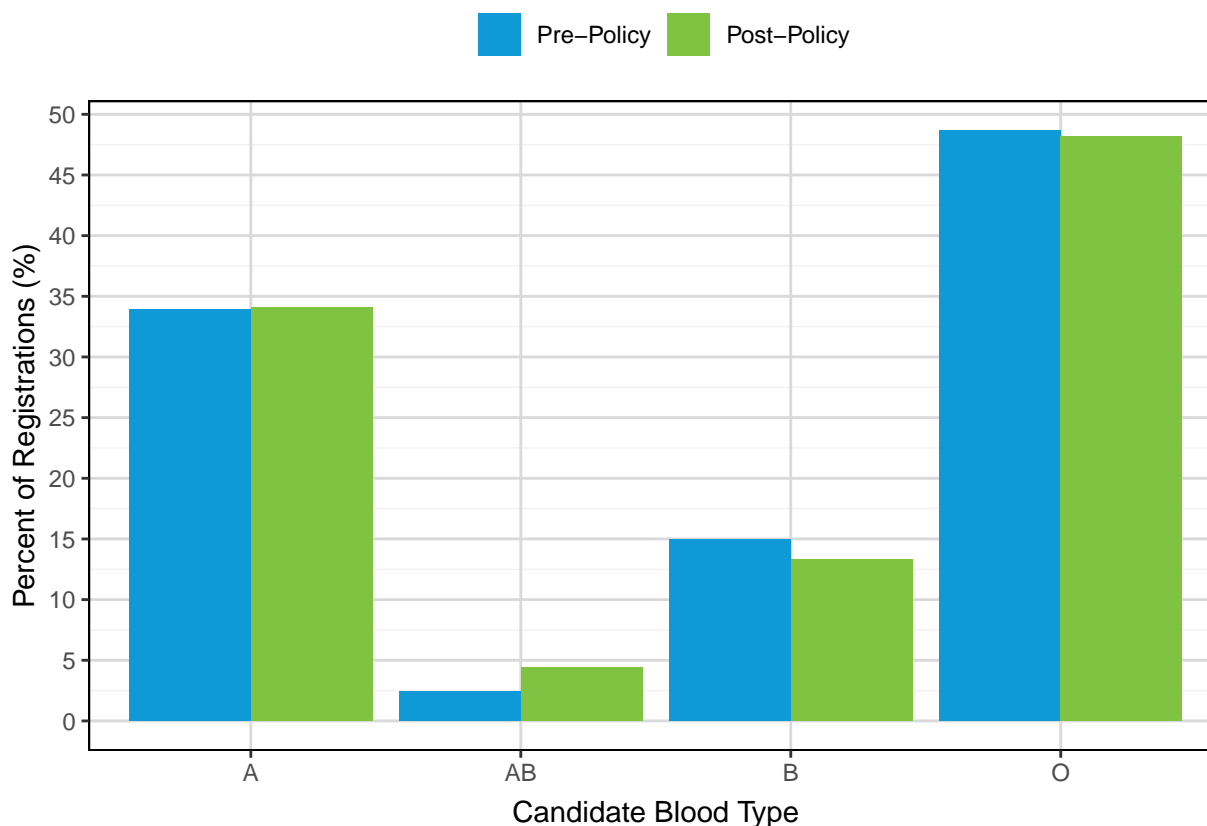


Table A7: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Blood Type

Blood Type	Pre-Policy		Post-Policy	
	N	%	N	%
A	447	33.94	513	34.06
AB	32	2.43	66	4.38
B	197	14.96	201	13.35
O	641	48.67	726	48.21
Total	1317	100.00	1506	100.00

Figure A8 and **Table A8** show kidney-pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and CPRA at listing. The majority of waiting list additions in both policy eras were for candidates with CPRA 0% and there was little change in the distribution of CPRA at listing after policy implementation.

Figure A8: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and CPRA

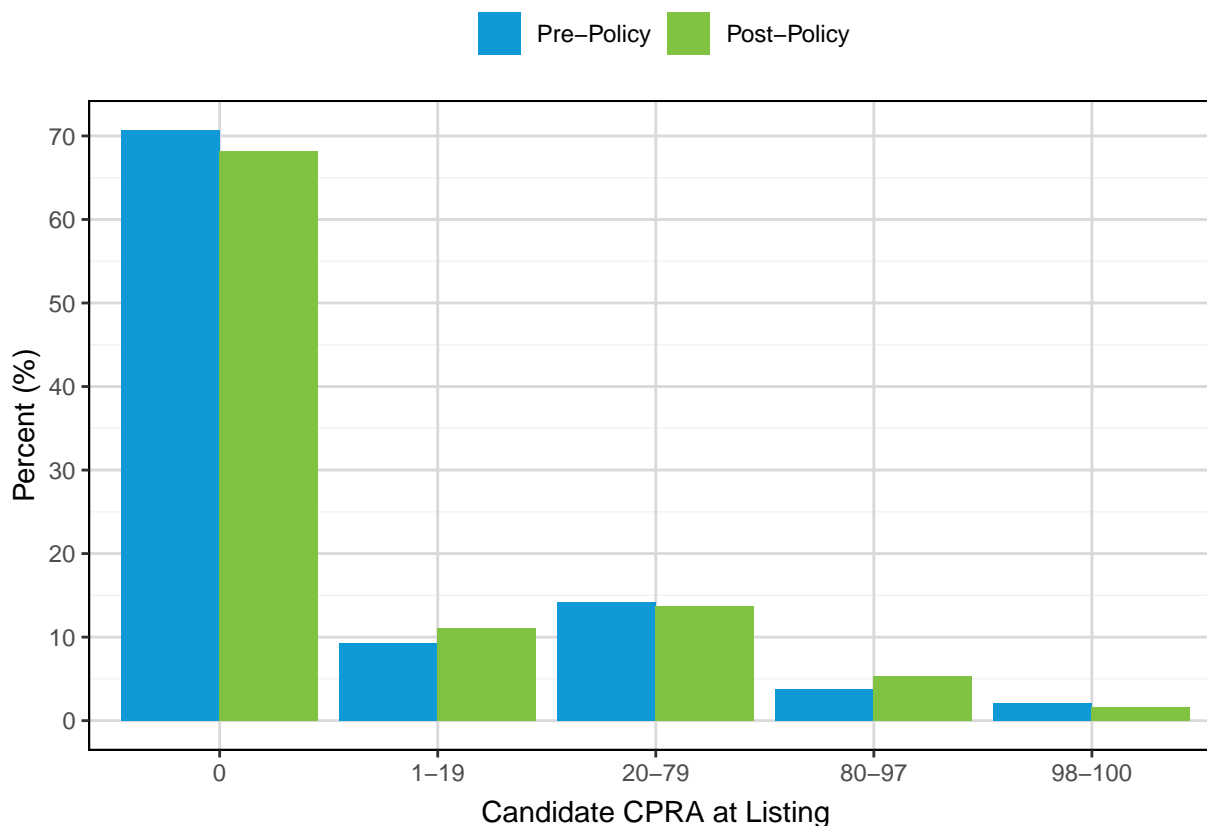


Table A8: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and CPRA

CPRA (%)	Pre-Policy		Post-Policy	
	N	%	N	%
0	931	70.69	1027	68.19
1-19	122	9.26	167	11.09
20-79	187	14.20	207	13.75
80-97	50	3.80	80	5.31
98-100	27	2.05	25	1.66
Total	1317	100.00	1506	100.00

Figure A9 and **Table A9** show kidney-pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and primary diagnosis at listing. The majority of waiting list additions in both policy eras were for candidates with type 1 diabetes. There was little change in the distribution of diagnosis at listing after policy implementation.

Figure A9: Kidney-Pancreas Registrations Added March 15, 2020 - March 14, 2022 by Policy Era and Diagnosis at Listing

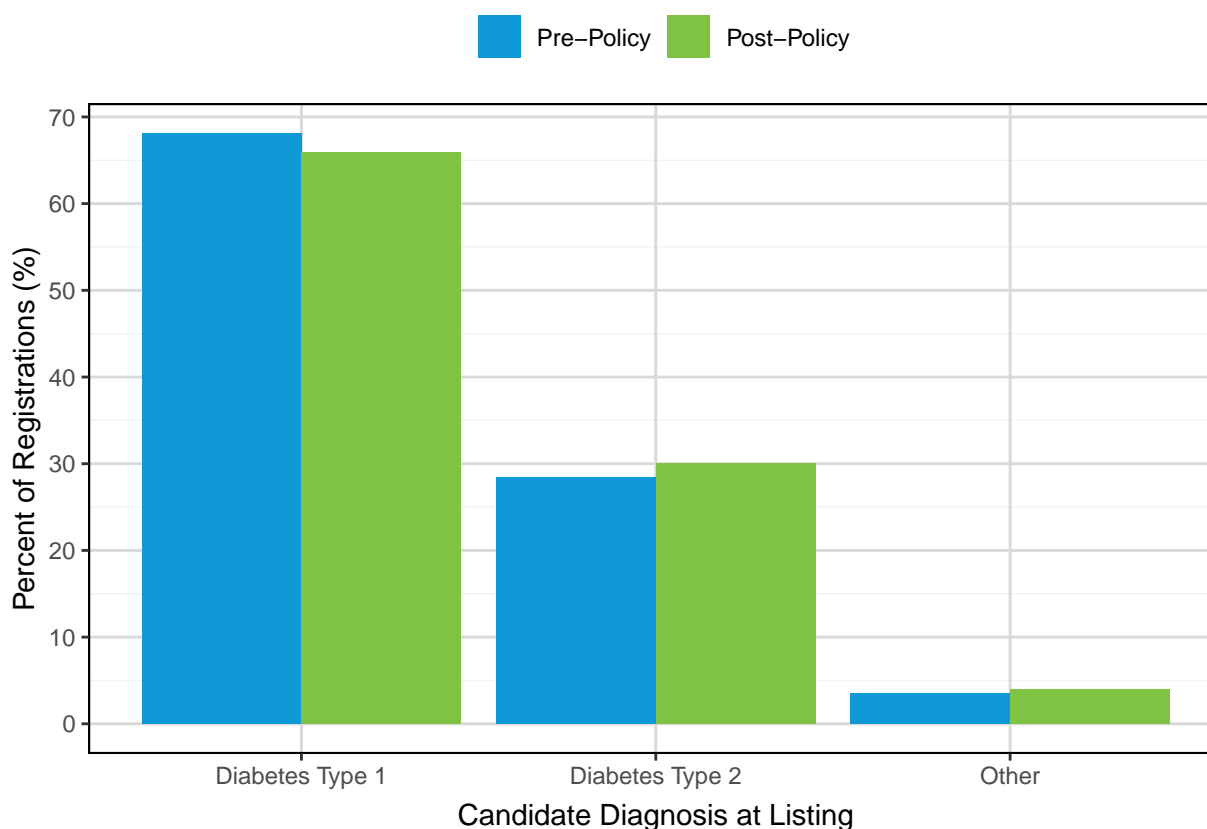


Table A9: Kidney-Pancreas Registrations Added March 15, 2020 - March 14, 2022 by Policy Era and Diagnosis at Listing

Diagnosis	Pre-Policy		Post-Policy	
	N	%	N	%
Diabetes Type 1	897	68.11	993	65.94
Diabetes Type 2	374	28.40	453	30.08
Other	46	3.49	60	3.98
Total	1317	100.00	1506	100.00

Figure A10 and **Table A10** show kidney-pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and insurance status at listing. There was little change in the distribution of candidate insurance status at listing after policy implementation.

Figure A10: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Insurance Status at Listing

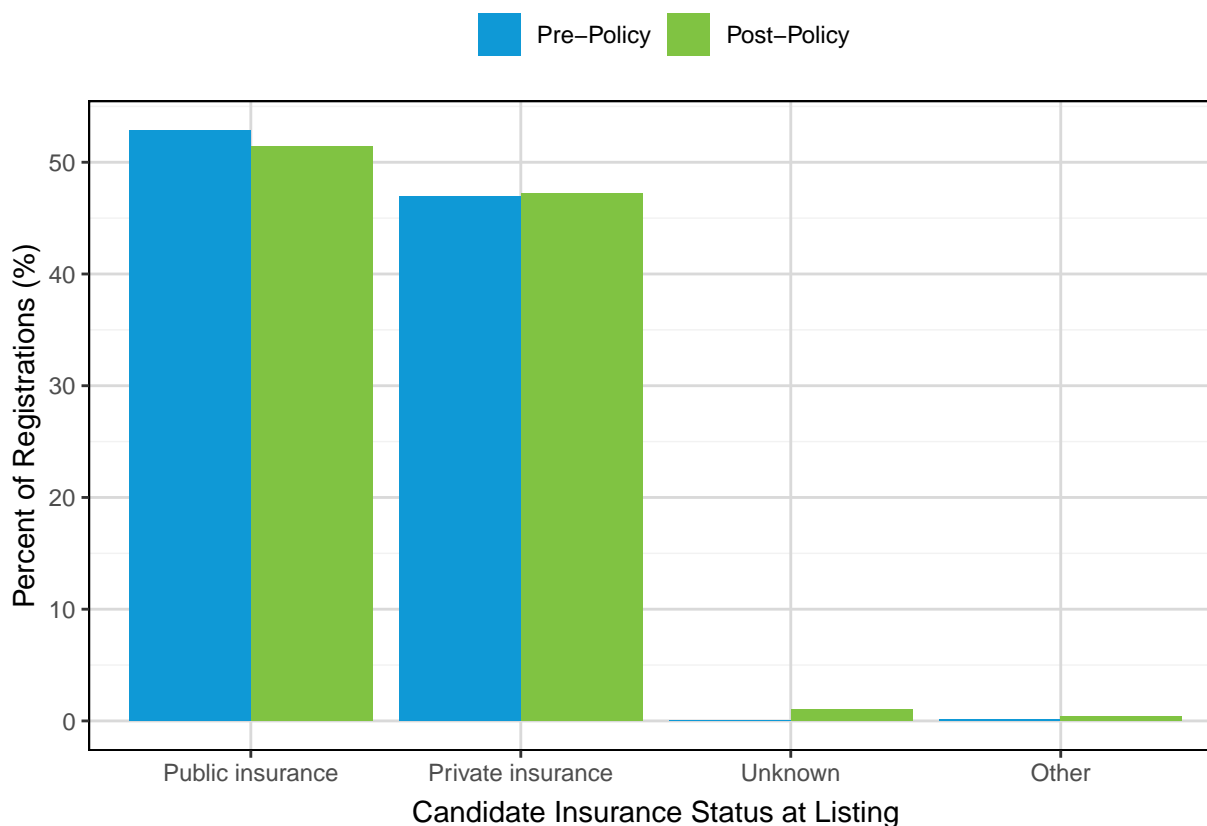


Table A10: Kidney-Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Insurance Status at Listing

Insurance at Listing	Pre-Policy		Post-Policy	
	N	%	N	%
Public insurance	696	52.85	774	51.39
Private insurance	618	46.92	711	47.21
Other	2	0.15	6	0.40
Unknown	1	0.08	15	1.00
Total	1317	100.00	1506	100.00

Figure A11 and **Table A11** show waiting list mortality rates for kidney-pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era. There were 110 deaths on the waiting list pre-policy and 99 deaths post-policy. The overall kidney-pancreas waiting list mortality rate decreased post-policy from 6.4 to 5.7 deaths per 100 patient years. This decrease was not statistically significant.

Figure A11: Waiting List Mortality Rates for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era

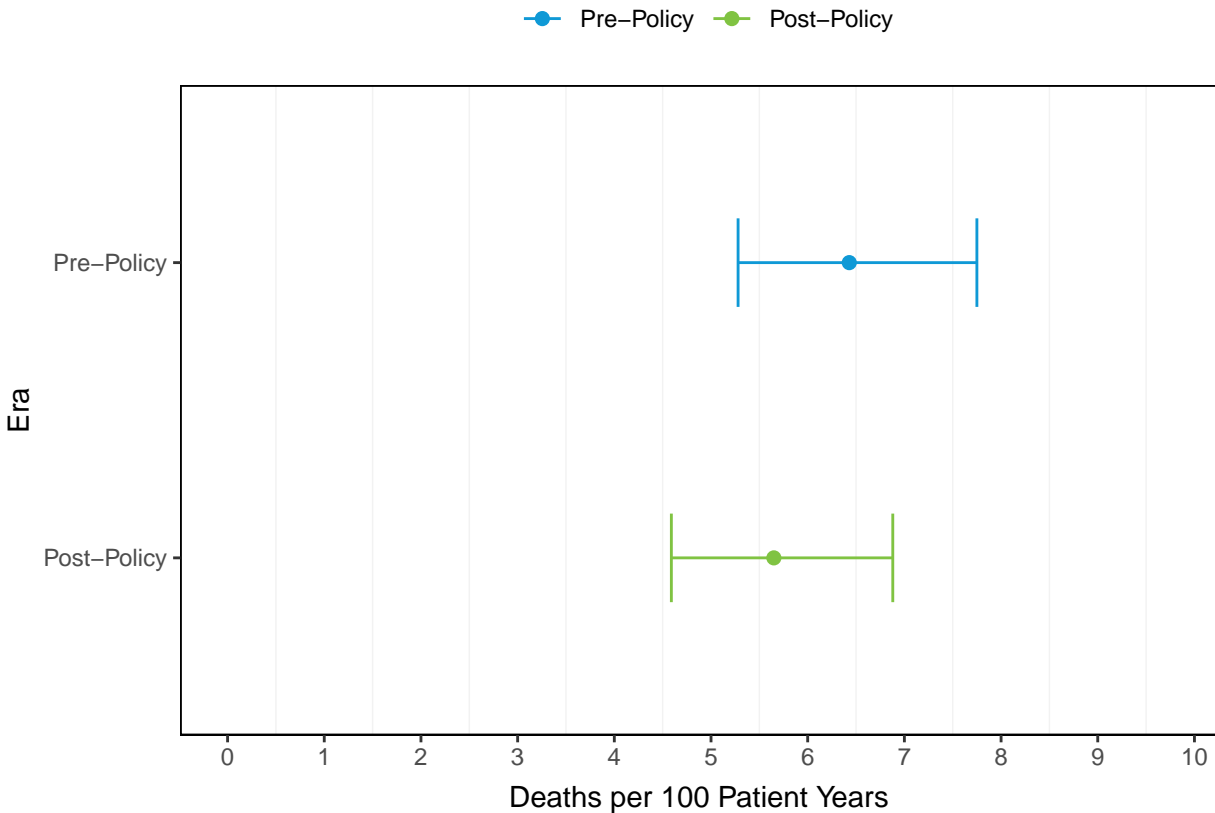
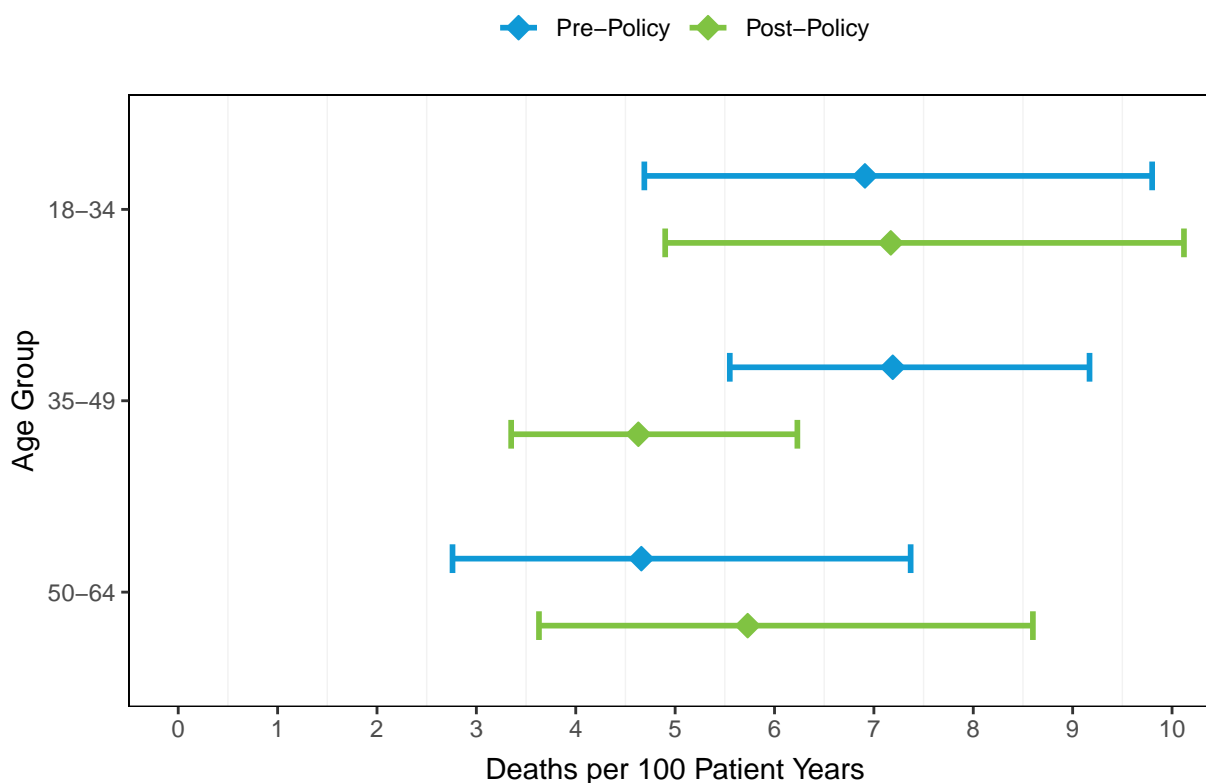


Table A11: Waiting List Mortality Rates for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era

Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
Pre-Policy	2919	110	6.43	(5.28, 7.75)
Post-Policy	3079	99	5.65	(4.59, 6.88)

Figure A12 and **Table A12** show waiting list mortality rates for kidney-pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and age at listing. Waiting list mortality rates decreased post-policy for the 35-49 age group, and increased for the 18-34 and 50-64 age groups. These changes were not statistically significant. There were no deaths on the waiting list for registrations aged 0-17 at listing pre-policy, and 1 death on the waiting list post-policy. There were no deaths on the waiting list for registrations aged 65+ at listing in the pre- or post-policy eras.

Figure A12: Waiting List Mortality Rates for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Age at Listing



0-17 and 65+ age groups omitted from figure due to small event counts.

Table A12: Waiting List Mortality Rates for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Age at Listing

Age at Listing	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
0-17	Pre-Policy	8	0	0.00	-
	Post-Policy	5	1	33.64	(0.85, 187.43)
18-34	Pre-Policy	784	31	6.91	(4.69, 9.8)
	Post-Policy	776	32	7.17	(4.9, 10.12)
35-49	Pre-Policy	1553	65	7.19	(5.55, 9.17)
	Post-Policy	1622	43	4.63	(3.35, 6.23)
50-64	Pre-Policy	657	18	4.66	(2.76, 7.37)
	Post-Policy	744	23	5.73	(3.63, 8.6)
65+	Pre-Policy	4	0	0.00	-
	Post-Policy	8	0	0.00	-

Figure A13 and **Table A13** show waiting list mortality rates for kidney-pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and gender. The waiting list mortality rate decreased post-policy for female registrations from 7.1 to 5.6 deaths per 100 patient years. This change was not statistically significant. There was little change in the waiting list mortality rate for male registrations (5.9 vs 5.7 deaths per 100 patient years).

Figure A13: Waiting List Mortality Rates for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Gender

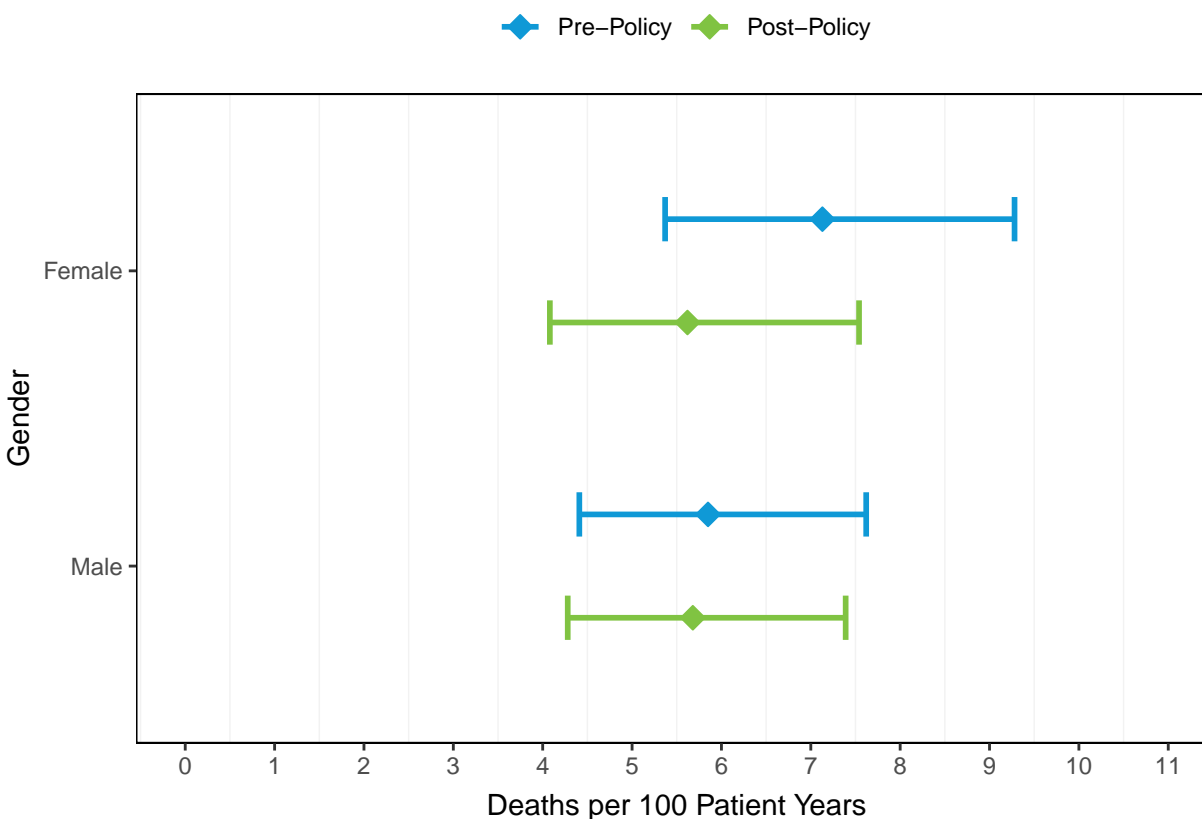


Table A13: Waiting List Mortality Rates for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Gender

Gender	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
Female	Pre-Policy	1288	55	7.13	(5.37, 9.28)
	Post-Policy	1323	44	5.62	(4.08, 7.54)
Male	Pre-Policy	1632	55	5.85	(4.41, 7.62)
	Post-Policy	1757	55	5.68	(4.28, 7.39)

Figure A14 and **Table A14** show waiting list mortality rates for kidney-pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and race/ethnicity. Waiting list mortality rates decreased for candidates of Black, Non-Hispanic; Hispanic/Latino; and Other race/ethnicity after policy implementation, and increased for Asian, Non-Hispanic candidates. These changes were not statistically significant. There was little change in the waiting list mortality rate for White, Non-Hispanic candidates after policy implementation (6.4 vs 6.6 deaths per 100 patient years).

Figure A14: Waiting List Mortality Rates for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Race/Ethnicity

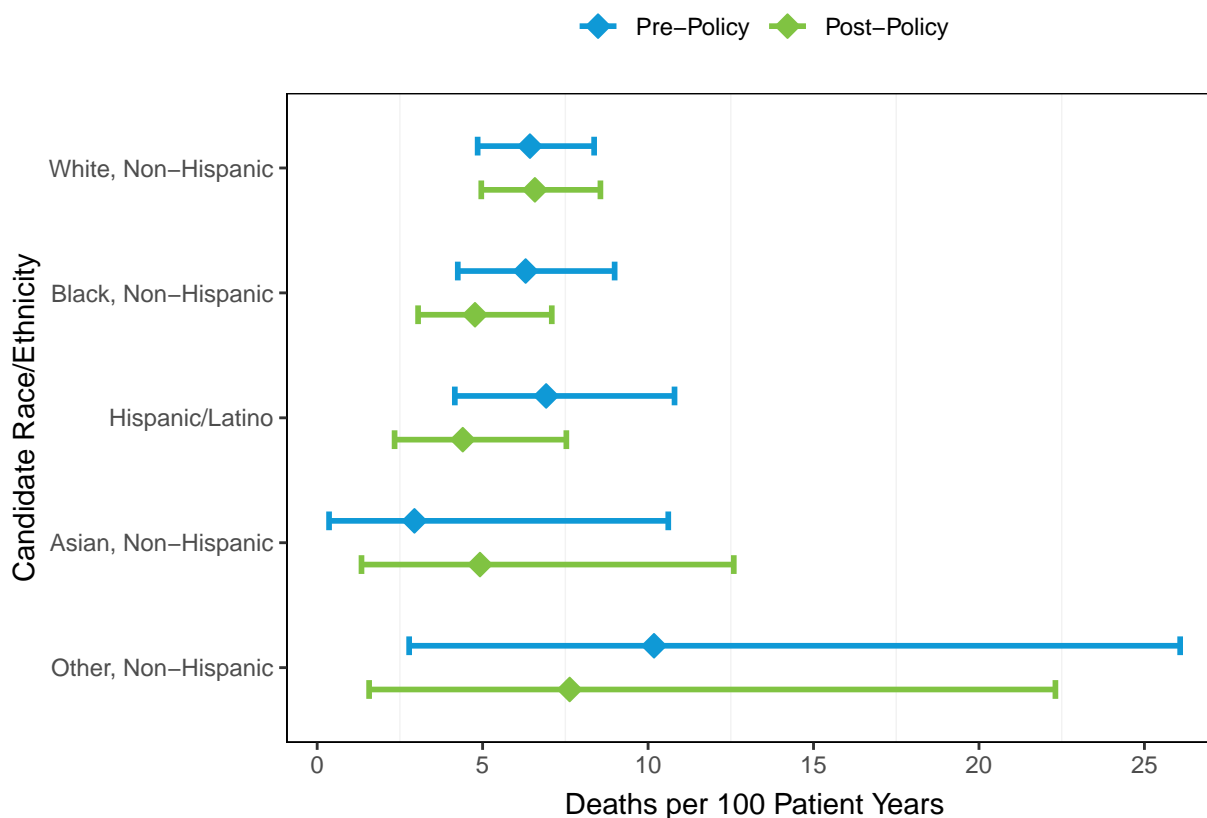


Table A14: Waiting List Mortality Rates for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Race/Ethnicity

Race/Ethnicity	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
White, Non-Hispanic	Pre-Policy	1422	55	6.43	(4.85, 8.37)
	Post-Policy	1441	55	6.58	(4.96, 8.56)
Black, Non-Hispanic	Pre-Policy	843	30	6.30	(4.25, 8.99)
	Post-Policy	909	24	4.77	(3.05, 7.09)
Hispanic/Latino	Pre-Policy	476	19	6.92	(4.16, 10.8)
	Post-Policy	537	13	4.40	(2.34, 7.53)
Asian, Non-Hispanic	Pre-Policy	127	2	2.94	(0.36, 10.61)
	Post-Policy	143	4	4.92	(1.34, 12.59)
Other, Non-Hispanic	Pre-Policy	58	4	10.18	(2.78, 26.08)
	Post-Policy	57	3	7.63	(1.57, 22.31)

Figure A15 and **Table A15** show waiting list mortality rates for kidney-pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and CPRA at listing. Waiting list mortality rates decreased post-policy for candidates with CPRA 0%, 1-19%, and 20-79%, and increased for candidates with CPRA 80-97% and 98-100%. These changes were not statistically significant.

Figure A15: Waiting List Mortality Rates for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and CPRA at Listing

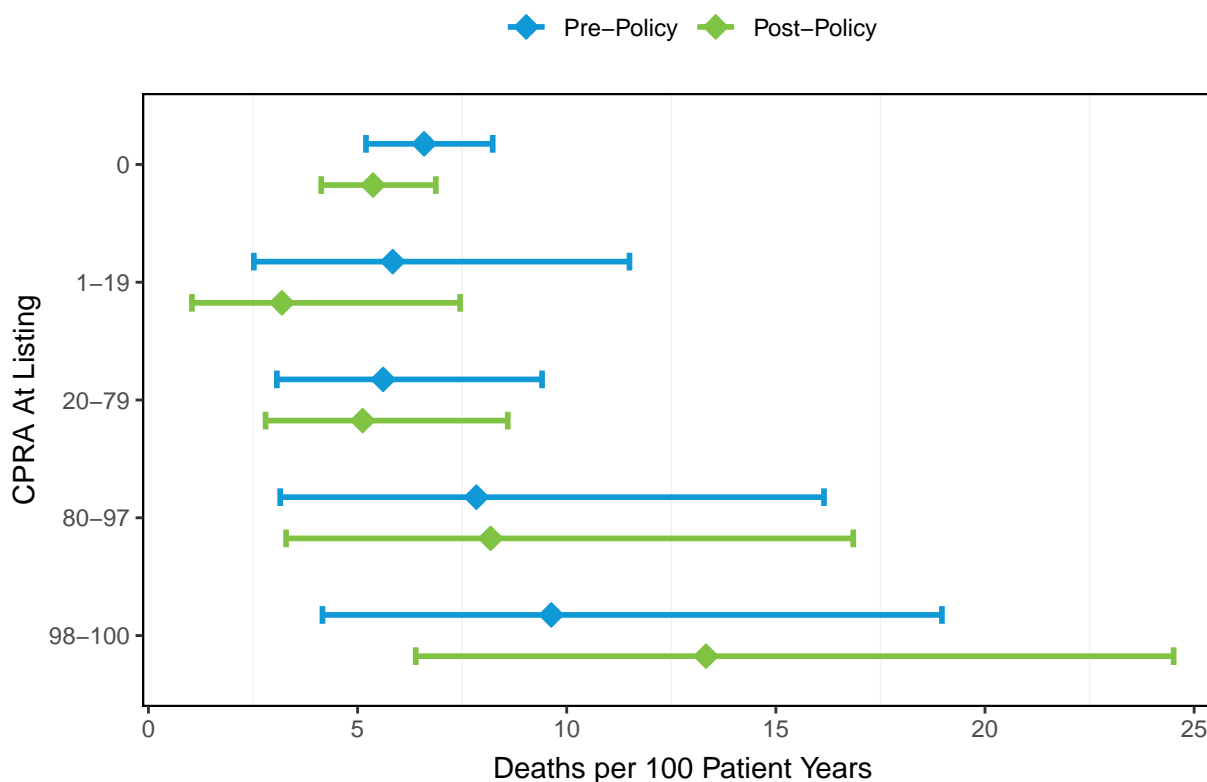


Table A15: Waiting List Mortality Rates for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and CPRA at Listing

CPRA (%)	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
0	Pre-Policy	2047	77	6.59	(5.2, 8.23)
	Post-Policy	2099	63	5.37	(4.13, 6.87)
1-19	Pre-Policy	241	8	5.84	(2.52, 11.5)
	Post-Policy	295	5	3.19	(1.04, 7.45)
20-79	Pre-Policy	422	14	5.61	(3.07, 9.41)
	Post-Policy	460	14	5.12	(2.8, 8.59)
80-97	Pre-Policy	144	7	7.84	(3.15, 16.15)
	Post-Policy	160	7	8.18	(3.29, 16.85)
98-100	Pre-Policy	112	8	9.63	(4.16, 18.97)
	Post-Policy	104	10	13.33	(6.39, 24.51)
Unknown	Pre-Policy	12	0	0.00	-
	Post-Policy	10	0	0.00	-

Figure A16 and **Table A16** show waiting list mortality rates for kidney-pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and blood type. Waiting list mortality rates decreased post-policy for blood type A, AB, and O candidates, and increased for blood type B candidates. These changes were not statistically significant.

Figure A16: Waiting List Mortality Rates for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Blood Type

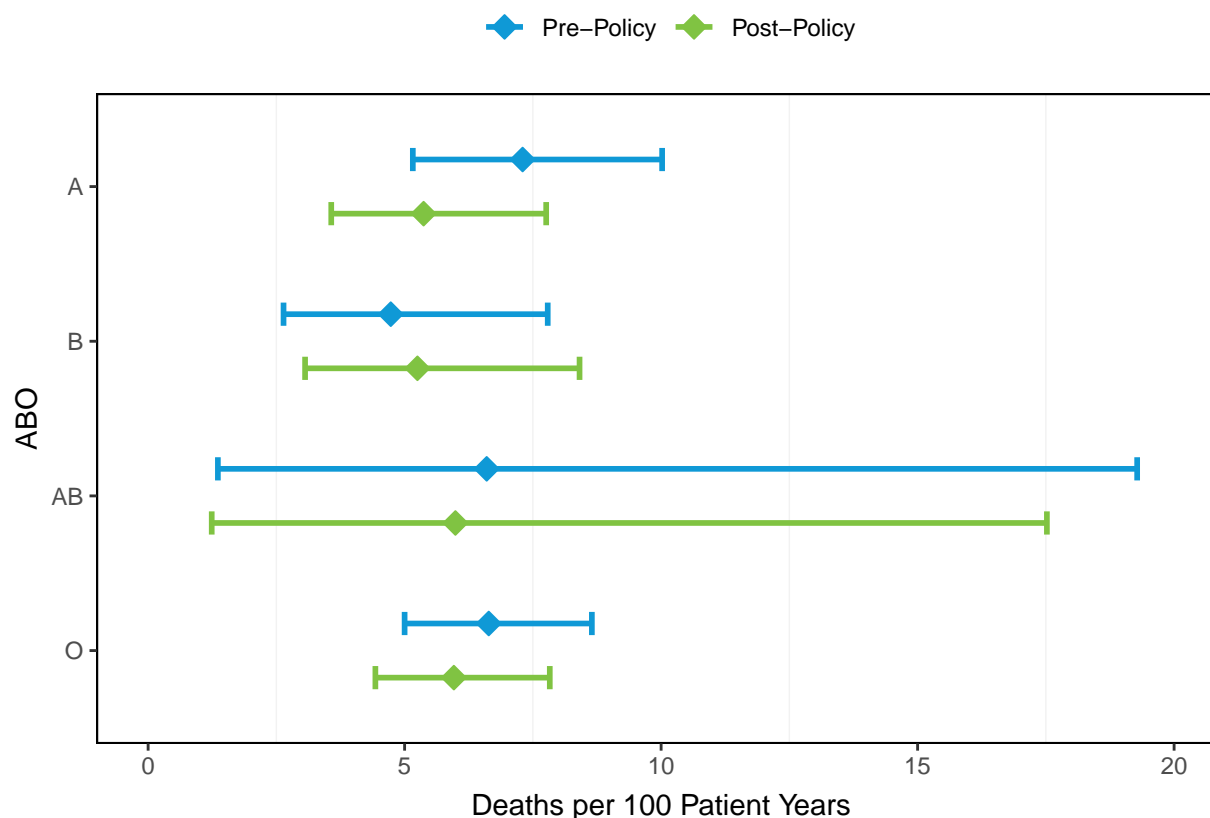


Table A16: Waiting List Mortality Rates for Kidney-Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Blood Type

ABO	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
A	Pre-Policy	929	38	7.30	(5.16, 10.02)
	Post-Policy	973	28	5.37	(3.57, 7.76)
B	Pre-Policy	489	15	4.73	(2.64, 7.79)
	Post-Policy	509	17	5.25	(3.06, 8.41)
AB	Pre-Policy	76	3	6.60	(1.36, 19.28)
	Post-Policy	105	3	5.99	(1.24, 17.52)
O	Pre-Policy	1426	55	6.64	(5, 8.65)
	Post-Policy	1492	51	5.96	(4.43, 7.83)

Deceased Donor Transplants

Figure A17 and **Table A17** show deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era. There were 820 transplants performed in the pre-policy era, and 816 in the post-policy era.

Figure A17: Deceased Donor Kidney-Pancreas Transplants March 15, 2020-March 14, 2022 by Policy Era

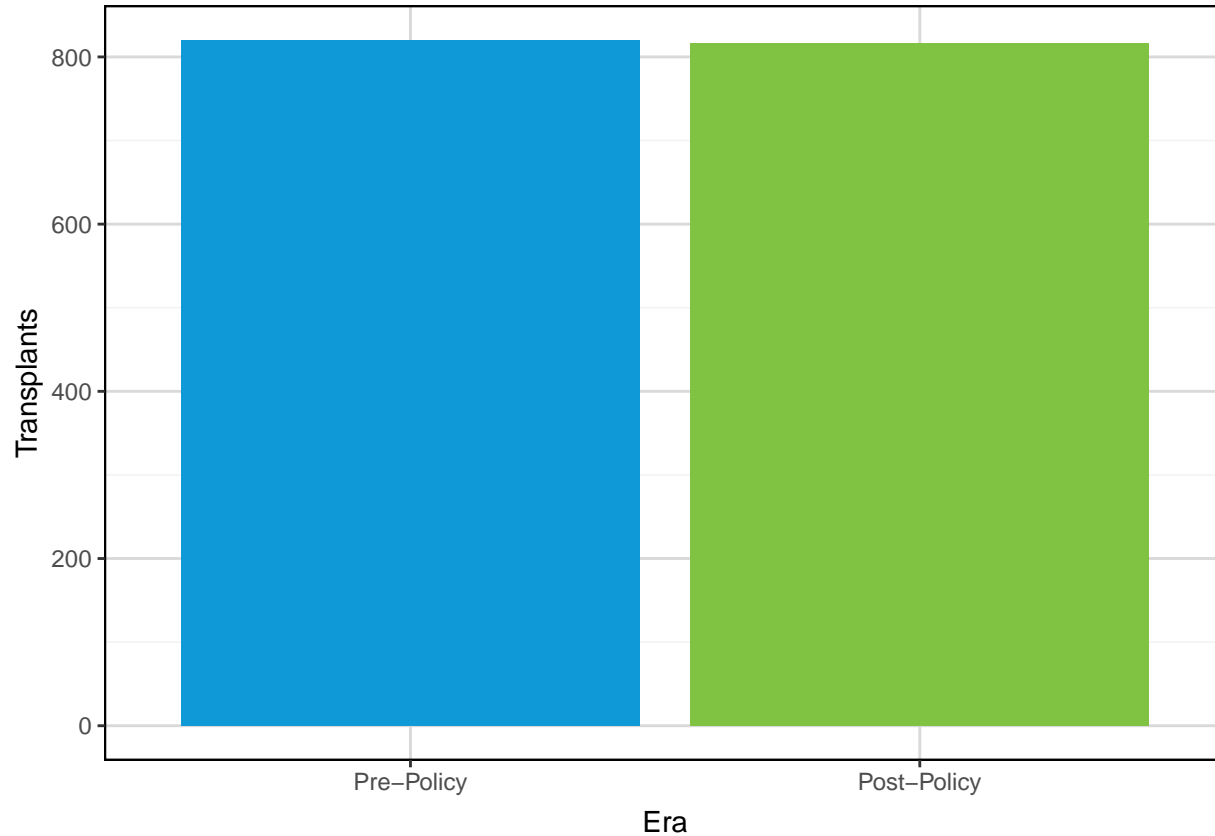


Table A17: Deceased Donor Kidney-Pancreas Transplants March 15, 2020-March 14, 2022 by Policy Era

Era	Transplants
Pre-Policy	820
Post-Policy	816

Figure A18 and **Table A18** show deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and recipient age at transplant. The volume and proportion of transplants to recipients in the 50-64 age group increased after policy implementation, while the volume and proportion of transplants to recipients in the 18-34 and 35-49 age groups decreased.

Figure A18: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Recipient Age at Transplant

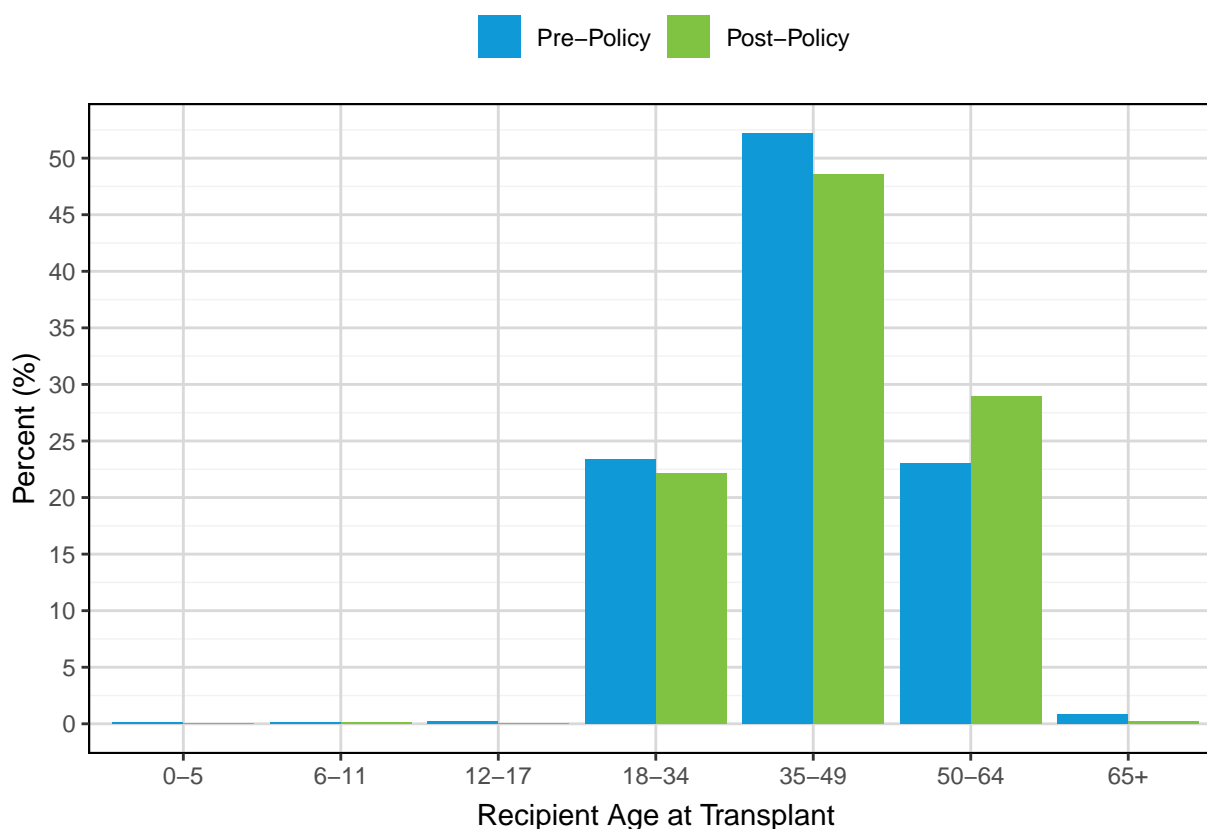


Table A18: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Recipient Age at Transplant

Age at Transplant	Pre-Policy		Post-Policy	
	N	%	N	%
0-5	1	0.12	0	0.00
6-11	1	0.12	1	0.12
12-17	2	0.24	0	0.00
18-34	192	23.41	181	22.18
35-49	428	52.20	396	48.53
50-64	189	23.05	236	28.92
65+	7	0.85	2	0.25
Total	820	100.00	816	100.00

Figure A19 and **Table A19** show deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and recipient race/ethnicity. The volume and proportion of transplants to Black, Non-Hispanic; Hispanic/Latino; and Asian, Non-Hispanic recipients increased after implementation, while the volume and proportion of transplants to White, Non-Hispanic recipients decreased.

Figure A19: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Recipient Race/Ethnicity

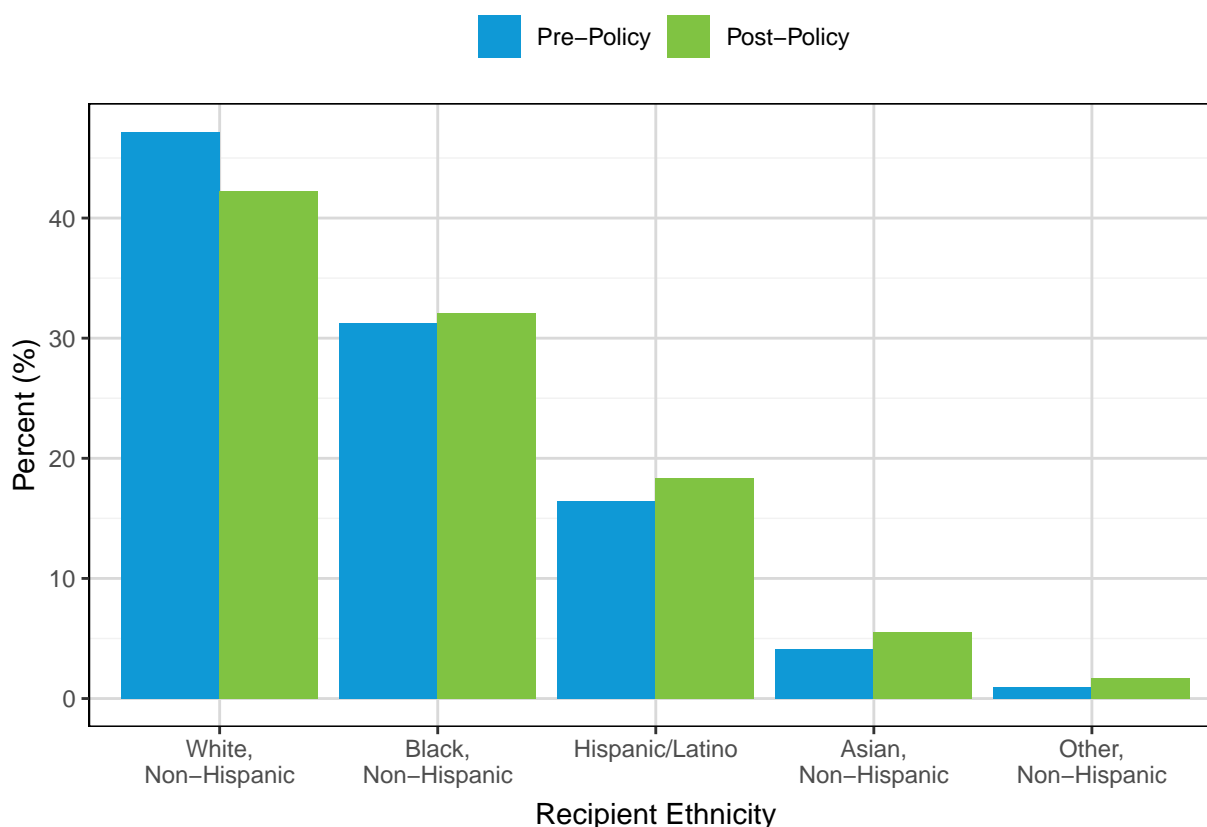


Table A19: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Recipient Race/Ethnicity

Race/Ethnicity	Pre-Policy		Post-Policy	
	N	%	N	%
White, Non-Hispanic	387	47.20	345	42.28
Black, Non-Hispanic	256	31.22	262	32.11
Hispanic/Latino	135	16.46	150	18.38
Asian, Non-Hispanic	34	4.15	45	5.51
Other, Non-Hispanic	8	0.98	14	1.72
Total	820	100.00	816	100.00

Figure A20 and **Table A20** show the distribution of time on the waiting list in years for deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era. Median time from listing to transplant decreased from 0.52 years to 0.37 years after policy implementation.

Figure A20: Distribution of Waiting Time for Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era

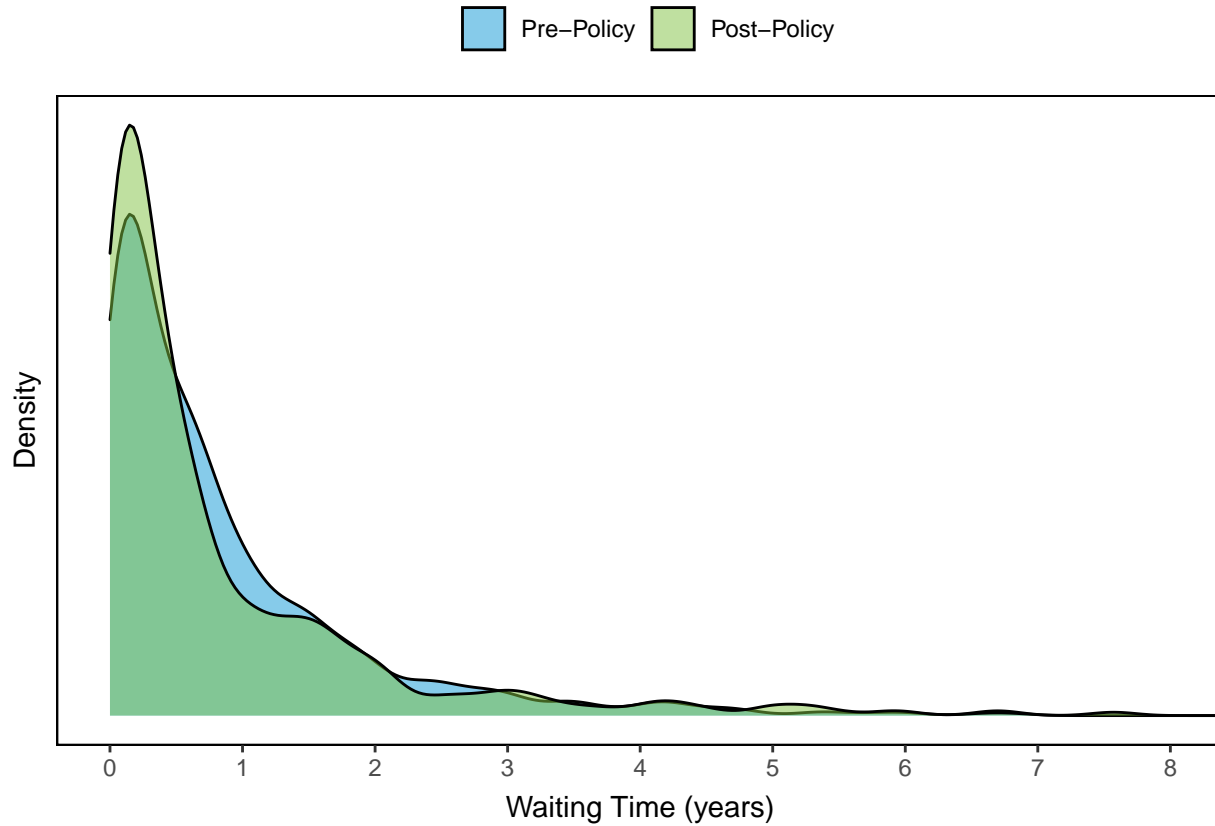


Table A20: Distribution of Waiting Time for Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	820	0	0.00	0.15	0.52	0.87	1.13	15.07
Post-Policy	816	0	0.01	0.12	0.37	0.83	1.08	7.58

Figure A21 and **Table A21** show deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and recipient blood type. The volume and proportion of transplants to blood type A and O recipients decreased slightly after policy implementation, while the volume and proportion of transplants to blood type AB and B recipients increased slightly.

Figure A21: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Recipient Blood Type

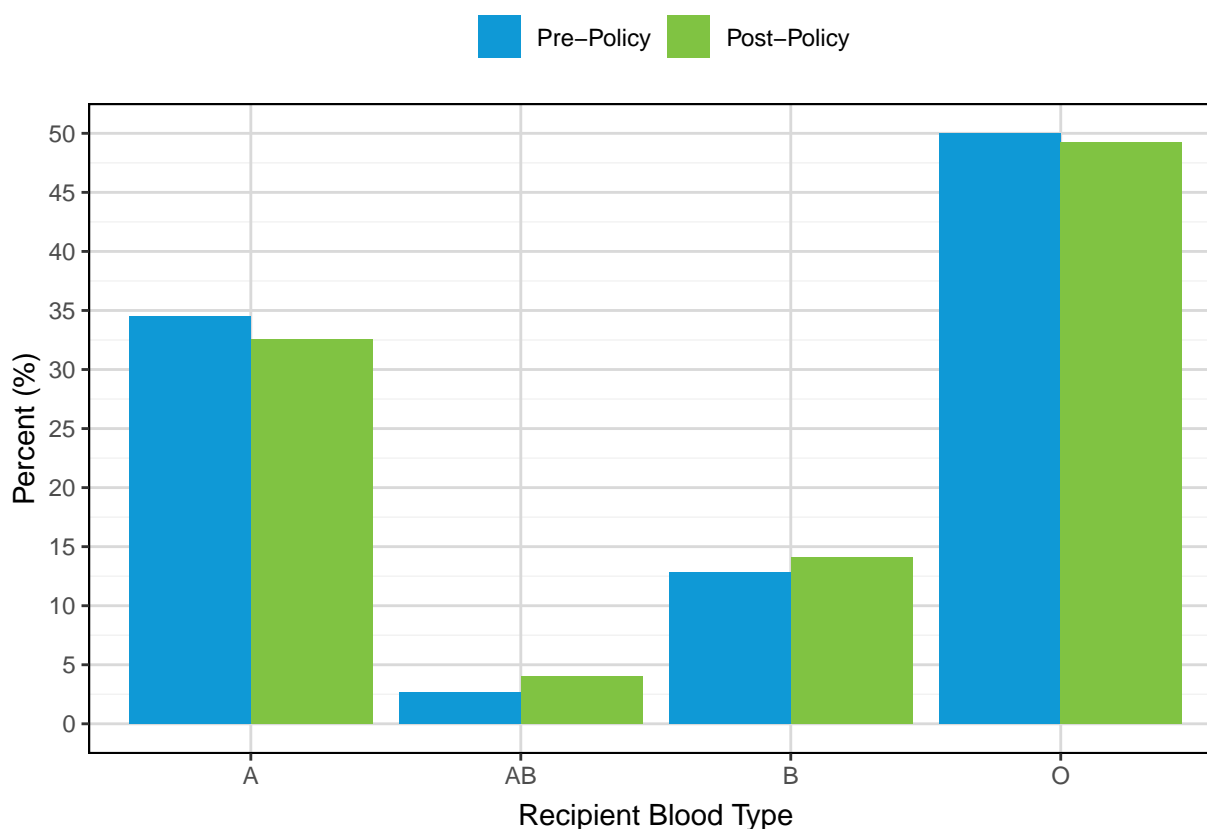


Table A21: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Recipient Blood Type

Blood Type	Pre-Policy		Post-Policy	
	N	%	N	%
A	283	34.51	266	32.60
AB	22	2.68	33	4.04
B	105	12.80	115	14.09
O	410	50.00	402	49.26
Total	820	100.00	816	100.00

Figure A22 and **Table A22** show deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and CPRA at transplant. The proportion of transplants to recipients with CPRA 80-97% increased from 3.2% to 5.0% after implementation, while the proportion of transplants to recipients with CPRA 98-100% decreased from 1.6% to 0.5%.

Figure A22: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and CPRA

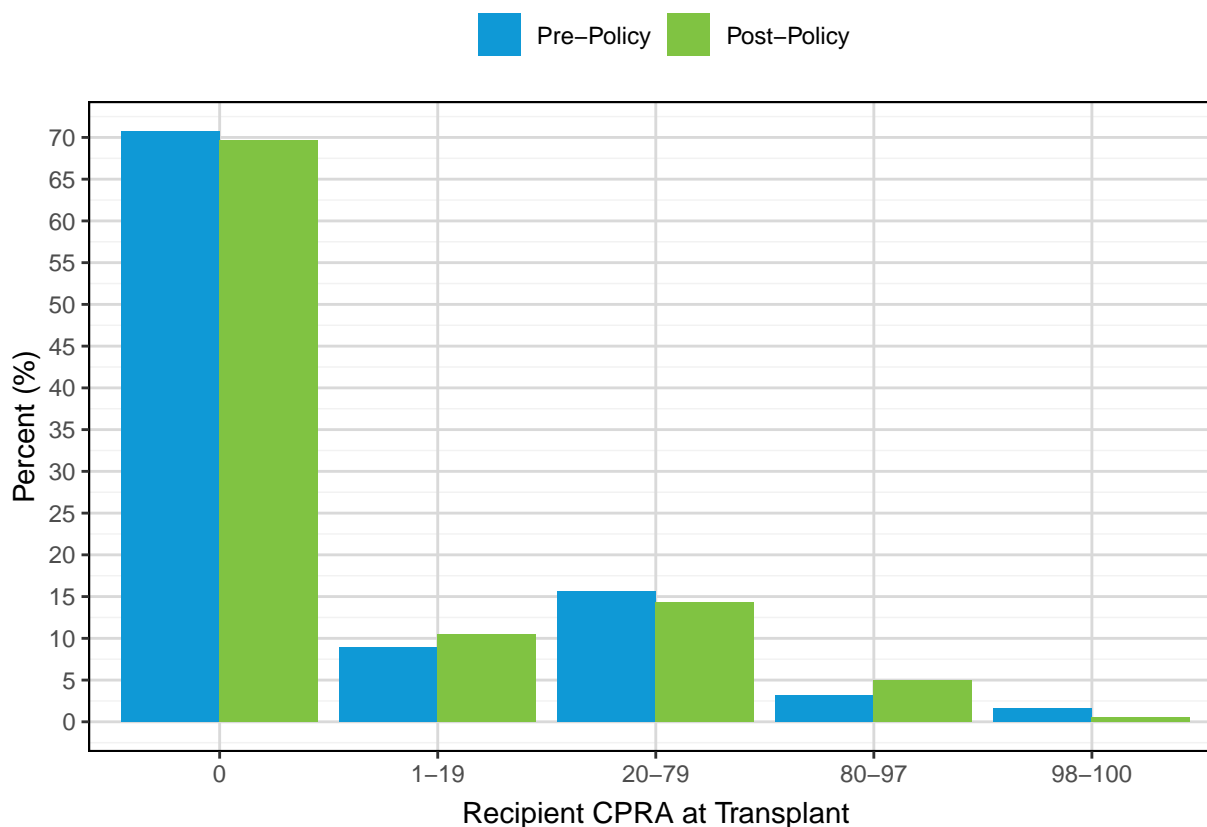


Table A22: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and CPRA

CPRA (%)	Pre-Policy		Post-Policy	
	N	%	N	%
0	580	70.73	568	69.61
1-19	73	8.90	86	10.54
20-79	128	15.61	117	14.34
80-97	26	3.17	41	5.02
98-100	13	1.59	4	0.49
Total	820	100.00	816	100.00

Figure A23 and **Table A23** show deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and level of HLA mismatch. Multi-organ transplants including a kidney-pancreas were excluded. There was little change in the distribution of HLA mismatch level after implementation.

Figure A23: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and HLA Mismatch

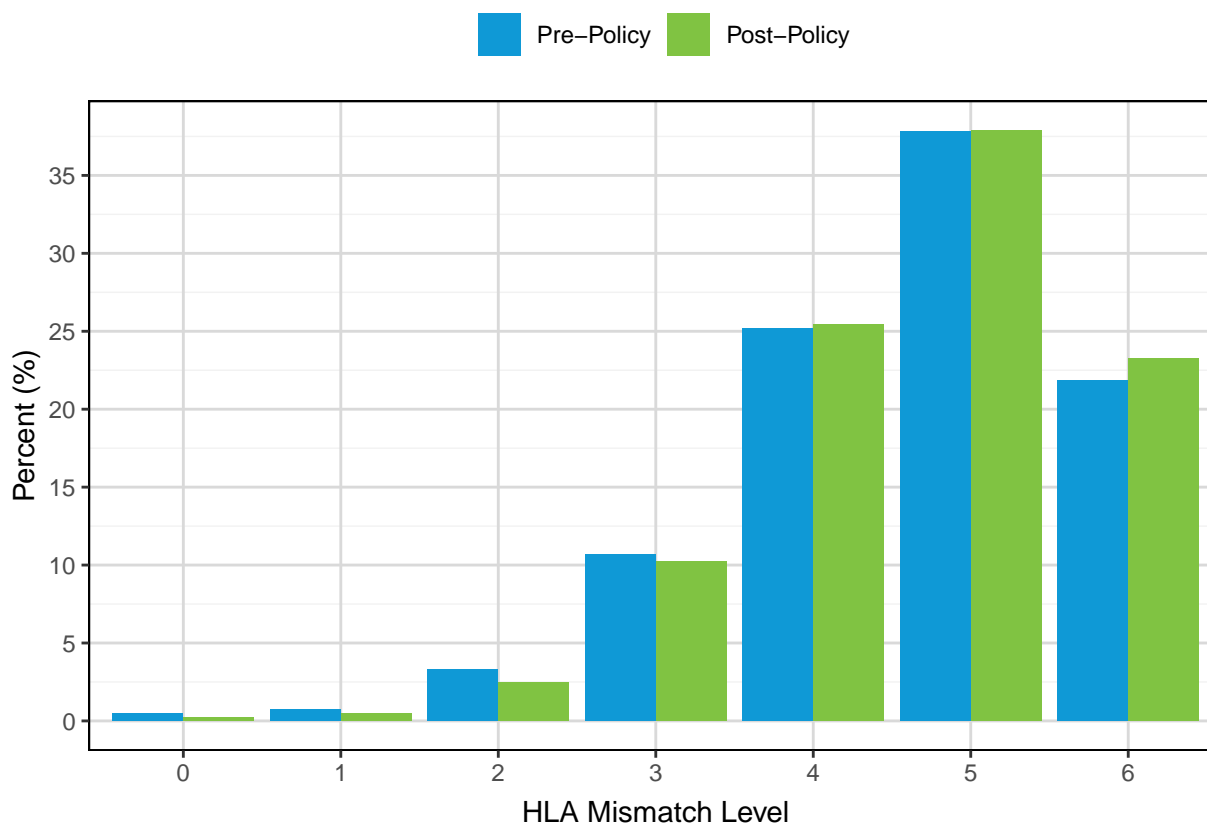


Table A23: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and HLA Mismatch

HLA Mismatch Level	Pre-Policy		Post-Policy	
	N	%	N	%
0	4	0.49	2	0.25
1	6	0.74	4	0.49
2	27	3.31	20	2.46
3	87	10.67	83	10.21
4	205	25.15	207	25.46
5	308	37.79	308	37.88
6	178	21.84	189	23.25
Total	815	100.00	813	100.00

Figure A24 and **Table A24** show deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and primary diagnosis. While the majority of recipients in both policy eras had type 1 diabetes, the proportion of transplants to recipients with type 1 diabetes decreased after implementation from 72.3% to 67.5%, and the proportion of transplants to recipients with type 2 diabetes increased from 25.0% to 30.6%.

Figure A24: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Diagnosis

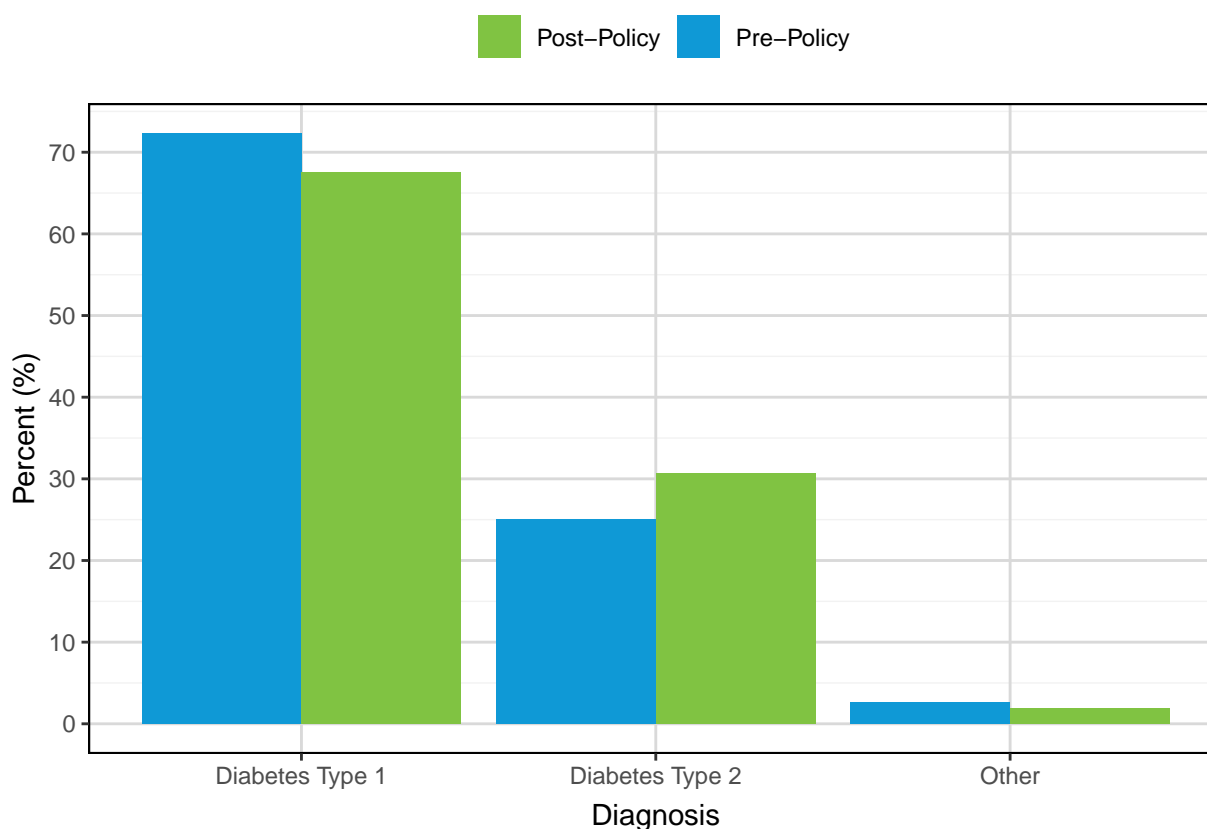


Table A24: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Diagnosis

Diagnosis	Pre-Policy		Post-Policy	
	N	%	N	%
Diabetes Type 1	593	72.32	551	67.52
Diabetes Type 2	205	25.00	250	30.64
Other	22	2.68	15	1.84
Total	820	100.00	816	100.00

Figure A25 and **Table A25** show deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and donor DCD status. The volume and proportion of transplants from DCD donors increased slightly after implementation from 23 (2.8%) to 27 (3.3%).

Figure A25: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and DCD Status

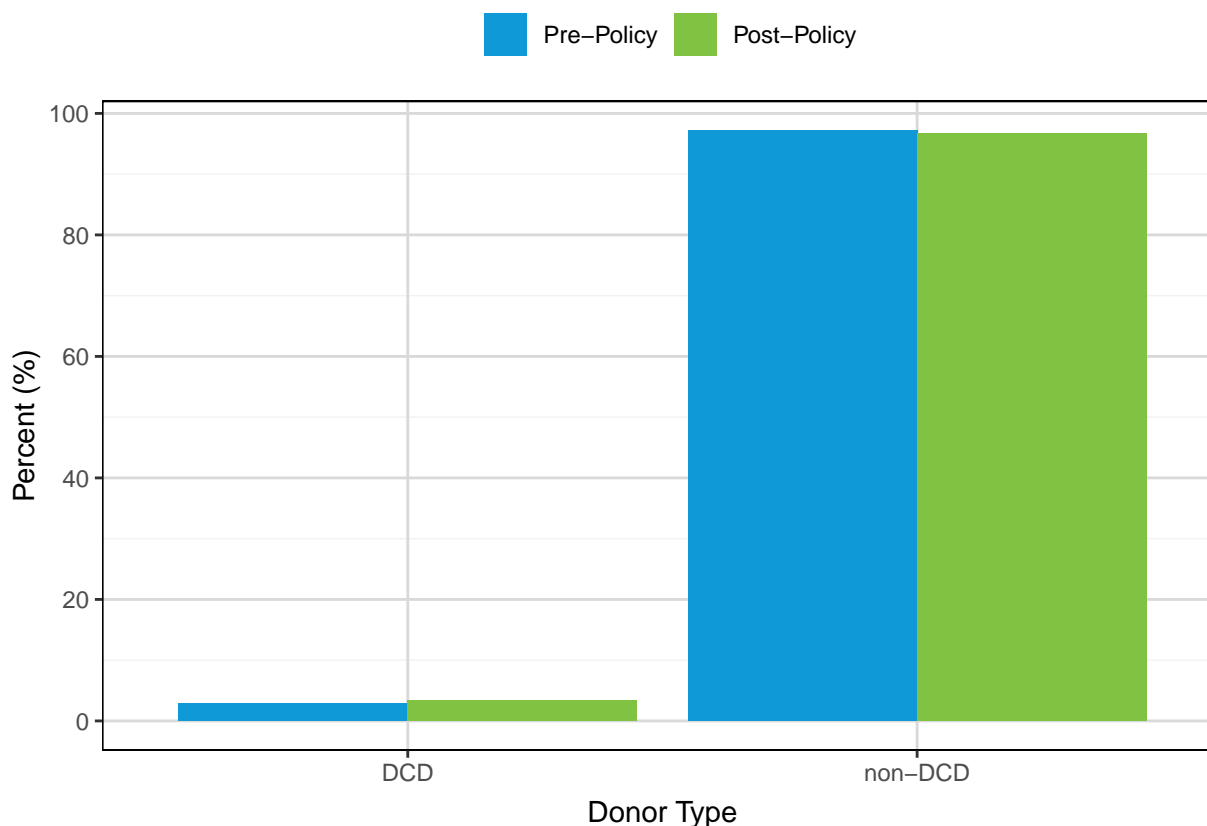


Table A25: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and DCD Status

	Pre-Policy		Post-Policy	
	N	%	N	%
DCD Donor				
DCD	23	2.80	27	3.31
non-DCD	797	97.20	789	96.69
Total	820	100.00	816	100.00

Table A26 shows deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and DSA.

Table A26: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and DSA

DSA	Pre-Policy	Post-Policy	% Change
ALOB	10	6	-40.00
AZOB	19	37	94.74
CADN	23	32	39.13
CAOP	27	51	88.89
CASD	6	4	-33.33
CORS	4	3	-25.00
DCTC	21	17	-19.05
FLFH	11	6	-45.45
FLMP	11	15	36.36
FLUF	14	19	35.71
FLWC	10	11	10.00
GALL	29	26	-10.34
HIOP	1	1	0.00
IAOP	10	9	-10.00
ILIP	60	96	60.00
INOP	17	14	-17.65
KYDA	8	6	-25.00
LAOP	37	27	-27.03
MAOB	7	9	28.57
MDPC	28	23	-17.86
MIOP	7	2	-71.43
MNOP	34	35	2.94
MOMA	13	9	-30.77
MSOP	5	4	-20.00
MWOB	10	10	0.00
NCCM	4	3	-25.00
NCNC	42	37	-11.90
NEOR	1	0	-100.00
NJTO	14	19	35.71
NMOP	2	0	-100.00
NYAP	3	1	-66.67
NYFL	1	6	500.00
NYRT	51	53	3.92
NYWN	2	7	250.00
OHLB	17	12	-29.41
OHLP	15	10	-33.33
OHOV	4	5	25.00
OKOP	2	7	250.00
ORUO	10	2	-80.00
PADV	16	22	37.50
PATF	7	6	-14.29
PRLI	6	6	0.00
SCOP	27	29	7.41
TNDS	2	10	400.00
TNMS	15	6	-60.00
TXGC	25	18	-28.00
TXSA	5	1	-80.00
TXSB	43	28	-34.88
UTOP	16	7	-56.25
VATB	22	20	-9.09

(continued)

DSA	Pre-Policy	Post-Policy	% Change
WALC	14	8	-42.86
WIDN	8	2	-75.00
WIUW	24	19	-20.83
Total	820	816	-0.49

Table A27 shows deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and transplant hospital.

Table A27: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Transplant Hospital

Transplant Hospital	Pre-Policy	Post-Policy	% Change
ALUA-TX1	10	6	-40.00
AZGS-TX1	2	1	-50.00
AZMC-TX1	17	29	70.59
AZUA-TX1	0	7	*
CACS-TX1	10	14	40.00
CAGH-TX1	2	1	-50.00
CAIM-TX1	3	3	0.00
CALL-TX1	6	28	366.67
CAPM-TX1	11	13	18.18
CARC-TX1	0	2	*
CASF-TX1	10	17	70.00
CASH-TX1	4	3	-25.00
CASU-TX1	2	2	0.00
CAUC-TX1	3	2	-33.33
CAUH-TX1	5	2	-60.00
COUC-TX1	4	3	-25.00
DCGU-TX1	21	12	-42.86
FLFH-TX1	11	6	-45.45
FLJM-TX1	11	15	36.36
FLSL-TX1	13	8	-38.46
FLTG-TX1	10	11	10.00
FLUF-TX1	1	11	1000.00
GAEM-TX1	11	10	-9.09
GAMC-TX1	1	0	-100.00
GAPH-TX1	17	16	-5.88
HIQM-TX1	1	1	0.00
IAIV-TX1	10	9	-10.00
ILLU-TX1	2	10	400.00
ILNM-TX1	23	18	-21.74
ILPL-TX1	5	11	120.00
ILSF-TX1	1	4	300.00
ILUC-TX1	5	11	120.00
ILUI-TX1	24	42	75.00
INIM-TX1	17	14	-17.65
KSUK-TX1	10	8	-20.00
KYJH-TX1	6	4	-33.33
KYUK-TX1	2	2	0.00
LAOF-TX1	18	9	-50.00
LATU-TX1	6	9	50.00
LAWK-TX1	13	9	-30.77
MABI-TX1	4	7	75.00
MAMG-TX1	2	1	-50.00
MAPB-TX1	1	1	0.00
MDJH-TX1	7	7	0.00
MDUM-TX1	21	16	-23.81
MIHF-TX1	0	1	*

(continued)

Transplant Hospital	Pre-Policy	Post-Policy	% Change
MIUM-TX1	7	1	-85.71
MNMC-TX1	4	11	175.00
MNUM-TX1	29	24	-17.24
MOBH-TX1	11	9	-18.18
MORH-TX1	0	2	*
MOSL-TX1	2	0	-100.00
MSUM-TX1	5	4	-20.00
NCBG-TX1	25	16	-36.00
NCCM-TX1	4	3	-25.00
NCDU-TX1	6	12	100.00
NCEC-TX1	9	6	-33.33
NCMH-TX1	2	3	50.00
NEUN-TX1	1	0	-100.00
NJLL-TX1	5	4	-20.00
NJRW-TX1	6	14	133.33
NJSB-TX1	3	1	-66.67
NMPH-TX1	2	0	-100.00
NYAM-TX1	3	1	-66.67
NYCP-TX1	5	11	120.00
NYEC-TX1	2	7	250.00
NYMA-TX1	23	24	4.35
NYMS-TX1	6	4	-33.33
NYNY-TX1	5	7	40.00
NYUC-TX1	12	7	-41.67
NYUM-TX1	1	6	500.00
OHCC-TX1	9	10	11.11
OHOU-TX1	15	10	-33.33
OHUC-TX1	4	5	25.00
OHUH-TX1	8	2	-75.00
OKBC-TX1	1	4	300.00
OKMD-TX1	1	3	200.00
ORUO-TX1	10	2	-80.00
PAAE-TX1	2	2	0.00
PAAG-TX1	2	1	-50.00
PACH-TX1	1	0	-100.00
PALV-TX1	2	3	50.00
PAPT-TX1	4	5	25.00
PATJ-TX1	3	5	66.67
PATU-TX1	2	2	0.00
PAUP-TX1	7	10	42.86
PRSJ-TX1	6	6	0.00
SCMU-TX1	27	29	7.41
SDMK-TX1	1	0	-100.00
TNMH-TX1	15	6	-60.00
TNVU-TX1	2	10	400.00
TXAS-TX1	7	3	-57.14
TXHD-TX1	6	8	33.33
TXHH-TX1	2	0	-100.00
TXHS-TX1	5	1	-80.00
TXJS-TX1	4	0	-100.00
TXMC-TX1	6	4	-33.33

(continued)

Transplant Hospital	Pre-Policy	Post-Policy	% Change
TXMH-TX1	16	15	-6.25
TXSW-TX1	17	9	-47.06
TXTX-TX1	10	7	-30.00
UTLD-TX1	7	5	-28.57
UTMC-TX1	9	2	-77.78
VAFH-TX1	0	5	*
VAMC-TX1	6	9	50.00
VANG-TX1	2	1	-50.00
VAUV-TX1	14	10	-28.57
WASH-TX1	1	0	-100.00
WASM-TX1	2	1	-50.00
WAUW-TX1	6	4	-33.33
WAVM-TX1	5	3	-40.00
WISE-TX1	5	2	-60.00
WISL-TX1	3	0	-100.00
WIUW-TX1	24	19	-20.83
Total	820	816	-0.49

Table A28 shows deceased donor kidney-pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and state.

Table A28: Deceased Donor Kidney-Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and State

State	Pre-Policy	Post-Policy	% Change
Alabama	10	6	-40.00
Arizona	19	37	94.74
California	56	87	55.36
Colorado	4	3	-25.00
Dist. Of Columbia	21	12	-42.86
Florida	46	51	10.87
Georgia	29	26	-10.34
Hawaii	1	1	0.00
Illinois	60	96	60.00
Indiana	17	14	-17.65
Iowa	10	9	-10.00
Kansas	10	8	-20.00
Kentucky	8	6	-25.00
Louisiana	37	27	-27.03
Maryland	28	23	-17.86
Massachusetts	7	9	28.57
Michigan	7	2	-71.43
Minnesota	33	35	6.06
Mississippi	5	4	-20.00
Missouri	13	11	-15.38
Nebraska	1	0	-100.00
New Jersey	14	19	35.71
New Mexico	2	0	-100.00
New York	57	67	17.54
North Carolina	46	40	-13.04
Ohio	36	27	-25.00
Oklahoma	2	7	250.00
Oregon	10	2	-80.00
Pennsylvania	23	28	21.74
Puerto Rico	6	6	0.00
South Carolina	27	29	7.41
South Dakota	1	0	-100.00
Tennessee	17	16	-5.88
Texas	73	47	-35.62
Utah	16	7	-56.25
Virginia	22	25	13.64
Washington	14	8	-42.86
Wisconsin	32	21	-34.38
Total	820	816	-0.49

Post-Transplant Outcomes

Patient Survival

Figure A26 and **Table A29** show six month post-transplant patient survival for deceased donor kidney-pancreas transplants by policy era and recipient age at transplant. There were no statistically significant differences in the probability of patient survival at six months post-transplant within recipient age groups.

Figure A26: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Recipient Age

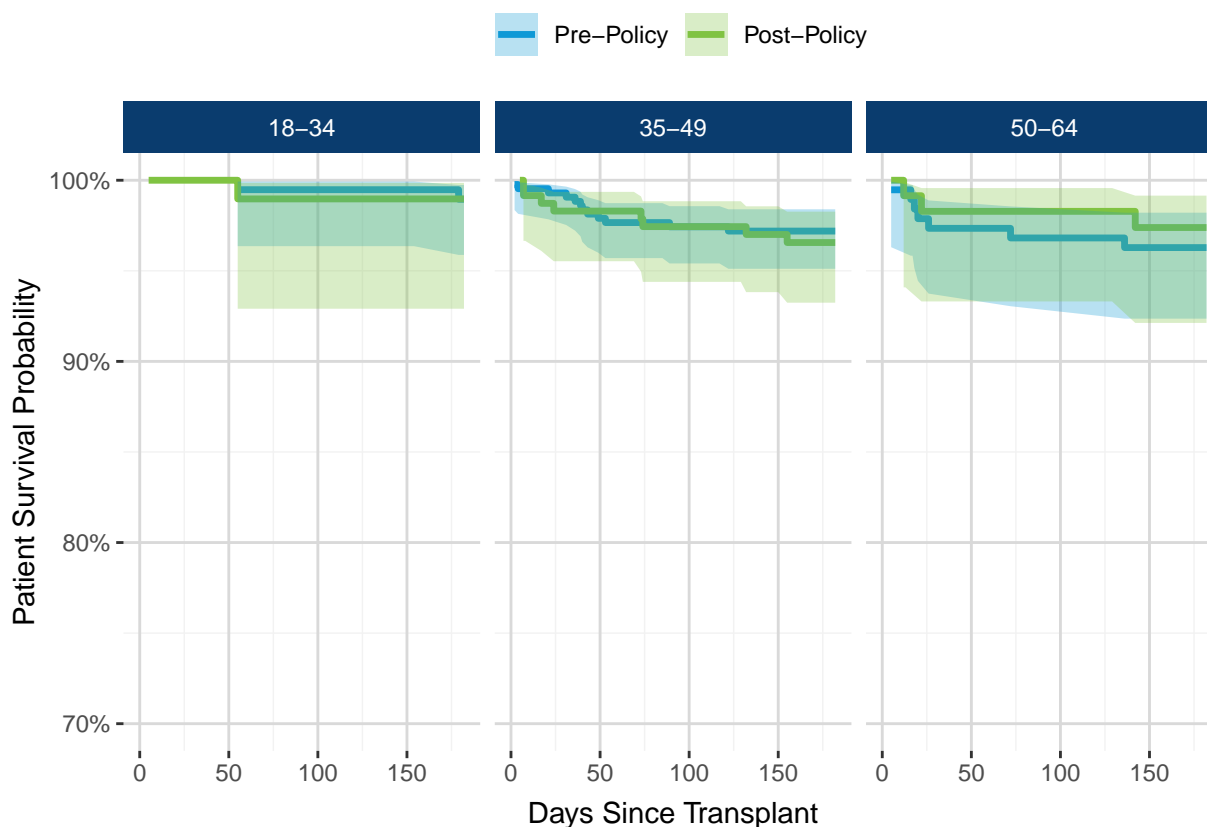


Table A29: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Recipient Age

Recipient Age	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
<18	Pre-Policy	4	1	3	–	–
	Post-Policy	0	0	0	–	–
18-34	Pre-Policy	192	2	186	99	(95.9, 99.7)
	Post-Policy	101	1	67	99	(92.9, 99.9)
35-49	Pre-Policy	428	12	408	97.2	(95.1, 98.4)
	Post-Policy	237	8	155	96.6	(93.2, 98.3)
50-64	Pre-Policy	189	7	180	96.3	(92.4, 98.2)
	Post-Policy	125	3	83	97.4	(92.1, 99.2)
65+	Pre-Policy	7	0	7	–	–
	Post-Policy	1	0	1	–	–

Figure A27 and **Table A30** show six month post-transplant patient survival for deceased donor kidney-pancreas transplants by policy era and recipient gender. There were no statistically significant differences in the probability of patient survival at six months post-transplant for female or male recipients.

Figure A27: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Gender

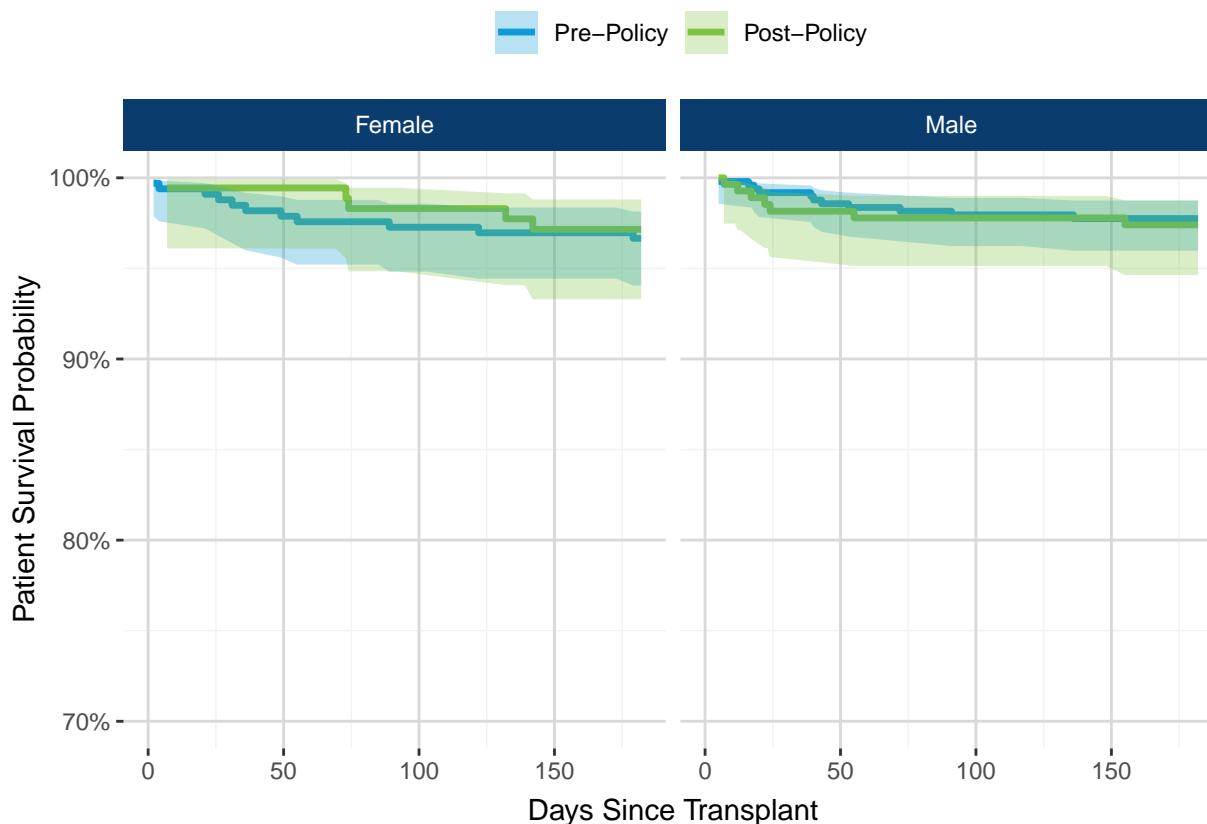


Table A30: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Gender

Recipient Gender	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
Female	Pre-Policy	330	11	313	96.7	(94.1, 98.1)
	Post-Policy	179	5	122	97.2	(93.3, 98.8)
Male	Pre-Policy	490	11	471	97.8	(96, 98.7)
	Post-Policy	285	7	184	97.4	(94.6, 98.8)

Figure A28 and **Table A31** show six month post-transplant patient survival for deceased donor kidney-pancreas transplants by policy era and recipient age at transplant. There were no statistically significant differences in the probability of patient survival at six months post-transplant within recipient racial/ethnic groups.

Figure A28: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Race/Ethnicity

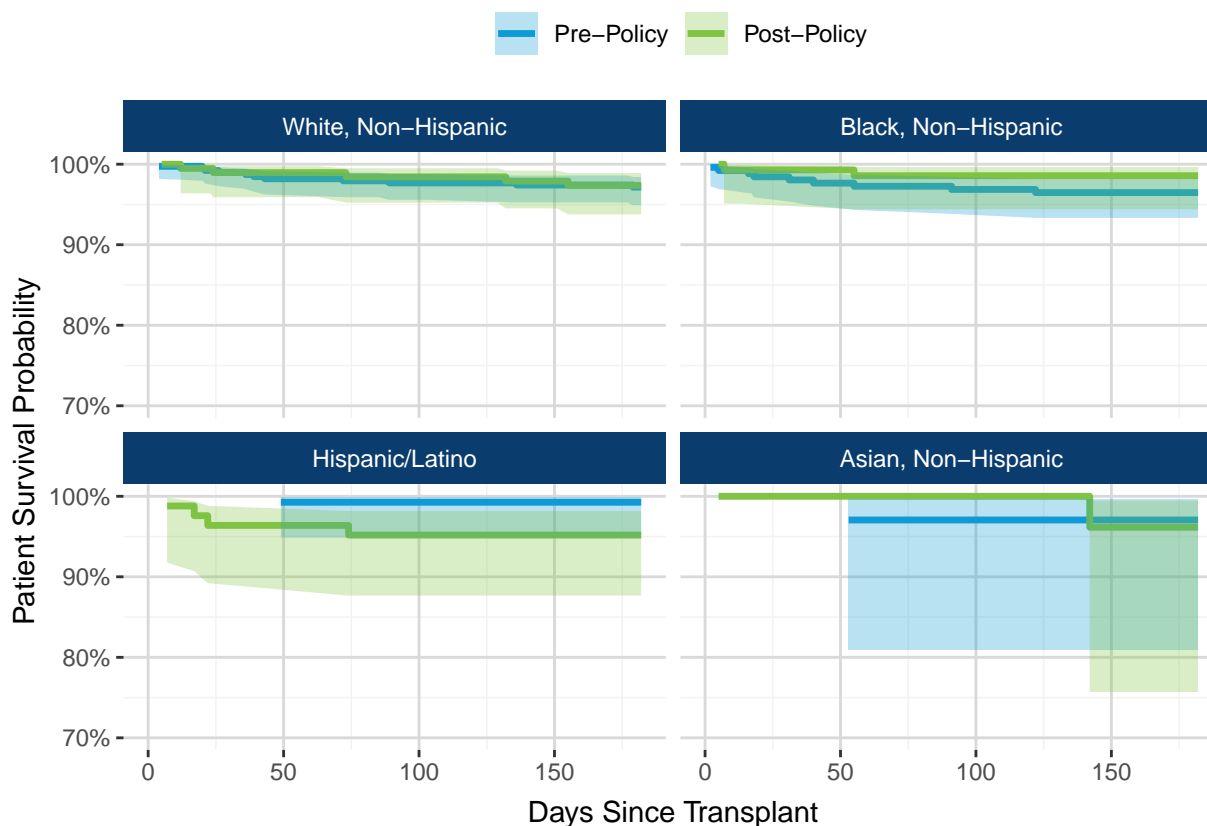


Table A31: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Race/Ethnicity

Recipient Race/Ethnicity	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
White, Non-Hispanic	Pre-Policy	387	11	370	97.2	(94.9, 98.4)
	Post-Policy	202	5	128	97.4	(93.8, 98.9)
Black, Non-Hispanic	Pre-Policy	256	9	242	96.5	(93.3, 98.2)
	Post-Policy	144	2	99	98.6	(94.4, 99.6)
Hispanic/Latino	Pre-Policy	135	1	131	99.3	(94.9, 99.9)
	Post-Policy	83	4	55	95.2	(87.7, 98.2)
Asian, Non-Hispanic	Pre-Policy	34	1	33	97.1	(80.9, 99.6)
	Post-Policy	27	1	17	96.2	(75.7, 99.4)
Other	Pre-Policy	8	0	8	–	–
	Post-Policy	8	0	7	–	–

Figure A29 and **Table A32** show six month post-transplant patient survival for deceased donor kidney-pancreas transplants by policy era and recipient CPRA. There were no statistically significant differences in the probability of patient survival at six months post-transplant within recipient CPRA groups.

Figure A29: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and CPRA

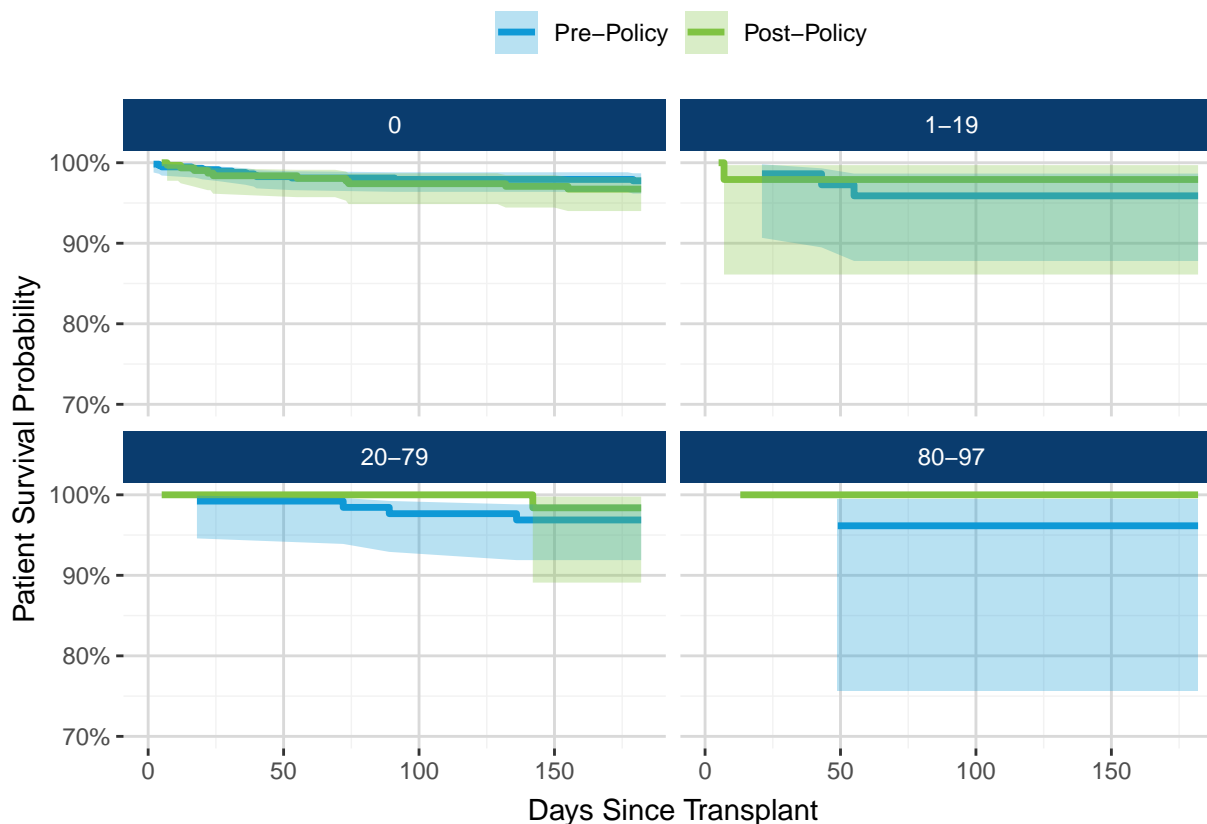


Table A32: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and CPRA

CPRA	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
0	Pre-Policy	580	13	555	97.8	(96.2, 98.7)
	Post-Policy	319	10	209	96.7	(94, 98.2)
1-19	Pre-Policy	73	3	68	95.9	(87.8, 98.7)
	Post-Policy	49	1	33	97.9	(86.1, 99.7)
20-79	Pre-Policy	128	4	124	96.9	(91.9, 98.8)
	Post-Policy	66	1	43	98.4	(89.1, 99.8)
80-97	Pre-Policy	26	1	25	96.2	(75.7, 99.4)
	Post-Policy	26	0	18	100	–
98-100	Pre-Policy	13	1	12	92.3	(56.6, 98.9)
	Post-Policy	4	0	3	–	–

Figure A30 and **Table A33** show six month post-transplant patient survival for deceased donor kidney-pancreas transplants by policy era and recipient blood type. There were no statistically significant differences in the probability of patient survival at six months post-transplant within blood type groups.

Figure A30: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Blood Type

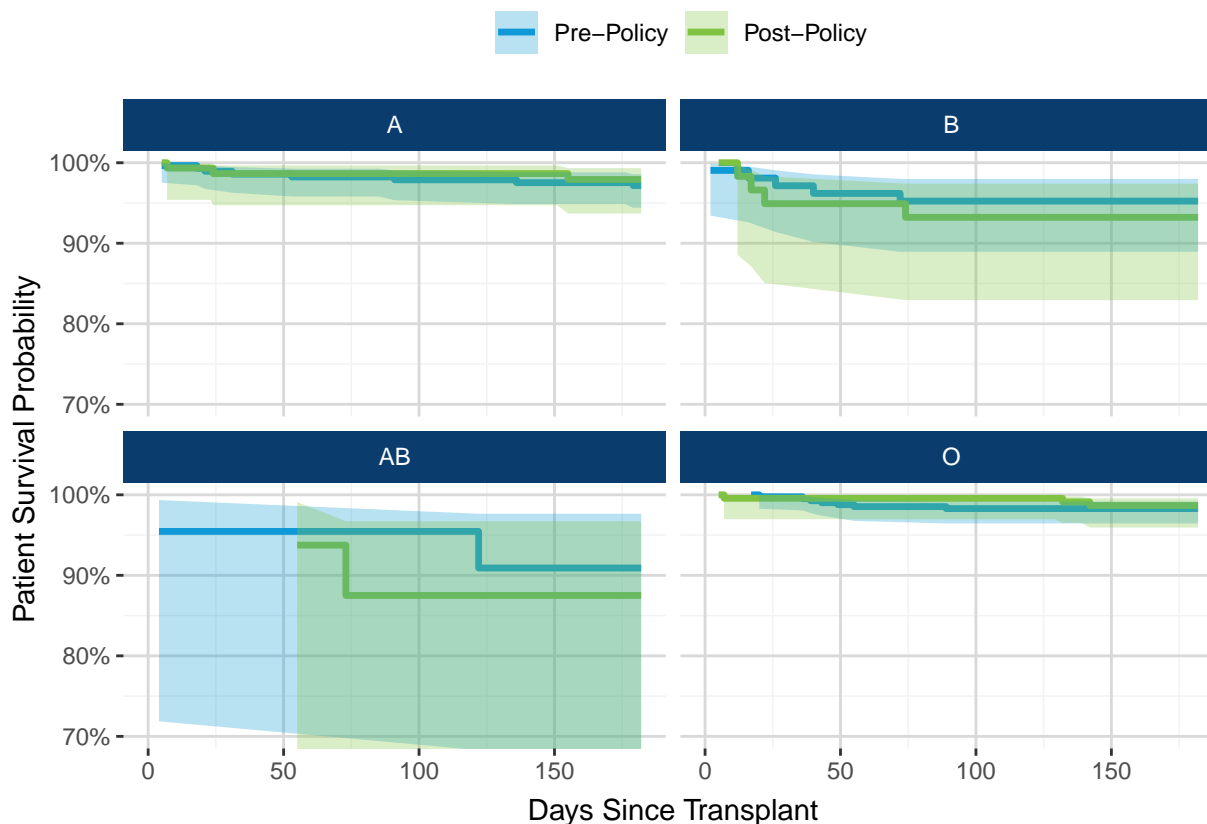


Table A33: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Blood Type

ABO	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
A	Pre-Policy	283	8	270	97.2	(94.4, 98.6)
	Post-Policy	154	3	94	97.9	(93.7, 99.3)
B	Pre-Policy	105	5	97	95.2	(88.9, 98)
	Post-Policy	60	4	41	93.2	(82.9, 97.4)
AB	Pre-Policy	22	2	20	90.9	(68.3, 97.6)
	Post-Policy	17	2	12	87.5	(58.6, 96.7)
O	Pre-Policy	410	7	397	98.3	(96.4, 99.2)
	Post-Policy	233	3	159	98.7	(95.9, 99.6)

Figure A31 and **Table A34** show six month post-transplant patient survival for deceased donor kidney-pancreas transplants by policy era and kidney cold ischemic time. There were no statistically significant differences in the probability of patient survival at six months post-transplant within quartiles of cold ischemic time.

Figure A31: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Cold Ischemic Time

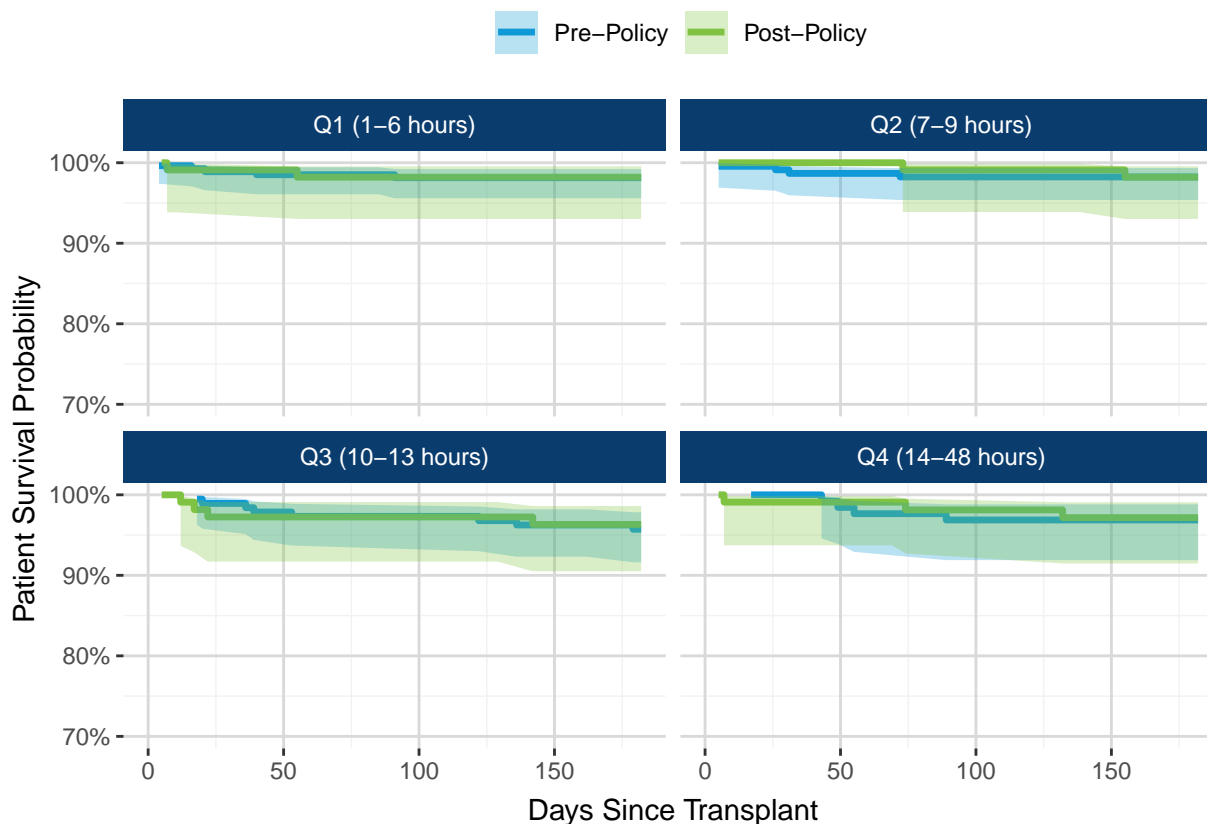


Table A34: Six Month Post-Transplant Patient Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Cold Ischemic Time

Cold Ischemic Time	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
Q1 (1-6 hours)	Pre-Policy	269	5	260	98.1	(95.6, 99.2)
	Post-Policy	114	2	76	98.2	(93, 99.5)
Q2 (7-9 hours)	Pre-Policy	227	4	221	98.2	(95.4, 99.3)
	Post-Policy	118	2	86	98.2	(93, 99.5)
Q3 (10-13 hours)	Pre-Policy	187	8	175	95.7	(91.6, 97.8)
	Post-Policy	111	4	72	96.3	(90.5, 98.6)
Q4 (14-48 hours)	Pre-Policy	129	4	122	96.9	(91.9, 98.8)
	Post-Policy	112	3	70	97.2	(91.5, 99.1)

Kidney Graft Survival

Figure A32 and **Table A35** show six month post-transplant kidney graft survival for deceased donor kidney-pancreas transplants by policy era and recipient age at transplant. There were no statistically significant differences in the probability of kidney graft survival at six months post-transplant within recipient age groups.

Figure A32: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Recipient Age

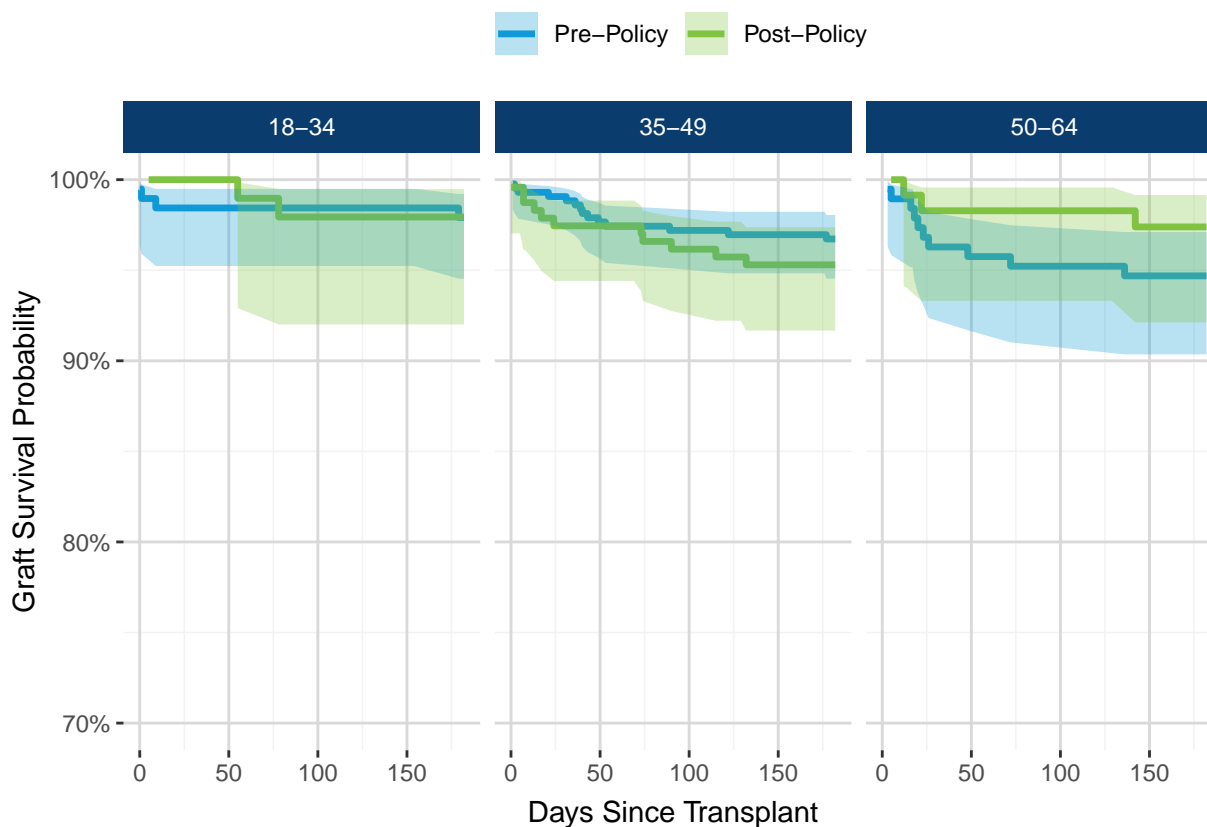


Table A35: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Recipient Age

Recipient Age	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
<18	Pre-Policy	4	1	3	–	–
	Post-Policy	0	0	0	–	–
18-34	Pre-Policy	192	4	184	97.9	(94.5, 99.2)
	Post-Policy	101	2	67	97.9	(92, 99.5)
35-49	Pre-Policy	428	14	409	96.7	(94.5, 98)
	Post-Policy	237	11	152	95.3	(91.7, 97.4)
50-64	Pre-Policy	189	10	177	94.7	(90.4, 97.1)
	Post-Policy	125	3	83	97.4	(92.1, 99.2)
65+	Pre-Policy	7	0	7	–	–
	Post-Policy	1	0	1	–	–

Figure A33 and **Table A36** show six month post-transplant kidney graft survival for deceased donor kidney-pancreas transplants by policy era and recipient age at transplant. There were no statistically significant differences in the probability of kidney graft survival at six months post-transplant for female or male recipients.

Figure A33: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Gender

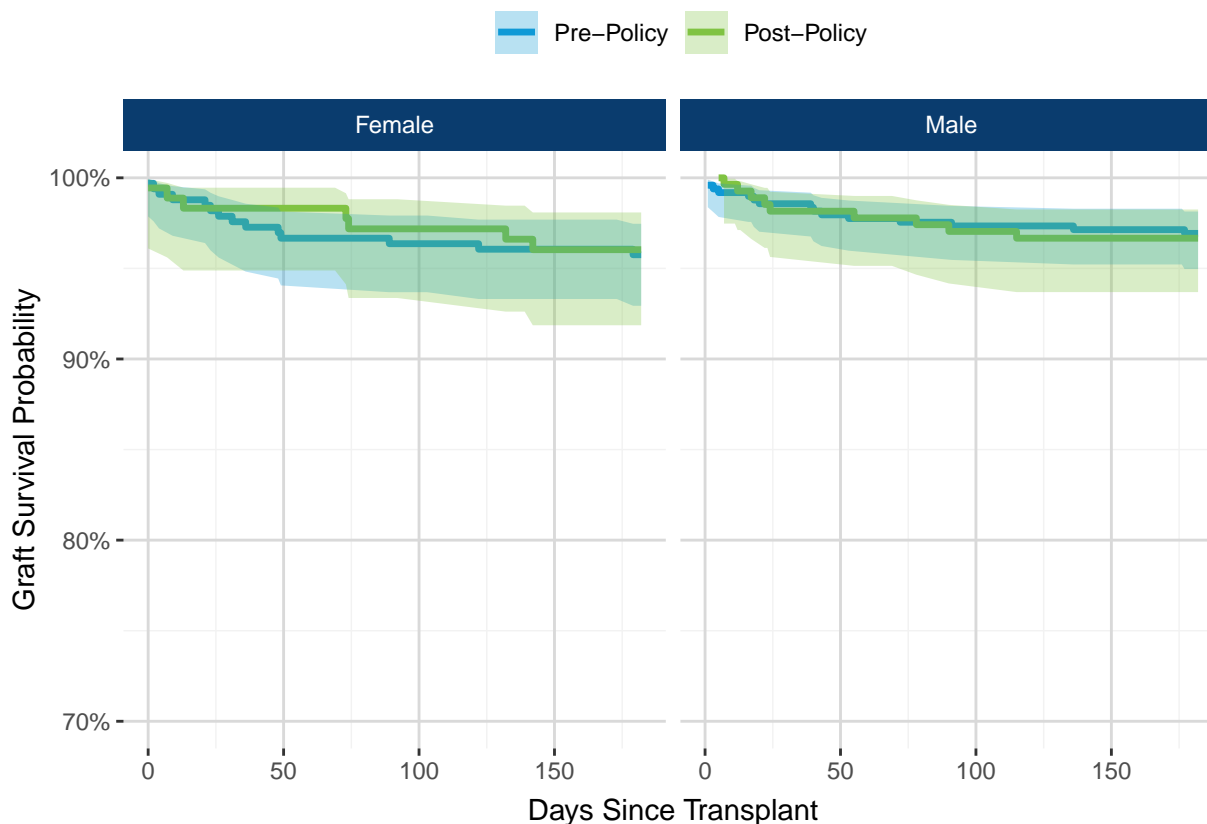


Table A36: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Gender

Recipient Gender	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Female	Pre-Policy	330	14	311	95.8	(92.9, 97.5)
	Post-Policy	179	7	120	96	(91.9, 98.1)
Male	Pre-Policy	490	15	469	96.9	(95, 98.1)
	Post-Policy	285	9	183	96.7	(93.7, 98.3)

Figure A34 and **Table A37** show six month post-transplant kidney graft survival for deceased donor kidney-pancreas transplants by policy era and recipient race/ethnicity. There were no statistically significant differences in the probability of kidney graft survival at six months post-transplant within racial/ethnic groups.

Figure A34: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Race/Ethnicity

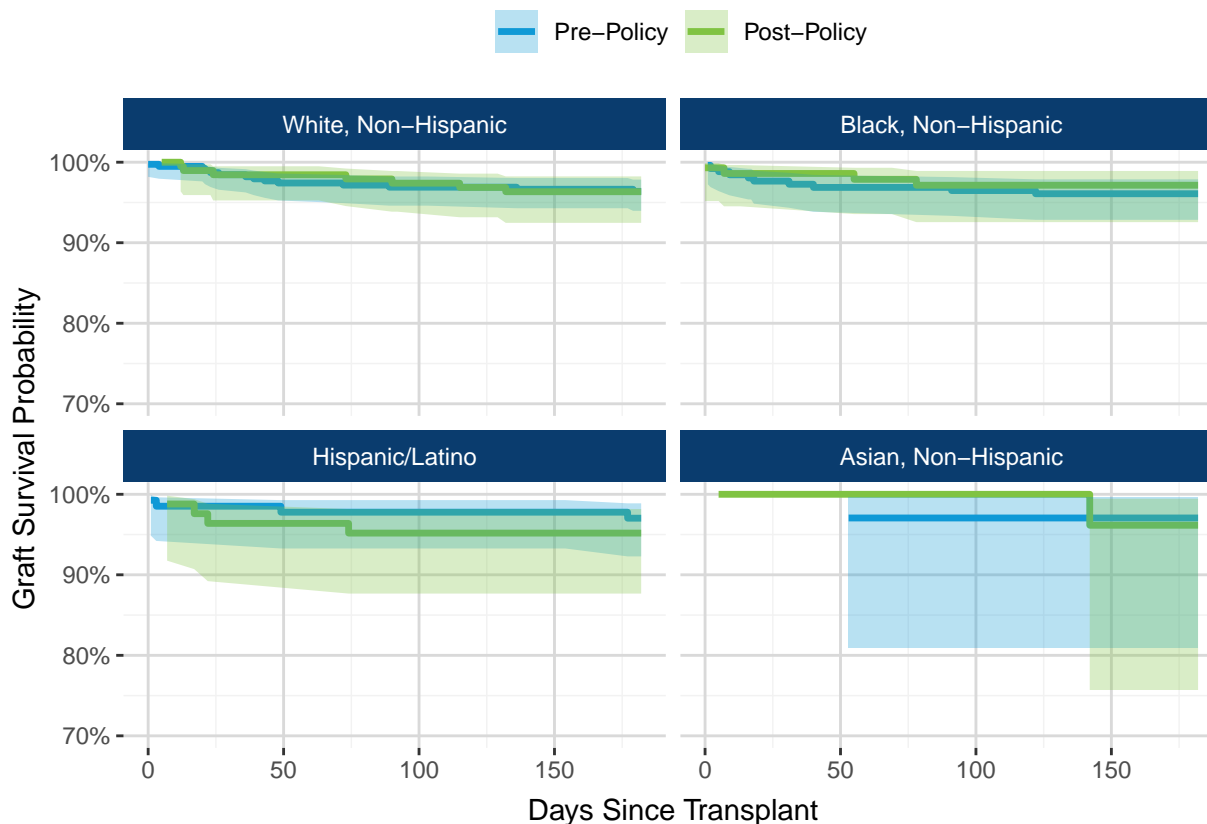


Table A37: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Race/Ethnicity

Recipient Race/Ethnicity	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
White, Non-Hispanic	Pre-Policy	387	14	368	96.4	(94, 97.8)
	Post-Policy	202	7	126	96.3	(92.5, 98.2)
Black, Non-Hispanic	Pre-Policy	256	10	241	96.1	(92.8, 97.9)
	Post-Policy	144	4	98	97.1	(92.6, 98.9)
Hispanic/Latino	Pre-Policy	135	4	130	97	(92.3, 98.9)
	Post-Policy	83	4	55	95.2	(87.7, 98.2)
Asian, Non-Hispanic	Pre-Policy	34	1	33	97.1	(80.9, 99.6)
	Post-Policy	27	1	17	96.2	(75.7, 99.4)
Other	Pre-Policy	8	0	8	–	–
	Post-Policy	8	0	7	–	–

Figure A35 and **Table A38** show six month post-transplant kidney graft survival for deceased donor kidney-pancreas transplants by policy era and recipient CPRA. There were no statistically significant differences in the probability of kidney graft survival at six months post-transplant within CPRA groups.

Figure A35: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and CPRA

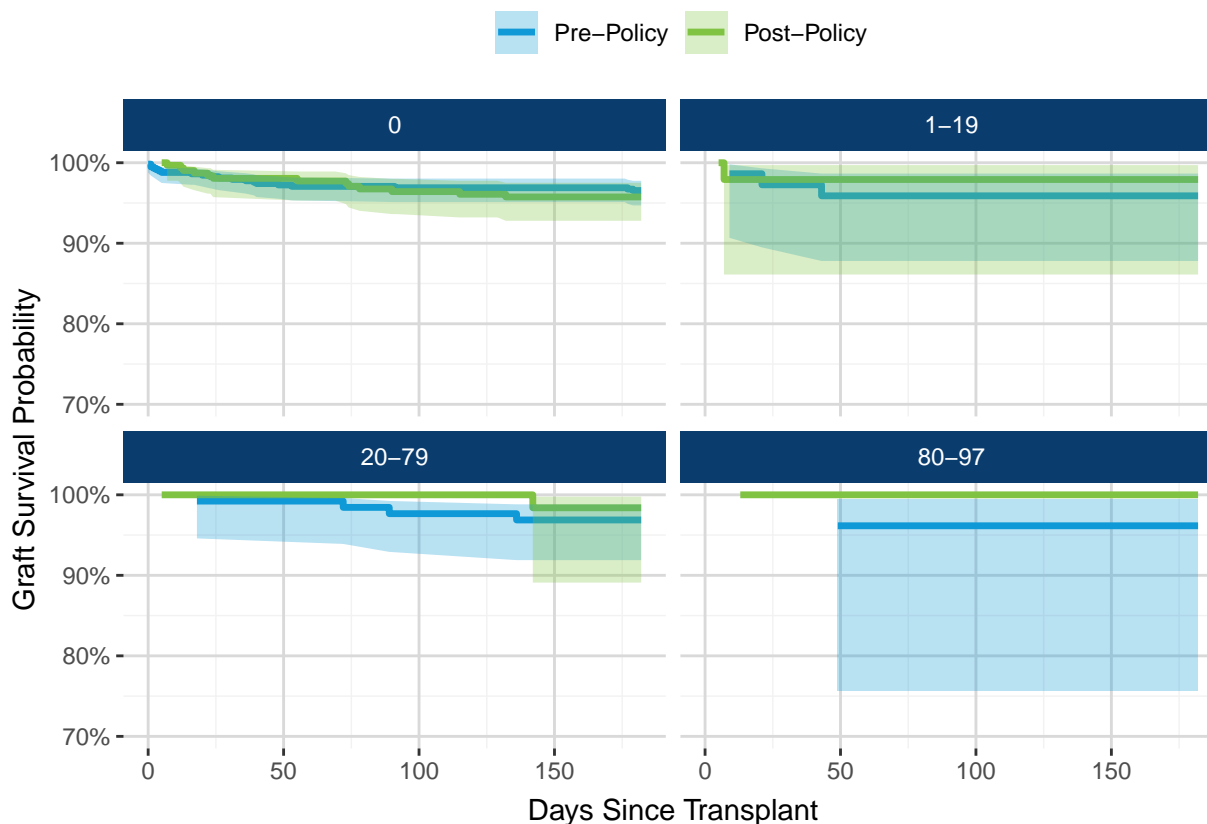


Table A38: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and CPRA

CPRA	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
0	Pre-Policy	580	20	550	96.5	(94.7, 97.8)
	Post-Policy	319	13	207	95.8	(92.8, 97.5)
1-19	Pre-Policy	73	3	69	95.9	(87.8, 98.7)
	Post-Policy	49	1	33	97.9	(86.1, 99.7)
20-79	Pre-Policy	128	4	124	96.9	(91.9, 98.8)
	Post-Policy	66	1	43	98.4	(89.1, 99.8)
80-97	Pre-Policy	26	1	25	96.2	(75.7, 99.4)
	Post-Policy	26	0	18	100	–
98-100	Pre-Policy	13	1	12	92.3	(56.6, 98.9)
	Post-Policy	4	1	2	–	–

Figure A36 and **Table A39** show six month post-transplant kidney graft survival for deceased donor kidney-pancreas transplants by policy era and recipient blood type. There were no statistically significant differences in the probability of kidney graft survival at six months post-transplant within blood type groups.

Figure A36: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Blood Type

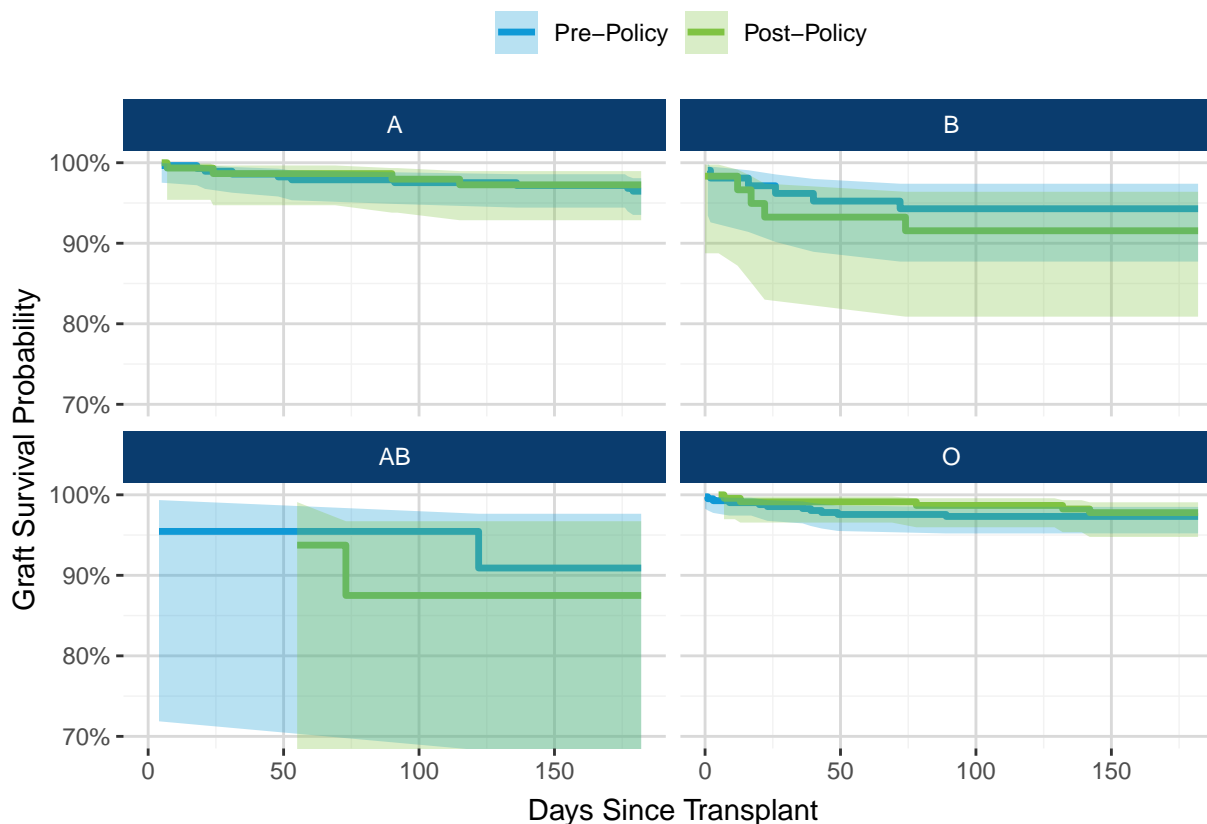


Table A39: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Blood Type

ABO	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
A	Pre-Policy	283	10	270	96.5	(93.5, 98.1)
	Post-Policy	154	4	93	97.3	(92.9, 99)
B	Pre-Policy	105	6	96	94.3	(87.7, 97.4)
	Post-Policy	60	5	40	91.6	(80.9, 96.4)
AB	Pre-Policy	22	2	20	90.9	(68.3, 97.6)
	Post-Policy	17	2	12	87.5	(58.6, 96.7)
O	Pre-Policy	410	11	394	97.3	(95.2, 98.5)
	Post-Policy	233	5	158	97.8	(94.8, 99.1)

Figure A37 and **Table A40** show six month post-transplant kidney graft survival for deceased donor kidney-pancreas transplants by policy era and cold ischemic time. There were no statistically significant differences in the probability of kidney graft survival at six months post-transplant within quartiles of cold ischemic time.

Figure A37: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Cold Ischemic Time

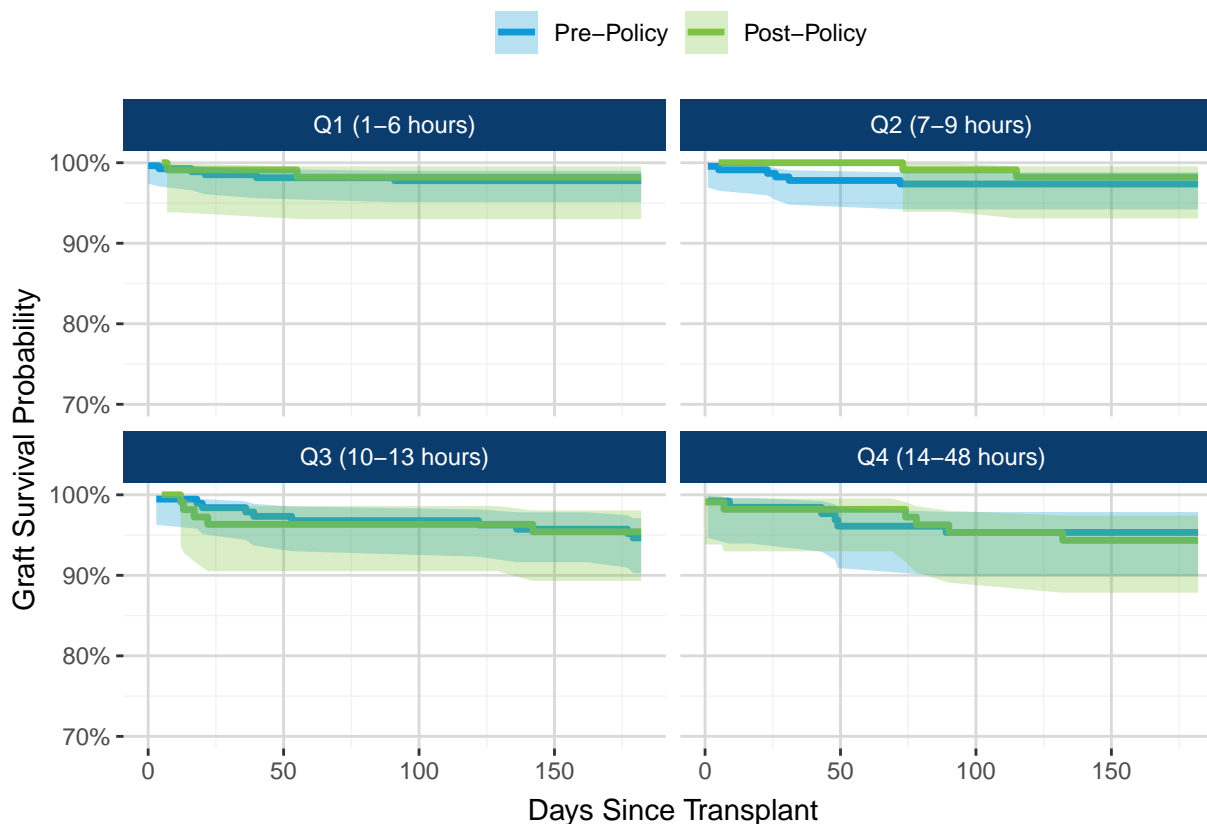


Table A40: Six Month Post-Transplant Kidney Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Cold Ischemic Time

Cold Ischemic Time	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Q1 (1-6 hours)	Pre-Policy	269	6	260	97.8	(95.1, 99)
	Post-Policy	114	2	76	98.2	(93, 99.5)
Q2 (7-9 hours)	Pre-Policy	227	6	220	97.4	(94.2, 98.8)
	Post-Policy	118	2	86	98.2	(93.1, 99.6)
Q3 (10-13 hours)	Pre-Policy	187	10	174	94.6	(90.3, 97.1)
	Post-Policy	111	5	71	95.4	(89.3, 98.1)
Q4 (14-48 hours)	Pre-Policy	129	6	120	95.3	(89.9, 97.9)
	Post-Policy	112	6	68	94.3	(87.8, 97.4)

Pancreas Graft Survival

Figure A38 and **Table A41** show six month post-transplant pancreas graft survival for deceased donor kidney-pancreas transplants by policy era and recipient age at transplant. There were no statistically significant differences in the probability of pancreas graft survival at six months post-transplant within age groups.

Figure A38: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Recipient Age

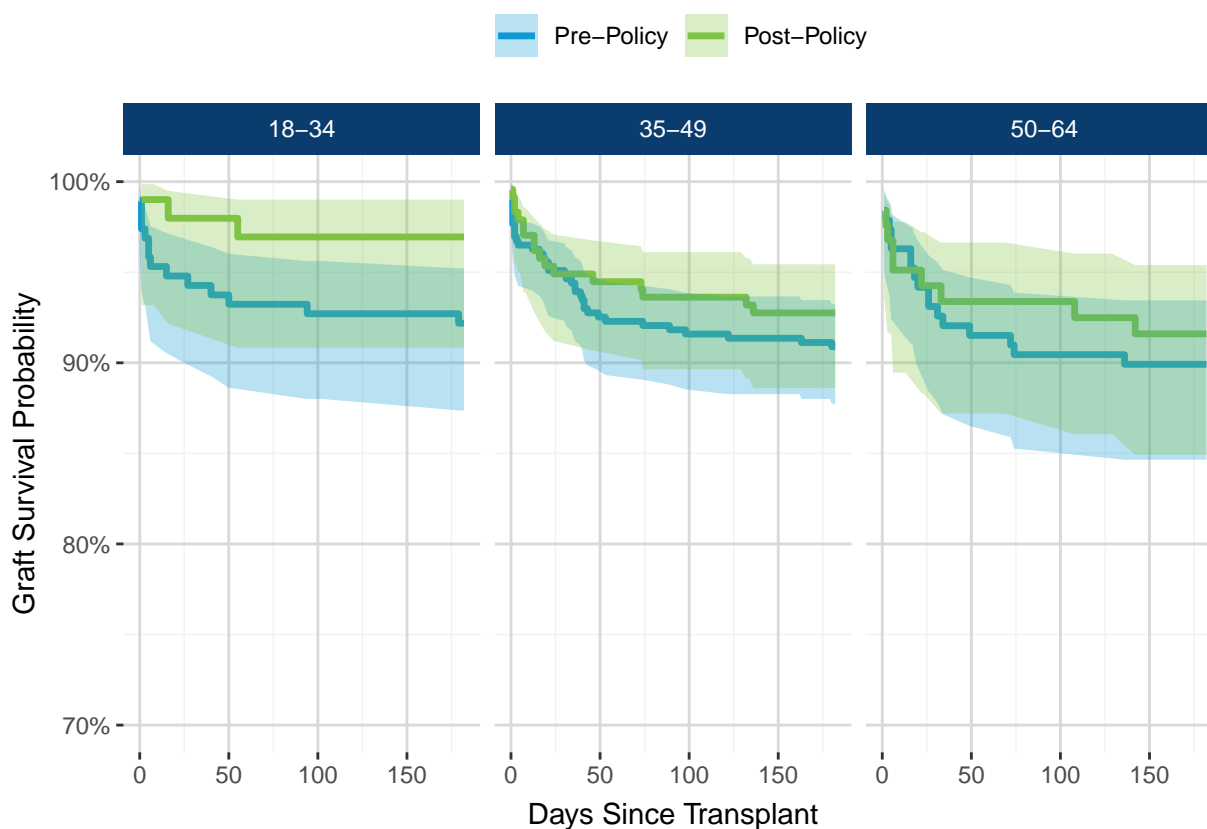


Table A41: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Recipient Age

Recipient Age	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
<18	Pre-Policy	4	1	3	–	–
	Post-Policy	0	0	0	–	–
18-34	Pre-Policy	192	15	174	92.2	(87.4, 95.2)
	Post-Policy	101	3	67	96.9	(90.8, 99)
35-49	Pre-Policy	428	39	385	90.9	(87.7, 93.3)
	Post-Policy	237	17	148	92.8	(88.6, 95.4)
50-64	Pre-Policy	189	19	168	89.9	(84.6, 93.4)
	Post-Policy	125	10	78	91.6	(84.9, 95.4)
65+	Pre-Policy	7	0	7	–	–
	Post-Policy	1	0	1	–	–

Figure A39 and **Table A42** show six month post-transplant pancreas graft survival for deceased donor kidney-pancreas transplants by policy era and recipient gender. There were no statistically significant differences in the probability of pancreas graft survival at six months post-transplant for female or male recipients.

Figure A39: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Gender

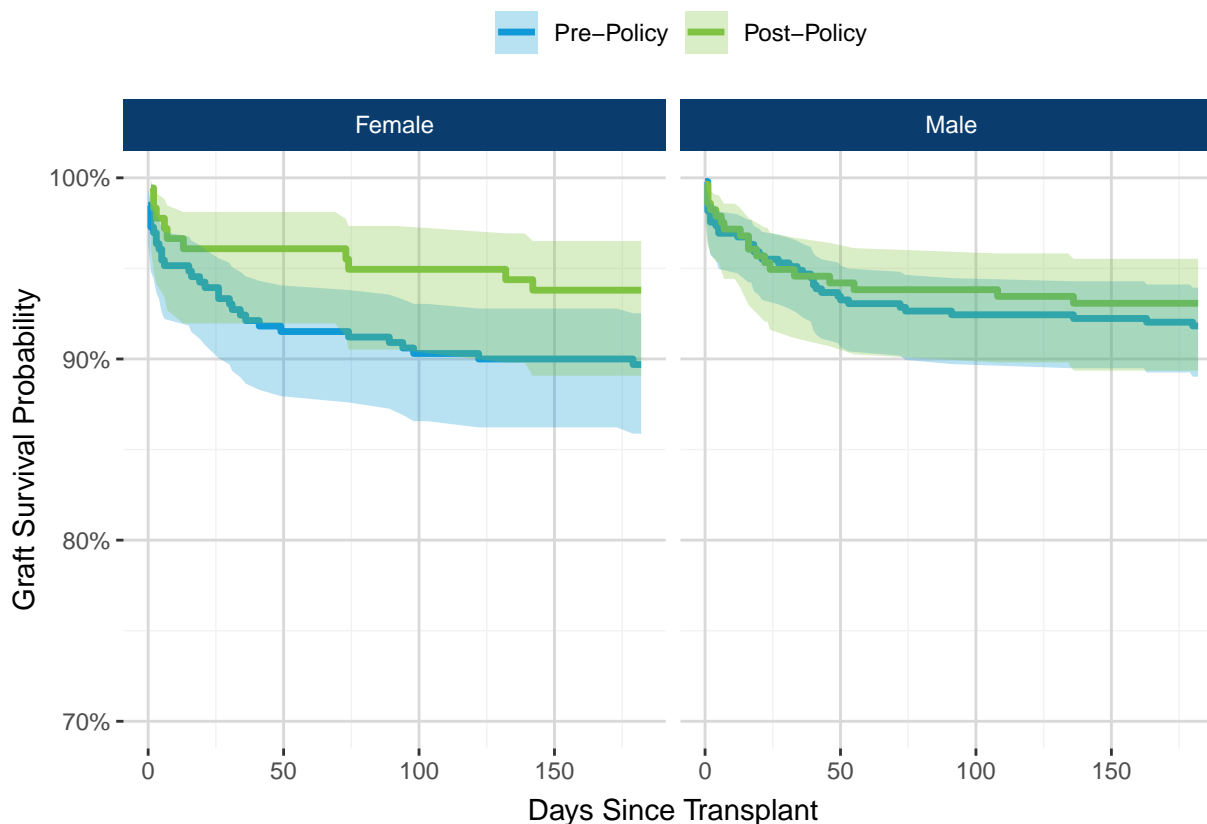


Table A42: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Gender

Recipient Gender	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Female	Pre-Policy	330	34	291	89.7	(85.9, 92.5)
	Post-Policy	179	11	118	93.8	(89.1, 96.5)
Male	Pre-Policy	490	40	446	91.8	(89, 93.9)
	Post-Policy	285	19	176	93.1	(89.4, 95.5)

Figure A40 and **Table A43** show six month post-transplant pancreas graft survival for deceased donor kidney-pancreas transplants by policy era and recipient race/ethnicity. There were no statistically significant differences in the probability of pancreas graft survival at six months post-transplant within racial/ethnic groups.

Figure A40: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Race/Ethnicity

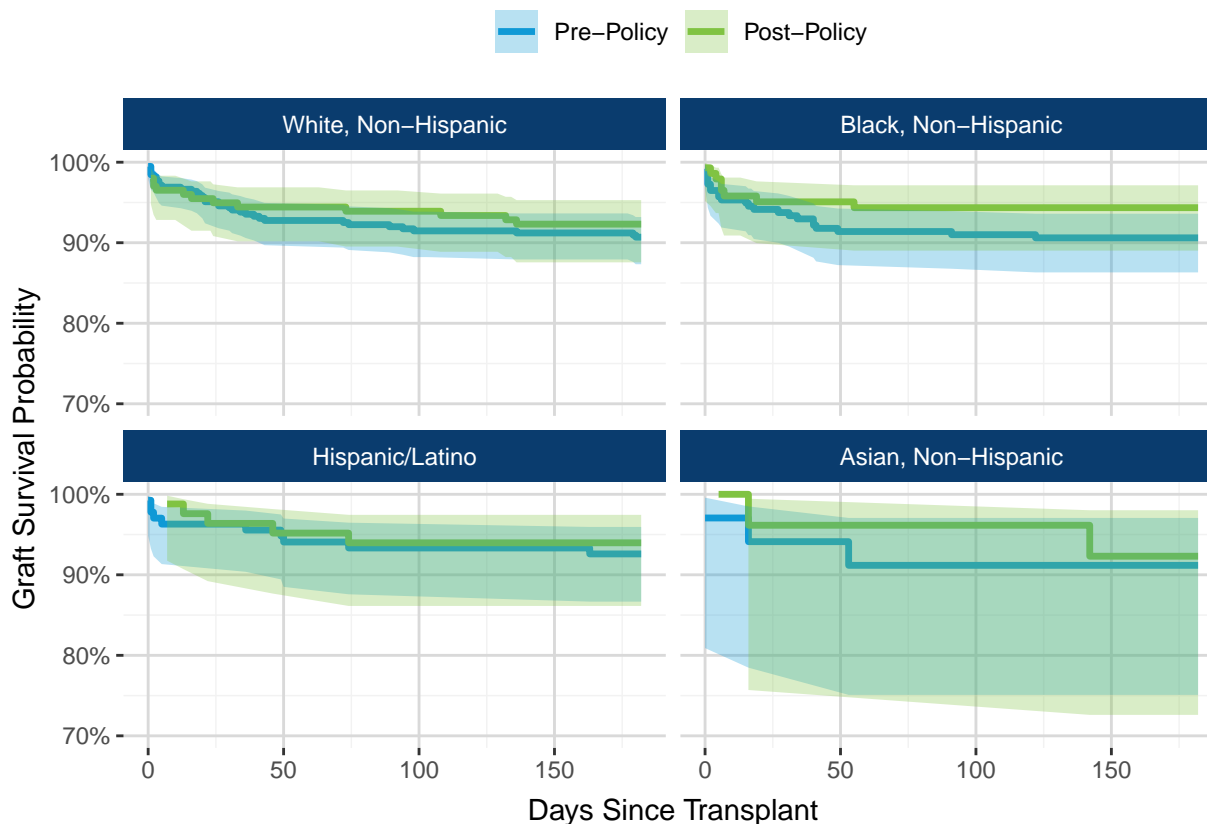


Table A43: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Race/Ethnicity

Recipient Race/Ethnicity	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
White, Non-Hispanic	Pre-Policy	387	36	346	90.7	(87.3, 93.2)
	Post-Policy	202	15	120	92.3	(87.6, 95.3)
Black, Non-Hispanic	Pre-Policy	256	24	228	90.6	(86.3, 93.6)
	Post-Policy	144	8	96	94.4	(89, 97.1)
Hispanic/Latino	Pre-Policy	135	10	125	92.6	(86.7, 95.9)
	Post-Policy	83	5	54	94	(86.1, 97.4)
Asian, Non-Hispanic	Pre-Policy	34	3	31	91.2	(75.1, 97.1)
	Post-Policy	27	2	17	92.3	(72.6, 98)
Other	Pre-Policy	8	1	7	-	-
	Post-Policy	8	0	7	-	-

Figure A41 and **Table A44** show six month post-transplant pancreas graft survival for deceased donor kidney-pancreas transplants by policy era and recipient CPRA. There were no statistically significant differences in the probability of pancreas graft survival at six months post-transplant within CPRA groups.

Figure A41: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and CPRA

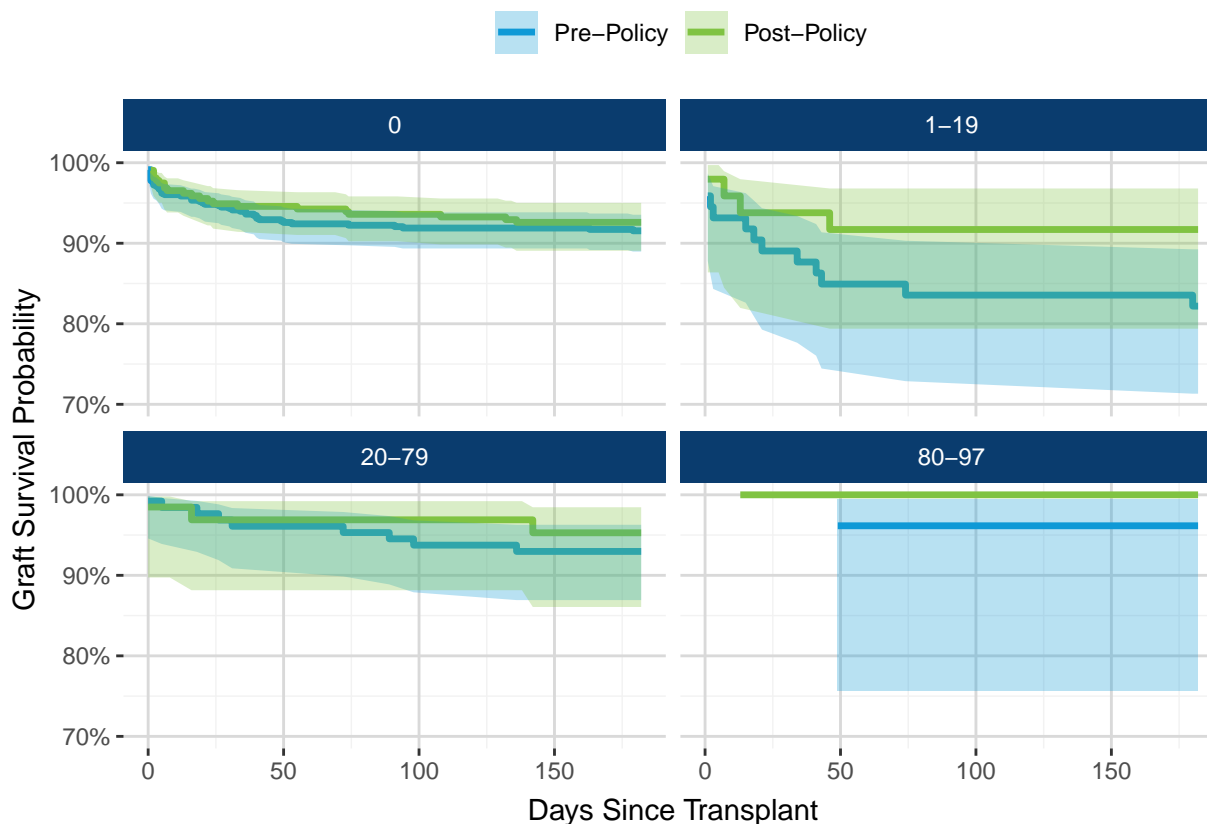


Table A44: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and CPRA

CPRA	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
0	Pre-Policy	580	49	523	91.5	(89, 93.5)
	Post-Policy	319	23	201	92.6	(89.1, 95)
1-19	Pre-Policy	73	13	59	82.2	(71.3, 89.2)
	Post-Policy	49	4	31	91.7	(79.4, 96.8)
20-79	Pre-Policy	128	9	119	93	(86.9, 96.3)
	Post-Policy	66	3	41	95.3	(86.1, 98.5)
80-97	Pre-Policy	26	1	25	96.2	(75.7, 99.4)
	Post-Policy	26	0	18	100	–
98-100	Pre-Policy	13	2	11	84.6	(51.2, 95.9)
	Post-Policy	4	0	3	–	–

Figure A42 and **Table A45** show six month post-transplant pancreas graft survival for deceased donor kidney-pancreas transplants by policy era and recipient blood type. There were no statistically significant differences in the probability of pancreas graft survival at six months post-transplant within blood type groups.

Figure A42: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Blood Type

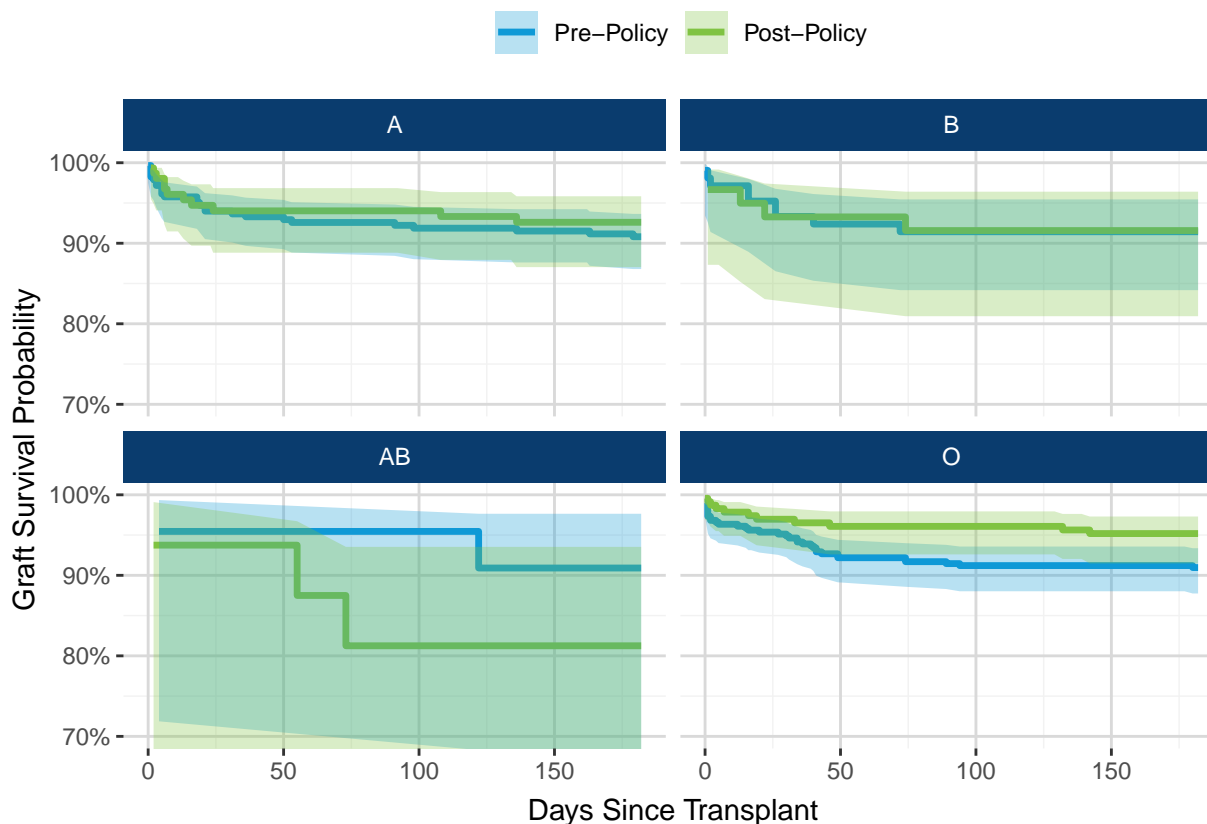


Table A45: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Blood Type

ABO	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
A	Pre-Policy	283	26	255	90.8	(86.8, 93.6)
	Post-Policy	154	11	90	92.6	(87, 95.8)
B	Pre-Policy	105	9	93	91.4	(84.2, 95.4)
	Post-Policy	60	5	40	91.6	(80.9, 96.4)
AB	Pre-Policy	22	2	20	90.9	(68.3, 97.6)
	Post-Policy	17	3	11	81.2	(52.5, 93.5)
O	Pre-Policy	410	37	369	91	(87.7, 93.4)
	Post-Policy	233	11	153	95.2	(91.5, 97.3)

Figure A43 and **Table A46** show six month post-transplant pancreas graft survival for deceased donor kidney-pancreas transplants by policy era and preservation time. There were no statistically significant differences in the probability of pancreas graft survival at six months post-transplant within quartiles of preservation time.

Figure A43: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Preservation Time

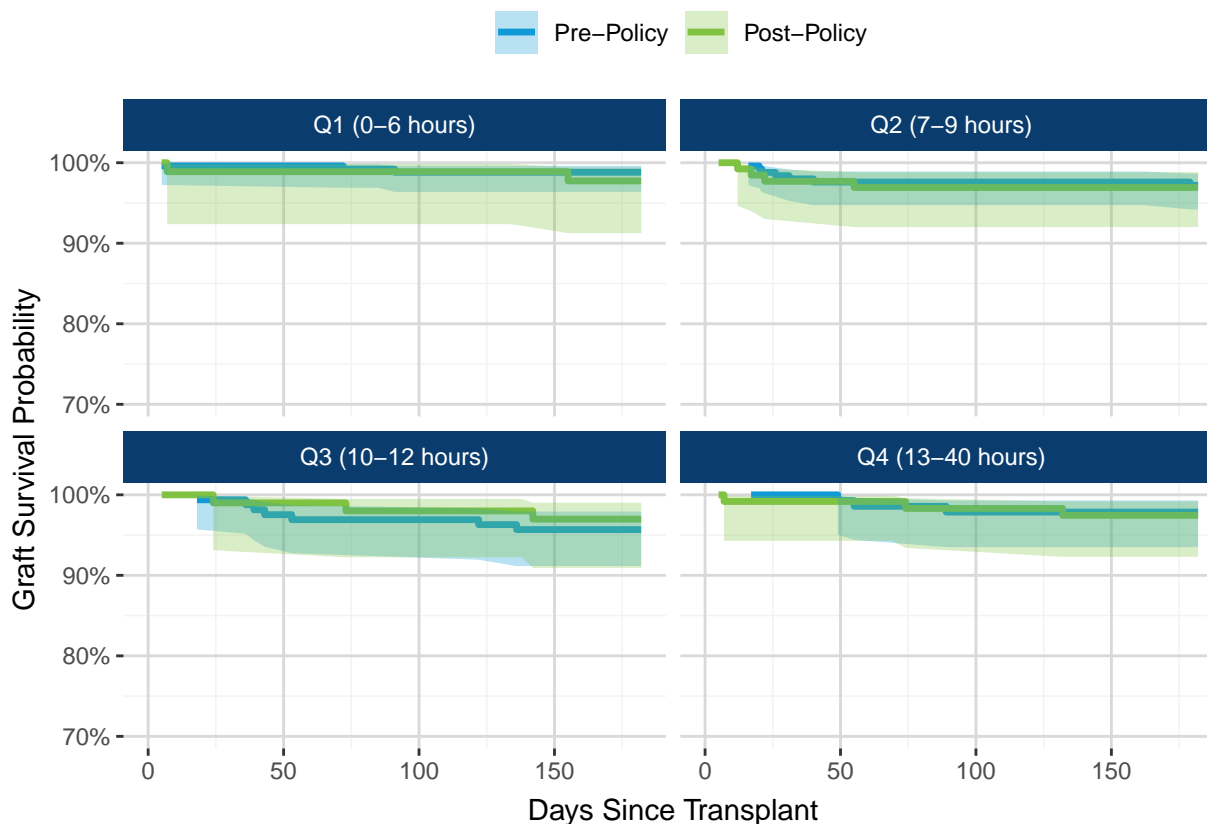


Table A46: Six Month Post-Transplant Pancreas Graft Survival for Kidney-Pancreas Transplants March 15, 2020 - September 30, 2021 by Policy Era and Preservation Time

Preservation Time	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Q1 (0-6 hours)	Pre-Policy	254	3	247	98.8	(96.4, 99.6)
	Post-Policy	92	2	63	97.7	(91.3, 99.4)
Q2 (7-9 hours)	Pre-Policy	250	7	240	97.2	(94.2, 98.7)
	Post-Policy	136	4	93	96.9	(92, 98.8)
Q3 (10-12 hours)	Pre-Policy	162	7	152	95.7	(91.2, 97.9)
	Post-Policy	103	3	71	97	(90.9, 99)
Q4 (13-40 hours)	Pre-Policy	141	3	135	97.9	(93.5, 99.3)
	Post-Policy	123	3	75	97.4	(92.3, 99.2)

Released Organs

Table 47 shows the disposition of kidneys and pancreata from kidney-pancreas matches with a final acceptance by policy era and OPTN region. The majority of kidneys and pancreata with a final acceptance were transplanted to the originally accepting patient both pre- and post-policy across all regions. Pre-policy, this ranged from 66.7% to 100% for kidneys, and from 70.0% to 100% for pancreata. Post-policy, this proportion ranged from 62.6% to 96.0% for kidneys and from 64.4% to 96.0% for pancreata. Overall, the proportion of kidneys and pancreata that were transplanted to the originally accepting patient decreased post-policy (kidney: 86.3% vs 81.9%; pancreas: 87.6% vs 83.6%).

Table 47: Disposition of Kidneys and Pancreata from Kidney-Pancreas Matches with a Final Acceptance March 15, 2020-March 14, 2022 by Policy Era and OPTN Region

Organ	Era	Region	N	Same Patient	Same Center	Different Center	Discard	Non-Recovery
Kidney	Pre-Policy	1	10	10 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
		2	76	76 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
		3	153	138 (90.2%)	6 (3.9%)	9 (5.9%)	0 (0.0%)	0 (0.0%)
		4	97	78 (80.4%)	4 (4.1%)	14 (14.4%)	0 (0.0%)	1 (1.0%)
		5	99	93 (93.9%)	2 (2.0%)	3 (3.0%)	0 (0.0%)	1 (1.0%)
		6	25	25 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
		7	105	70 (66.7%)	11 (10.5%)	14 (13.3%)	1 (1.0%)	9 (8.6%)
		8	68	64 (94.1%)	0 (0.0%)	3 (4.4%)	0 (0.0%)	1 (1.5%)
		9	20	17 (85.0%)	3 (15.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
		10	87	65 (74.7%)	11 (12.6%)	8 (9.2%)	1 (1.1%)	2 (2.3%)
		11	114	101 (88.6%)	3 (2.6%)	9 (7.9%)	0 (0.0%)	1 (0.9%)
	Total	854	737 (86.3%)	40 (4.7%)	60 (7.0%)	2 (0.2%)	15 (1.8%)	
	Post-Policy	1	25	24 (96.0%)	0 (0.0%)	1 (4.0%)	0 (0.0%)	0 (0.0%)
		2	92	87 (94.6%)	4 (4.3%)	1 (1.1%)	0 (0.0%)	0 (0.0%)
		3	153	138 (90.2%)	6 (3.9%)	6 (3.9%)	3 (2.0%)	0 (0.0%)
		4	73	51 (69.9%)	1 (1.4%)	18 (24.7%)	1 (1.4%)	2 (2.7%)
		5	121	110 (90.9%)	3 (2.5%)	8 (6.6%)	0 (0.0%)	0 (0.0%)
		6	20	17 (85.0%)	2 (10.0%)	1 (5.0%)	0 (0.0%)	0 (0.0%)
		7	99	62 (62.6%)	8 (8.1%)	19 (19.2%)	0 (0.0%)	10 (10.1%)
		8	79	66 (83.5%)	3 (3.8%)	9 (11.4%)	0 (0.0%)	1 (1.3%)
		9	23	20 (87.0%)	2 (8.7%)	1 (4.3%)	0 (0.0%)	0 (0.0%)
		10	104	66 (63.5%)	9 (8.7%)	17 (16.3%)	3 (2.9%)	9 (8.7%)
11		100	87 (87.0%)	5 (5.0%)	4 (4.0%)	0 (0.0%)	4 (4.0%)	
Total	889	728 (81.9%)	43 (4.8%)	85 (9.6%)	7 (0.8%)	26 (2.9%)		

(continued)

Organ	Era	Region	N	Same Patient	Same Center	Different Center	Discard	Non-Recovery
Pancreas	Pre-Policy	1	10	10 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
		2	75	75 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
		3	148	136 (91.9%)	5 (3.4%)	1 (0.7%)	5 (3.4%)	1 (0.7%)
		4	91	78 (85.7%)	3 (3.3%)	3 (3.3%)	3 (3.3%)	4 (4.4%)
		5	99	93 (93.9%)	1 (1.0%)	0 (0.0%)	0 (0.0%)	5 (5.1%)
		6	25	25 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
		7	100	70 (70.0%)	8 (8.0%)	5 (5.0%)	4 (4.0%)	13 (13.0%)
		8	67	62 (92.5%)	0 (0.0%)	1 (1.5%)	2 (3.0%)	2 (3.0%)
		9	20	17 (85.0%)	3 (15.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
		10	85	63 (74.1%)	7 (8.2%)	1 (1.2%)	6 (7.1%)	8 (9.4%)
		11	111	99 (89.2%)	3 (2.7%)	6 (5.4%)	1 (0.9%)	2 (1.8%)
	Total	831	728 (87.6%)	30 (3.6%)	17 (2.0%)	21 (2.5%)	35 (4.2%)	
	Post-Policy	1	25	24 (96.0%)	0 (0.0%)	1 (4.0%)	0 (0.0%)	0 (0.0%)
		2	92	86 (93.5%)	3 (3.3%)	1 (1.1%)	2 (2.2%)	0 (0.0%)
		3	150	137 (91.3%)	4 (2.7%)	2 (1.3%)	5 (3.3%)	2 (1.3%)
		4	71	51 (71.8%)	0 (0.0%)	7 (9.9%)	3 (4.2%)	10 (14.1%)
		5	119	110 (92.4%)	3 (2.5%)	5 (4.2%)	0 (0.0%)	1 (0.8%)
		6	19	17 (89.5%)	0 (0.0%)	0 (0.0%)	2 (10.5%)	0 (0.0%)
		7	93	61 (65.6%)	2 (2.2%)	5 (5.4%)	4 (4.3%)	21 (22.6%)
		8	76	66 (86.8%)	2 (2.6%)	4 (5.3%)	0 (0.0%)	4 (5.3%)
		9	22	21 (95.5%)	1 (4.5%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
		10	101	65 (64.4%)	4 (4.0%)	7 (6.9%)	5 (5.0%)	20 (19.8%)
11		100	88 (88.0%)	3 (3.0%)	3 (3.0%)	2 (2.0%)	4 (4.0%)	
Total	868	726 (83.6%)	22 (2.5%)	35 (4.0%)	23 (2.6%)	62 (7.1%)		

Table 48 shows the disposition of kidneys from kidney-pancreas matches with a final acceptance by policy era and KDPI. The proportion of kidneys transplanted to the originally accepting patient was highest for KDPI 0-20% kidneys both pre-policy (89.0%) and post-policy (84.7%). There were no kidney-pancreas matches with a final acceptance for kidneys with KDPI >85% either pre- or post-policy.

Table 48: Disposition of Kidneys from Kidney-Pancreas Matches with a Final Acceptance March 15, 2020-March 14, 2022 by Policy Era and KDPI

Era	KDPI (%)	N	Same Patient	Same Center	Different Center	Discard	Non-Recovery
Pre-Policy	0-20	554	493 (89.0%)	15 (2.7%)	35 (6.3%)	1 (0.2%)	10 (1.8%)
	21-34	166	140 (84.3%)	12 (7.2%)	11 (6.6%)	0 (0.0%)	3 (1.8%)
	35-85	134	104 (77.6%)	13 (9.7%)	14 (10.4%)	1 (0.7%)	2 (1.5%)
	Total	854	737 (86.3%)	40 (4.7%)	60 (7.0%)	2 (0.2%)	15 (1.8%)
Post-Policy	0-20	569	482 (84.7%)	26 (4.6%)	49 (8.6%)	2 (0.4%)	10 (1.8%)
	21-34	189	142 (75.1%)	10 (5.3%)	23 (12.2%)	4 (2.1%)	10 (5.3%)
	35-85	131	104 (79.4%)	7 (5.3%)	13 (9.9%)	1 (0.8%)	6 (4.6%)
	Total	889	728 (81.9%)	43 (4.8%)	85 (9.6%)	7 (0.8%)	26 (2.9%)

Table 49 shows the disposition of kidneys from kidney-pancreas matches with a final acceptance by policy era and CPRA of the accepting patient. The proportion of kidneys transplanted to the originally accepting patient was highest for patients with CPRA 98-100% pre-policy (91.7%), and highest for patients with CPRA 1-19% post-policy (86.8%).

Table 49: Disposition of Kidneys from Kidney-Pancreas Matches with a Final Acceptance March 15, 2020-March 14, 2022 by Policy Era and Accepting Patient CPRA

Era	CPRA (%)	N	Same Patient	Same Center	Different Center	Discard	Non-Recovery
Pre-Policy	0	574	502 (87.5%)	25 (4.4%)	32 (5.6%)	2 (0.3%)	13 (2.3%)
	1-19	101	82 (81.2%)	7 (6.9%)	11 (10.9%)	0 (0.0%)	1 (1.0%)
	20-79	137	117 (85.4%)	6 (4.4%)	13 (9.5%)	0 (0.0%)	1 (0.7%)
	80-97	29	25 (86.2%)	2 (6.9%)	2 (6.9%)	0 (0.0%)	0 (0.0%)
	98-100	12	11 (91.7%)	0 (0.0%)	1 (8.3%)	0 (0.0%)	0 (0.0%)
	Total	854	737 (86.3%)	40 (4.7%)	60 (7.0%)	2 (0.2%)	15 (1.8%)
Post-Policy	0	574	469 (81.7%)	24 (4.2%)	56 (9.8%)	5 (0.9%)	20 (3.5%)
	1-19	121	105 (86.8%)	7 (5.8%)	7 (5.8%)	1 (0.8%)	1 (0.8%)
	20-79	143	113 (79.0%)	9 (6.3%)	16 (11.2%)	1 (0.7%)	4 (2.8%)
	80-97	45	38 (84.4%)	3 (6.7%)	4 (8.9%)	0 (0.0%)	0 (0.0%)
	98-100	6	3 (50.0%)	0 (0.0%)	2 (33.3%)	0 (0.0%)	1 (16.7%)
	Total	889	728 (81.9%)	43 (4.8%)	85 (9.6%)	7 (0.8%)	26 (2.9%)

Additional Pancreas Information

Waiting List

Figure A44 and **Table A50** show the number of registrations waiting for a pancreas on the last day of each month from March 15, 2020 to March 14, 2022. There was little change in waiting list volume after policy implementation.

Figure A44: Pancreas Registrations Waiting on the Last Day of Each Month, March 15, 2020-March 14, 2022

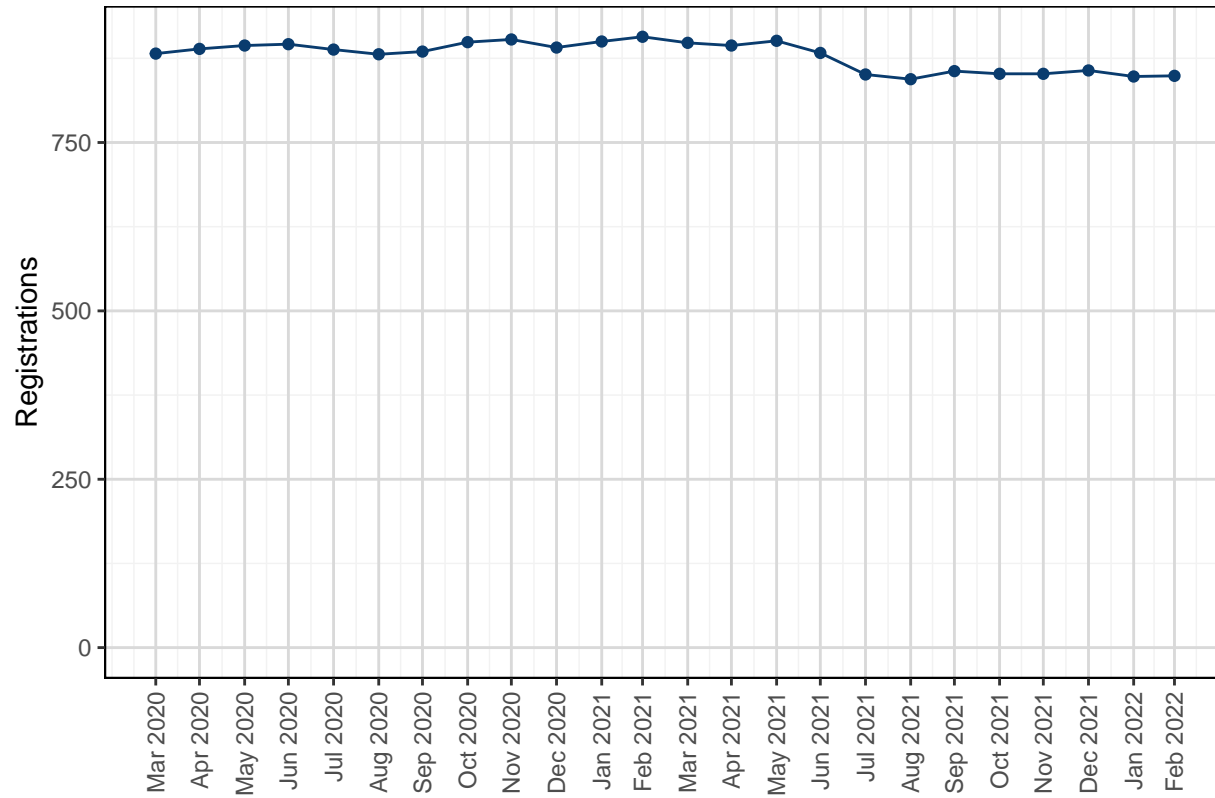


Table A50: Pancreas Registrations Waiting on the Last Day of Each Month, March 15, 2020-March 14, 2022

Date	Registrations
March 2020	882
April 2020	889
May 2020	894
June 2020	896
July 2020	888
August 2020	881
September 2020	885
October 2020	899
November 2020	903
December 2020	891
January 2021	900
February 2021	907
March 2021	898
April 2021	894
May 2021	901
June 2021	883
July 2021	851
August 2021	844
September 2021	856
October 2021	852
November 2021	852
December 2021	857
January 2022	848
February 2022	849

Figure A45 and **Table A51** show the percentage of registrations waiting for a pancreas on the last day of each month from March 15, 2020 to March 14, 2022 by status. There was little change in the proportion of registrations in active status after policy implementation.

Figure A45: Pancreas Registrations Waiting on the Last Day of Each Month by Status, March 15, 2020-March 14, 2022

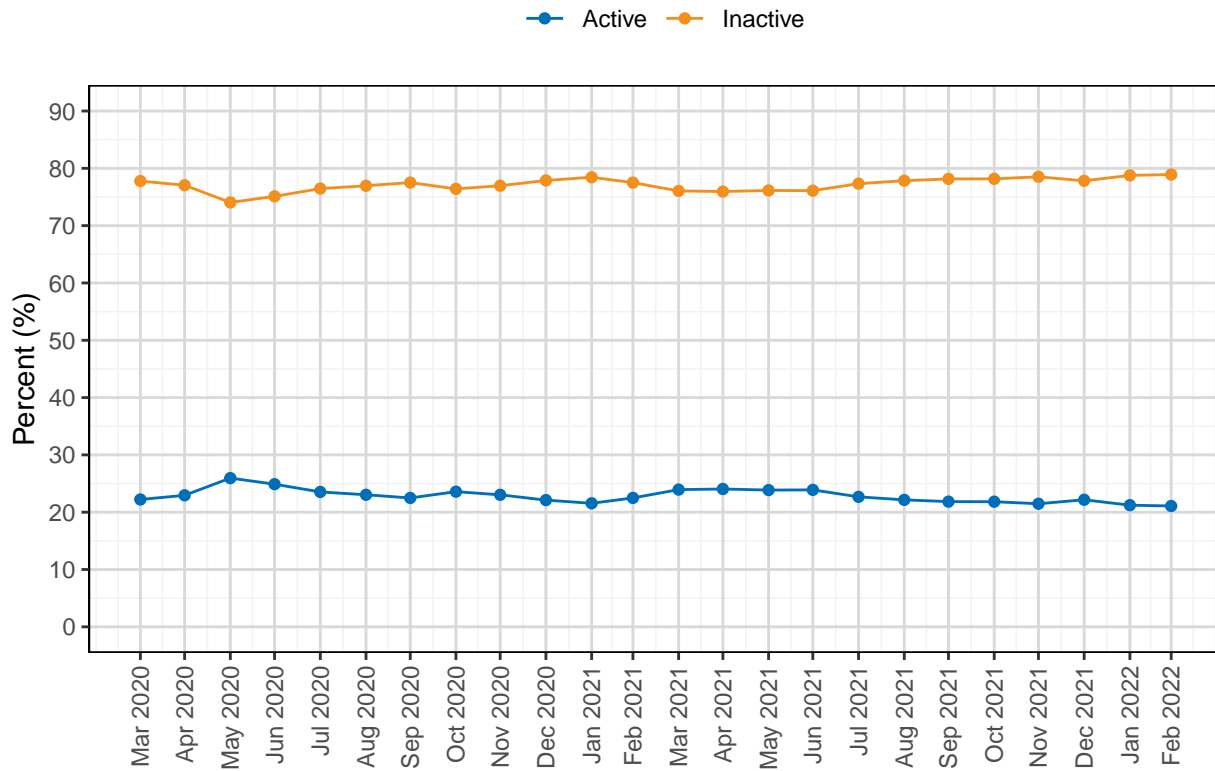


Table A51: Pancreas Registrations Waiting on the Last Day of Each Month by Status, March 15, 2020-March 14, 2022

Date	Active		Inactive		Total	
	N	%	N	%	N	%
March 2020	196	22.22	686	77.78	882	100.00
April 2020	204	22.95	685	77.05	889	100.00
May 2020	232	25.95	662	74.05	894	100.00
June 2020	223	24.89	673	75.11	896	100.00
July 2020	209	23.54	679	76.46	888	100.00
August 2020	203	23.04	678	76.96	881	100.00
September 2020	199	22.49	686	77.51	885	100.00
October 2020	212	23.58	687	76.42	899	100.00
November 2020	208	23.03	695	76.97	903	100.00
December 2020	197	22.11	694	77.89	891	100.00
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
May 2021	215	23.86	686	76.14	901	100.00
June 2021	211	23.90	672	76.10	883	100.00
July 2021	193	22.68	658	77.32	851	100.00
August 2021	187	22.16	657	77.84	844	100.00
September 2021	187	21.85	669	78.15	856	100.00
October 2021	186	21.83	666	78.17	852	100.00
November 2021	183	21.48	669	78.52	852	100.00
December 2021	190	22.17	667	77.83	857	100.00
January 2022	180	21.23	668	78.77	848	100.00
February 2022	179	21.08	670	78.92	849	100.00

Figure A46 and **Table A52** show total pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era. There were 541 registrations added to the waiting list in the pre-policy era, and 496 added in the post-policy era.

Figure A46: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era

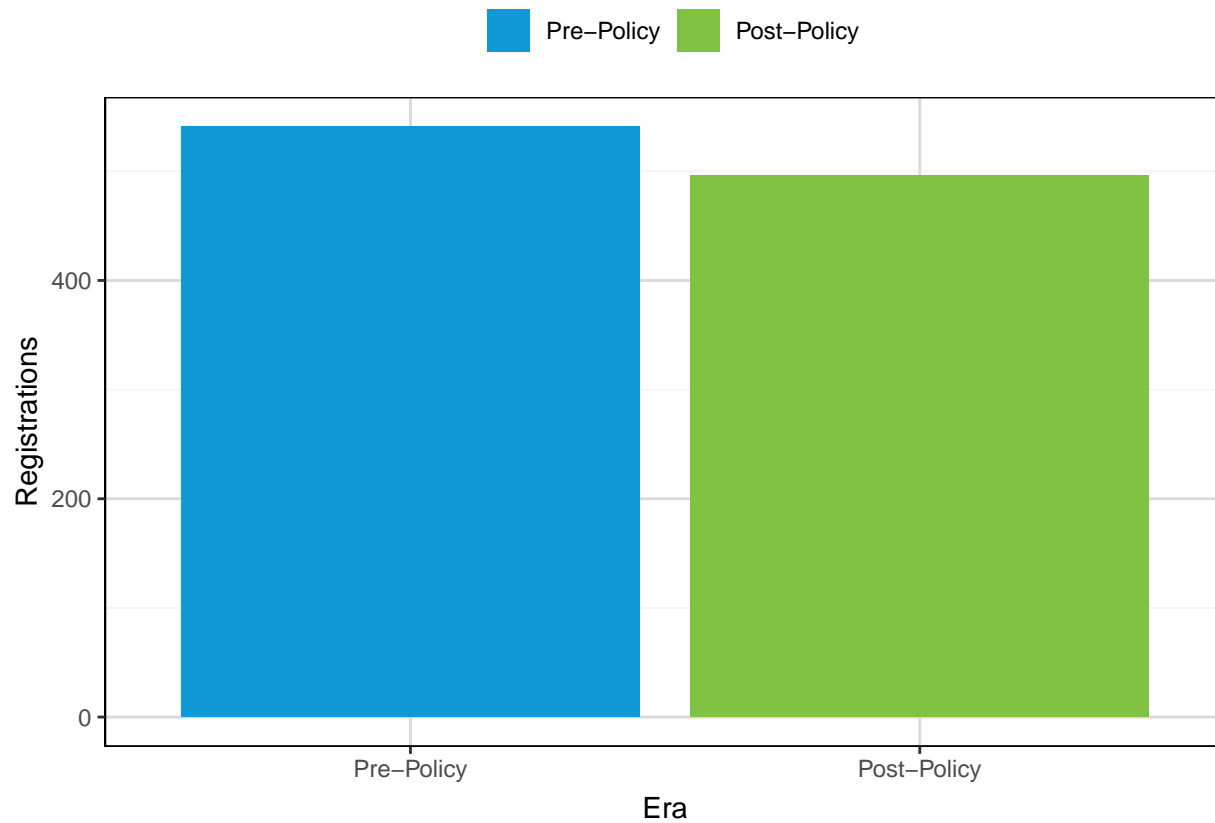


Table A52: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era

Era	Registrations
Pre-Policy	541
Post-Policy	496

Figure A47 and **Table A53** show pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and age at listing. There was little change in the distribution of candidate age at listing after policy implementation.

Figure A47: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Age at Listing

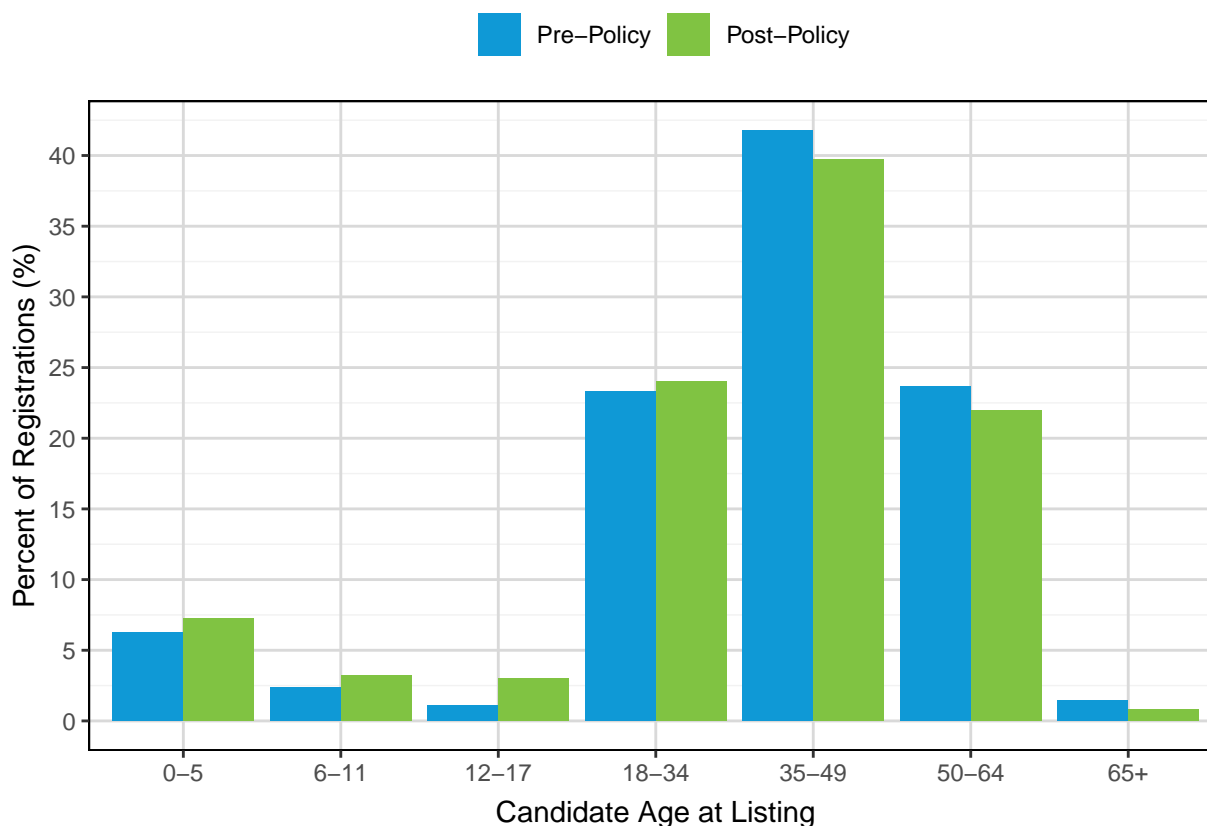


Table A53: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Age at Listing

Age at Listing	Pre-Policy		Post-Policy	
	N	%	N	%
0-5	34	6.28	36	7.26
6-11	13	2.40	16	3.23
12-17	6	1.11	15	3.02
18-34	126	23.29	119	23.99
35-49	226	41.77	197	39.72
50-64	128	23.66	109	21.98
65+	8	1.48	4	0.81
Total	541	100.00	496	100.00

Figure A48 and **Table A54** show pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and gender. The proportion of registrations added for female candidates decreased post-policy from 46.6% to 43.2%.

Figure A48: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Gender

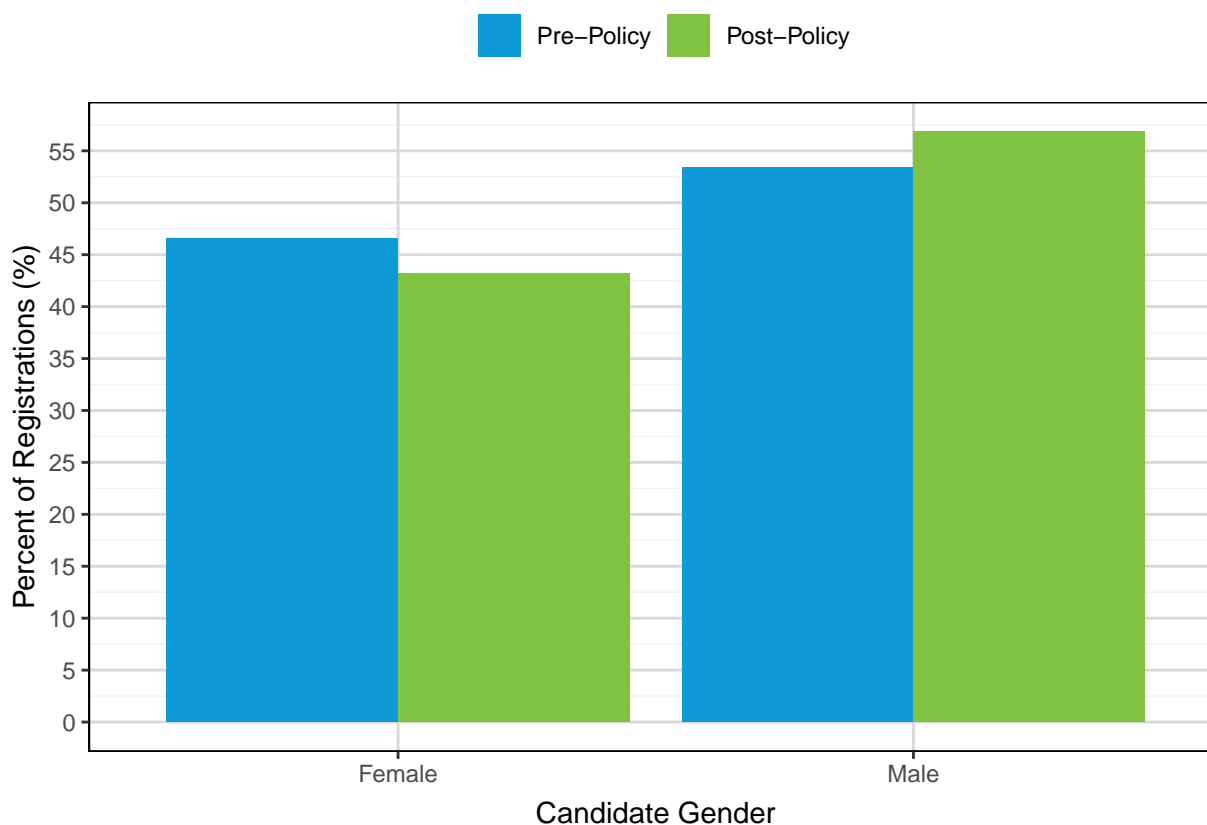


Table A54: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Gender

Gender	Pre-Policy		Post-Policy	
	N	%	N	%
Female	252	46.58	214	43.15
Male	289	53.42	282	56.85
Total	541	100.00	496	100.00

Figure A49 and **Table A55** show pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and race/ethnicity. There was little change in the distribution of waiting list additions by race/ethnicity after policy implementation.

Figure A49: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Race/Ethnicity

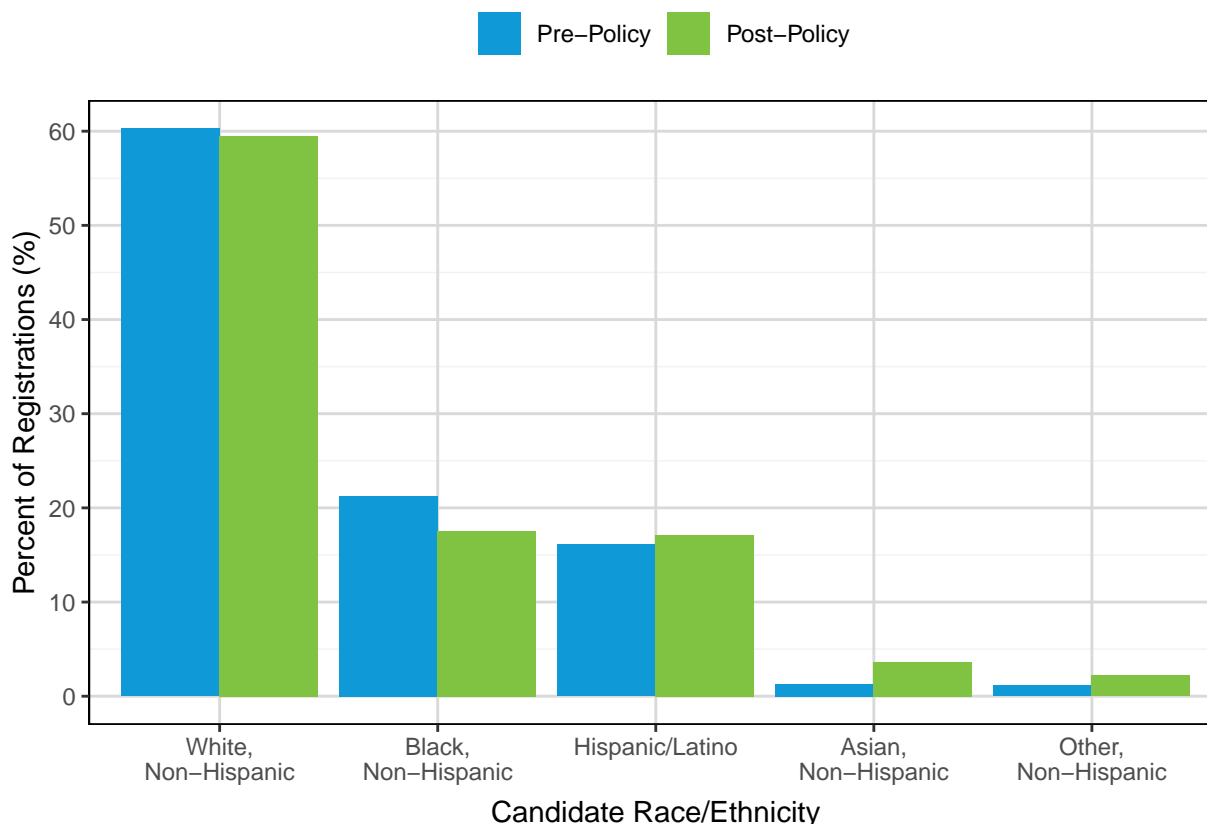


Table A55: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Race/Ethnicity

Race/Ethnicity	Pre-Policy		Post-Policy	
	N	%	N	%
White, Non-Hispanic	326	60.26	295	59.48
Black, Non-Hispanic	115	21.26	87	17.54
Hispanic/Latino	87	16.08	85	17.14
Asian, Non-Hispanic	7	1.29	18	3.63
Other, Non-Hispanic	6	1.11	11	2.22
Total	541	100.00	496	100.00

Figure A50 and **Table A56** show pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and blood type. There was little change in the distribution of waiting list additions by blood type after policy implementation.

Figure A50: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Blood Type

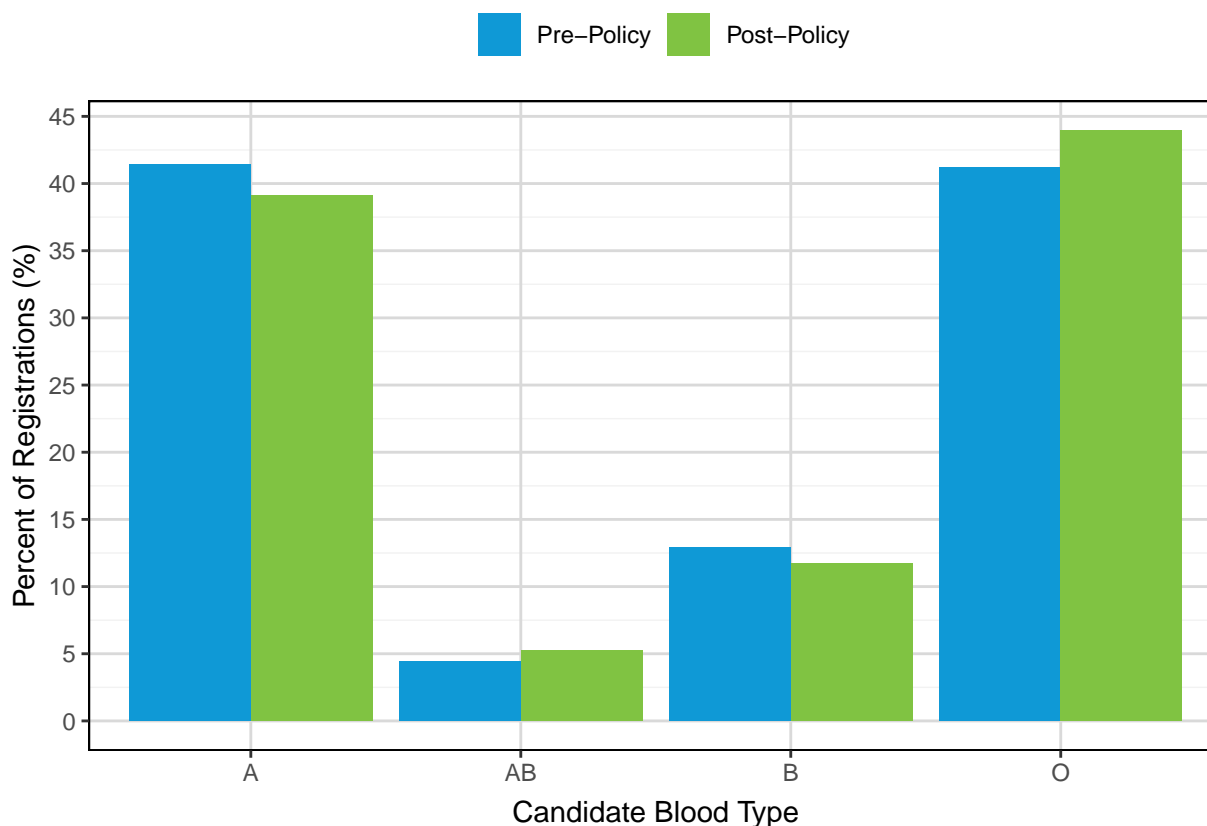


Table A56: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Blood Type

Blood Type	Pre-Policy		Post-Policy	
	N	%	N	%
A	224	41.40	194	39.11
AB	24	4.44	26	5.24
B	70	12.94	58	11.69
O	223	41.22	218	43.95
Total	541	100.00	496	100.00

Figure A51 and **Table A57** show pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and CPRA at listing. The majority of waiting list additions in both policy eras were for candidates with CPRA 0% and there was little change in the distribution of CPRA at listing after policy implementation.

Figure A51: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and CPRA

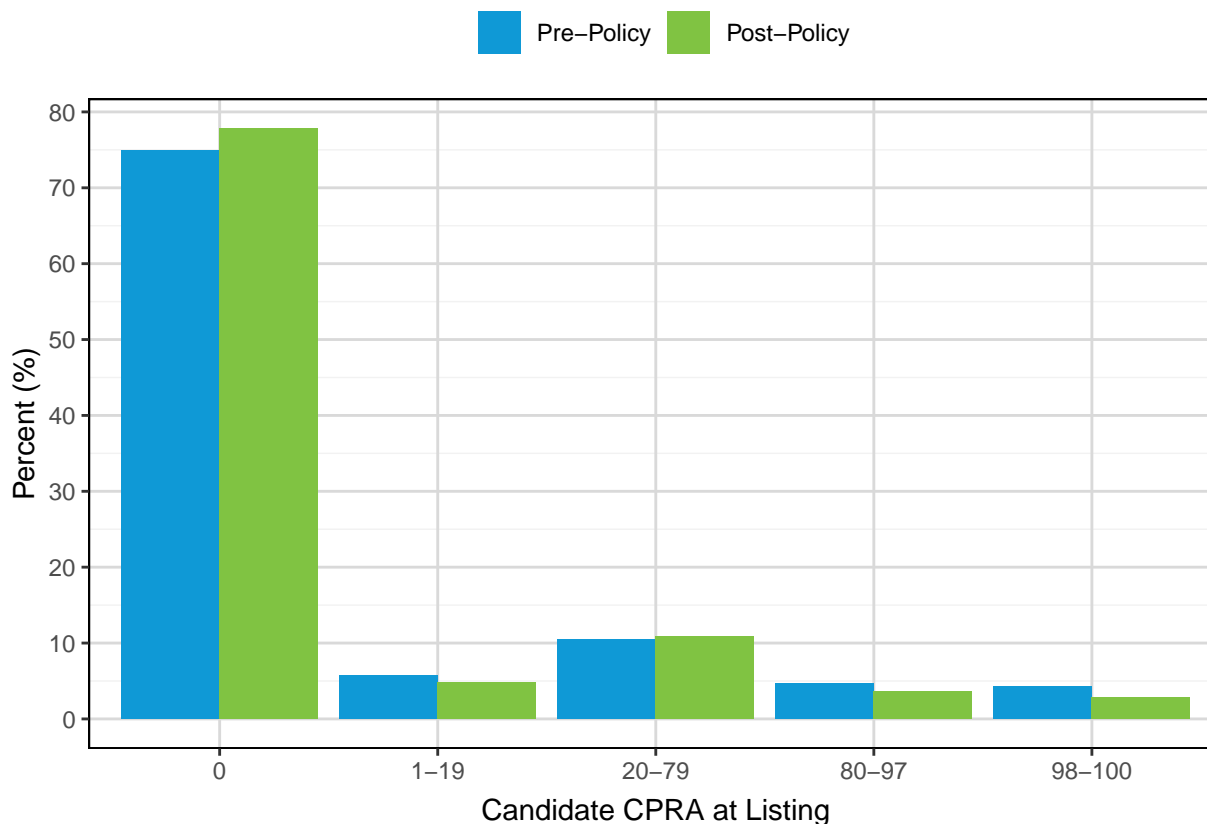


Table A57: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and CPRA

CPRA (%)	Pre-Policy		Post-Policy	
	N	%	N	%
0	405	74.86	386	77.82
1-19	31	5.73	24	4.84
20-79	57	10.54	54	10.89
80-97	25	4.62	18	3.63
98-100	23	4.25	14	2.82
Total	541	100.00	496	100.00

Figure A52 and **Table A58** show pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and insurance status at listing. There was little change in the distribution of candidate insurance status at listing after policy implementation.

Figure A52: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Insurance Status at Listing

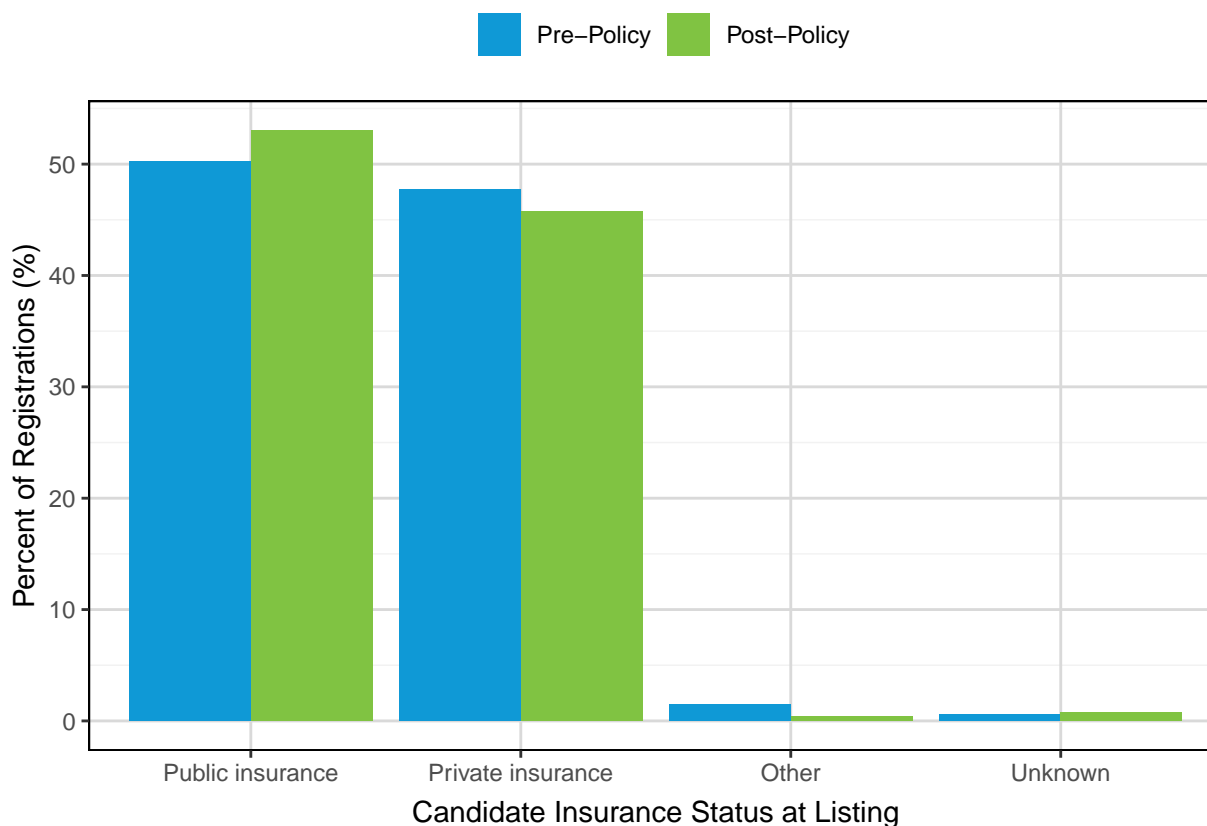


Table A58: Pancreas Registrations Added March 15, 2020-March 14, 2022 by Policy Era and Insurance Status at Listing

Insurance at Listing	Pre-Policy		Post-Policy	
	N	%	N	%
Public insurance	272	50.28	263	53.02
Private insurance	258	47.69	227	45.77
Other	8	1.48	2	0.40
Unknown	3	0.55	4	0.81
Total	541	100.00	496	100.00

Figure A53 and **Table A59** show pancreas registrations added to the waiting list from March 15, 2020 to March 14, 2022 by policy era and primary diagnosis at listing. The proportion of waiting list additions for candidates with type 1 diabetes decreased slightly after policy implementation, while the proportion of waiting list for candidates with type 2 diabetes and other diagnoses increased slightly.

Figure A53: Pancreas Registrations Added March 15, 2020 - March 14, 2022 by Policy Era and Diagnosis at Listing

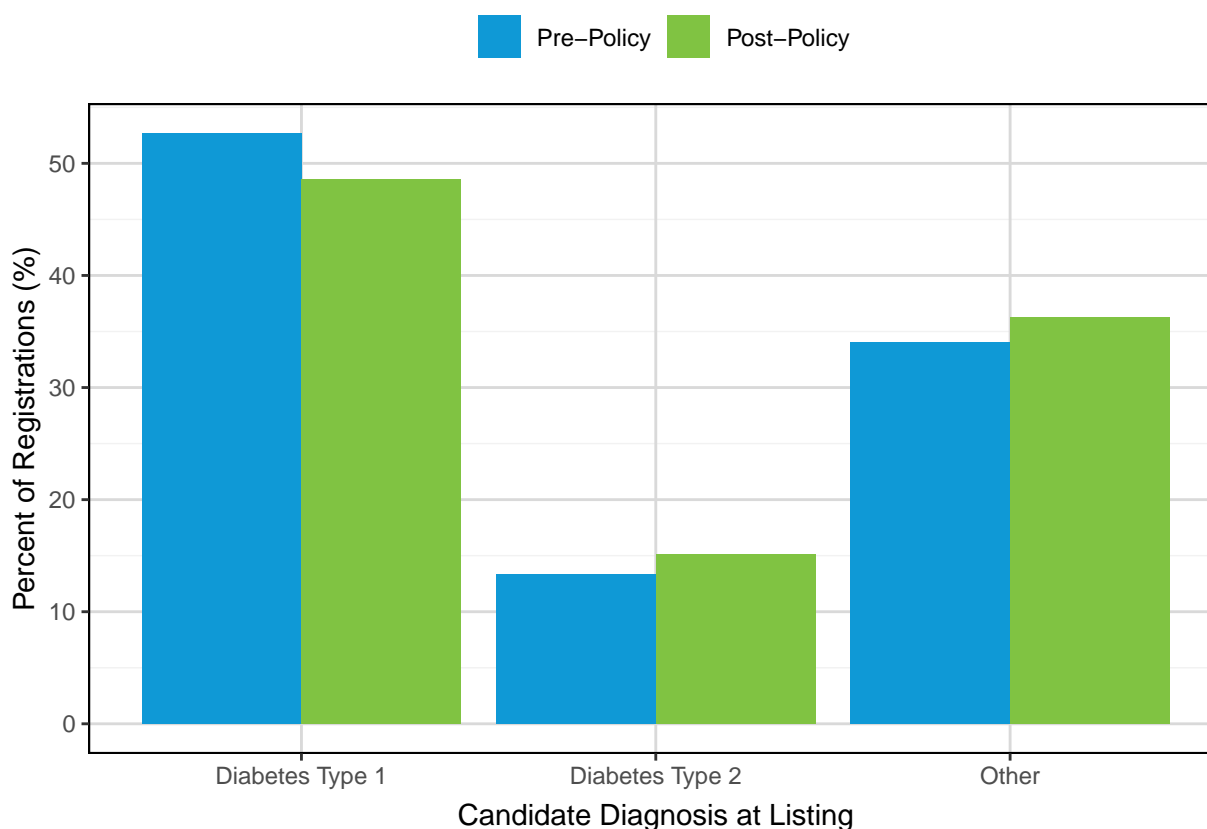


Table A59: Pancreas Registrations Added March 15, 2020 - March 14, 2022 by Policy Era and Diagnosis at Listing

Diagnosis	Pre-Policy		Post-Policy	
	N	%	N	%
Diabetes Type 1	285	52.68	241	48.59
Diabetes Type 2	72	13.31	75	15.12
Other	184	34.01	180	36.29
Total	541	100.00	496	100.00

Figure A54 and **Table A60** show waiting list mortality rates for pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era. There were 24 deaths on the waiting list pre-policy and 28 deaths post-policy. The overall pancreas waiting list mortality rate increased post-policy from 2.68 to 3.23 deaths per 100 patient years. This increase was not statistically significant.

Figure A54: Waiting List Mortality Rates for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era

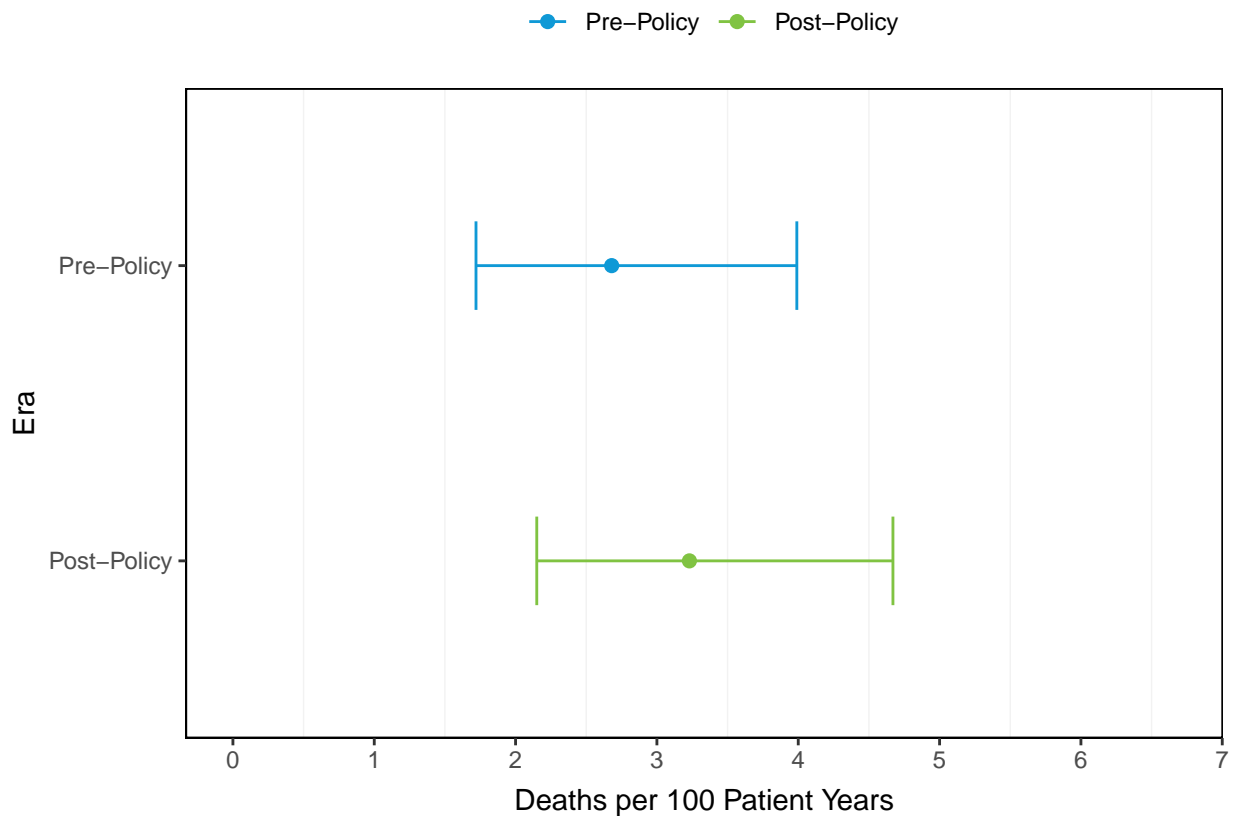
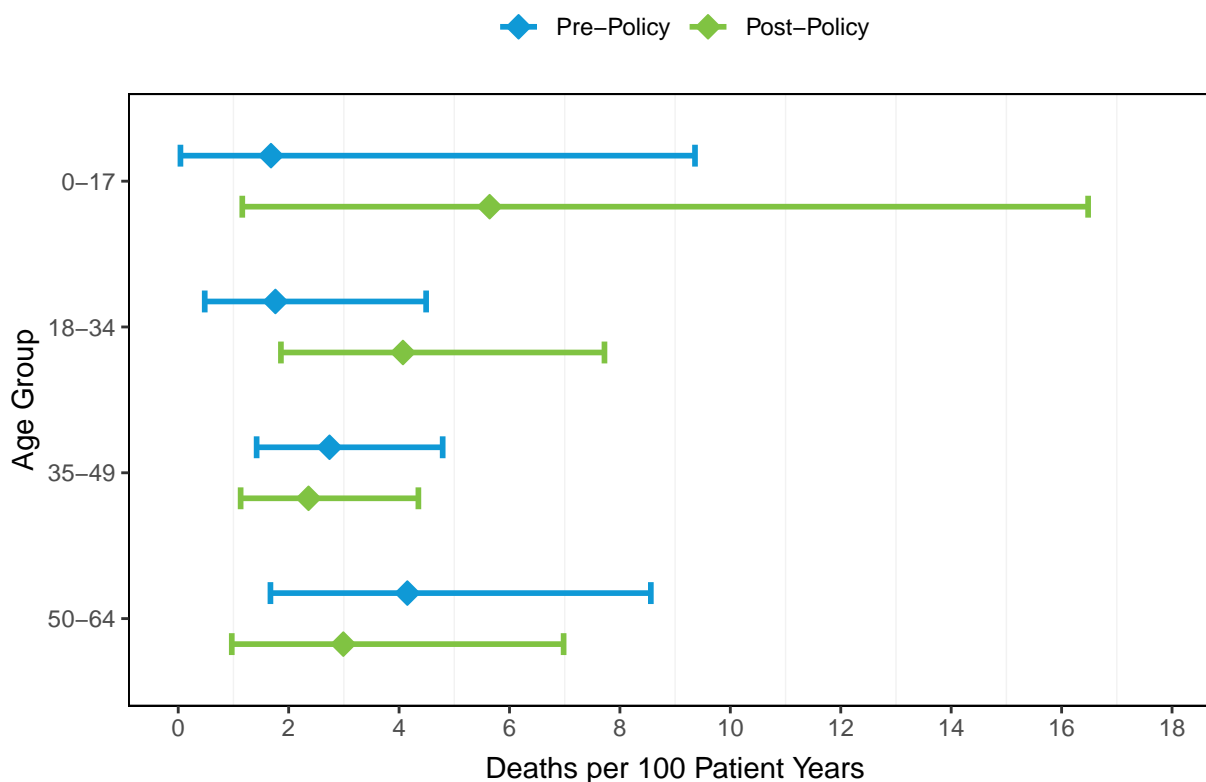


Table A60: Waiting List Mortality Rates for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era

Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
Pre-Policy	1280	24	2.68	(1.72, 3.99)
Post-Policy	1264	28	3.23	(2.15, 4.67)

Figure A55 and **Table A61** show waiting list mortality rates for pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and age at listing. Waiting list mortality rates decreased post-policy for the 35-49 and 50-64 age groups, and increased for the 0-17 and 18-34 age groups. These changes were not statistically significant. There were no deaths on the waiting list for registrations aged 65+ at listing in the pre-policy era, and one death on the waiting list post-policy.

Figure A55: Waiting List Mortality Rates for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Age at Listing



65+ age group omitted from figure due to small number of events and wide confidence intervals.

Table A61: Waiting List Mortality Rates for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Age at Listing

Age at Listing	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
0-17	Pre-Policy	91	1	1.68	(0.04, 9.36)
	Post-Policy	88	3	5.64	(1.16, 16.48)
18-34	Pre-Policy	323	4	1.76	(0.48, 4.49)
	Post-Policy	324	9	4.07	(1.86, 7.72)
35-49	Pre-Policy	622	12	2.74	(1.42, 4.79)
	Post-Policy	607	10	2.36	(1.13, 4.35)
50-64	Pre-Policy	264	7	4.15	(1.67, 8.56)
	Post-Policy	270	5	2.99	(0.97, 6.98)
65+	Pre-Policy	10	0	0.00	-
	Post-Policy	10	1	20.49	(0.52, 114.19)

Figure A56 and **Table A62** show waiting list mortality rates for pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and gender. The waiting list mortality rate increased post-policy for male registrations from 1.80 to 2.94 deaths per 100 patient years. This change was not statistically significant. There was no change in the waiting list mortality rate for female registrations (3.56 vs 3.53 deaths per 100 patient years).

Figure A56: Waiting List Mortality Rates for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Gender

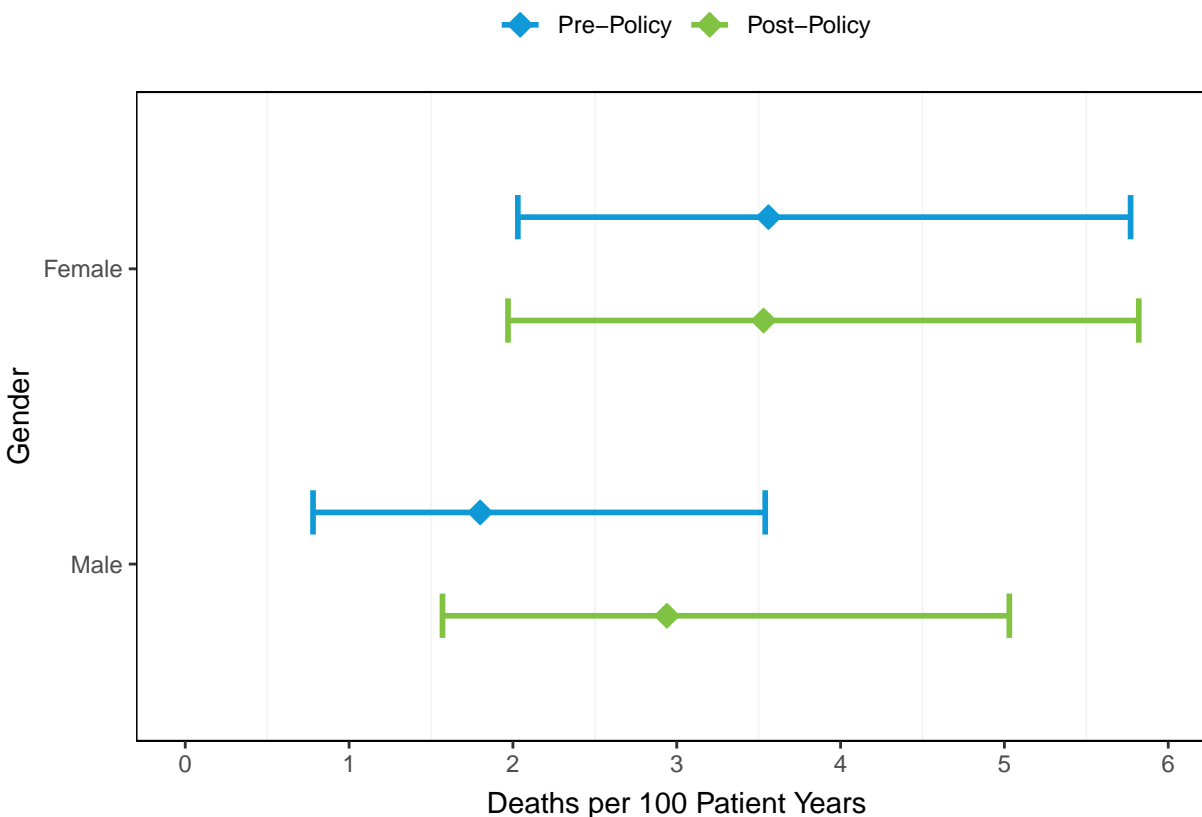


Table A62: Waiting List Mortality Rates for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Gender

Gender	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
Female	Pre-Policy	641	16	3.56	(2.03, 5.77)
	Post-Policy	616	15	3.53	(1.97, 5.82)
Male	Pre-Policy	639	8	1.80	(0.78, 3.54)
	Post-Policy	648	13	2.94	(1.57, 5.03)

Figure A57 and **Table A63** show waiting list mortality rates for pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and race/ethnicity. Waiting list mortality rates increased for candidates of White, Non-Hispanic and Hispanic/Latino race/ethnicity after policy implementation. These changes were not statistically significant. There was little change in the waiting list mortality rate for Black, Non-Hispanic or Asian, Non-Hispanic candidates after policy implementation.

Figure A57: Waiting List Mortality Rates for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Race/Ethnicity

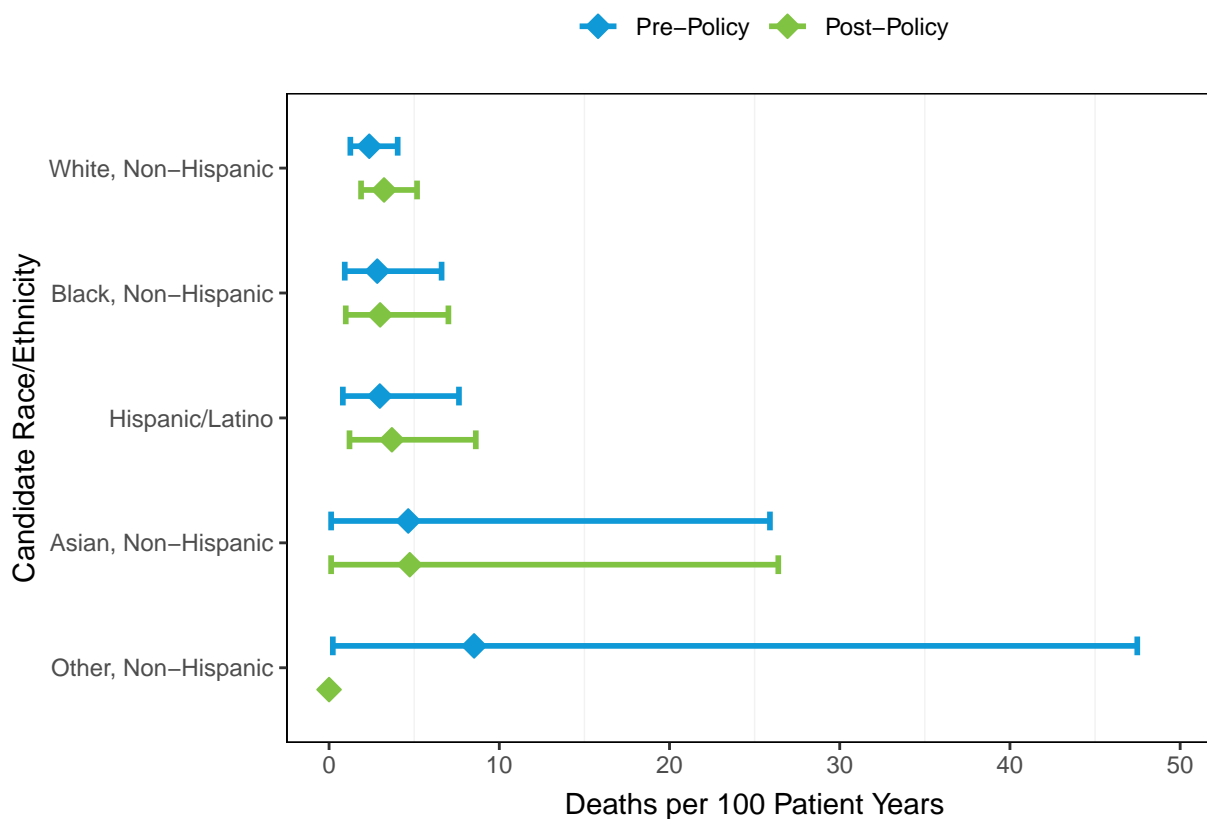


Table A63: Waiting List Mortality Rates for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Race/Ethnicity

Race/Ethnicity	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
White, Non-Hispanic	Pre-Policy	796	13	2.36	(1.25, 4.03)
	Post-Policy	769	17	3.23	(1.88, 5.17)
Black, Non-Hispanic	Pre-Policy	253	5	2.83	(0.92, 6.61)
	Post-Policy	243	5	3.00	(0.98, 7.01)
Hispanic/Latino	Pre-Policy	188	4	2.98	(0.81, 7.63)
	Post-Policy	200	5	3.69	(1.2, 8.62)
Asian, Non-Hispanic	Pre-Policy	30	1	4.65	(0.12, 25.9)
	Post-Policy	33	1	4.74	(0.12, 26.39)
Other, Non-Hispanic	Pre-Policy	15	1	8.52	(0.22, 47.48)
	Post-Policy	21	0	0.00	-

Figure A58 and **Table A64** show waiting list mortality rates for pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and CPRA at listing. Waiting list mortality rates decreased post-policy for candidates with CPRA 98-100%, and increased for candidates with CPRA 0% and 80-97%. There was no change in the waiting list mortality rate for candidates with CPRA 1-19% or 20-79%.

Figure A58: Waiting List Mortality Rates for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and CPRA at Listing

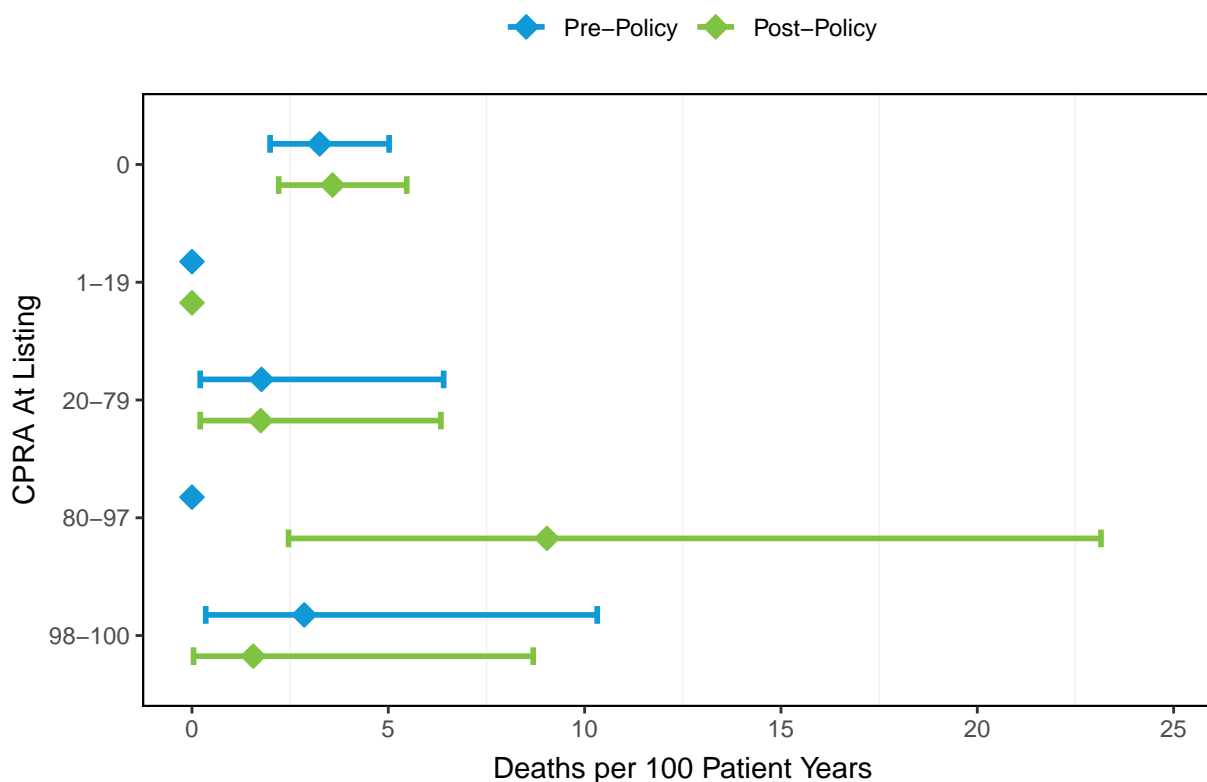


Table A64: Waiting List Mortality Rates for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and CPRA at Listing

CPRA (%)	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
0	Pre-Policy	897	20	3.25	(1.99, 5.02)
	Post-Policy	887	21	3.58	(2.21, 5.47)
1-19	Pre-Policy	67	0	0.00	-
	Post-Policy	69	0	0.00	-
20-79	Pre-Policy	158	2	1.77	(0.21, 6.41)
	Post-Policy	163	2	1.75	(0.21, 6.34)
80-97	Pre-Policy	61	0	0.00	-
	Post-Policy	62	4	9.04	(2.46, 23.15)
98-100	Pre-Policy	91	2	2.86	(0.35, 10.32)
	Post-Policy	82	1	1.56	(0.04, 8.69)
Unknown	Pre-Policy	16	0	0.00	-
	Post-Policy	15	0	0.00	-

Figure A59 and **Table A65** show waiting list mortality rates for pancreas registrations ever waiting between March 15, 2020 and March 14, 2022 by policy era and blood type. Waiting list mortality rates decreased post-policy for blood type B and AB candidates, and increased for blood type A and O candidates. These changes were not statistically significant.

Figure A59: Waiting List Mortality Rates for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Blood Type

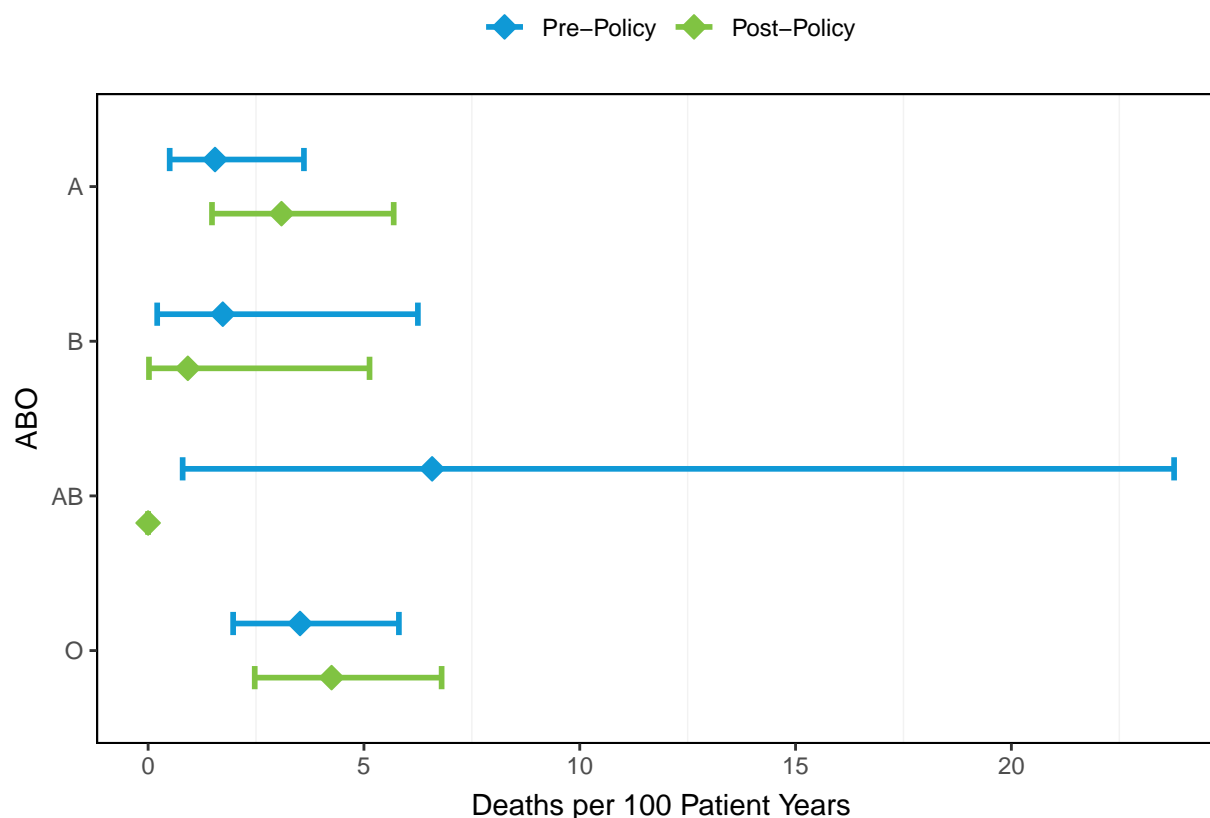


Table A65: Waiting List Mortality Rates for Pancreas Registrations Ever Waiting March 15, 2020 - March 14, 2022 by Policy Era and Blood Type

ABO	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
A	Pre-Policy	467	5	1.55	(0.5, 3.61)
	Post-Policy	466	10	3.09	(1.48, 5.69)
B	Pre-Policy	169	2	1.73	(0.21, 6.25)
	Post-Policy	154	1	0.92	(0.02, 5.13)
AB	Pre-Policy	44	2	6.58	(0.8, 23.77)
	Post-Policy	51	0	0.00	-
O	Pre-Policy	600	15	3.52	(1.97, 5.81)
	Post-Policy	593	17	4.25	(2.47, 6.8)

Deceased Donor Transplants

Figure A60 and **Table A66** show deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era. There were 134 transplants in the pre-policy era, and 138 in the post-policy era.

Figure A60: Deceased Donor Pancreas Transplants March 15, 2020- March 14, 2022 by Policy Era

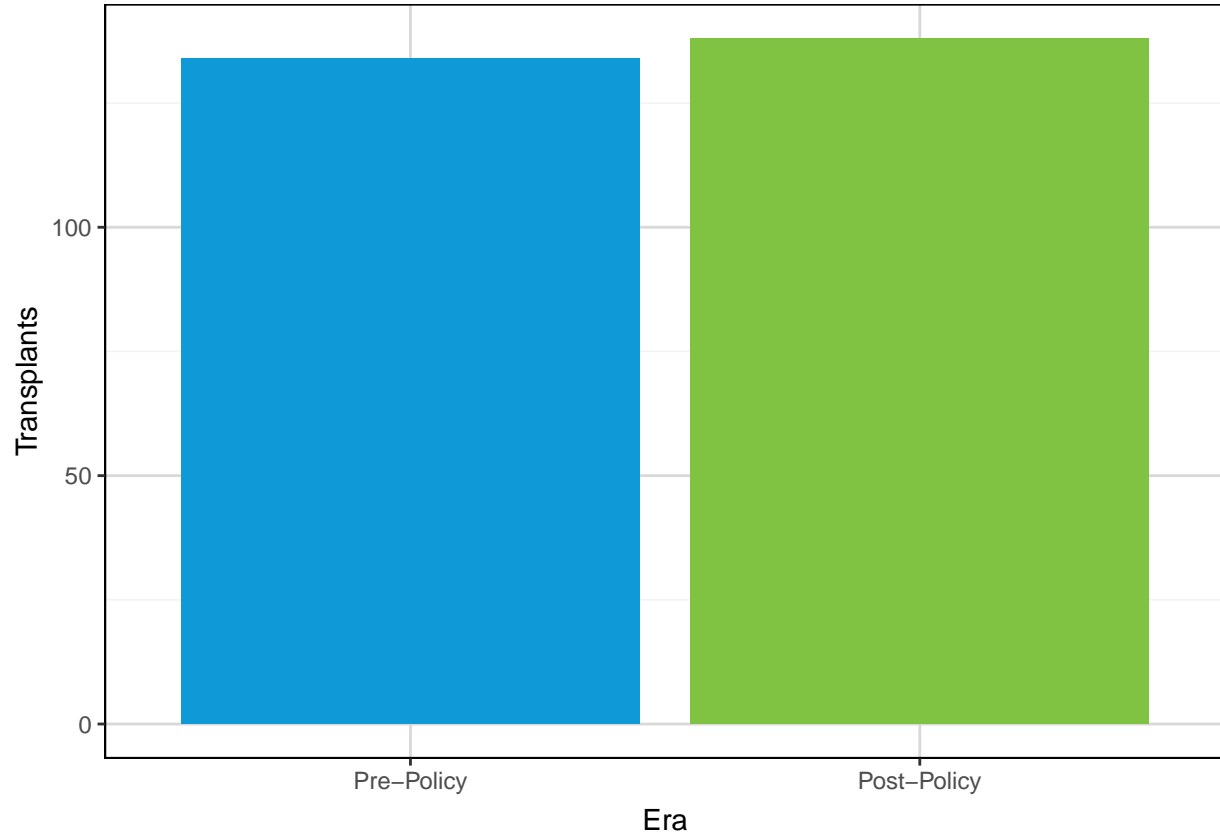


Table A66: Deceased Donor Pancreas Transplants March 15, 2020- March 14, 2022 by Policy Era

Era	Transplants
Pre-Policy	134
Post-Policy	138

Figure A61 and **Table A67** show deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and recipient age at transplant. The proportion of transplants increased post-policy for the 0-5, 35-49, and 65+ age groups, and decreased for the 6-11, 12-17, 18-34, and 50-64 age groups.

Figure A61: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Recipient Age at Transplant

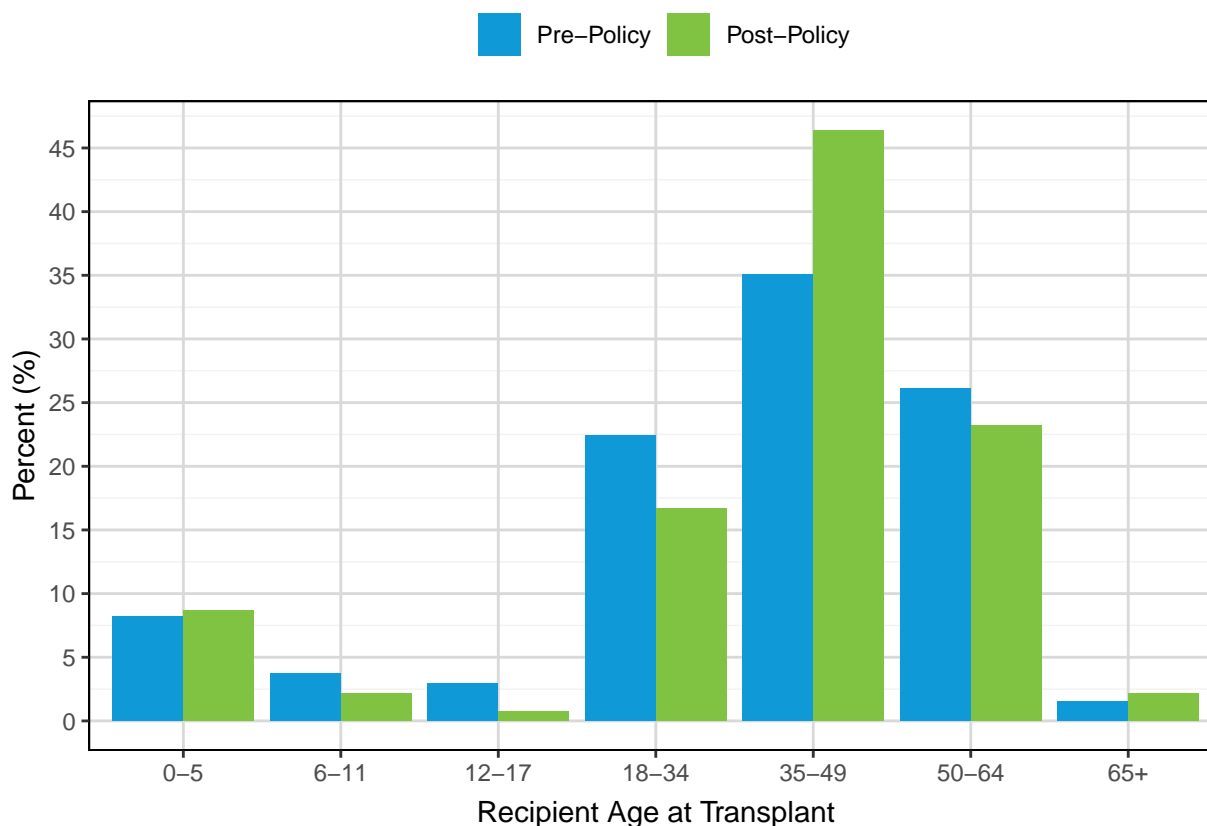


Table A67: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Recipient Age at Transplant

Age at Transplant	Pre-Policy		Post-Policy	
	N	%	N	%
0-5	11	8.21	12	8.70
6-11	5	3.73	3	2.17
12-17	4	2.99	1	0.72
18-34	30	22.39	23	16.67
35-49	47	35.07	64	46.38
50-64	35	26.12	32	23.19
65+	2	1.49	3	2.17
Total	134	100.00	138	100.00

Figure A62 and **Table A68** show deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and recipient race/ethnicity. The proportion of transplants increased post-policy for White, Non-Hispanic and Asian, Non-Hispanic recipients, and decreased for recipients of Black, Non-Hispanic and Hispanic/Latino race/ethnicity.

Figure A62: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Recipient Race/Ethnicity

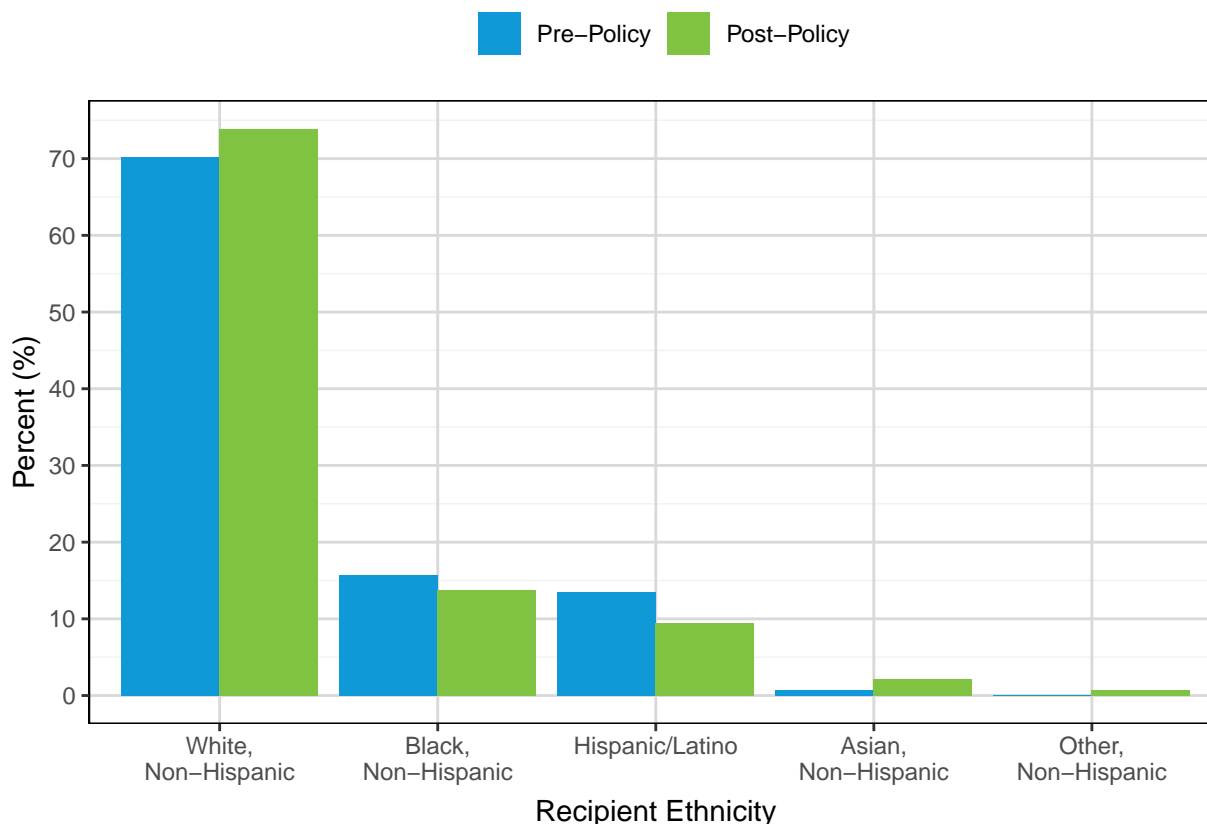


Table A68: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Recipient Race/Ethnicity

Race/Ethnicity	Pre-Policy		Post-Policy	
	N	%	N	%
White, Non-Hispanic	94	70.15	102	73.91
Black, Non-Hispanic	21	15.67	19	13.77
Hispanic/Latino	18	13.43	13	9.42
Asian, Non-Hispanic	1	0.75	3	2.17
Other, Non-Hispanic	0	0.00	1	0.72
Total	134	100.00	138	100.00

Figure A63 and **Table A69** show the distribution of waiting time in years for deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era. Median time from listing to transplant increased from 0.51 to 0.77 years after policy implementation.

Figure A63: Distribution of Waiting Time for Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era

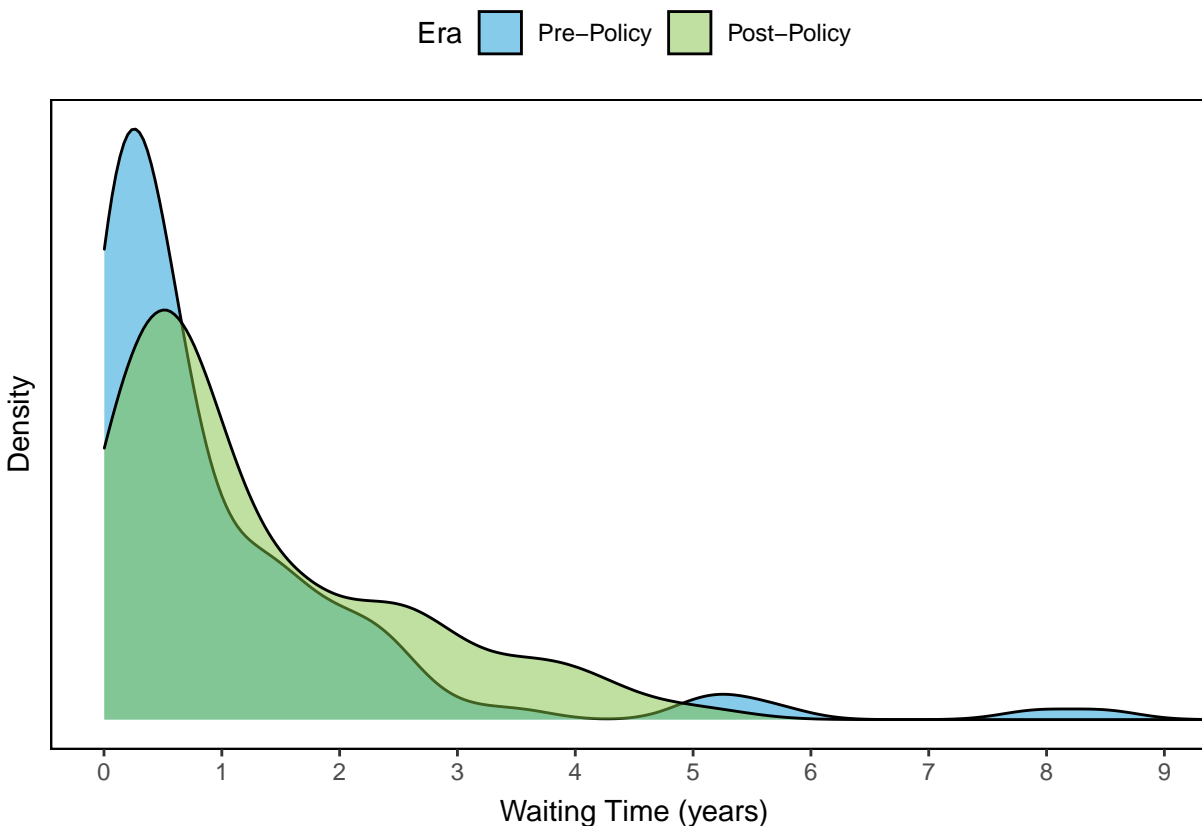


Table A69: Distribution of Waiting Time for Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	134	0	0.00	0.18	0.51	1.08	1.35	12.26
Post-Policy	138	0	0.01	0.39	0.77	1.39	1.99	16.97

Figure A64 and **Table A70** show deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and recipient blood type. The proportion of transplants increased after implementation for blood type A and O recipients, and decreased for type AB and B recipients.

Figure A64: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Recipient Blood Type

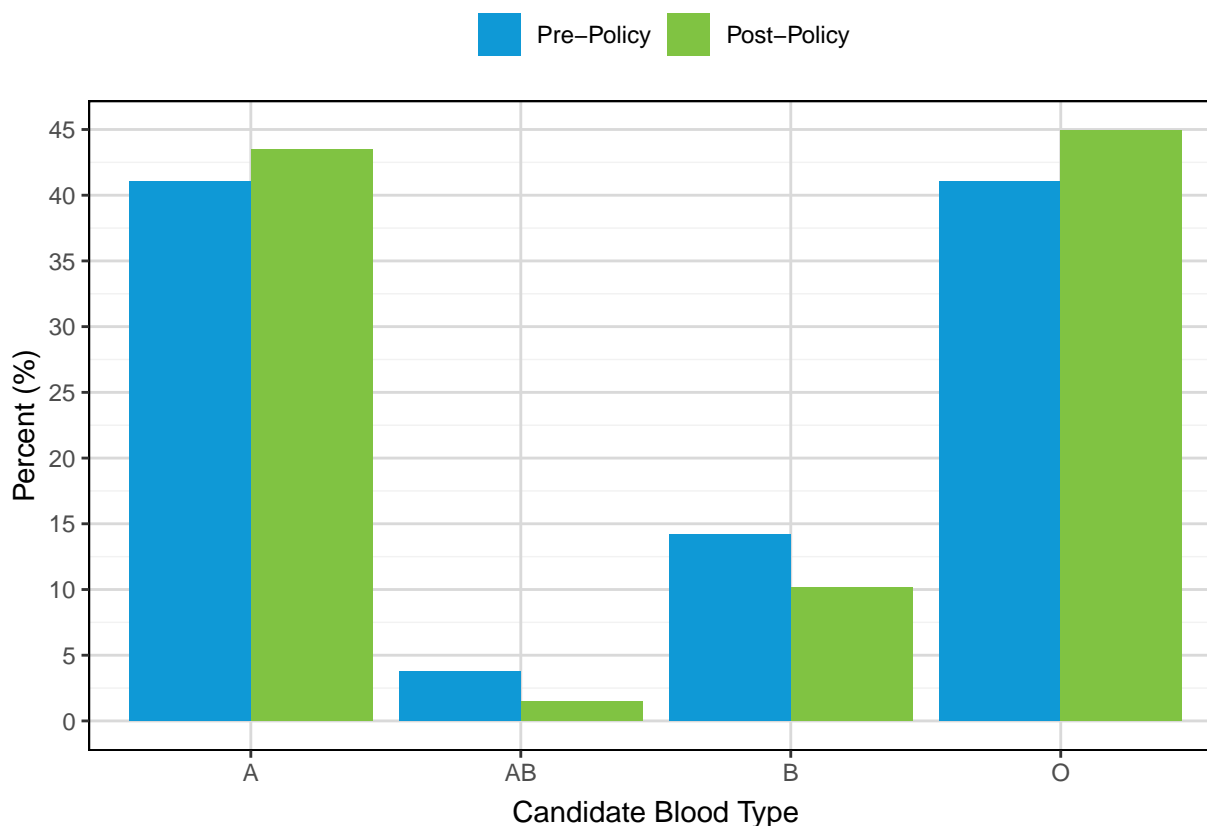


Table A70: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Recipient Blood Type

Blood Type	Pre-Policy		Post-Policy	
	N	%	N	%
A	55	41.04	60	43.48
AB	5	3.73	2	1.45
B	19	14.18	14	10.14
O	55	41.04	62	44.93
Total	134	100.00	138	100.00

Figure A65 and **Table A71** show deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and CPRA at transplant. The proportion of transplants to recipients in the CPRA 80-97% group increased from 5.2% to 8.7% after policy implementation. There was no change in the proportion of transplants to recipients in the CPRA 98-100% group (2.2%).

Figure A65: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and CPRA

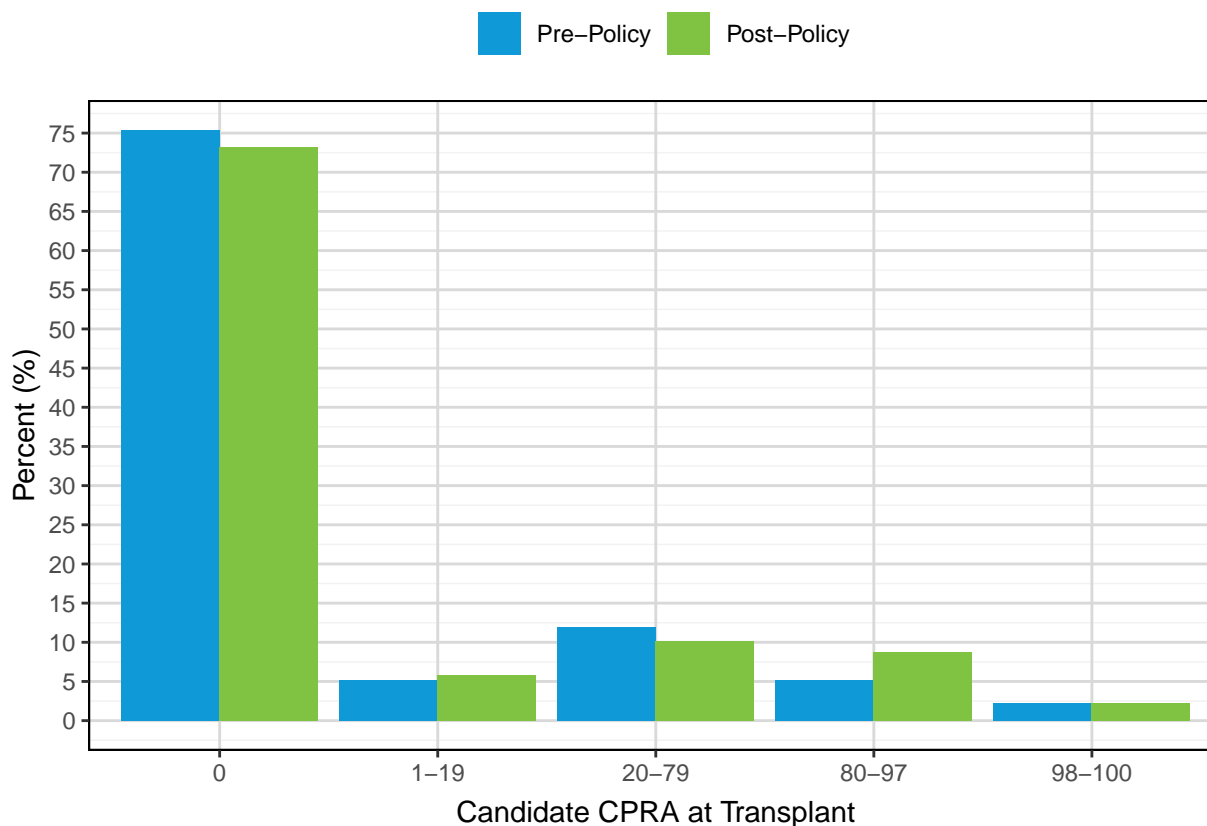


Table A71: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and CPRA

CPRA (%)	Pre-Policy		Post-Policy	
	N	%	N	%
0	101	75.37	101	73.19
1-19	7	5.22	8	5.80
20-79	16	11.94	14	10.14
80-97	7	5.22	12	8.70
98-100	3	2.24	3	2.17
Total	134	100.00	138	100.00

Figure A66 and **Table A72** show deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and level of HLA mismatch. Multi-organ transplants including a pancreas were excluded.

Figure A66: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and HLA Mismatch

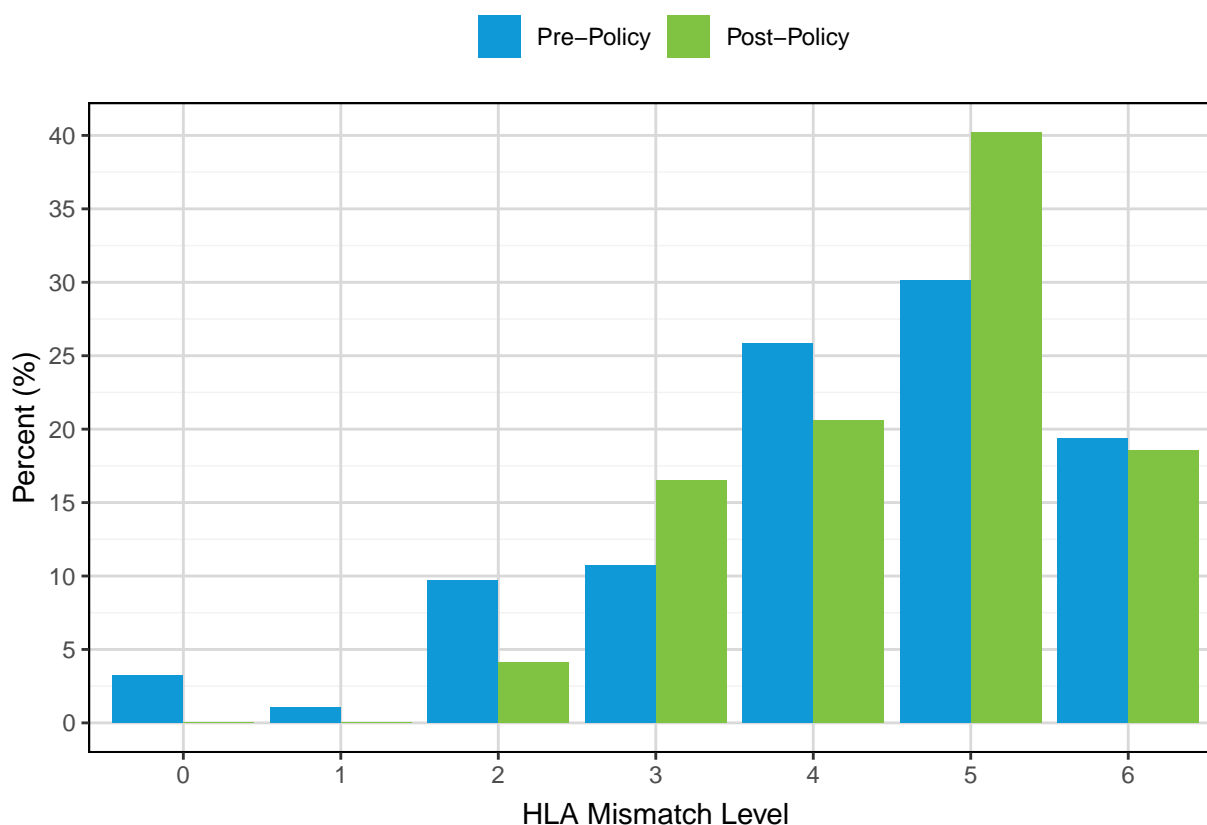


Table A72: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and HLA Mismatch

HLA Mismatch Level	Pre-Policy		Post-Policy	
	N	%	N	%
0	3	3.23	0	0.00
1	1	1.08	0	0.00
2	9	9.68	4	4.12
3	10	10.75	16	16.49
4	24	25.81	20	20.62
5	28	30.11	39	40.21
6	18	19.35	18	18.56
Total	93	100.00	97	100.00

Figure A67 and **Table A73** show deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and primary diagnosis. The proportion of recipients diagnosed with type 1 diabetes increased post-policy from 54.5% to 58.7%, while the proportion of recipients with type 2 diabetes decreased from 7.5% to 3.6%. There was little change in the proportion of recipients with other diagnoses (38.1% vs 37.7%).

Figure A67: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Diagnosis

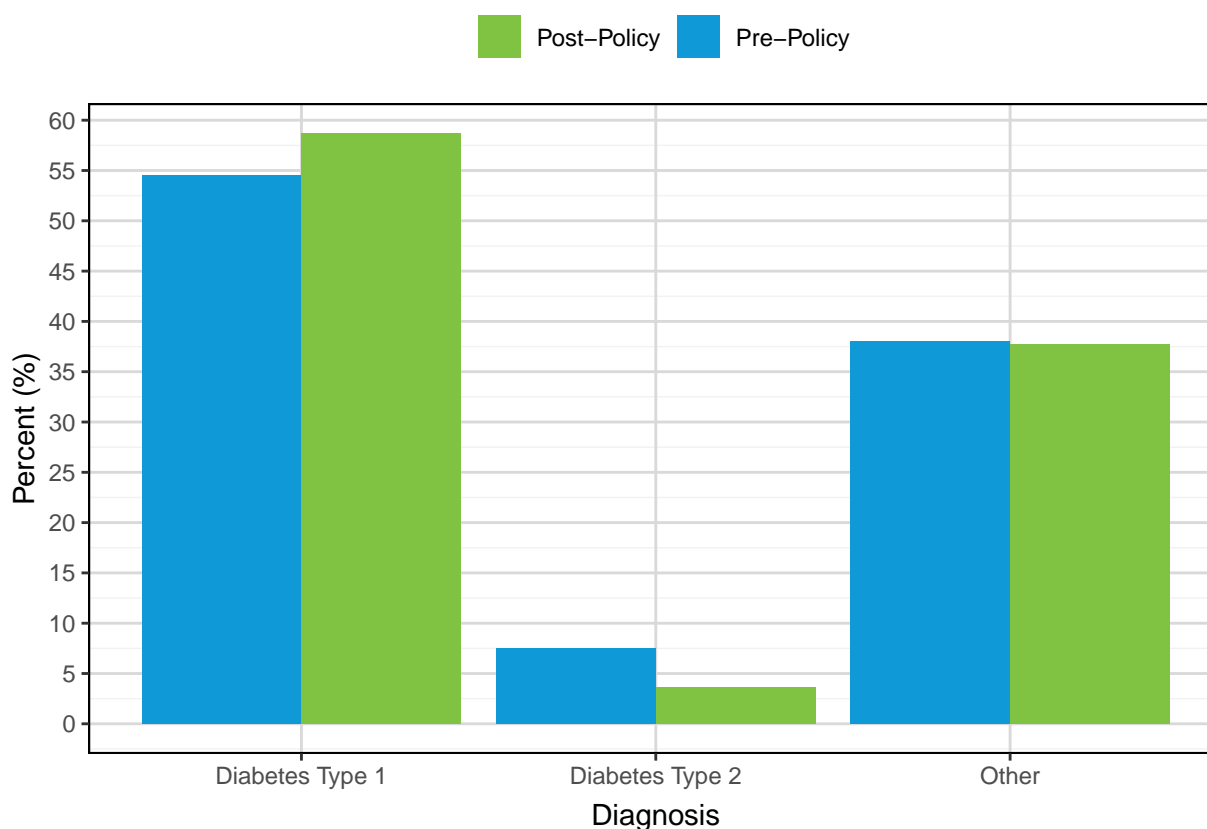


Table A73: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and Diagnosis

Diagnosis	Pre-Policy		Post-Policy	
	N	%	N	%
Diabetes Type 1	73	54.48	81	58.70
Diabetes Type 2	10	7.46	5	3.62
Other	51	38.06	52	37.68
Total	134	100.00	138	100.00

Figure A68 and **Table A74** show deceased donor pancreas transplants from March 15, 2020 to March 14, 2022 by policy era and donor DCD status. The volume and proportion of pancreas transplants from DCD donors decreased from 4 (3.0%) to 2 (1.5%) after policy implementation.

Figure A68: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and DCD Status

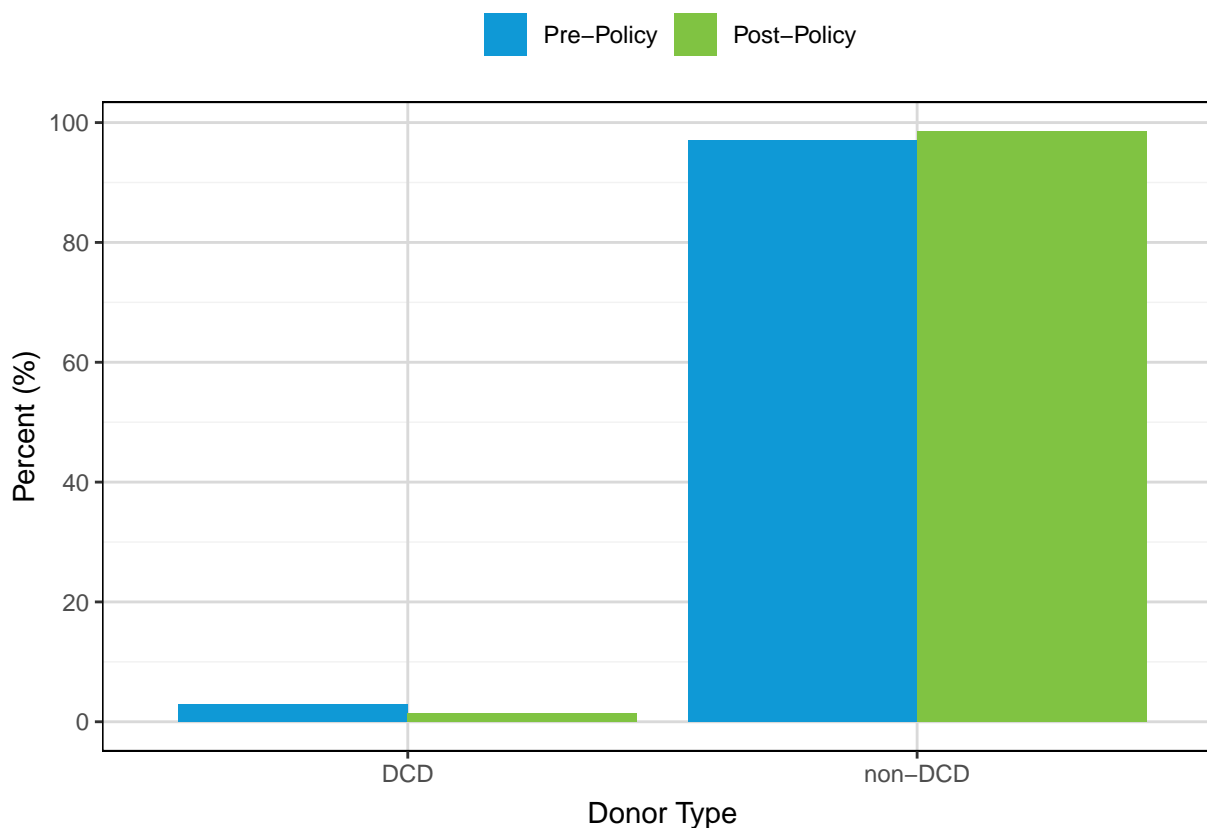


Table A74: Deceased Donor Pancreas Transplants from March 15, 2020-March 14, 2022 by Policy Era and DCD Status

DCD Donor	Pre-Policy		Post-Policy	
	N	%	N	%
DCD	4	2.99	2	1.45
non-DCD	130	97.01	136	98.55
Total	134	100.00	138	100.00

Post-Transplant Outcomes

Patient Survival

Figure A69 and **Table A75** show six month post-transplant patient survival for deceased donor pancreas transplants by policy era and recipient gender. There were no statistically significant differences in the probability of patient survival at six months post-transplant for female or male recipients.

Figure A69: Six Month Post-Transplant Patient Survival for Pancreas Transplants by Policy Era and Gender

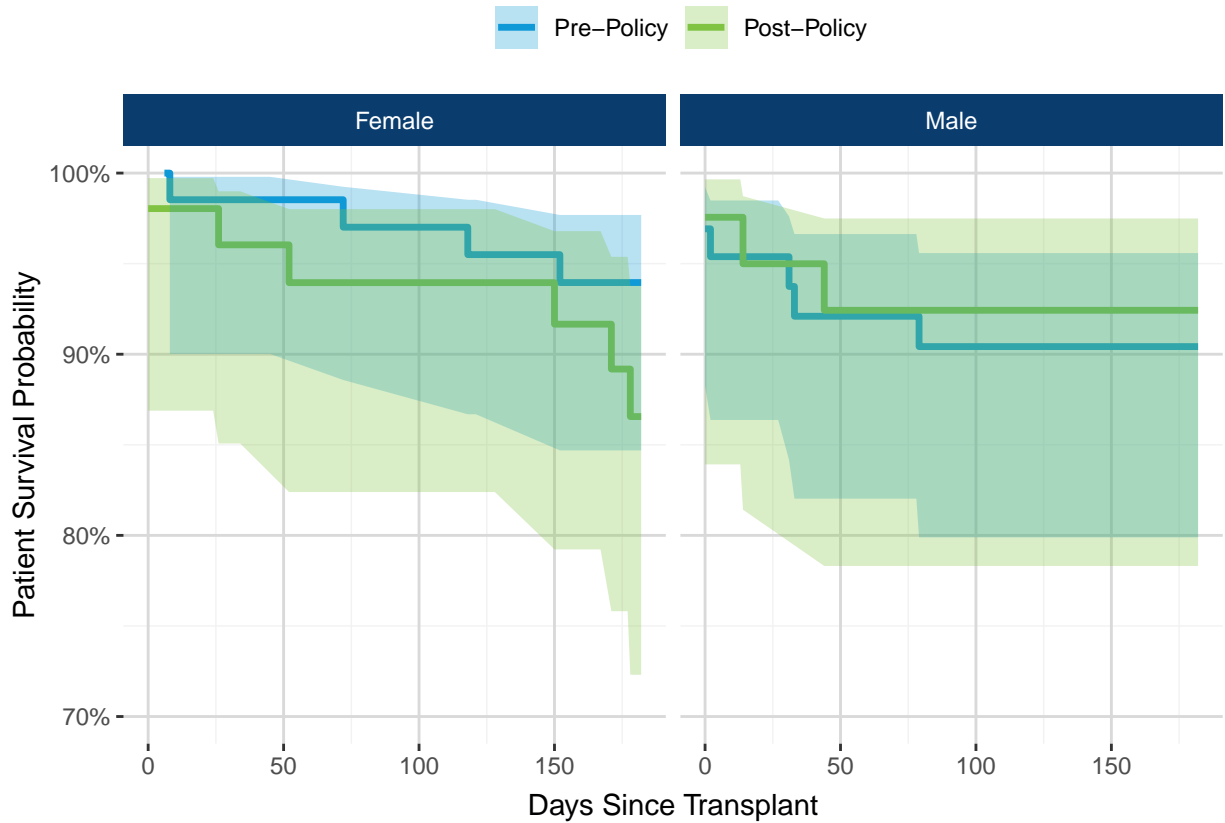


Table A75: Six Month Post-Transplant Patient Survival for Pancreas Transplants by Policy Era and Gender

Recipient Gender	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
Female	Pre-Policy	69	4	61	94	(84.7, 97.7)
	Post-Policy	51	6	30	86.6	(72.3, 93.8)
Male	Pre-Policy	65	6	54	90.4	(79.9, 95.6)
	Post-Policy	41	3	25	92.4	(78.3, 97.5)

Pancreas Graft Survival

Figure A70 and **Table A76** show six month post-transplant pancreas graft survival for deceased donor pancreas transplants by policy era and recipient gender. There were no statistically significant differences in the probability of pancreas graft survival at six months post-transplant for female or male recipients.

Figure A70: Six Month Post-Transplant Pancreas Graft Survival for Pancreas Transplants by Policy Era and Gender

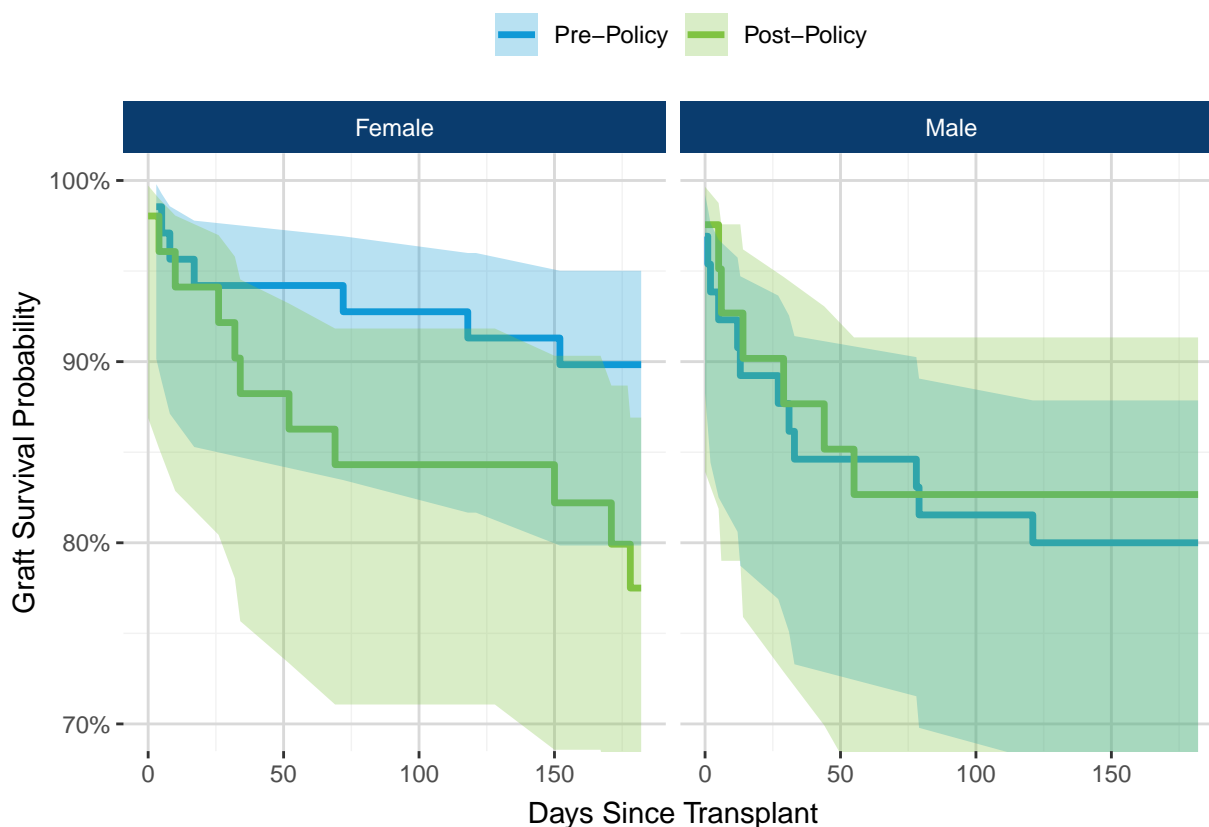


Table A76: Six Month Post-Transplant Pancreas Graft Survival for Pancreas Transplants by Policy Era and Gender

Recipient Gender	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Female	Pre-Policy	69	7	61	89.8	(79.8, 95)
	Post-Policy	51	11	29	77.5	(62.9, 86.9)
Male	Pre-Policy	65	13	52	80	(68.1, 87.9)
	Post-Policy	41	7	25	82.7	(67, 91.3)

Released Organs

Table 77 shows the disposition of pancreata from pancreas matches with a final acceptance by policy era and OPTN region. The proportion of pancreata with a final acceptance that were transplanted to the originally accepting patient varied by region, ranging from 20.0% to 100% pre-policy and from 22.6% to 60.0% post-policy.

Table 77: Disposition of Pancreata from Pancreas Matches with a Final Acceptance March 15, 2020-March 14, 2022 by Policy Era and OPTN Region

Era	Region	N	Same Patient	Same Center	Different Center	Discard	Non-Recovery
Pre-Policy	1	7	4 (57.1%)	0 (0.0%)	0 (0.0%)	1 (14.3%)	2 (28.6%)
	2	9	8 (88.9%)	0 (0.0%)	0 (0.0%)	1 (11.1%)	0 (0.0%)
	3	27	18 (66.7%)	0 (0.0%)	0 (0.0%)	4 (14.8%)	5 (18.5%)
	4	19	8 (42.1%)	0 (0.0%)	2 (10.5%)	2 (10.5%)	7 (36.8%)
	5	25	5 (20.0%)	0 (0.0%)	0 (0.0%)	4 (16.0%)	16 (64.0%)
	6	6	6 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	7	26	15 (57.7%)	1 (3.8%)	3 (11.5%)	2 (7.7%)	5 (19.2%)
	8	12	4 (33.3%)	1 (8.3%)	0 (0.0%)	3 (25.0%)	4 (33.3%)
	9	7	4 (57.1%)	0 (0.0%)	2 (28.6%)	1 (14.3%)	0 (0.0%)
	10	25	14 (56.0%)	0 (0.0%)	3 (12.0%)	1 (4.0%)	7 (28.0%)
	11	21	7 (33.3%)	0 (0.0%)	1 (4.8%)	6 (28.6%)	7 (33.3%)
	Total	184	93 (50.5%)	2 (1.1%)	11 (6.0%)	25 (13.6%)	53 (28.8%)
Post-Policy	1	5	2 (40.0%)	0 (0.0%)	0 (0.0%)	3 (60.0%)	0 (0.0%)
	2	25	12 (48.0%)	0 (0.0%)	1 (4.0%)	6 (24.0%)	6 (24.0%)
	3	21	9 (42.9%)	0 (0.0%)	1 (4.8%)	5 (23.8%)	6 (28.6%)
	4	18	10 (55.6%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	8 (44.4%)
	5	23	11 (47.8%)	0 (0.0%)	1 (4.3%)	3 (13.0%)	8 (34.8%)
	6	4	1 (25.0%)	0 (0.0%)	0 (0.0%)	2 (50.0%)	1 (25.0%)
	7	29	15 (51.7%)	0 (0.0%)	0 (0.0%)	2 (6.9%)	12 (41.4%)
	8	15	9 (60.0%)	2 (13.3%)	0 (0.0%)	1 (6.7%)	3 (20.0%)
	9	19	10 (52.6%)	1 (5.3%)	0 (0.0%)	4 (21.1%)	4 (21.1%)
	10	31	7 (22.6%)	0 (0.0%)	4 (12.9%)	3 (9.7%)	17 (54.8%)
	11	27	9 (33.3%)	0 (0.0%)	0 (0.0%)	5 (18.5%)	13 (48.1%)
	Total	217	95 (43.8%)	3 (1.4%)	7 (3.2%)	34 (15.7%)	78 (35.9%)

Additional Information on Efficient Allocation and Utilization of Organs

Figure A71 and **Table A78** show total pancreas donors recovered from March 15, 2020 to March 14, 2022 by policy era. There were 1245 pancreas donors recovered in the pre-policy era, and 1319 recovered in the post-policy era.

Figure A71: Pancreas Donors Recovered March 15, 2020-March 14, 2022 by Policy Era

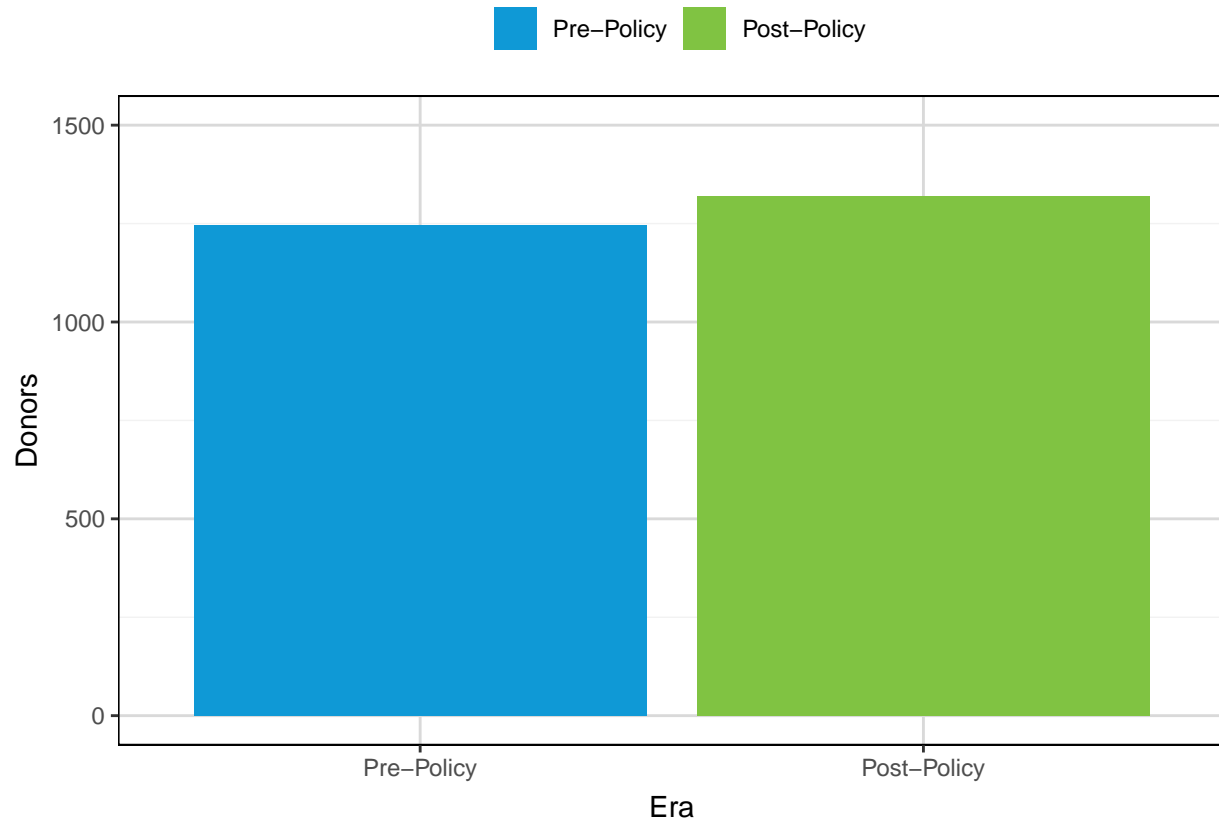


Table A78: Pancreas Donors Recovered March 15, 2020-March 14, 2022 by Policy Era

Era	Donors
Pre-Policy	1245
Post-Policy	1319

Figure A72 and **Table A79** show deceased pancreas donors recovered from March 15, 2020 to March 14, 2022 by policy era and donor DCD status. There was no change in the proportion of DCD pancreas donors recovered after policy implementation (4.7%).

Figure A72: Deceased Pancreas Donors Recovered March 15, 2020-March 14, 2022 by DCD Status and Policy Era

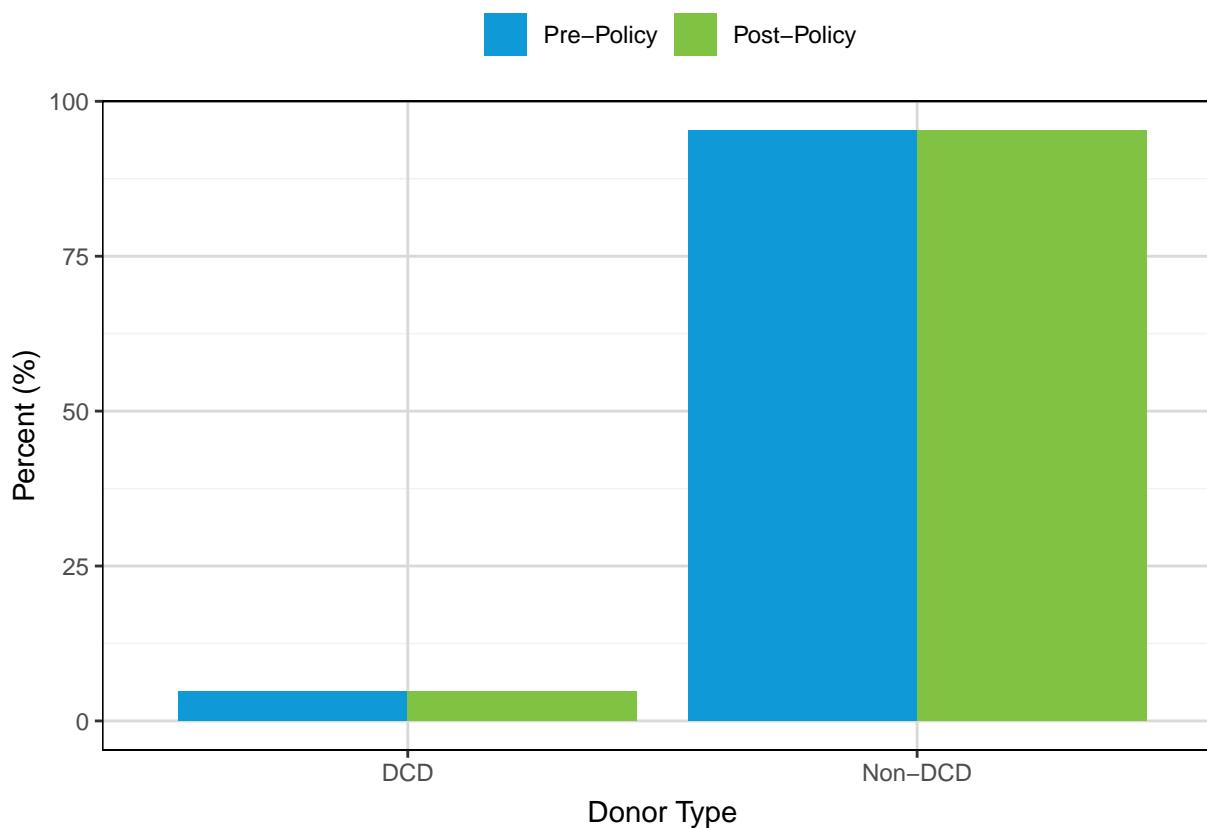


Table A79: Deceased Pancreas Donors Recovered March 15, 2020-March 14, 2022 by DCD Status and Policy Era

Donor Type	Pre-Policy		Post-Policy	
	N	%	N	%
DCD	59	4.74	62	4.70
Non-DCD	1186	95.26	1257	95.30
Total	1245	100.00	1319	100.00

Figure A73 and **Table A80** show deceased pancreas donors recovered from March 15, 2020 to March 14, 2022 by donor age and policy era.

Figure A73: Deceased Pancreas Donors Recovered March 15, 2020-March 14, 2022 by Age and Policy Era

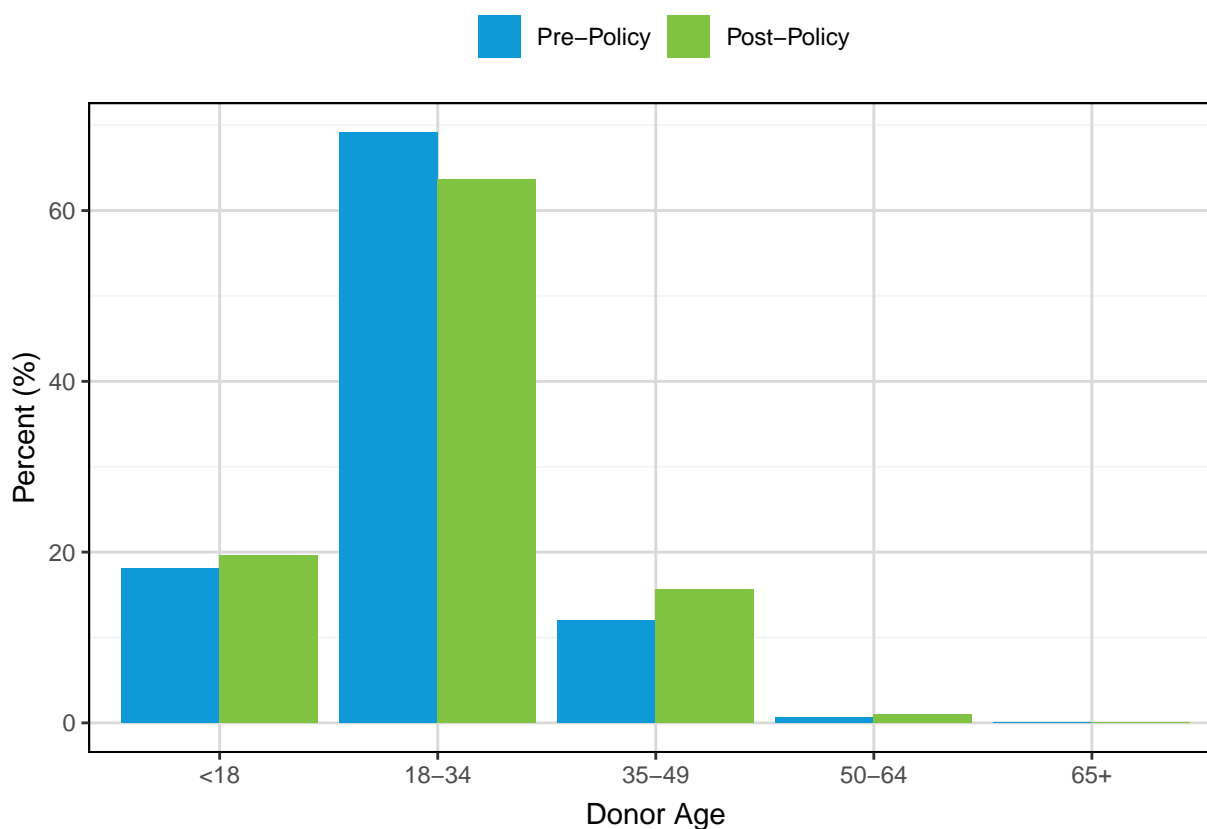


Table A80: Deceased Pancreas Donors Recovered March 15, 2020-March 14, 2022 by Age and Policy Era

Donor Age	Pre-Policy		Post-Policy	
	N	%	N	%
<18	226	18.15	259	19.64
18-34	861	69.16	840	63.68
35-49	150	12.05	207	15.69
50-64	8	0.64	13	0.99
65+	0	0.00	0	0.00
Total	1245	100.00	1319	100.00

Figure A74 and **Table A81** show offers per active patient year for pancreas/kidney-pancreas match runs from March 15, 2020 to March 14, 2022 by policy era and candidate age at listing. Offer rates increased after policy implementation for candidates in the 18-34, 35-49, and 50-64 age groups, while offer rates decreased for candidates in the 0-17 and 65+ age groups.

Figure A74: Offers per Active Patient Year for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and Age at Listing

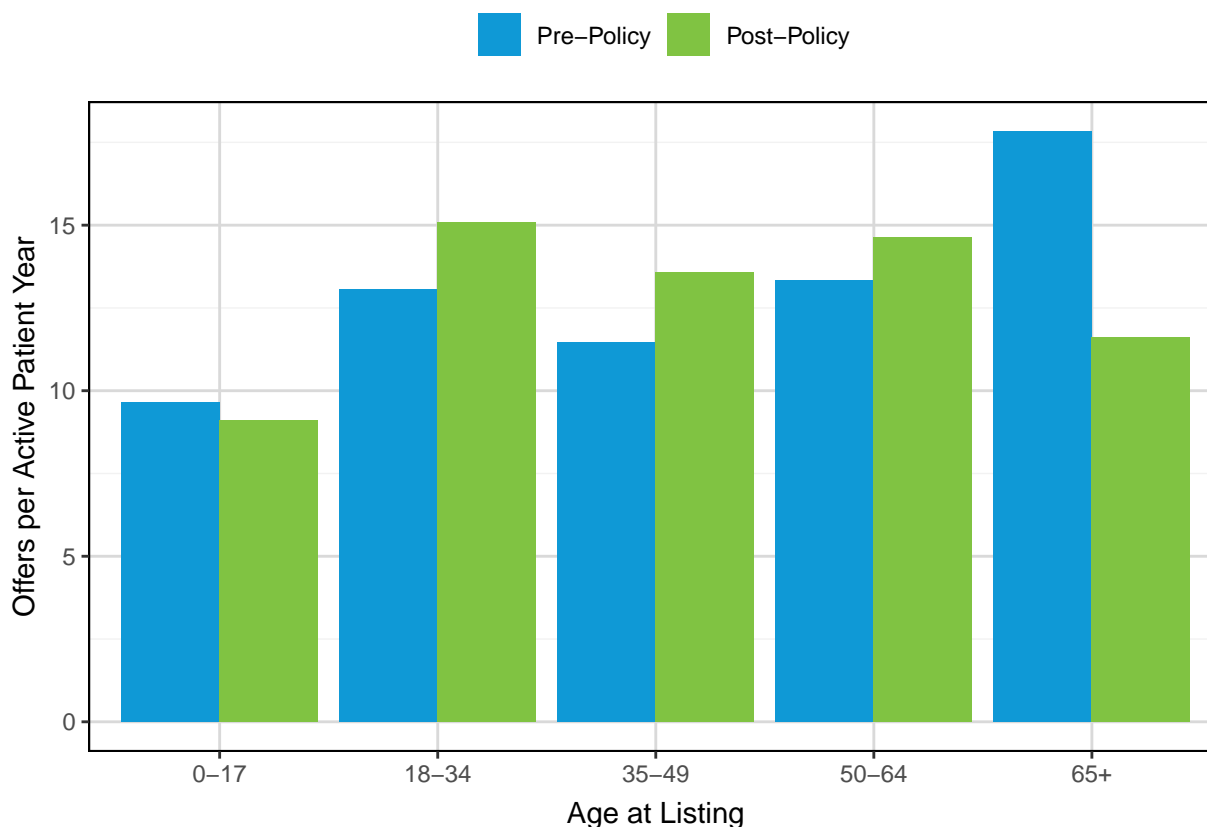


Table A81: Offer and Acceptance Rates for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and Age at Listing

Era	Age	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	0-17	38.13	368	7	9.65	19.02
	18-34	258.77	3384	259	13.08	76.54
	35-49	528.60	6061	500	11.47	82.49
	50-64	211.56	2819	228	13.33	80.88
	65+	2.52	45	4	17.83	88.89
Post-Policy	0-17	39.66	361	3	9.10	8.31
	18-34	258.17	3893	252	15.08	64.73
	35-49	512.45	6963	484	13.59	69.51
	50-64	218.30	3195	240	14.64	75.12
	65+	4.99	58	3	11.61	51.72

Figure A75 shows acceptances per 1000 offers for pancreas/kidney-pancreas match runs from March 15, 2020 to March 14, 2022 by policy era and age at listing. Acceptance rates decreased for all age groups after policy implementation.

Figure A75: Acceptances per 1000 Offers for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and Age at Listing

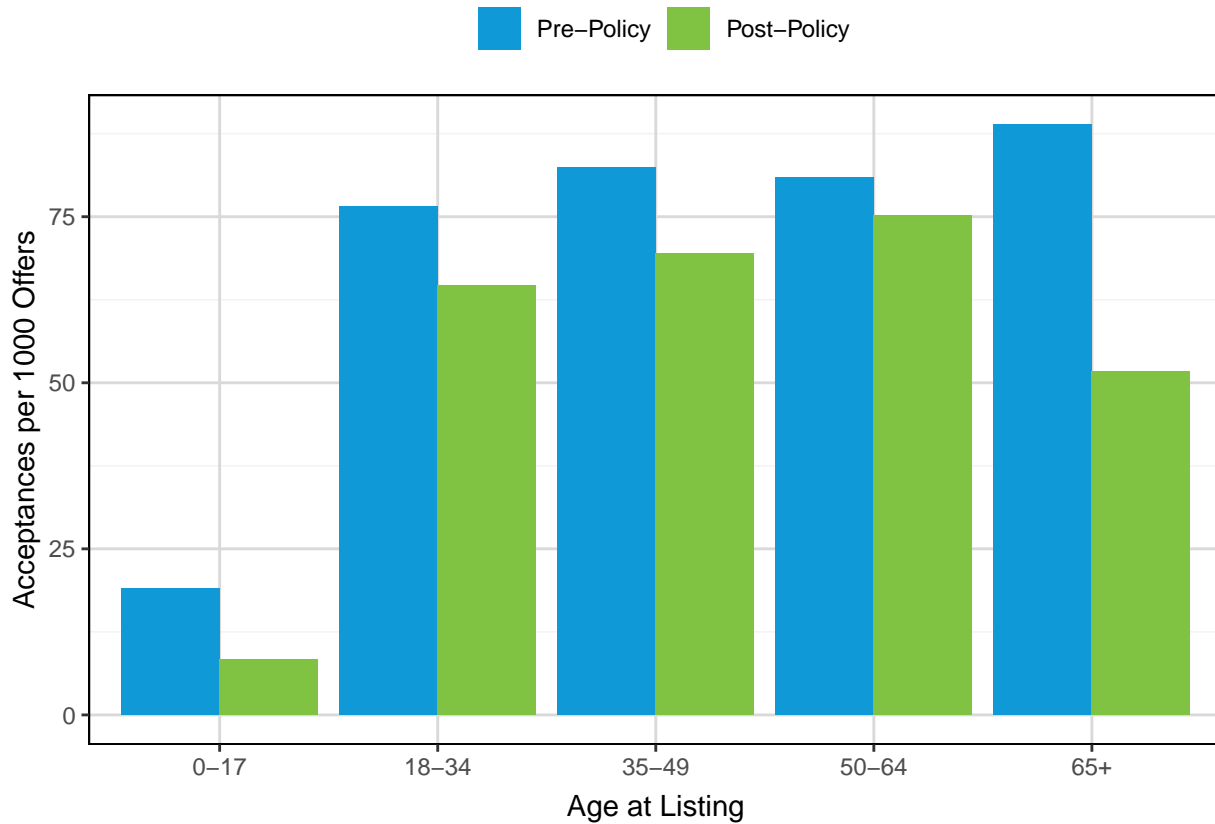


Figure A76 and **Table A82** show offers per active patient year for pancreas/kidney-pancreas matches from March 15, 2020 to March 14, 2022 by policy era and race/ethnicity. Offer rates increased for candidates of all race/ethnicities after policy implementation.

Figure A76: Offers per Active Patient Year for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and Race/Ethnicity

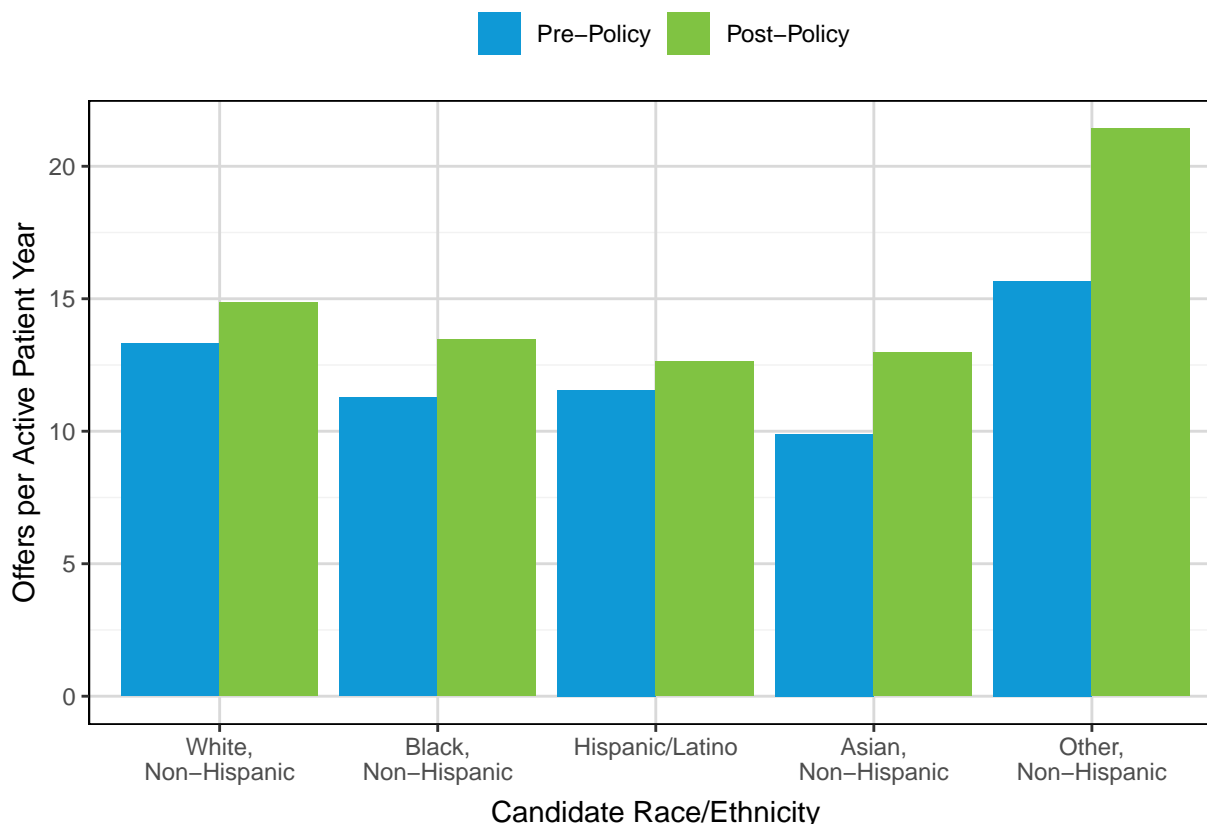


Table A82: Offer and Acceptance Rates for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and Race/Ethnicity

Era	Race/Ethnicity	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	White, Non-Hispanic	526.20	7002	509	13.31	72.69
	Black, Non-Hispanic	294.27	3319	287	11.28	86.47
	Hispanic/Latino	147.91	1710	153	11.56	89.47
	Asian, Non-Hispanic	37.29	369	32	9.90	86.72
	Other, Non-Hispanic	17.87	280	17	15.67	60.71
Post-Policy	White, Non-Hispanic	511.97	7612	459	14.87	60.30
	Black, Non-Hispanic	290.31	3909	291	13.46	74.44
	Hispanic/Latino	161.17	2036	167	12.63	82.02
	Asian, Non-Hispanic	38.96	505	47	12.96	93.07
	Other, Non-Hispanic	19.05	408	18	21.42	44.12

Figure A77 shows acceptances per 1000 offers for pancreas/kidney-pancreas match runs from March 15, 2020 to March 14, 2022 by policy era and race/ethnicity. Acceptance rates increased after implementation for Asian, Non-Hispanic candidates, while acceptance rates decreased for all other racial/ethnic groups.

Figure A77: Acceptances per 1000 Offers for pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and Race/Ethnicity

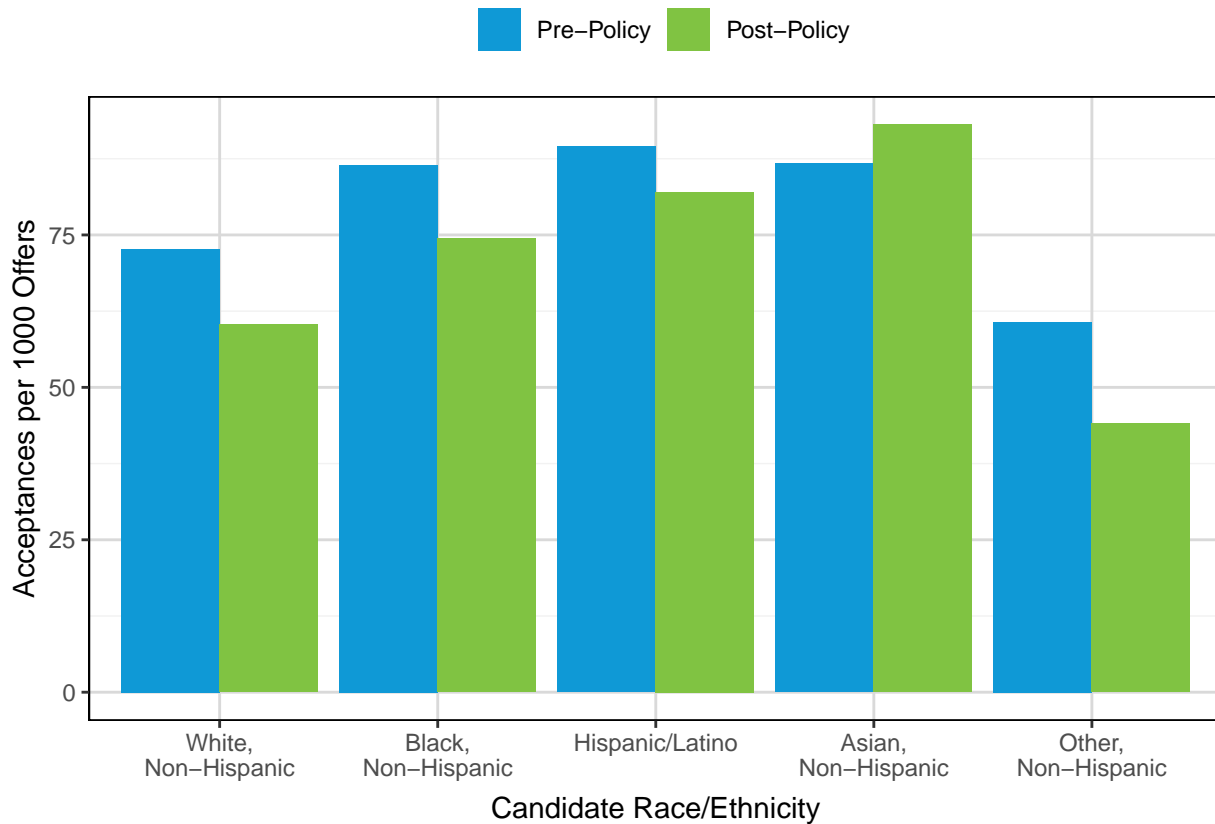


Figure A78 and **Table A83** show offers per active patient year for pancreas/kidney-pancreas matches from March 15, 2020 to March 14, 2022 by policy era and blood type. Offer rates increased after implementation for candidates with blood types A, AB, and O, while offer rates decreased for blood type B candidates.

Figure A78: Offers per Active Patient Year for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and Blood Type

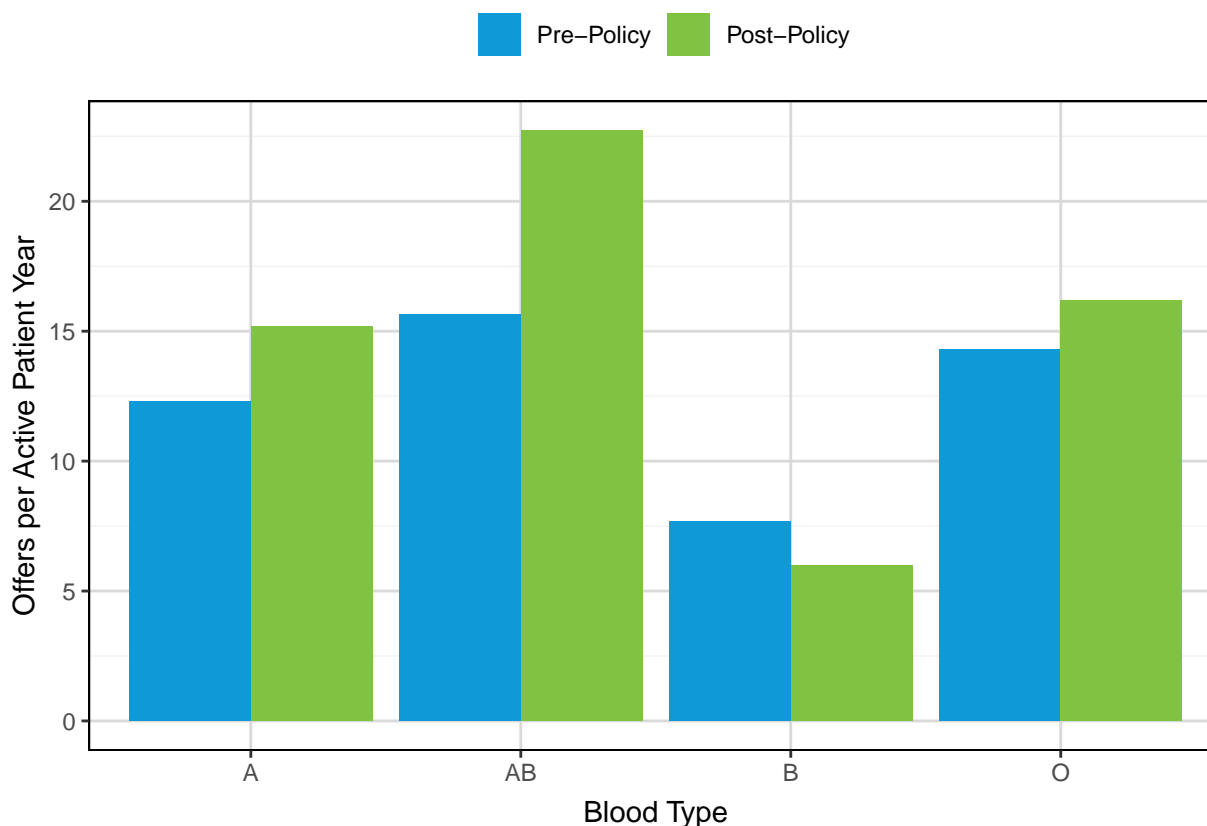


Table A83: Offer and Acceptance Rates for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and Blood Type

Era	Blood Type	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	A	305.11	3752	363	12.30	96.75
	AB	21.41	335	25	15.65	74.63
	B	202.64	1557	129	7.68	82.85
	O	491.82	7036	481	14.31	68.36
Post-Policy	A	310.45	4709	336	15.17	71.35
	AB	25.56	581	35	22.73	60.24
	B	186.01	1114	133	5.99	119.39
	O	498.71	8066	478	16.17	59.26

Figure A79 shows acceptances per 1000 offers for pancreas/kidney-pancreas match runs from March 15, 2020 to March 14, 2022 by policy era and blood type. Acceptance rates increased for blood type B candidates after implementation. Acceptance rates decreased for blood types A, AB, and O.

Figure A79: Acceptances per 1000 Offers for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and Blood Type

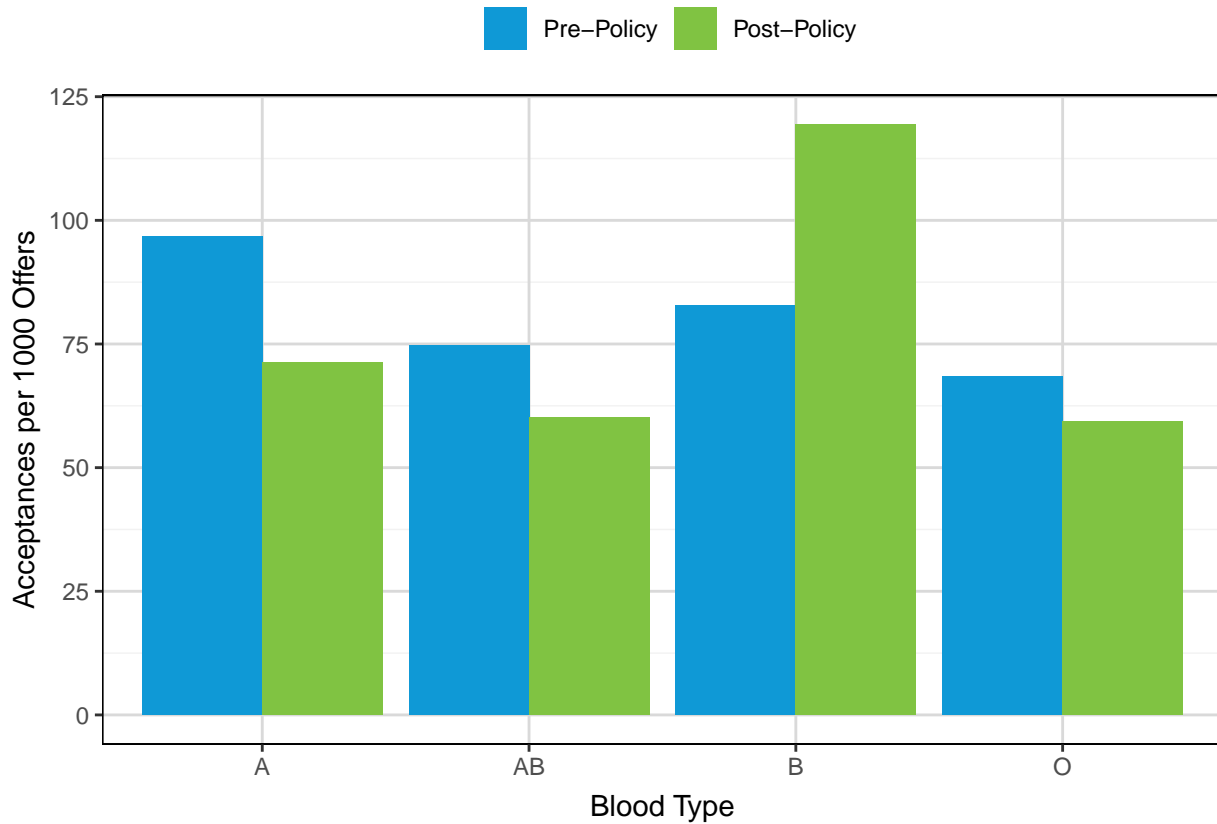


Figure A80 and **Table A84** show offers per active patient year for kidney-pancreas match runs from March 15, 2020 to March 14, 2022 by policy era and CPRA at listing. There was little change in the offer rate for candidates with CPRA 98-100% after implementation (0.56 vs 0.76 offers per active patient year). Offer rates increased for all other CPRA groups after implementation.

Figure A80: Offers per Active Patient Year for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and CPRA at Listing

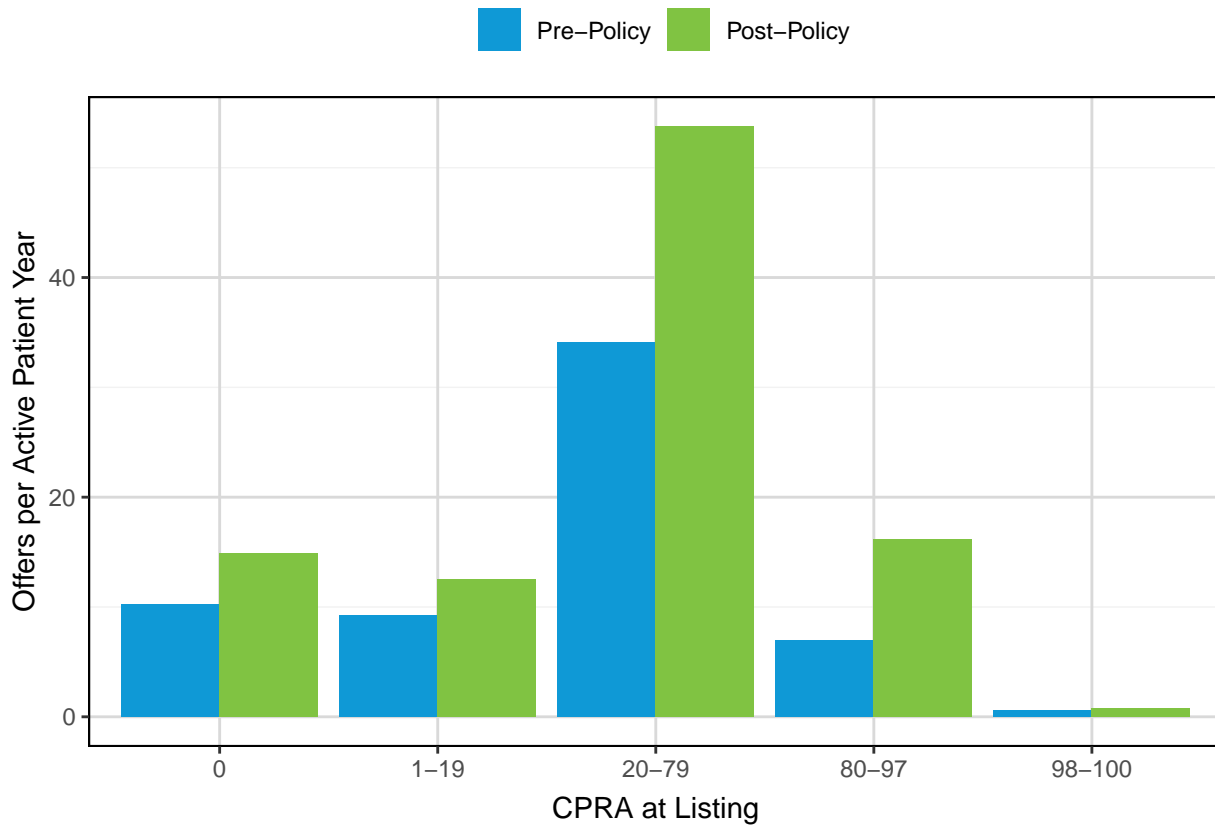


Table A84: Offer and Acceptance Rates for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and CPRA at Listing

Era	CPRA (%)	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	0	684.85	7005	424	10.23	60.53
	1-19	79.47	732	53	9.21	72.40
	20-79	123.14	874	68	7.10	77.80
	20-79	25.61	874	68	34.13	77.80
	80-97	47.04	84	14	1.79	166.67
	80-97	12.03	84	14	6.98	166.67
	98-100	60.90	34	5	0.56	147.06
Post-Policy	0	679.43	10134	540	14.92	53.29
	1-19	82.66	1037	67	12.55	64.61
	20-79	138.72	1295	90	9.34	69.50
	20-79	24.08	1295	90	53.77	69.50
	80-97	39.60	171	17	4.32	99.42
	80-97	10.56	171	17	16.19	99.42
	98-100	54.28	41	3	0.76	73.17

Figure A81 shows acceptances per 1000 offers for pancreas/kidney-pancreas match runs from March 15, 2020 to March 14, 2022 by policy era and CPRA at listing. Acceptance rates decreased for all CPRA groups after policy implementation.

Figure A81: Acceptances per 1000 Offers for Pancreas/Kidney-Pancreas Match Runs March 15, 2020 - March 14, 2022 by Policy Era and CPRA at Listing

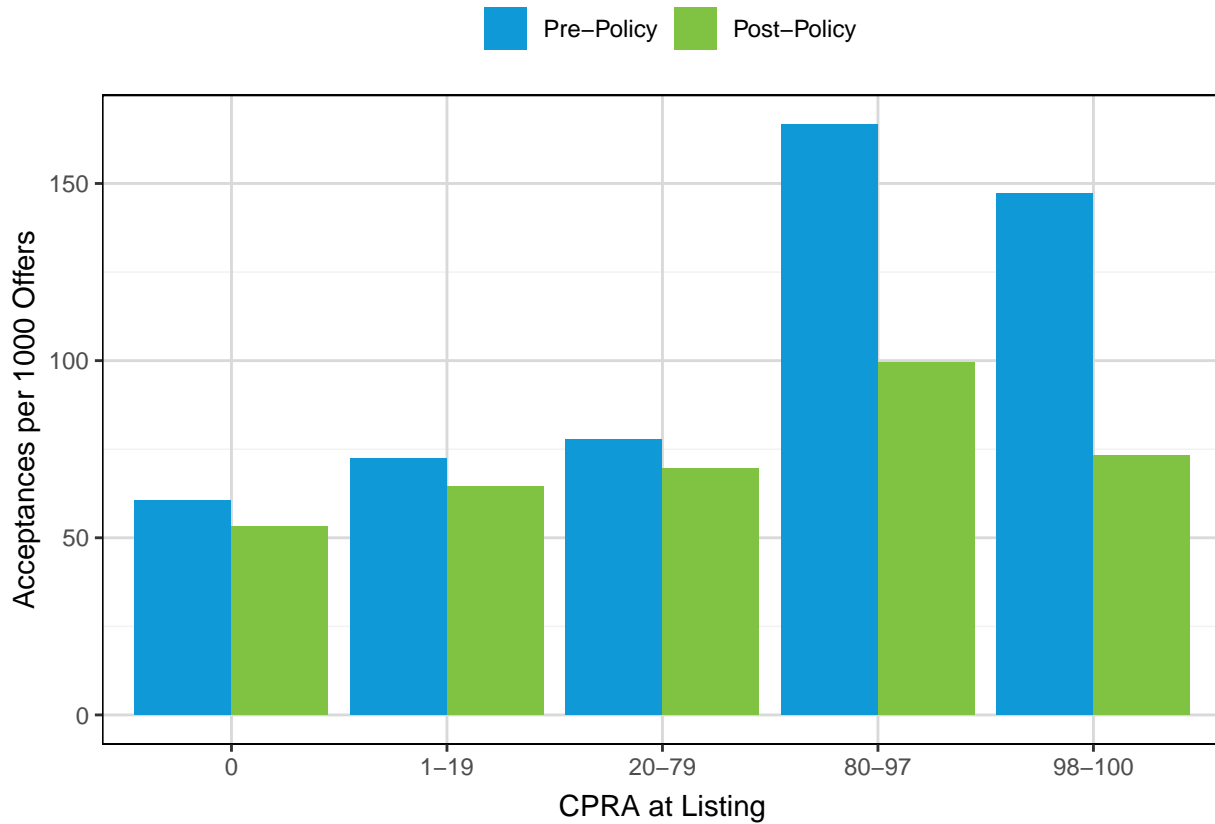


Figure A82 and **Table A85** describe pancreas/kidney-pancreas match run offer refusals due to positive crossmatch by CPRA. The proportion of refusals due to positive crossmatch was highest for candidates with CPRA 80-97% and 98-100% both before and after policy implementation, and increased after implementation for the CPRA 98-100% group. There was little change in the overall proportion of refusals due to positive crossmatch (0.84% vs 0.54%).

Figure A82: Percent of Refusals Due to Positive Crossmatch for Pancreas/Kidney-Pancreas Matches March 15, 2020 - March 14, 2022 by Policy Era and CPRA

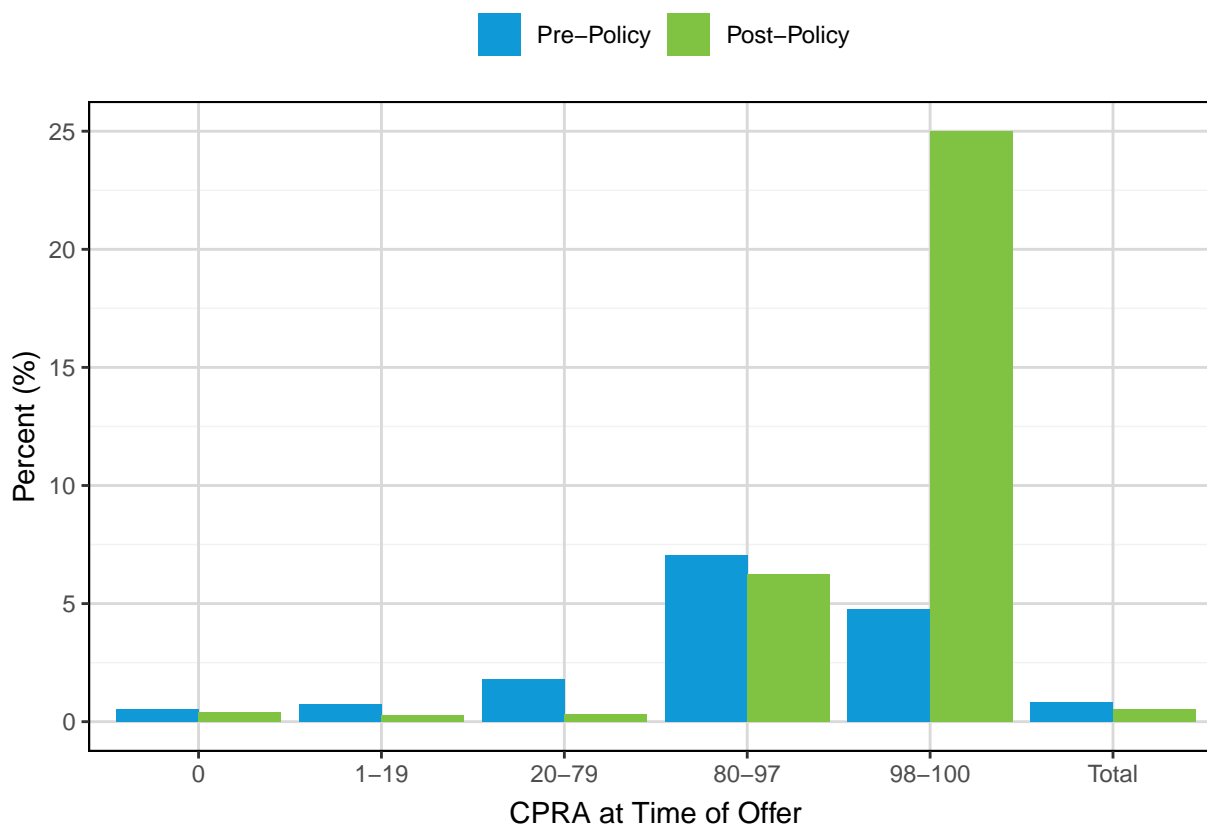


Table A85: Number and Percent of Refusals Due to Positive Crossmatch for Pancreas/Kidney-Pancreas Matches March 15, 2020 - March 14, 2022 by Policy Era and CPRA

CPRA (%)	Pre-Policy			Post-Policy		
	Refusals	Due to Xmatch	%	Refusals	Due to Xmatch	%
0	6545	34	0.52	9025	38	0.42
1-19	829	6	0.72	1175	3	0.26
20-79	1110	20	1.80	1607	5	0.31
80-97	170	12	7.06	257	16	6.23
98-100	21	1	4.76	12	3	25.00
Total	8675	73	0.84	12076	65	0.54