

OPTN Kidney Transplantation

Descriptive Data Request

Eliminate Use of DSA and Region from Kidney Allocation 6 Month Post-Implementation Monitoring Report

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Executive Summary

This report presents data describing the US organ transplantation system before and after the removal of Donation Service Area (DSA) and OPTN region from deceased donor kidney allocation. The analyses include data on waiting list registrations, transplant recipients, and deceased donors submitted to the OPTN between December 01, 2020 and June 30, 2021. Data are current as of October 15, 2021 and are subject to change based on future submission or correction.

Waiting List

Waiting list volume remained stable after policy implementation (**Figure 1**), both overall and by registration status.

Overall waiting list mortality decreased from 7 to 4 deaths per 100 patient years (**Figure 15**). Waiting list mortality decreased or remained constant across all subpopulations included in this analysis. Notable decreases in waiting list mortality were observed for:

- Registrations aged 35 years and older at listing (**Figure 16**)
- Most ethnicities (**Figure 18**)
- Registrations with CPRA 0% and 80-97% (**Figure 19**)
- Registrations diagnosed with diabetes (**Figure 23**)

The overall transplant rate increased from 32 to 39 transplants per 100 active patient years (**Figure 24**). Increases in transplant rates were seen for the following subpopulations, which align with the KPSAM analysis used to inform the development of this policy:

- Registrations age 11-64 years (**Figure 25** and **Figure 84**)
- Black and Hispanic registrations (**Figure 27**)
- CPRA 80-97% registrations (**Figure 28**)
- Registrations on dialysis for 3 or more years at listing (**Figure 31**)

Transplants

The total number of deceased donor kidney transplants increased from 4926 to 6025 after policy implementation (**Figure 33**), though this increase may be attributable to factors other than this allocation change. Increases in transplant volume were observed for:

- All age groups (**Table 33**)
- All ethnicities (**Table 34**)
- All blood types (**Table 38**)
- All CPRA values (**Table 39**)
- All diagnoses (**Table 41**)

Median time on dialysis at transplant increased from 4.1 to 4.5 years after the policy change (**Figure 39**), as predicted by the KPSAM. This increase does not imply patients need to accrue more time on dialysis in order to receive at transplant, rather more patients with higher dialysis times are getting transplanted under the new system as kidneys are distributed more broadly.

As predicted by the KPSAM, median distance from the donor hospital to the transplant center increased from 70 to 125 NM after policy implementation (**Figure 49**), and more transplants occurred at centers outside the recovering OPO's DSA (**Figure 48**). The proportion of transplants occurring within 250 NM of the donor hospital increased from 80% to 85% after the change (**Figure 47**), also in line with the KPSAM analysis. Changes in transplant volume varied across OPTN region (**Figure 50**).

Utilization and Efficiency

The number of deceased kidney donors recovered increased from 3455 to 4130 after policy implementation (**Figure 57**). The overall discard rate decreased from 24% to 22% (**Figure 62**), with the largest decrease observed for KDPI 86-100% kidneys (67% to 62%).

Offer rates increased overall (**Figure 63**) and across all subpopulations investigated in this analysis after policy implementation. Acceptance rates decreased overall (**Figure 64**) after policy implementation, as well as across most subpopulations. Acceptance rates increased for offers to candidates with CPRA 80-97% (**Figure 74**) and offers to candidates listed at centers outside the DSA of the donor hospital (**Figure 79**).

Background

The OPTN implemented several policy changes on March 15, 2021 in order to remove DSA and region from kidney 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. It also added increased priority for prior living donor and pediatric candidates within 250 NM of the donor hospital.

Three supplemental policies went into effect the same day. The first change provided a rationally determined and consistently applied definition for medical urgency. This definition, and the associated classification, ensures candidates who have exhausted dialysis access, as well as candidates with imminent failure of access to dialysis, can receive the appropriate priority in allocation in an expedient manner.

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

Strategic Plan Goal

Increase equity in access to transplant.

Committee Request

These policies will be formally evaluated approximately 3 months, 6 months, 1 year, and 2 years post-implementation. The following metrics, and any subsequently requested by the Committee, will be evaluated as data become available. Appropriate lags will be applied, per typical UNOS conventions, to account for time delay in institutions reporting data to UNet and compared to an appropriate pre-policy cohort to assess performance before and after implementation of this policy. To assess the policy's impact on pediatric populations as well as the geographic variation in pediatric populations, when feasible, metrics will be stratified by pediatric age groupings, DSA and OPTN Region.

Any metrics not presented in this report will be examined in a subsequent analysis as data accrue.

Waiting List

1. Total kidney registrations on the waiting list (snapshot by month)
2. Kidney registrations added to the list, overall and by age, gender, ethnicity, cPRA, blood type, diagnosis, time on dialysis, and insurance status at time of listing
3. % of candidates in active status
4. % of candidates multi-listed
5. Waiting list mortality per 100 patient years, overall and by candidate age, gender, ethnicity, cPRA, blood type, diagnosis, EPTS score, and time on dialysis.
6. Deceased donor transplants per 100 active patient years by recipient age, ethnicity, time on dialysis, ABO, cPRA, HLA-ABDR mismatch level, diagnosis, EPTS score, and DSA.

Transplant

1. Donor, recipient and transplant characteristics: number and percent of transplants by recipient age, ethnicity, waiting time (days on the waiting list), time on dialysis, ABO, cPRA, HLA-ABDR mismatch level, diagnosis, EPTS score, KDPI, DCD, inside/outside fixed circle, and cold ischemic time (CIT).
 - Distribution of kidney travel distance (NM), overall and by inside/outside fixed circle
 - Distribution of KDPI by inside/outside fixed circle and pediatric age group (pediatric recipients only)
 - Distribution of KDPI by inside/outside fixed circle and cPRA
 - Distribution of KDPI by inside/outside fixed circle and prior living donor status
 - Distribution of KDPI by inside/outside fixed circle and CIT
2. Change in access by location: N and % of transplants by
 - Share type (local/regional/national)
 - OPTN region
 - Donation Service Area (DSA)
 - Transplant center
 - State
3. Variance in deceased donor transplant rate across DSA
4. Rates of receiving kidney offers per 100 patient years by recipient age, time on dialysis, ethnicity, ABO, cPRA, HLA-ABDR mismatch level, diagnosis, and EPTS score.
5. Rates of delayed graft function (DGF)
6. Number and percent of multi-organ kidney transplants by type (KP, SLK, HR-KI, other), overall and by KDPI

Utilization and Efficiency of Allocation

1. Number kidney donors recovered for transplantation, overall and by KDPI
2. Number and percent of kidneys recovered but not utilized (discarded), overall and by KDPI
3. Number and percent of kidneys discarded by discard reason
4. Number and percent kidneys with a final acceptance
5. Offer acceptance per 100 patient years by recipient age, ethnicity, waiting time (days on the waiting list), time on dialysis, ABO, cPRA, diagnosis, EPTS score, DCD, 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 offers refused due to a positive cross-match
9. Number of candidates transplanted with medically urgent classification, overall and sorted by KDPI

Outcomes

Post-transplant graft and patient survival rates, overall and stratified by recipient age, gender, ethnicity, cPRA, blood type, diagnosis, time on dialysis, HLA-ABDR mismatch, EPTS score, KDPI, and CIT. These data will be presented in a future report, once sufficient data have accrued.

Medical Urgency

Overall and by OPTN Region:

1. Number and percentage of candidates on the waiting list who received medically urgent allocation priority, overall and by candidate characteristics including:
 - Calculated panel reactive antibody score (%)
 - Expected post-transplant survival score (%)
 - Age group

- Primary vs. repeat transplant
 - Time on dialysis
2. Distribution of time in medical urgency classification before WL removal (minimum, 25th percentile, mean, standard deviation, median, 75th percentile, maximum)
 3. Waiting list outcomes for candidates placed in medical urgency status including:
 - Number and percentage of waiting list removals by removal reason
 - Median time to transplant calculated using the competing risks extension of Kaplan Meier survival
 - Number and percentage of deceased donor kidney transplants by kidney donor profile index sequence (0-20%, 21-34%, 35-85%, 86-100%)
 4. National unadjusted post-transplant graft and patient survival for medically urgent transplant recipients (compared to non-medically urgent transplants)
 5. National delayed graft function rates for medically urgent transplant recipients (compared to non-medically urgent transplants)

Donors Recovered in 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

For Kidney, Kidney-Pancreas, and Pancreas Donors/Organs:

1. Overall and by OPTN Region (and KDPI if KI or KP)
 - N/% of organs with a final acceptance
 - N/% of organs for which an acceptance came from an import match run
 - N/% of kidneys for which an acceptance came from a released match run (KI only)
2. For accepted organs (overall and stratified by OPTN region, donor KDPI, 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 October 15, 2021. Candidate information was submitted through Waitlist and on the Transplant Candidate Registration (TCR). Recipient and transplant data were submitted on the Transplant Recipient Registration (TRR). Donor data were submitted in DonorNet and on the Deceased Donor Registration (DDR). Match run data were submitted in DonorNet. Data are subject to change based on future submission or correction.

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

- Submission of the TCR within 30 days of listing
- Submission of the TRR within 60 days of waiting list removal
- Submission of the DDR within 30 days organ disposition submission

- Potential transplant recipient offers within 30 days of the match run date

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

Cohort

All kidney alone registrations added to the waiting list, ever waiting, or transplanted between December 01, 2020 and June 30, 2021 were included in this analysis, as were all deceased kidney donors recovered during this time. We also looked at all deceased donor kidney offers sent over this period. These dates were chosen to ensure policy eras were of uniform length.

Policy eras were defined as:

- Pre-Policy: December 01, 2020 to March 14, 2021
- Post-Policy: March 15, 2021 to June 30, 2021

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 January 1, 2021 and May 31, 2021. 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 sources.

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

Discard rates were defined as the number of deceased donor kidneys recovered for the purpose of transplant, but not transplanted, divided by the total number of kidneys recovered for transplant.

Utilization rates were defined as the number of kidneys transplanted divided by the total number of available kidneys. All donors were assumed to have two transplantable kidneys.

To determine the disposition of kidneys with a final acceptance, we identified the first kidney or kidney-pancreas acceptance for each donor's left and right kidney (sometimes accepted together). 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 was then classified as being transplanted with the 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 kidney match runs divided by the total amount of time in active status on the waiting list for kidney registrations ever waiting during the study period. These results are presented as offers per active patient year. 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 kidney match runs. These results are presented as acceptances per 1000 offers.

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 very challenging to determine.

Results

Waiting List

Figure 1 and **Table 1** show the number of registrations waiting for a kidney on the last day of each month from December 31, 2020 to June 30, 2021. Waiting list volume changed very little after policy implementation.

Figure 1: Kidney Registrations Waiting on the Last Day of Each Month, December 31, 2020 - June 30, 2021

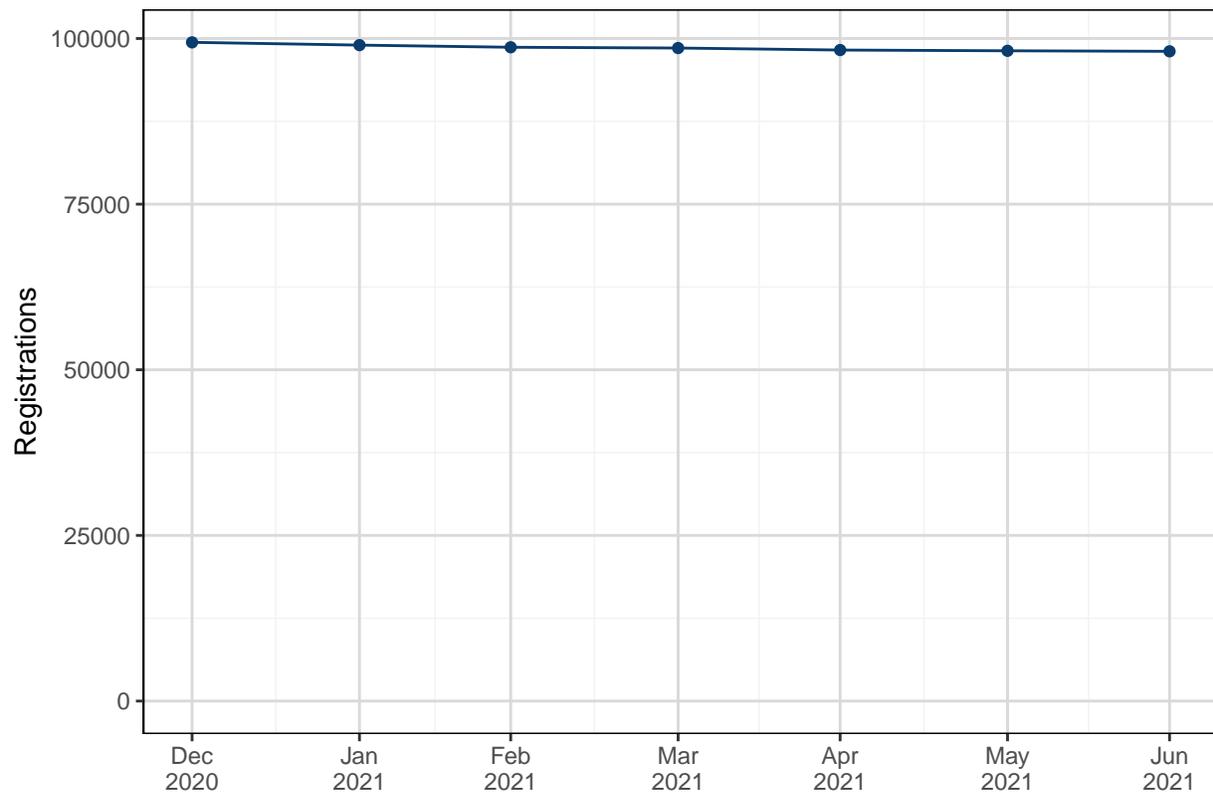


Table 1: Kidney Registrations Waiting on the Last Day of Each Month, December 31, 2020 - June 30, 2021

Date	Registrations
December 2020	99424
January 2021	99003
February 2021	98679
March 2021	98563
April 2021	98261
May 2021	98147
June 2021	98068

Figure 2 and **Table 2** show the number of registrations waiting for a kidney on the last day of each month from December 31, 2020 to June 30, 2021 by status. Roughly 58% of registrations were in active status both before and after policy implementation.

Figure 2: Kidney Registrations Waiting on the Last Day of Each Month by Status, December 31, 2020 - June 30, 2021

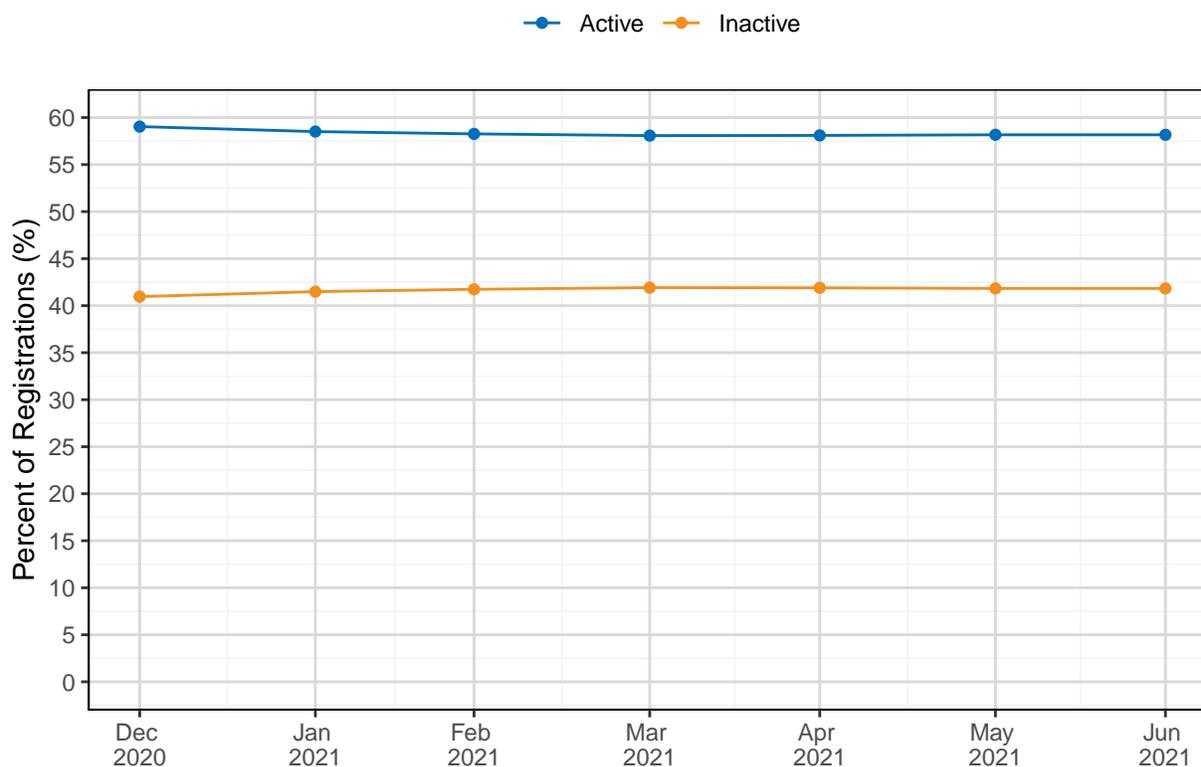


Table 2: Kidney Registrations Waiting on the Last Day of Each Month by Status, December 31, 2020 - June 30, 2021

Date	Active		Inactive		Total	
	N	%	N	%	N	%
December 2020	58699	59.04	40725	40.96	99424	100.00
January 2021	57927	58.51	41076	41.49	99003	100.00
February 2021	57494	58.26	41185	41.74	98679	100.00
March 2021	57246	58.08	41317	41.92	98563	100.00
April 2021	57092	58.10	41169	41.90	98261	100.00
May 2021	57092	58.17	41055	41.83	98147	100.00
June 2021	57045	58.17	41023	41.83	98068	100.00

Figure 3 and **Table 3** show the percentage of candidates waiting for a kidney on the last day of each month from December 31, 2020 to June 30, 2021 registered at more than one transplant hospital. Roughly 7% of candidates were multi-listed both before and after policy implementation.

Figure 3: Multi-Listed Kidney Candidates Waiting on the Last Day of Each Month, December 31, 2020 - June 30, 2021

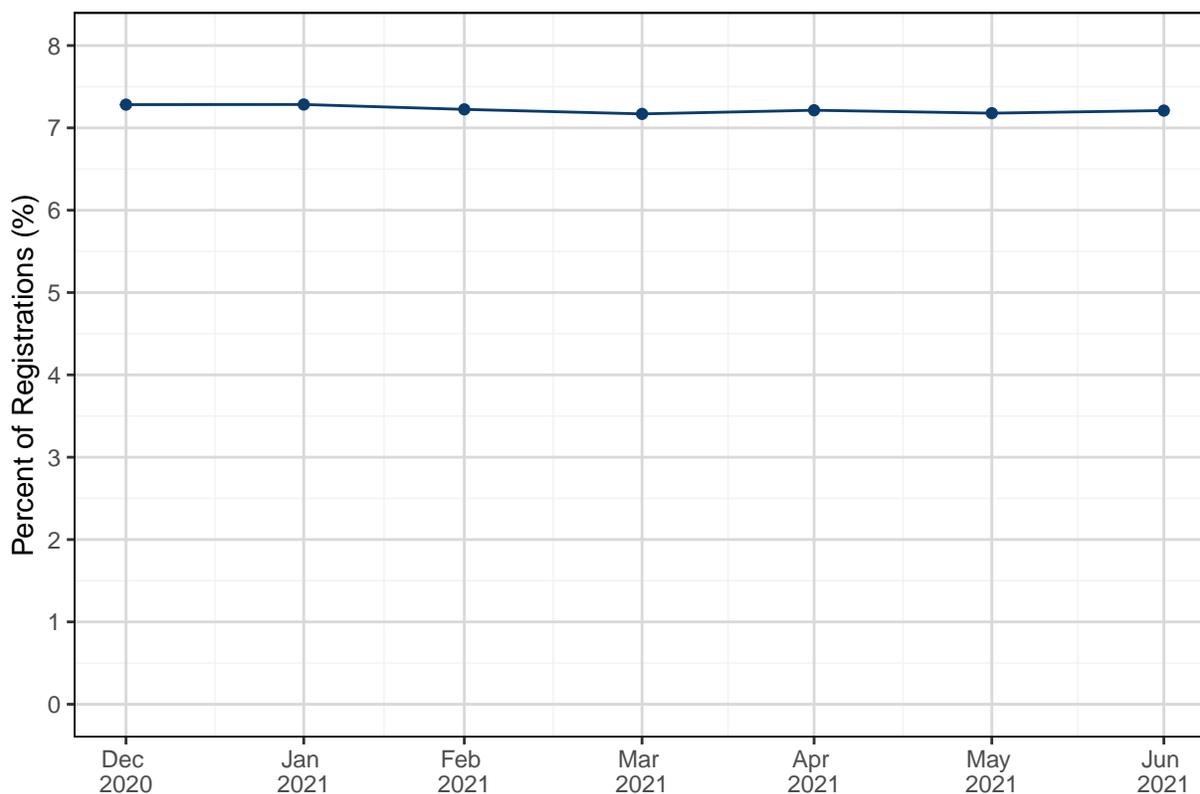


Table 3: Multi-Listed Kidney Candidates Waiting on the Last Day of Each Month, December 31, 2020 - June 30, 2021

Date	Multi-listing		Single Listing		Total	
	N	%	N	%	N	%
December 2020	6682	7.28	85078	92.72	91760	100.00
January 2021	6654	7.28	84699	92.72	91353	100.00
February 2021	6583	7.22	84536	92.78	91119	100.00
March 2021	6530	7.17	84546	92.83	91076	100.00
April 2021	6548	7.21	84221	92.79	90769	100.00
May 2021	6511	7.18	84191	92.82	90702	100.00
June 2021	6532	7.21	84065	92.79	90597	100.00

Figure 4 and **Table 4** show total kidney registrations added to the waiting list from December 01, 2020 to June 30, 2021 by policy era. There were 12101 registrations added to the waiting list pre-policy implementation, and another 14404 added post-policy.

Figure 4: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era

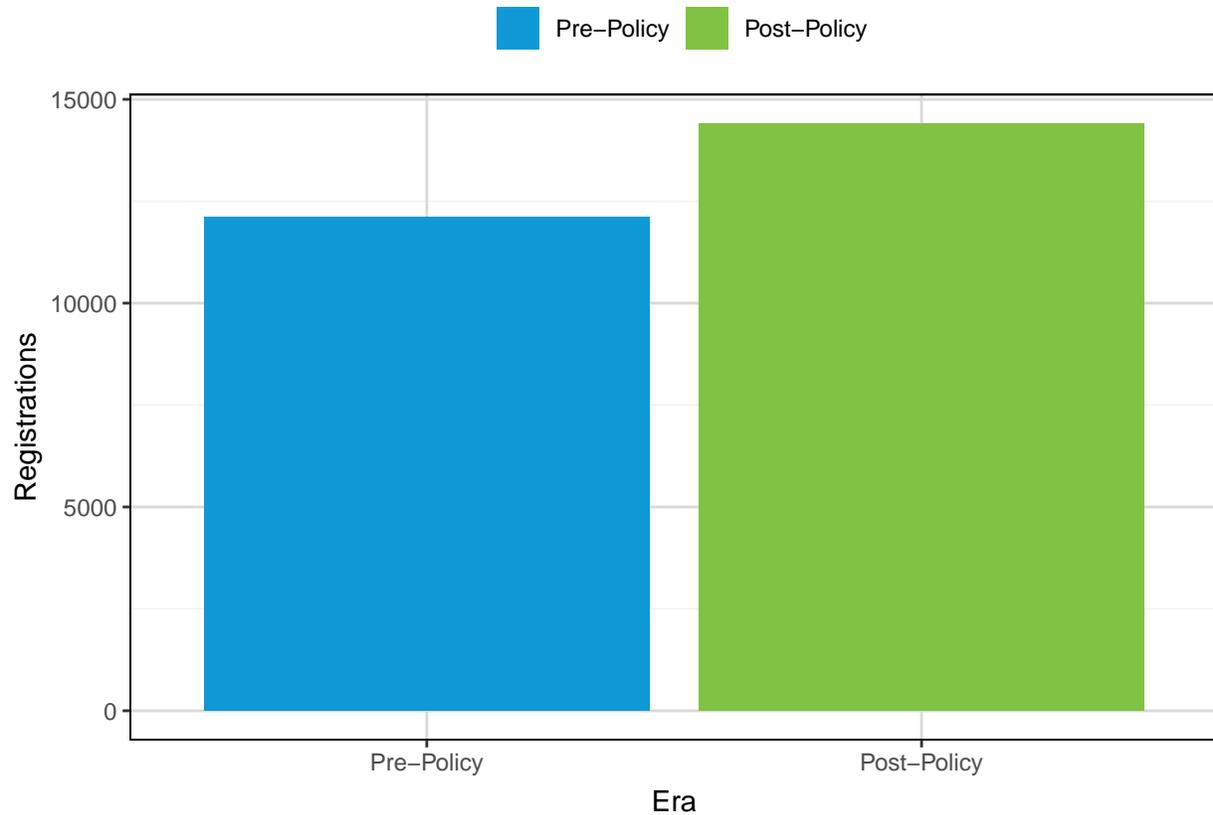
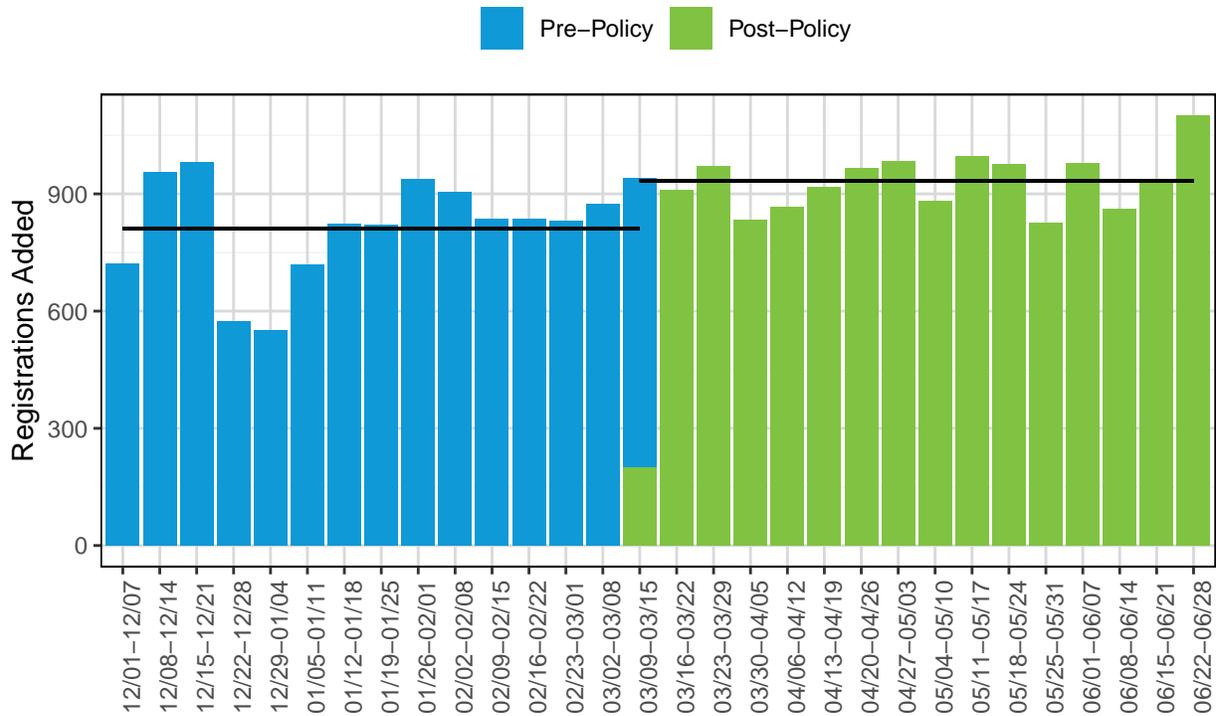


Table 4: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era

Era	Registrations
Pre-Policy	12101
Post-Policy	14404

Figure 5 shows weekly kidney registrations added from December 01, 2020 to June 28, 2021. The average number of registrations added per week was 811 pre-policy and 934 post-policy. A table showing registration added by week is provided in the **Appendix**.

Figure 5: Weekly Kidney Registrations Added December 01, 2020-June 30, 2021 by Policy Era



Lines represent the average number of registrations per week. Some weeks shown in the figure include federal holidays.

Figure 6 and **Table 5** show kidney registrations added to the waiting list from December 01, 2020 to June 30, 2021 by policy era and age at listing. For adult candidates, the volume of waiting list additions increased for each age group, and the distribution of age at listing remained stable pre- to post-policy implementation. Candidates aged 50-64 years accounted for the majority of waiting list additions overall both pre- and post-policy at 38.63% and 39.59% respectively.

The volume of pediatric additions aged 0-5 years increased after policy implementation from 90 to 122 registrations, and additions aged 12-17 increased from 234 to 262. Pediatric additions for candidates aged 6-11 decreased from 84 to 73 after the policy change.

Figure 6: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Age at Listing

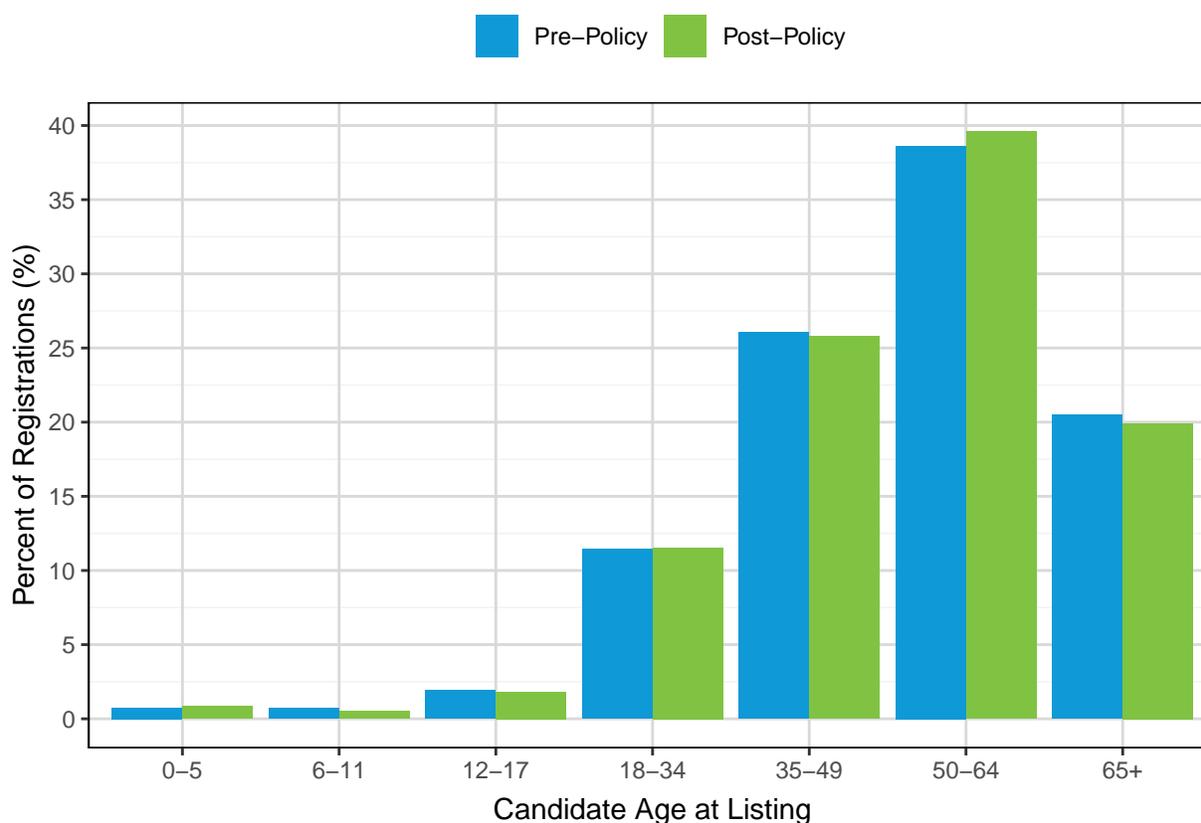


Table 5: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Age at Listing

Age at Listing	Pre-Policy		Post-Policy	
	N	%	N	%
0-5	90	0.74	122	0.85
6-11	84	0.69	73	0.51
12-17	234	1.93	262	1.82
18-34	1387	11.46	1663	11.55
35-49	3151	26.04	3713	25.78
50-64	4675	38.63	5702	39.59
65+	2480	20.49	2869	19.92
Total	12101	100.00	14404	100.00

Figure 7 and **Table 6** show kidney registrations added to the waiting list from December 01, 2020 to June 30, 2021 by policy era and gender. Male candidates accounted for the majority of additions both pre- and post-policy at roughly 62%.

Figure 7: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Gender

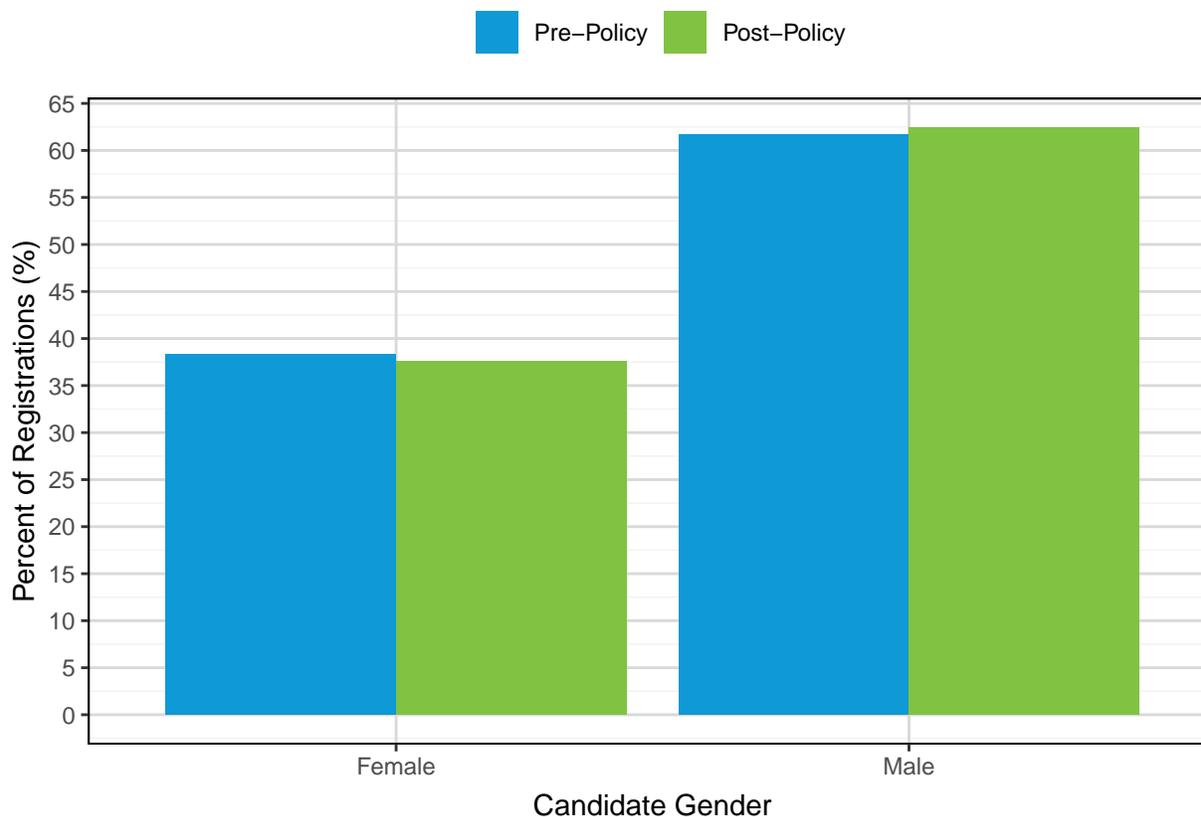


Table 6: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Gender

Gender	Pre-Policy		Post-Policy	
	N	%	N	%
Female	4640	38.34	5412	37.57
Male	7461	61.66	8992	62.43
Total	12101	100.00	14404	100.00

Figure 8 and **Table 7** show kidney registrations added to the waiting list from December 01, 2020 to June 30, 2021 by policy era and ethnicity. The number of additions increased for all ethnicities post-policy. The proportion of additions for Hispanic candidates after the policy change increased, from 17.27% to 19.08%, and the proportion of additions for White candidates decreased from 44.02% to 42.85%. The proportion of waiting list additions of other race/ethnicities did not change after implementation.

Figure 8: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Ethnicity

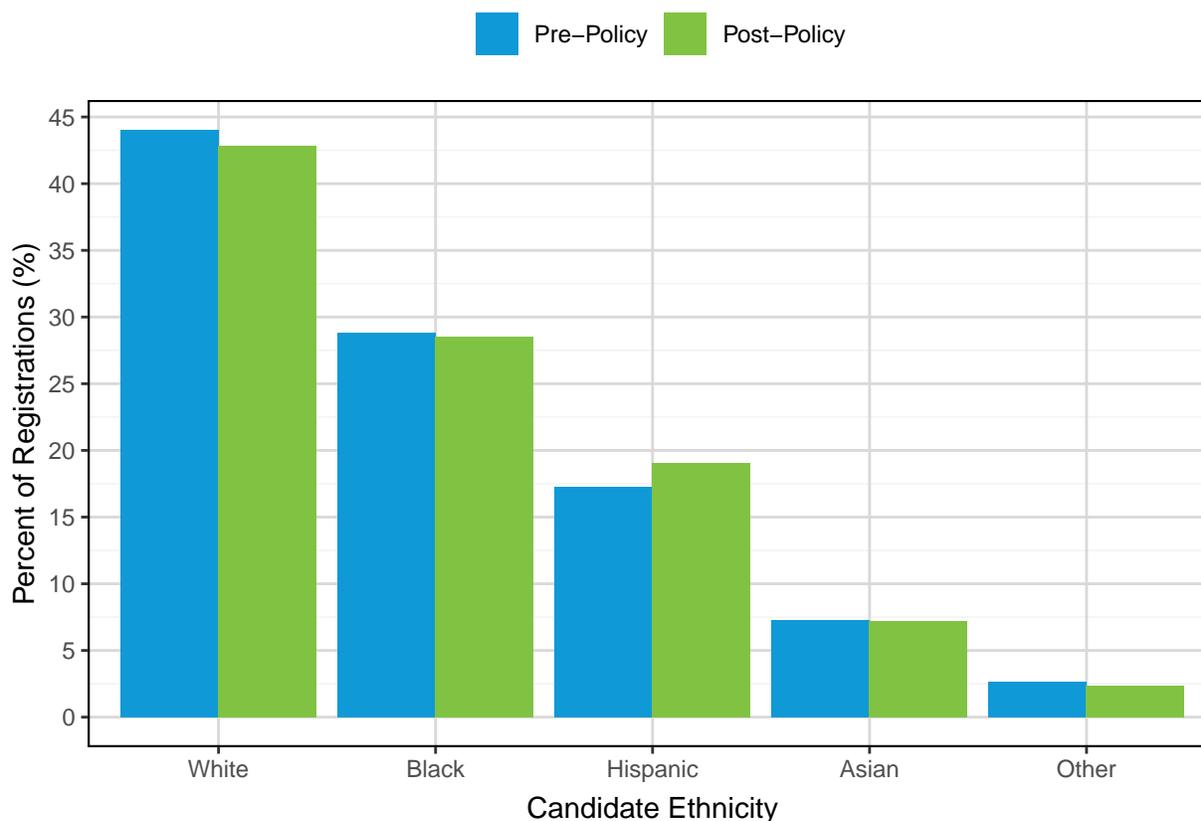


Table 7: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Ethnicity

Ethnicity	Pre-Policy		Post-Policy	
	N	%	N	%
White	5327	44.02	6172	42.85
Black	3486	28.81	4105	28.50
Hispanic	2090	17.27	2749	19.08
Asian	882	7.29	1038	7.21
Other	316	2.61	340	2.36
Total	12101	100.00	14404	100.00

Figure 9 and **Table 8** show kidney registrations added to the waiting list from December 01, 2020 to June 30, 2021 by policy era and blood type. There was an increase in the number of additions of each blood type after policy implementation, though the distribution of blood type across additions did not change.

Figure 9: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Blood Type

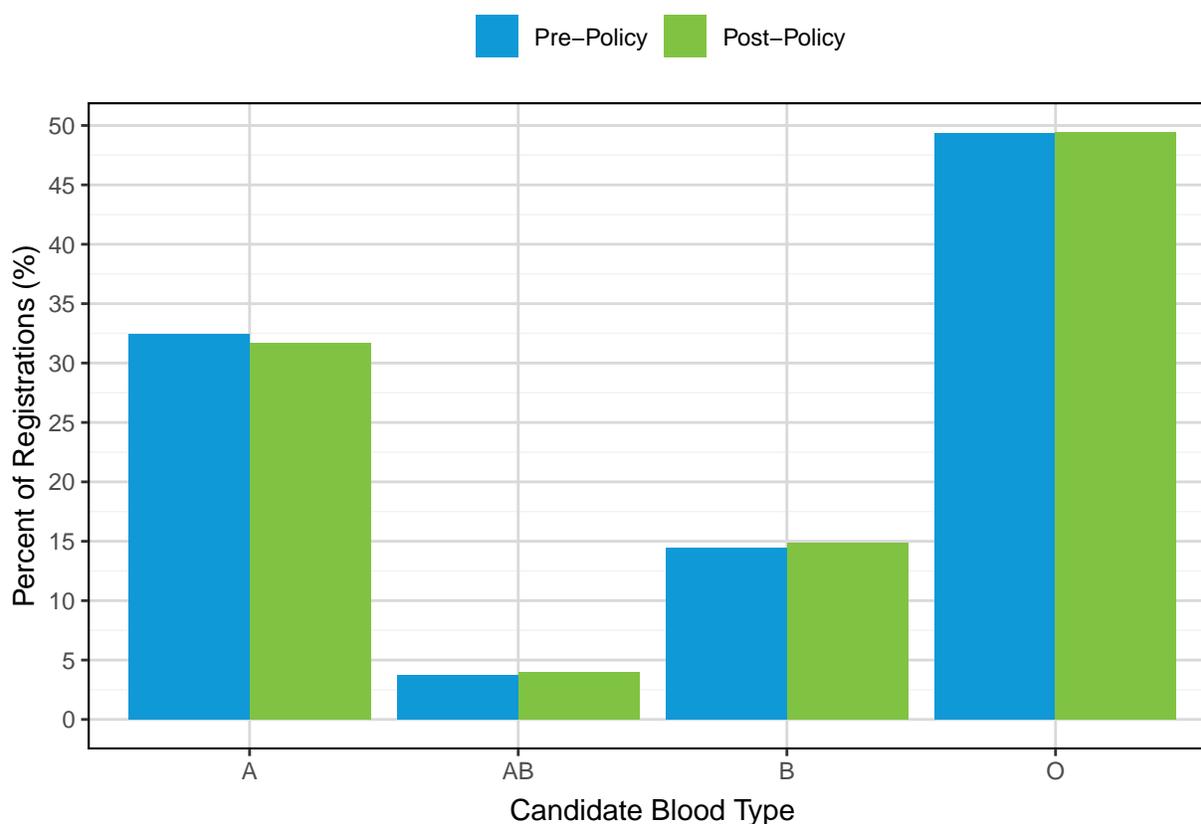


Table 8: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Blood Type

Blood Type	Pre-Policy		Post-Policy	
	N	%	N	%
A	3927	32.45	4569	31.72
AB	455	3.76	573	3.98
B	1746	14.43	2143	14.88
O	5973	49.36	7119	49.42
Total	12101	100.00	14404	100.00

Figure 10 and **Table 9** show kidney registrations added to the waiting list from December 01, 2020 to June 30, 2021 by policy era and CPRA at listing. The distribution of CPRA at listing did not change after policy implementation, with roughly 70% of additions having a CPRA of 0%. The number of additions increased post-policy across all CPRA categories.

Figure 10: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and CPRA at Listing

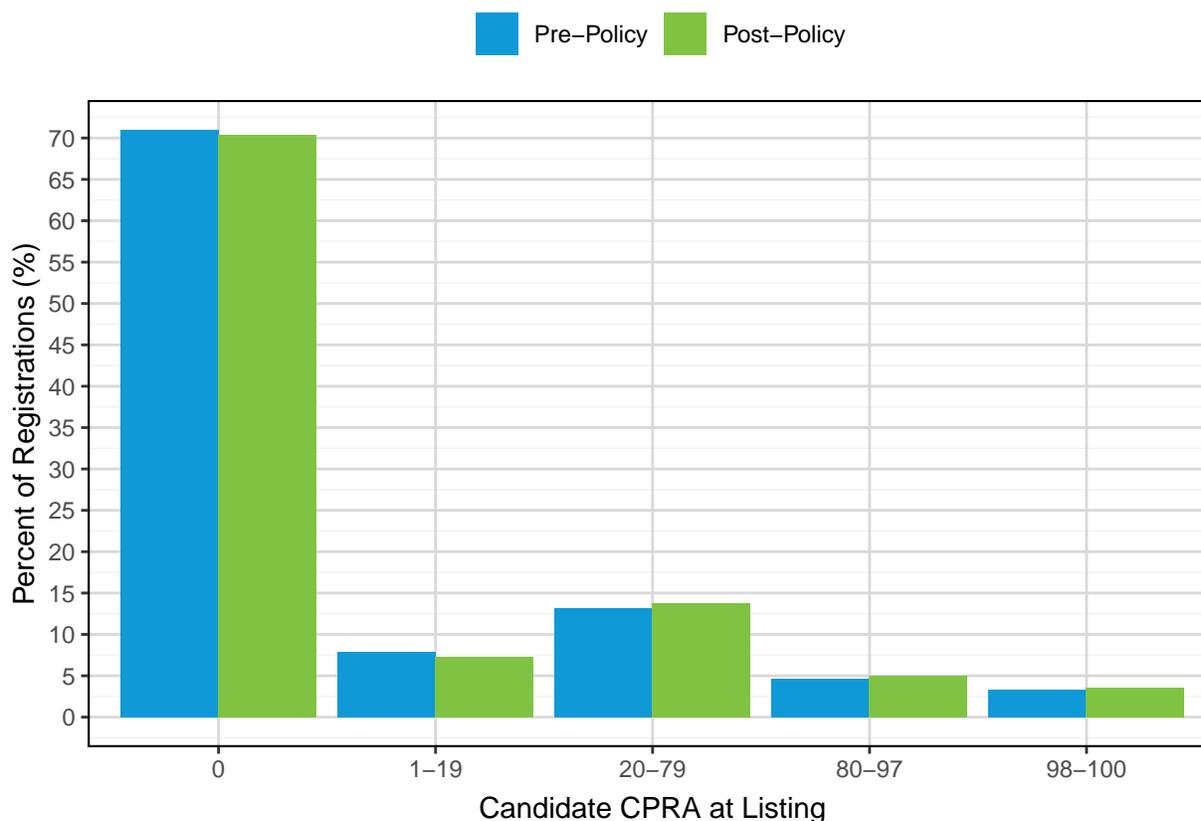


Table 9: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and CPRA at Listing

CPRA	Pre-Policy		Post-Policy	
	N	%	N	%
0	8588	70.97	10137	70.38
1-19	956	7.90	1052	7.30
20-79	1593	13.16	1986	13.79
80-97	559	4.62	712	4.94
98-100	405	3.35	517	3.59
Total	12101	100.00	14404	100.00

Figure 11 and **Table 10** show kidney registrations added to the waiting list from December 01, 2020 to June 30, 2021 by policy era and primary diagnosis at listing. Prior to policy implementation the majority of candidates listed were diagnosed with diabetes, but this decreased after policy implementation (31.81% to 30.45%). The proportion of candidates listed with a diagnosis other than diabetes, glomerular disease, hypertensive nephrosclerosis, or polycystic kidney disease increased from 30.47% to 31.32% post-policy. There was an increase in the number of additions for all diagnosis groups.

Figure 11: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Diagnosis at Listing

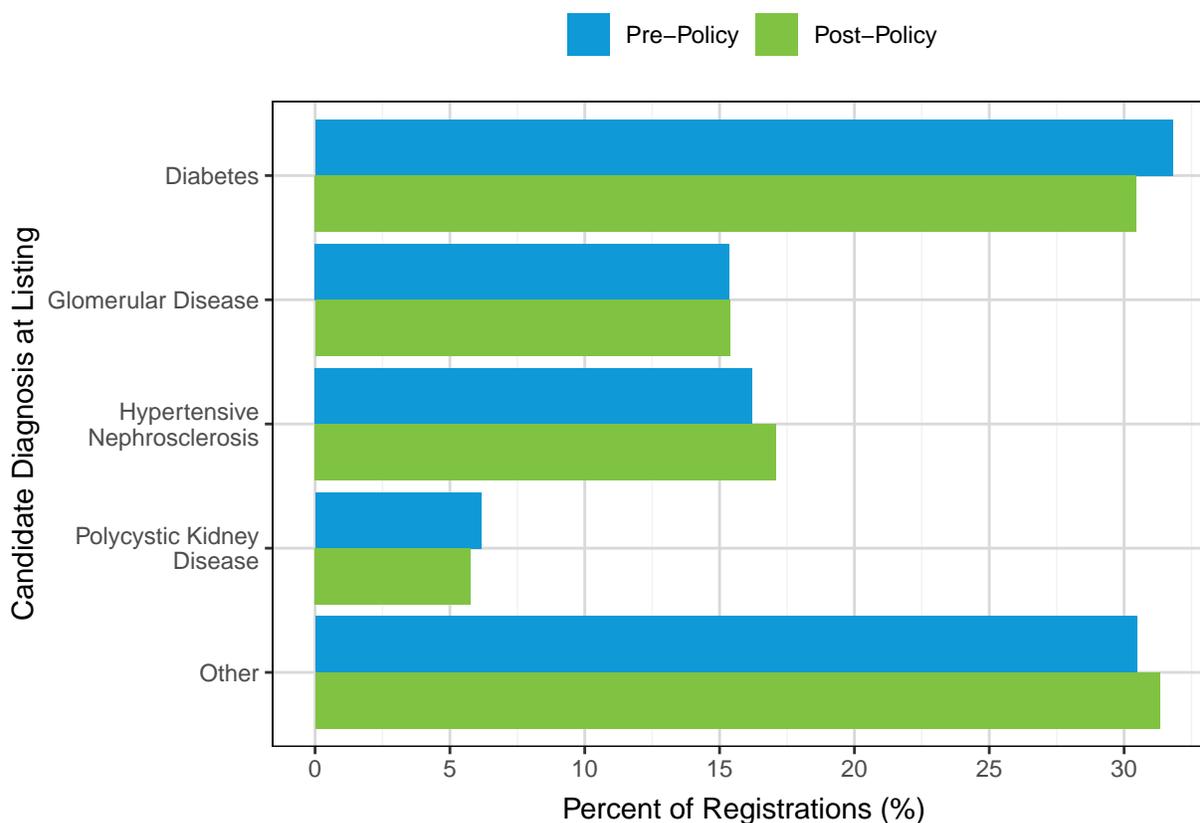


Table 10: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Diagnosis at Listing

Diagnosis	Pre-Policy		Post-Policy	
	N	%	N	%
Diabetes	3849	31.81	4386	30.45
Glomerular Disease	1859	15.36	2215	15.38
Hypertensive Nephrosclerosis	1961	16.21	2461	17.09
Polycystic Kidney Disease	745	6.16	831	5.77
Other	3687	30.47	4511	31.32
Total	12101	100.00	14404	100.00

Figure 12 and **Table 11** show kidney registrations added to the waiting list from December 01, 2020 to June 30, 2021 by policy era and dialysis status at listing as reported to the OPTN. Close to two thirds of candidates were on dialysis at listing both pre- and post-policy.

Figure 12: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Dialysis Status at Listing

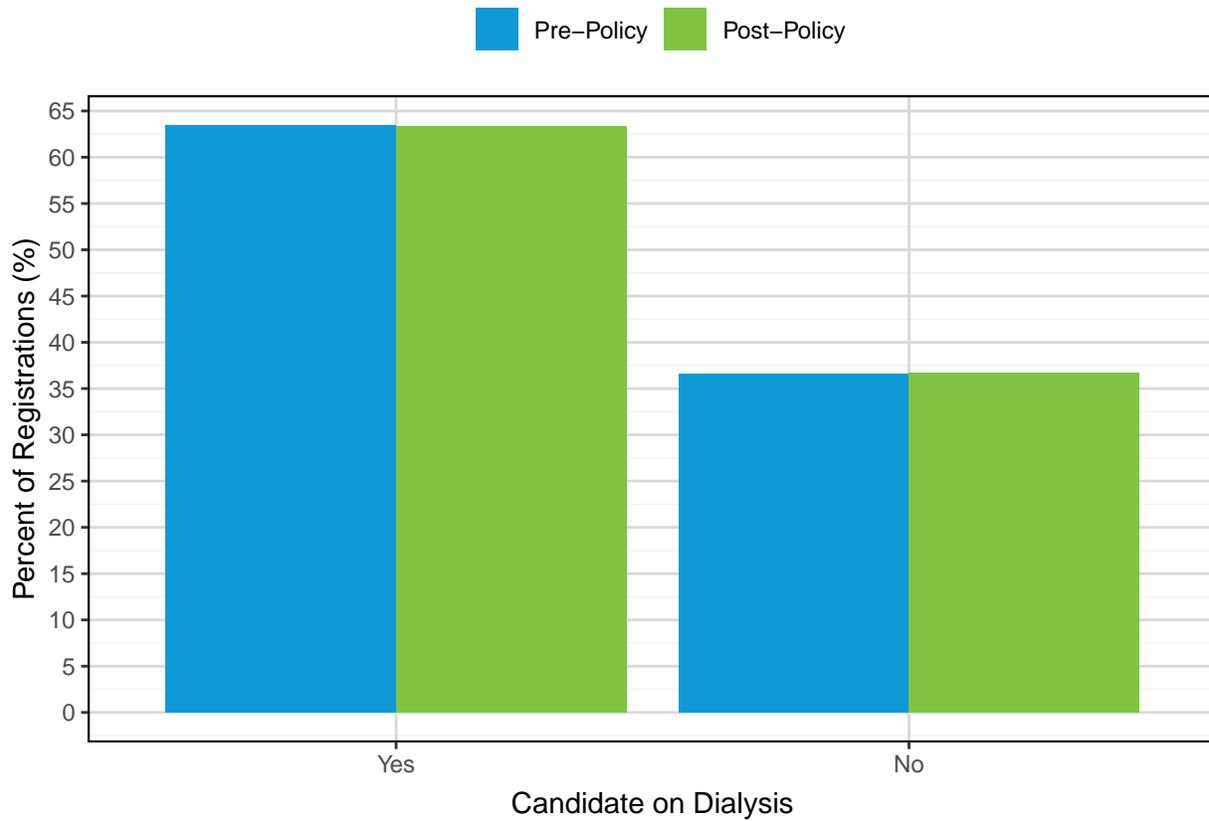
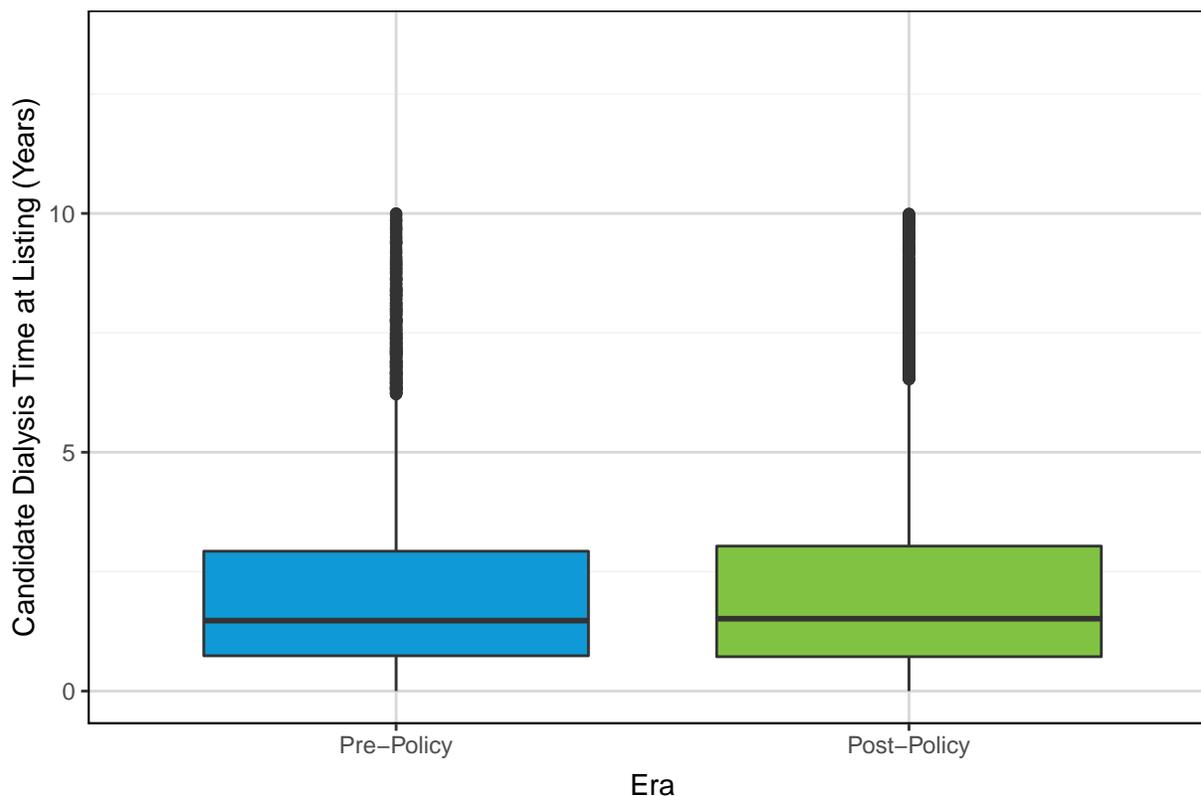


Table 11: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Dialysis Status at Listing

Dialysis	Pre-Policy		Post-Policy	
	N	%	N	%
Yes	7678	63.45	9118	63.30
No	4423	36.55	5286	36.70
Total	12101	100.00	14404	100.00

Figure 13 and **Table 12** show the distribution of time on dialysis at listing as reported to the OPTN for kidney registrations added to the waiting list from December 01, 2020 to June 30, 2021 by policy era. The view is restricted to the 99th percentile of dialysis time. Median dialysis time was roughly one and a half years both pre- and post-policy.

Figure 13: Distribution of Time on Dialysis (Years) at Listing for Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era



View restricted to 99th percentile.

Table 12: Distribution of Time on Dialysis (Years) at Listing for Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era

Era	N	Min	25th %-tile	Med	Mean	75th %-tile	Max
Pre-Policy	7678	0	0.76	1.53	2.44	3.12	27.52
Post-Policy	9118	0	0.74	1.57	2.52	3.26	28.34

Figure 14 and **Table 13** show kidney registrations added to the waiting list from December 01, 2020 to June 30, 2021 by policy era and insurance status at listing. The majority of candidates listed both pre- and post-policy were using public insurance.

Figure 14: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Insurance Status at Listing

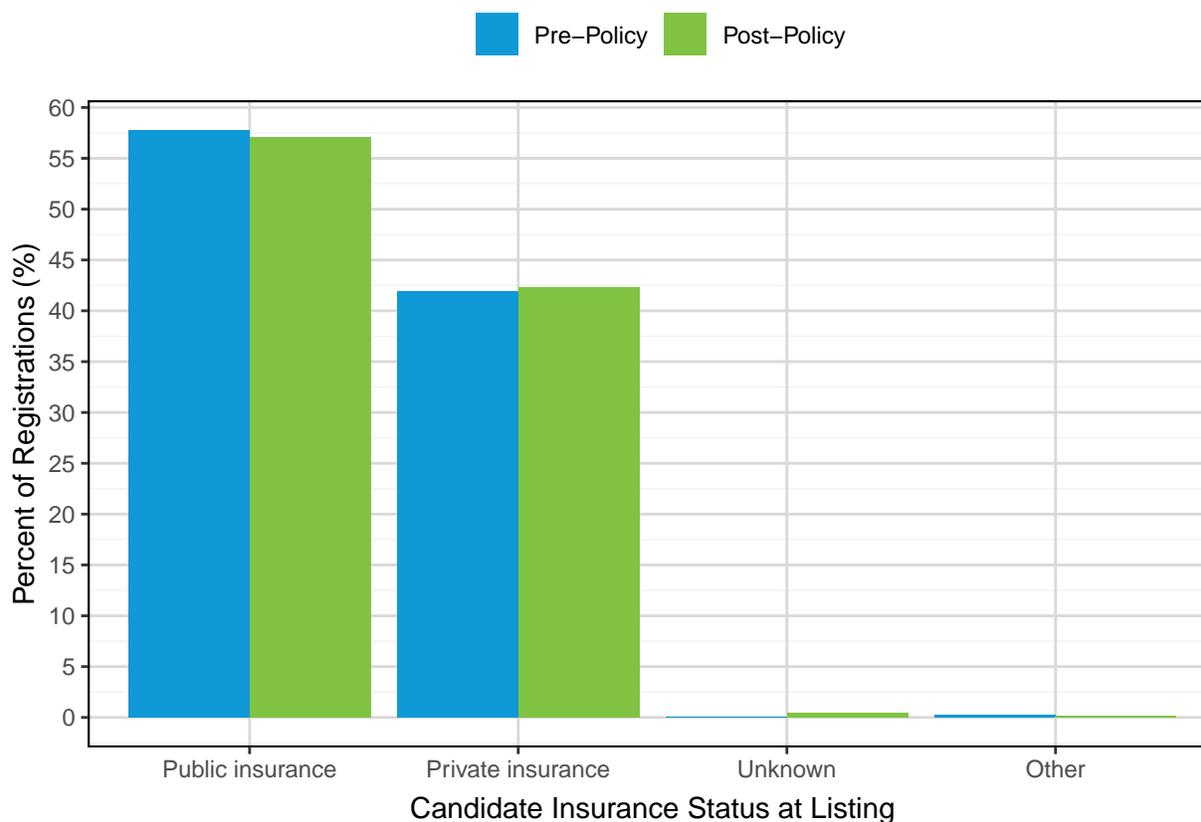


Table 13: Kidney Registrations Added December 01, 2020 - June 30, 2021 by Policy Era and Insurance Status at Listing

Insurance at Listing	Pre-Policy		Post-Policy	
	N	%	N	%
Public insurance	6989	57.76	8219	57.06
Private insurance	5074	41.93	6091	42.29
Unknown	11	0.09	66	0.46
Other	27	0.22	28	0.19
Total	12101	100.00	14404	100.00

Figure 15 and **Table 14** show deaths per 100 patient years for kidney registrations ever waiting between December 01, 2020 and May 31, 2021 by policy era. Overall waiting list mortality decreased from approximately 7 to 4.5 deaths per 100 patient years after policy implementation.

Figure 15: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era

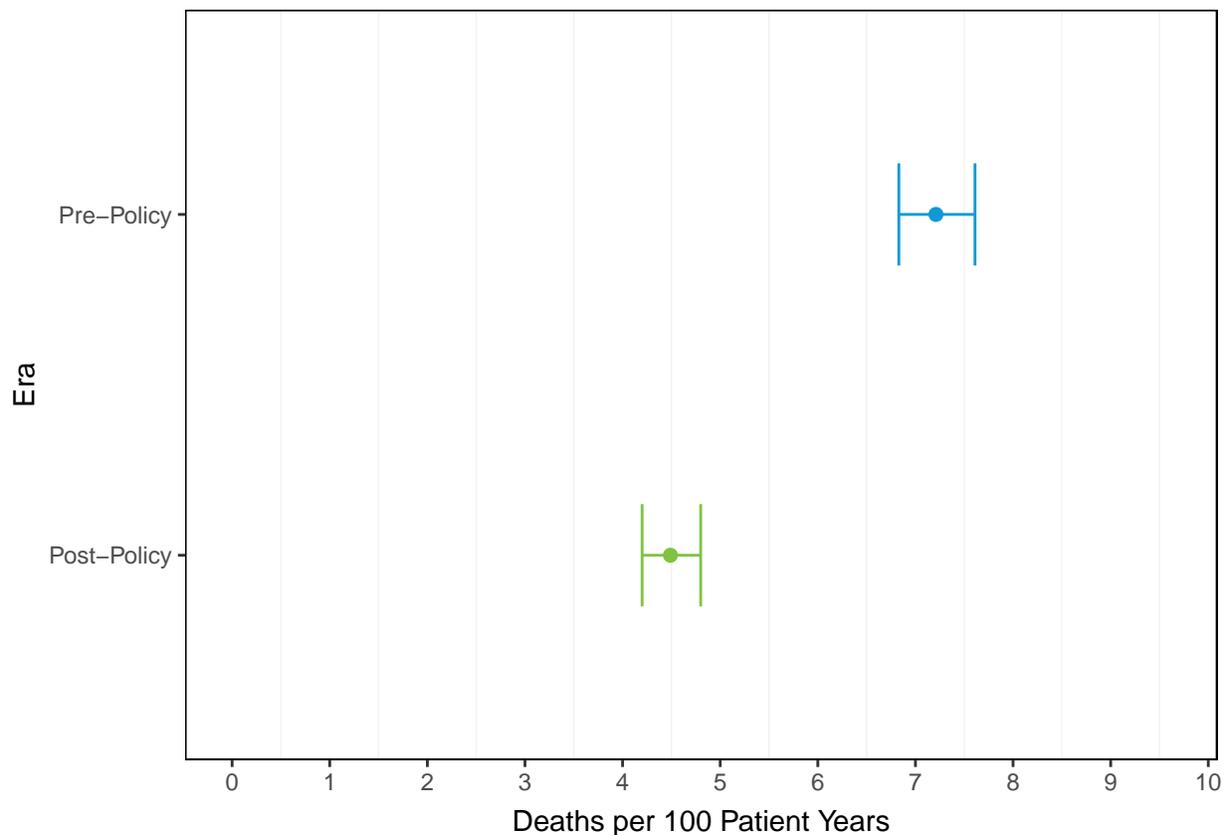


Table 14: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era

Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
Pre-Policy	97580	1307	7.21	(6.83, 7.61)
Post-Policy	98484	867	4.49	(4.2, 4.8)

Figure 16 and **Table 15** show deaths per 100 patient years for kidney registrations ever waiting between January 1, 2021 and May 31, 2021 by policy era and age at listing. Waiting list mortality decreased for candidates listed at 35 years or older after policy implementation. Waiting list mortality for candidates 34 years old and younger at listing did not change.

Figure 16: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and Age at Listing

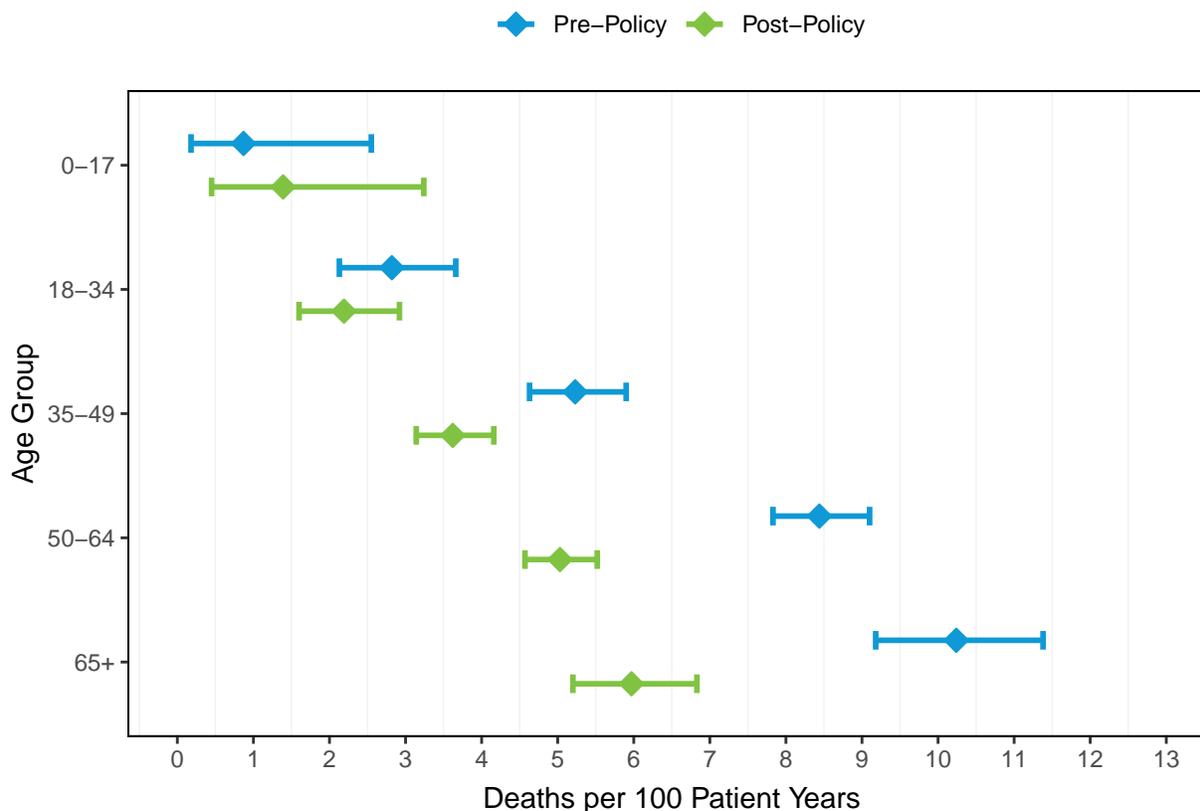


Table 15: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and Age at Listing

Age at Listing	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
0-17	Pre-Policy	1904	3	0.87	(0.18, 2.55)
	Post-Policy	1953	5	1.39	(0.45, 3.24)
18-34	Pre-Policy	10769	56	2.82	(2.13, 3.66)
	Post-Policy	10877	46	2.19	(1.6, 2.92)
35-49	Pre-Policy	27881	271	5.23	(4.63, 5.9)
	Post-Policy	28155	200	3.62	(3.14, 4.16)
50-64	Pre-Policy	44345	696	8.44	(7.83, 9.1)
	Post-Policy	44660	441	5.03	(4.57, 5.52)
65+	Pre-Policy	18255	342	10.24	(9.18, 11.38)
	Post-Policy	18430	213	5.97	(5.2, 6.83)

Figure 17 and **Table 16** show deaths per 100 patient years for kidney registrations ever waiting between January 1, 2021 and May 31, 2021 by policy era and gender. Waiting list mortality decreased from 6 to 4 deaths per 100 patient years for female candidates after the policy change, and from 8 to 5 deaths per 100 patients years for male candidates.

Figure 17: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and Gender

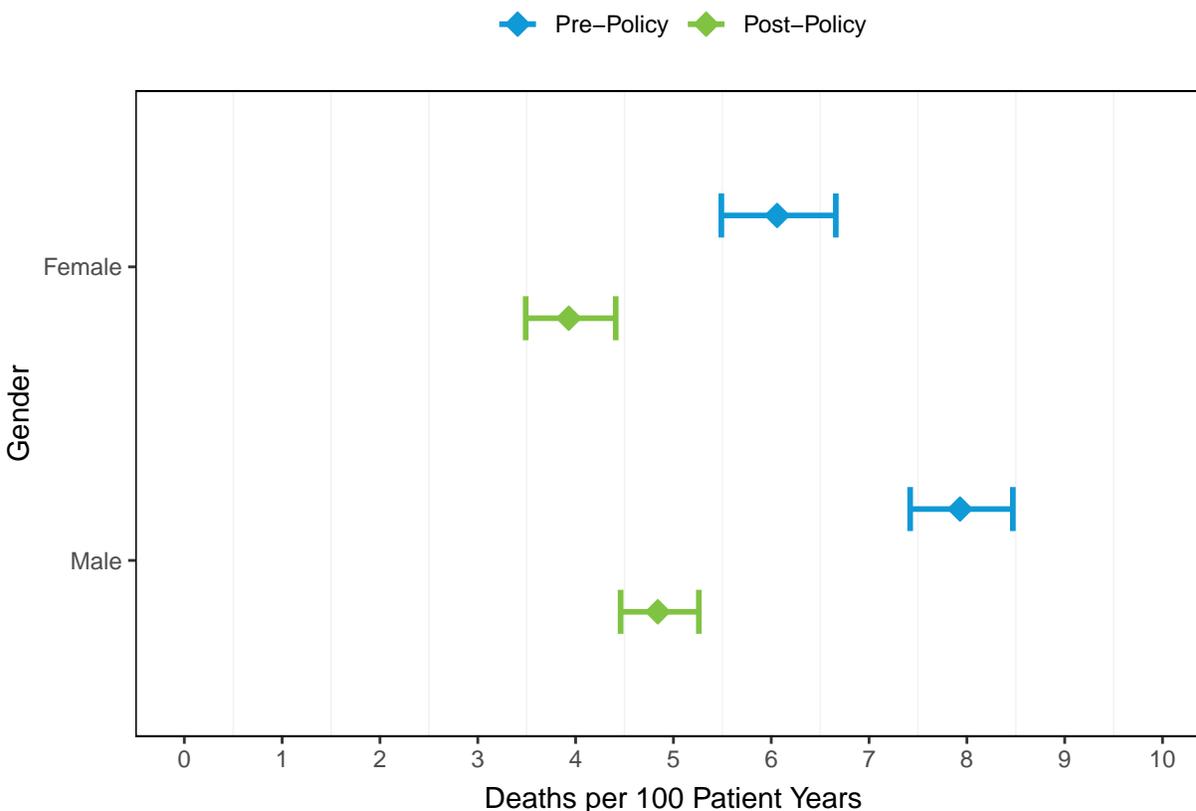


Table 16: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and Gender

Gender	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
Female	Pre-Policy	37362	421	6.06	(5.49, 6.66)
	Post-Policy	37687	291	3.93	(3.49, 4.41)
Male	Pre-Policy	60244	886	7.93	(7.42, 8.47)
	Post-Policy	60824	577	4.84	(4.46, 5.26)

Figure 18 and **Table 17** show deaths per 100 patient years for kidney registrations ever waiting between January 1, 2021 and May 31, 2021 by policy era and ethnicity. Waiting list mortality decreased significantly for White, Black, Hispanic, and Asian candidates after policy implementation. Waiting list mortality did not change for candidates of other ethnicities.

Figure 18: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and Ethnicity

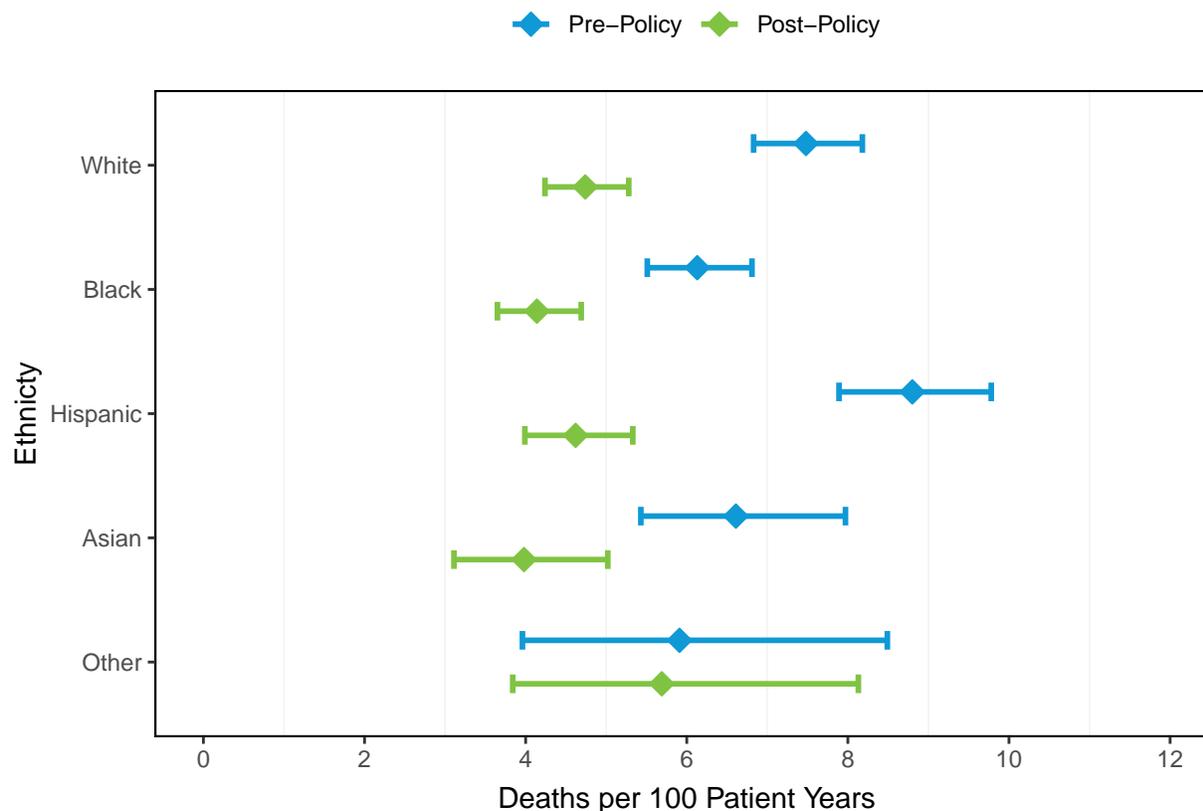
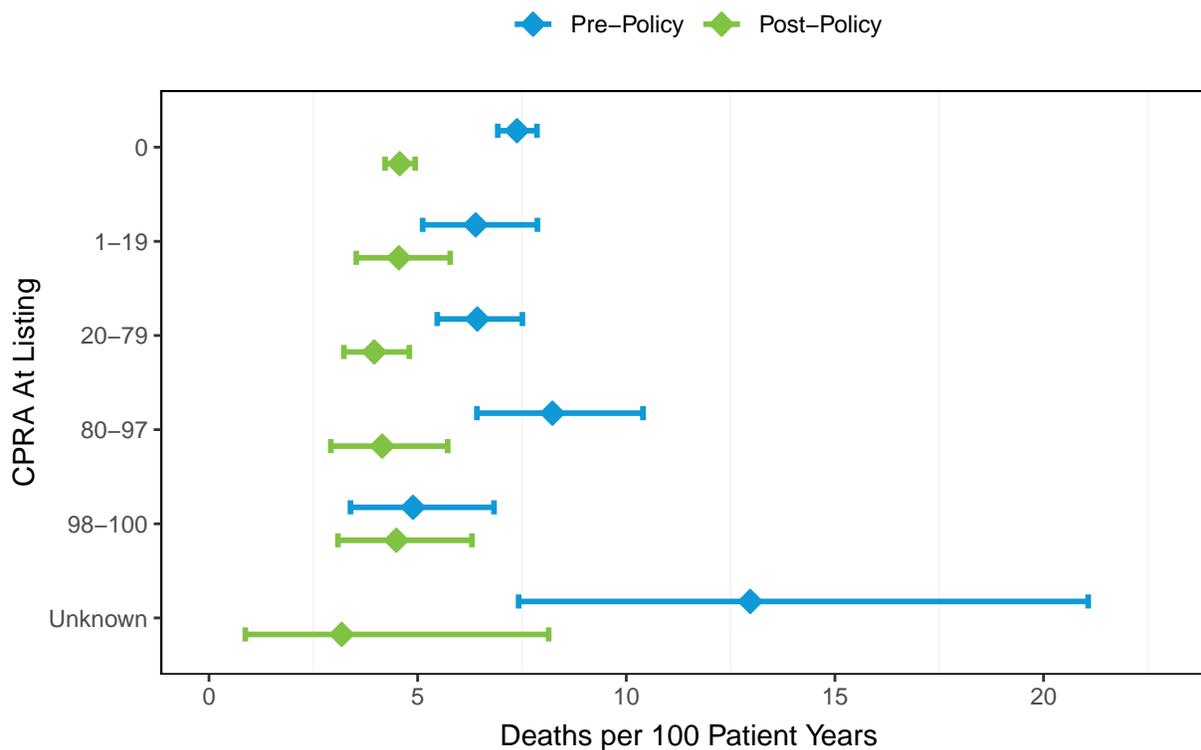


Table 17: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and Ethnicity

Ethnicity	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
White	Pre-Policy	35199	482	7.48	(6.83, 8.18)
	Post-Policy	35684	327	4.74	(4.24, 5.28)
Black	Pre-Policy	30625	351	6.13	(5.51, 6.81)
	Post-Policy	30801	252	4.14	(3.65, 4.69)
Hispanic	Pre-Policy	20752	342	8.80	(7.89, 9.78)
	Post-Policy	20891	190	4.62	(3.99, 5.33)
Asian	Pre-Policy	8822	110	6.61	(5.43, 7.97)
	Post-Policy	8920	71	3.98	(3.11, 5.02)
Other	Pre-Policy	2649	29	5.91	(3.96, 8.49)
	Post-Policy	2679	30	5.69	(3.84, 8.13)

Figure 19 and **Table 18** show deaths per 100 patient years for kidney registrations ever waiting between January 1, 2021 and May 31, 2021 by policy era and CPRA at listing. Waiting list mortality decreased for candidates with CPRA 0%, 20-79%, and 80-97% at listing after policy implementation. Waiting list mortality did not change for candidates with other CPRA values at listing.

Figure 19: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and CPRA at Listing



Candidates with unknown CPRA at listing were listed prior to October 1st, 2009, when CPRA was implemented in allocation

Table 18: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and CPRA at Listing

CPRA	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
0	Pre-Policy	70698	968	7.38	(6.92, 7.86)
	Post-Policy	71310	639	4.57	(4.22, 4.94)
1-19	Pre-Policy	7467	88	6.39	(5.12, 7.87)
	Post-Policy	7541	67	4.55	(3.53, 5.78)
20-79	Pre-Policy	13293	158	6.43	(5.47, 7.51)
	Post-Policy	13461	104	3.96	(3.23, 4.8)
80-97	Pre-Policy	4613	70	8.23	(6.42, 10.4)
	Post-Policy	4645	37	4.15	(2.92, 5.72)
98-100	Pre-Policy	3732	34	4.89	(3.39, 6.83)
	Post-Policy	3763	33	4.49	(3.09, 6.3)
Unknown	Pre-Policy	630	16	12.97	(7.42, 21.07)
	Post-Policy	602	4	3.18	(0.87, 8.14)

Figure 20 and **Table 19** show deaths per 100 patient years for kidney registrations ever waiting between January 1, 2021 and May 31, 2021 by policy era and blood type. Waiting list mortality decreased for candidates with blood type A, B, and O after policy implementation. Waiting list mortality did not change for candidates with blood type AB.

Figure 20: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and Blood Type

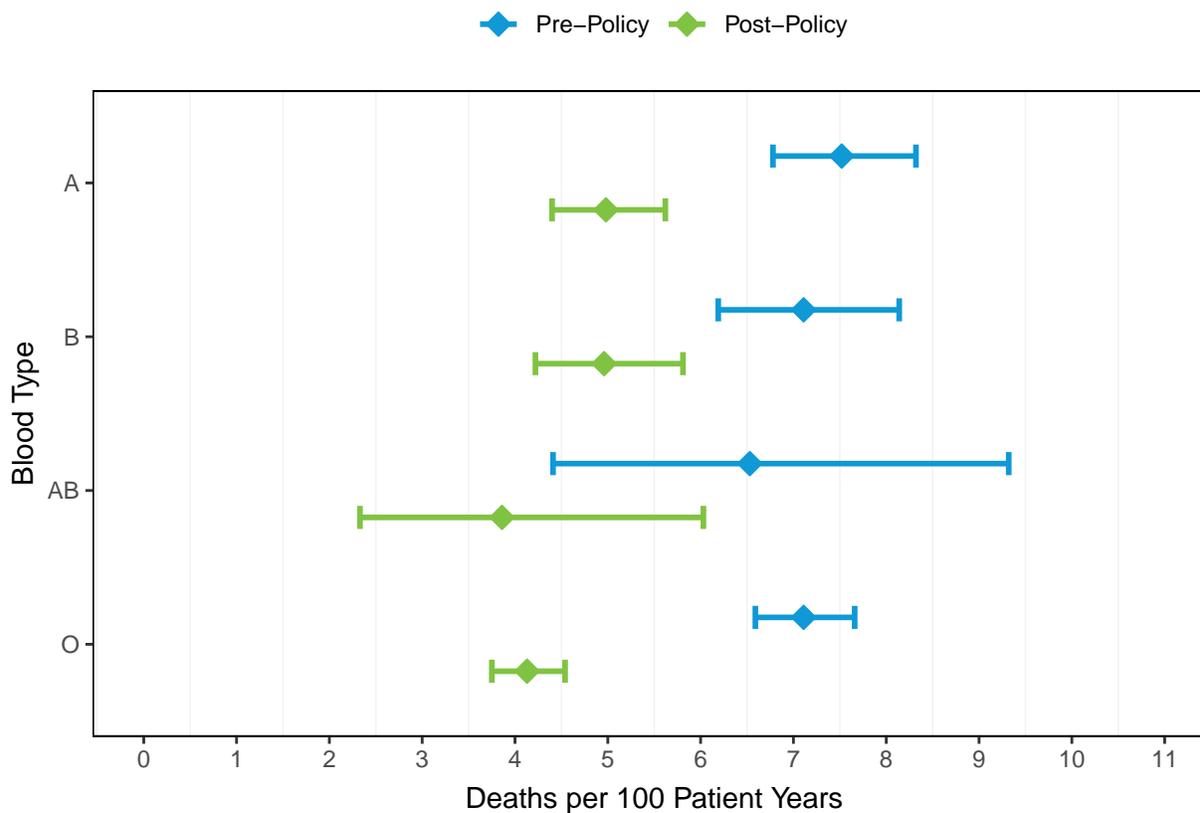


Table 19: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and Blood Type

Blood Type	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
A	Pre-Policy	27211	375	7.52	(6.78, 8.32)
	Post-Policy	27425	264	4.98	(4.4, 5.62)
B	Pre-Policy	15892	212	7.11	(6.19, 8.14)
	Post-Policy	16020	157	4.96	(4.22, 5.81)
AB	Pre-Policy	2545	30	6.53	(4.41, 9.32)
	Post-Policy	2643	19	3.86	(2.33, 6.03)
O	Pre-Policy	51971	690	7.11	(6.59, 7.66)
	Post-Policy	52439	428	4.13	(3.75, 4.54)

Figure 21 and **Table 20** show deaths per 100 patient years for kidney registrations ever waiting between January 1, 2021 and May 31, 2021 by policy era and EPTS at listing. Pediatric candidates and candidates with no EPTS assigned at listing due to being listed prior to May 27, 2014 are excluded. Waiting list mortality decreased from 9 to 5 deaths per 100 patient years for candidates with EPTS 21-100% at listing after policy implementation. Waiting list mortality did not change for candidates with EPTS 0-20% at listing.

Figure 21: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and EPTS at Listing

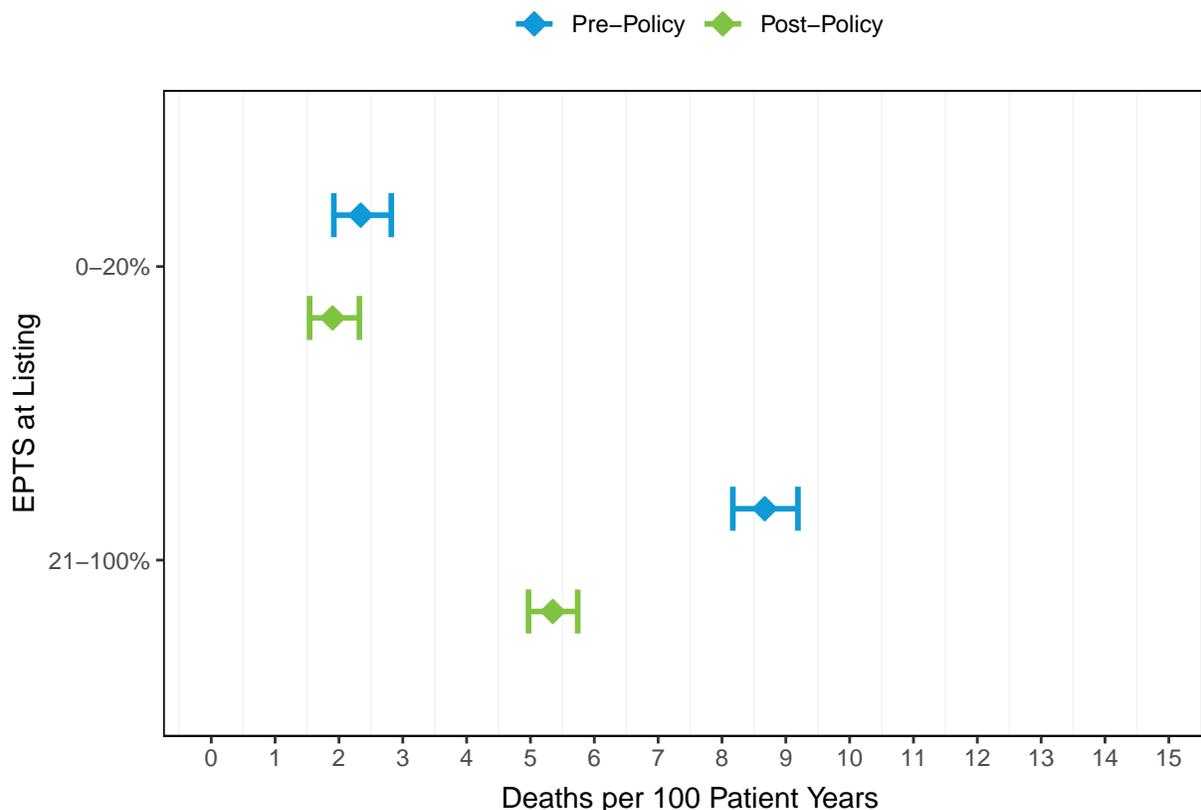


Table 20: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and EPTS at Listing

EPTS	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
0-20%	Pre-Policy	25283	109	2.34	(1.92, 2.82)
	Post-Policy	25800	95	1.90	(1.54, 2.32)
21-100%	Pre-Policy	70368	1127	8.67	(8.17, 9.19)
	Post-Policy	71279	744	5.35	(4.97, 5.74)

Figure 22 and **Table 21** show deaths per 100 patient years for kidney registrations ever waiting between January 1, 2021 and May 31, 2021 by policy era and time on dialysis at listing. Groupings are based on the 25th, 50th, and 75th percentiles of dialysis time (see **Table 12**). Waiting list mortality decreased for candidates listed pre-emptively and those on dialysis for any length of time at listing after policy implementation.

Figure 22: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and Dialysis Time at Listing

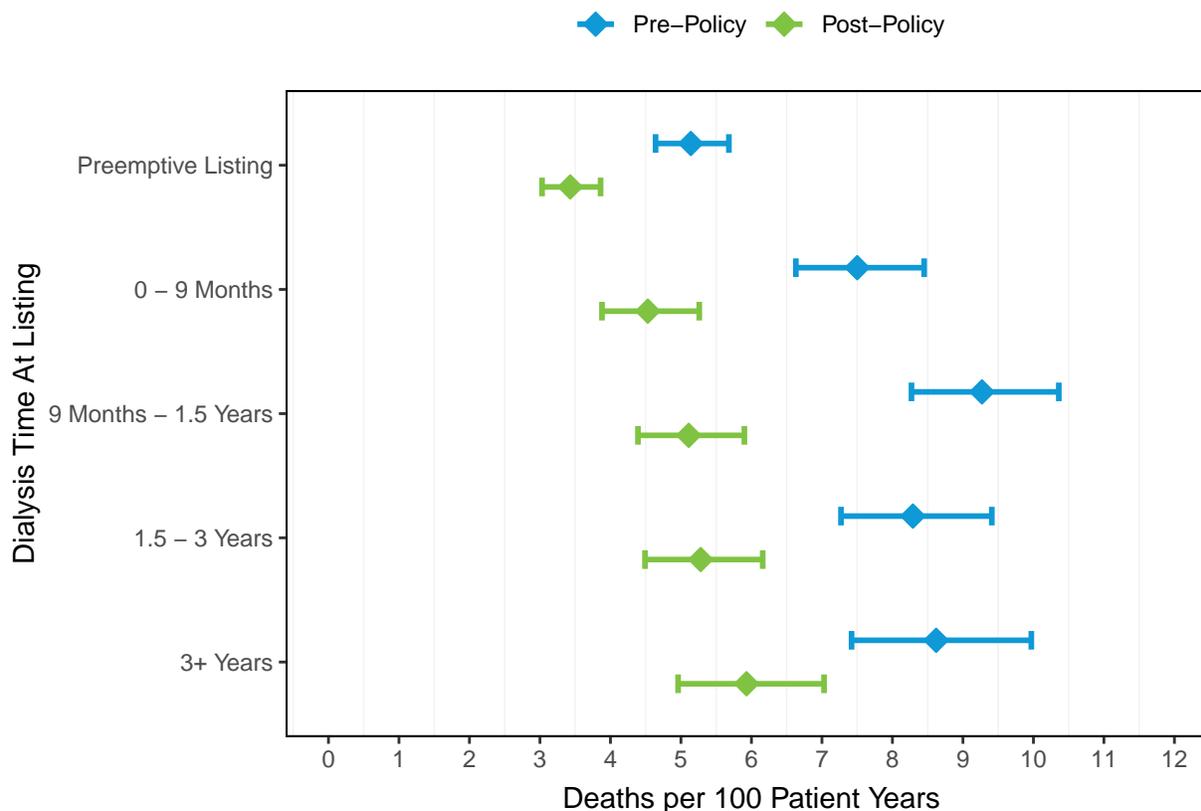


Table 21: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and Dialysis Time at Listing

Dialysis Time	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
Preemptive Listing	Pre-Policy	39888	383	5.14	(4.64, 5.68)
	Post-Policy	40415	274	3.43	(3.03, 3.86)
0 - 9 Months	Pre-Policy	19203	268	7.50	(6.63, 8.45)
	Post-Policy	19211	171	4.53	(3.88, 5.26)
9 Months - 1.5 Years	Pre-Policy	18194	313	9.27	(8.27, 10.36)
	Post-Policy	18161	183	5.11	(4.39, 5.9)
1.5 - 3 Years	Pre-Policy	15576	238	8.29	(7.27, 9.41)
	Post-Policy	15739	161	5.28	(4.49, 6.16)
3+ Years	Pre-Policy	11950	183	8.62	(7.42, 9.97)
	Post-Policy	12132	132	5.93	(4.96, 7.03)

Figure 23 and **Table 22** show deaths per 100 patient years for kidney registrations ever waiting between January 1, 2021 and May 31, 2021 by policy era and diagnosis. Waiting list mortality did not change for candidates diagnosed with glomerular disease, hypertensive nephrosclerosis, or polycystic kidney disease after policy implementation. Waiting list mortality decreased for candidates with diabetes or other diagnoses.

Figure 23: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and Diagnosis

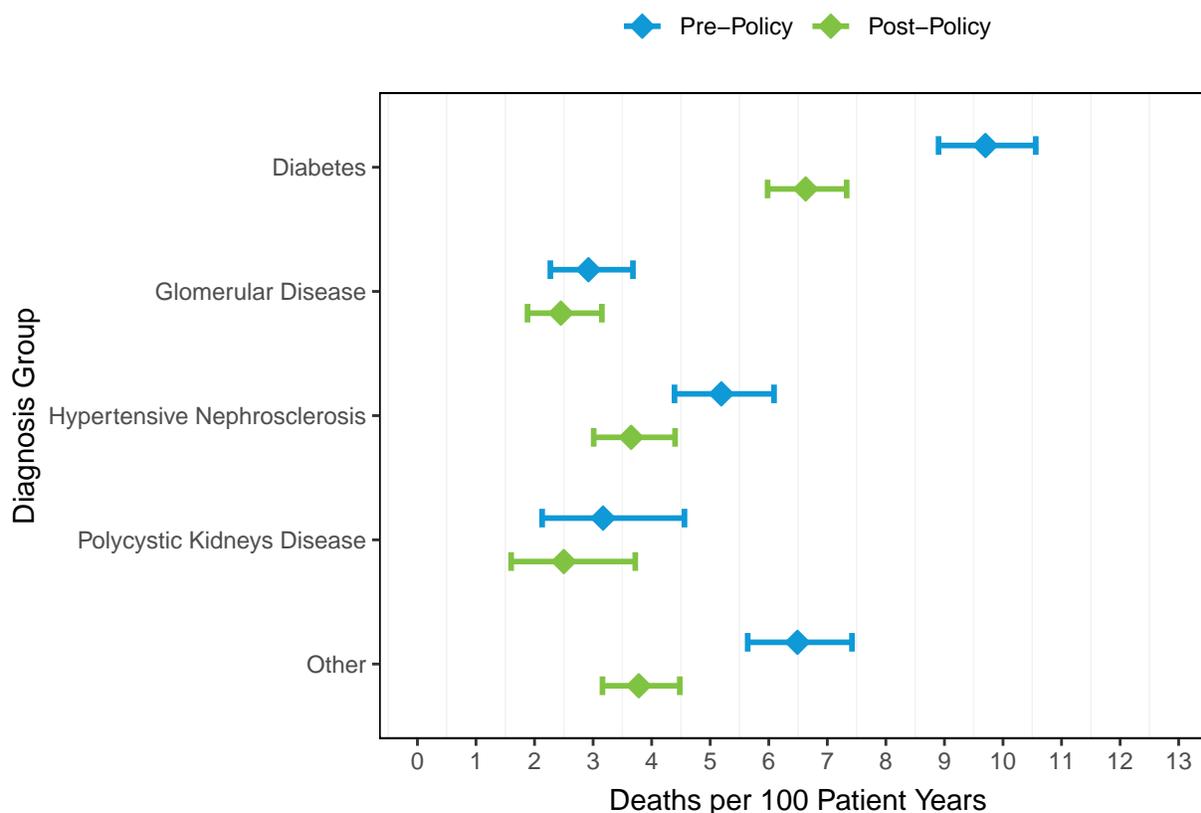


Table 22: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting January 1, 2021 - May 31, 2021 by Policy Era and Diagnosis

Diagnosis	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
Diabetes	Pre-Policy	36150	534	9.70	(8.9, 10.56)
	Post-Policy	36224	382	6.63	(5.98, 7.33)
Glomerular Disease	Pre-Policy	15817	70	2.92	(2.27, 3.68)
	Post-Policy	15987	62	2.45	(1.88, 3.15)
Hypertensive Nephrosclerosis	Pre-Policy	19082	151	5.19	(4.39, 6.09)
	Post-Policy	19165	111	3.65	(3.01, 4.4)
Polycystic Kidneys Disease	Pre-Policy	6001	29	3.17	(2.13, 4.56)
	Post-Policy	6053	24	2.50	(1.6, 3.72)
Other	Pre-Policy	21692	212	6.49	(5.64, 7.42)
	Post-Policy	21985	130	3.78	(3.16, 4.48)

Figure 24 and **Table 23** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between December 01, 2020 and June 30, 2021 by policy era. The overall deceased donor kidney transplant rate increased from 32 to 39 transplants per 100 active patient years.

Figure 24: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era

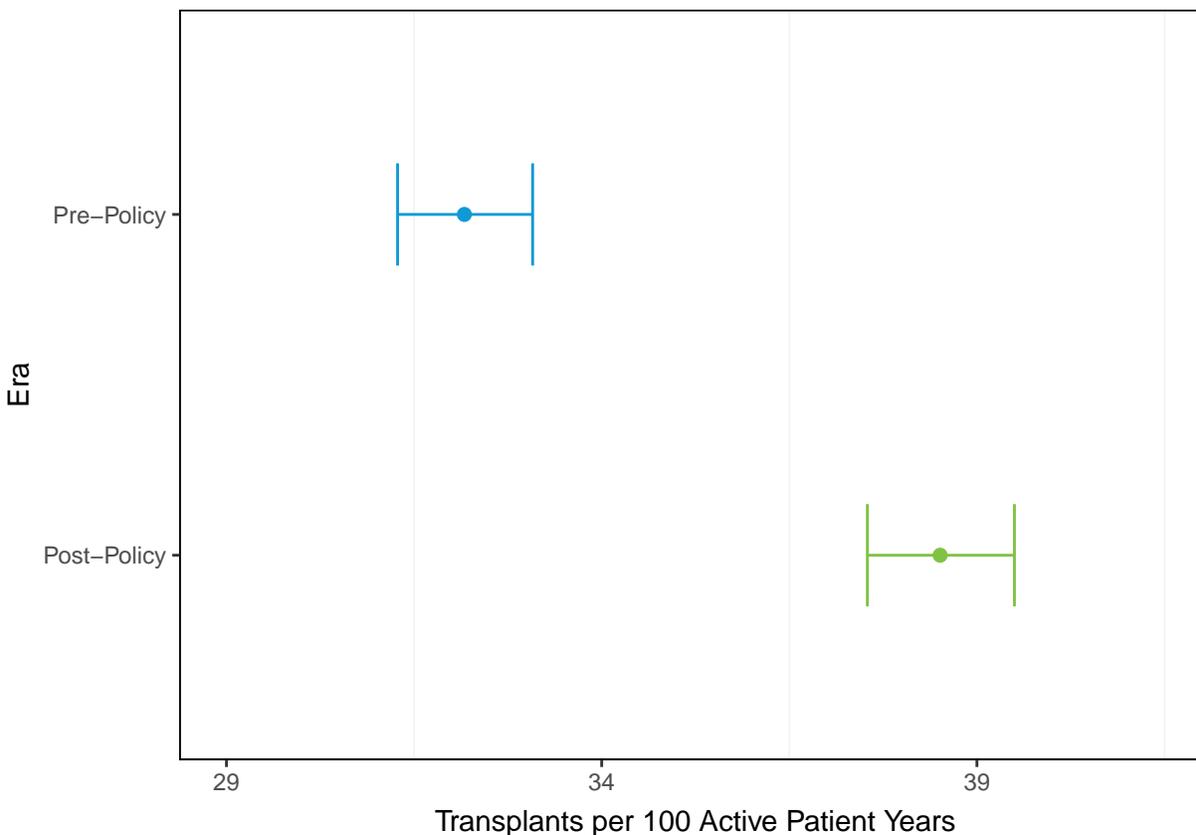


Table 23: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era

Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
Pre-Policy	65536	4921	32.17	(31.28, 33.08)
Post-Policy	66160	6019	38.51	(37.54, 39.5)

Figure 25 and **Table 24** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between December 01, 2020 and June 30, 2021 by policy era and age at listing. Transplant rates increased for candidates aged 18-34, 35-49, and 50-64 years at listing. There was no change in transplant rate for candidates aged 65 years or older.

Figure 25: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Age at Listing For Adult Candidates

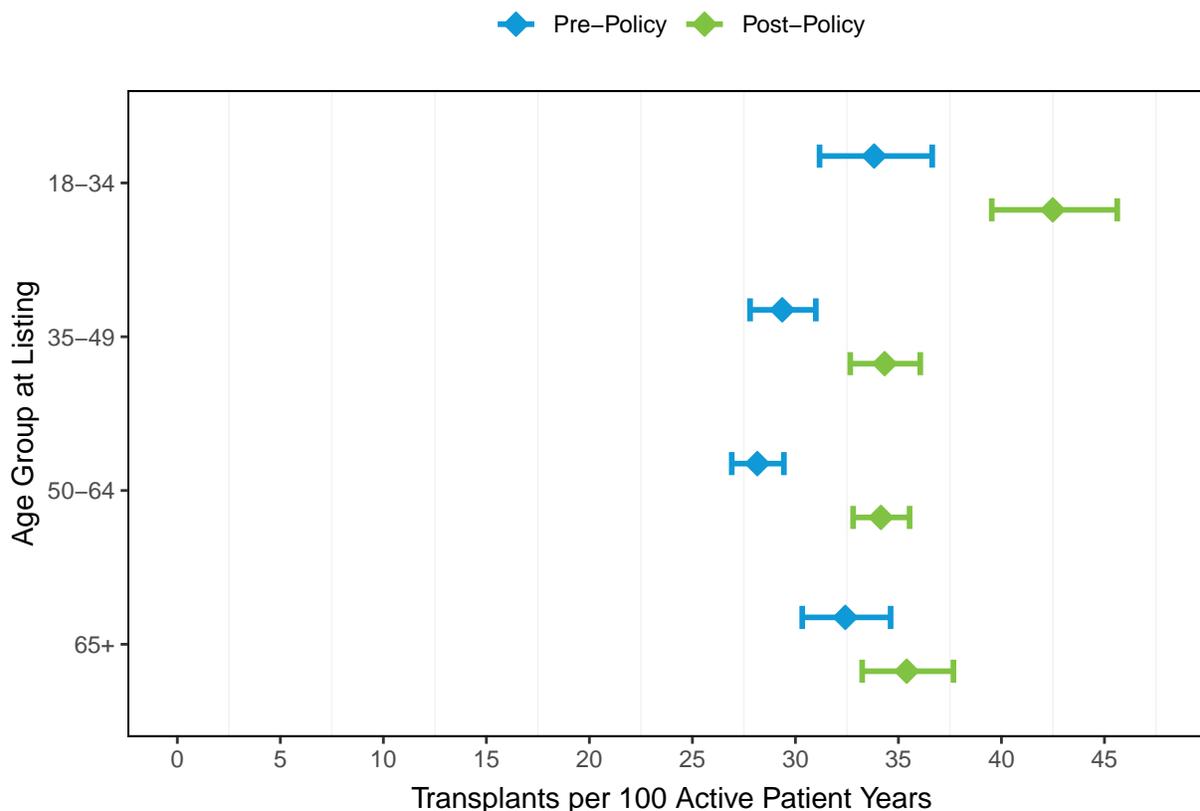


Table 24: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Age at Listing

Age at Listing	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
18-34	Pre-Policy	7608	598	33.82	(31.17, 36.64)
	Post-Policy	7699	763	42.49	(39.53, 45.62)
35-49	Pre-Policy	19246	1327	29.36	(27.8, 30.99)
	Post-Policy	19465	1588	34.33	(32.66, 36.06)
50-64	Pre-Policy	29470	1939	28.15	(26.91, 29.44)
	Post-Policy	29686	2404	34.15	(32.8, 35.54)
65+	Pre-Policy	12149	895	32.42	(30.33, 34.62)
	Post-Policy	12219	999	35.40	(33.24, 37.67)

Figure 26 and **Table 25** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between December 01, 2020 and June 30, 2021 by policy era and gender. The transplant rate for female registrations increased from 33 to 42 transplants per 100 active patient years. The rate for male registrations increased from 32 to 37 transplants per 100 active patient years.

Figure 26: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Gender

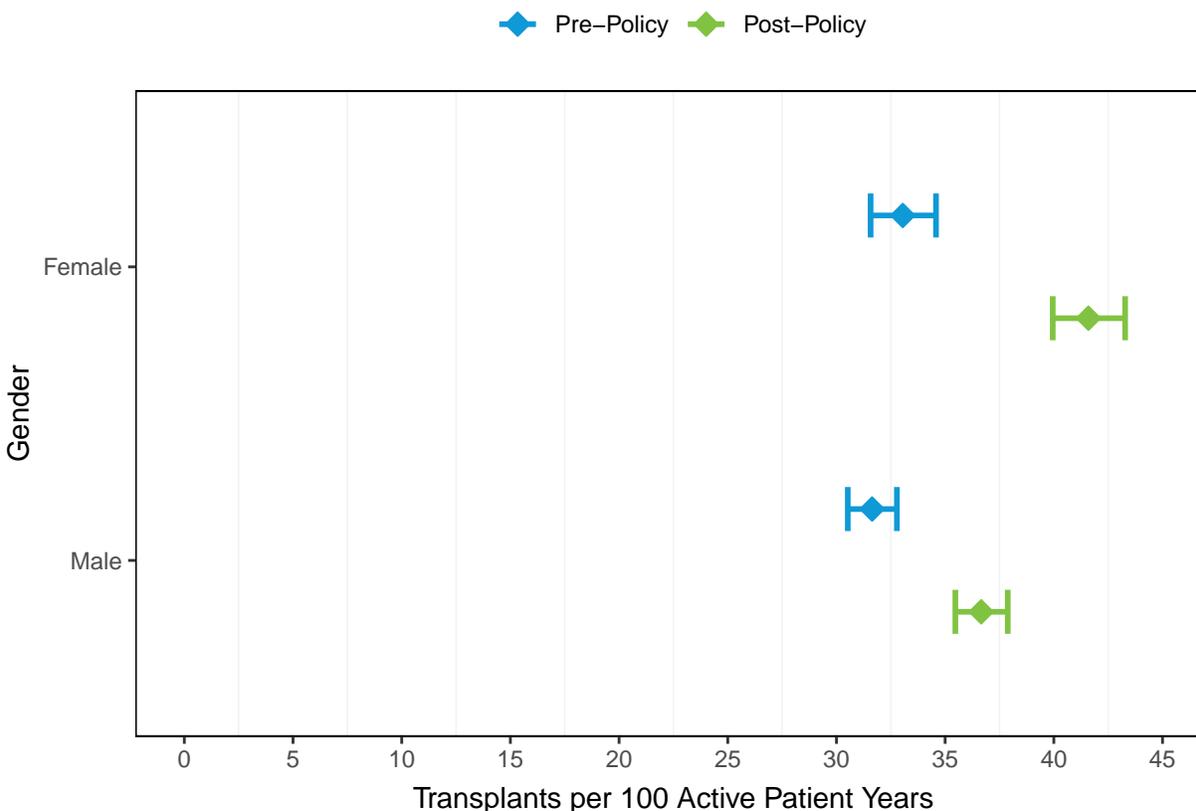


Table 25: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Gender

Gender	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
Female	Pre-Policy	24338	1882	33.05	(31.57, 34.58)
	Post-Policy	24651	2423	41.59	(39.95, 43.28)
Male	Pre-Policy	41221	3039	31.64	(30.52, 32.78)
	Post-Policy	41533	3596	36.66	(35.47, 37.88)

Figure 27 and **Table 26** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between December 01, 2020 and June 30, 2021 by policy era and ethnicity. The transplant rate for Black and Hispanic registrations increased from 32 to 40 and 27 to 36 transplants per 100 active patient years respectively. The transplant rate for Asian registrations increased from 23 to 29 transplants per 100 active patient years. There was no change in transplant rate for registrations of other ethnicities.

Figure 27: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Ethnicity

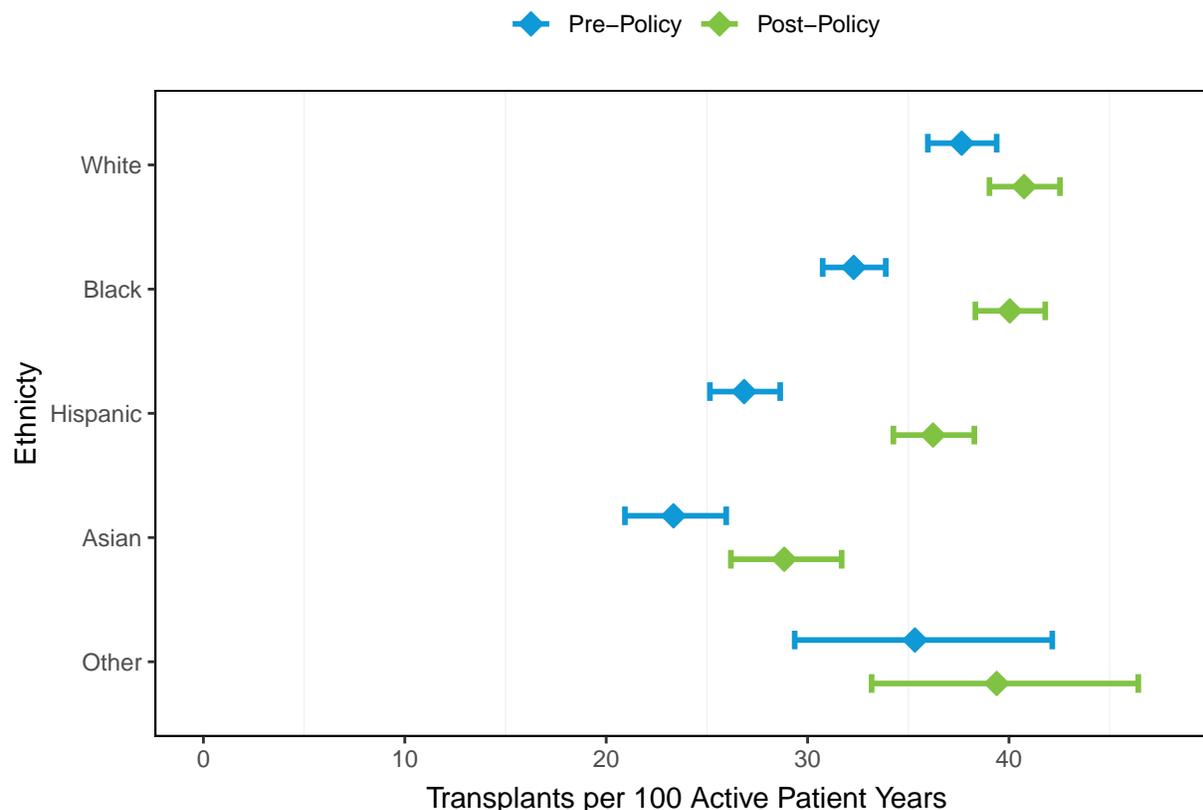


Table 26: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Ethnicity

Ethnicity	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
White	Pre-Policy	22431	1884	37.65	(35.97, 39.39)
	Post-Policy	22792	2106	40.75	(39.03, 42.53)
Black	Pre-Policy	21520	1648	32.29	(30.75, 33.88)
	Post-Policy	21677	2074	40.04	(38.33, 41.8)
Hispanic	Pre-Policy	14332	925	26.85	(25.15, 28.64)
	Post-Policy	14379	1263	36.23	(34.26, 38.28)
Asian	Pre-Policy	6001	341	23.34	(20.93, 25.96)
	Post-Policy	6075	434	28.84	(26.19, 31.69)
Other	Pre-Policy	1555	123	35.33	(29.36, 42.15)
	Post-Policy	1563	142	39.39	(33.18, 46.42)

Figure 28 and **Table 27** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between December 01, 2020 and June 30, 2021 by policy era and CPRA at listing. The largest increase in transplant rate was seen for registrations with CPRA 80-97% at listing, going from 37 to 73 transplants per 100 active patient years. Transplant rates also increased for registrations with CPRA 0% and 20-79%, going from 31 to 36 and 31 to 39 transplants per 100 active patient years respectively.

Figure 28: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and CPRA at Listing

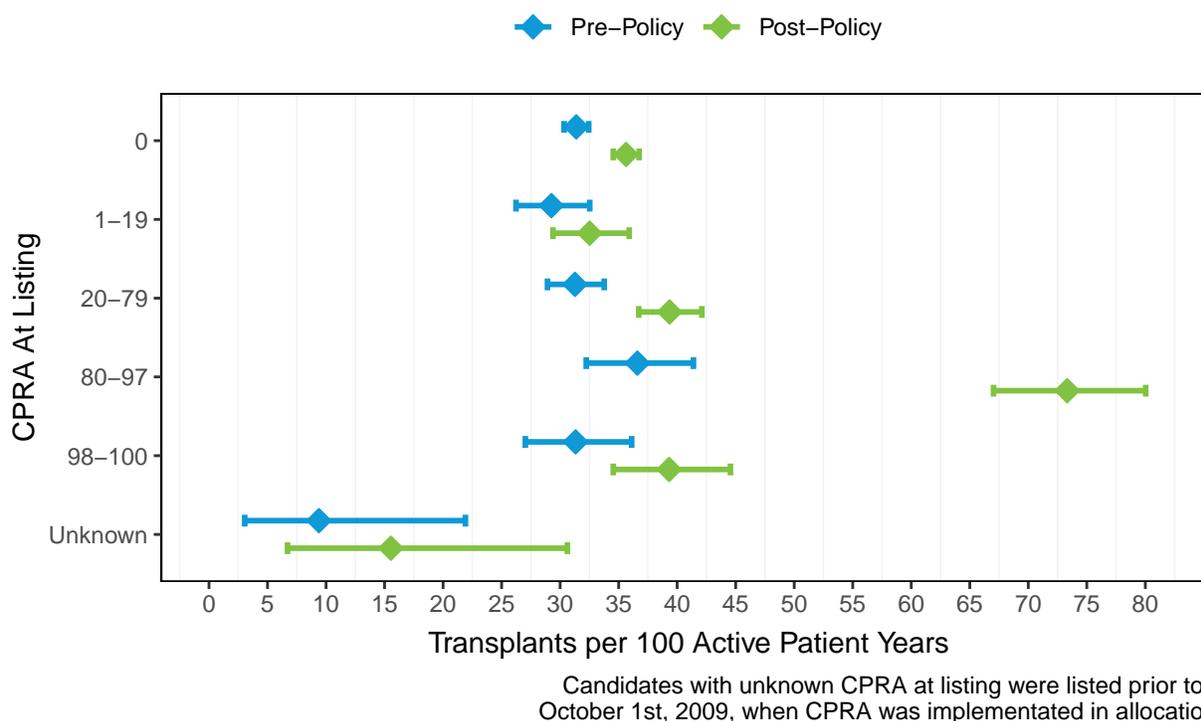


Table 27: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and CPRA at Listing

CPRA	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
0	Pre-Policy	47482	3482	31.38	(30.34, 32.44)
	Post-Policy	47751	4037	35.63	(34.54, 36.75)
1-19	Pre-Policy	5089	341	29.25	(26.23, 32.53)
	Post-Policy	5158	393	32.52	(29.39, 35.9)
20-79	Pre-Policy	9003	650	31.27	(28.92, 33.77)
	Post-Policy	9166	836	39.35	(36.72, 42.11)
80-97	Pre-Policy	3038	253	36.60	(32.23, 41.39)
	Post-Policy	3103	500	73.32	(67.03, 80.03)
98-100	Pre-Policy	2585	190	31.32	(27.03, 36.11)
	Post-Policy	2659	245	39.31	(34.54, 44.55)
Unknown	Pre-Policy	204	5	9.39	(3.05, 21.91)
	Post-Policy	188	8	15.54	(6.71, 30.62)

Figure 29 and **Table 28** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between December 01, 2020 and June 30, 2021 by policy era and blood type. Transplant rates increased from 44 to 51 transplants per 100 active patient years for type A registrations, 26 to 33 for type B registrations, and 27 to 32 for type O registrations. There was no change in transplant rate for type AB registrations after policy implementation.

Figure 29: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Blood Type

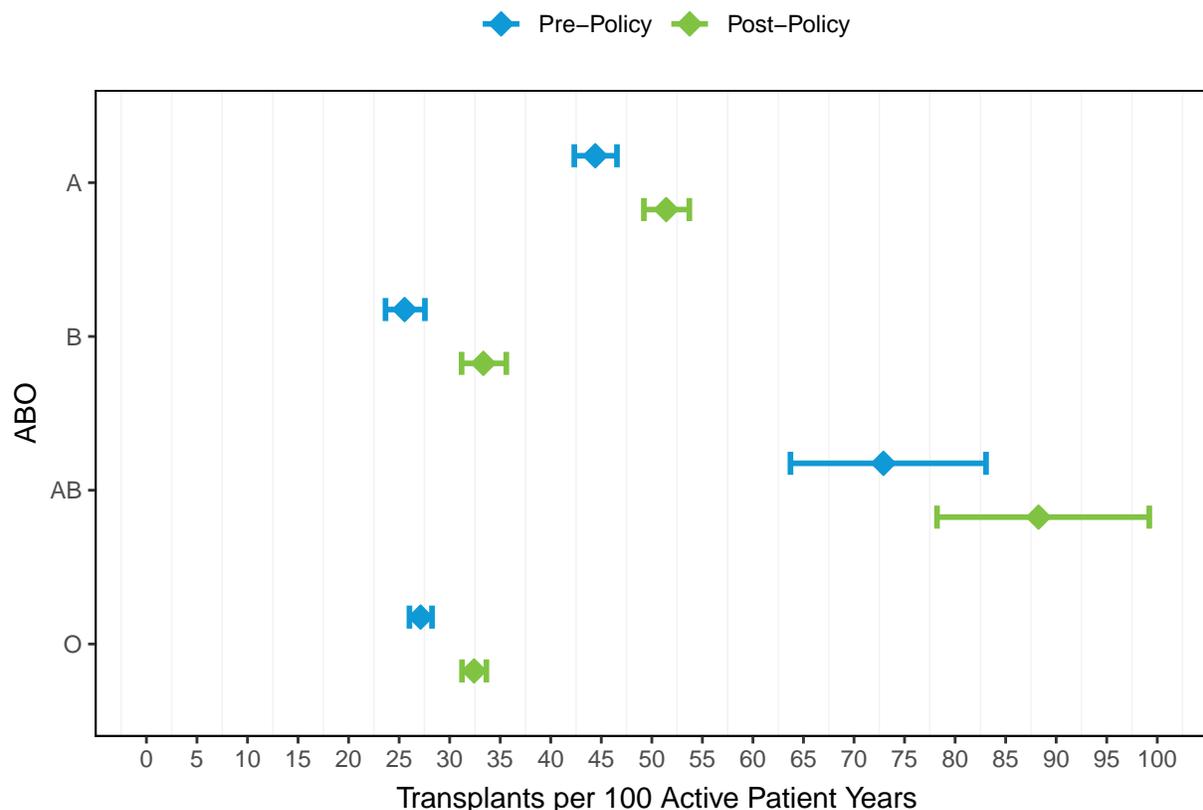


Table 28: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Blood Type

Blood Type	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
A	Pre-Policy	17402	1724	44.40	(42.33, 46.55)
	Post-Policy	17581	2028	51.42	(49.21, 53.71)
B	Pre-Policy	11001	671	25.54	(23.65, 27.55)
	Post-Policy	11012	887	33.33	(31.18, 35.6)
AB	Pre-Policy	1491	226	72.91	(63.71, 83.06)
	Post-Policy	1585	280	88.25	(78.21, 99.21)
O	Pre-Policy	35668	2300	27.12	(26.02, 28.25)
	Post-Policy	36014	2824	32.41	(31.22, 33.63)

Figure 30 and **Table 29** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between December 01, 2020 and June 30, 2021 by policy era and EPTS at listing. Pediatric candidates and candidates with no EPTS assigned at listing due to being listed prior to May 27, 2014 are excluded. The transplant rate for registrations with EPTS 0-20% increased from 31 to 35 transplants per 100 active patient years. The transplant rate for registrations with EPTS 21-100% increased from 28 to 33 transplants per 100 active patient years.

Figure 30: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and EPTS at Listing

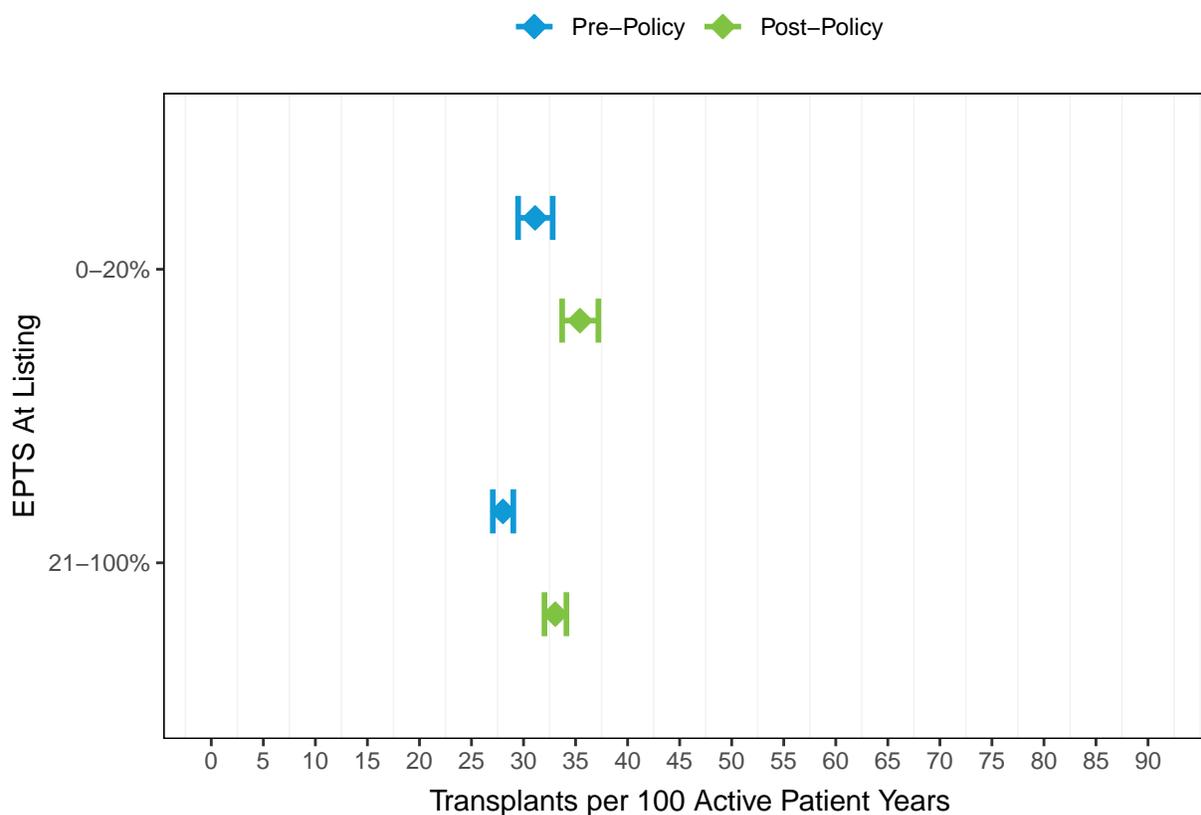


Table 29: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and EPTS at Listing

EPTS	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
0-20%	Pre-Policy	18678	1365	31.11	(29.48, 32.8)
	Post-Policy	19168	1607	35.42	(33.71, 37.19)
21-100%	Pre-Policy	48439	3145	28.02	(27.05, 29.02)
	Post-Policy	48875	3805	33.05	(32.01, 34.12)

Figure 31 and **Table 30** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between December 01, 2020 and June 30, 2021 by policy era and time on dialysis at listing. Groupings are based on the 25th, 50th, and 75th percentiles of dialysis time (see **Table 12**). The transplant rate increased for registrations more than 3 years of dialysis time at listing, going from 74 to 100 transplants per 100 active patient years. Transplant rates did not change for pre-emptively listed registrations and those with less than 3 years of dialysis time at listing.

Figure 31: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Time on Dialysis at Listing

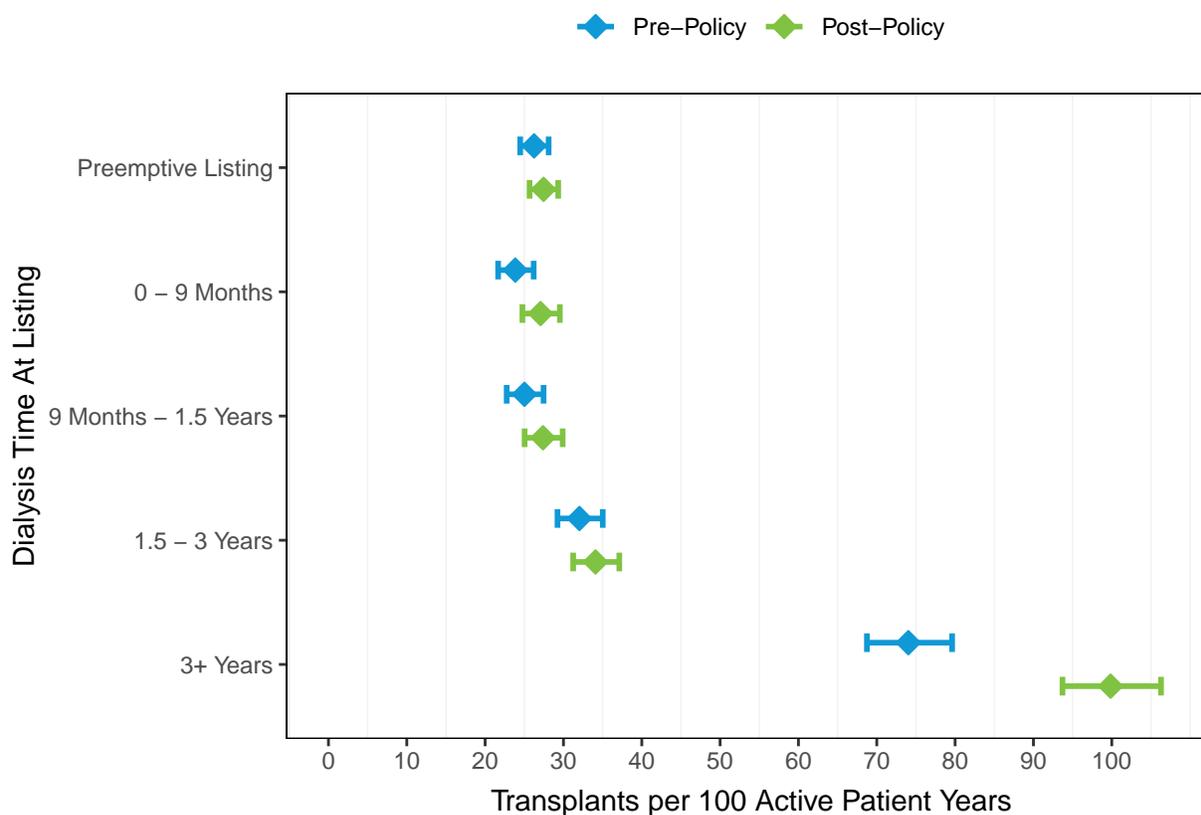


Table 30: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Time on Dialysis at Listing

Dialysis Time	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
Preemptive Listing	Pre-Policy	21782	818	26.25	(24.48, 28.11)
	Post-Policy	22001	881	27.46	(25.67, 29.33)
0 - 9 Months	Pre-Policy	12684	434	23.85	(21.66, 26.2)
	Post-Policy	12691	504	27.07	(24.76, 29.54)
9 Months - 1.5 Years	Pre-Policy	12391	445	25.02	(22.75, 27.46)
	Post-Policy	12390	499	27.39	(25.04, 29.9)
1.5 - 3 Years	Pre-Policy	10590	484	32.04	(29.24, 35.02)
	Post-Policy	10688	527	34.09	(31.24, 37.13)
3+ Years	Pre-Policy	7412	726	74.03	(68.74, 79.62)
	Post-Policy	7473	984	99.85	(93.71, 106.29)

Figure 32 and **Table 31** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between December 01, 2020 and June 30, 2021 by policy era and diagnosis. Transplant rates increased for all diagnoses except glomerular disease and polycystic kidney disease after policy implementation.

Figure 32: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Diagnosis

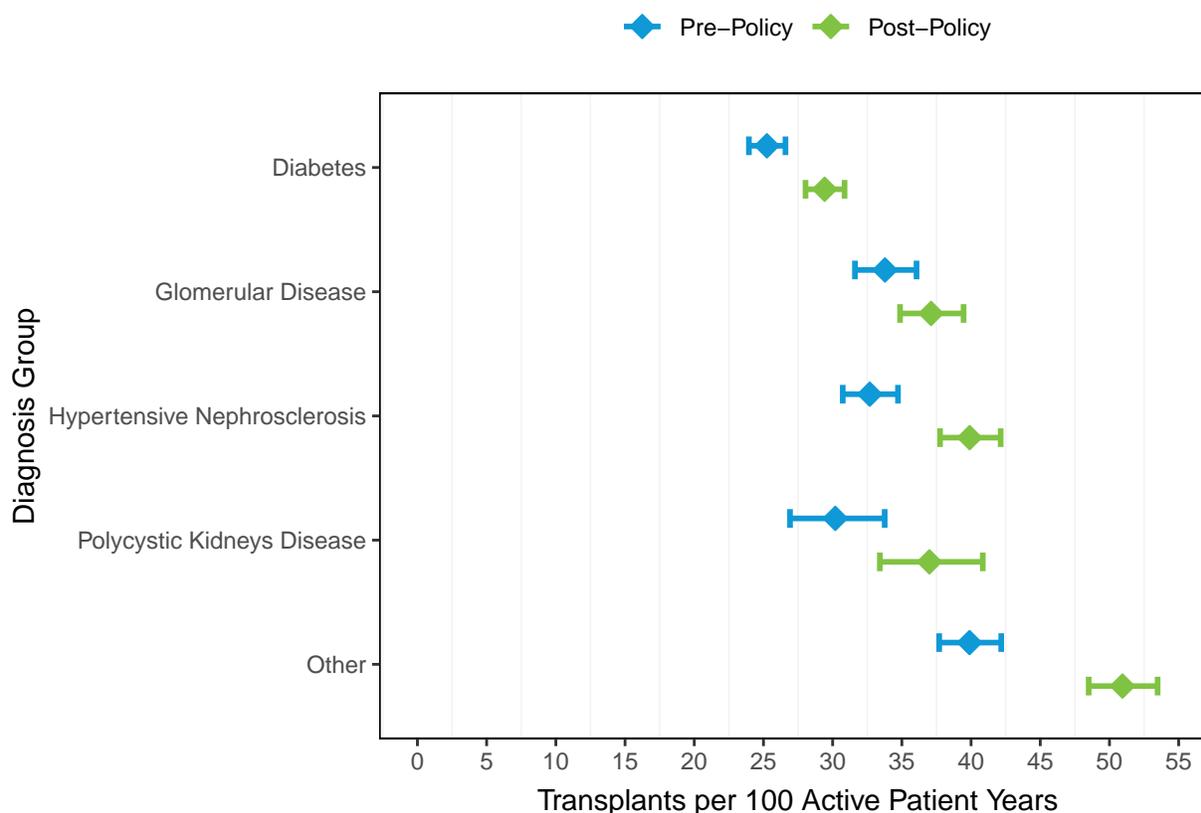


Table 31: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Diagnosis

Diagnosis	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
Diabetes	Pre-Policy	24178	1431	25.25	(23.95, 26.59)
	Post-Policy	24042	1694	29.42	(28.04, 30.86)
Glomerular Disease	Pre-Policy	11370	899	33.78	(31.61, 36.06)
	Post-Policy	11578	1019	37.11	(34.87, 39.46)
Hypertensive Nephrosclerosis	Pre-Policy	13619	1045	32.68	(30.73, 34.72)
	Post-Policy	13730	1294	39.90	(37.76, 42.14)
Polycystic Kidneys Disease	Pre-Policy	4336	309	30.19	(26.92, 33.76)
	Post-Policy	4422	390	36.99	(33.41, 40.85)
Other	Pre-Policy	13730	1237	39.89	(37.7, 42.18)
	Post-Policy	14061	1623	50.94	(48.5, 53.48)

Transplants

Figure 33 and **Table 32** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era. There were 4926 transplants performed pre-policy, and 6025 performed post-policy.

Figure 33: Deceased Donor Kidney Transplants December 01, 2020 - June 30, 2021 by Policy Era

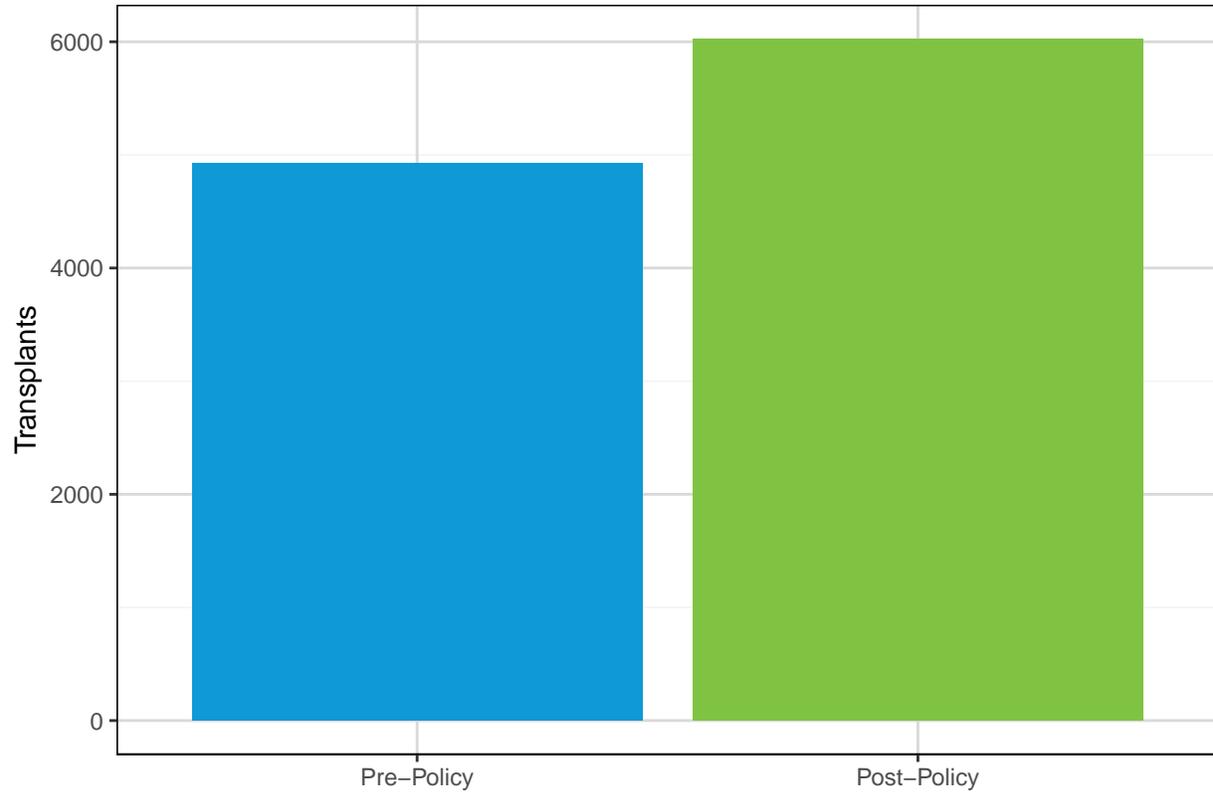
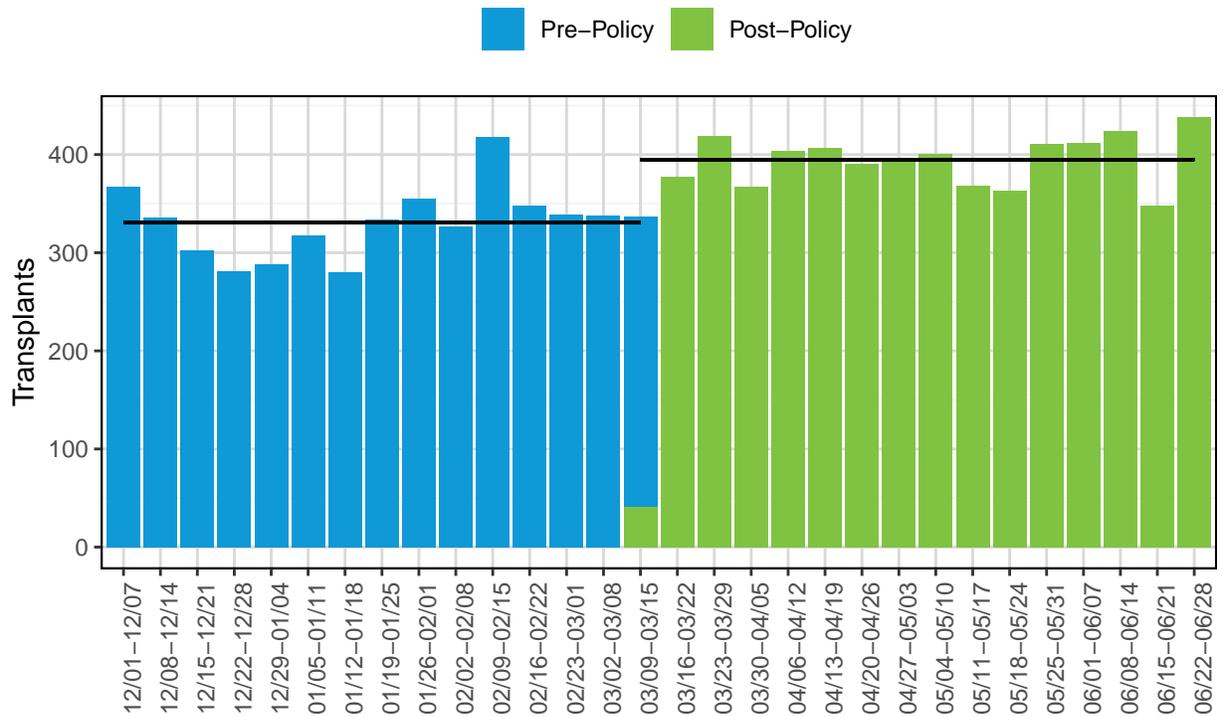


Table 32: Deceased Donor Kidney Transplants December 01, 2020 - June 30, 2021 by Policy Era

Era	Transplants
Pre-Policy	4926
Post-Policy	6025

Figure 34 shows weekly deceased donor kidney transplants from December 01, 2020 to June 28, 2021. The average number of transplants per week was 331 pre-policy and 395 post-policy. A table showing transplants by week is provided in the **Appendix**.

Figure 34: Weekly Deceased Donor Kidney Transplants December 01, 2020-June 28, 2021 by Policy Era



Lines represent the average number of transplants per week.
Some weeks shown in the figure include federal holidays.

Figure 35 and **Table 33** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and recipient age at transplant. The number of transplants to all age groups increased after policy implementation. The proportion of transplants to recipients aged 65 years and older decreased from 24.02% to 21.81%, and the proportion of transplants to recipients aged 50 to 64 years increased from 39.12% to 40.22%. The proportion of transplants to recipients aged 0 to 17 years increased from 2.94% to 3.52%.

Figure 35: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Recipient Age at Transplant

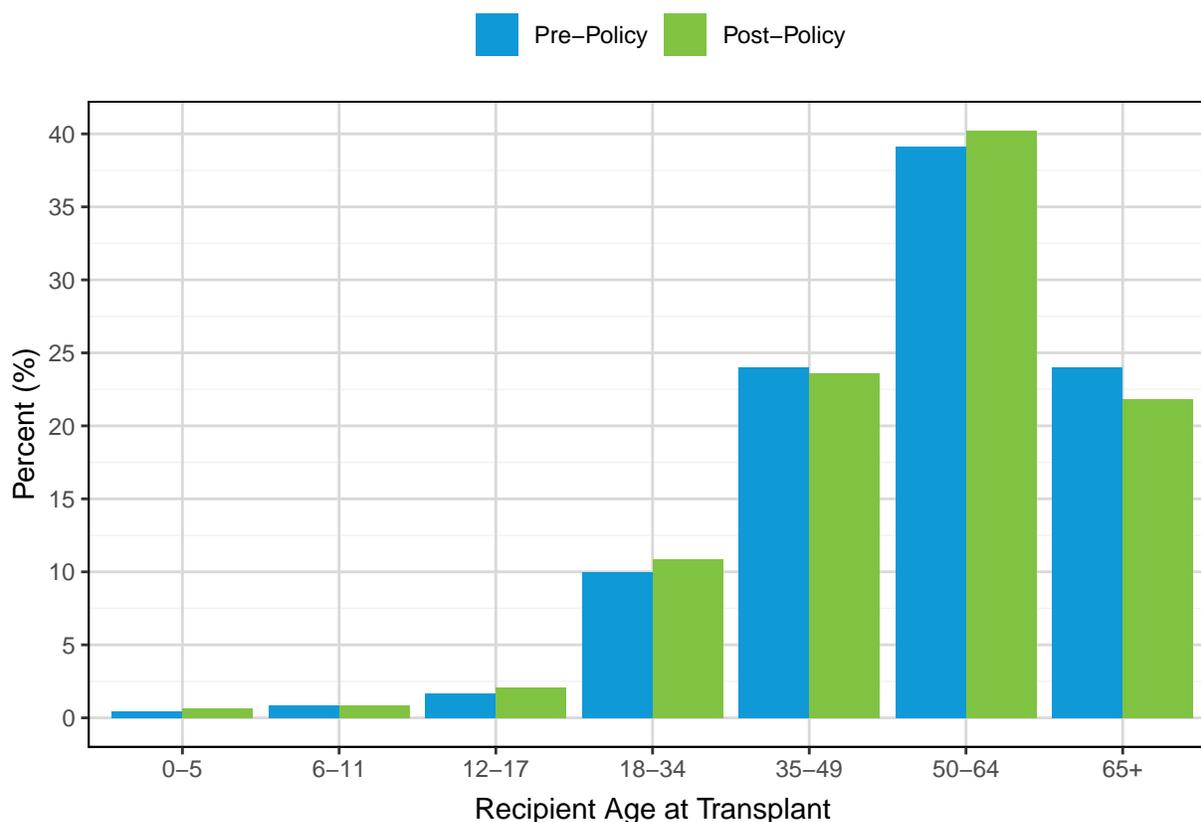


Table 33: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Recipient Age at Transplant

Age at Transplant	Pre-Policy		Post-Policy	
	N	%	N	%
0-5	21	0.43	37	0.61
6-11	42	0.85	50	0.83
12-17	81	1.64	125	2.07
18-34	491	9.97	654	10.85
35-49	1181	23.97	1422	23.60
50-64	1927	39.12	2423	40.22
65+	1183	24.02	1314	21.81
Total	4926	100.00	6025	100.00

Figure 36 and **Table 34** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and recipient ethnicity. There was an increase in transplants observed for all ethnicities after implementation, and the largest increase was seen for Black recipients (1649 to 2075 transplants after implementation).

Figure 36: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Recipient Ethnicity

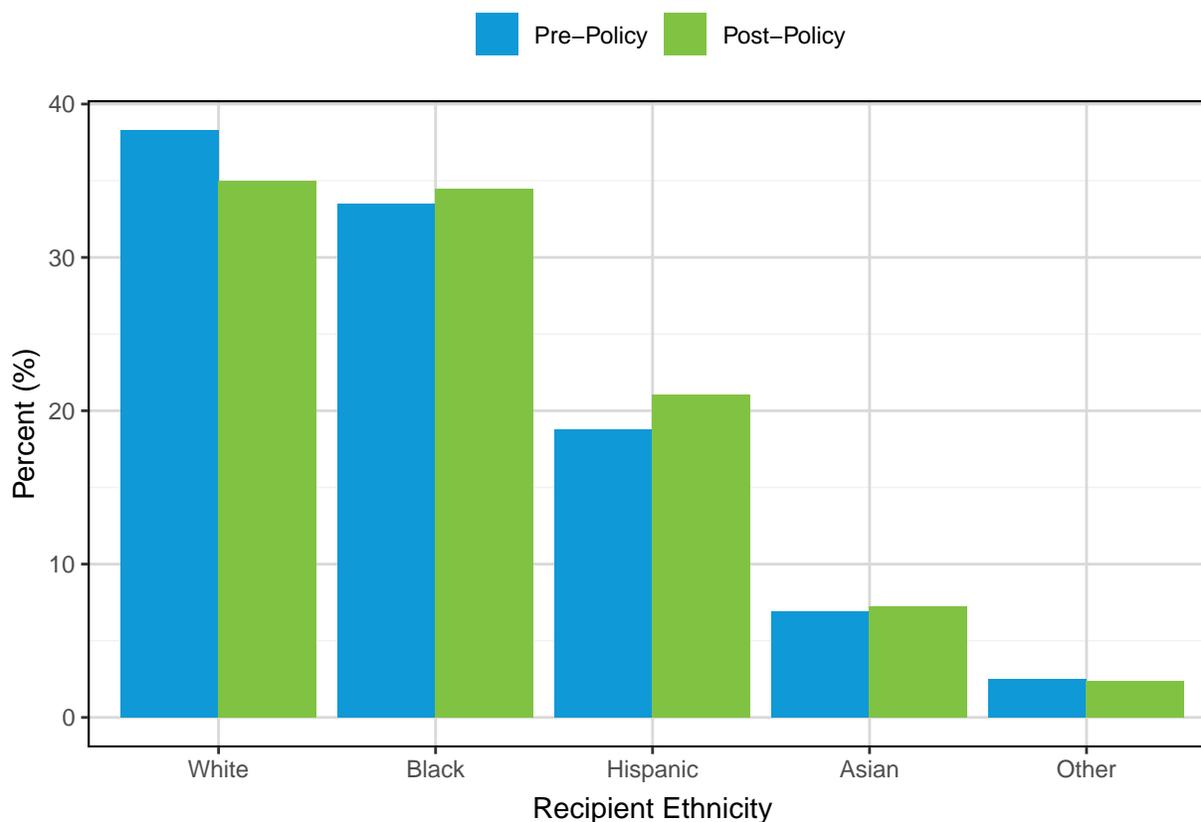


Table 34: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Recipient Ethnicity

Ethnicity	Pre-Policy		Post-Policy	
	N	%	N	%
White	1886	38.29	2108	34.99
Black	1649	33.48	2075	34.44
Hispanic	926	18.80	1266	21.01
Asian	341	6.92	434	7.20
Other	124	2.52	142	2.36
Total	4926	100.00	6025	100.00

Figure 37 and **Table 35** show the distribution of time on the waiting list in years for deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era. View is restricted to 10 years. Median waiting time remained constant at 1.28 years after policy implementation, though these data only account for transplanted patients and not those who remained on the waiting list.

Figure 37: Distribution of Waiting Time (Years) for Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

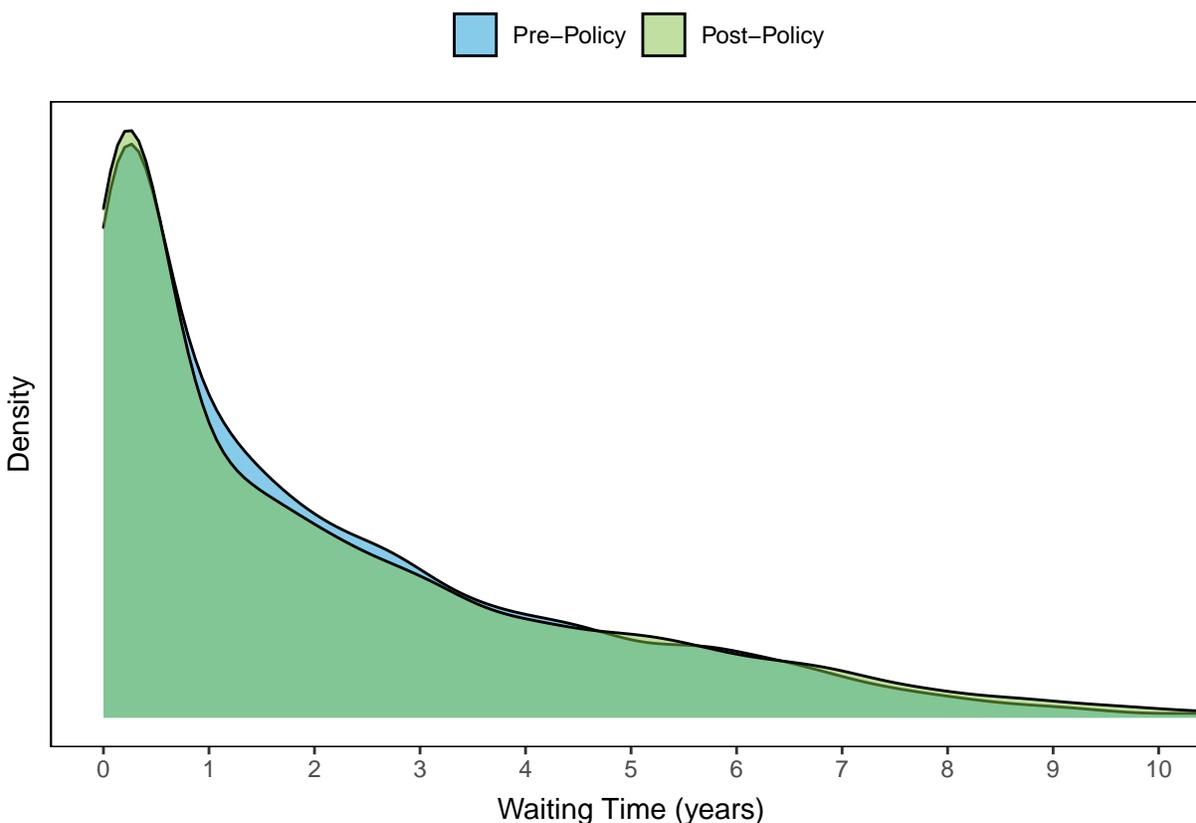


Table 35: Distribution of Waiting Time (Years) for Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	4926	0	0	0.28	1.28	2.10	3.22	34.21
Post-Policy	6025	0	0	0.25	1.28	2.18	3.37	16.90

Figure 38 and **Table 36** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and dialysis status at the time of transplant as reported to the OPTN. Roughly 82% of transplant recipients were on dialysis both pre- and post-policy implementation.

Figure 38: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Dialysis Status at Transplant

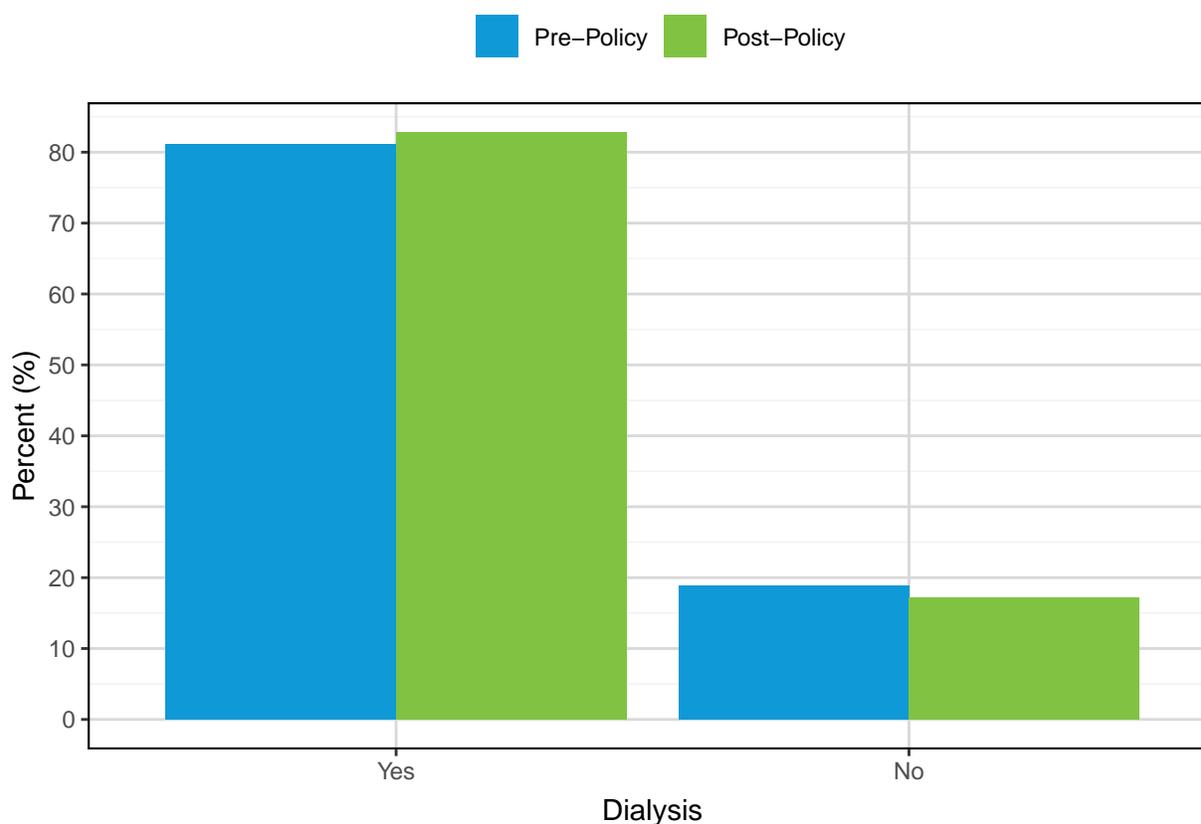


Table 36: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Dialysis Status at Transplant

Dialysis	Pre-Policy		Post-Policy	
	N	%	N	%
Yes	3998	81.16	4989	82.80
No	928	18.84	1036	17.20
Total	4926	100.00	6025	100.00

Figure 39 and **Table 37** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and time on dialysis at transplant as reported to the OPTN. Only recipients on dialysis at time of transplant were included. View is restricted to the 99th percentile. Median dialysis time at transplant increased from 4.09 to 4.53 years after the policy change. This increase does not imply patients need to accrue more time on dialysis in order to receive at transplant, rather patients with higher dialysis times are getting transplanted under the new system as kidneys are distributed more broadly.

Figure 39: Distribution of Time on Dialysis (Years) at Transplant for Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

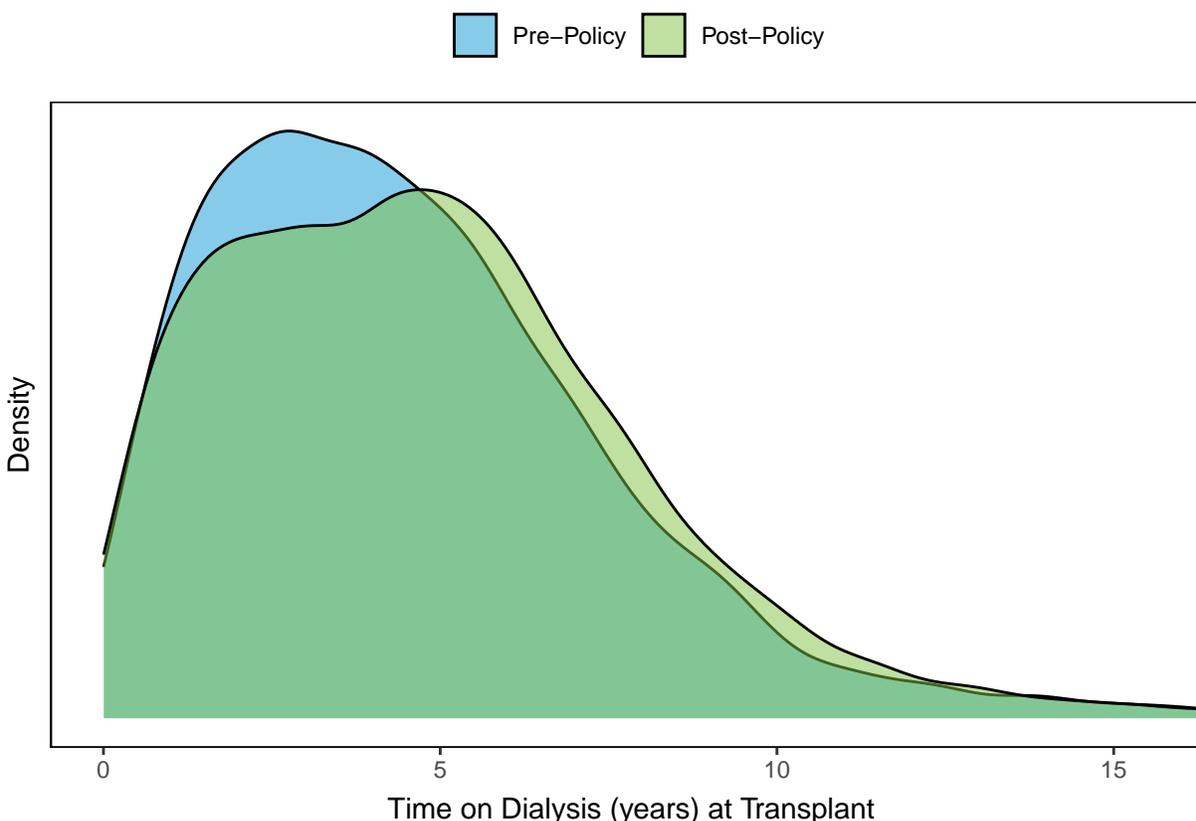


Table 37: Distribution of Time on Dialysis (Years) at Transplant for Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

Era	Total	Min	25th Percentile	Median	Mean	75th Percentile	Max
Pre-Policy	3998	0.01	2.34	4.09	4.61	6.21	39.63
Post-Policy	4989	0.01	2.49	4.53	4.95	6.67	31.38

Figure 40 and **Table 38** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and recipient blood type. The majority of recipients were type O both before and after the policy change.

Figure 40: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Recipient Blood Type

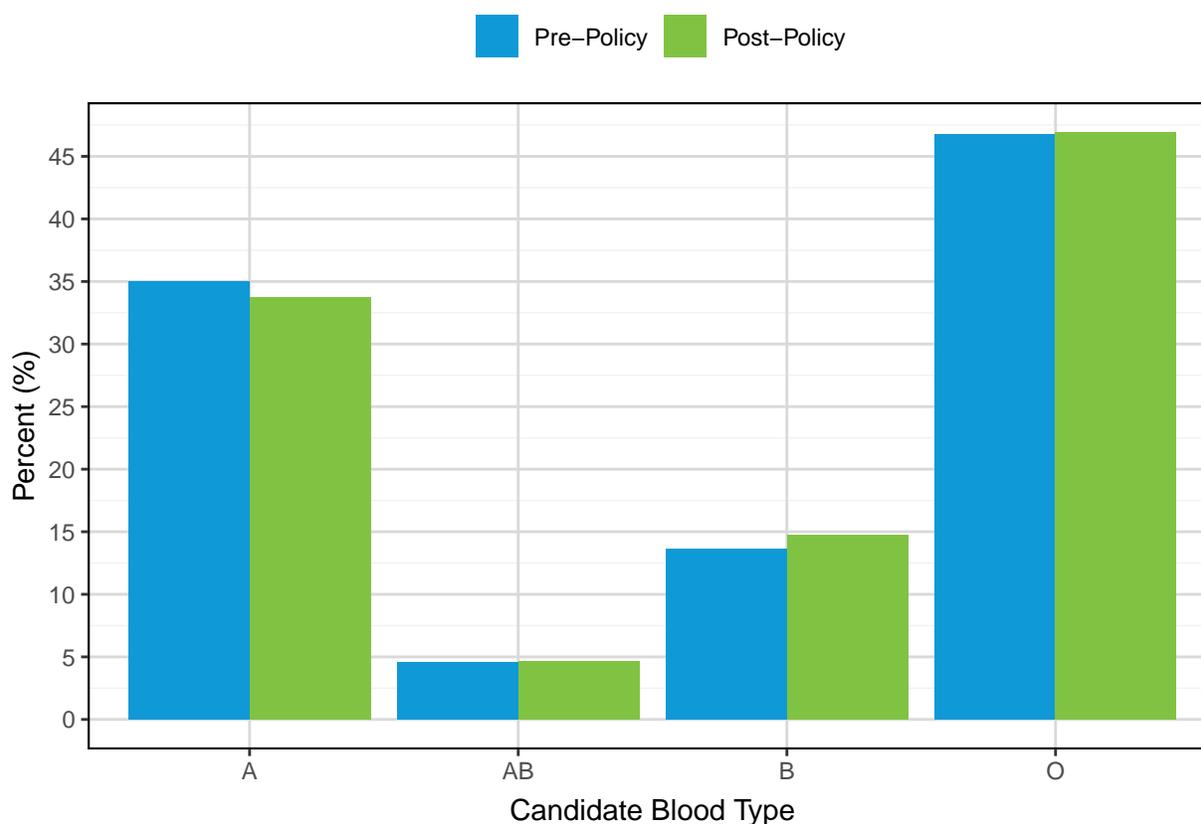


Table 38: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Recipient Blood Type

Blood Type	Pre-Policy		Post-Policy	
	N	%	N	%
A	1725	35.02	2031	33.71
AB	226	4.59	280	4.65
B	672	13.64	887	14.72
O	2303	46.75	2827	46.92
Total	4926	100.00	6025	100.00

Figure 41 and **Table 39** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and CPRA at transplant. The proportion recipients with CPRA 0% and CPRA 20-79% decreased from 60.76% to 57.21% and 17.28% to 15.77% respectively with this change. The proportion of recipients with CPRA 80-97% increased from 6.23% to 11.63% after policy implementation, and the proportion of CPRA 98-100% increased from 6.84% to 7.6%.

Figure 41: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and CPRA at Transplant

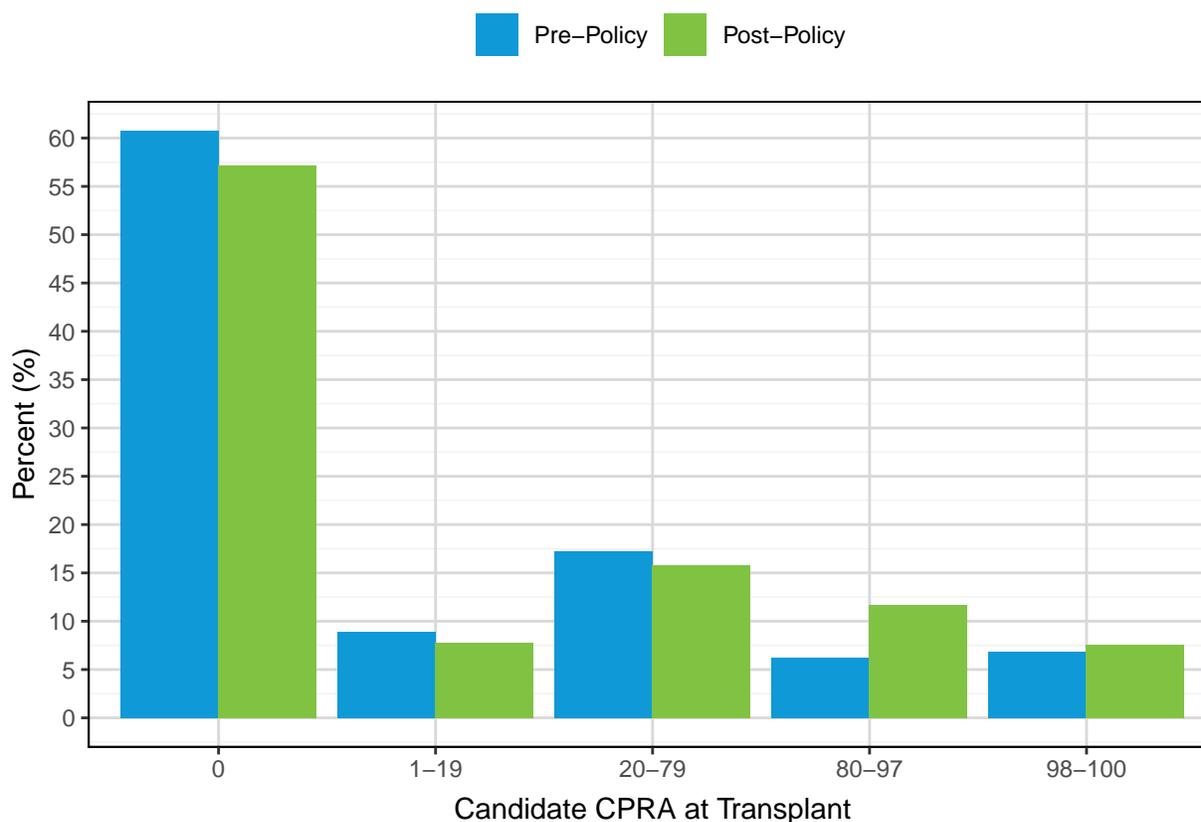


Table 39: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and CPRA at Transplant

CPRA %	Pre-Policy		Post-Policy	
	N	%	N	%
0	2993	60.76	3447	57.21
1-19	438	8.89	469	7.78
20-79	851	17.28	950	15.77
80-97	307	6.23	701	11.63
98-100	337	6.84	458	7.60
Total	4926	100.00	6025	100.00

Figure 42 and **Table 40** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and level of HLA mismatch. Multi-organ transplants including a kidney were excluded. The proportion of 0 ABDR mismatch transplants remained stable after policy implementation, at roughly 5%. Little change was observed in the distribution of HLA mismatch level pre- to post-policy.

Figure 42: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and HLA Mismatch

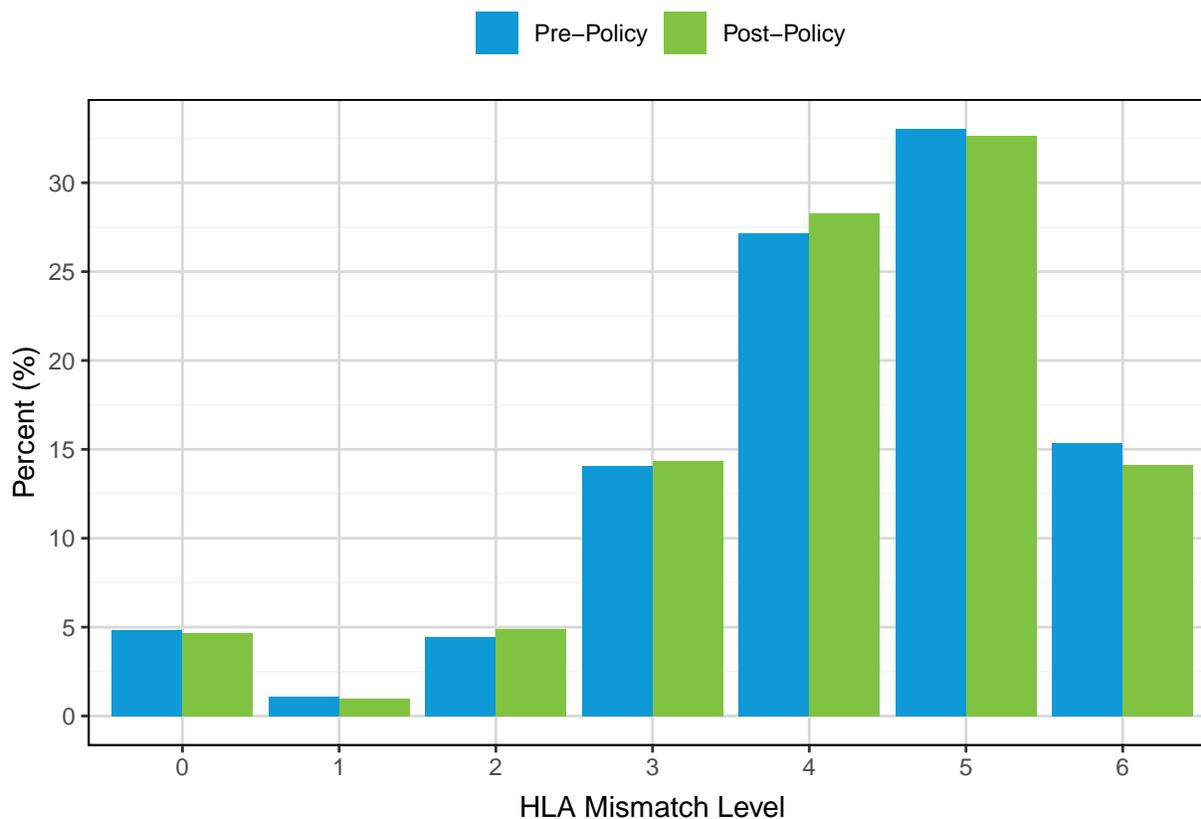


Table 40: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and HLA Mismatch

HLA Mismatch Level	Pre-Policy		Post-Policy	
	N	%	N	%
0	224	4.84	263	4.67
1	50	1.08	56	0.99
2	206	4.45	276	4.90
3	652	14.09	809	14.35
4	1257	27.17	1595	28.30
5	1528	33.03	1841	32.67
6	709	15.33	796	14.12
Total	4626	100.00	5636	100.00

Figure 43 and **Table 41** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and primary diagnosis at transplant. Diagnosis at transplant was missing for less than 1% of transplant recipients. Transplants with missing diagnoses were supplemented with diagnosis at listing.

The proportion of transplants to recipients diagnosed with diabetes and glomerular disease decreased from 29.54% to 28.53% and 18.86% to 17.01% respectively, though the number of transplants to recipients with either diagnosis increased. The proportion of transplants to recipients with a diagnosis other than diabetes, glomerular disease, hypertensive nephrosclerosis, or polycystic kidney disease increased from 23.83% to 26.02% after the policy change.

Figure 43: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Diagnosis at Transplant

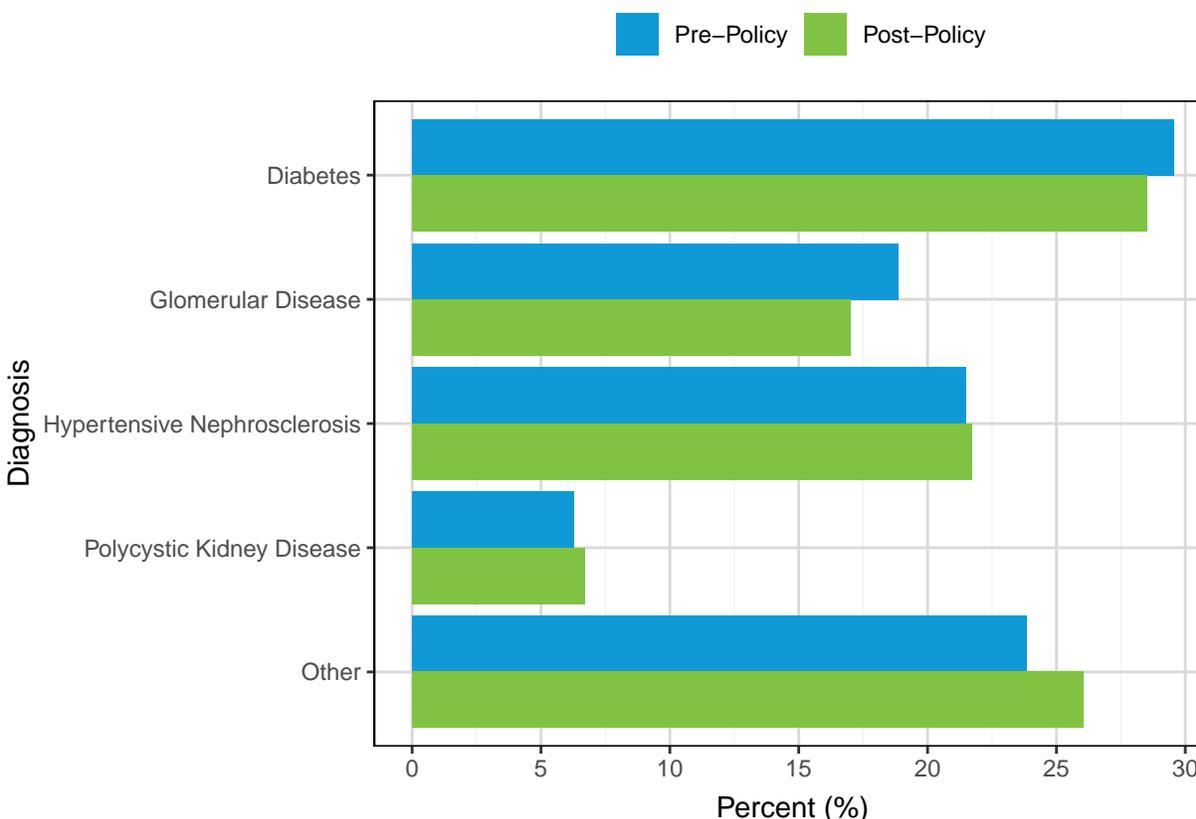


Table 41: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Diagnosis at Transplant

Diagnosis	Pre-Policy		Post-Policy	
	N	%	N	%
Diabetes	1455	29.54	1719	28.53
Glomerular Disease	929	18.86	1025	17.01
Hypertensive Nephrosclerosis	1059	21.50	1309	21.73
Polycystic Kidney Disease	309	6.27	404	6.71
Other	1174	23.83	1568	26.02
Total	4926	100.00	6025	100.00

Figure 44 and **Table 42** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and EPTS at transplant. There was little change in the distribution of EPTS at transplant after the policy was implemented.

Figure 44: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and EPTS at Transplant

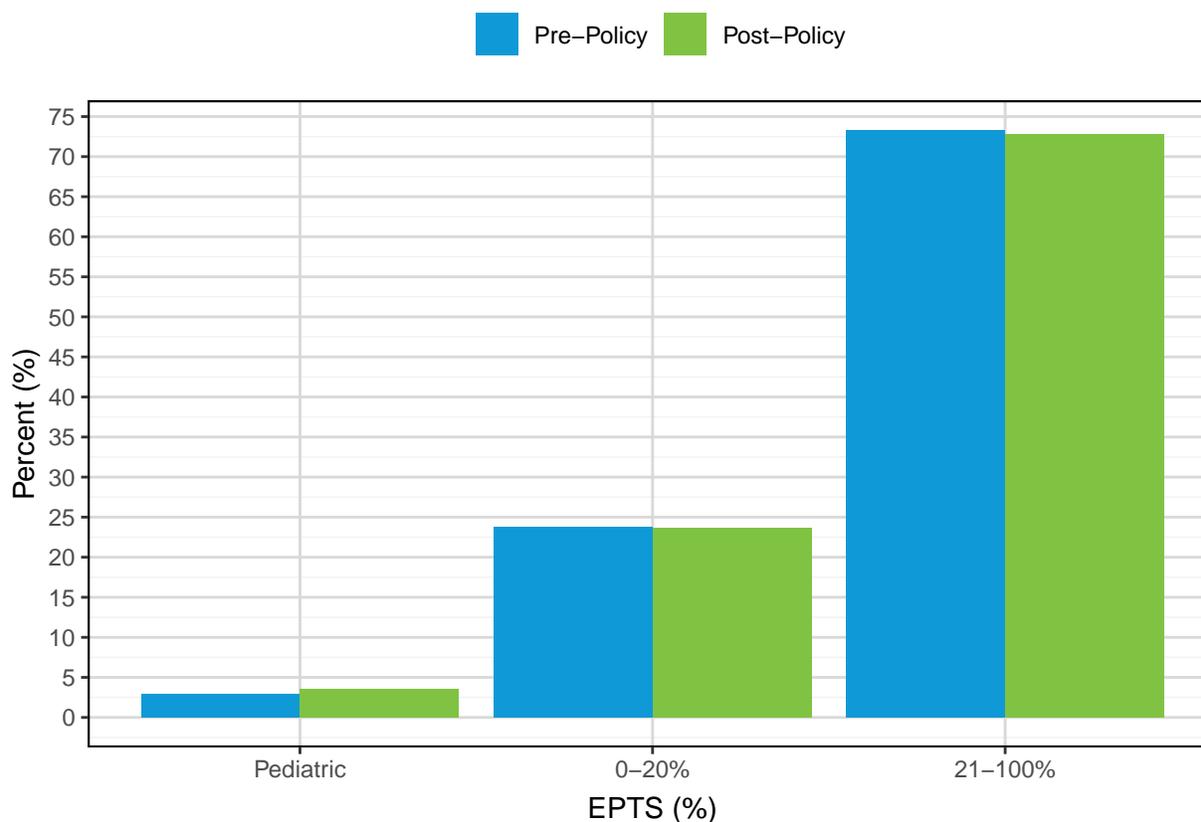


Table 42: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and EPTS at Transplant

EPTS	Pre-Policy		Post-Policy	
	N	%	N	%
Pediatric	145	2.94	212	3.52
0-20%	1171	23.77	1427	23.68
21-100%	3610	73.28	4386	72.80
Total	4926	100.00	6025	100.00

Figure 45 and **Table 43** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and KDPI. There was little change in the distribution of KDPI after the policy was implemented.

Figure 45: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and KDPI

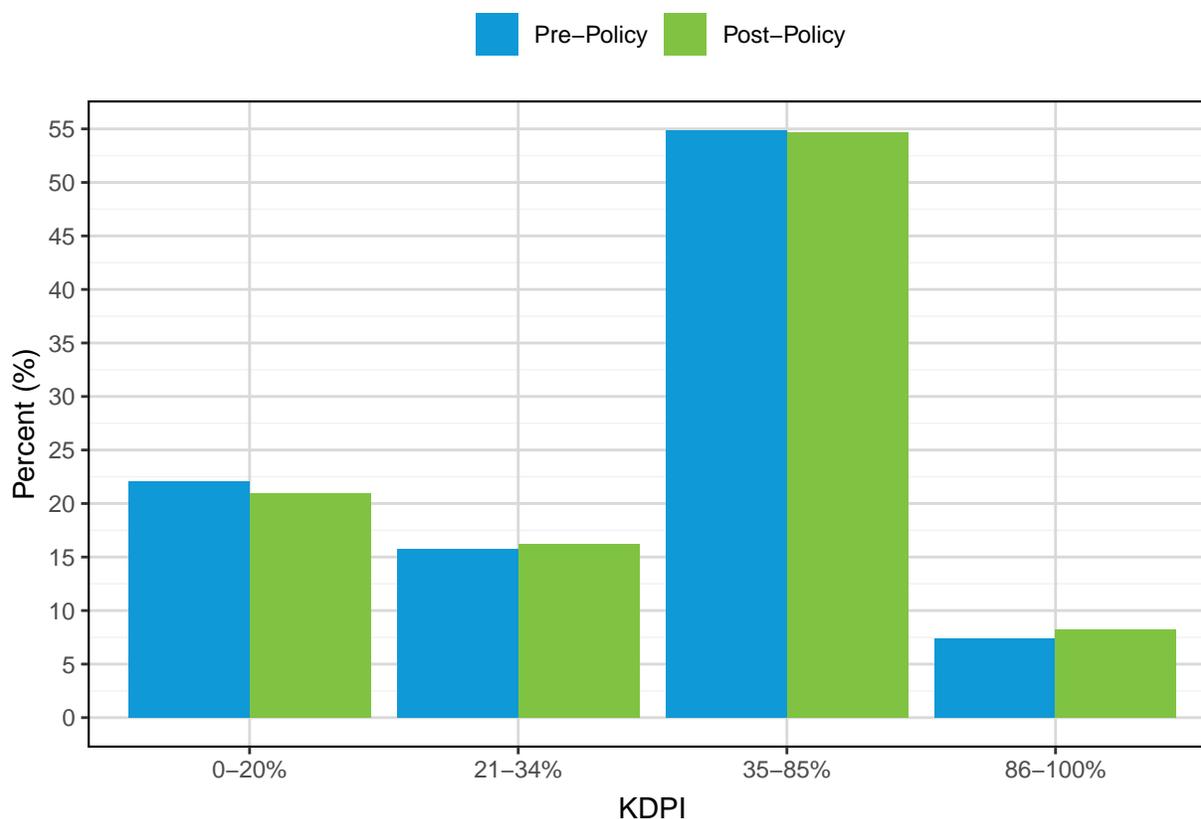


Table 43: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and KDPI

KDPI	Pre-Policy		Post-Policy	
	N	%	N	%
0-20%	1085	22.03	1262	20.95
21-34%	775	15.73	974	16.17
35-85%	2702	54.85	3292	54.64
86-100%	364	7.39	497	8.25
Total	4926	100.00	6025	100.00

Figure 46 and **Table 44** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and donor DCD status. Roughly 30% of transplants used kidneys recovered from DCD donors both pre- and post-policy.

Figure 46: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and DCD Status

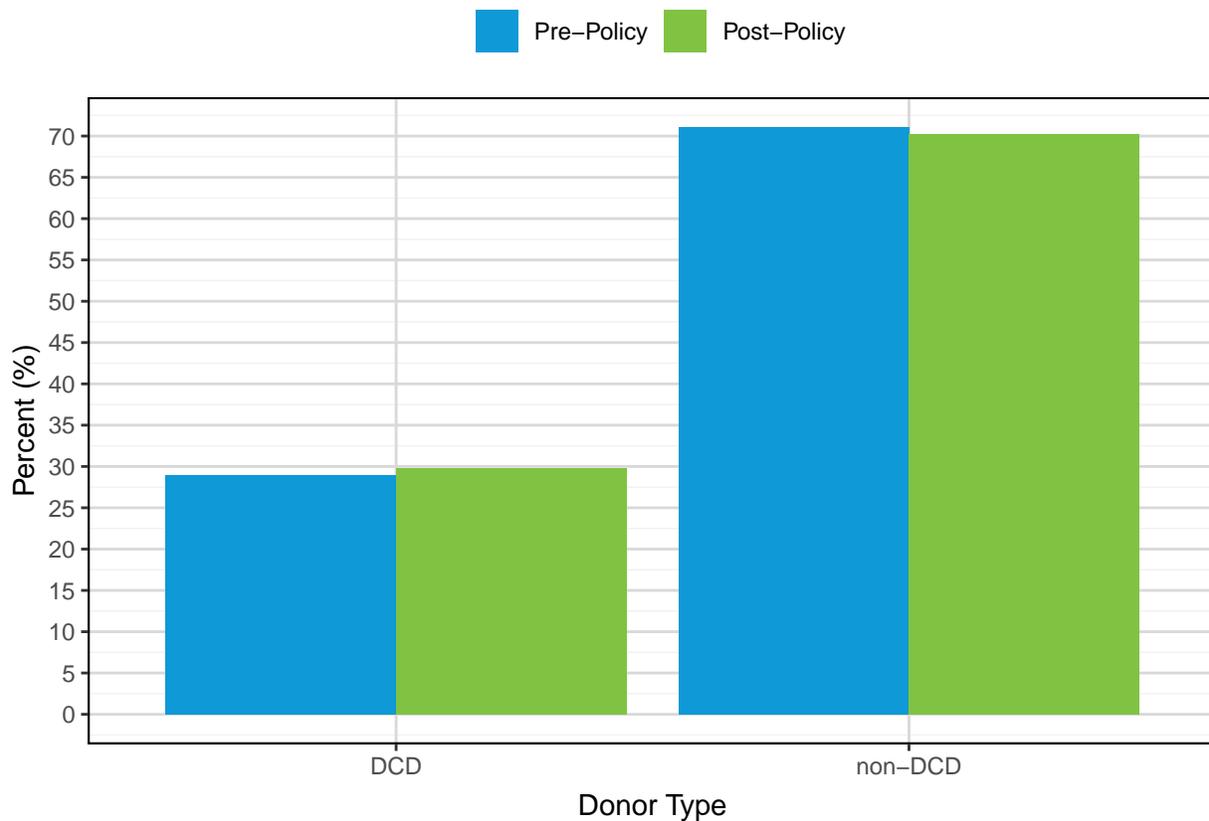


Table 44: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and DCD Status

DCD Donor	Pre-Policy		Post-Policy	
	N	%	N	%
DCD	1425	28.93	1792	29.74
non-DCD	3501	71.07	4233	70.26
Total	4926	100.00	6025	100.00

Figure 47 and **Table 45** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and distance from donor hospital. The proportion of transplants within 250 NM of the donor hospital increased from 79.94% to 85.24% after policy implementation.

Figure 47: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Distance from Donor Hospital

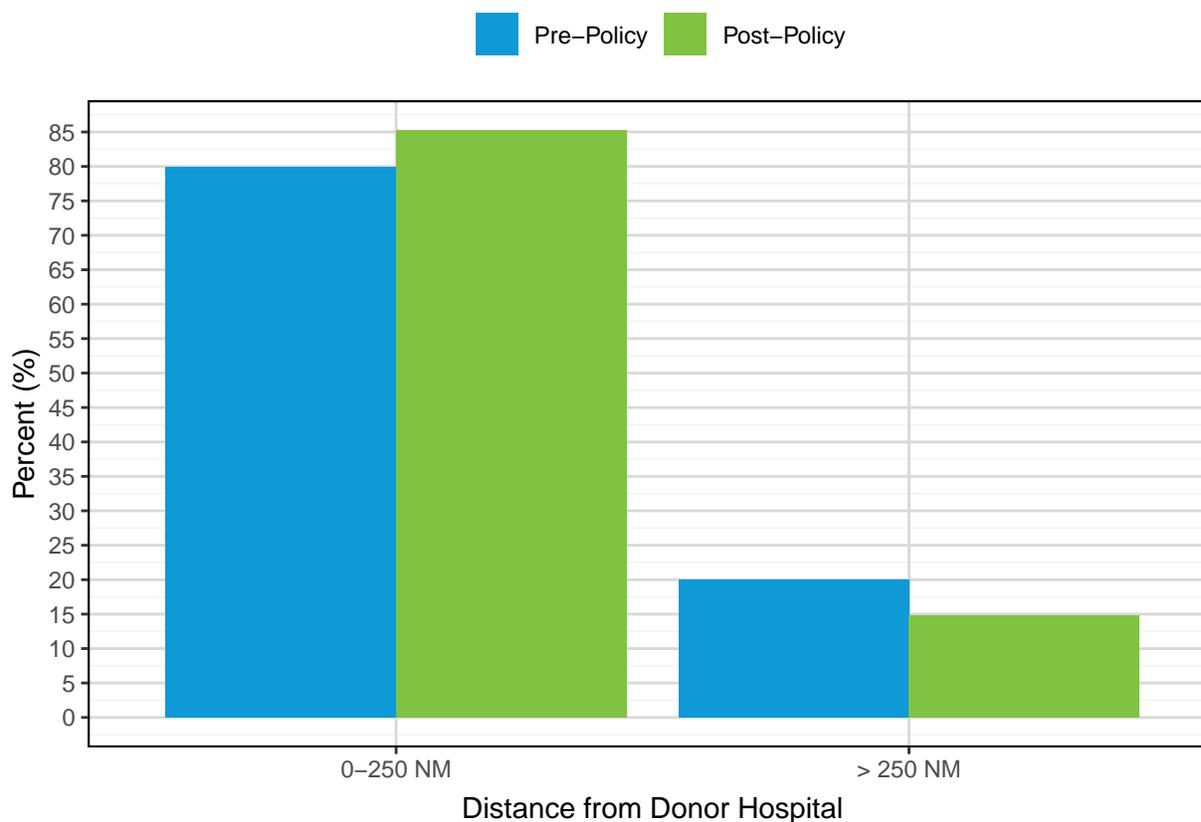


Table 45: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Distance from Donor Hospital

Distance	Pre-Policy		Post-Policy	
	N	%	N	%
0-250 NM	3938	79.94	5136	85.24
> 250 NM	988	20.06	889	14.76
Total	4926	100.00	6025	100.00

Figure 48 and **Table 46** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and share type. The proportion of transplants using kidneys recovered in the same DSA as the transplant hospital decreased from 70.58% to 38.97% after the policy change. The proportion of regional and national shares increased from 14.98% to 29.05% and 14.43% to 31.98% respectively.

Figure 48: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Share Type

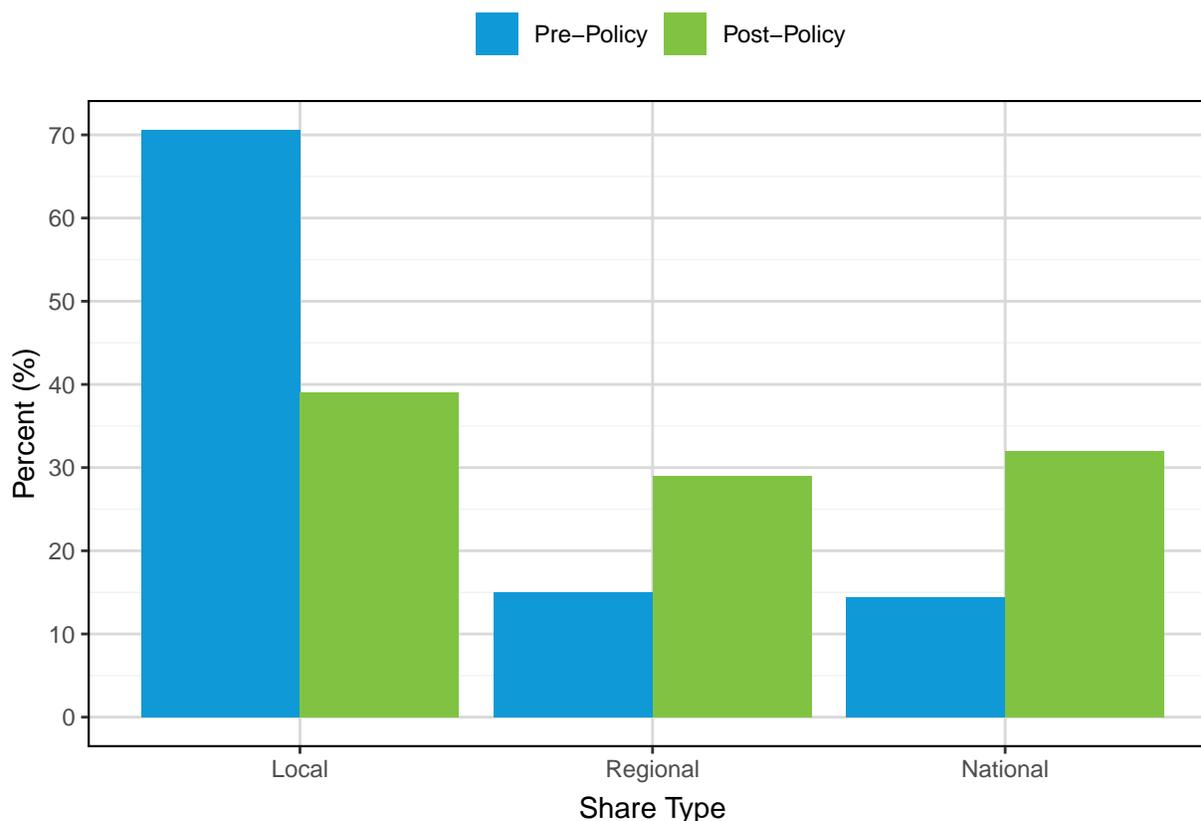


Table 46: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Share Type

Share Type	Pre-Policy		Post-Policy	
	N	%	N	%
Local	3477	70.58	2348	38.97
Regional	738	14.98	1750	29.05
National	711	14.43	1927	31.98
Total	4926	100.00	6025	100.00

Figure 49 and **Table 47** show the distribution of distance in NM from donor hospital for deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era. Median distance from donor hospital increased from 70 NM to 125 NM after policy implementation.

Figure 49: Distribution of Distance from Donor Hospital for Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

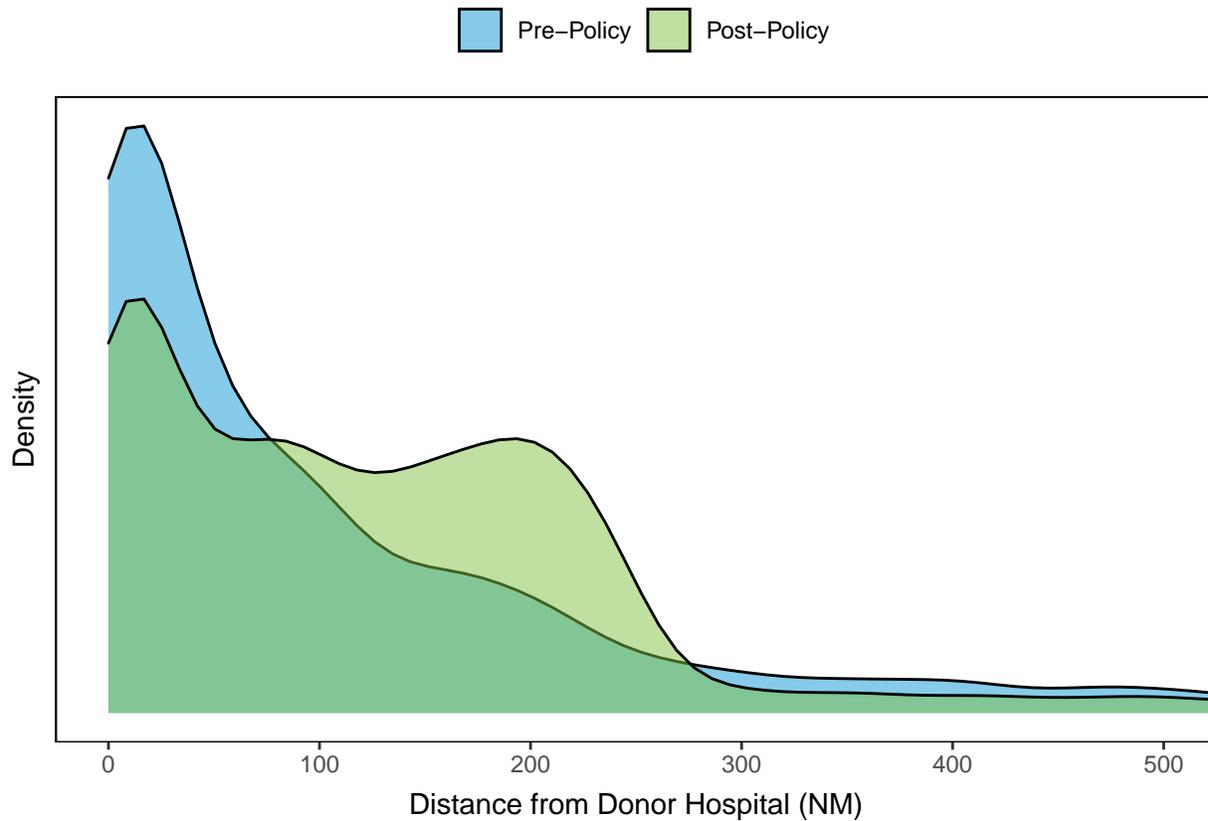


Table 47: Distribution of Distance from Donor Hospital for Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	4926	0	0	11	70	200	200	4299
Post-Policy	6025	0	0	35	125	211	210	4206

Figure 50 and **Table 48** show deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and OPTN region. Region 1 saw no change in the number of transplants pre- to post-policy, and Region 2 saw a decrease. All other regions saw an increase in transplant volume after policy implementation.

Figure 50: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and OPTN Region

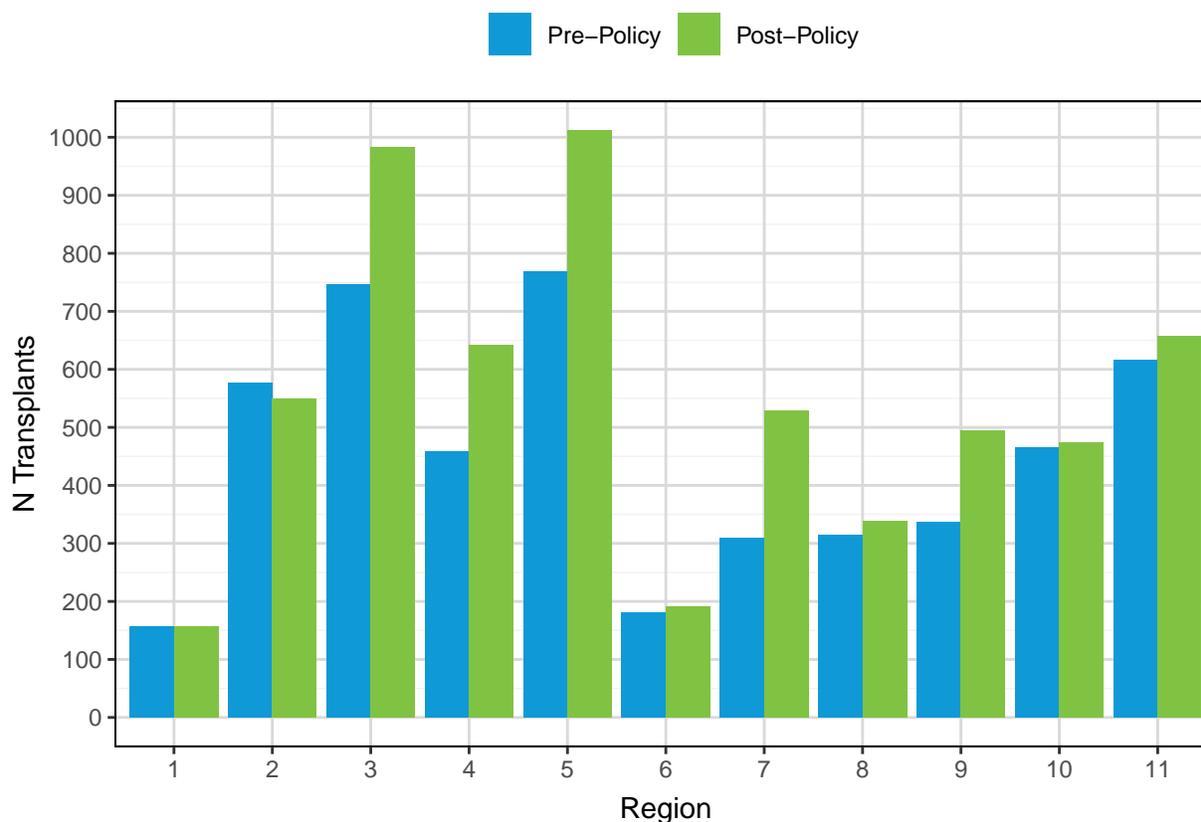


Table 48: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and OPTN Region

Region	Pre-Policy		Post-Policy	
	N	%	N	%
1	156	3.17	156	2.59
2	576	11.69	550	9.13
3	746	15.14	983	16.32
4	458	9.30	641	10.64
5	768	15.59	1012	16.80
6	181	3.67	191	3.17
7	310	6.29	528	8.76
8	314	6.37	338	5.61
9	336	6.82	494	8.20
10	465	9.44	474	7.87
11	616	12.51	658	10.92
Total	4926	100.00	6025	100.00

Figure 51 shows deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and DSA. The number of transplants increased in 37 DSAs after policy implementation, and the number of transplants decreased in 17 DSAs. Three DSAs saw no change in transplant volume. A table showing transplants by policy era and DSA is provided in the **Appendix**.

Figure 51: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and DSA

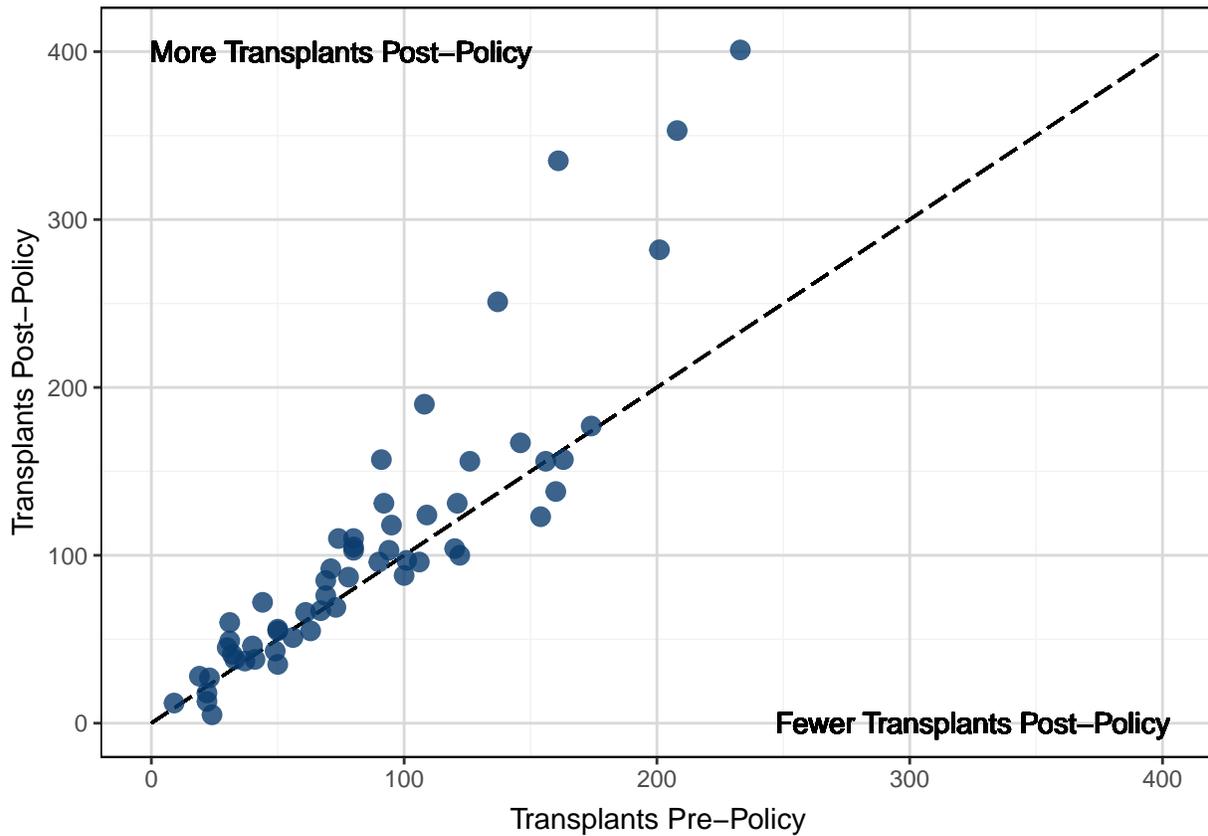


Figure 52 shows deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and transplant center. The number of transplants increased at 145 centers after policy implementation, and the number of transplants decreased at 71 centers. A table showing transplants by policy era and transplant center is provided in the **Appendix**.

Figure 52: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Transplant Center

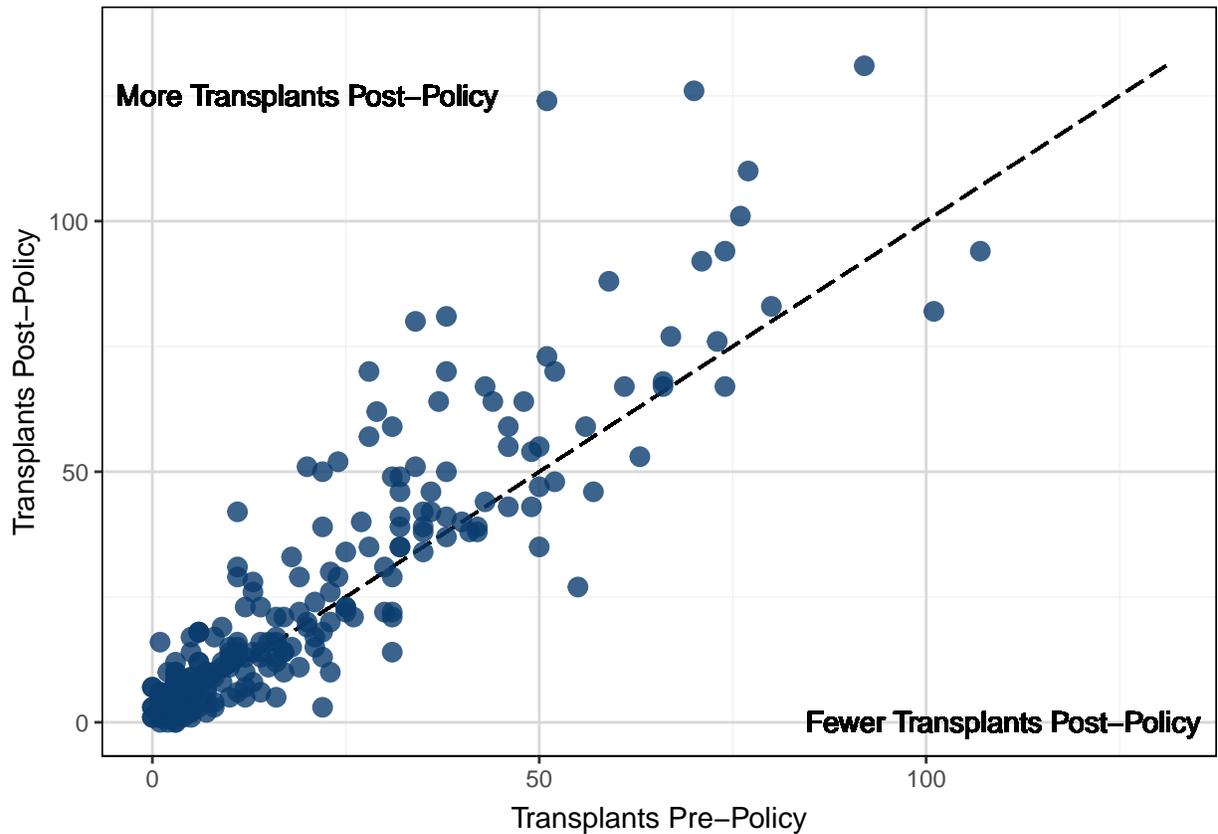


Figure 53 shows deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and state including the District of Columbia and Puerto Rico. The number of transplants increased in 30 states after policy implementation, and the number of transplants decreased in 15 states. Three states saw no change in transplant volume. There are no active kidney transplant programs in Alaska, Idaho, Montana, or Wyoming. A table showing transplants by policy era and state is provided in the **Appendix**.

Figure 53: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and State

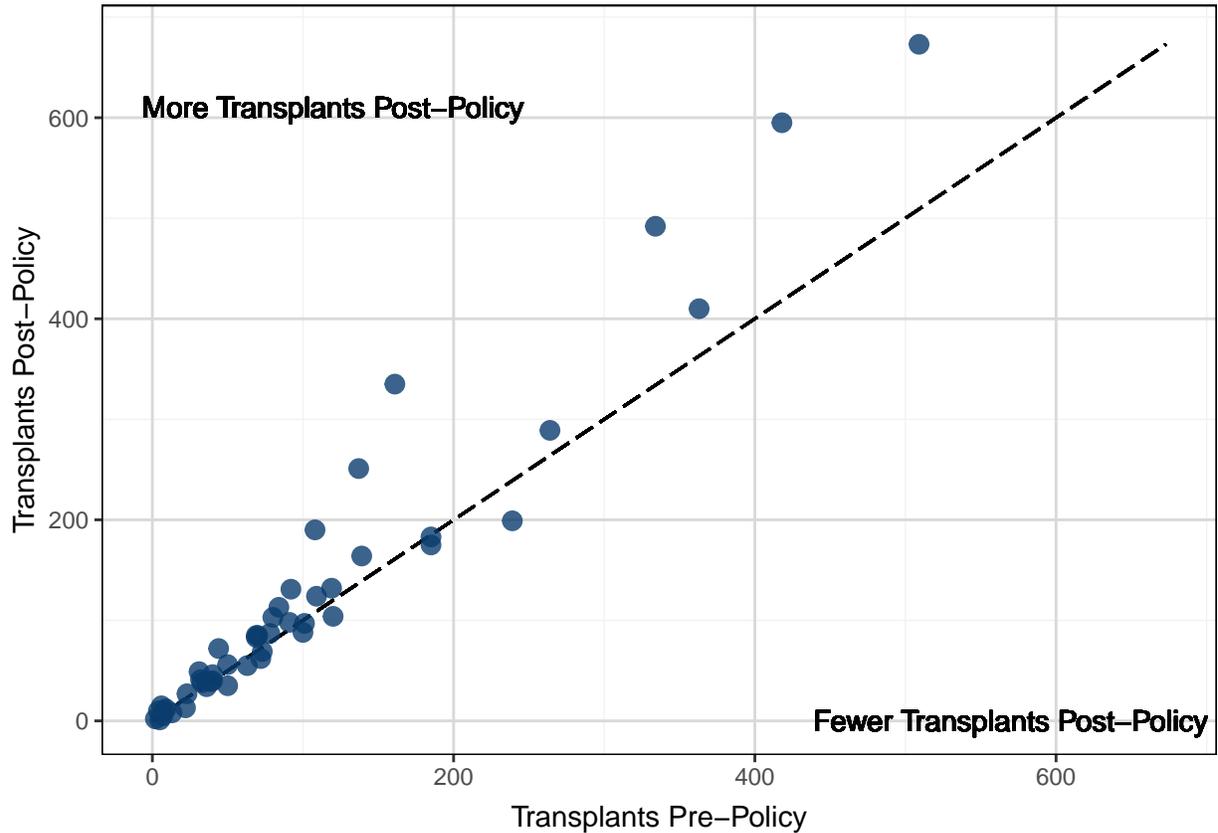
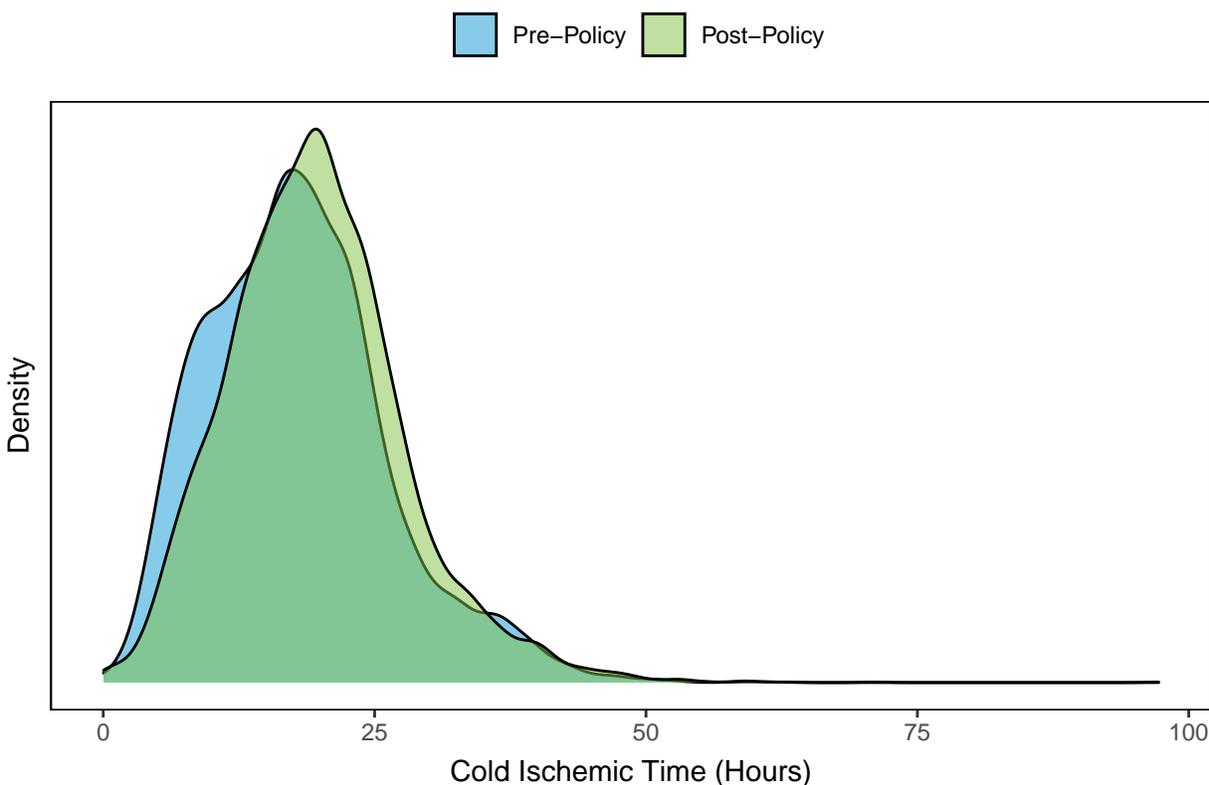


Figure 54 and **Table 49** show the distribution of cold ischemic time in hours for deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era. Median cold ischemic time increased from 17.32 to 19.25 hours after policy implementation. Cold ischemic time was missing for 1% of transplants pre-policy and 3% of transplants post-policy.

Figure 54: Distribution of Cold Ischemic Time (Hours) for Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era



Cold ischemic time was missing for 1% of transplants pre-policy and 3% of transplants post-policy.

Table 49: Distribution of Cold Ischemic Time (Hours) for Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	4926	65	0.03	11.87	17.32	17.93	22.70	61.36
Post-Policy	6025	157	0.02	14.09	19.25	19.64	24.23	97.23

Figure 55 and **Table 50** show rate of delayed graft function for deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era. The rate of delayed graft function was 30.55% pre-policy and 32.18% post-policy.

Figure 55: Rate of Delayed Graft Function for Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

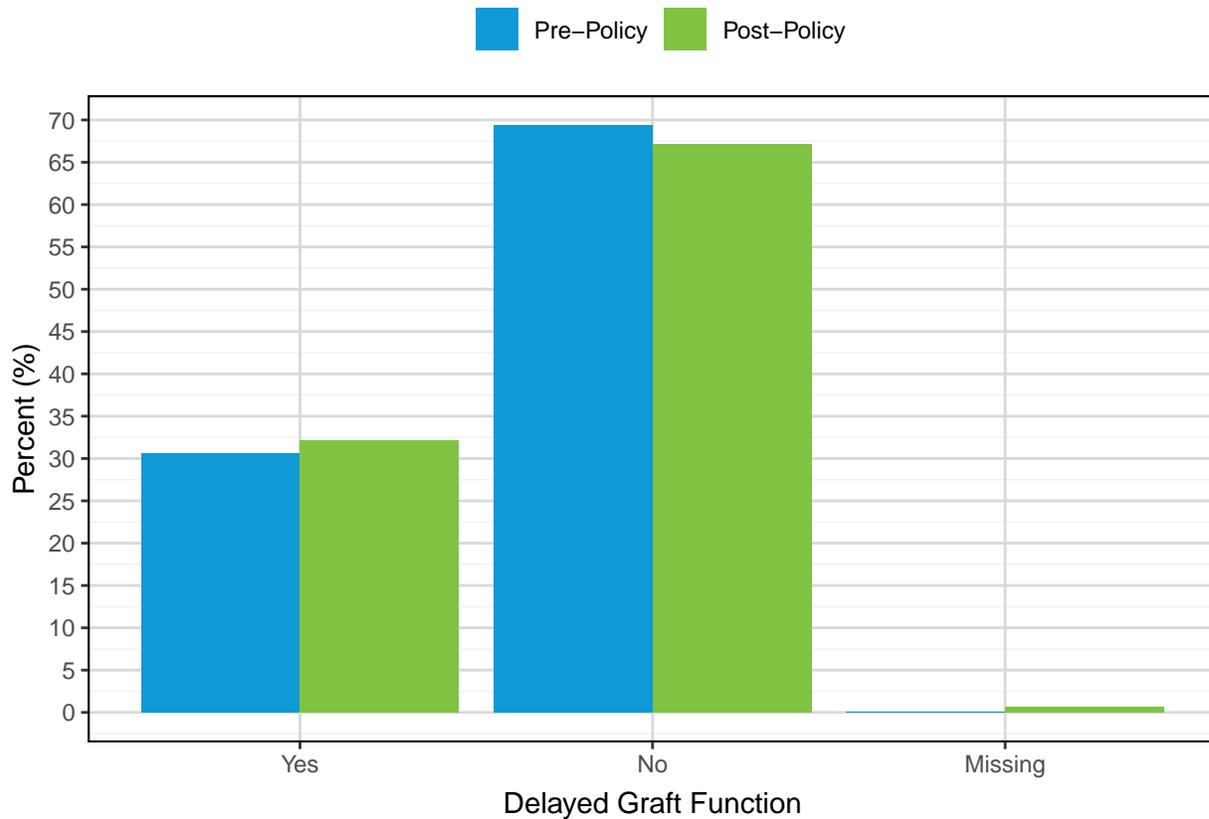
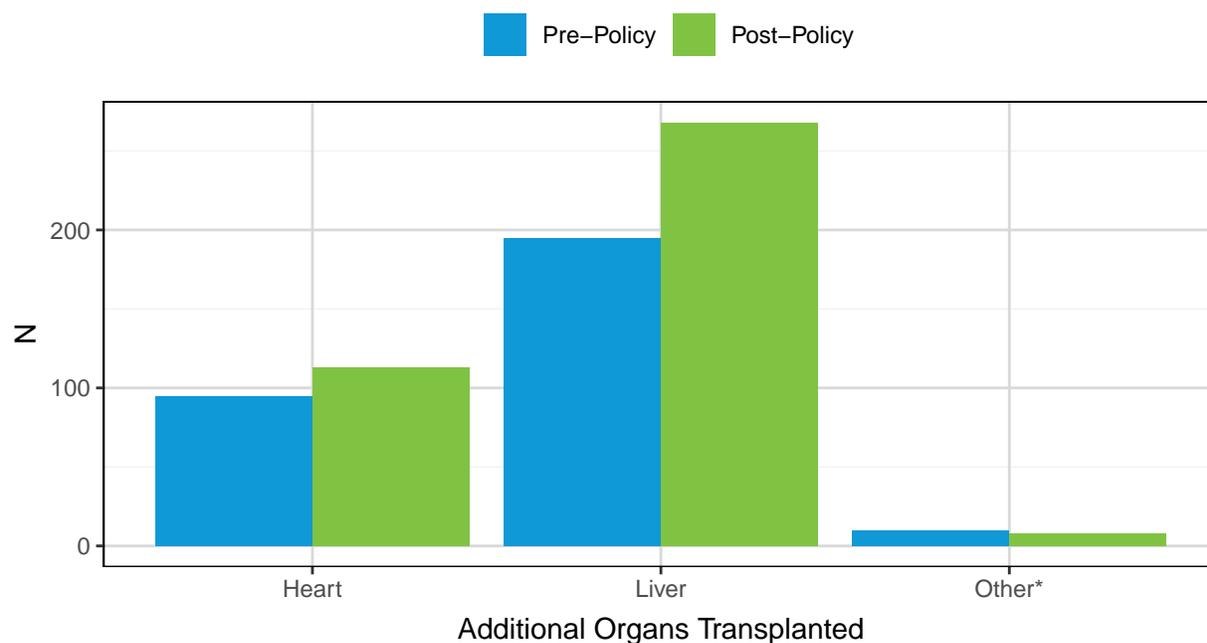


Table 50: Rate of Delayed Graft Function for Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

Delayed Graft Function	Pre-Policy		Post-Policy	
	N	%	N	%
Yes	1505	30.55	1939	32.18
No	3417	69.37	4047	67.17
Missing	4	0.08	39	0.65
Total	4926	100.00	6025	100.00

Figure 56 and **Table 51** show multi-organ deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era, organ, and KDPI, excluding kidney-pancreas transplants. There were 95 heart-kidney transplants pre-policy implementation and 113 post-policy. The majority of heart-kidney transplants across eras utilized KDPI 0-20% donors. There were 195 liver-kidney transplants pre-policy and 268 post-policy. The majority of liver-kidney transplants utilized KDPI 35-85% donors.

Figure 56: Multi-Organ Deceased Donor Kidney Transplants from from December 01, 2020 - June 30, 2021 by Policy Era



*Does not include kidney-pancreas transplants.

Table 51: Multi-Organ Deceased Donor Kidney Transplants from from December 01, 2020 - June 30, 2021 by Policy Era and KDPI

Organ	KDPI	Pre-Policy		Post-Policy	
		N	%	N	%
Heart	0-20%	49	51.58	61	53.98
	21-34%	22	23.16	23	20.35
	35-85%	23	24.21	29	25.66
	86-100%	1	1.05	0	0.00
	Total	95	100.00	113	100.00
Liver	0-20%	57	29.23	89	33.21
	21-34%	42	21.54	46	17.16
	35-85%	90	46.15	122	45.52
	86-100%	6	3.08	11	4.10
	Total	195	100.00	268	100.00
Other*	0-20%	5	50.00	4	50.00
	21-34%	3	30.00	2	25.00
	35-85%	2	20.00	2	25.00
	86-100%	0	0.00	0	0.00
	Total	10	100.00	8	100.00

* Does not include kidney-pancreas transplants.

Utilization and Efficiency of Allocation

Figure 57 and Table 52 show total deceased kidneys donors recovered from December 01, 2020 to June 30, 2021 by policy era. There were 3455 kidney donors recovered pre-policy, and another 4130 recovered post-policy.

Figure 57: Deceased Kidney Donors Recovered December 01, 2020 - June 30, 2021 by Policy Era

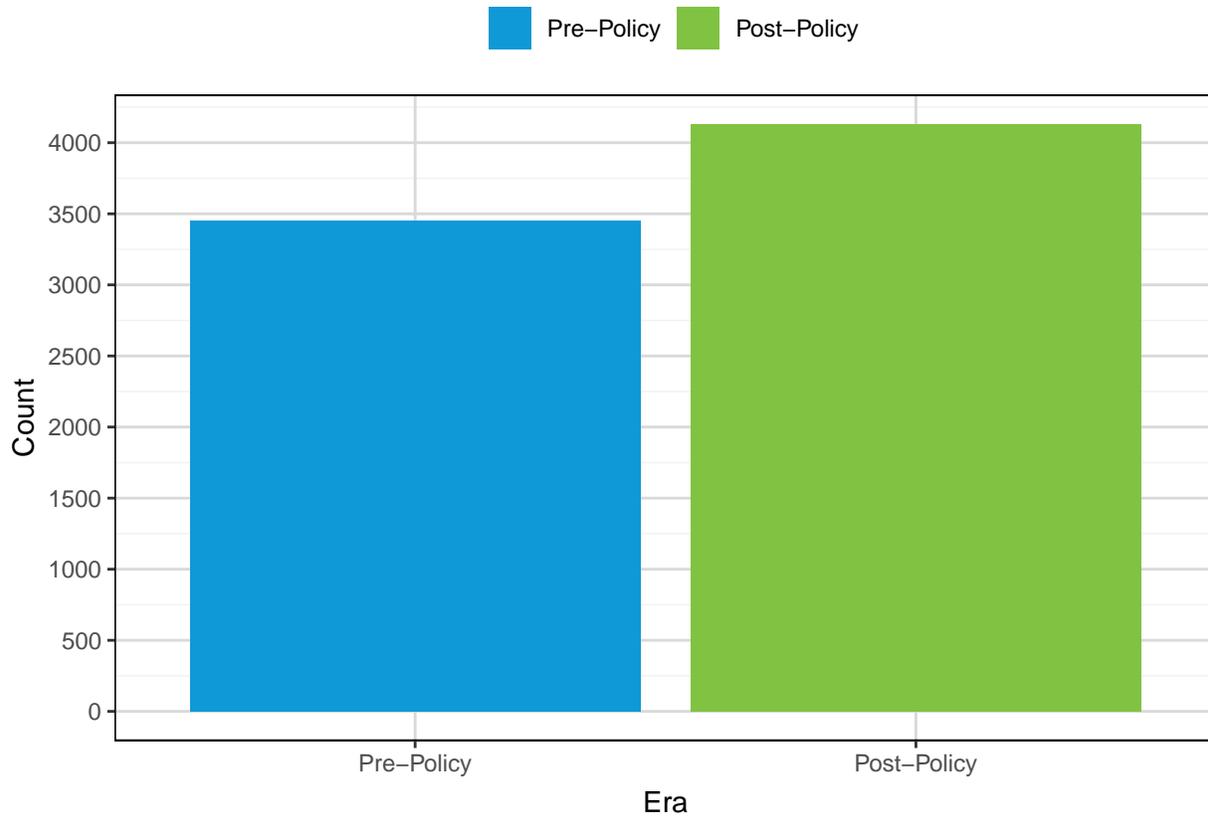
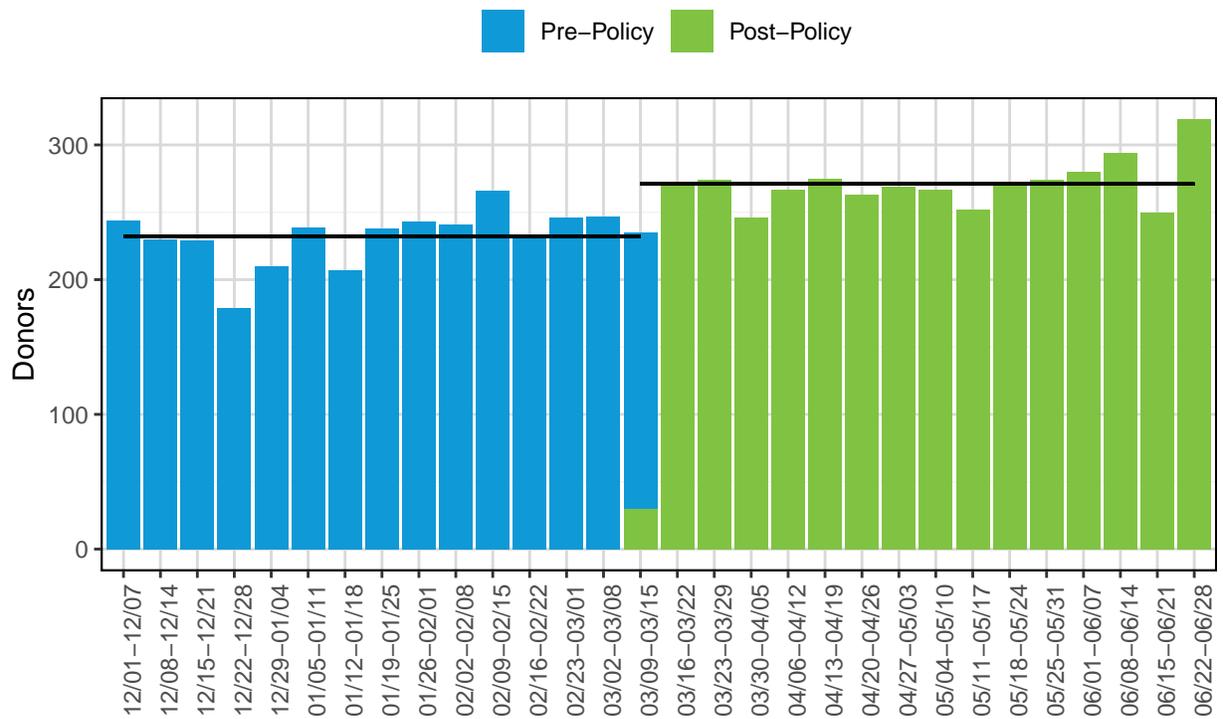


Table 52: Deceased Kidney Donors Recovered December 01, 2020 - June 30, 2021 by Policy Era

Era	Kidney Donors Recovered
Pre-Policy	3455
Post-Policy	4130

Figure 58 shows weekly deceased kidney donors recovered from December 01, 2020 to June 28, 2021. The average number of kidney donors recovered per week was 232 pre-policy and 271 post-policy. A table showing donors recovered by week is provided in the **Appendix**.

Figure 58: Weekly Deceased Kidney Donors Recovered December 01, 2020-June 28, 2021 by Policy Era



Lines represent the average number of donors recovered per week.
Some weeks shown in the figure include federal holidays.

Figure 59 and **Table 53** show deceased kidney donors recovered from December 01, 2020 to June 30, 2021 by policy era and KDPI. The number of donors increased across all KDPI categories after policy implementation. The distribution of KDPI did not change pre- to post-policy.

Figure 59: Deceased Kidney Donors Recovered December 01, 2020 - June 30, 2021 by Policy Era and KDPI

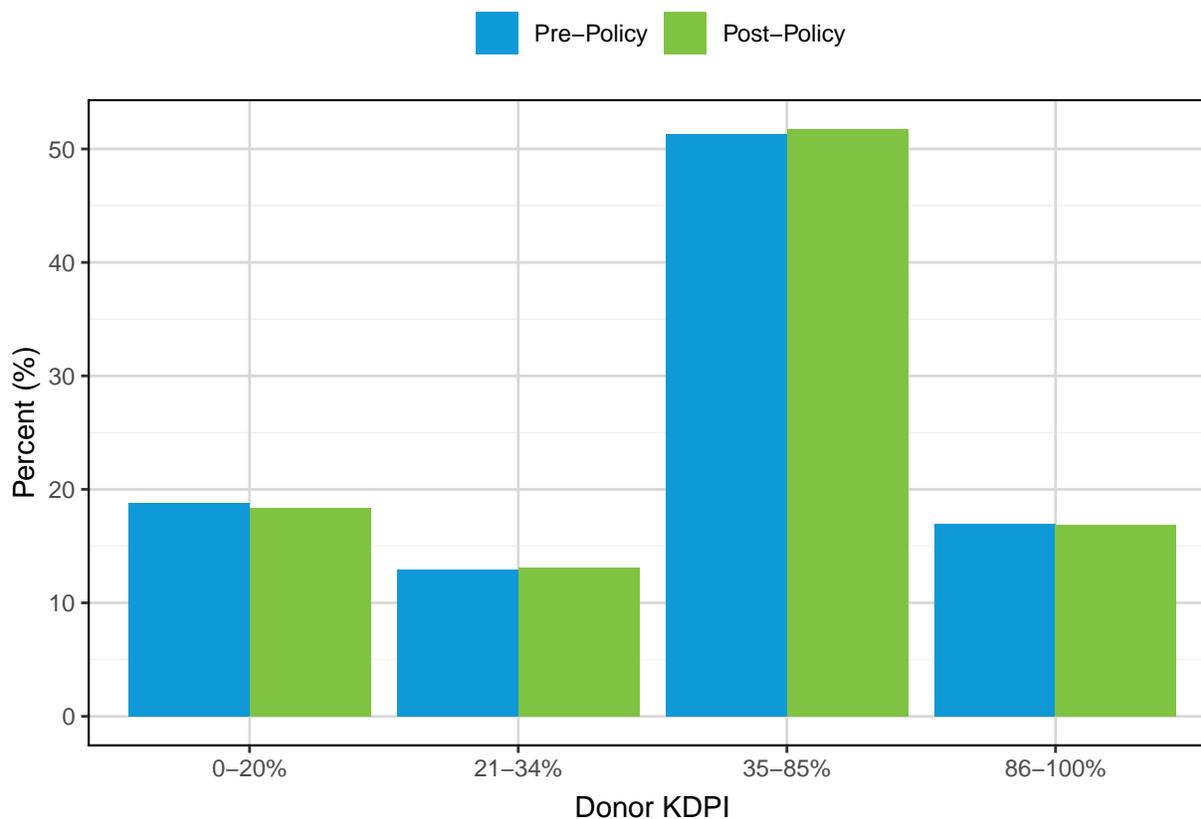


Table 53: Deceased Kidney Donors Recovered December 01, 2020 - June 30, 2021 by Policy Era and KDPI

KDPI	Pre-Policy		Post-Policy	
	N	%	N	%
0-20%	649	18.78	757	18.33
21-34%	447	12.94	541	13.10
35-85%	1773	51.32	2137	51.74
86-100%	586	16.96	695	16.83
Total	3455	100.00	4130	100.00

Figure 60 and Table 54 show deceased kidney donors recovered from December 01, 2020 to June 30, 2021 by policy era and DCD status. Roughly 30% of donors were DCD both pre- and post-policy.

Figure 60: Deceased Kidney Donors Recovered December 01, 2020 - June 30, 2021 by Policy Era and DCD Status

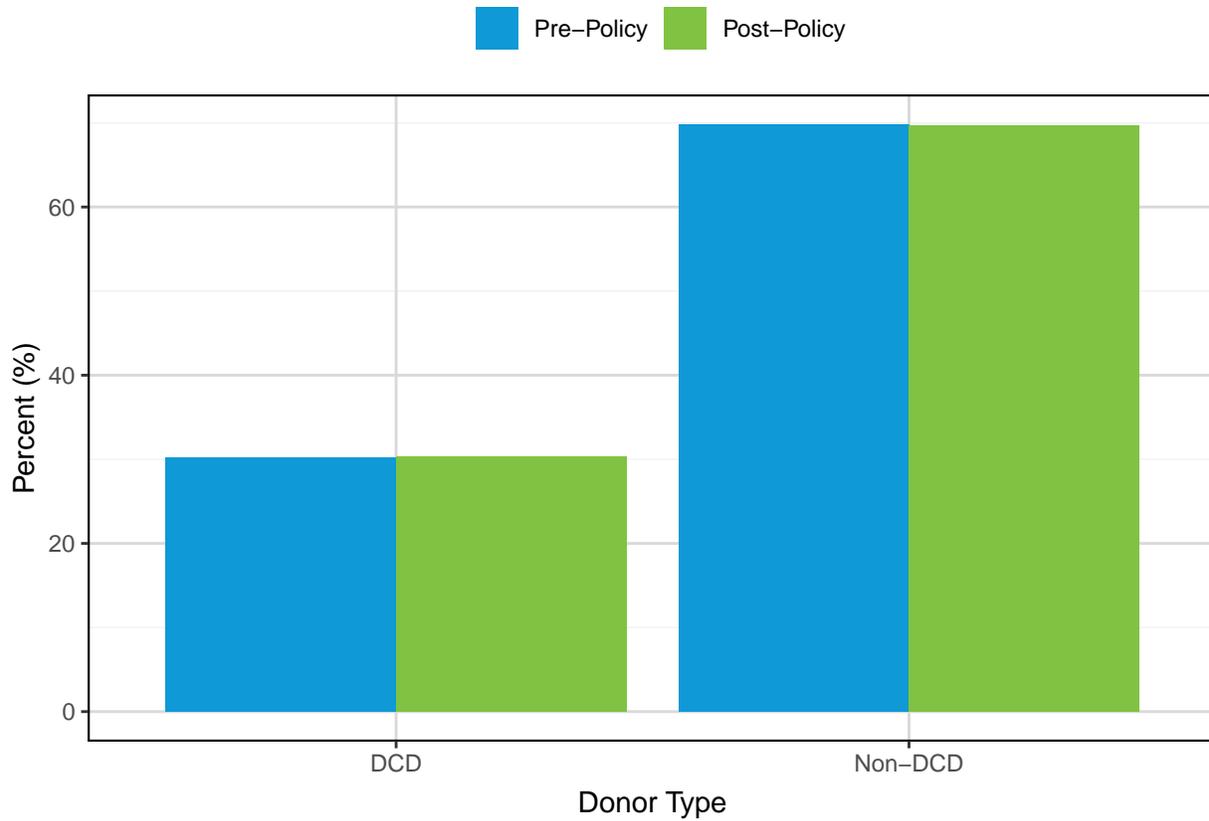


Table 54: Deceased Kidney Donors Recovered December 01, 2020 - June 30, 2021 by Policy Era and DCD Status

Donor Type	Pre-Policy		Post-Policy	
	N	%	N	%
DCD	1043	30.19	1250	30.27
Non-DCD	2412	69.81	2880	69.73
Total	3455	100.00	4130	100.00

Figure 61 and **Table 55** show deceased kidney donors recovered from December 01, 2020 to June 30, 2021 by policy era and age. The total number of donors increased in all age groups after policy implementation. The proportion of donors aged 35 to 49 years increased from 29.03% to 30.34% after the policy change. The proportion of donors aged 18 to 34 and 50 to 64 years decreased from 27.03% to 25.98% and 32.27% to 30.39% respectively.

Figure 61: Deceased Kidney Donors Recovered December 01, 2020 - June 30, 2021 by Policy Era and Donor Age

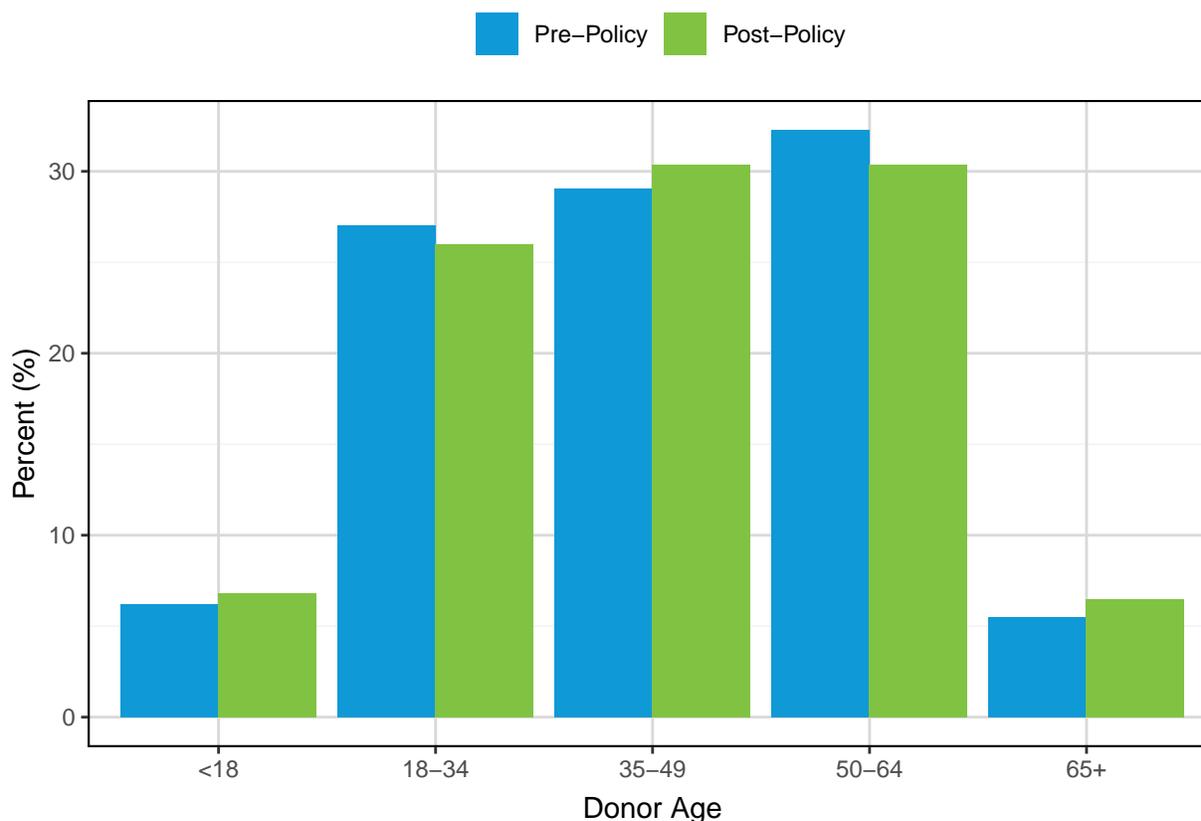


Table 55: Deceased Kidney Donors Recovered December 01, 2020 - June 30, 2021 by Policy Era and Donor Age

Donor Age	Pre-Policy		Post-Policy	
	N	%	N	%
<18	214	6.19	282	6.83
18-34	934	27.03	1073	25.98
35-49	1003	29.03	1253	30.34
50-64	1115	32.27	1255	30.39
65+	189	5.47	267	6.46
Total	3455	100.00	4130	100.00

Figure 62 and **Table 56** show discard rates for deceased donor kidney recovered from December 01, 2020 to June 30, 2021 by policy era and KDPI. Overall the kidney discard rate dropped from 24.25% to 21.91% post-policy, with the biggest change seen for KDPI 86-100% kidneys (67.44% to 61.71%).

Figure 62: Discard Rates for Deceased Donor Kidneys Recovered December 01, 2020 - June 30, 2021 by Policy Era and KDPI

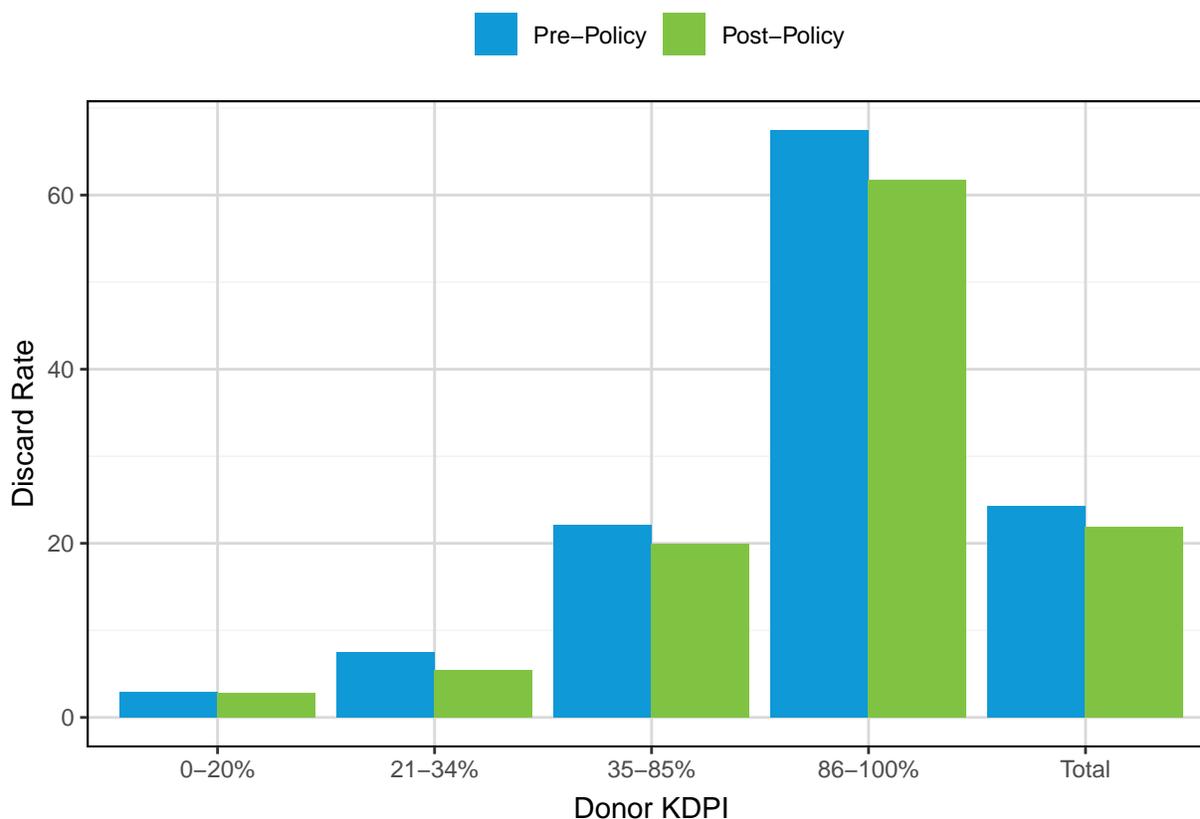


Table 56: Discard Rates for Deceased Donor Kidneys Recovered December 01, 2020 - June 30, 2021 by Policy Era and KDPI

KDPI	Pre-Policy			Post-Policy		
	Kidneys Recovered	Kidneys Not TXed	Discard Rate	Kidneys Recovered	Kidneys Not TXed	Discard Rate
0-20%	1295	38	2.93	1506	43	2.86
21-34%	890	67	7.53	1079	59	5.47
35-85%	3533	779	22.05	4257	848	19.92
86-100%	1164	785	67.44	1379	851	61.71
Total	6882	1669	24.25	8221	1801	21.91

Table 57 shows deceased donor kidneys recovered but not transplanted from December 01, 2020 to June 30, 2021 by policy era and discard reason. The most common reason for discard both pre- and post-policy implementation was “No recipient located - list exhausted,” increasing from 55% to 58.36% after the policy change.

Table 57: Deceased Donor Kidneys Recovered but Not Transplanted December 01, 2020 - June 30, 2021 by Policy Era and Discard Reason

Discard Reason	Pre-Policy		Post-Policy	
	N	%	N	%
Anatomical abnormalities	68	4.07	50	2.78
Biopsy findings	281	16.84	297	16.49
Diseased organ	35	2.10	25	1.39
Donor Medical history	21	1.26	9	0.50
Donor social history	2	0.12	0	0.00
Inadequate urine output	2	0.12	0	0.00
Infection	2	0.12	0	0.00
No recipient located - list exhausted	918	55.00	1051	58.36
Organ not as described	1	0.06	6	0.33
Organ trauma	8	0.48	11	0.61
Other, specify	203	12.16	201	11.16
Poor organ function	75	4.49	88	4.89
Positive Hepatitis	7	0.42	2	0.11
Positive HIV	0	0.00	2	0.11
Recipient determined to be unsuitable for TX in OR	4	0.24	0	0.00
Too old on ice	15	0.90	12	0.67
Too old on pump	4	0.24	4	0.22
Ureteral damage	3	0.18	11	0.61
Vascular damage	12	0.72	14	0.78
Warm ischemic time too long	8	0.48	18	1.00
Missing	0	0.00	0	0.00
Total	1669	100.00	1801	100.00

Table 58 shows the disposition of kidneys with a final acceptance from December 01, 2020 to June 30, 2021 by policy era and OPTN region. The majority of kidneys with an acceptance were transplanted to the same patient that accepted the organ both pre- and post-policy across all regions. Pre-policy, this proportion ranged from 68.4% in Region 11 to 87.4% in Region 1. Post-policy, this proportion ranged from 71.7% in Region 11 to 85.2% in Region 6.

Table 58: Disposition of Kidneys with a Final Acceptance December 01, 2020 - June 30, 2021 by Policy Era and OPTN Region

Era	Region	N	Accepting Patient	Accepting Center	Different Center	Discard	Non-Recovery
Pre-Policy	1	151	132 (87.4%)	8 (5.3%)	7 (4.6%)	4 (2.6%)	0 (0.0%)
	2	603	521 (86.4%)	38 (6.3%)	16 (2.7%)	28 (4.6%)	0 (0.0%)
	3	793	603 (76.0%)	75 (9.5%)	29 (3.7%)	84 (10.6%)	2 (0.3%)
	4	451	359 (79.6%)	33 (7.3%)	34 (7.5%)	25 (5.5%)	0 (0.0%)
	5	756	616 (81.5%)	73 (9.7%)	29 (3.8%)	36 (4.8%)	2 (0.3%)
	6	244	201 (82.4%)	19 (7.8%)	7 (2.9%)	15 (6.1%)	2 (0.8%)
	7	323	271 (83.9%)	18 (5.6%)	16 (5.0%)	18 (5.6%)	0 (0.0%)
	8	378	299 (79.1%)	40 (10.6%)	10 (2.6%)	27 (7.1%)	2 (0.5%)
	9	211	173 (82.0%)	16 (7.6%)	16 (7.6%)	4 (1.9%)	2 (0.9%)
	10	511	400 (78.3%)	62 (12.1%)	20 (3.9%)	29 (5.7%)	0 (0.0%)
	11	703	481 (68.4%)	86 (12.2%)	59 (8.4%)	60 (8.5%)	17 (2.4%)
	Total	5124	4056 (79.2%)	468 (9.1%)	243 (4.7%)	330 (6.4%)	27 (0.5%)
Post-Policy	1	197	153 (77.7%)	16 (8.1%)	25 (12.7%)	3 (1.5%)	0 (0.0%)
	2	669	539 (80.6%)	47 (7.0%)	42 (6.3%)	41 (6.1%)	0 (0.0%)
	3	1010	819 (81.1%)	67 (6.6%)	49 (4.9%)	75 (7.4%)	0 (0.0%)
	4	644	527 (81.8%)	47 (7.3%)	43 (6.7%)	26 (4.0%)	1 (0.2%)
	5	948	789 (83.2%)	68 (7.2%)	45 (4.7%)	42 (4.4%)	4 (0.4%)
	6	263	224 (85.2%)	14 (5.3%)	12 (4.6%)	13 (4.9%)	0 (0.0%)
	7	457	378 (82.7%)	32 (7.0%)	24 (5.3%)	23 (5.0%)	0 (0.0%)
	8	440	357 (81.1%)	40 (9.1%)	25 (5.7%)	16 (3.6%)	2 (0.5%)
	9	231	177 (76.6%)	18 (7.8%)	26 (11.3%)	10 (4.3%)	0 (0.0%)
	10	557	420 (75.4%)	63 (11.3%)	36 (6.5%)	34 (6.1%)	4 (0.7%)
	11	727	521 (71.7%)	75 (10.3%)	68 (9.4%)	55 (7.6%)	8 (1.1%)
	Total	6143	4904 (79.8%)	487 (7.9%)	395 (6.4%)	338 (5.5%)	19 (0.3%)

Table 59 shows the disposition of kidneys with a final acceptance from December 01, 2020 to June 30, 2021 by policy era and KDPI. The proportion of kidneys transplanted to same patient accepting the organ was highest for KDPI 0-20% kidneys (~88% pre- and post-policy) and lowest for KDPI 86-100% kidneys (58.5% pre-policy and 69.1% post-policy).

Table 59: Disposition of Kidneys with a Final Acceptance December 01, 2020 - June 30, 2021 by Policy Era and KDPI

Era	KDPI	N	Accepting Patient	Accepting Center	Different Center	Discard	Non-Recovery
Pre-Policy	0-20%	991	884 (89.2%)	49 (4.9%)	48 (4.8%)	9 (0.9%)	1 (0.1%)
	21-34%	750	619 (82.5%)	53 (7.1%)	43 (5.7%)	31 (4.1%)	4 (0.5%)
	35-85%	2903	2272 (78.3%)	286 (9.9%)	135 (4.7%)	197 (6.8%)	13 (0.4%)
	86-100%	480	281 (58.5%)	80 (16.7%)	17 (3.5%)	93 (19.4%)	9 (1.9%)
	Total	5124	4056 (79.2%)	468 (9.1%)	243 (4.7%)	330 (6.4%)	27 (0.5%)
Post-Policy	0-20%	1110	968 (87.2%)	49 (4.4%)	72 (6.5%)	17 (1.5%)	4 (0.4%)
	21-34%	913	760 (83.2%)	67 (7.3%)	66 (7.2%)	16 (1.8%)	4 (0.4%)
	35-85%	3499	2747 (78.5%)	307 (8.8%)	232 (6.6%)	205 (5.9%)	8 (0.2%)
	86-100%	621	429 (69.1%)	64 (10.3%)	25 (4.0%)	100 (16.1%)	3 (0.5%)
	Total	6143	4904 (79.8%)	487 (7.9%)	395 (6.4%)	338 (5.5%)	19 (0.3%)

Table 60 shows the disposition of kidneys with a final acceptance from December 01, 2020 to June 30, 2021 by policy era and CPRA of the accepting patient. The proportion of kidneys transplanted to the same patient accepting the organ was lowest for CPRA 80-97% patients both pre- and post-policy (73.1% and 76%).

Table 60: Disposition of Kidneys with a Final Acceptance December 01, 2020 - June 30, 2021 by Policy Era and Accepting Patient CPRA

Era	CPRA	N	Accepting Patient	Accepting Center	Different Center	Discard	Non-Recovery
Pre-Policy	0	2829	2266 (80.1%)	259 (9.2%)	98 (3.5%)	192 (6.8%)	14 (0.5%)
	1-19	557	447 (80.3%)	52 (9.3%)	29 (5.2%)	26 (4.7%)	3 (0.5%)
	20-79	909	730 (80.3%)	77 (8.5%)	37 (4.1%)	62 (6.8%)	3 (0.3%)
	80-97	375	274 (73.1%)	40 (10.7%)	30 (8.0%)	30 (8.0%)	1 (0.3%)
	98-100	432	327 (75.7%)	40 (9.3%)	49 (11.3%)	12 (2.8%)	4 (0.9%)
	Unknown	22	12 (54.5%)	0 (0.0%)	0 (0.0%)	8 (36.4%)	2 (9.1%)
	Total	5124	4056 (79.2%)	468 (9.1%)	243 (4.7%)	330 (6.4%)	27 (0.5%)
Post-Policy	0	3125	2535 (81.1%)	223 (7.1%)	169 (5.4%)	191 (6.1%)	7 (0.2%)
	1-19	616	494 (80.2%)	58 (9.4%)	32 (5.2%)	29 (4.7%)	3 (0.5%)
	20-79	992	764 (77.0%)	99 (10.0%)	70 (7.1%)	58 (5.8%)	1 (0.1%)
	80-97	849	645 (76.0%)	75 (8.8%)	79 (9.3%)	45 (5.3%)	5 (0.6%)
	98-100	541	449 (83.0%)	32 (5.9%)	44 (8.1%)	13 (2.4%)	3 (0.6%)
	Unknown	20	17 (85.0%)	0 (0.0%)	1 (5.0%)	2 (10.0%)	0 (0.0%)
	Total	6143	4904 (79.8%)	487 (7.9%)	395 (6.4%)	338 (5.5%)	19 (0.3%)

Figure 63 and **Table 61** show offers per active patient year for kidney matches from December 01, 2020 to June 30, 2021 by policy era. The overall offer rate increased from 141 to 208 offers per active patient year after implementation.

Figure 63: Offers per Active Patient Year for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era

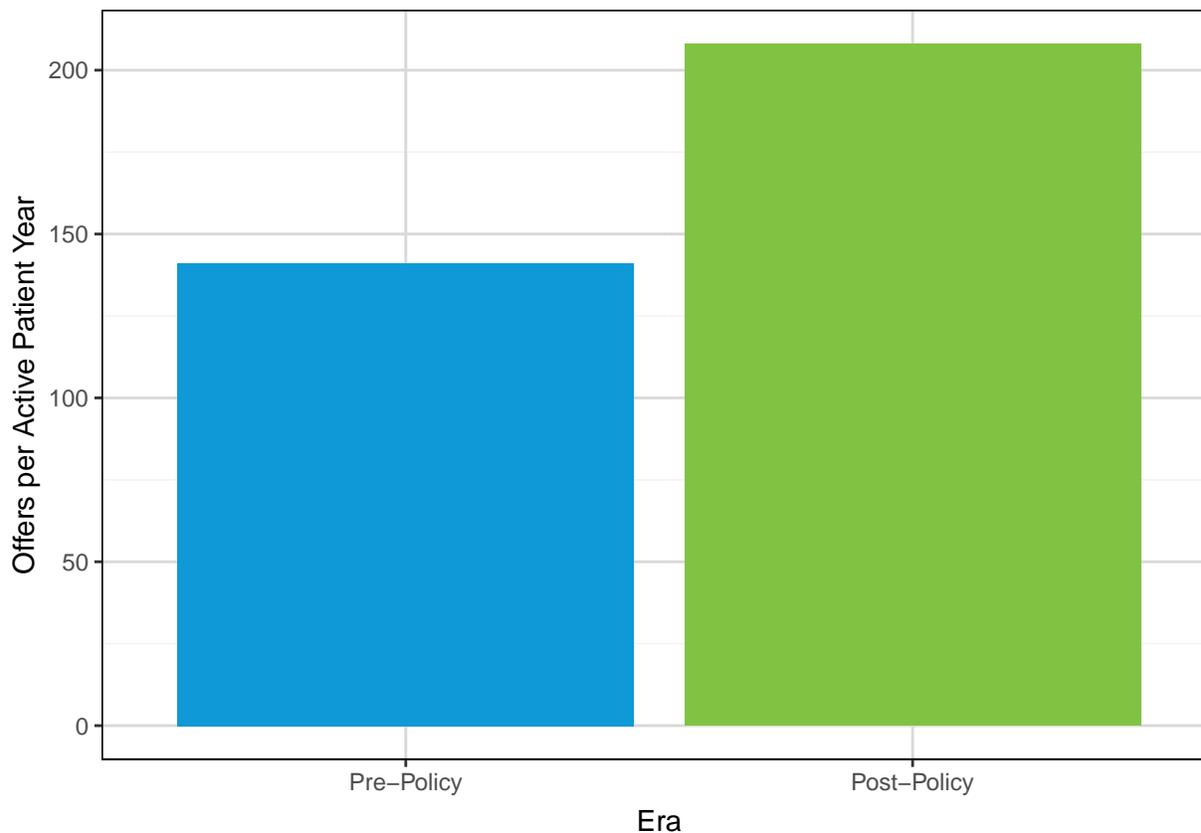


Table 61: Offer and Acceptance Rates for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era

Era	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	15295.33	2158172	5182	141.10	2.40
Post-Policy	15629.24	3250644	5752	207.98	1.77

Figure 64 shows acceptances per 1000 offers for kidney match runs from December 01, 2020 to June 30, 2021 by policy era. The overall acceptance rate decreased from 2.4 to 1.77 acceptances per 1000 offers after policy implementation. While the number of offers increased 10% after policy implementation, the number of offers increased by 50%.

Figure 64: Acceptances per 1000 Offers for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era

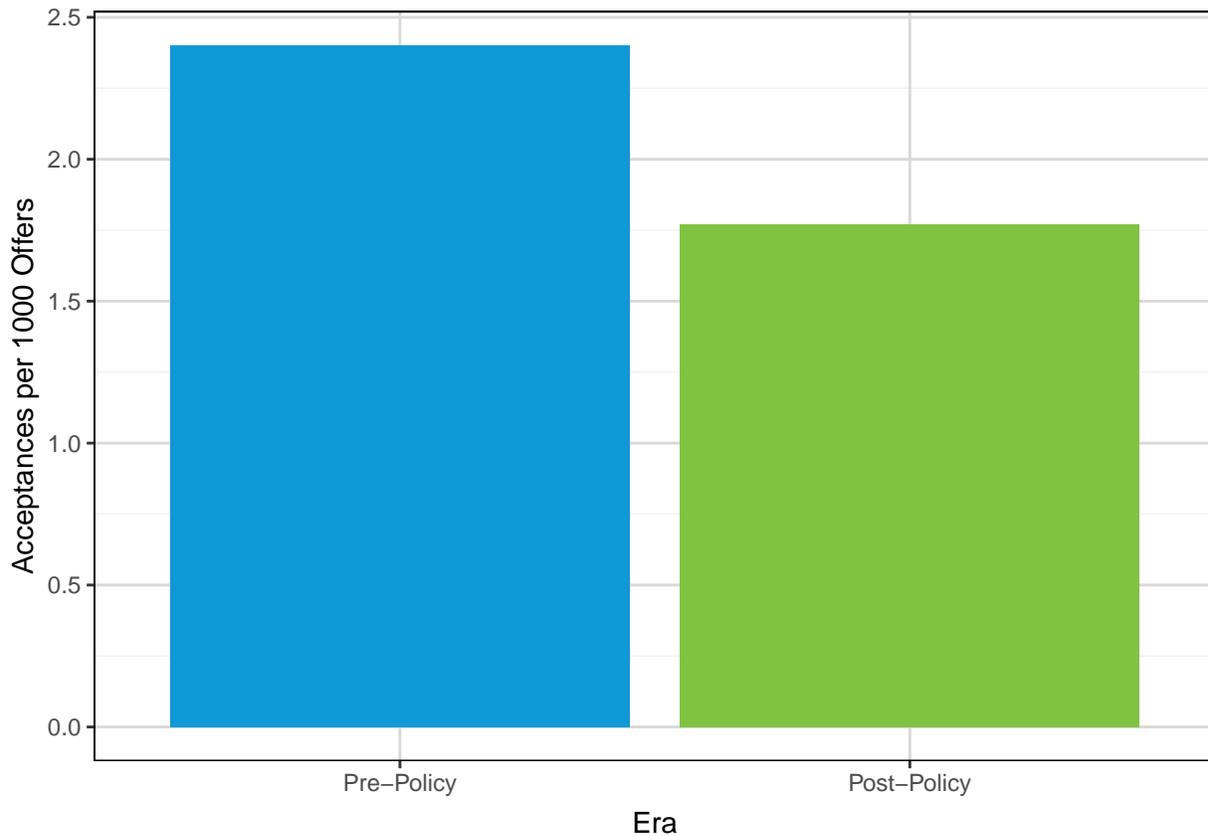


Figure 65 and **Table 62** show offers per active patient year for kidney matches from December 01, 2020 to June 30, 2021 by policy era and age at listing. Offer rates increased for all age groups after policy implementation. Offer rates increased with age at listing, with candidates aged 65 years or older seeing the highest offer rates both pre- and post-policy (159 and 231 offers per active patient year).

Offer rates increased for candidates aged less than 18 years at listing, particularly for candidates aged 0-5 (54 to 111 offers per active patient year).

Figure 65: Offers per Active Patient Year for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Age at Listing

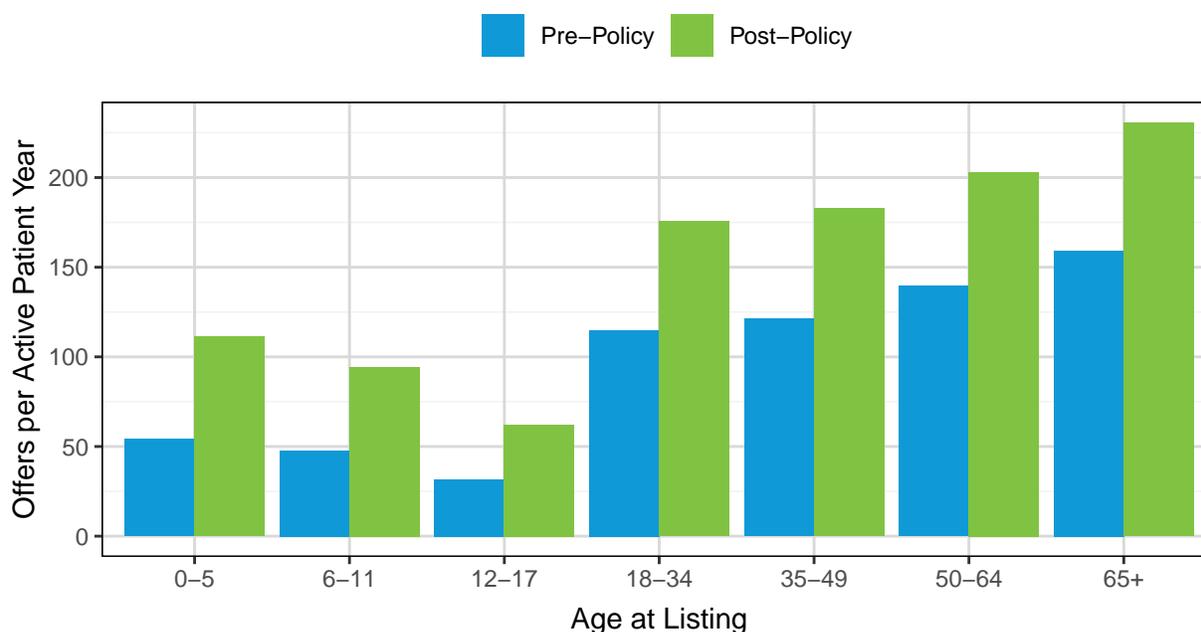


Table 62: Offer and Acceptance Rates for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Age at Listing

Era	Age	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	0-5	26.99	1457	30	53.98	20.59
	6-11	23.83	1138	38	47.75	33.39
	12-17	68.38	2166	93	31.68	42.94
	18-34	1768.08	203042	649	114.84	3.20
	35-49	4519.21	548637	1391	121.40	2.54
	50-64	6887.08	962185	2000	139.71	2.08
	65+	2760.33	439545	981	159.24	2.23
Post-Policy	0-5	26.91	2995	41	111.30	13.69
	6-11	20.95	1976	51	94.33	25.81
	12-17	57.05	3548	123	62.19	34.67
	18-34	1795.60	315622	737	175.77	2.34
	35-49	4625.61	846019	1544	182.90	1.83
	50-64	7039.46	1429568	2249	203.08	1.57
	65+	2822.03	650915	1007	230.66	1.55

Figure 66 shows acceptances per 1000 offers for kidney match runs from December 01, 2020 to June 30, 2021 by policy era and age at listing. Acceptance rates decreased after policy implementation across all candidate age groups. Candidates less than 18 years old had the highest acceptance rates both pre- and post-policy.

Figure 66: Acceptances per 1000 Offers for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Age at Listing

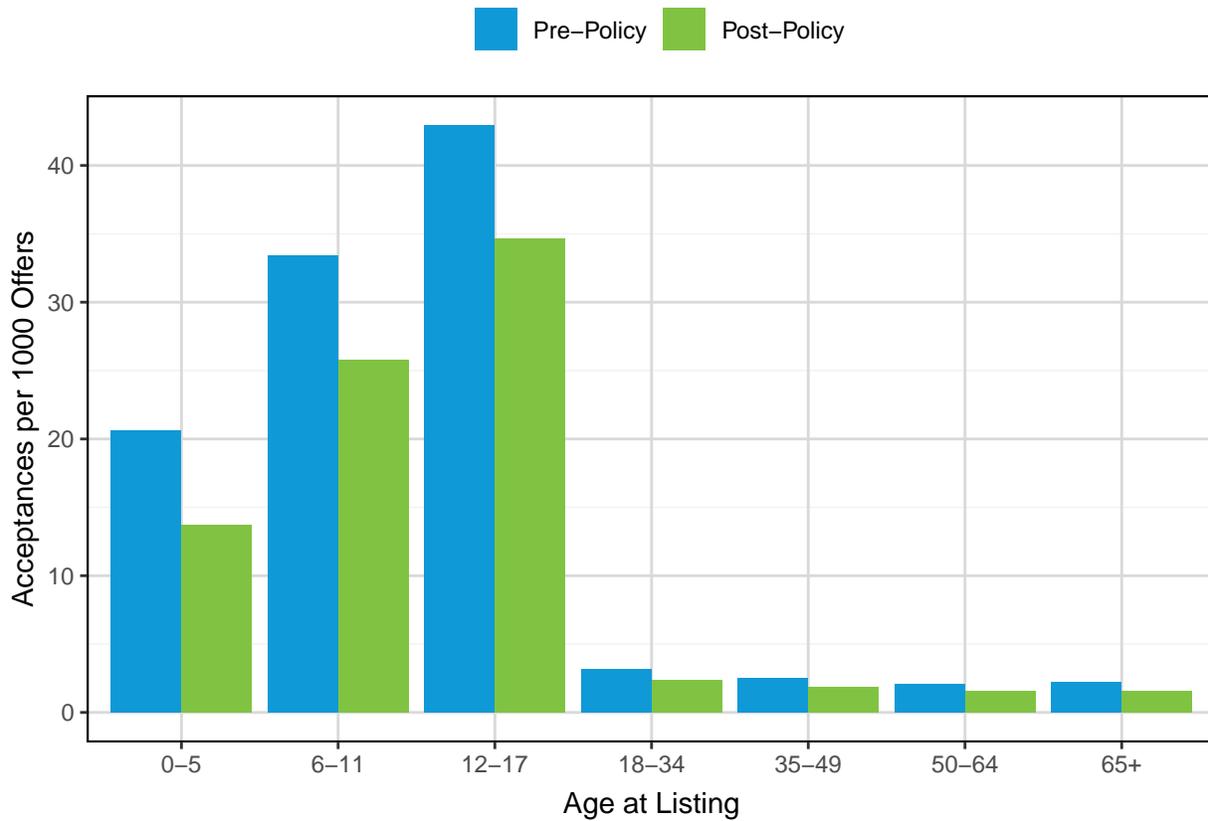


Figure 67 and **Table 63** show offers per active patient year for kidney matches from December 01, 2020 to June 30, 2021 by policy era and time on dialysis at listing. Groupings are based on the 25th, 50th, and 75th percentiles of dialysis time (see **Table 12**). Offer rates increased for pre-emptively listed patients as well as those on dialysis after policy implementation.

Figure 67: Offers per Active Patient Year for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Dialysis Time at Listing

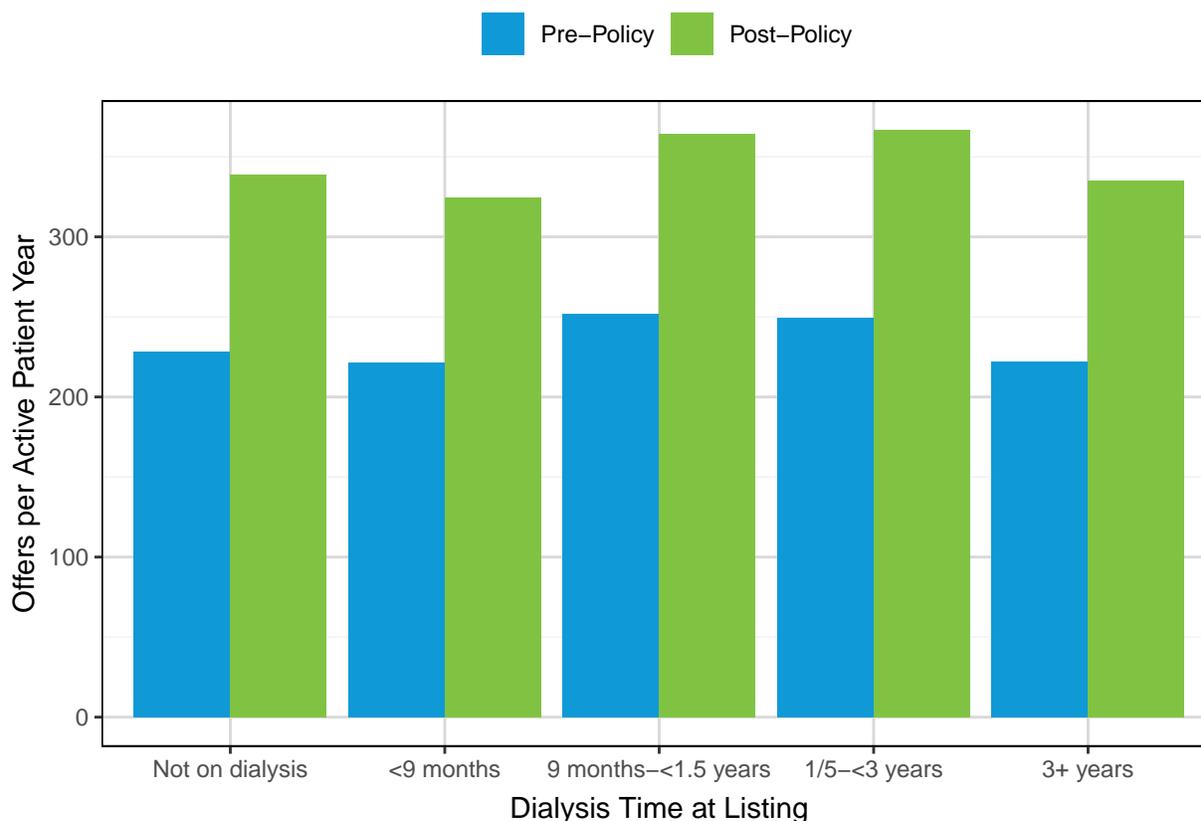


Table 63: Offer and Acceptance Rates for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Dialysis Time at Listing

Era	Dialysis Time	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	Not on dialysis	3116.17	712168	1349	228.54	1.89
	<9 months	1819.67	403003	720	221.47	1.79
	9 months-<1.5 years	1778.24	448296	829	252.10	1.85
	1/5-<3 years	1510.84	377189	861	249.66	2.28
	3+ years	980.68	217516	1423	221.80	6.54
Post-Policy	Not on dialysis	3208.70	1086058	1377	338.47	1.27
	<9 months	1861.93	603688	807	324.23	1.34
	9 months-<1.5 years	1821.97	664102	884	364.50	1.33
	1/5-<3 years	1545.79	566872	971	366.72	1.71
	3+ years	985.44	329924	1713	334.80	5.19

Figure 68 shows acceptances per 1000 offers for kidney match runs from December 01, 2020 to June 30, 2021 by policy era and time on dialysis at listing. Groupings are based on the 25th, 50th, and 75th percentiles of dialysis time (see **Table 12**). Acceptance rates decreased for all patients regardless of dialysis status or time after policy implementation. Candidates on dialysis for three or more years at the time of listing had the highest rate of offer acceptance both before and after policy implementation, decreasing from 6.54 acceptances per 1000 offers pre-policy to 5.19 post-policy.

Figure 68: Acceptances per 1000 Offers for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Dialysis Time at Listing

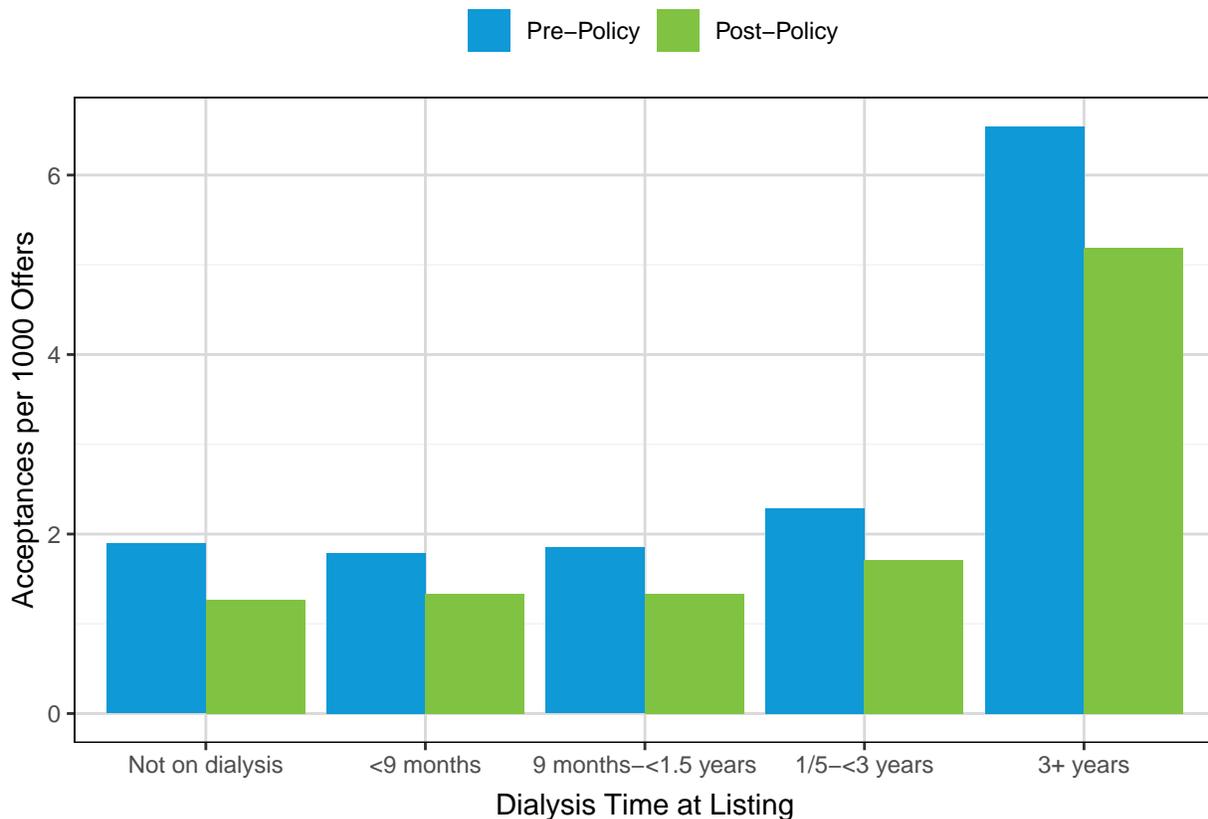


Figure 69 and **Table 64** show offers per active patient year for kidney matches from December 01, 2020 to June 30, 2021 by policy era and ethnicity. Offer rates increased for candidates of all ethnicities after policy implementation. Hispanic candidates had the highest offer rates both before and after the policy change.

Figure 69: Offers per Active Patient Year for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Ethnicity

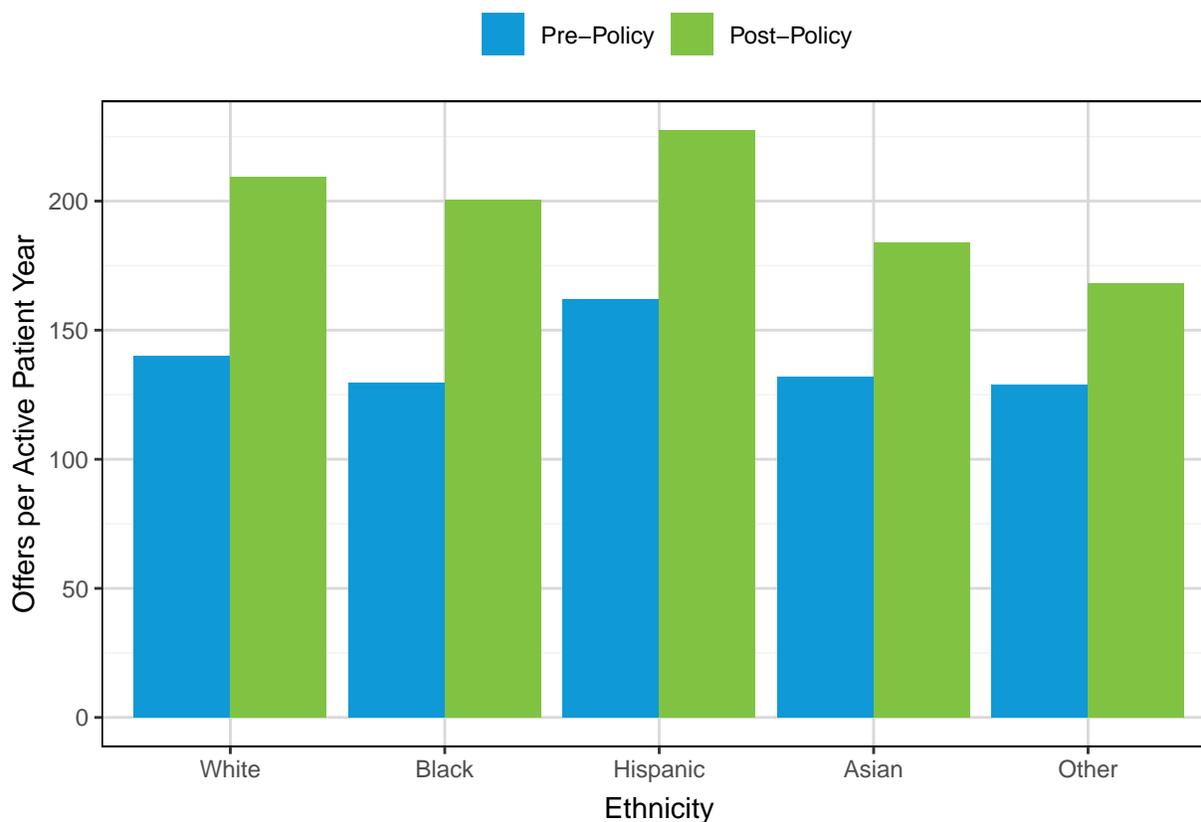


Table 64: Offer and Acceptance Rates for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Ethnicity

Era	Ethnicity	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	White	5003.74	700559	1863	140.01	2.66
	Black	5104.31	662247	1826	129.74	2.76
	Hispanic	3444.59	557658	997	161.89	1.79
	Asian	1460.85	192864	368	132.02	1.91
	Other	348.18	44844	128	128.80	2.85
Post-Policy	White	5167.50	1082621	1947	209.51	1.80
	Black	5180.43	1038163	2027	200.40	1.95
	Hispanic	3486.18	792795	1215	227.41	1.53
	Asian	1504.68	276416	417	183.70	1.51
	Other	360.52	60649	146	168.23	2.41

Figure 70 shows acceptances per 1000 offers for kidney match runs from December 01, 2020 to June 30, 2021 by policy era and ethnicity. Acceptance rates decreased for all ethnicities after policy implementation.

Figure 70: Acceptances per 1000 Offers for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Age at Ethnicity

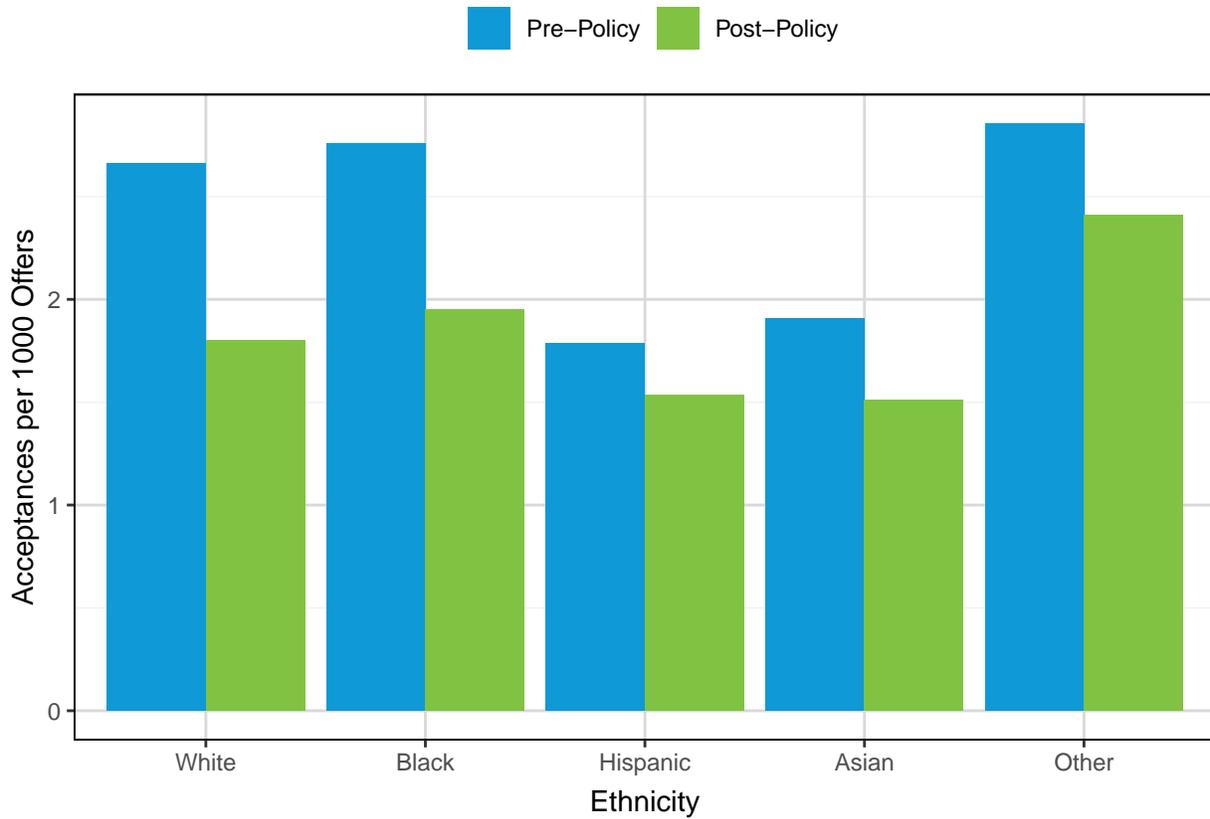


Figure 71 and **Table 65** show offers per active patient year for kidney matches from December 01, 2020 to June 30, 2021 by policy era and blood type. Offer rates increased for all blood types after policy implementation. The largest shift was observed for type O candidates, increasing from 174 to 270 offers per active patient year.

Figure 71: Offers per Active Patient Year for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Blood Type

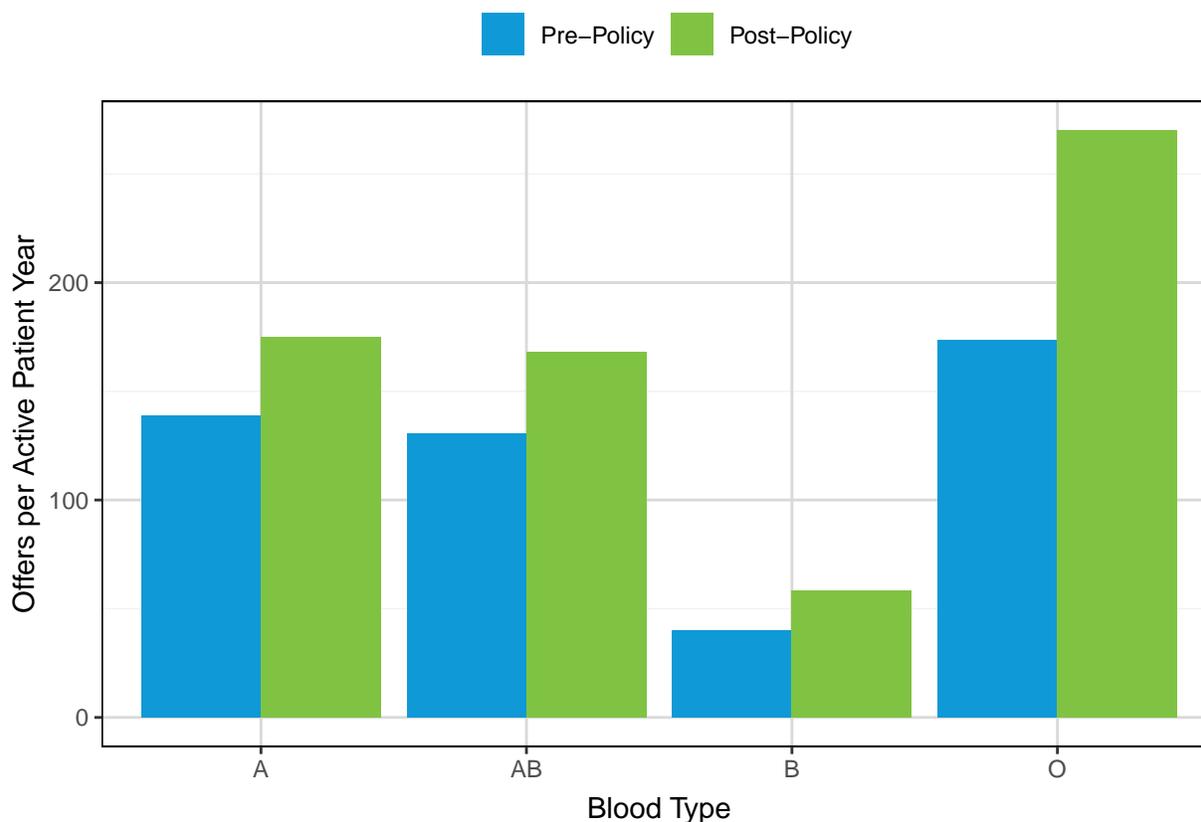


Table 65: Offer and Acceptance Rates for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Blood Type

Era	Blood Type	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	A	3882.50	539654	1794	139.00	3.32
	AB	309.96	40453	236	130.51	5.83
	B	2626.82	105279	693	40.08	6.58
	O	8482.08	1472786	2459	173.64	1.67
Post-Policy	A	3943.74	689099	1923	174.73	2.79
	AB	317.29	53284	270	167.94	5.07
	B	2660.99	155091	835	58.28	5.38
	O	8713.85	2353170	2724	270.05	1.16

Figure 72 shows acceptances per 1000 offers for kidney match runs from December 01, 2020 to June 30, 2021 by policy era and blood type. Acceptance rates decreased for all blood types after policy implementation. Type AB and B candidates had the highest acceptance rates both pre- and post-policy.

Figure 72: Acceptances per 1000 Offers for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Blood Type

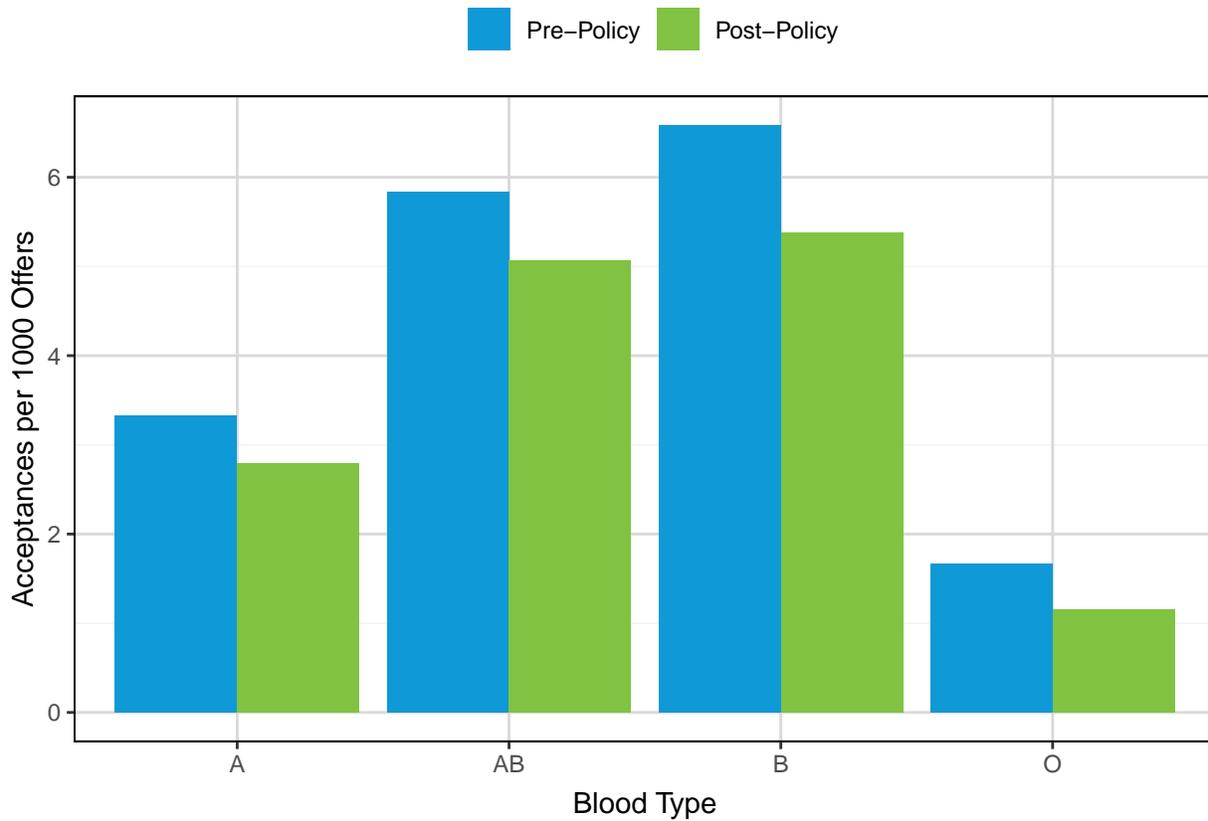


Figure 73 and **Table 66** show offers per active patient year for kidney matches from December 01, 2020 to June 30, 2021 by policy era and CPRA at listing. Offer rates increased for all CPRA groups after policy implementation.

Figure 73: Offers per Active Patient Year for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and CPRA at Listing

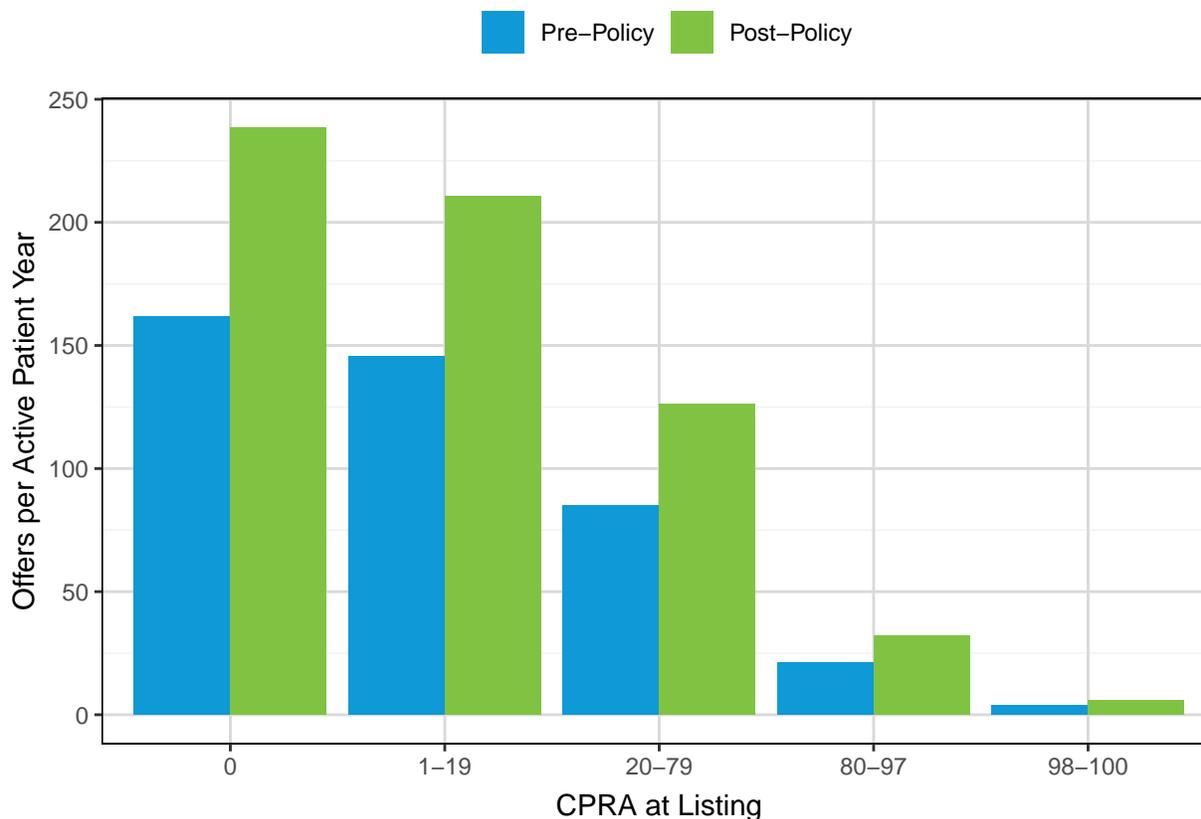


Table 66: Offer and Acceptance Rates for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and CPRA at Listing

Era	CPRA	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	0	11096.84	1794213	3604	161.69	2.01
	1-19	1165.74	169652	355	145.53	2.09
	20-79	2078.41	176945	696	85.13	3.93
	80-97	691.32	14549	292	21.05	20.07
	98-100	606.56	2431	229	4.01	94.20
Post-Policy	0	11330.49	2702129	3786	238.48	1.40
	1-19	1208.39	254353	383	210.49	1.51
	20-79	2124.69	268377	807	126.31	3.01
	80-97	681.98	21942	516	32.17	23.52
	98-100	623.32	3551	252	5.70	70.97

Figure 74 shows acceptances per 1000 offers for kidney match runs from December 01, 2020 to June 30, 2021 by policy era and age at listing. The only CPRA group with an increase in acceptance rate was CPRA 80-97% candidates, going from 20.07 to 23.52 acceptances per 1000 offers.

Figure 74: Acceptances per 1000 Offers for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and CPRA at Listing

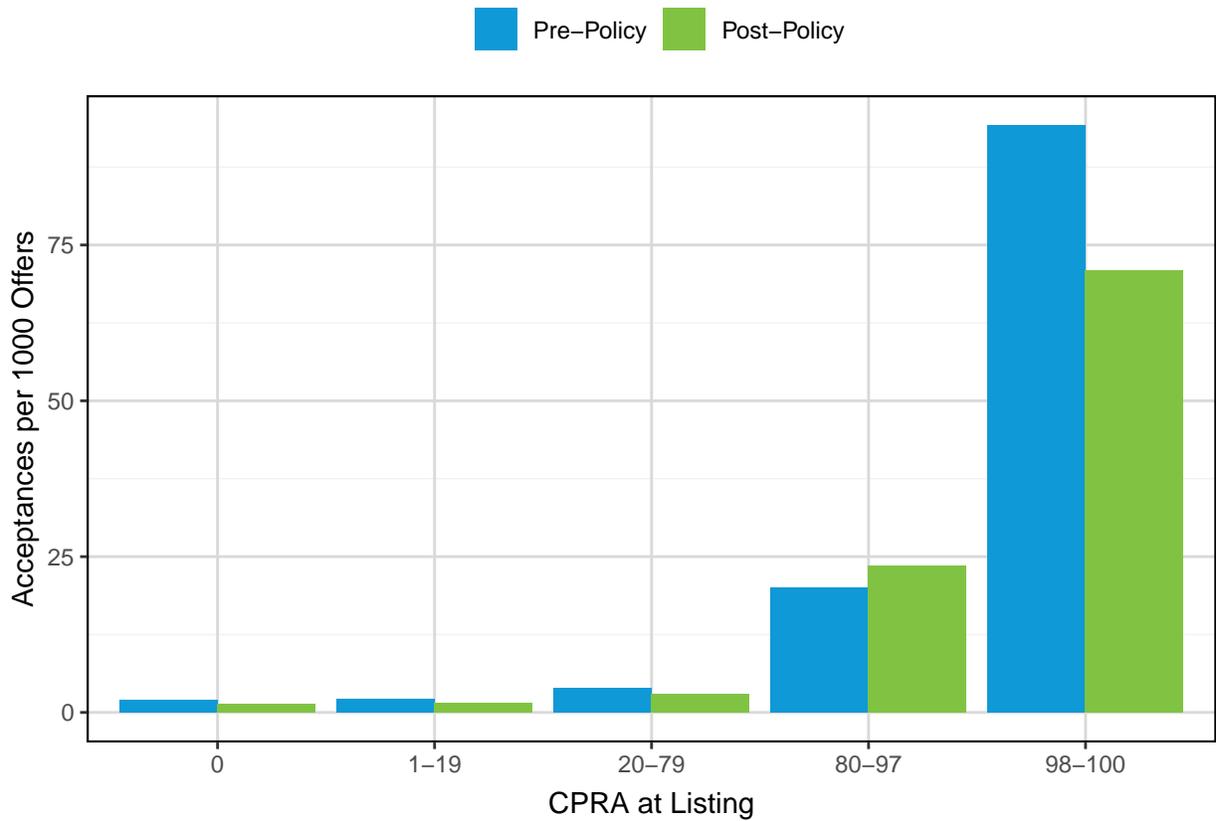


Figure 75 and **Table 67** show offers per active patient year for kidney matches from December 01, 2020 to June 30, 2021 by policy era and EPTS at listing. Offer rates increased for all EPTS groups after policy implementation.

Figure 75: Offers per Active Patient Year for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and EPTS at Listing

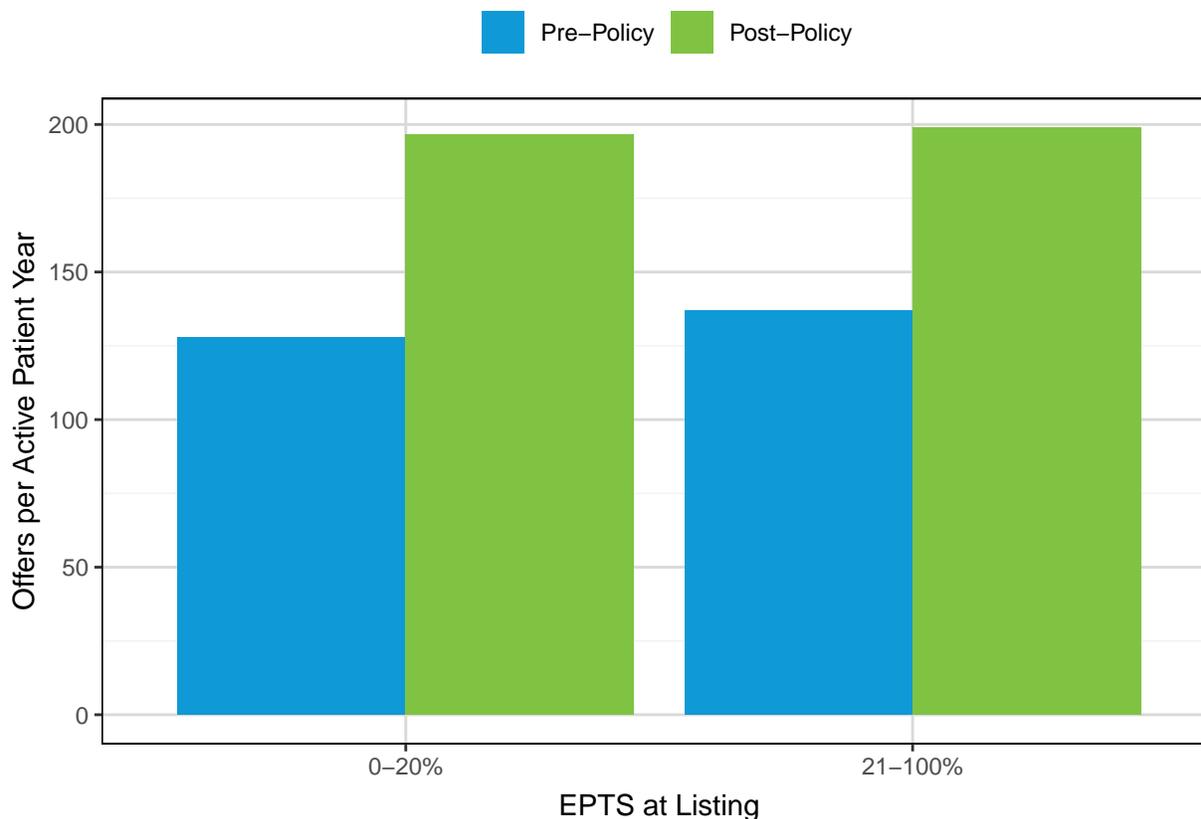


Table 67: Offer and Acceptance Rates for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and EPTS at Listing

Era	EPTS	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	0-20%	4387.73	560515	1418	127.75	2.53
	21-100%	11222.66	1538615	3306	137.10	2.15
Post-Policy	0-20%	4537.10	891262	1523	196.44	1.71
	21-100%	11513.57	2290372	3627	198.93	1.58

Figure 76 shows acceptances per 1000 offers for kidney match runs from December 01, 2020 to June 30, 2021 by policy era and EPTS at listing. Acceptance rates decreased for all EPTS groups after policy implementation.

Figure 76: Acceptances per 1000 Offers for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and EPTS at Listing

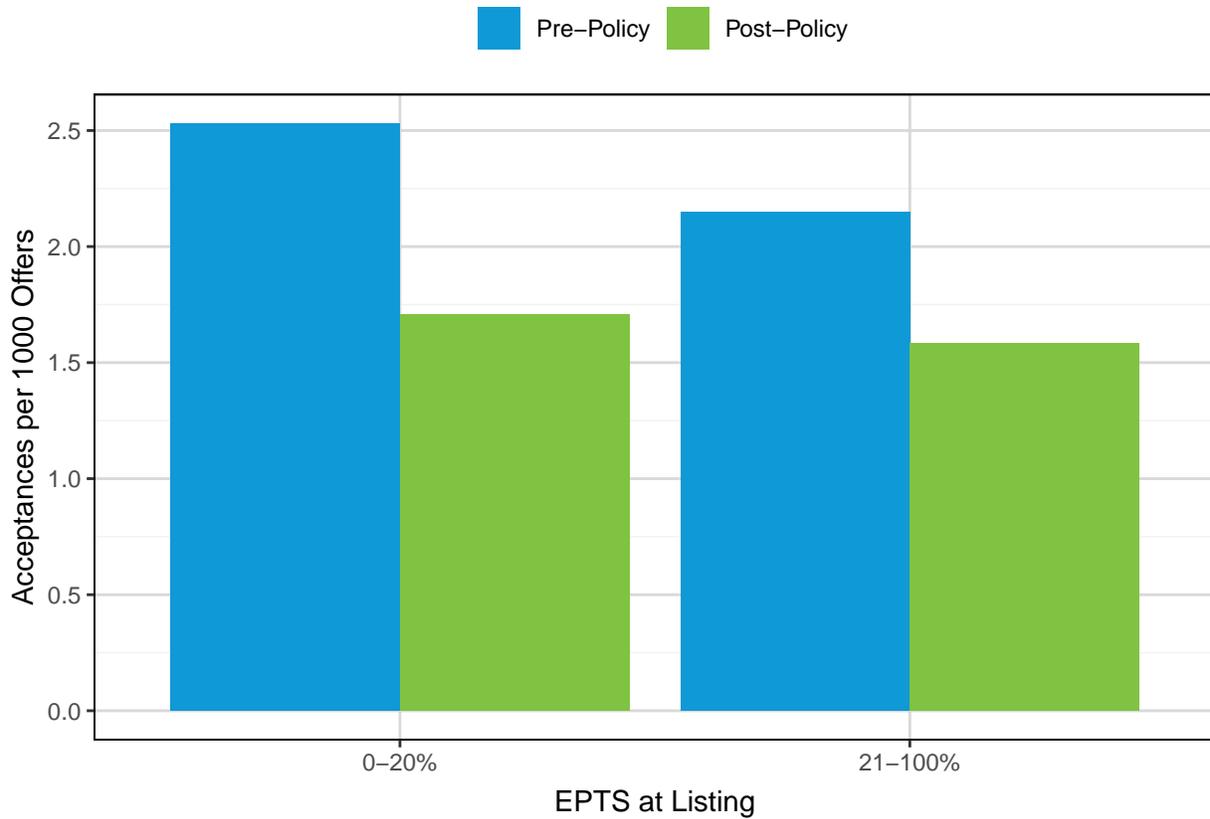


Figure 77 and **Table 68** show offers per active patient year for kidney matches from December 01, 2020 to June 30, 2021 by policy era and diagnosis. Offer rates increased for all diagnoses after policy implementation.

Figure 77: Offers per Active Patient Year for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Diagnosis

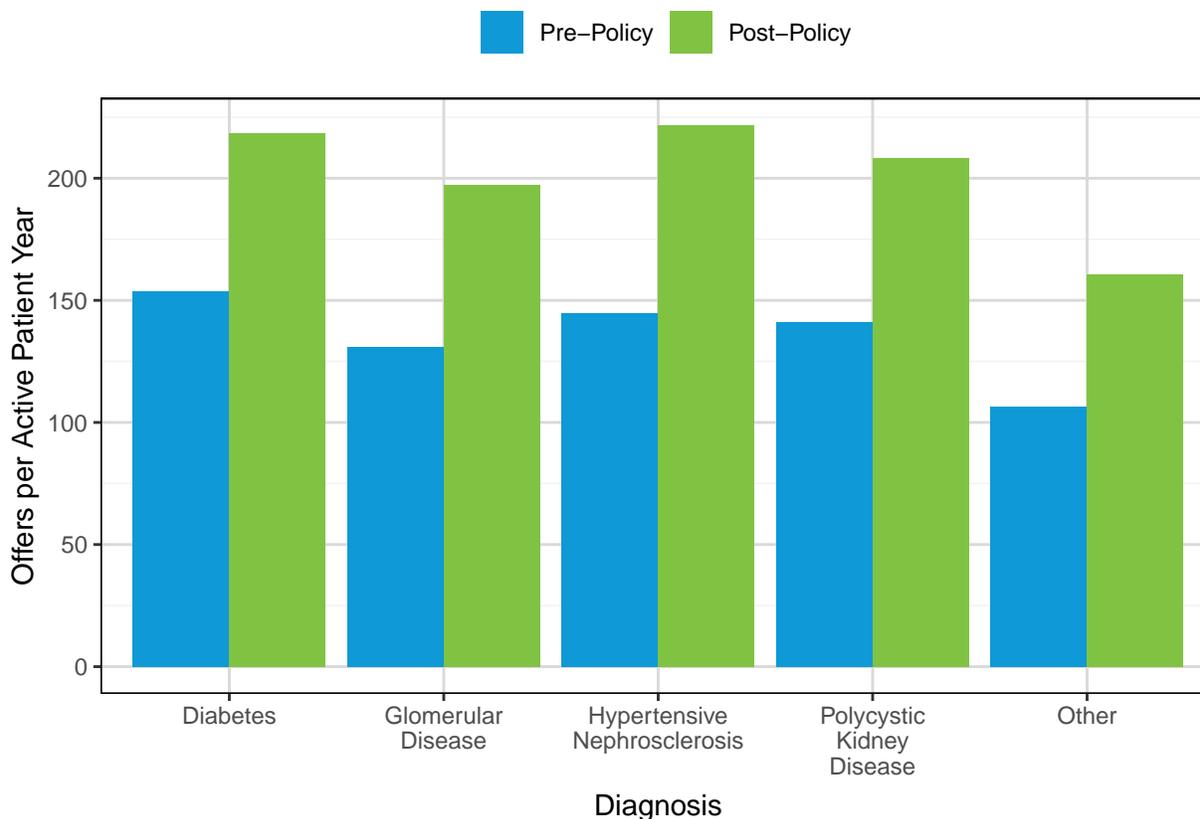


Table 68: Offer and Acceptance Rates for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Diagnosis

Era	Diagnosis	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	Diabetes	5668.30	872029	1510	153.84	1.73
	Glomerular Disease	2661.50	348553	963	130.96	2.76
	Hypertensive Nephrosclerosis	3197.78	463218	1142	144.86	2.47
	Polycystic Kidney Disease	1023.35	144450	331	141.15	2.29
	Other	3100.89	329922	1236	106.40	3.75
Post-Policy	Diabetes	5757.40	1258485	1656	218.59	1.32
	Glomerular Disease	2745.65	541809	1012	197.33	1.87
	Hypertensive Nephrosclerosis	3242.89	718832	1271	221.66	1.77
	Polycystic Kidney Disease	1054.41	219617	363	208.29	1.65
	Other	3185.83	511901	1450	160.68	2.83

Figure 78 shows acceptances per 1000 offers for kidney match runs from December 01, 2020 to June 30, 2021 by policy era and diagnosis. Acceptance rates decreased for all diagnoses after policy implementation.

Figure 78: Acceptances per 1000 Offers for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Diagnosis

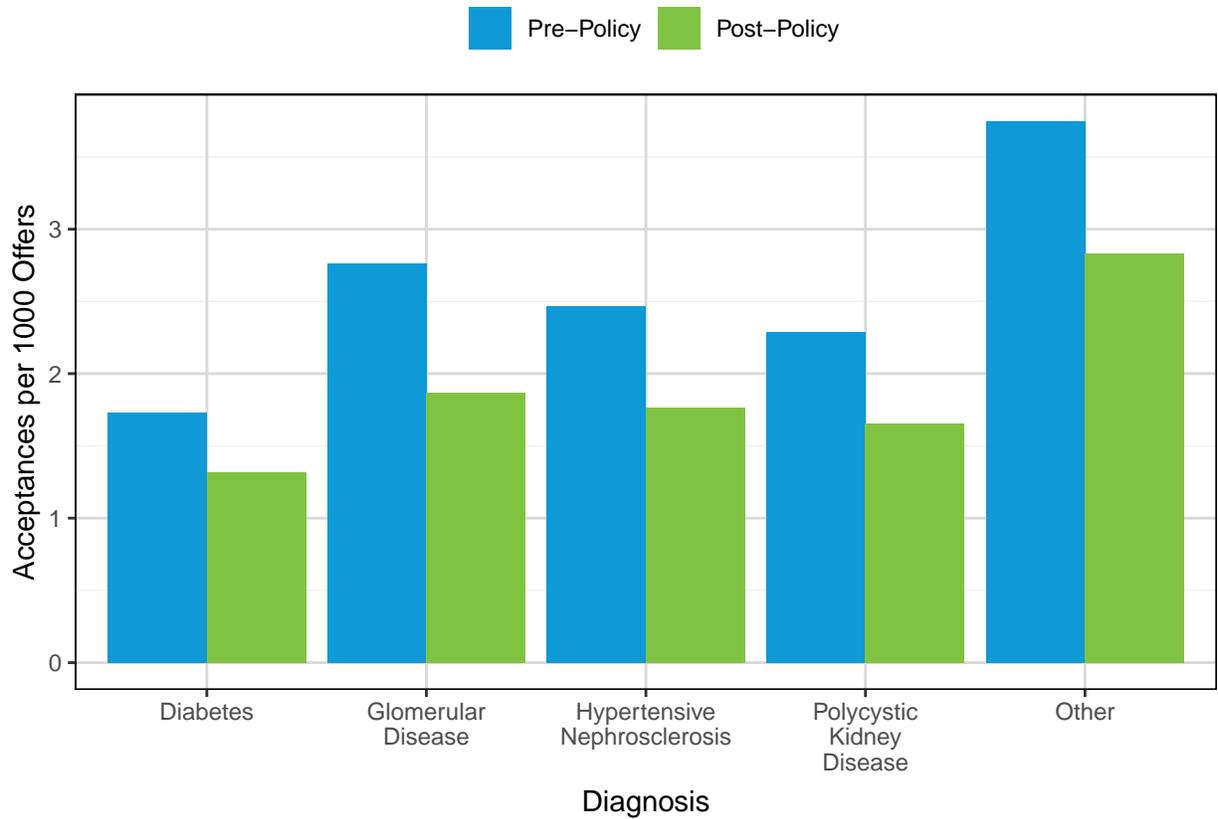


Figure 79 and **Table 69** show acceptances per 1000 offers for kidney match runs from December 01, 2020 to June 30, 2021 by policy era and share type. The acceptance rate for organs recovered in the same DSA as the potential transplant recipient's transplant center decreased from 11.64 to 7.16 acceptances per 1000 offers after policy implementation. The acceptance rate for organs recovered outside the same DSA as the potential transplant recipient increased from 0.77 to 1.21 acceptances per 1000 offers.

Figure 79: Acceptances per 1000 Offers for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Share Type

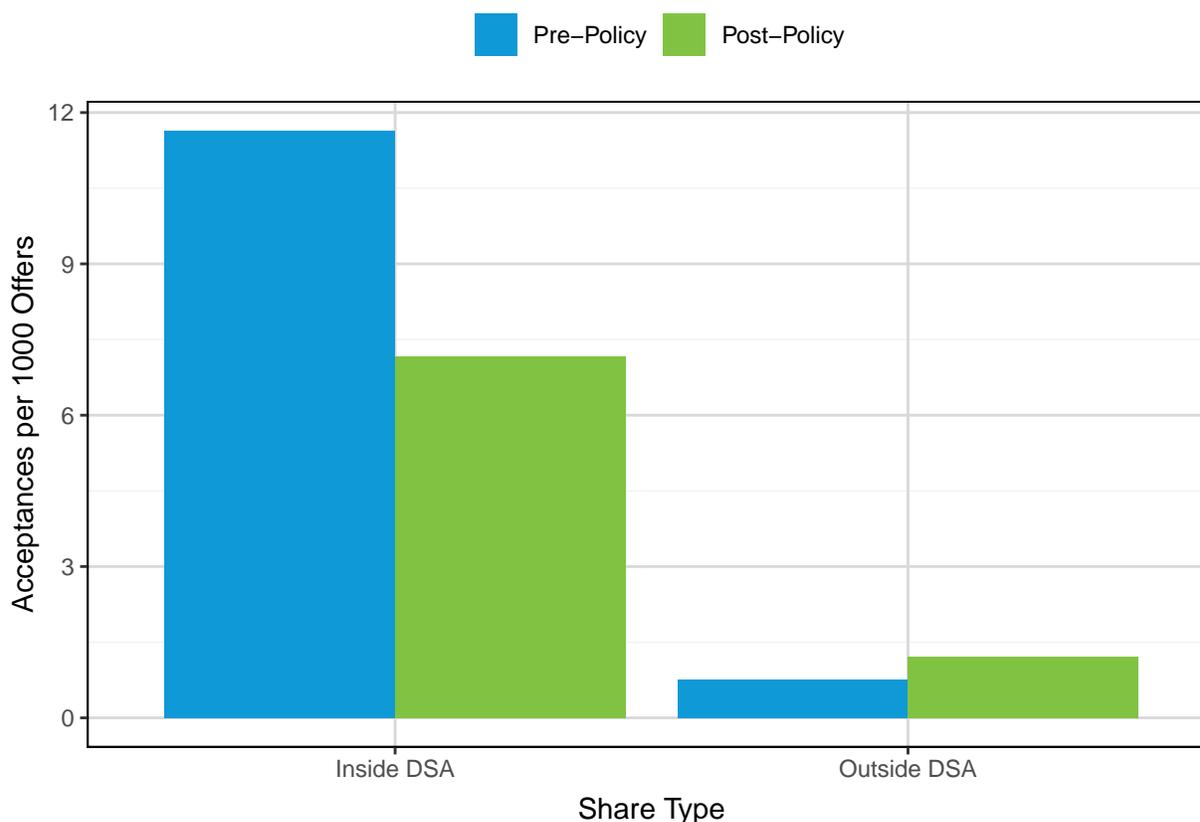


Table 69: Acceptances per 1000 Offers for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Share Type

Share Type	Pre-Policy			Post-Policy		
	Offers	Acceptances	Acceptances per 1000 Offers	Offers	Acceptances	Acceptances per 1000 Offers
Inside DSA	324662	3779	11.64	307080	2199	7.16
Outside DSA	1833510	1403	0.77	2943564	3553	1.21

Figure 80 and **Table 70** show acceptances per 1000 offers for kidney match runs from December 01, 2020 to June 30, 2021 by policy era and distance from the donor hospital. The acceptance rate for organs recovered within 250 NM of the potential transplant recipient's transplant center decreased from 6.52 to 4.04 acceptances per 1000 offers after policy implementation. The acceptance rate for organs recovered more than 250 NM from the potential transplant recipient decreased from 0.82 to 0.38 acceptances per 1000 offers.

Figure 80: Acceptances per 1000 Offers for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Distance

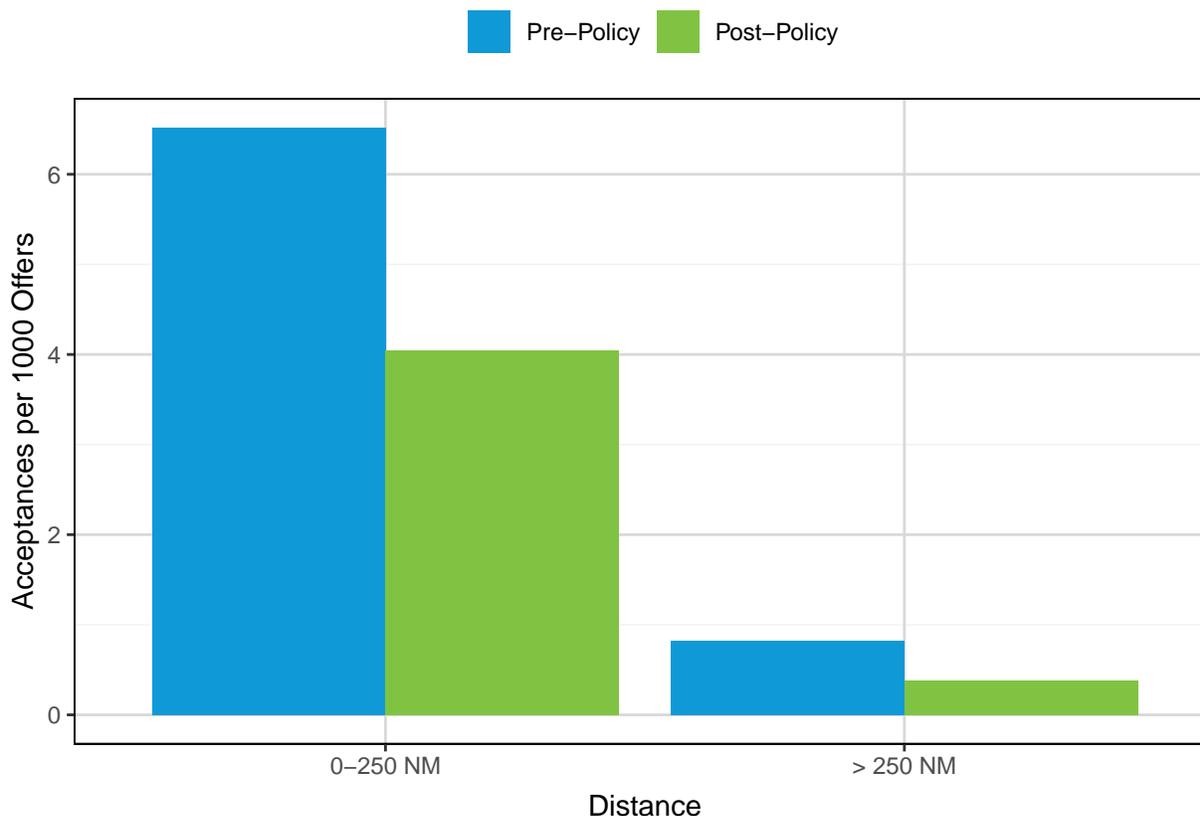
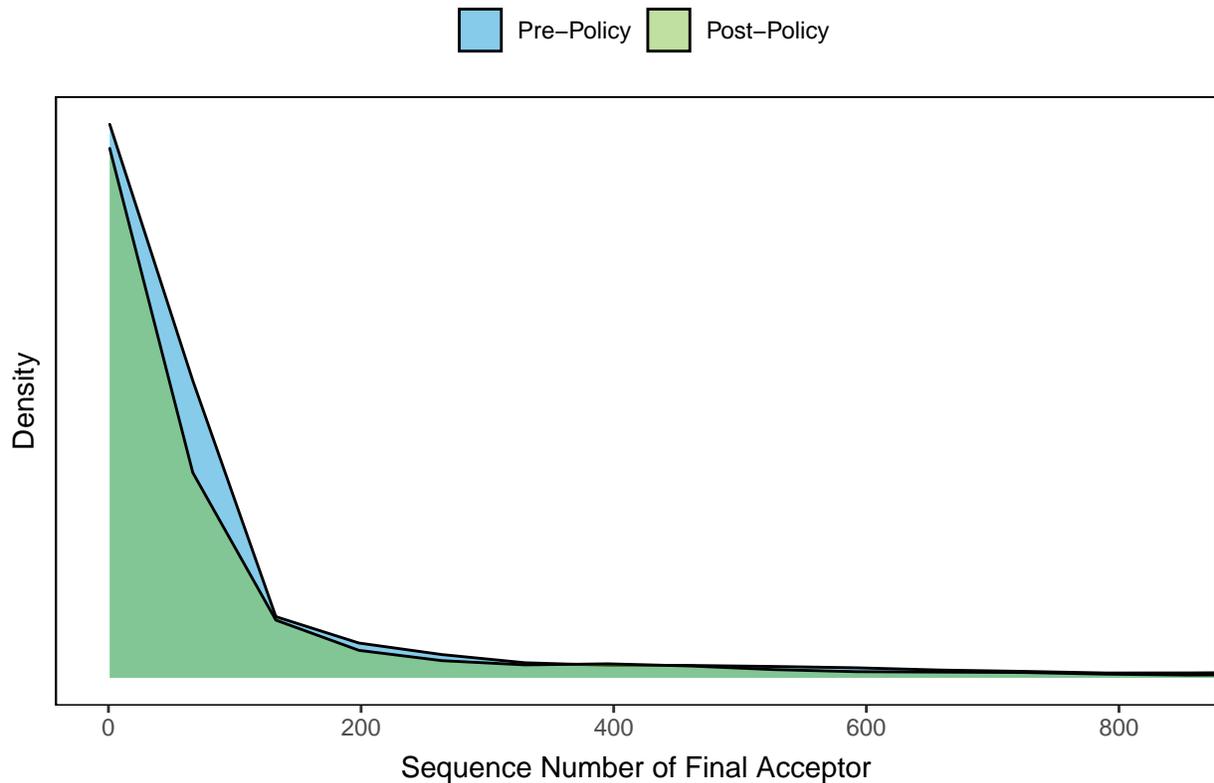


Table 70: Acceptances per 1000 Offers for Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Distance

Distance	Pre-Policy			Post-Policy		
	Offers	Acceptances	Acceptances per 1000 Offers	Offers	Acceptances	Acceptances per 1000 Offers
0-250 NM	598144	3898	6.52	1231268	4975	4.04
> 250 NM	1560028	1284	0.82	2019376	777	0.38

Figure 81 and **Table 71** show the distribution of the sequence number of the final acceptor for kidney matches from December 01, 2020 to June 30, 2021 by policy era. View is restricted to the 90th percentile. Median sequence number increased from 10 to 16 after the policy change.

Figure 81: Distribution of Sequence Number of Final Acceptor for Kidney Match Runs December 01, 2020-June 30, 2021 by Policy Era



View restricted to 90th percentile.

Table 71: Distribution of Sequence Number of Final Acceptor for Kidney Match Runs December 01, 2020-June 30, 2021 by Policy Era

Era	N	Min	25th %-tile	Med	Mean	75th %-tile	Max
Pre-Policy	3109	1	4	10	409.3	87	26480
Post-Policy	3384	1	5	16	581.7	109	33603

Figure 82 and **Table 72** show the distribution of hours from first offer to cross-clamp for kidney match runs from December 01, 2020 to June 30, 2021 by policy era. Time of first offer was defined as the time when the first electronic offer was sent for the match. There were 451 matches where cross-clamp occurred before the first electronic offer was sent, and another 210 post-policy. Median time from first offer to cross-clamp was 24 hours pre- and post-policy.

Figure 82: Distribution of Hours from First Offer to Cross-Clamp for Kidney Match Runs December 01, 2020-June 30, 2021 by Policy Era

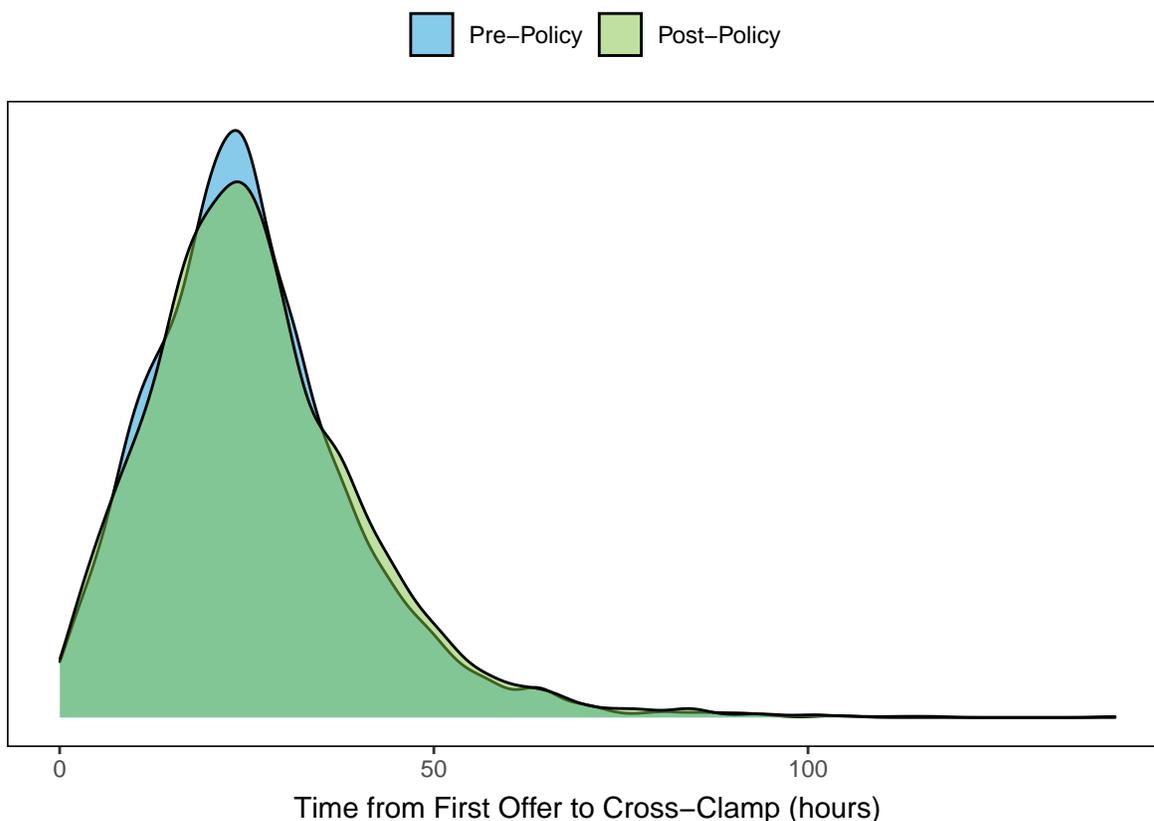


Table 72: Distribution of Hours from First Offer to Cross-Clamp for Kidney Match Runs December 01, 2020-June 30, 2021 by Policy Era

Era	N	Cross-Clamp Before Offer	Min	25th %-tile	Med	Mean	75th %-tile	Max
Pre-Policy	3109	451	0.12	16.47	24.11	25.70	32.52	105.12
Post-Policy	3384	210	0.03	16.53	24.40	26.41	33.99	141.03

Figure 83 and **Table 73** show refusals due to positive crossmatch for kidney matches from December 01, 2020 to June 30, 2021 by policy era and CPRA. Roughly 0.1% of all refusals were due to positive crossmatch across policy eras. Candidates with CPRA 98-100% were the most likely to refuse an offer due to positive crossmatch (roughly 18%).

Figure 83: Refusals Due to Positive Crossmatch for Kidney Matches December 01, 2020-June 30, 2021 by Policy Era and CPRA

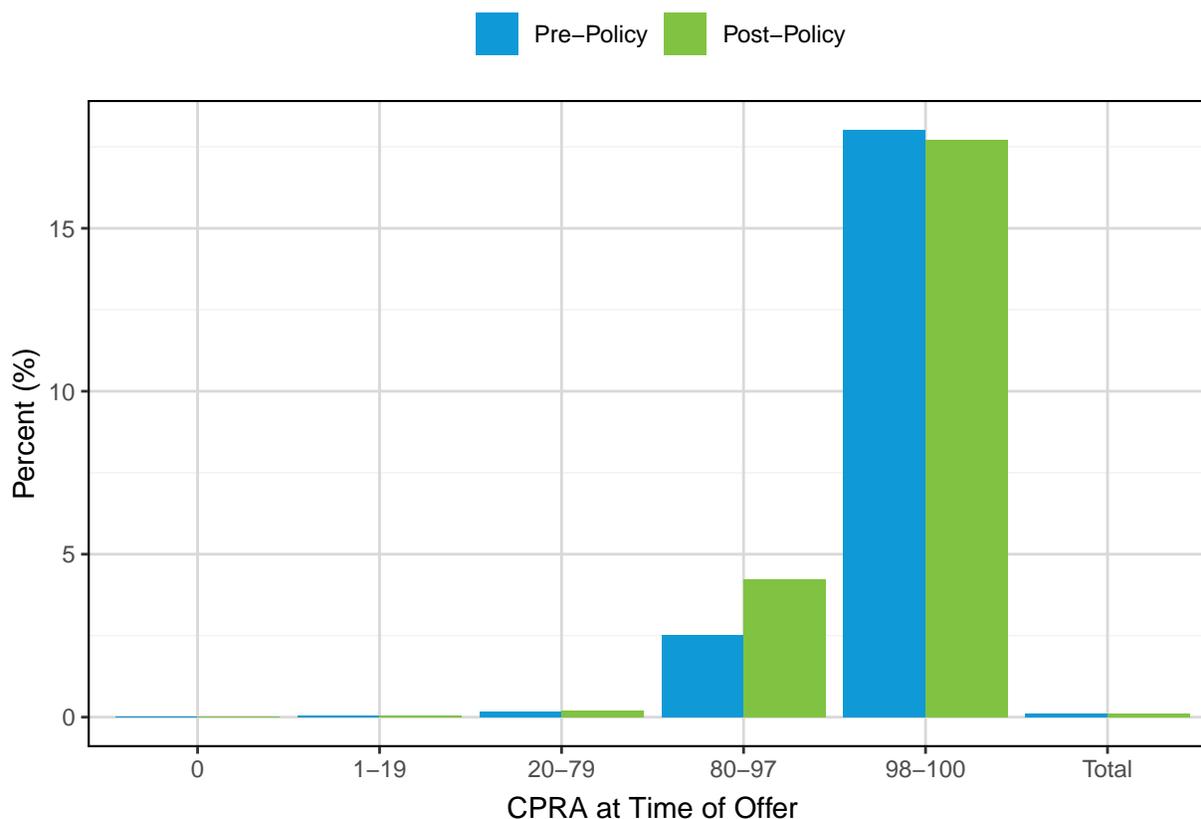


Table 73: Refusals Due to Positive Crossmatch for Kidney Matches December 01, 2020-June 30, 2021 by Policy Era and CPRA

CPRA	Pre-Policy			Post-Policy		
	Refusals	Due to Xmatch	%	Refusals	Due to Xmatch	%
0	747411	192	0.03	1089128	299	0.03
1-19	107600	65	0.06	153758	79	0.05
20-79	111367	180	0.16	158348	312	0.20
80-97	8206	207	2.52	12052	508	4.22
98-100	1421	256	18.02	1715	304	17.73
Total	976005	900	0.09	1415001	1502	0.11

Medical Urgency

Transplant centers were able to place registrations in medical urgency status on March 8, 2021 in advance of the policy change. Through June 30, 2021, 14 registrations were ever waiting in medical urgency status and 4 received a deceased donor transplant. These patients were transplanted within 3-5 days of being placed in medical urgency status. Two registrations were taken out of medical urgency status without receiving a deceased donor transplant, and the remaining 8 were still waiting in medical urgency status on June 30, 2021. Five registrations remained in medical urgency status from March 15 to June 30, 2021.

Released Organs

Table 74 shows kidney match runs from December 01, 2020 to June 30, 2021 by policy era and type. The majority of kidney matches were not import or released organ match runs. The policy change eliminated the import match run, and OPOs were only able to run released organ matches after implementation. There were 852 import matches run pre-policy, and there were 123 released kidney matches run post-policy.

Table 74: Kidney Match Runs December 01, 2020 - June 30, 2021 by Policy Era and Type

Era	Total	Standard	Import	Released
Pre-Policy	7862	7010	852	0
Post-Policy	8114	7991	0	123

Table 75 shows deceased donor kidney utilization from December 01, 2020 to June 30, 2021 by policy era and match run type. The discard rate for standard match runs decreased from 24.1% to 21.9% after policy implementation. The discard rate for import matches pre-policy was 31.4%, and the discard rate for released organ matches post-policy was 22.9%.

Table 75: Deceased Donor Kidney Utilization from December 01, 2020 - June 30, 2021 by Policy Era Match Run Type

Era	Match Type	N Donors	N Matches	Utilization Rate	Discard Rate
Pre-Policy	Standard	4067	7010	64.1%	24.1%
	Import	719	852	65.7%	31.4%
Post-Policy	Standard	4779	7991	66.6%	21.9%
	Released	113	123	76.1%	22.9%

Donors Recovered in Alaska

Table 76 shows kidneys recovered and transplanted for deceased donors recovered in Alaska from December 01, 2020 to June 30, 2021 by policy era. Pre-policy, 6 donors had 12 kidneys recovered in Alaska, of which 10 were transplanted. Post-policy, 9 donors in Alaska had 18 kidneys recovered and 14 transplanted.

Table 76: Kidneys Recovered and Transplanted for Deceased Donors Recovered in Alaska December 01, 2020 - June 30, 2021 by Policy Era

	Pre-Policy	Post-Policy
Kidney Donors Recovered	6	9
Kidneys Recovered	12	18
Kidneys Transplanted	10	14

Table 77 shows the distribution of distance from the donor hospital in NM for deceased donor kidney transplants utilizing donors recovered in Alaska from December 01, 2020 to June 30, 2021 by policy era. The median distance from the donor hospital decreased from 1315 NM to 1243 NM after the policy change.

Table 77: Distribution of Distance from Donor Hospital for Deceased Donor Kidney Transplants Utilizing Donors Recovered in Alaska December 01, 2020 - June 30, 2021 by Policy Era

Era	N	Min	25th %-tile	Med	75th %-tile	Max
Pre-Policy	10	1241	1241	1315	1317	1317
Post-Policy	14	1241	1241	1243	1716	2022

Pediatrics

Figure 84 and **Table 78** show deceased donor transplants per 100 active patient years for pediatric kidney registrations ever waiting between December 01, 2020 and June 30, 2021 by policy era and age at listing. Transplant rates did not change for registrations aged 10 years or younger at listing after policy implementation. The transplant rate for registrations aged 11 to 17 years at listing increased from 146 to 312 transplants per 100 active patient years.

Figure 84: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Age at Listing

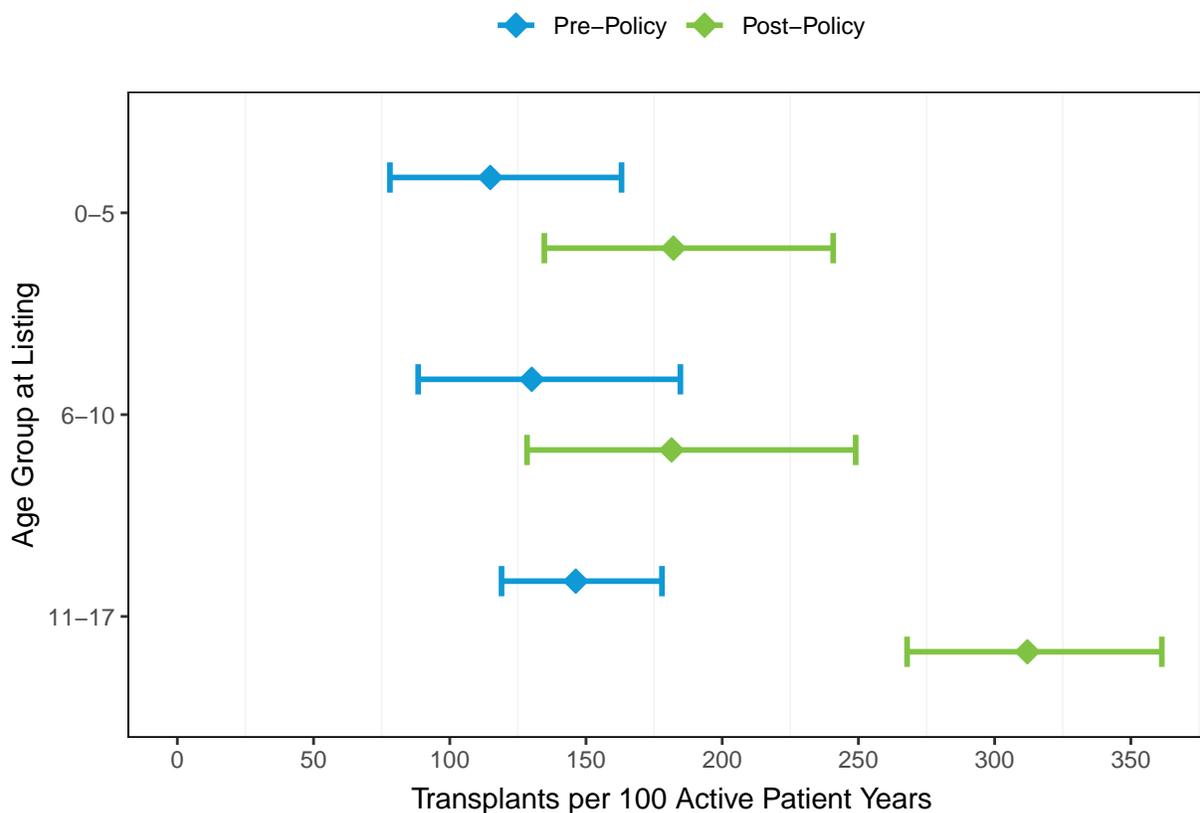


Table 78: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting December 01, 2020 - June 30, 2021 by Policy Era and Age at Listing

Age at Listing	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
0-5	Pre-Policy	153	31	114.86	(78.04, 163.04)
	Post-Policy	157	49	182.09	(134.71, 240.73)
6-10	Pre-Policy	122	31	130.09	(88.39, 184.65)
	Post-Policy	123	38	181.40	(128.37, 248.99)
11-17	Pre-Policy	387	100	146.25	(119, 177.88)
	Post-Policy	401	178	312.01	(267.86, 361.37)

Figure 85 and **Table 79** show pediatric deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and recipient ethnicity. The proportion of pediatric transplants to Black recipients increased from 13.89% pre-policy to 21.7% post-policy. The proportion of pediatric kidney transplants to Hispanic recipients decreased from 34.72% to 30.66%, though the volume of transplants increased from 50 to 65. The proportion of pediatric transplants to Asian recipients decreased from 8.33% to 4.25%, with 12 transplants pre-policy and 9 transplants post-policy.

Figure 85: Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Recipient Ethnicity

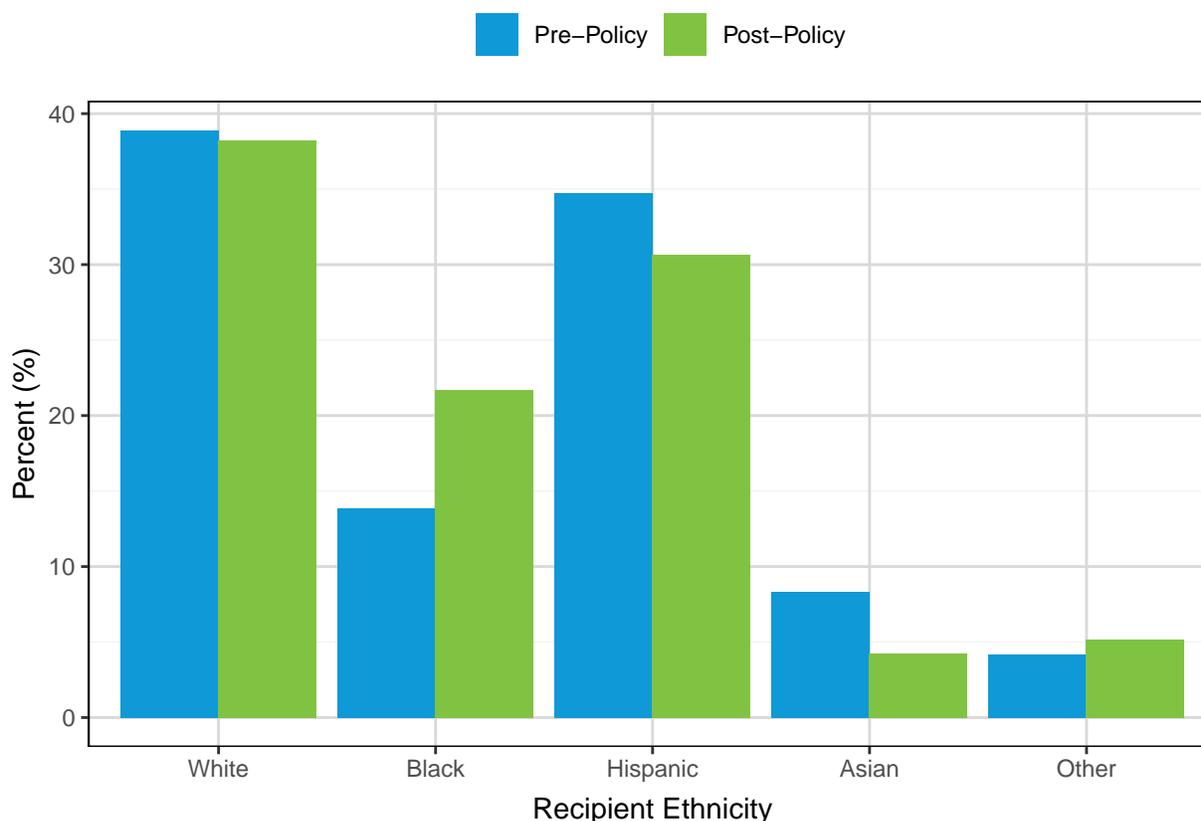


Table 79: Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Recipient Ethnicity

Ethnicity	Pre-Policy		Post-Policy	
	N	%	N	%
White	56	38.89	81	38.21
Black	20	13.89	46	21.70
Hispanic	50	34.72	65	30.66
Asian	12	8.33	9	4.25
Other	6	4.17	11	5.19
Total	144	100.00	212	100.00

Figure 86 and **Table 80** show pediatric deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and CPRA at transplant. Close to three quarters of pediatric transplant recipients had CPRA 0% at time of transplant both pre- and post-policy implementation.

Figure 86: Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and CPRA at Transplant

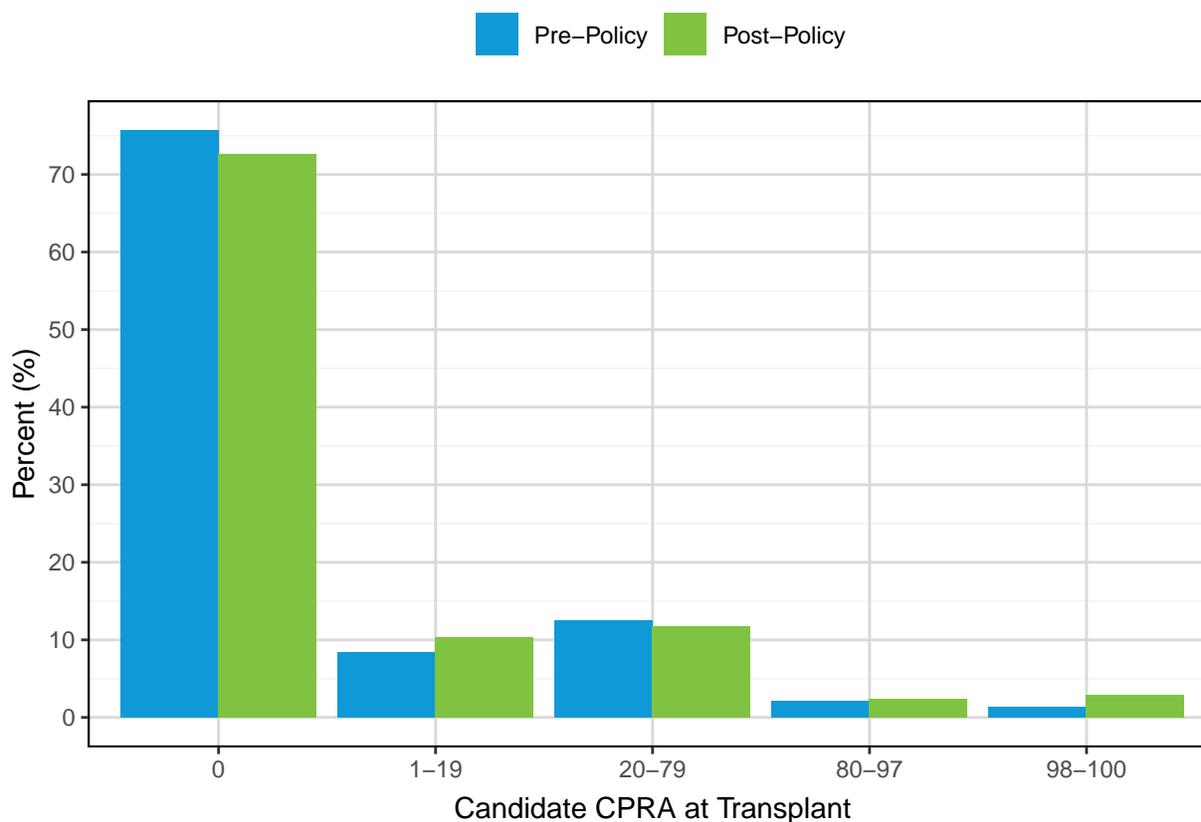


Table 80: Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and CPRA at Transplant

CPRA %	Pre-Policy		Post-Policy	
	N	%	N	%
0	109	75.69	154	72.64
1-19	12	8.33	22	10.38
20-79	18	12.50	25	11.79
80-97	3	2.08	5	2.36
98-100	2	1.39	6	2.83
Total	144	100.00	212	100.00

Figure 87 and **Table 81** show pediatric deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and dialysis status at the time of transplant as reported to the OPTN. Roughly 65% of pediatric transplant recipients were on dialysis pre-policy, increasing to 70% post-policy.

Figure 87: Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Dialysis Status at Transplant

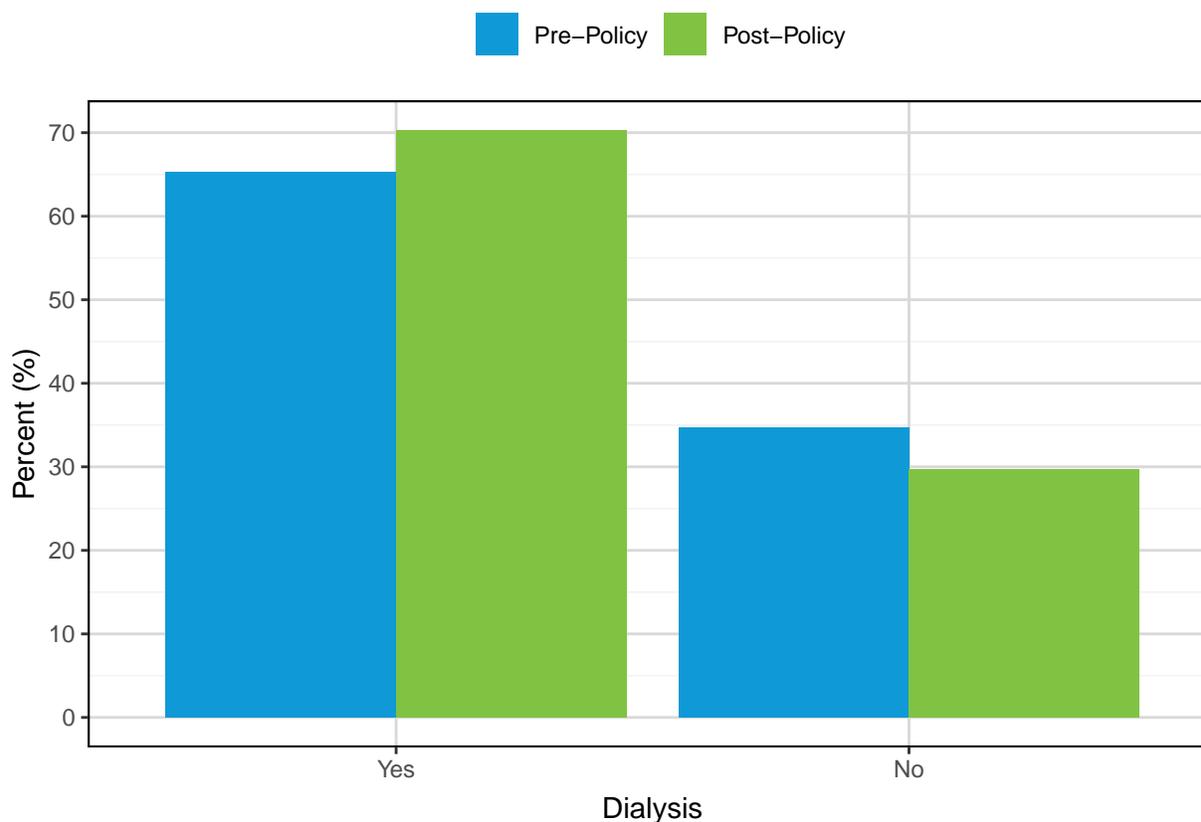


Table 81: Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Dialysis Status at Transplant

Dialysis	Pre-Policy		Post-Policy	
	N	%	N	%
Yes	94	65.28	149	70.28
No	50	34.72	63	29.72
Total	144	100.00	212	100.00

Figure 88 and **Table 82** show pediatric deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and time on dialysis at transplant as reported to the OPTN. Median dialysis time at transplant for pediatric recipients was roughly 1.5 years both pre- and post-policy.

Figure 88: Distribution of Time on Dialysis (Years) at Transplant for Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

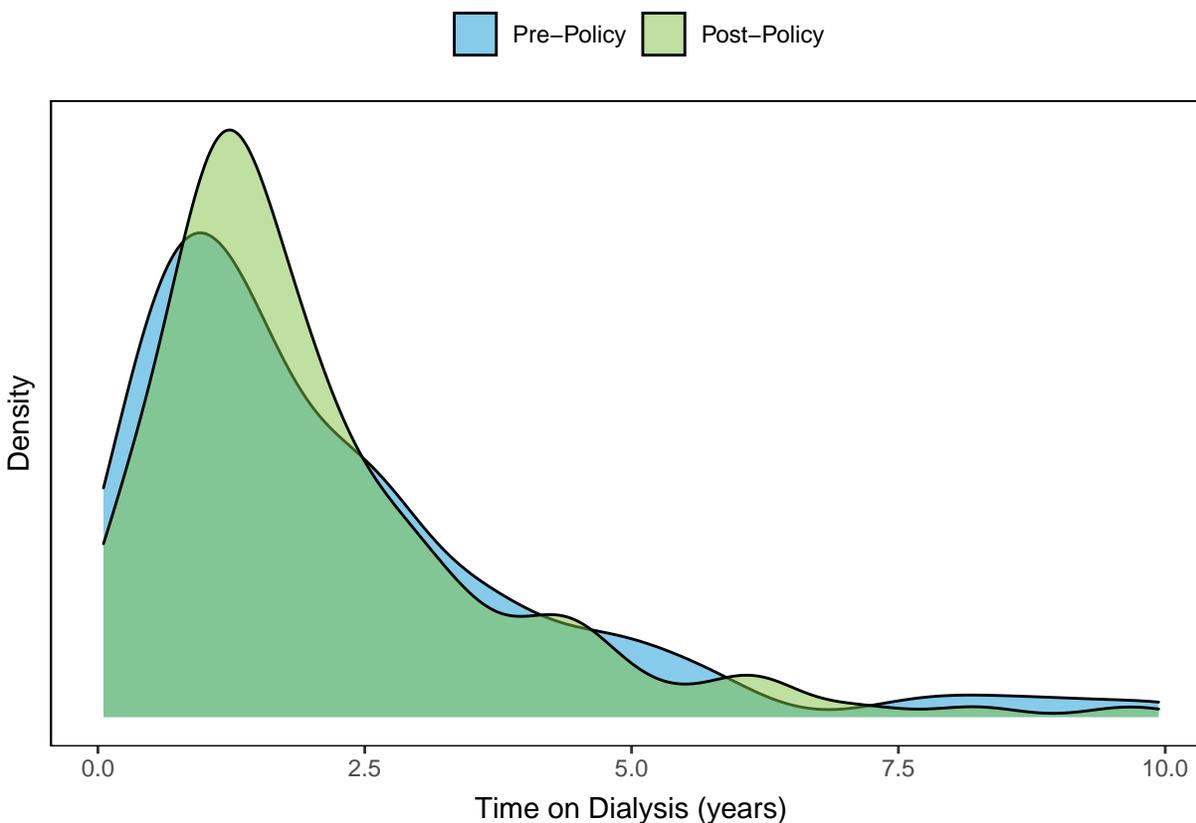


Table 82: Distribution of Time on Dialysis (Years) at Transplant for Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

Era	Total	Min	25th Percentile	Median	Mean	75th Percentile	Max
Pre-Policy	94	0.16	0.93	1.52	2.20	2.84	9.94
Post-Policy	149	0.05	1.03	1.58	2.06	2.64	9.68

Figure 89 and **Table 83** show pediatric deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and KDPI. Over 95% of pediatric transplants both pre- and post-policy utilized kidneys recovered from KDPI 0-34% donors.

Figure 89: Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and KDPI

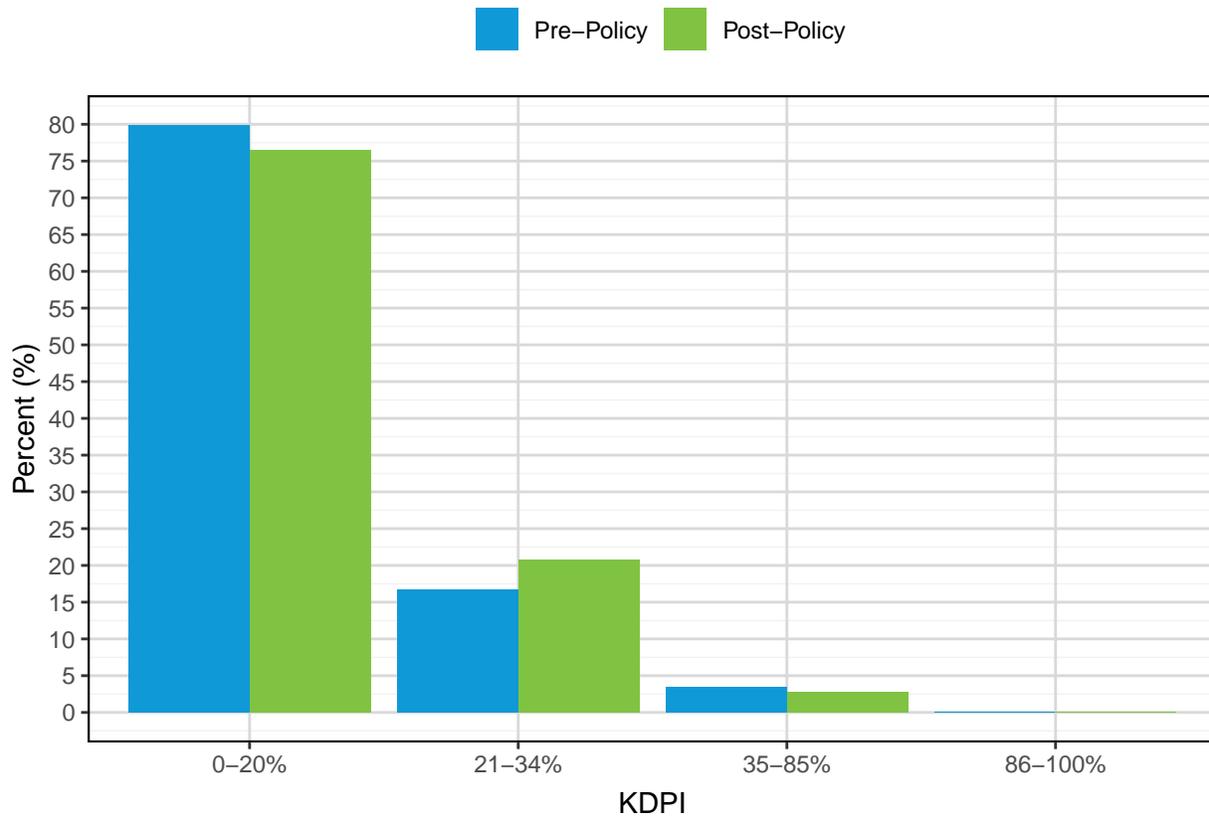


Table 83: Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and KDPI

KDPI	Pre-Policy		Post-Policy	
	N	%	N	%
0-20%	115	79.86	162	76.42
21-34%	24	16.67	44	20.75
35-85%	5	3.47	6	2.83
86-100%	0	0.00	0	0.00
Total	144	100.00	212	100.00

Figure 90 and **Table 84** show pediatric deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era and distance from donor hospital. Roughly 94% of pediatric transplants utilized organs recovered from donors at hospitals within 250 NM of the transplant center both pre- and post-policy.

Figure 90: Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Distance from Donor Hospital

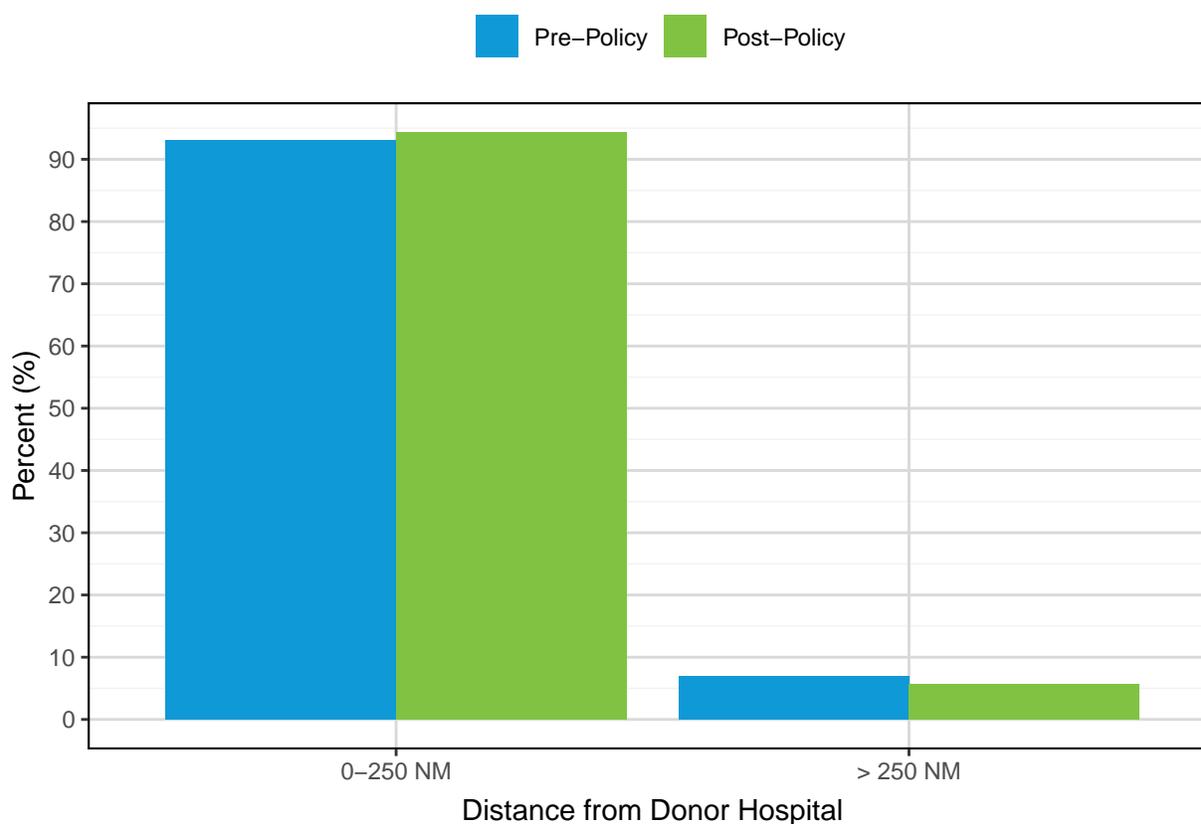


Table 84: Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Distance from Donor Hospital

Distance	Pre-Policy		Post-Policy	
	N	%	N	%
0-250 NM	134	93.06	200	94.34
> 250 NM	10	6.94	12	5.66
Total	144	100.00	212	100.00

Figure 91 and **Table 85** show the distribution of distance in NM from donor hospital for pediatric deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era. Median distance from then donor hospital increased from 26 NM to 142 NM after policy implementation.

Figure 91: Distribution of Distance from Donor Hospital for Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

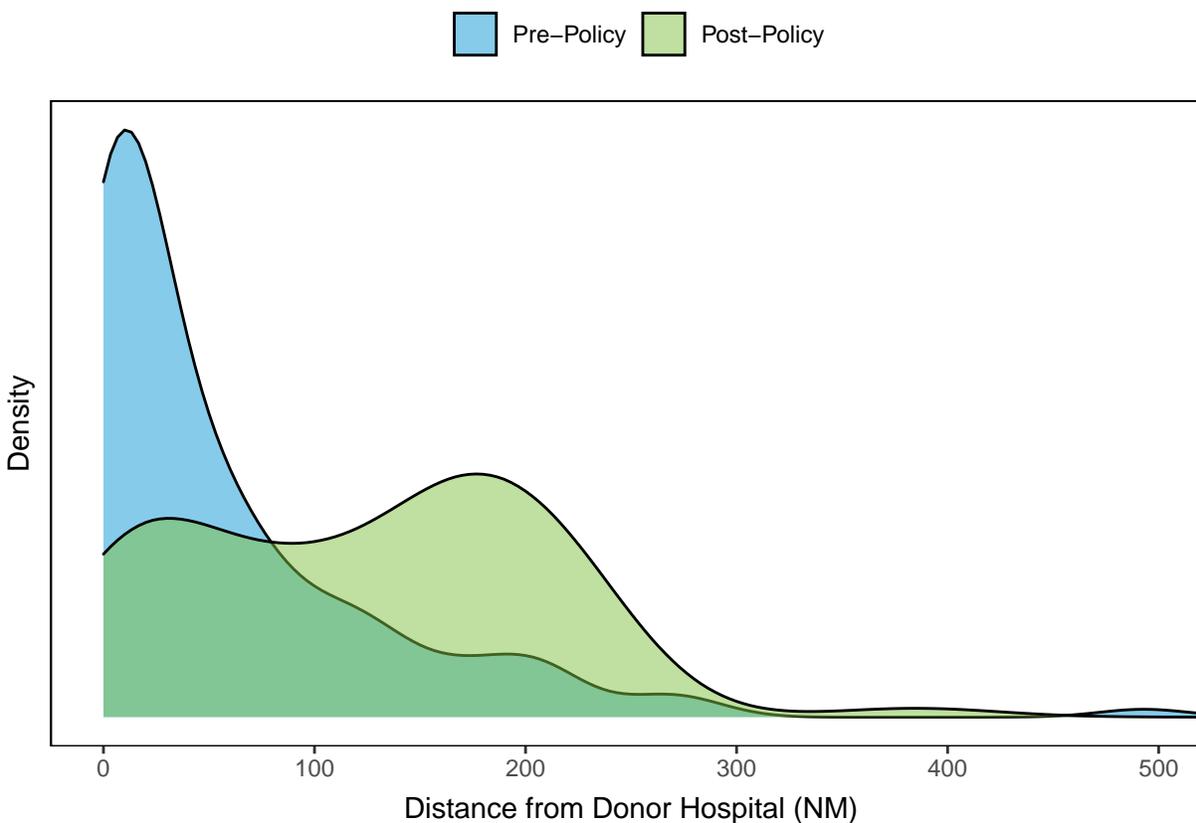
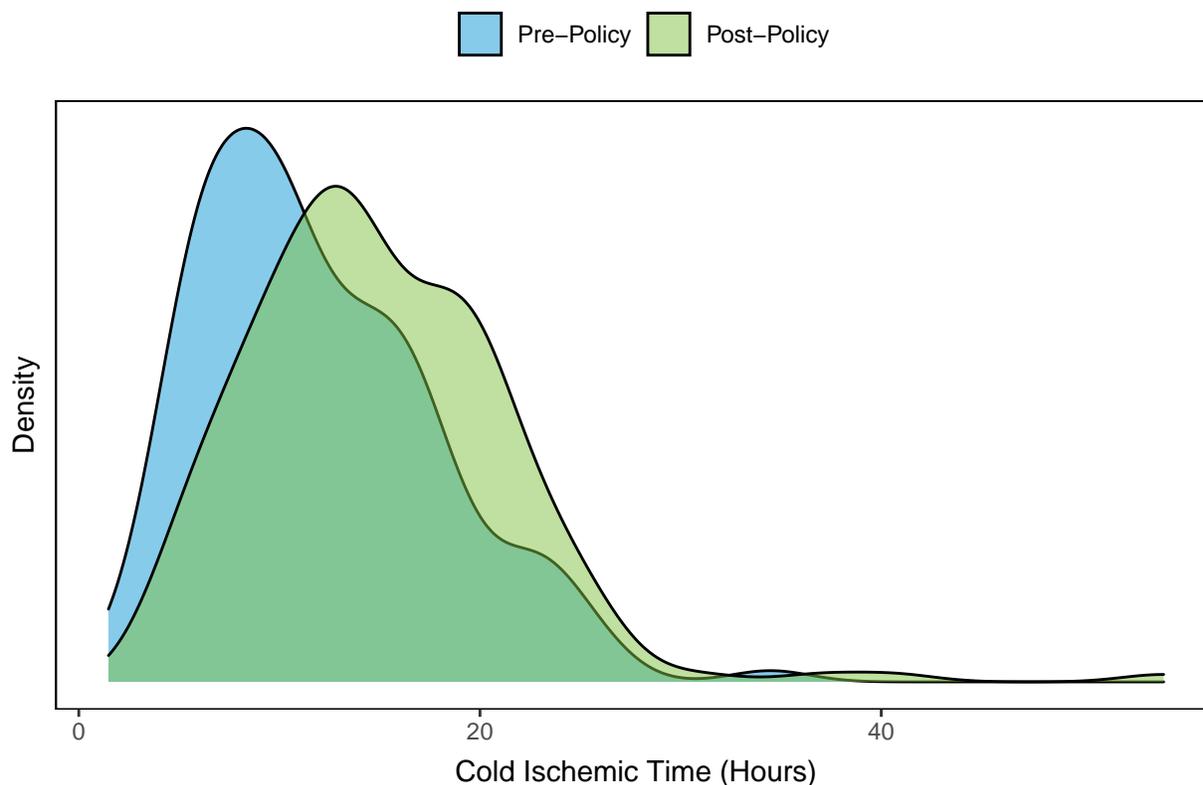


Table 85: Distribution of Distance from Donor Hospital for Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	144	0	0	5	26	97	90	1241
Post-Policy	212	0	0	44	142	162	196	1702

Figure 92 and **Table 86** show the distribution of cold ischemic time in hours for pediatric deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era. Median cold ischemic time increased from 10.48 to 14 hours after policy implementation. Missing values were excluded.

Figure 92: Distribution of Cold Ischemic Time (Hours) for Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era



Cold ischemic time was missing for 1% of transplants pre-policy and 2% of transplants post-policy.

Table 86: Distribution of Cold Ischemic Time (Hours) for Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	144	2	1.48	7.00	10.48	11.97	15.99	34.47
Post-Policy	212	4	3.82	10.17	14.00	14.95	18.98	54.08

Figure 93 and **Table 87** show rate of delayed graft function for pediatric deceased donor kidney transplants from December 01, 2020 to June 30, 2021 by policy era. The rate of delayed graft function for pediatric recipients was 4.17% pre-policy and 6.6% post-policy.

Figure 93: Rate of Delayed Graft Function for Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

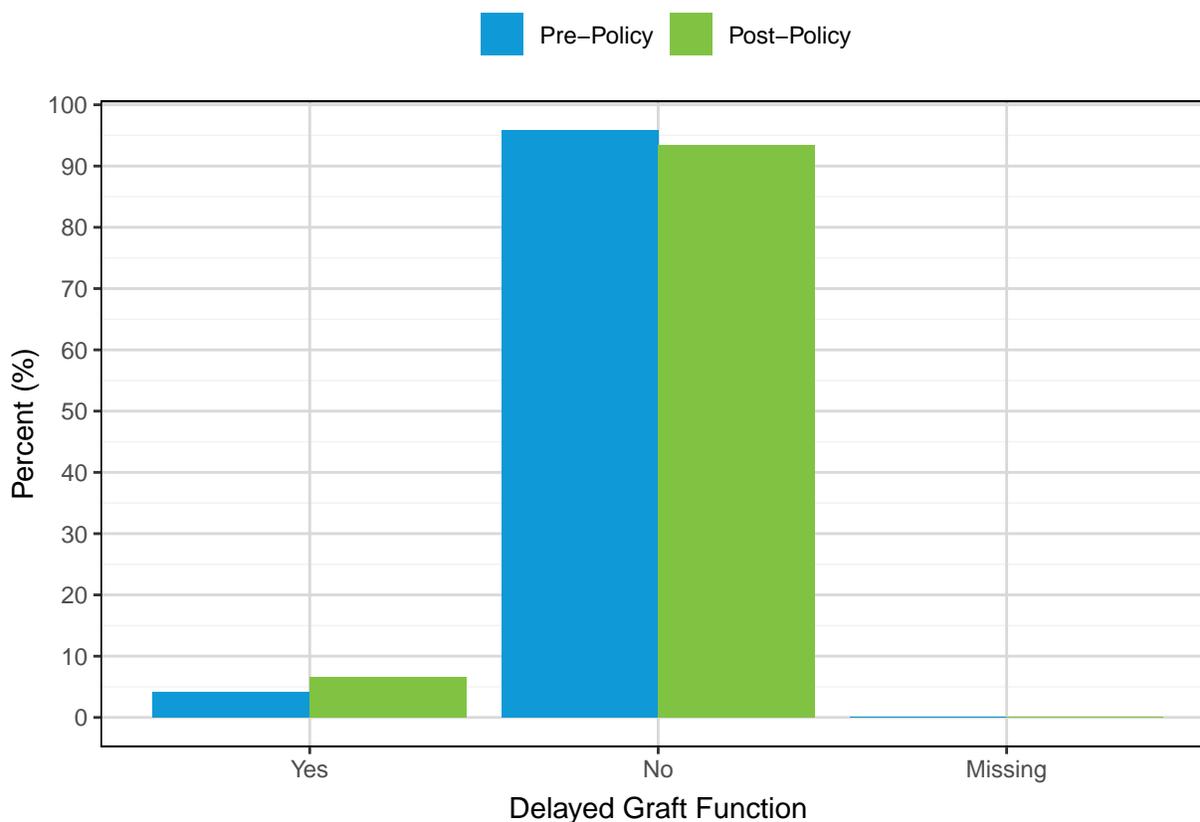


Table 87: Rate of Delayed Graft Function for Pediatric Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era

Delayed Graft Function	Pre-Policy		Post-Policy	
	N	%	N	%
Yes	6	4.17	14	6.60
No	138	95.83	198	93.40
Missing	0	0.00	0	0.00
Total	144	100.00	212	100.00

Conclusion

Increases in waiting list additions, transplants, and donors recovered were observed after the removal of DSA and OPTN region from kidney allocation, though may not be attributable to the change in OPTN policy. Most observed changes, based on early data, show alignment with the KPSAM modeling used to inform the development of this policy. The OPTN Kidney Committee will continue to monitor this policy as data are submitted.

Appendix

Table 88: Weekly Kidney Registrations Added, Transplants, and Deceased Donors Recovered December 01, 2020-June 28, 2021

Week	Registrations Added	Transplants	Donors
12/01-12/07	721	367	244
12/08-12/14	955	336	230
12/15-12/21	981	302	229
12/22-12/28	573	281	179
12/29-01/04	550	288	210
01/05-01/11	719	318	239
01/12-01/18	822	280	207
01/19-01/25	820	334	238
01/26-02/01	938	355	243
02/02-02/08	904	327	241
02/09-02/15	836	418	266
02/16-02/22	837	348	231
02/23-03/01	831	339	246
03/02-03/08	873	338	247
03/09-03/15	941	336	235
03/16-03/22	911	377	272
03/23-03/29	970	419	274
03/30-04/05	833	367	246
04/06-04/12	867	404	267
04/13-04/19	918	407	275
04/20-04/26	966	391	263
04/27-05/03	983	396	269
05/04-05/10	883	401	267
05/11-05/17	996	368	252
05/18-05/24	976	363	270
05/25-05/31	826	411	274
06/01-06/07	979	412	280
06/08-06/14	861	424	294
06/15-06/21	934	348	250
06/22-06/28	1100	438	319

Table 89: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and DSA

DSA	Pre-Policy	Post-Policy	% Change
ALOB	80	103	28.75
AROR	44	72	63.64
AZOB	108	190	75.93
CADN	174	177	1.72
CAGS	71	92	29.58
CAOP	208	353	69.71
CASD	56	51	-8.93
CORS	73	69	-5.48
DCTC	94	103	9.57
FLFH	37	37	0.00
FLMP	146	167	14.38
FLUF	74	110	48.65
FLWC	106	96	-9.43
GALL	137	251	83.21
HIOP	9	12	33.33
IAOP	50	56	12.00
ILIP	161	335	108.07
INOP	100	88	-12.00
KYDA	33	38	15.15
LAOP	69	85	23.19
MAOB	156	156	0.00
MDPC	80	105	31.25
MIOP	101	97	-3.96
MNOP	80	110	37.50
MOMA	69	76	10.14
MSOP	31	49	58.06
MWOB	90	96	6.67
NCCM	22	18	-18.18
NCNC	163	157	-3.68
NEOR	32	41	28.12
NJTO	120	104	-13.33
NMOP	23	27	17.39
NVLV	50	35	-30.00
NYAP	24	5	-79.17
NYFL	30	45	50.00
NYRT	233	401	72.10
NYWN	49	43	-12.24
OHLB	95	118	24.21
OHLC	41	38	-7.32
OHLP	67	67	0.00
OHOV	61	66	8.20
OKOP	40	46	15.00
ORUO	63	55	-12.70
PADV	160	138	-13.75
PATF	122	100	-18.03
PRLL	22	13	-40.91
SCOP	92	131	42.39
TNDS	154	123	-20.13
TNMS	31	60	93.55

(continued)

DSA	Pre-Policy	Post-Policy	% Change
TXGC	126	156	23.81
TXSA	91	157	72.53
TXSB	201	282	40.30
UTOP	78	87	11.54
VATB	121	131	8.26
WALC	109	124	13.76
WIDN	19	28	47.37
WIUW	50	55	10.00
Total	4926	6025	22.31

Table 90: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and Transplant Center

Center	Pre-Policy	Post-Policy	% Change
ALCH-TX1	1	2	100.00
ALUA-TX1	76	101	32.89
ALVA-TX1	3	0	-100.00
ARCH-TX1	1	5	400.00
ARUA-TX1	43	67	55.81
AZCH-TX1	2	6	200.00
AZGS-TX1	17	14	-17.65
AZMC-TX1	70	126	80.00
AZSJ-TX1	6	18	200.00
AZUA-TX1	13	26	100.00
CACH-TX1	4	1	-75.00
CACL-TX1	5	8	60.00
CACS-TX1	51	73	43.14
CAGH-TX1	11	15	36.36
CAIM-TX1	11	31	181.82
CALA-TX1	3	8	166.67
CALL-TX1	22	50	127.27
CAMB-TX1	1	1	0.00
CAPC-TX1	8	4	-50.00
CAPM-TX1	50	47	-6.00
CARC-TX1	0	7	*
CASD-TX1	31	22	-29.03
CASF-TX1	80	83	3.75
CASH-TX1	10	13	30.00
CASJ-TX1	1	16	1500.00
CASM-TX1	71	92	29.58
CASU-TX1	35	42	20.00
CAUC-TX1	77	110	42.86
CAUH-TX1	38	50	31.58
COCH-TX1	4	2	-50.00
COPM-TX1	1	5	400.00
COSL-TX1	5	9	80.00
COUC-TX1	63	53	-15.87
CTHH-TX1	16	13	-18.75
CTYN-TX1	23	26	13.04
DCCH-TX1	1	3	200.00
DCGU-TX1	52	48	-7.69
DCGW-TX1	19	11	-42.11
DCWR-TX1	4	8	100.00
DEAI-TX1	0	1	*
DECC-TX1	7	4	-42.86
FLBC-TX1	1	6	500.00
FLCC-TX1	32	49	53.12
FLFH-TX1	30	31	3.33
FLHM-TX1	7	6	-14.29
FLJM-TX1	107	94	-12.15
FLLM-TX1	5	14	180.00
FLMR-TX1	6	18	200.00
FLSH-TX1	4	7	75.00

(continued)

Center	Pre-Policy	Post-Policy	% Change
FLSL-TX1	48	64	33.33
FLTG-TX1	101	82	-18.81
FLUF-TX1	22	39	77.27
GAEH-TX1	1	4	300.00
GAEM-TX1	74	94	27.03
GAMC-TX1	11	29	163.64
GAPH-TX1	51	124	143.14
HIQM-TX1	9	12	33.33
IAIM-TX1	23	30	30.43
IAIV-TX1	20	19	-5.00
IAVA-TX1	7	7	0.00
ILCH-TX1	0	7	*
ILCM-TX1	2	10	400.00
ILLU-TX1	29	62	113.79
ILMM-TX1	4	6	50.00
ILNM-TX1	38	70	84.21
ILPL-TX1	14	23	64.29
ILSF-TX1	6	12	100.00
ILUC-TX1	24	52	116.67
ILUI-TX1	38	81	113.16
ILVA-TX1	6	12	100.00
INIM-TX1	74	67	-9.46
INSV-TX1	26	21	-19.23
KSUK-TX1	40	40	0.00
KYJH-TX1	17	14	-17.65
KYKC-TX1	0	3	*
KYUK-TX1	16	21	31.25
LACH-TX1	2	6	200.00
LAOF-TX1	36	46	27.78
LATU-TX1	20	20	0.00
LAWK-TX1	11	13	18.18
MABI-TX1	11	14	27.27
MABS-TX1	16	5	-68.75
MABU-TX1	12	10	-16.67
MACH-TX1	5	4	-20.00
MALC-TX1	6	7	16.67
MAMG-TX1	19	22	15.79
MANM-TX1	5	5	0.00
MAPB-TX1	11	13	18.18
MAUM-TX1	6	18	200.00
MDJH-TX1	52	70	34.62
MDUM-TX1	28	35	25.00
MEMC-TX1	8	10	25.00
MIBH-TX1	16	16	0.00
MICH-TX1	3	0	-100.00
MIDV-TX1	1	2	100.00
MIHF-TX1	14	16	14.29
MIHH-TX1	8	3	-62.50
MISJ-TX1	6	3	-50.00
MISM-TX1	15	16	6.67
MIUM-TX1	38	41	7.89

(continued)

Center	Pre-Policy	Post-Policy	% Change
MNAN-TX1	4	5	25.00
MNHC-TX1	9	11	22.22
MNMC-TX1	25	34	36.00
MNUM-TX1	32	35	9.38
MOBH-TX1	56	59	5.36
MOCG-TX1	1	3	200.00
MOCH-TX1	2	2	0.00
MOCM-TX1	0	3	*
MOLH-TX1	35	38	8.57
MORH-TX1	14	14	0.00
MOSL-TX1	10	12	20.00
MOUM-TX1	1	1	0.00
MSUM-TX1	31	49	58.06
NCBG-TX1	49	54	10.20
NCCM-TX1	22	18	-18.18
NCDU-TX1	57	46	-19.30
NCEC-TX1	21	15	-28.57
NCMH-TX1	36	42	16.67
NDMC-TX1	3	6	100.00
NDSL-TX1	3	9	200.00
NEUN-TX1	32	41	28.12
NHDH-TX1	5	1	-80.00
NJHK-TX1	31	14	-54.84
NJLL-TX1	7	10	42.86
NJRW-TX1	16	12	-25.00
NJSB-TX1	66	68	3.03
NMAQ-TX1	16	17	6.25
NMPH-TX1	7	10	42.86
NVUM-TX1	50	35	-30.00
NYAM-TX1	22	3	-86.36
NYCC-TX1	1	3	200.00
NYCP-TX1	35	39	11.43
NYDS-TX1	4	3	-25.00
NYEC-TX1	49	43	-12.24
NYFL-TX1	19	29	52.63
NYMA-TX1	20	51	155.00
NYMS-TX1	34	80	135.29
NYNS-TX1	13	28	115.38
NYNY-TX1	28	57	103.57
NYSB-TX1	25	23	-8.00
NYUC-TX1	59	88	49.15
NYUM-TX1	11	16	45.45
NYVA-TX1	2	6	200.00
NYWC-TX1	12	23	91.67
OHCC-TX1	61	67	9.84
OHCH-TX1	1	0	-100.00
OHCM-TX1	3	10	233.33
OHCO-TX1	41	38	-7.32
OHOU-TX1	66	67	1.52
OHTC-TX1	12	13	8.33
OHUC-TX1	46	43	-6.52

(continued)

Center	Pre-Policy	Post-Policy	% Change
OHUH-TX1	34	51	50.00
OKBC-TX1	23	10	-56.52
OKMD-TX1	8	17	112.50
OKSJ-TX1	9	19	111.11
ORGS-TX1	17	10	-41.18
ORUO-TX1	32	39	21.88
ORVA-TX1	14	6	-57.14
PAAE-TX1	13	14	7.69
PAAG-TX1	31	21	-32.26
PACC-TX1	5	2	-60.00
PACH-TX1	2	0	-100.00
PACP-TX1	5	2	-60.00
PAGM-TX1	10	5	-50.00
PAHE-TX1	4	3	-25.00
PAHH-TX1	9	8	-11.11
PALH-TX1	3	2	-33.33
PALV-TX1	30	22	-26.67
PAPT-TX1	42	39	-7.14
PARH-TX1	1	1	0.00
PASC-TX1	1	2	100.00
PATJ-TX1	23	20	-13.04
PATU-TX1	6	8	33.33
PAUP-TX1	43	44	2.33
PAVA-TX1	11	6	-45.45
PRSJ-TX1	22	13	-40.91
RIRH-TX1	13	8	-38.46
SCMU-TX1	92	131	42.39
SDMK-TX1	3	4	33.33
SDSV-TX1	1	6	500.00
TNEM-TX1	12	7	-41.67
TNLB-TX1	0	1	*
TNMH-TX1	31	59	90.32
TNST-TX1	55	27	-50.91
TNUK-TX1	14	13	-7.14
TNVU-TX1	73	76	4.11
TXAS-TX1	17	21	23.53
TXBC-TX1	28	70	150.00
TXCF-TX1	3	10	233.33
TXCM-TX1	3	8	166.67
TXDC-TX1	1	1	0.00
TXDM-TX1	10	14	40.00
TXDR-TX1	5	8	60.00
TXFW-TX1	5	9	80.00
TXHD-TX1	38	37	-2.63
TXHH-TX1	15	11	-26.67
TXHI-TX1	24	29	20.83
TXHS-TX1	46	59	28.26
TXJS-TX1	21	17	-19.05
TXLP-TX1	10	11	10.00
TXMC-TX1	11	42	281.82
TXMH-TX1	27	40	48.15

(continued)

Center	Pre-Policy	Post-Policy	% Change
TXPL-TX1	25	22	-12.00
TXPM-TX1	1	4	300.00
TXSP-TX1	44	64	45.45
TXSW-TX1	35	34	-2.86
TXTC-TX1	3	12	300.00
TXTX-TX1	37	64	72.97
TXUC-TX1	2	6	200.00
TXVA-TX1	7	2	-71.43
UTLD-TX1	42	38	-9.52
UTMC-TX1	32	46	43.75
UTPC-TX1	4	3	-25.00
VACH-TX1	1	1	0.00
VAFH-TX1	18	33	83.33
VAHD-TX1	3	3	0.00
VAMC-TX1	67	77	14.93
VANG-TX1	18	15	-16.67
VAUV-TX1	32	35	9.38
VTMC-TX1	2	2	0.00
WACH-TX1	12	5	-58.33
WASH-TX1	5	17	240.00
WASM-TX1	25	23	-8.00
WAUW-TX1	46	55	19.57
WAVM-TX1	21	24	14.29
WICH-TX1	1	4	300.00
WISE-TX1	10	15	50.00
WISL-TX1	8	9	12.50
WIUW-TX1	50	55	10.00
WVCA-TX1	31	29	-6.45
WVWU-TX1	5	5	0.00
Total	4926	6025	22.31

Table 91: Deceased Donor Kidney Transplants from December 01, 2020 - June 30, 2021 by Policy Era and State

State	Pre-Policy	Post-Policy	% Change
Alabama	80	103	28.75
Arizona	108	190	75.93
Arkansas	44	72	63.64
California	509	673	32.22
Colorado	73	69	-5.48
Connecticut	39	39	0.00
Delaware	7	5	-28.57
Dist. Of Columbia	72	62	-13.89
Florida	363	410	12.95
Georgia	137	251	83.21
Hawaii	9	12	33.33
Illinois	161	335	108.07
Indiana	100	88	-12.00
Iowa	50	56	12.00
Kansas	40	40	0.00
Kentucky	33	38	15.15
Louisiana	69	85	23.19
Maine	8	10	25.00
Maryland	84	113	34.52
Massachusetts	91	98	7.69
Michigan	101	97	-3.96
Minnesota	70	85	21.43
Mississippi	31	49	58.06
Missouri	119	132	10.92
Nebraska	32	41	28.12
Nevada	50	35	-30.00
New Hampshire	5	1	-80.00
New Jersey	120	104	-13.33
New Mexico	23	27	17.39
New York	334	492	47.31
North Carolina	185	175	-5.41
North Dakota	6	15	150.00
Ohio	264	289	9.47
Oklahoma	40	46	15.00
Oregon	63	55	-12.70
Pennsylvania	239	199	-16.74
Puerto Rico	22	13	-40.91
Rhode Island	13	8	-38.46
South Carolina	92	131	42.39
South Dakota	4	10	150.00
Tennessee	185	183	-1.08
Texas	418	595	42.34
Utah	78	87	11.54
Vermont	2	2	0.00
Virginia	139	164	17.99
Washington	109	124	13.76
West Virginia	36	34	-5.56
Wisconsin	69	83	20.29
Total	4926	6025	22.31