OPTN Kidney Transplantation

Descriptive Data Request

Eliminate Use of DSA and Region from Kidney Allocation Two Year 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 March 16, 2019 and March 14, 2023. Data are current as of March 03, 2023 and are subject to change based on future submission or correction.

In general, the results of the current two-year monitoring are consistent with those of the one-year monitoring report and are summarized, below.

Equity in Access to Transplant

Transplant rates increased by 29.38% overall after the removal of DSA and OPTN Region from deceased donor kidney allocation. Several subpopulations saw a significant increase in transplant rate after policy implementation. The transplant rates increased by: 37.89% for Black candidates, 34.78% for Hispanic candidates, and 34.75% for Asian candidates; 80.76% for candidates with CPRA 80-97% and 46.4% for candidates with 3+ years of dialysis time at listing. Transplant rates also increased for all pediatric age groups.

Note that there are OPTN dashboards for monitoring equity in access to deceased donor transplant that complement this report (found here: https://insights.unos.org/equity-in-access/). The methodology presented in the dashboards differs from what is presented here.

Geography

Median distance between the donor and transplant hospitals for deceased donor kidney transplants increased from 71 to 120 NM after policy implementation. The proportion of transplants at hospitals within 250 NM of the donor hospital increased from 78.74% to 84.53%. The proportion of transplants occurring at transplant hospitals outside the DSA of the recovering OPO doubled from 30.02% to 59.89%. The number of transplants increased for 35 DSAs and decreased for 21 DSAs.

Efficient Allocation and Utilization of Organs

Median cold ischemic time increased from 17.2 to 19.5 hours after policy implementation. The rate of delayed graft function increased from 29.24% to 32.89% under the new policy. The overall non-use rate for deceased donor kidneys increased from 21.14% to 26.04%. One year unadjusted post-transplant patient and graft survival did not change.

Pediatrics

The two-year monitoring report contains additional metrics on the pediatric recipient, wait list and donor populations which can be found in the appendix. Pediatric transplant rates increased for all pediatric age groups. The transplant rates increased by: 40.05% for pediatric candidates aged 0.5, 62.25% for pediatric candidates aged 6.11, 49.44% for pediatric candidates aged 12.17. Transplant rates among the pediatric population increased notably for registrations with CPRA 0.79% at listing, with blood types A, B, and O as well with a pre-emptive listing or on dialysis 0.1 years or 2+ years.

The proportion of transplants at hospitals within 250 NM of the donor hospital increased slightly and the proportion of transplants occurring at transplant hospitals outside the DSA of the recovering OPO increased. Median distance from the donor hospital increased from 29 NM to 129 NM after policy implementation. Median cold ischemic time increased from 11.24 to 14 hours after policy implementation. One year unadjusted post-transplant patient and graft survival did not change.

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 were formally evaluated approximately 3 months, 6 months, and 1 year post-implementation. This report represents the final round of monitoring at 2 years post-implementation. The following metrics, and any subsequently requested by the Committee, will be evaluated as data become available. Appropriate lags will be applied, per typical OPTN conventions, to account for time delay in institutions reporting data to the OPTN 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.

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, race/ethnicity, Calculated Panel Reactive Antibodies (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, race/ethnicity, CPRA, blood type, diagnosis, EPTS score, and time on dialysis.
- Deceased donor transplants per 100 active patient years by recipient age, race/ethnicity, time on dialysis, ABO, CPRA, HLA-ABDR mismatch level, diagnosis, Estimated Post Transplant Survival (EPTS) score, and DSA.

Transplant

- 1. Donor, recipient and transplant characteristics: number and percent of transplants by recipient age, race/ethnicity, waiting time (days on the waiting list), time on dialysis, ABO, CPRA, HLA-ABDR mismatch level, diagnosis, EPTS score, Kidney Donor Profile Index (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, race/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 (Kidney-Pancreas (KP), Simultaneous Liver-Kidney (SLK), Heart-Kidney (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 for transplant but not transplanted (discarded), overall and by KDPI
- 3. Number and percent of kidneys recovered for transplant but not transplanted by non-use reason
- 4. Number and percent kidneys with a final acceptance
- 5. Offer acceptance per 100 patient years by recipient age, race/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

Unadjusted post-transplant graft and patient survival rates, overall and stratified by recipient age, gender, race/ethnicity, CPRA, blood type, diagnosis, time on dialysis, HLA-ABDR mismatch, EPTS score, KDPI, and CIT.

Medical Urgency

Overall and by OPTN Region (as sample size allows):

- 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
 - Recovered for transplant but not transplanted

Pediatrics

Includes metrics described above.

Data and Methods

Data Sources

This analysis is based on OPTN data as of March 03, 2023. Candidate information was submitted through the OPTN Waiting List and on the Transplant Candidate Registration (TCR). Recipient and transplant data were submitted on the Transplant Recipient Registration (TRR). Donor data were submitted via the OPTN Donor Data and Matching System and on the Deceased Donor Registration (DDR). Match run data were submitted through the OPTN Donor Data and Matching System. Data are subject to change based on future submission or correction.

Cohort

All kidney alone registrations added to the waiting list, ever waiting, or transplanted between March 16, 2019 and March 14, 2023 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. Donor was defined as an individual for which at least one solid organ was recovered for the purpose of transplant.

Policy eras were defined as:

Pre-Policy: March 16, 2019 to March 14, 2021
Post-Policy: March 15, 2021 to March 14, 2023

Methods

Waiting list mortality rates were defined as the number of deaths on the waiting list divided by the total amount of time on the waiting list (active or inactive) for registrations ever waiting between March 16, 2019 and March 14, 2023. 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.

Post-transplant patient and death-censored graft survival were calculated using the Kaplan-Meier survival estimate. Due to insufficient follow-up and concerns about informative censoring, this report only looks at survival for deceased donor kidney transplants through February 28, 2022.

Non-use 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, recovered for transplant but not transplanted, 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.

On January 26th, 2023, the CPRA calculator used in allocation was updated. A result of this change was that for all candidates that have no unacceptable antigens reported, their CPRA will no longer be displayed as 0% like it had been previously. Under the new calculation, candidates with no unacceptable antigens report will now show a CPRA that is blank, or NULL. For the purpose of this report, any candidates with a NULL CPRA from January 26th to the end of the cohort on March 14th, 2023 were recorded as a 0% CPRA, to mirror how candidates with no unacceptable antigens were reported in the old calculation. There are also candidates who will have an "Unknown" CPRA. These are candidates who's CPRA are truly missing due to these candidates being listed prior to October 1st, 2009, when CPRA was implemented in allocation, meaning their CPRA is unknown due to it not being calculated yet in allocation when they were originally listed. NULL CPRAs differ from unknown in that there is no CPRA as an artifact of the calculation, whereas Unknown CPRA is a CPRA that is truly missing.

Finally, with respect to equity in access it is important to note that race neutral EGFR was mandated and centers were allowed to submit wait time modifications for their candidates starting 1/5/23 (https://unos.org/news/impl ementation-notice-race-neutral-egfr-formulas/). Any wait time modifications submitted on or after 1/5/23 and before the end of policy monitoring cohort would be included in this report.

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

Equity in Access to Transplant

Figure 1 and **Table 1** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era (note: includes pediatrics and adults ever-waiting). The overall deceased donor kidney transplant rate significantly increased from 29.85 to 38.62 transplants per 100 active patient years after policy implementation.

Figure 1: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era

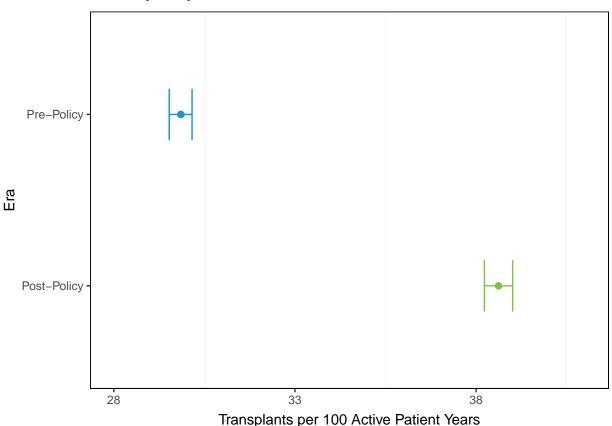


Table 1: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era

Pre-Policy 127250 34368 Post-Policy 125670 38707	(29.53, 30.16) (38.23, 39.01)

Figure 2 and **Table 2** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and age at listing. Transplant rates increased across all adult age groups after policy implementation.

Figure 2: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing For Adult Candidates

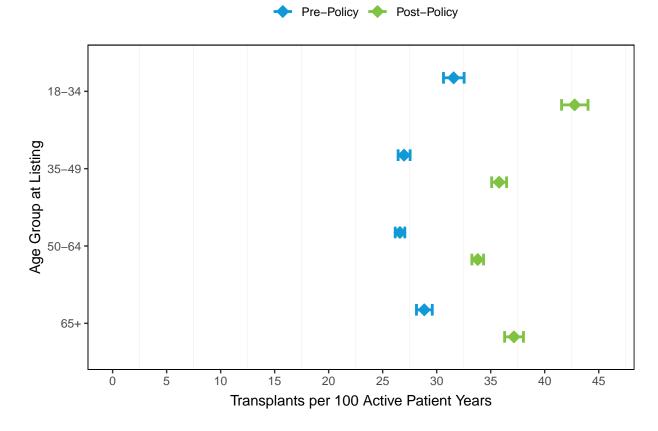


Table 2: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

Age at Listing	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
18-34	Pre-Policy	15611	4238	31.57	(30.63, 32.54)
	Post-Policy	14778	4732	42.77	(41.56, 44.01)
35-49	Pre-Policy	37353	9179	26.98	(26.43, 27.54)
	Post-Policy	36155	10389	35.78	(35.09, 36.47)
50-64	Pre-Policy	58049	13863	26.60	(26.16, 27.05)
	Post-Policy	56512	15321	33.80	(33.26, 34.34)
65+	Pre-Policy	25023	5986	28.85	(28.13, 29.59)
	Post-Policy	25828	7029	37.15	(36.29, 38.03)

Figure 3 and **Table 3** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and race/ethnicity. Transplant rates increased for all candidates irrespective of candidate race/ethnicity.

Figure 3: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Race/Ethnicity

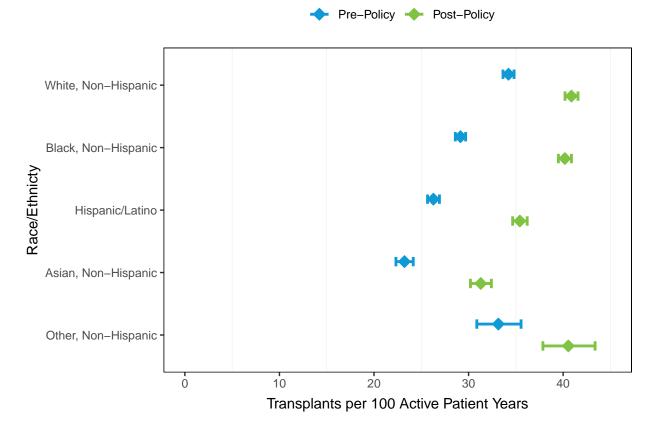
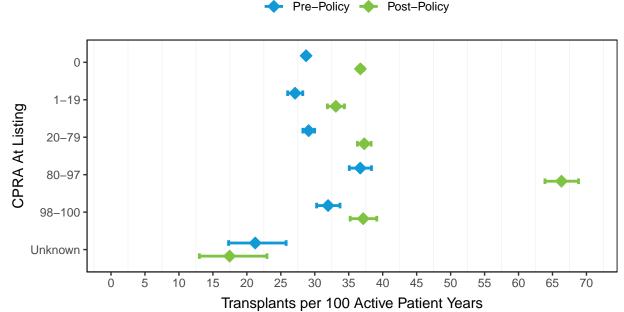


Table 3: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Race/Ethnicity

Race/Ethnicity	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
White, Non-Hispanic	Pre-Policy	48163	13151	34.22	(33.64, 34.81)
	Post-Policy	46313	13569	40.88	(40.2, 41.57)
Black, Non-Hispanic	Pre-Policy	39667	11134	29.14	(28.6, 29.69)
	Post-Policy	39316	13011	40.18	(39.5, 40.88)
Hispanic/Latino	Pre-Policy	26793	6794	26.28	(25.66, 26.92)
	Post-Policy	27261	8199	35.42	(34.66, 36.2)
Asian, Non-Hispanic	Pre-Policy	10546	2506	23.22	(22.32, 24.15)
	Post-Policy	10769	3086	31.29	(30.2, 32.41)
Other, Non-Hispanic	Pre-Policy	2887	787	33.15	(30.87, 35.55)
	Post-Policy	2768	842	40.55	(37.86, 43.38)

Figure 4 and **Table 4** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and CPRA at listing. Transplant rates increased for all CPRA groups in the post-policy era compared to the pre, except for registrations with an unknown CPRA. The largest increase in transplant rate was seen for registrations with CPRA 80-97% at listing, going from 36.69 to 66.32 transplants per 100 active patient years.

Figure 4: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 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 Registrations listed on or after January 26th, 2023 with a NULL CPRA due to not reporting unacceptable antigens was recoded to have a CPRA of 0%

Table 4: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and CPRA at Listing

CPRA	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
0	Pre-Policy	93176	24212	28.72	(28.36, 29.09)
	Post-Policy	89693	26498	36.72	(36.28, 37.16)
1-19	Pre-Policy	9867	2318	27.10	(26.01, 28.23)
	Post-Policy	10688	2701	33.10	(31.86, 34.37)
20-79	Pre-Policy	17790	4477	29.10	(28.25, 29.97)
	Post-Policy	18798	5299	37.28	(36.28, 38.29)
80-97	Pre-Policy	6596	1955	36.69	(35.08, 38.35)
	Post-Policy	6679	2797	66.32	(63.89, 68.83)
98-100	Pre-Policy	4614	1341	31.96	(30.27, 33.71)
	Post-Policy	4614	1395	37.13	(35.21, 39.13)
Unknown	Pre-Policy	409	102	21.23	(17.31, 25.78)
	Post-Policy	219	51	17.46	(13, 22.96)

Figure 5 and **Table 5** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and time on dialysis at listing. Groupings are based on the 25th, 50th, and 75th percentiles of dialysis time. Transplant rates increased for pre-emptively listed candidates, as well as candidates with any amount of dialysis time at listing. The largest change was seen for candidates with 3 or more years of dialysis time at listing, for whom the transplant rate increased from 64.83 to 94.91 transplants per 100 active patient years.

Figure 5: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Time on Dialysis at Listing

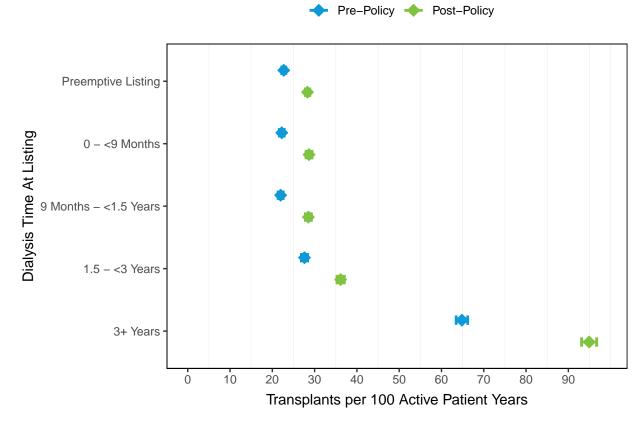


Table 5: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Time on Dialysis at Listing

Dialysis Time	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
Preemptive Listing	Pre-Policy	44800	9291	22.71	(22.25, 23.18)
	Post-Policy	45683	11436	28.32	(27.8, 28.85)
0 - < 9 Months	Pre-Policy	27088	5610	22.23	(21.65, 22.82)
	Post-Policy	25134	6397	28.68	(27.98, 29.39)
9 Months - $< 1.5 Years$	Pre-Policy	25474	5287	21.97	(21.38, 22.57)
	Post-Policy	24507	6316	28.53	(27.83, 29.24)
1.5 - < 3 Years	Pre-Policy	22853	5529	27.60	(26.88, 28.34)
	Post-Policy	23242	6859	36.15	(35.3, 37.02)
3+ Years	Pre-Policy	20971	8721	64.83	(63.48, 66.2)
	Post-Policy	21360	10910	94.91	(93.13, 96.7)

Geography

Figure 6 and **Table 6** show the distribution of distance in NM between the transplant and donor hospitals for deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era. Median distance between the transplant and donor hospitals increased from 71 NM to 120 NM after policy implementation.

Figure 6: Distribution of Distance from Donor Hospital to Transplant Center for Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

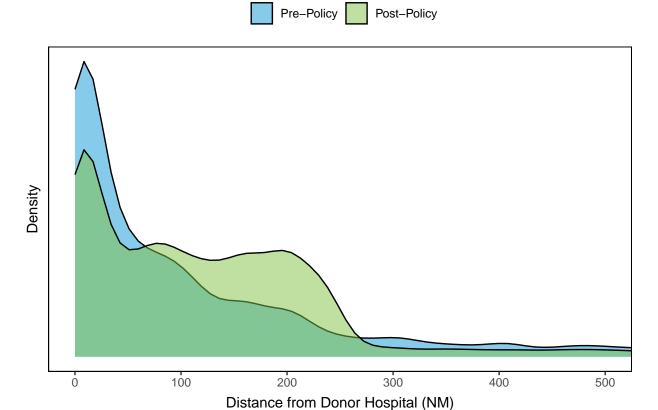


Table 6: Distribution of Distance from Donor Hospital to Transplant Center for Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	34479	0	0	11	71	212	206	4348
Post-Policy	38823	0	0	34	120	216	209	4241

Figure 7 and **Table 7** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and distance from the transplant hospital to the donor hospital. The proportion of transplants within 250 NM of the donor hospital increased from 78.74% to 84.53% after policy implementation.

Figure 7: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Distance from Donor Hospital to Transplant Center

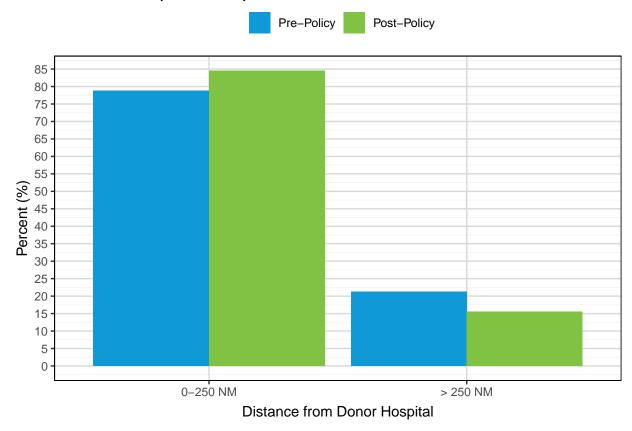


Table 7: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Distance from Donor Hospital to Transplant Center

	Pre-I	Policy	Post-	Policy
Distance	N	%	N	%
0-250 NM > 250 NM Total	27150 7329 34479	78.74 21.26 100.00	32816 6007 38823	84.53 15.47 100.00

Figure 8 and **Table 8** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and share type. The proportion of transplants using kidneys recovered in the same DSA as the transplant hospital decreased from 69.98% to 40.11% after the policy change. The proportion of regional and national shares increased from 15.52% to 27.47% and 14.5% to 32.43% respectively.

Figure 8: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Share Type

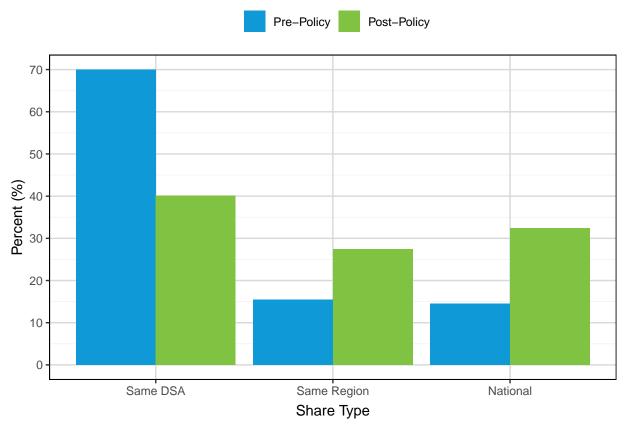


Table 8: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Share Type

	Pre-l	Policy	Post-	Policy
Share Type	N	%	N	%
Same DSA	24129	69.98	15571	40.11
Same Region	5350	15.52	10663	27.47
National	5000	14.50	12589	32.43
Total	34479	100.00	38823	100.00

Figure 9 and **Table 9** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and OPTN region. The total number of transplants decreased slightly after policy implementation in Regions 2 and 8. Transplant volumes increased in the remaining regions.

Figure 9: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and OPTN Region

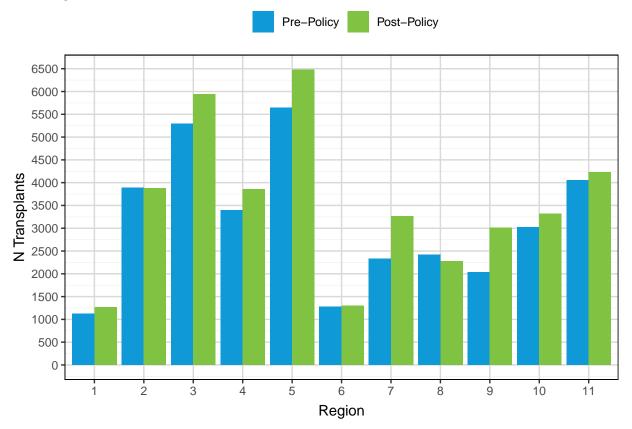


Table 9: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and OPTN Region

	Pre-l	Policy	Post-	Policy
Region	N	%	N	%
1	1123	3.26	1266	3.26
2	3894	11.29	3879	9.99
3	5291	15.35	5940	15.30
4	3392	9.84	3859	9.94
5	5645	16.37	6478	16.69
6	1277	3.70	1300	3.35
7	2327	6.75	3263	8.40
8	2420	7.02	2274	5.86
9	2039	5.91	3016	7.77
10	3019	8.76	3314	8.54
11	4052	11.75	4234	10.91
Total	34479	100.00	38823	100.00

Figure 10 shows deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and DSA. The number of transplants increased in 35 DSAs after policy implementation, and the number of transplants decreased in 21 DSAs. A table showing transplants by policy era and DSA is provided in the **Appendix**.

Figure 10: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and DSA

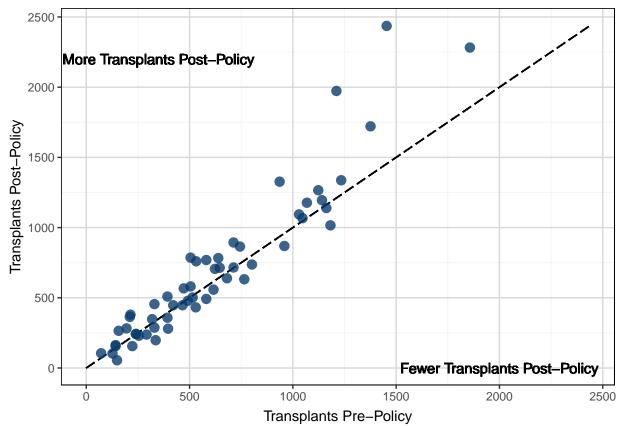
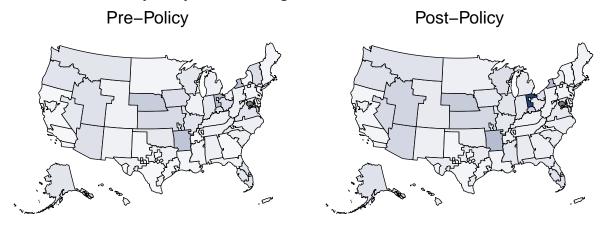


Figure 11 and **Table 10** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and listing DSA. Transplant rates ranged from 13.89 to 145.54 transplants per 100 active patient years pre-policy and 20.12 to 421.91 post-policy. A table showing transplant rates by policy era and DSA is provided in the **Appendix**.

Figure 11: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Listing DSA



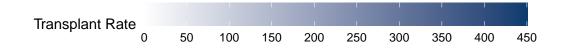


Figure 12 shows deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and transplant center. The number of transplants increased at 145 centers after policy implementation, and the number of transplants decreased at 94 centers. A table showing transplants by policy era and transplant center is provided in the **Appendix**.

Figure 12: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Transplant Center

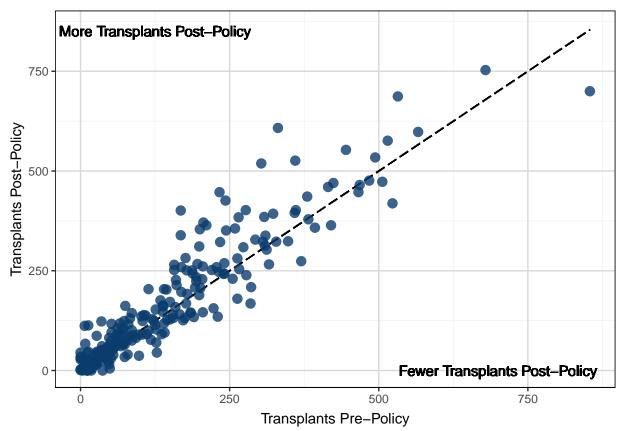
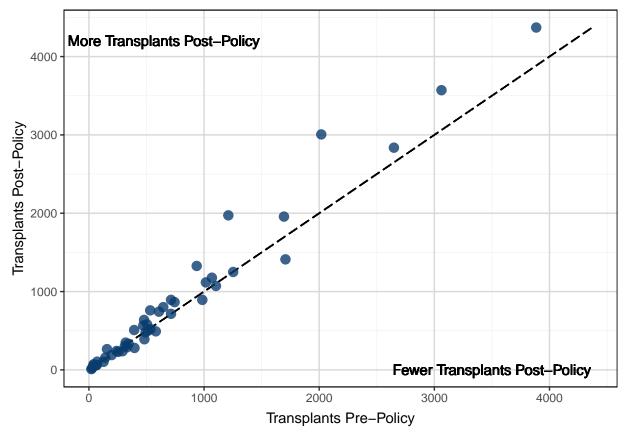


Figure 13 shows deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and state including the District of Columbia and Puerto Rico. The number of transplants increased in 27 states after policy implementation, and the number of transplants decreased in 21 states. There 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**.

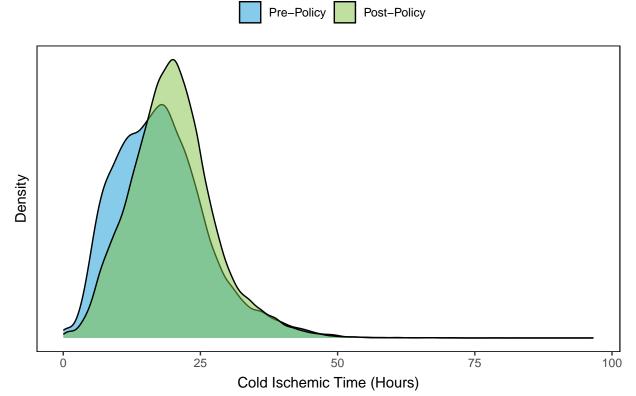
Figure 13: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and State



Efficient Allocation and Utilization of Organs

Figure 14 and **Table 10** show the distribution of cold ischemic time in hours for deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era. Median cold ischemic time increased from 17.2 to 19.5 hours after policy implementation. Cold ischemic time was missing for less than 1% of transplants pre-policy and post-policy.

Figure 14: Distribution of Cold Ischemic Time (Hours) for Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era



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

Table 10: Distribution of Cold Ischemic Time (Hours) for Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	34479	157	0	11.6	17.2	17.9	22.7	75.65
Post-Policy	38823	318	0	14.7	19.5	19.9	24.1	96.63

Figure 15 and **Table 11** show rate of delayed graft function for deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era. The rate of delayed graft function was 29.24% pre-policy and 32.89% post-policy.

Figure 15: Rate of Delayed Graft Function for Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

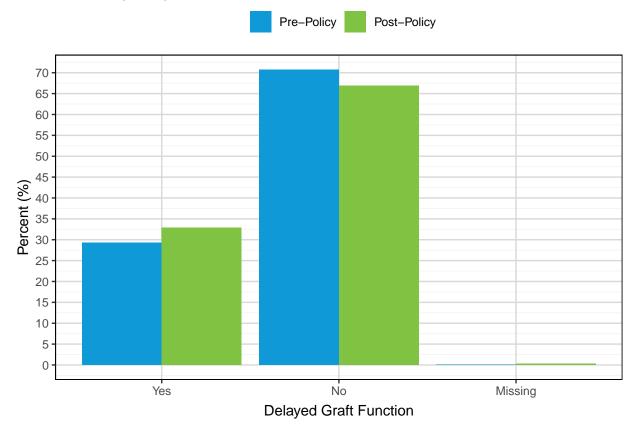
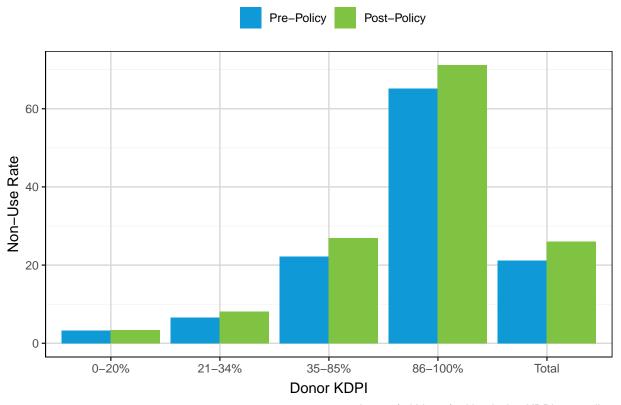


Table 11: Rate of Delayed Graft Function for Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

	Pre-l	Pre-Policy		Policy
Delayed Graft Function	N	%	N	%
Yes	10080	29.24	12768	32.89
No Missing	24384 15	70.72 0.04	25954 101	66.85 0.26
Total	34479	100.00	38823	100.00

Figure 16 and **Table 12** show non-use rates for deceased donor kidney recovered from March 16, 2019 to March 14, 2023 by policy era and KDPI. Overall the kidney non-use rate increased from 21.14% to 26.04% post-policy.

Figure 16: Non-use Rates for Deceased Donor Kidneys Recovered March 16, 2019 - March 14, 2023 by Policy Era and KDPI



2 donors (4 kidneys) with missing KDPI pre-policy

Table 12: Non-use Rates for Deceased Donor Kidneys Recovered March 16, 2019 - March 14, 2023 by Policy Era and KDPI

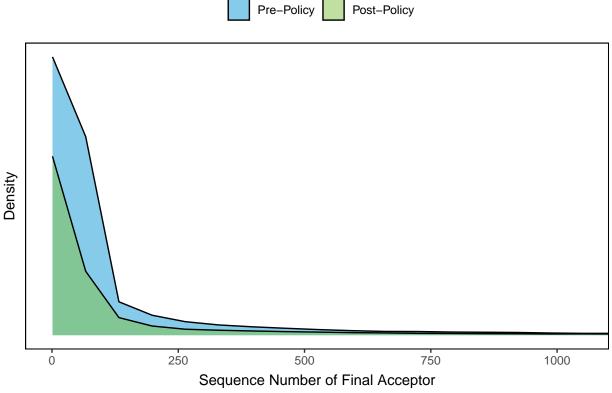
	Pre-Policy				Post-Policy			
KDPI	Kidneys Recovered	Kidneys Not TXed	Non-use Rate	Kidneys Recovered	Kidneys Not TXed	Non-use Rate		
0-20%	10319	330	3.20	11208	384	3.43		
21-34%	7037	467	6.64	7844	632	8.06		
35-85%	23253	5155	22.17	28321	7619	26.90		
86-100%	5985	3896	65.10	8200	5838	71.20		
Total	46598	9852	21.14	55573	14473	26.04		

Note:

2 donors (4 kidneys) with missing KDPI pre-policy

Figure 17 and **Table 13** show the distribution of the sequence number of the final acceptor for kidney matches from March 16, 2019 to March 14, 2023 by policy era. The figure is restricted to the 90th percentile. Median sequence number increased from 9 to 18 after the policy change.

Figure 17: Distribution of Sequence Number of Final Acceptor for Kidney Match Runs March 16, 2019-March 14, 2023 by Policy Era



View restricted to 90th percentile.

Table 13: Distribution of Sequence Number of Final Acceptor for Kidney Match Runs March 16, 2019-March 14, 2023 by Policy Era

Era	N	Min	25th %-tile	Med	Mean	75th %-tile	Max
Pre-Policy	22220	1	4	9	460.8	78	31599
Post-Policy	21984	1	6	18	757.4	163	33603

Figure 18 and **Table 14** show the distribution of hours from first offer to cross-clamp for kidney match runs from March 16, 2019 to March 14, 2023 by policy era. Time of first offer was defined as the time when the first electronic offer was sent for the match. There were 3430 matches where cross-clamp occurred before the first electronic offer was sent pre-policy, and another 1409 post-policy. Matches where cross-clamp occurred before the first electronic offer were removed from the metrics presented in 18 and 14. Median time from first offer to cross-clamp was 23.27 hours pre-policy and 25.93 hours post-policy.

Figure 18: Distribution of Hours from First Offer to Cross-Clamp for Kidney Match Runs March 16, 2019-March 14, 2023 by Policy Era

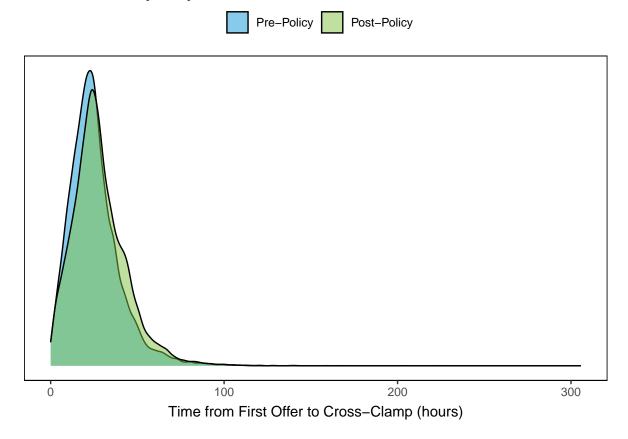


Table 14: Distribution of Hours from First Offer to Cross-Clamp for Kidney Match Runs March 16, 2019-March 14, 2023 by Policy Era

Era	N	Cross-Clamp Before Offer	Min	25th %-tile	Med	Mean	75th %-tile	Max
Pre-Policy	22220	3430	0	15.73	23.27	25.33	31.97	158.90
Post-Policy	21984	1409	0	17.92	25.93	28.19	36.28	305.68

Figure 19 and **Table 15** show offers per active patient year for kidney matches from March 16, 2019 to March 14, 2023 by policy era. The overall offer rate increased from 88.92 to 165.74 offers per active patient year after implementation.

Figure 19: Offers per Active Patient Year for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era

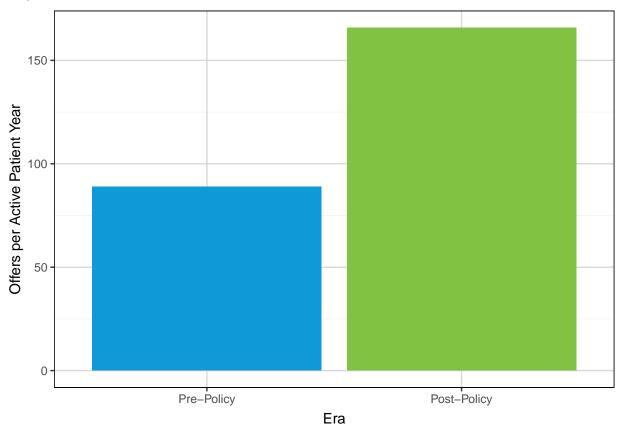


Table 15: Offer and Acceptance Rates for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era

Era	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Pre-Policy	115154.1	10239865	36869	88.92	3.60
Post-Policy	100228.6	16612261	37306	165.74	2.25

Figure 20 shows acceptances per 1000 offers for kidney match runs from March 16, 2019 to March 14, 2023 by policy era. The overall acceptance rate decreased from 3.6 to 2.25 acceptances per 1000 offers after policy implementation.

Figure 20: Acceptances per 1000 Offers for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era

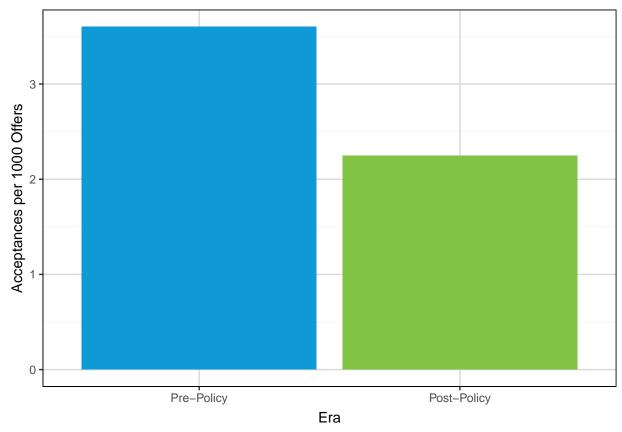


Figure 21 and **Table 16** show one-year unadjusted Kaplan Meier post-transplant patient survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by policy era. Patient survival did not change after policy implementation.

Figure 21: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Policy Era

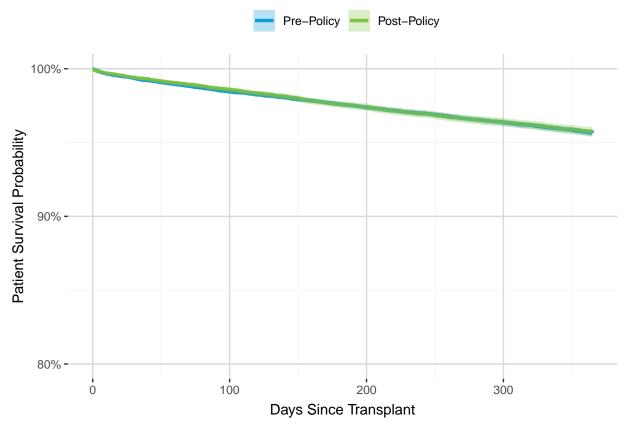


Table 22: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Policy Era

Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
Pre-Policy	32391	1395	29952	95.6	(95.4, 95.9)
Post-Policy	17012	697	9162	95.7	(95.4, 96.0)

Figure 22 and **Table 17** show one year unadjusted Kaplan Meier post-transplant graft survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by policy era. Graft survival did not change after policy implementation.

Figure 22: One Year Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Policy Era

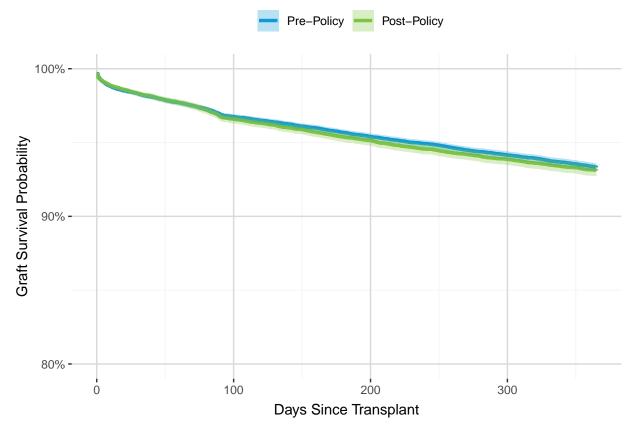


Table 1: One Year Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Policy Era

Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Pre-Policy	32391	2155	29656	93.3	(93.0, 93.6)
Post-Policy	17012	1147	9062	93.1	(92.7, 93.5)

Medical Urgency

Transplant centers were able to place registrations in medical urgency status on March 8, 2021 in advance of the policy change. Through March 14, 2023, 44 registrations were ever-waiting in the post-implementation monitoring period in medical urgency status. Of the 44, 22 received a deceased donor transplant, 14 are still waiting and 8 were removed from the waitlist for reasons other than transplant.

Released Organs

Table 18 shows deceased donor kidney recovery and transplants from March 16, 2019 to March 14, 2023 by policy era and match run 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. In the pre-policy period, 5007 import matches were run. From donors of those match runs, 3096 kidneys were recovered and 1388 kidneys were transplanted. In the post-policy era only 312 released matches were executed. From donors of those match runs, 301 kidneys were recovered and 151 kidneys were transplanted.

Table 18: Deceased Donor Kidney Recovery and Transplantation from March 16, 2019 - March 14, 2023 by Policy Era Match Run Type

Era	Match Type	N Match	N Kidneys Recovered	N Kidneys Transplanted
Pre-Policy	Import	5007	3096	1388
	Standard	37949	43556	35454
Post-Policy	Released	312	301	151
	Standard	44943	55184	40953

Donors Recovered in Alaska

Table 19 shows kidneys recovered and transplanted for deceased donors recovered in Alaska from March 16, 2019 to March 14, 2023 by policy era. Pre-policy, 68 donors had 136 kidneys recovered in Alaska, of which 116 were transplanted. Post-policy, 63 donors in Alaska had 126 kidneys recovered and 102 transplanted.

Table 19: Kidneys Recovered and Transplanted for Deceased Donors Recovered in Alaska March 16, 2019 - March 14, 2023 by Policy Era

	Pre-Policy	Post-Policy
Kidney Donors Recovered	68	63
Kidneys Recovered	136	126
Kidneys Transplanted	116	102

Table 20 shows the distribution of distance from the donor hospital in NM for deceased donor kidney transplants utilizing donors recovered in Alaska from March 16, 2019 to March 14, 2023 by policy era. The median distance from the donor hospital remained 1243 NM across policy eras.

Table 20: Distribution of Distance from Donor Hospital to Transplant Center for Deceased Donor Kidney Transplants Utilizing Donors Recovered in Alaska March 16, 2019 - March 14, 2023 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	115	0	1237	1241	1243	1607.70	1726	3126
Post-Policy	97	0	1239	1242	1243	1552.84	1736	3436



Table 21 shows the distance in NM from Sea-Tac to the transplant hospital for deceased donor kidneys recovered in Alaska and transplanted from March 16, 2019 to March 14, 2023 by policy era. Pre-policy early 49.57% of kidneys recovered in Alaska were transplanted within 250 NM of Sea-Tac which increased to 56.7% post-policy.

Table 21: Distance from Sea-Tac to Transplant Hospital for Deceased Donor Kidneys Recovered in Alaska and Transplanted March 16, 2019 - March 14, 2023 by Policy Era

	Pre	-Policy	Pos	t-Policy
Distance	N	%	N	%
0-250 NM > 250 NM Total	57 58 115	49.57 50.43 100.00	55 42 97	56.70 43.30 100.00

Conclusion

Transplant rates increased significantly for all candidates on the waiting list. Several subpopulations of candidates saw notable increases in transplant rate, including: pediatric candidates; Black, Hispanic, and Asian candidates; candidates with CPRA 80-97%; and candidates with 3 or more years of dialysis time at listing. Changes in transplant rate varied across the country. The majority of DSAs seeing a increase in volume, though some DSAs did see a decrease.

Deceased donor kidneys are traveling farther under the new allocation system, but the majority are transplanted at hospitals within 250 NM of the donor hospital. Kidneys are less likely to be transplanted at hospitals inside the DSA of the recovering OPO.

Deceased donor kidney non-use rates increased overall and across all values of KDPI although, most notably, for the higher KDPI kidneys. Average cold ischemic time increased after policy implementation, as did the national rate of delayed graft function. One year unadjusted Kaplan Meier post-transplant patient and graft survival did not change.

Appendix

Table A1: Deceased Donor Kidney Transplants and Transplant Rates from March 16, 2019 - March 14, 2023 by Policy Era and DSA

		Transplants		Transplant R	ate (95% CI)
DSA	Pre-Policy	Post-Policy	% Change	Pre-Policy	Post-Policy
ALOB	515	502	-2.52	32.66 (29.9, 35.61)	41.46 (37.9, 45.27)
AROR	319	348	9.09	123.78 (110.57, 138.14)	140.45 (126.08, 156)
AZOB	1068	1177	10.21	65.53 (61.65, 69.58)	84.77 (79.99, 89.77)
CADN	1141	1195	4.73	16.35 (15.41, 17.32)	20.74 (19.58, 21.95)
CAGS	466	447	-4.08	27.02 (24.61, 29.59)	30.23 (27.48, 33.18)
CAOP	1857	2282	22.89	15.62 (14.92, 16.35)	20.65 (19.81, 21.51)
CASD	421	447	6.18	19.21 (17.42, 21.13)	21.83 (19.85, 23.96)
CORS	472	567	20.13	28.92 (26.32, 31.7)	42.99 (39.48, 46.74)
FLFH	336	198	-41.07	52 (46.57, 57.88)	33.85 (29.3, 38.91)
FLMP	1162	1139	-1.98	53.44 (50.41, 56.6)	59.94 (56.5, 63.53)
FLUF	505	786	55.64	28.49 (26.05, 31.1)	48.46 (45.13, 51.96)
FLWC	646	714	10.53	50.14 (46.35, 54.16)	61.27 (56.86, 65.93)
GALL	936	1327	41.77	14.26 (13.36, 15.21)	33.21 (31.45, 35.05)
HIOP	72	105	45.83	23.04 (18.03, 29.01)	35.98 (29.43, 43.56)
IAOP	396	280	-29.29	66.05 (59.68, 72.91)	49.91 (44.22, 56.12)
ILIP	1211	1973	62.92	28.48 (26.89, 30.13)	53.69 (51.35, 56.12)
INOP	581	492	-15.32	49.17 (45.26, 53.34)	51.49 (47.03, 56.25)
KYDA	292	238	-18.49	33.3 (29.59, 37.34)	29.09 (25.51, 33.03)
LAOP	505	581	15.05	19.99 (18.28, 21.82)	24.72 (22.75, 26.82)
MAOB	1123	1266	12.73	20.7 (19.36, 22.11)	25.98 (24.49, 27.53)
MDPC	1234	1337	8.35	23.2 (21.92, 24.53)	34.6 (32.76, 36.51)
MIOP	744	865	16.26	33.45 (31.09, 35.95)	44.53 (41.61, 47.6)
MNOP	581	769	32.36	22.66 (20.85, 24.58)	32.67 (30.4, 35.07)
MOMA	616	558	-9.42	57.25 (52.82, 61.95)	47.12 (43.29, 51.2)
MSOP	240	242	0.83	22.3 (19.56, 25.32)	51.07 (44.83, 57.95)
MWOB	681	639	-6.17	74.91 (69.38, 80.77)	82.11 (75.87, 88.73)
NCCM	223	156	-30.04	40.86 (35.67, 46.59)	22.62 (19.21, 26.46)
NCNC	1030	1094	6.21	32.71 (30.74, 34.77)	36.89 (34.74, 39.15)
NEOR	255	230	-9.80	104.82 (92.3, 118.56)	108.15 (94.62, 123.06)
NJTO	713	894	25.39	22.12 (20.52, 23.81)	31.51 (29.48, 33.65)
NMOP	142	156	9.86	28.5 (24.01, 33.59)	33.02 (28.04, 38.62)
NVLV	157	265	68.79	47.91 (40.71, 56.02)	78.33 (69.16, 88.37)
NYAP	149	55	-63.09	70.55 (59.68, 82.84)	23.76 (17.9, 30.93)
NYFL	195	282	44.62	21.28 (18.39, 24.49)	35.77 (31.7, 40.23)
NYRT	1454	2436	67.54	17.2 (16.32, 18.1)	37.08 (35.62, 38.58)
NYWN	241	243	0.83	132.81 (116.54, 150.72)	150.85 (132.48, 171.06)
OHLB	623	706	13.32	37.28 (34.41, 40.32)	61.91 (57.43, 66.65)
OHLC	211	364	72.51	145.54 (126.52, 166.61)	421.91 (379.68, 467.56)
OHLP	530	432	-18.49	66.45 (60.9, 72.37)	43.19 (39.21, 47.47)
OHOV	330	455	37.88	60.81 (54.42, 67.74)	91.8 (83.55, 100.65)
OKOP	330	288	-12.73	46.63 (41.7, 51.98)	39.19 (34.72, 44.08)
ORUO	492	479	-2.64	56.83 (51.92, 62.08)	62.27 (56.8, 68.12)
PADV	1182	1016	-14.04	23.73 (22.4, 25.13)	25.26 (23.73, 26.87)
PATF	765	632	-17.39	31.84 (29.61, 34.18)	29.48 (27.23, 31.88)
PRLL	127	103	-18.90	27.51 (22.94, 32.73)	24.72 (20.18, 29.98)
SCOP	532	760	42.86	34.13 (31.29, 37.16)	41.26 (38.38, 44.3)

(continued)

	Transplants			Transplant Rate (95% CI)		
DSA	Pre-Policy	Post-Policy	% Change	Pre-Policy	Post-Policy	
TNDS	802	737	-8.10	30.78 (28.69, 32.99)	28.25 (26.25, 30.37)	
TNMS	214	380	77.57	13.89 (12.09, 15.88)	32.16 (29.01, 35.56)	
TXGC	1047	1067	1.91	17.25 (16.22, 18.33)	20.12 (18.93, 21.37)	
TXSA	639	783	22.54	16.07 (14.85, 17.37)	20.23 (18.83, 21.7)	
TXSB	1376	1721	25.07	29.05 (27.53, 30.63)	40.7 (38.8, 42.67)	
UTOP	393	509	29.52	62.97 (56.89, 69.52)	88.44 (80.92, 96.46)	
VATB	959	869	-9.38	56.36 (52.84, 60.04)	48.34 (45.17, 51.68)	
WALC	713	716	0.42	55.32 (51.34, 59.54)	60.63 (56.27, 65.24)	
WIDN	142	163	14.79	17.78 (14.97, 20.95)	25.18 (21.46, 29.35)	
WIUW	393	358	-8.91	49.28 (44.52, 54.42)	67.74 (60.9, 75.13)	

Table A2: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Transplant Center

Transplant Hospital	Pre-Policy	Post-Policy	% Change
ALCH-TX1	14	18	28.57
ALUA-TX1	484	476	-1.65
ALVA-TX1	17	8	-52.94
ARCH-TX1	9	10	11.11
ARUA-TX1	310	338	9.03
AZCH-TX1	26	20	-23.08
AZGS-TX1	172	126	-26.74
AZMC-TX1	679	753	10.90
AZSJ-TX1	52	117	125.00
AZUA-TX1	139	161	15.83
CACH-TX1	16	12	-25.00
CACL-TX1	55	39	-29.09
CACS-TX1	424	470	10.85
CAGH-TX1	111	91	-18.02
CAIM-TX1	160	227	41.88
CALA-TX1	49	64	30.61
CALL-TX1	323	393	21.67
CAMB-TX1	17	19	11.76
CAPC-TX1	41	49	19.51
CAPM-TX1	348	324	-6.90
CARC-TX1	0	34	*
CASD-TX1	192	208	8.33
CASE-TX1	494	534	8.10
CASH-TX1	102	136	33.33
CASJ-TX1	35		
CASM-TX1	466	123 447	251.43 -4.08
CASU-TX1	241		
CASU-TX1		269	11.62
CASV-TX1 CAUC-TX1	37	0 576	-100.00
	515	576	11.84
CAUH-TX1	259	356	37.45
COCH-TX1	23	20	-13.04
COPM-TX1	8	67	737.50
COSL-TX1	82	85	3.66
COUC-TX1	359	395	10.03
CTHH-TX1	166	141	-15.06
CTYN-TX1	179	192	7.26
DCCH-TX1	15	27	80.00
DCGU-TX1	370	274	-25.95
DCGW-TX1	97	90	-7.22
DCWR-TX1	51	74	45.10
DEAI-TX1	11	8	-27.27
DECC-TX1	32	40	25.00
FLBC-TX1	1	30	2900.00
FLCC-TX1	232	247	6.47
FLFH-TX1	285	168	-41.05
FLHM-TX1	51	30	-41.18
FLJM-TX1	854	700	-18.03
FLLM-TX1	80	116	45.00
FLMR-TX1	75	162	116.00



(continued)

(continued)			
Transplant Hospital	Pre-Policy	Post-Policy	% Change
FLSH-TX1	44	57	29.55
FLSL-TX1	293	328	11.95
FLTG-TX1	566	598	5.65
FLUF-TX1	168	401	138.69
GAEH-TX1	22	19	-13.64
GAEM-TX1	445	553	24.27
GAMC-TX1	138	147	6.52
GAPH-TX1	331	608	83.69
HIQM-TX1	72	105	45.83
IAIM-TX1	205	146	-28.78
IAIV-TX1	140	118	-15.71
IAMH-TX1	3	0	-100.00
IAVA-TX1	48	16	-66.67
ILCH-TX1	29	45	55.17
ILCM-TX1	32	39	21.88
ILLU-TX1	200	354	77.00
ILMM-TX1	48	44	-8.33
ILNM-TX1	243	426	75.31
ILPL-TX1	140	204	45.71
ILSF-TX1	66	88	33.33
ILUC-TX1	169	259	53.25
ILUI-TX1	277	402	45.13
ILVA-TX1	7	112	1500.00
INIM-TX1	420	364	-13.33
INLH-TX1	11	0	-100.00
INSV-TX1	150	128	-14.67
KSUK-TX1	312	303	-2.88
KYJH-TX1	114	100	-12.28
KYKC-TX1	3	6	100.00
KYUK-TX1	175	132	-24.57
LACH-TX1	12	21	75.00
LAOF-TX1	273	309	13.19
LATU-TX1	134	176	31.34
LAWK-TX1	86	75	-12.79
MABI-TX1	73	124	69.86
MABS-TX1	63	70	11.11
MABU-TX1	79	40	-49.37
MACH-TX1	25	25	0.00
MALC-TX1	79	77	-2.53
MAMG-TX1	161	214	32.92
MANM-TX1	36	61	69.44
MAPB-TX1	64	72	12.50
MAUM-TX1	66	118	78.79
MDJH-TX1	361	402	11.36
MDUM-TX1	196	267	36.22
MEMC-TX1	37	51	37.84
MIBH-TX1	145	127	-12.41
MICH-TX1	13	11	-15.38
MIDV-TX1	7	10	42.86
MIHF-TX1	126	153	21.43
MIHH-TX1	49	5	-89.80

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Transplant Hospital	Pre-Policy	Post-Policy	% Change
MISJ-TX1	35	51	45.71
MISM-TX1	104	124	19.23
MIUM-TX1	265	384	44.91
MNAN-TX1	33	46	39.39
MNHC-TX1	69	103	49.28
MNMC-TX1	176	282	60.23
MNUM-TX1	201	207	2.99
MOBH-TX1	468	465	-0.64
MOCG-TX1	9	12	33.33
MOCH-TX1	12	11	-8.33
MOCM-TX1	10	17	70.00
MOLH-TX1	286	209	-26.92
MORH-TX1	52	96	84.62
MOSL-TX1	127	70	-44.88
MOUM-TX1	21	14	-33.33
MSUM-TX1	240	242	0.83
NCBG-TX1	382	379	-0.79
NCCM-TX1	223	156	-30.04
NCDU-TX1	306	323	5.56
NCEC-TX1	138	163	18.12
NCMH-TX1	204	229	12.25
NDMC-TX1	13	24	84.62
NDSL-TX1	27	47	74.07
NEUN-TX1	255	230	-9.80
NHDH-TX1	27	20	-25.93
NJBI-TX1	5	1	-80.00
NJHK-TX1	205	261	27.32
NJLL-TX1	62	106	70.97
NJRW-TX1	61	90	47.54
NJSB-TX1	380	436	14.74
NMAQ-TX1	71	91	28.17
NMPH-TX1	71	65	-8.45
NVUM-TX1	157	265	68.79
NYAM-TX1	128	45	-64.84
NYCC-TX1	11	10	-9.09
NYCP-TX1	194	224	15.46
NYDS-TX1	13	113	769.23
NYEC-TX1	241	243	0.83
NYFL-TX1	109	138	26.61
NYMA-TX1	168	339	101.79
NYMS-TX1	233	447	91.85
NYNS-TX1	114	204	78.95
NYNY-TX1	199	311	56.28
NYSB-TX1	125	114	-8.80
NYUC-TX1	303	519	71.29
NYUM-TX1	86	144	67.44
NYVA-TX1	11	24	118.18
NYWC-TX1	83	131	57.83
OHCC-TX1	360	526	46.11
OHCH-TX1	7	13	85.71
OHCM-TX1	26	41	57.69
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Transplant Hospital	Pre-Policy	Post-Policy	% Change
OHCO-TX1	211	364	72.51
OHOU-TX1	523	419	-19.89
OHTC-TX1	60	63	5.00
OHUC-TX1	244	351	43.85
OHUH-TX1	263	180	-31.56
OKBC-TX1	156	132	-15.38
OKMD-TX1	71	66	-7.04
OKSJ-TX1	103	90	-12.62
ORGS-TX1	123	125	1.63
ORUO-TX1	228	259	13.60
ORVA-TX1	141	95	-32.62
PAAE-TX1	106	139	31.13
PAAG-TX1	184	145	-21.20
PACC-TX1	25	18	-28.00
PACH-TX1	13	20	53.85
PACP-TX1	17	21	23.53
PAGM-TX1	118	77	-34.75
PAHE-TX1	35	24	-31.43
PAHH-TX1	74	65	-12.16
PAHM-TX1	12	0	-100.00
PALH-TX1	24	15	-37.50
PALV-TX1	190	134	-29.47
PAPH-TX1	19	5	-73.68
PAPT-TX1	278	239	-14.03
PARH-TX1	4	2	-50.00
PASC-TX1	6	10	66.67
PATJ-TX1	155	139	-10.32
PATU-TX1	57	58	1.75
PAUP-TX1	316	266	-15.82
PAVA-TX1	74	34	-54.05
PRSJ-TX1	127	103	-18.90
RIRH-TX1	68	61	-10.29
SCLA-TX1	0	45	*
SCMU-TX1	532	687	29.14
SCPG-TX1	0	28	*
SDMK-TX1	33	32	-3.03
SDSV-TX1	29	28	-3.45
TNEM-TX1	41	53	29.27
TNLB-TX1	8	9	12.50
TNMH-TX1	206	371	80.10
TNPV-TX1	11	0	-100.00
TNST-TX1	230	135	-41.30
TNUK-TX1	87	89	2.30
TNVA-TX1	18	0	-100.00
TNVU-TX1	415	460	10.84
TXAS-TX1	159	159	0.00
TXBC-TX1	187	251	34.22
TXCF-TX1	27	23	-14.81
TXCM-TX1	21	24	14.29
TXDC-TX1	11	13	18.18
TXDL-TX1	0	1	*
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Transplant Hospital	Pre-Policy	Post-Policy	% Change
TXDM-TX1	98	37	-62.24
TXDR-TX1	27	87	222.22
TXDS-TX1	0	3	*
TXFW-TX1	54	52	-3.70
TXHD-TX1	220	252	14.55
TXHH-TX1	93	82	-11.83
TXHI-TX1	199	189	-5.03
TXHS-TX1	308	385	25.00
TXJS-TX1	150	172	14.67
TXLP-TX1	48	82	70.83
TXMC-TX1	157	252	60.51
TXMH-TX1	263	281	6.84
TXPL-TX1	169	197	16.57
TXPM-TX1	13	47	261.54
TXSP-TX1	328	323	-1.52
TXSW-TX1	194	234	20.62
TXTC-TX1	42	50	19.05
TXTX-TX1	234	322	37.61
TXUC-TX1	19	19	0.00
TXVA-TX1	41	34	-17.07
UTLD-TX1	188	243	29.26
UTMC-TX1	178	251	41.01
UTPC-TX1	27	15	-44.44
VACH-TX1	8	5	-37.50
VAFH-TX1	144	203	40.97
VAHD-TX1	43	46	6.98
VAMC-TX1	506	473	-6.52
VANG-TX1	136	91	-33.09
VAUV-TX1	266	254	-4.51
VTMC-TX1	21	10	-52.38
WACH-TX1	46	23	-50.00
WASH-TX1	61	83	36.07
WASM-TX1	177	168	-5.08
WAUW-TX1	309	313	1.29
WAVM-TX1	120	129	7.50
WICH-TX1	8	14	75.00
WISE-TX1	86	101	17.44
WISL-TX1	48	48	0.00
WIUW-TX1	393	358	-8.91
WVCA-TX1	185	145	-21.62
WVWU-TX1	12	44	266.67
Total	34479	38823	12.60

Table A3: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and State

State	Pre-Policy	Post-Policy	% Change
Alabama	515	502	-2.52
Arizona	1068	1177	10.21
Arkansas	319	348	9.09
California	3885	4371	12.51
Colorado	472	567	20.13
Connecticut	345	333	-3.48
Delaware	43	48	11.63
Dist. Of Columbia	482	391	-18.88
Florida	2649	2837	7.10
Georgia	936	1327	41.77
Hawaii	72	105	45.83
Illinois	1211	1973	62.92
Indiana	581	492	-15.32
Iowa	396	280	-29.29
Kansas	312	303	-2.88
Kentucky	292	238	-18.49
Louisiana	505	581	15.05
Maine	37	51	37.84
Maryland	608	743	22.20
Massachusetts	646	801	23.99
Michigan	744	865	16.26
Minnesota	479	638	33.19
Mississippi	240	242	0.83
Missouri	985	894	-9.24
Nebraska	255	230	-9.80
Nevada	157	265	68.79
New Hampshire	27	20	-25.93
New Jersey	713	894	25.39
New Mexico	142	156	9.86
New York	2018	3006	48.96
North Carolina	1253	1250	-0.24
North Dakota	40	71	77.50
Ohio	1694	1957	15.53
Oklahoma	330	288	-12.73
Oregon	492	479	-2.64
Pennsylvania	1707	1411	-17.34
Puerto Rico	127	103	-18.90
Rhode Island	68	61	-10.29
South Carolina	532	760	42.86
South Dakota	62	60	-3.23
Tennessee	1016	1117	9.94
Texas	3062	3571	16.62
Utah	393	509	29.52
Vermont	21	10	-52.38
Virginia	1103	1072	-2.81
Washington	713	716	0.42
West Virginia	197	189	-4.06
Wisconsin	535	521	-2.62
Total	34479	38823	12.60

Waiting List

Figure A1 and **Table A4** show the number of registrations waiting for a kidney on the last day of each month from March 31, 2019 to February 28, 2023. Waiting list volume decreased from a monthly median of 102,859 in the pre-policy era to 97,478 in the post-policy era.

Figure A1: Kidney Registrations Waiting on the Last Day of Each Month, March 31, 2019 - February 28, 2023

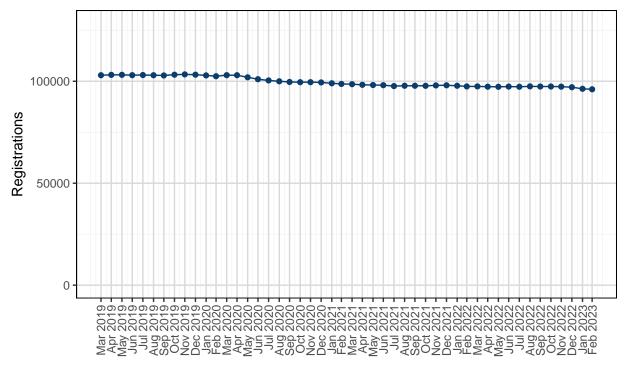


Table A4: Kidney Registrations Waiting on the Last Day of Each Month, March 31, 2019 - February 28, 2023

Date	Registrations
March 2019	102957
April 2019	103128
May 2019	103152
June 2019	102982
July 2019	103053
August 2019	102959
September 2019	102846
October 2019	103211
November 2019	103367
December 2019	103220
January 2020	102872
February 2020	102468
March 2020	102986
April 2020	102964
May 2020	101934
June 2020	101005
July 2020	100396
August 2020	99982
September 2020	99656
October 2020	99540
November 2020	99545
December 2020	99424
January 2021	99003
February 2021	98679
March 2021	98563
April 2021	98261
May 2021	98147
June 2021	98068
July 2021	97637
August 2021	97793
September 2021	97800
October 2021	97763
November 2021	97961
December 2021	98026
January 2022	97794
February 2022	97464
March 2022	97478
April 2022	97340
May 2022	97285
June 2022	97392
July 2022	97297
August 2022	97500
September 2022	97421
October 2022	97423
November 2022	97423
December 2022	97080
January 2023	96309
February 2023	96056
	90000



Figure A2 and **Table A5** show the number of registrations waiting for a kidney on the last day of each month from March 31, 2019 to February 28, 2023 by status. The median percentage of registrations in active status pre-policy was 61.66% compared to 54.76% in the post-policy era

Figure A2: Kidney Registrations Waiting on the Last Day of Each Month by Status, March 31, 2019 - February 28, 2023

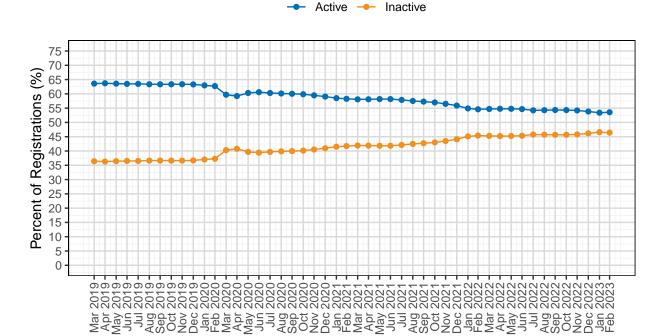


Table A5: Kidney Registrations Waiting on the Last Day of Each Month by Status, March 31, 2019 - February 28, 2023

	Act	ive	Inac	tive	То	tal
Date	N	%	N	%	N	%
March 2019	65472	63.59	37485	36.41	102957	100.00
April 2019	65698	63.71	37430	36.29	103128	100.00
May 2019	65576	63.57	37576	36.43	103152	100.00
June 2019	65379	63.49	37603	36.51	102982	100.00
July 2019	65427	63.49	37626	36.51	103053	100.00
August 2019	65235	63.36	37724	36.64	102959	100.00
September 2019	65151	63.35	37695	36.65	102846	100.00
October 2019	65393	63.36	37818	36.64	103211	100.00
November 2019	65509	63.38	37858	36.62	103367	100.00
December 2019	65340	63.30	37880	36.70	103220	100.00
January 2020	64780	62.97	38092	37.03	102872	100.00
February 2020	64267	62.72	38201	37.28	102468	100.00
March 2020	61484	59.70	41502	40.30	102986	100.00
April 2020	60990	59.23	41974	40.77	102964	100.00
May 2020	61477	60.31	40457	39.69	101934	100.00
June 2020	61195	60.59	39810	39.41	101005	100.00
July 2020	60540	60.30	39856	39.70	100396	100.00
August 2020	60117	60.13	39865	39.87	99982	100.00
September 2020	59826	60.03	39830	39.97	99656	100.00
October 2020	59587	59.86	39953	40.14	99540	100.00
November 2020	59208	59.48	40337	40.52	99545	100.00
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
July 2021	56516	57.88	41121	42.12	97637	100.00
August 2021	56251	57.52	41542	42.48	97793	100.00
September 2021	56027	57.29	41773	42.71	97800	100.00
October 2021	55728	57.00	42035	43.00	97763	100.00
November 2021	55350	56.50	42611	43.50	97961	100.00
December 2021	54803	55.91	43223	44.09	98026	100.00
January 2022	53686	54.90	44108	45.10	97794	100.00
February 2022	53216	54.60	44248	45.40	97464	100.00
March 2022	53328	54.71	44150	45.29	97478	100.00
April 2022	53324	54.78	44016	45.22	97340	100.00
May 2022	53278	54.76	44007	45.24	97285	100.00
June 2022	53242	54.67	44150	45.33	97392	100.00
July 2022	52765	54.23	44532	45.77	97297	100.00
August 2022	52923	54.28	44577	45.72	97500	100.00
September 2022	52944	54.35	44477	45.65	97421	100.00
October 2022	52922	54.32	44501	45.68	97423	100.00
November 2022	52762	54.20	44587	45.80	97349	100.00
December 2022	52254	53.83	44826	46.17	97080	100.00
January 2023	51432	53.40	44877	46.60	96309	100.00
February 2023	51461	53.57	44595	46.43	96056	100.00



Figure A3 and **Table A6** show the percentage of candidates waiting for a kidney on the last day of each month from March 31, 2019 to February 28, 2023 registered at more than one transplant hospital. Roughly 7% of candidates were multi-listed both before and after policy implementation.

Figure A3: Multi-Listed Kidney Candidates Waiting on the Last Day of Each Month, March 31, 2019 - February 28, 2023

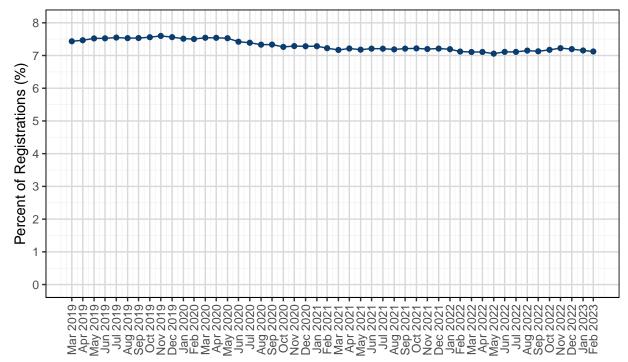


Table A6: Multi-Listed Kidney Candidates Waiting on the Last Day of Each Month, March 31, 2019 - February 28, 2023

	Multi-	listing	Single	Listing	To	otal
Date	N	%	N	%	N	%
March 2019	7054	7.43	87835	92.57	94889	100.00
April 2019	7094	7.47	87920	92.53	95014	100.00
May 2019	7144	7.52	87832	92.48	94976	100.00
June 2019	7134	7.52	87671	92.48	94805	100.00
July 2019	7159	7.55	87684	92.45	94843	100.00
August 2019	7137	7.53	87628	92.47	94765	100.00
September 2019	7131	7.53	87518	92.47	94649	100.00
October 2019	7178	7.56	87787	92.44	94965	100.00
November 2019	7224	7.60	87849	92.40	95073	100.00
December 2019	7181	7.56	87790	92.44	94971	100.00
January 2020	7115	7.51	87572	92.49	94687	100.00
February 2020	7079	7.50	87262	92.50	94341	100.00
March 2020	7149	7.54	87632	92.46	94781	100.00
April 2020	7145	7.54	87608	92.46	94753	100.00
May 2020	7063	7.53	86747	92.47	93810	100.00
June 2020	6906	7.42	86153	92.58	93059	100.00
July 2020	6839	7.39	85710	92.61	92549	100.00
August 2020	6761	7.33	85458	92.67	92219	100.00
September 2020	6741	7.33	85169	92.67	91910	100.00
October 2020	6674	7.26	85211	92.74	91885	100.00
November 2020	6696	7.29	85181	92.71	91877	100.00
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
July 2021	6501	7.21	83692	92.79	90193	100.00
August 2021	6491	7.19	83833	92.81	90324	100.00
September 2021	6512	7.21	83805	92.79	90317	100.00
October 2021	6514	7.22	83739	92.78	90253	100.00
November 2021	6510	7.20	83934	92.80	90444	100.00
December 2021	6525	7.21	83958	92.79	90483	100.00
January 2022	6494	7.19	83796	92.81	90290	100.00
February 2022	6412	7.12	83632	92.88	90044	100.00
March 2022	6402	7.11	83682	92.89	90084	100.00
April 2022	6393	7.11	83549	92.89	89942	100.00
May 2022	6348	7.06	83606	92.94	89954	100.00
June 2022	6398	7.11	83582	92.89	89980	100.00
July 2022	6392	7.11	83504	92.89	89896	100.00
August 2022	6437	7.15	83583	92.85	90020	100.00
September 2022	6413	7.13	83556	92.87	89969	100.00
October 2022	6452	7.17	83488	92.83	89940	100.00
November 2022	6489	7.22	83326	92.78	89815	100.00
December 2022	6447	7.20	83147	92.80	89594	100.00
January 2023	6360	7.15	82547	92.85	88907	100.00
February 2023	6320	7.12	82409	92.88	88729	100.00
-						



Figure A4 and **Table A7** show total kidney registrations added to the waiting list from March 16, 2019 to March 14, 2023 by policy era. There were 87052 registrations added to the waiting list pre-policy implementation, and 96062 added post-policy.

Figure A4: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era

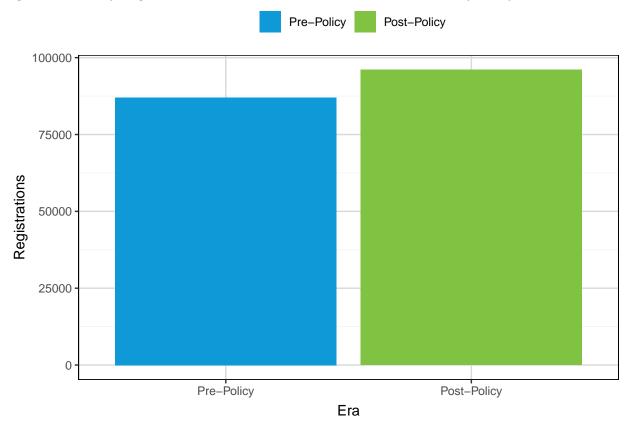


Table A7: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era

Era	Registrations
Pre-Policy	87052
Post-Policy	96062

Figure A5 and **Table A8** show kidney registrations added to the waiting list from March 16, 2019 to March 14, 2023 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 40.06% and 39.97% respectively.

The volume of pediatric additions increased for all age groups. Pediatric additions aged 0-5 years increased after policy implementation from 641 to 675 registrations, additions aged 6-11 increased from 547 to 594 and additions aged 12-17 increased from 1591 to 1670 after the policy change.

Figure A5: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

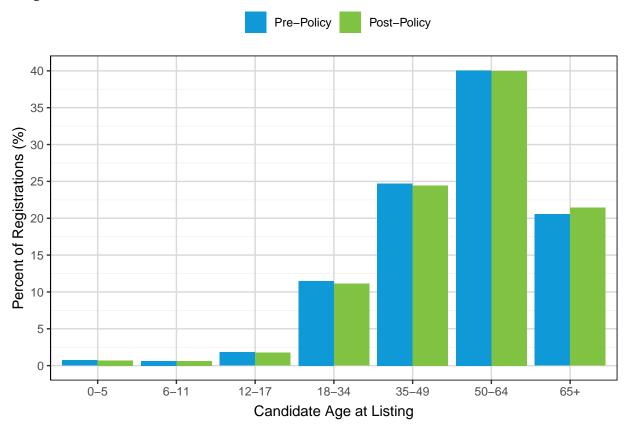


Table A8: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

	Pre-Policy		Post-	Policy
Age at Listing	N	%	N	%
0-5	641	0.74	675	0.70
6-11	547	0.63	594	0.62
12-17	1591	1.83	1670	1.74
18-34	10009	11.50	10679	11.12
35-49	21519	24.72	23474	24.44
50-64	34874	40.06	38394	39.97
65+	17871	20.53	20576	21.42
Total	87052	100.00	96062	100.00

Figure A6 and **Table A9** show kidney registrations added to the waiting list from March 16, 2019 to March 14, 2023 by policy era and gender. Male candidates accounted for the majority of additions both pre- and post-policy at approximately 61.77%.

Figure A6: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Gender

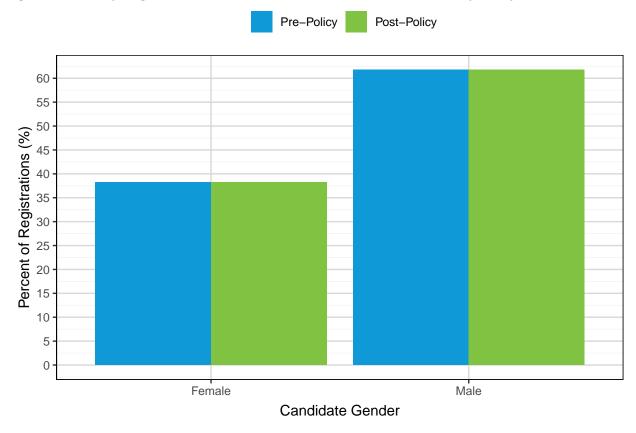


Table A9: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Gender

	Pre-Policy		Post-	Policy
Gender	N	%	N	%
Female	33276	38.23	36733	38.24
Male	53776	61.77	59329	61.76
Total	87052	100.00	96062	100.00

Figure A7 and **Table A10** show kidney registrations added to the waiting list from March 16, 2019 to March 14, 2023 by policy era and race/ethnicity. The number of additions increased post-policy for all race/ethnicity groups. The distribution of additions by race/ethnicity did not change much after policy implementation.

Figure A7: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Race/Ethnicity

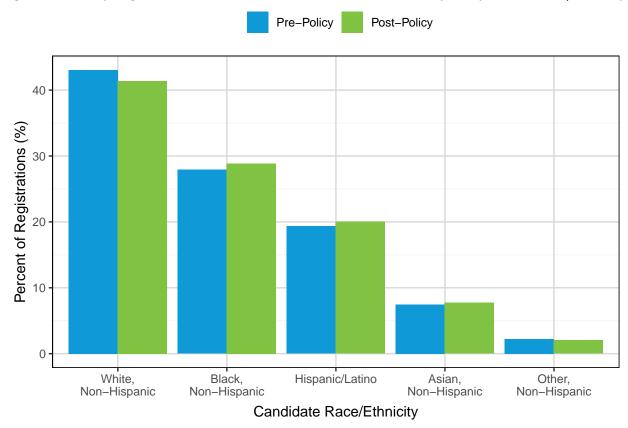


Table A10: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Race/Ethnicity

	Pre-l	Pre-Policy		Policy
Race/Ethnicity	N	%	N	%
White, Non-Hispanic	37485	43.06	39730	41.36
Black, Non-Hispanic	24293	27.91	27716	28.85
Hispanic/Latino	16839	19.34	19237	20.03
Asian, Non-Hispanic	6498	7.46	7425	7.73
Other, Non-Hispanic	1937	2.23	1954	2.03
Total	87052	100.00	96062	100.00

Figure A8 and **Table A11** show kidney registrations added to the waiting list from March 16, 2019 to March 14, 2023 by policy era and blood type. The distribution of blood type across additions did not change.

Figure A8: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Blood Type

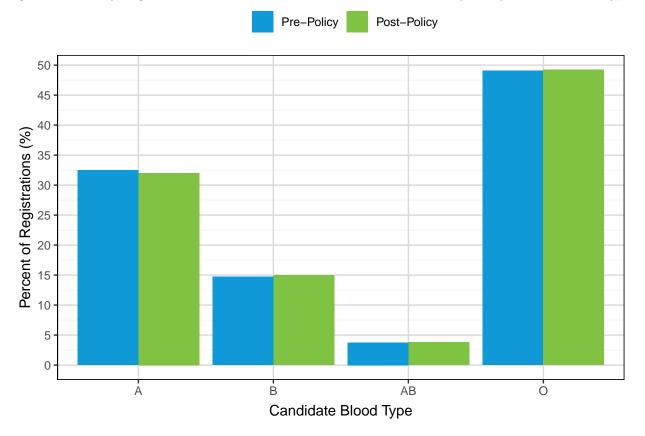
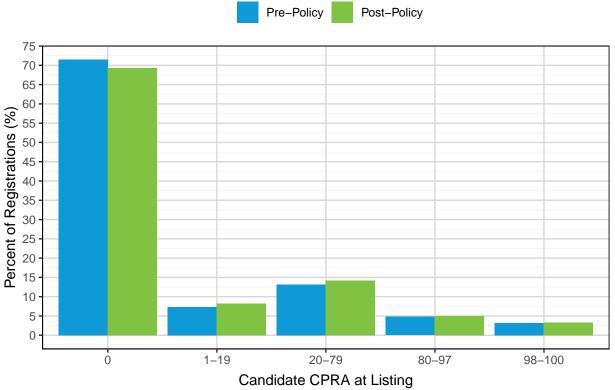


Table A11: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Blood Type

	Pre-l	Pre-Policy		Policy
Blood Type	N	%	N	%
A	28278	32.48	30754	32.01
В	12810	14.72	14372	14.96
AB	3273	3.76	3656	3.81
0	42691	49.04	47280	49.22
Total	87052	100.00	96062	100.00

Figure A9 and **Table A12** show kidney registrations added to the waiting list from March 16, 2019 to March 14, 2023 by policy era and CPRA at listing. The distribution of CPRA at listing did not change after policy implementation. Registrations with a CPRA of 0 decreased from 71.49% pre-policy to 69.31% post-policy. Registrations with a CPRA of 1-19 changed from 7.29% pre-policy to 8.25% post-policy and registrations with CPRA 20-79 from 13.19% pre-policy to 14.15% post-policy. Registrations with a CPRA of 80+ did not change pre- to post-policy.

Figure A9: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and CPRA at Listing



Registrations listed on or after January 26th, 2023 with a NULL CPRA due to not reporting unacceptable antigens was recoded to have a CPRA of 0%

Table A12: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and CPRA at Listing

	Pre-l	Policy	Post-	Post-Policy		
CPRA	N	%	N	%		
0	62237	71.49	66580	69.31		
1-19	6349	7.29	7929	8.25		
20-79	11482	13.19	13592	14.15		
80-97	4171	4.79	4760	4.96		
98-100	2813	3.23	3201	3.33		
Total	87052	100.00	96062	100.00		

Figure A10 and **Table A13** show kidney registrations added to the waiting list from March 16, 2019 to March 14, 2023 by policy era and primary diagnosis at listing. The majority of candidates listed in the post-policy era were diagnosed with either a diagnosis other than the ones listed (30.18%) or with diabetes (31.65%).

Figure A10: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Diagnosis at Listing

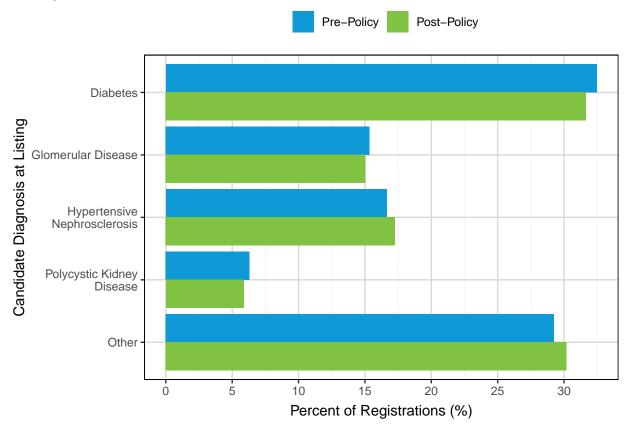


Table A13: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Diagnosis at Listing

	Dro	Pre-Policy		Policy
	F 16-1	- Olicy		rollcy
Diagnosis	N	%	N	%
Diabetes	28267	32.47	30401	31.65
Glomerular Disease	13349	15.33	14449	15.04
Hypertensive Nephrosclerosis	14488	16.64	16589	17.27
Polycystic Kidney Disease	5488	6.30	5636	5.87
Other	25460	29.25	28987	30.18
Total	87052	100.00	96062	100.00

Figure A11 and **Table A14** show kidney registrations added to the waiting list from March 16, 2019 to March 14, 2023 by policy era and dialysis status at listing as reported to the OPTN. In the pre-policy era 64.16% of registrations added were on dialysis at listing, in the post-policy era 62.94% of registrations were on dialysis at listing.

Figure A11: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Dialysis Status at Listing

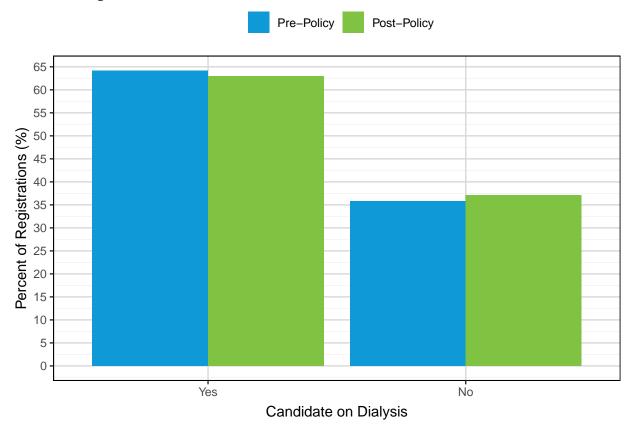
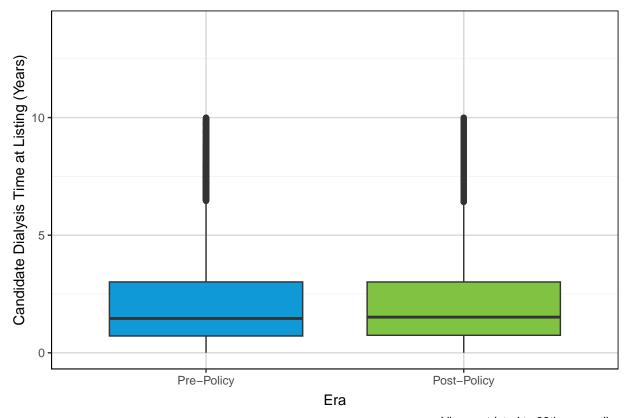


Table A14: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Dialysis Status at Listing

	Pre-Policy		Post-Policy	
Dialysis	N	%	N	%
Yes	55856	64.16	60464	62.94
No	31196	35.84	35598	37.06
Total	87052	100.00	96062	100.00

Figure A12 and **Table A15** show the distribution of time on dialysis at listing as reported to the OPTN for kidney registrations added to the waiting list from March 16, 2019 to March 14, 2023 by policy era. The view is restricted to the 99th percentile of dialysis time. Median dialysis time at listing was roughly 1.5 years both preand post-policy.

Figure A12: Distribution of Time on Dialysis (Years) at Listing for Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era



View restricted to 99th percentile.

Table A15: Distribution of Time on Dialysis (Years) at Listing for Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era

Era	N	Min	25th %-tile	Med	Mean	75th %-tile	Max
Pre-Policy Post-Policy		0			2.50 2.54		38.27 36.06

Figure A13 and **Table A16** show kidney registrations added to the waiting list from March 16, 2019 to March 14, 2023 by policy era and insurance status at listing. The majority of candidates listed both pre- and post-policy were using public insurance.

Figure A13: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Insurance Status at Listing

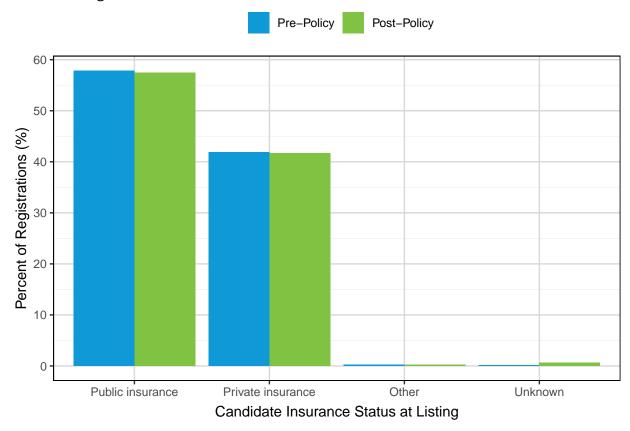


Table A16: Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Insurance Status at Listing

	Pre-l	Pre-Policy		Policy
Insurance at Listing	N	%	N	%
Public insurance	50355	57.84	55208	57.47
Private insurance	36425	41.84	40015	41.66
Other	181	0.21	200	0.21
Unknown	91	0.10	639	0.67
Total	87052	100.00	96062	100.00

Figure A14 and **Table A17** show deaths per 100 patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era. Overall waiting list mortality did not significantly change after policy implementation.

Figure A14: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era

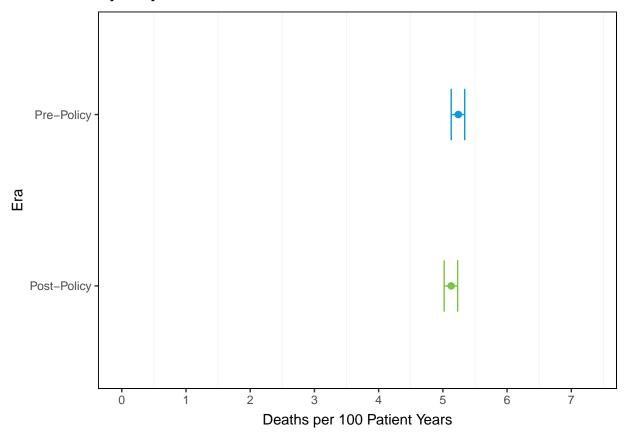


Table A17: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era

Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
Pre-Policy	160912	9734		(5.13, 5.34)
Post-Policy	164246	9169		(5.02, 5.23)

Figure A15 and **Table A18** show deaths per 100 patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and age at listing. There were no significant differences in waiting list mortality for any age groups between eras.

Figure A15: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

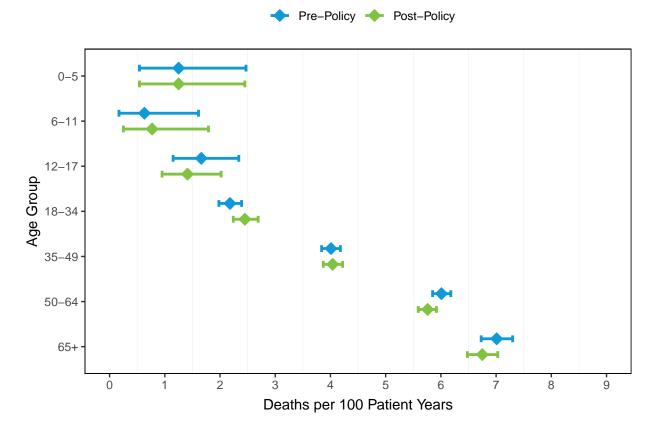


Table A18: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

Age at Listing	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
0-5	Pre-Policy	782	8	1.25	(0.54, 2.47)
	Post-Policy	791	8	1.25	(0.54, 2.45)
6-11	Pre-Policy	738	4	0.63	(0.17, 1.61)
	Post-Policy	764	5	0.77	(0.25, 1.79)
12-17	Pre-Policy	2159	33	1.66	(1.15, 2.34)
	Post-Policy	2316	30	1.41	(0.95, 2.02)
18-34	Pre-Policy	19084	454	2.18	(1.98, 2.39)
	Post-Policy	18561	463	2.45	(2.24, 2.69)
35-49	Pre-Policy	46617	2153	4.01	(3.84, 4.18)
	Post-Policy	46247	2036	4.04	(3.87, 4.22)
50-64	Pre-Policy	74098	5101	6.01	(5.85, 6.18)
	Post-Policy	74840	4681	5.76	(5.59, 5.92)
65+	Pre-Policy	32138	2358	7.01	(6.73, 7.3)
	Post-Policy	34572	2306	6.75	(6.48, 7.03)

Figure A16 and **Table A19** show deaths per 100 patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and gender. Waiting list mortality was not significantly different between the two eras for either gender.

Figure A16: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Gender

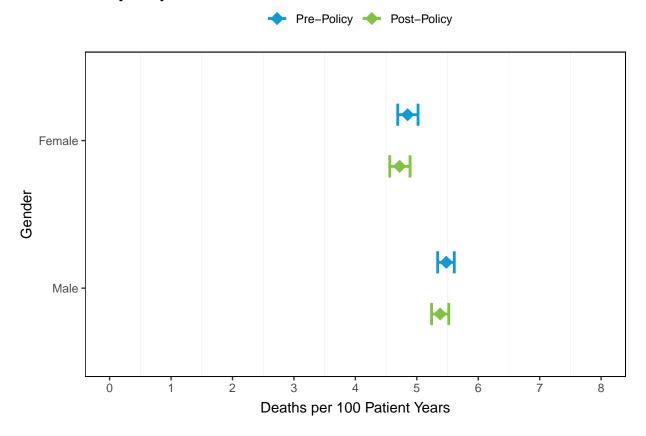


Table A19: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Gender

Gender	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
Female	Pre-Policy	61694	3455	4.85	(4.69, 5.02)
	Post-Policy	62849	3226	4.72	(4.56, 4.89)
Male	Pre-Policy	99268	6280	5.48	(5.34, 5.61)
	Post-Policy	101450	5946	5.38	(5.24, 5.52)

Figure A17 and **Table A20** show deaths per 100 patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and Race/Ethnicity. Waiting list mortality decreased singificantly for Hispanic/Latino candidates after policy implementation from 5.29 to 4.68 deaths per 100 patient years. There were no significant differences in waiting list mortality for candidates of other Race/Ethnicity groups.

Figure A17: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Race/Ethnicity

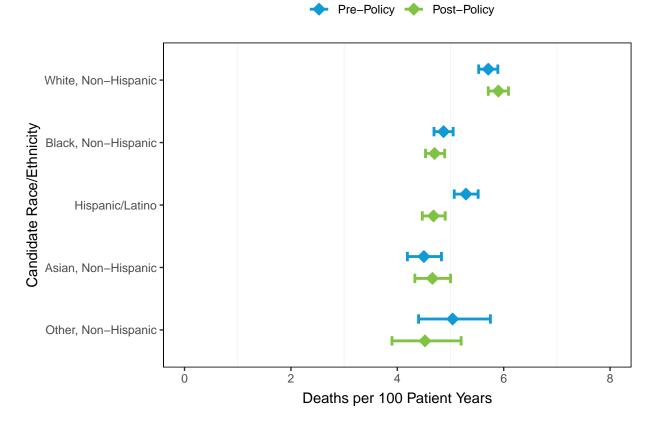


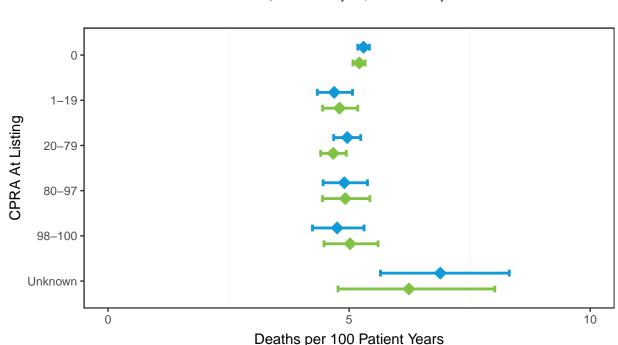
Table A20: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Race/Ethnicity

Race/Ethnicity	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
White, Non-Hispanic	Pre-Policy	62436	3780	5.71	(5.53, 5.89)
	Post-Policy	62626	3780	5.90	(5.71, 6.09)
Black, Non-Hispanic	Pre-Policy	48908	2871	4.87	(4.69, 5.05)
	Post-Policy	49877	2626	4.70	(4.53, 4.89)
Hispanic/Latino	Pre-Policy	33428	2130	5.29	(5.07, 5.52)
	Post-Policy	34930	1816	4.68	(4.47, 4.9)
Asian, Non-Hispanic	Pre-Policy	13310	758	4.50	(4.19, 4.83)
	Post-Policy	14014	776	4.66	(4.33, 5)
Other, Non-Hispanic	Pre-Policy	3887	222	5.04	(4.4, 5.75)
	Post-Policy	3871	193	4.52	(3.9, 5.2)

Figure A18 and **Table A21** show deaths per 100 patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and CPRA at listing. Waiting list mortality was similar pre- to post-policy for all CPRA groups.

Figure A18: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and CPRA at Listing

Pre-Policy Post-Policy



Candidates with unknown CPRA at listing were listed prior to October 1st, 2009,
when CPRA was implemented in allocation
Registrations listed on or after January 26th, 2023 with a NULL CPRA due to not
reporting unacceptable antigens was recoded to have a CPRA of 0%

Table A21: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and CPRA at Listing

CPRA	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
0	Pre-Policy	118216	7177	5.30	(5.18, 5.42)
	Post-Policy	118391	6710	5.21	(5.08, 5.33)
1-19	Pre-Policy	12323	645	4.69	(4.34, 5.07)
	Post-Policy	13707	684	4.80	(4.45, 5.18)
20-79	Pre-Policy	22321	1228	4.96	(4.68, 5.24)
	Post-Policy	24185	1175	4.67	(4.41, 4.94)
80-97	Pre-Policy	8289	441	4.90	(4.46, 5.38)
	Post-Policy	8610	400	4.92	(4.45, 5.43)
98-100	Pre-Policy	5629	314	4.75	(4.24, 5.31)
	Post-Policy	5737	318	5.02	(4.48, 5.6)
Unknown	Pre-Policy	1070	108	6.89	(5.65, 8.32)
	Post-Policy	594	61	6.24	(4.77, 8.02)

Figure A19 and **Table A22** show deaths per 100 patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and blood type. There were no significant differences in waiting list mortality for candidates with any blood type between eras.

Figure A19: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Blood Type

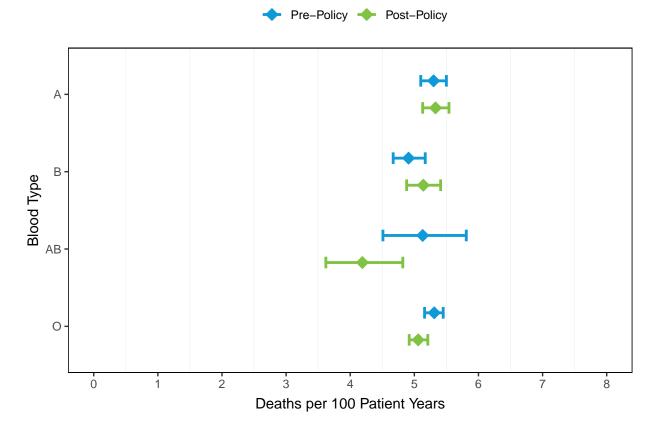


Table A22: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Blood Type

Blood Type	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
A	Pre-Policy	48441	2736	5.30	(5.1, 5.5)
	Post-Policy	49056	2613	5.33	(5.13, 5.54)
В	Pre-Policy	25224	1502	4.91	(4.67, 5.17)
	Post-Policy	25740	1499	5.14	(4.88, 5.41)
AB	Pre-Policy	5126	244	5.13	(4.51, 5.81)
	Post-Policy	5303	193	4.19	(3.62, 4.82)
0	Pre-Policy	82270	5253	5.31	(5.16, 5.45)
	Post-Policy	84256	4867	5.06	(4.92, 5.21)

Figure A20 and **Table A23** show deaths per 100 patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 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. Waitling list mortality increased significantly from 1.9 in the pre-policy era to 2.25 deaths per 100 patient years in the post policy era for EPTS 0-20% candidates. Waiting list mortality did not change for candidates with EPTS 21-100% at listing.

Figure A20: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and EPTS at Listing

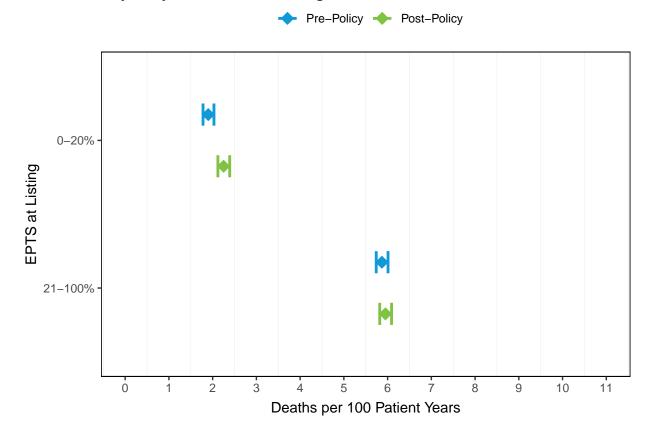


Table A23: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and EPTS at Listing

EPTS	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
0-20%	Pre-Policy	42152	877	1.90	(1.78, 2.03)
	Post-Policy	45612	1063	2.25	(2.12, 2.39)
21-100%	Pre-Policy	116402	7573	5.87	(5.74, 6.01)
	Post-Policy	125202	7821	5.95	(5.82, 6.09)

Figure A21 and **Table A24** show deaths per 100 patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and time on dialysis at listing. Groupings are approximately based on the 25th, 50th, and 75th percentiles of dialysis time. There were no significant differences in waiting list mortality between eras for any groups of registrations by dialysis time at listing.

Figure A21: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Dialysis Time at Listing



Table A24: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Dialysis Time at Listing

Dialysis Time	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
Preemptive Listing	Pre-Policy	62896	2894	3.88	(3.74, 4.03)
NA	Post-Policy	66949	2971	3.87	(3.73, 4.01)
9 Months - < 1.5 Years	Pre-Policy	30465	2100	5.95	(5.7, 6.21)
NA	Post-Policy	29687	1795	5.54	(5.29, 5.8)
1.5 - $<$ 3 Years	Pre-Policy	27171	1782	5.98	(5.71, 6.27)
NA	Post-Policy	27846	1683	5.94	(5.66, 6.23)
3+ Years	Pre-Policy	25057	1423	6.48	(6.15, 6.82)
NA	Post-Policy	25674	1268	6.39	(6.04, 6.75)
0-<9 Months	Pre-Policy	33336	2040	5.33	(5.1, 5.56)
NA	Post-Policy	31318	1956	5.75	(5.5, 6.02)

Figure A22 and **Table A25** show deaths per 100 patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and diagnosis. There were no significant differences in waiting list mortality between eras for any candidate diagnosis groups.

Figure A22: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Diagnosis

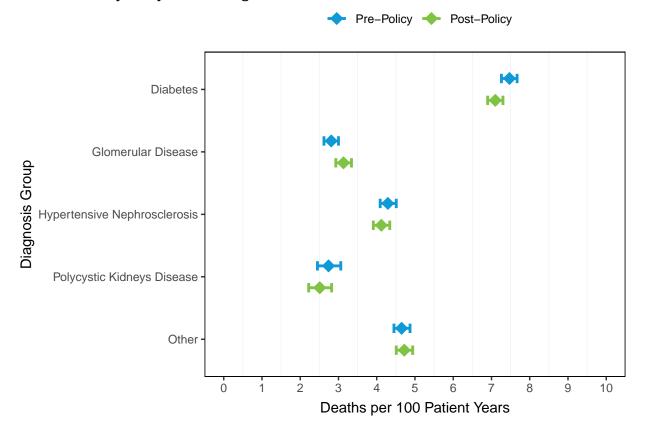


Table A25: Deaths per 100 Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Diagnosis

Diagnosis	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
Diabetes	Pre-Policy	59553	5212	7.47	(7.26, 7.67)
	Post-Policy	60646	4779	7.10	(6.9, 7.3)
Glomerular Disease	Pre-Policy	27418	865	2.81	(2.62, 3)
	Post-Policy	27404	911	3.13	(2.93, 3.34)
Hypertensive Nephrosclerosis	Pre-Policy	32377	1616	4.29	(4.09, 4.51)
	Post-Policy	32714	1443	4.12	(3.91, 4.34)
Polycystic Kidneys Disease	Pre-Policy	10412	319	2.74	(2.45, 3.06)
	Post-Policy	10258	281	2.51	(2.22, 2.82)
Other	Pre-Policy	37688	1901	4.65	(4.45, 4.87)
	Post-Policy	39353	1910	4.72	(4.51, 4.94)

Figure A23 and **Table A26** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and gender. The transplant rate for female registrations significantly increased from 31.49 to 41.43 transplants per 100 active patient years. The rate for male registrations significantly increased from 28.86 to 36.96 transplants per 100 active patient years.

Figure A23: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Gender

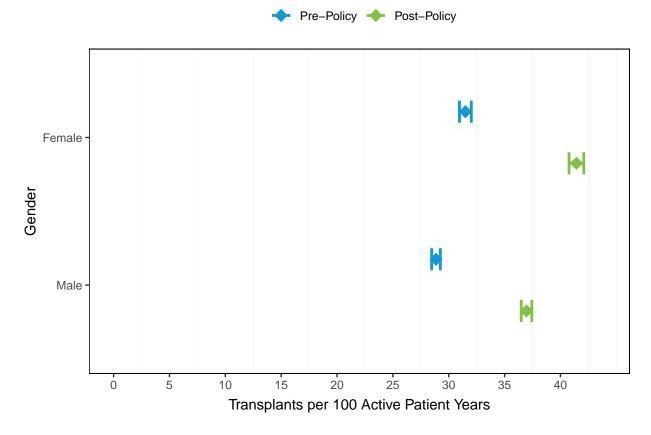


Table A26: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Gender

Gender	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
Female	Pre-Policy	47962	13506	31.49	(30.96, 32.02)
	Post-Policy	47264	15326	41.43	(40.77, 42.09)
Male	Pre-Policy	79330	20862	28.86	(28.47, 29.25)
	Post-Policy	78444	23381	36.96	(36.49, 37.44)

Figure A24 and **Table A27** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and blood type. Transplant rates increased significantly from 39.77 to 51.92 transplants per 100 active patient years for type A registrations, 24.7 to 33.78 for type B registrations, 25.04 to 32.31 for type O registrations, and 72.15 to 85.91 for type AB registrations.

Figure A24: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Blood Type

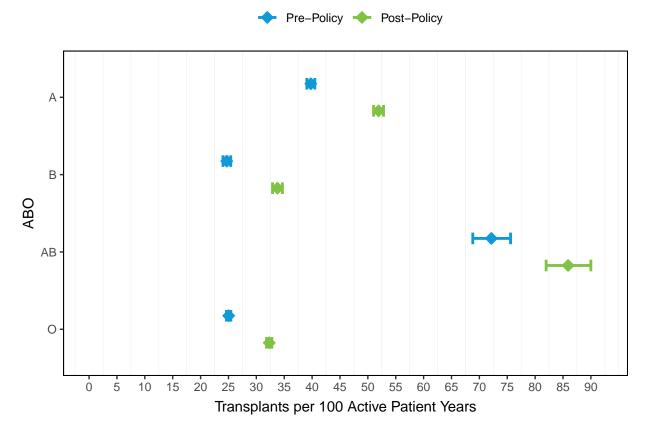


Table A27: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Blood Type

			—	—	050/ 61
Blood Type	Era	Registrations	Transplants	Transplants per	95% CI
				100 Active	
				Patient Years	
Α	Pre-Policy	37755	11975	39.77	(39.06, 40.49)
	Post-Policy	36747	13121	51.92	(51.03, 52.81)
В	Pre-Policy	20134	4806	24.70	(24.01, 25.41)
	Post-Policy	19877	5699	33.78	(32.91, 34.67)
AB	Pre-Policy	3976	1764	72.15	(68.82, 75.59)
	Post-Policy	3921	1783	85.91	(81.97, 89.99)
0	Pre-Policy	65502	15823	25.04	(24.65, 25.43)
	Post-Policy	65204	18105	32.31	(31.84, 32.78)

Figure A25 and **Table A28** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 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 27.52 to 38.14 transplants per 100 active patient years. The transplant rate for registrations with EPTS 21-100% increased from 25.59 to 33.56 transplants per 100 active patient years.

Figure A25: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and EPTS at Listing

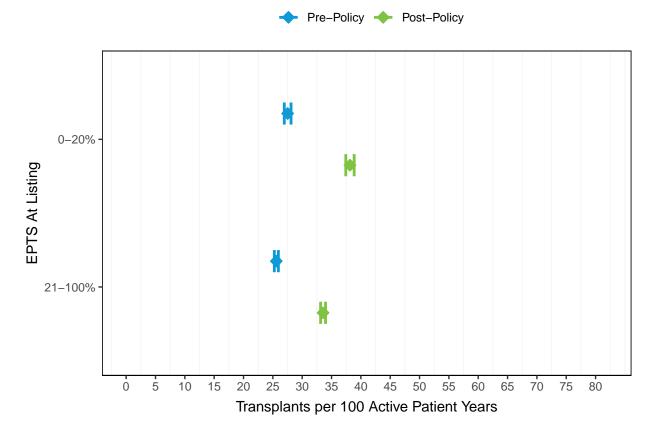


Table A28: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and EPTS at Listing

EPTS	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
0-20%	Pre-Policy	35615	8792	27.52	(26.95, 28.1)
	Post-Policy	36978	11103	38.14	(37.43, 38.86)
21-100%	Pre-Policy	94218	21165	25.59	(25.25, 25.94)
	Post-Policy	96017	25134	33.56	(33.14, 33.98)

Figure A26 and **Table A29** show deceased donor transplants per 100 active patient years for kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and diagnosis. Transplant rates increased for all diagnoses after policy implementation.

Figure A26: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Diagnosis

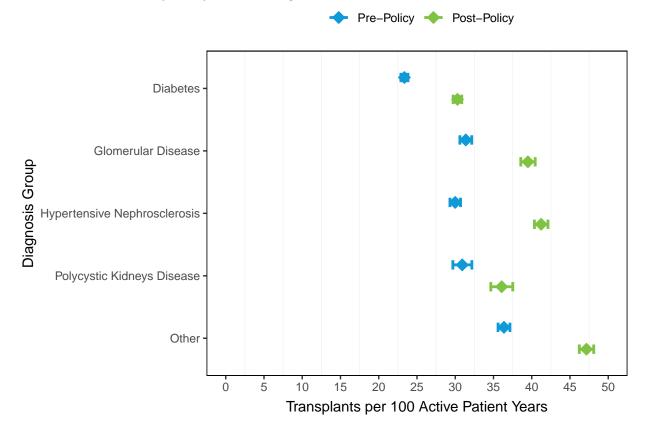


Table A29: Transplants per 100 Active Patient Years for Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Diagnosis

Diagnosis	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
Diabetes	Pre-Policy	46130	9904	23.35	(22.9, 23.82)
	Post-Policy	45342	11271	30.29	(29.73, 30.85)
Glomerular Disease	Pre-Policy	22552	6334	31.38	(30.61, 32.16)
	Post-Policy	21902	6836	39.50	(38.57, 40.45)
Hypertensive Nephrosclerosis	Pre-Policy	26169	7308	29.99	(29.31, 30.69)
	Post-Policy	25716	8447	41.23	(40.35, 42.12)
Polycystic Kidneys Disease	Pre-Policy	8581	2401	30.91	(29.69, 32.17)
	Post-Policy	8159	2458	36.07	(34.65, 37.52)
Other	Pre-Policy	28635	8469	36.37	(35.6, 37.15)
	Post-Policy	28807	9744	47.15	(46.22, 48.1)

Transplants

Figure A27 and **Table A30** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era. There were 34479 transplants performed pre-policy, and 38823 performed post-policy.

Figure A27: Deceased Donor Kidney Transplants March 16, 2019 - March 14, 2023 by Policy Era

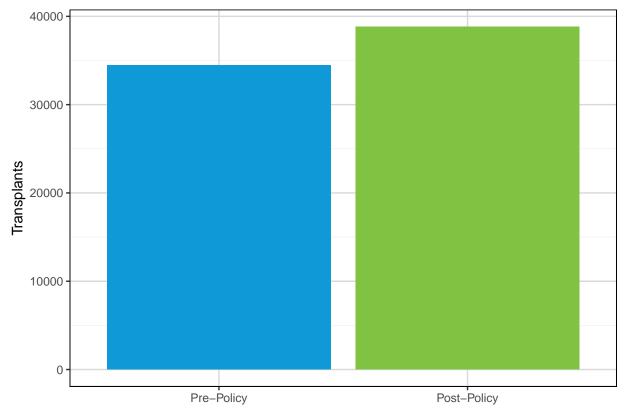


Table A30: Deceased Donor Kidney Transplants March 16, 2019 - March 14, 2023 by Policy Era

Era	Transplants
Pre-Policy	34479
Post-Policy	38823

Figure A28 and **Table A31** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and recipient age at transplant. The distribution of age a transplant did not appear to change with the new policy.

Figure A28: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Recipient Age at Transplant

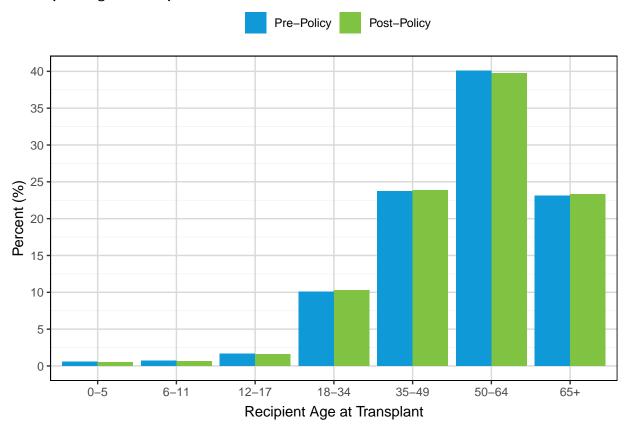


Table A31: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Recipient Age at Transplant

	Pre-I	Policy	Post-	Policy
Age at Transplant	N	%	N	%
0-5	196	0.57	204	0.53
6-11	254	0.74	249	0.64
12-17	563	1.63	632	1.63
18-34	3487	10.11	3984	10.26
35-49	8181	23.73	9266	23.87
50-64	13821	40.09	15442	39.78
65+	7977	23.14	9046	23.30
Total	34479	100.00	38823	100.00

Figure A29 and **Table A32** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and recipient race/ethnicity. There was an increase in the number of transplants observed for all races/ethnicities after implementation.

Figure A29: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Recipient Race/Ethnicity

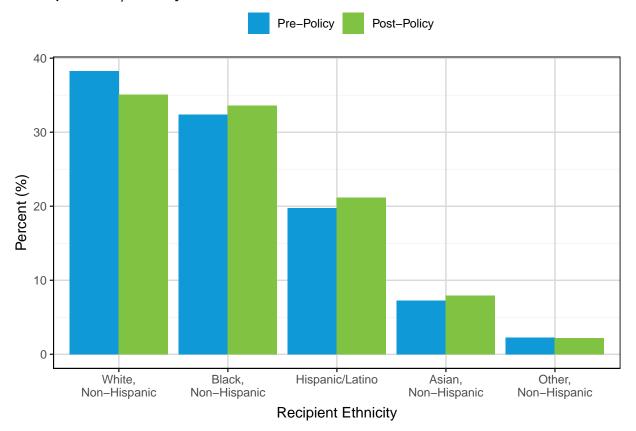


Table A32: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Recipient Race/Ethnicity

	Pre-Policy		Post-Policy	
Race/Ethnicity	N	%	N	%
White, Non-Hispanic	13201	38.29	13618	35.08
Black, Non-Hispanic	11166	32.38	13044	33.60
Hispanic/Latino	6812	19.76	8228	21.19
Asian, Non-Hispanic	2508	7.27	3088	7.95
Other, Non-Hispanic	792	2.30	845	2.18
Total	34479	100.00	38823	100.00

Figure A30 and **Table A33** show the distribution of time on the waiting list in years for deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era. The view is restricted to 10 years. Median waiting time among those transplanted decreased slightly from 1.28 to 1.1 years after policy implementation. It is important to note that median waiting time among those transplanted does not reflect the average waiting time for all candidates and is likely skewed to shorter waiting times due to only being calculcated among the subset of patients who received a transplant.

Figure A30: Distribution of Waiting Time (Years) for Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

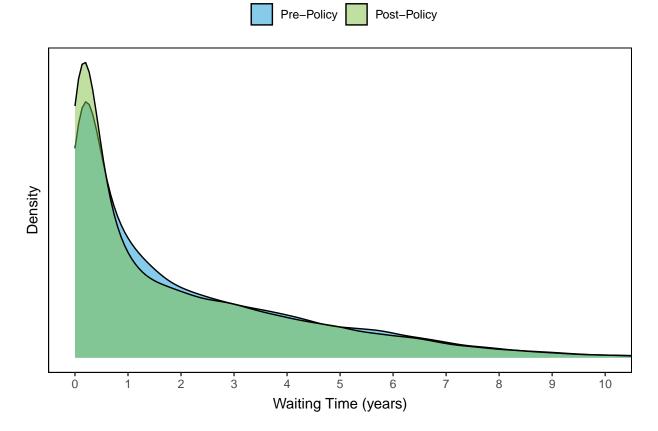


Table A33: Distribution of Waiting Time (Years) for Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	34479	0	0	0.31	1.28	2.18	3.40	34.21
Post-Policy	38823	0	0	0.22	1.10	2.06	3.24	25.71

Figure A31 and **Table A34** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and dialysis status at the time of transplant as reported to the OPTN. Approximately 82% of transplant recipients were on dialysis both pre- and post-policy implementation.

Figure A31: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Dialysis Status at Transplant

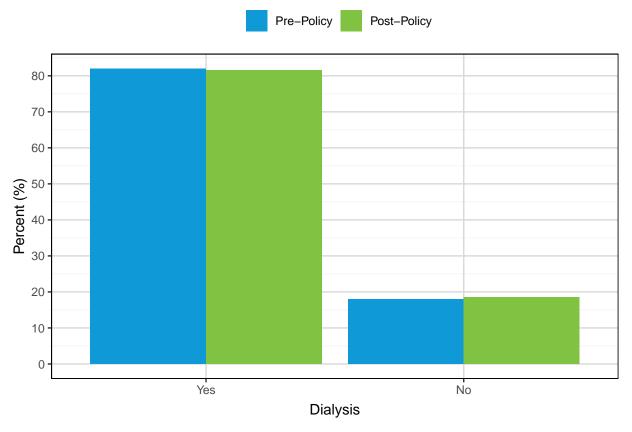


Table A34: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Dialysis Status at Transplant

	Pre-Policy		Post-Policy	
Dialysis	N	%	N	%
Yes	28260	81.96	31647	81.52
No	6219	18.04	7176	18.48
Total	34479	100.00	38823	100.00

Figure A32 and **Table A35** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 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 remained unchanged pre- to post-policy at about 4.2 years.

Figure A32: Distribution of Time on Dialysis (Years) at Transplant for Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

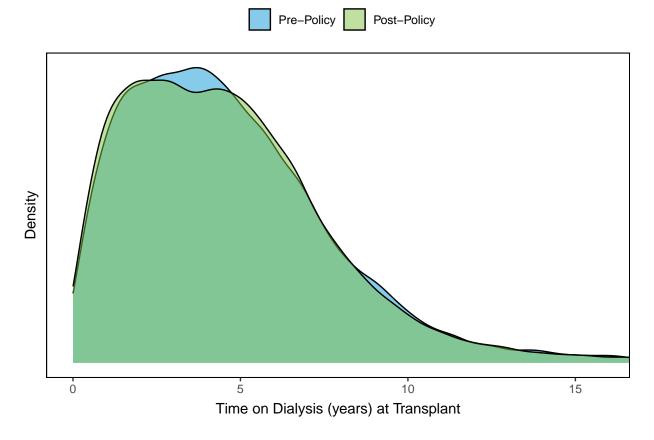


Table A35: Distribution of Time on Dialysis (Years) at Transplant for Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

Era	Total	Min	25th Percentile	Median	Mean	75th Percentile	Max
Pre-Policy	28260	0.01	2.37	4.20	4.74	6.39	39.63
Post-Policy	31647	0.00	2.28	4.22	4.71	6.37	37.12

Figure A33 and **Table A36** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and recipient blood type. The majority of recipients were type O both before and after the policy change.

Figure A33: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Recipient Blood Type

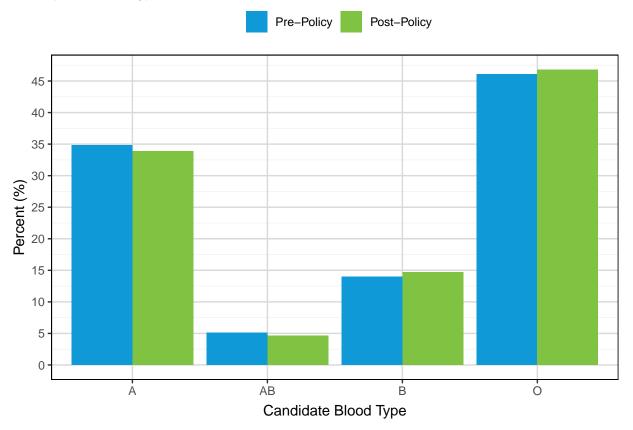
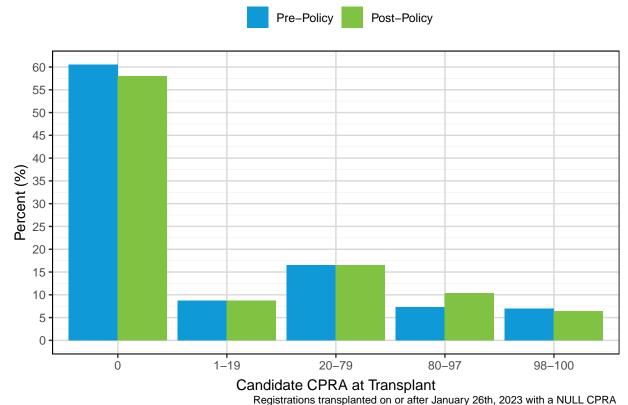


Table A36: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Recipient Blood Type

	Pre-Policy		Post-	Policy
Blood Type	N	%	N	%
Α	12003	34.81	13158	33.89
AB	1775	5.15	1788	4.61
В	4818	13.97	5712	14.71
0	15883	46.07	18165	46.79
Total	34479	100.00	38823	100.00

Figure A34 and **Table A37** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and CPRA at transplant. The proportion recipients with CPRA 0% decreased from 60.51% to 58.04% with this change. The proportion of recipients with CPRA 80-97% increased from 7.25% to 10.32% after policy implementation.

Figure A34: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and CPRA at Transplant



due to not reporting unacceptable antigens was recoded to have a CPRA of 0%

Table A37: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and CPRA at Transplant

	Pre-Policy		Post-	Policy
CPRA %	N	%	N	%
0	20862	60.51	22531	58.04
1-19	3009	8.73	3369	8.68
20-79	5706	16.55	6409	16.51
80-97	2500	7.25	4007	10.32
98-100	2402	6.97	2507	6.46
Total	34479	100.00	38823	100.00

Figure A35 and **Table A38** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 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 A35: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and HLA Mismatch

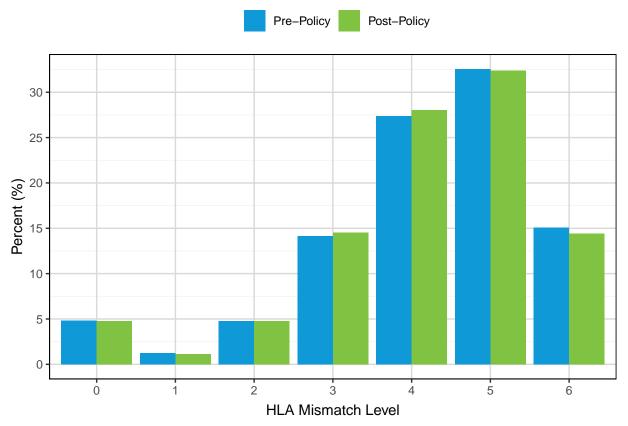


Table A38: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and HLA Mismatch

	Pre-Policy		Post-	Policy
HLA Mismatch Level	N	%	N	%
0	1558	4.81	1728	4.74
1	410	1.27	406	1.11
2	1545	4.77	1731	4.75
3	4579	14.14	5301	14.55
4	8866	27.37	10205	28.01
5	10545	32.56	11806	32.41
6	4888	15.09	5252	14.42
Total	32391	100.00	36429	100.00

Figure A36 and **Table A39** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and primary diagnosis at transplant. The distribution of diagnosis at transplant did not change after policy implementation.

Figure A36: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Diagnosis at Transplant

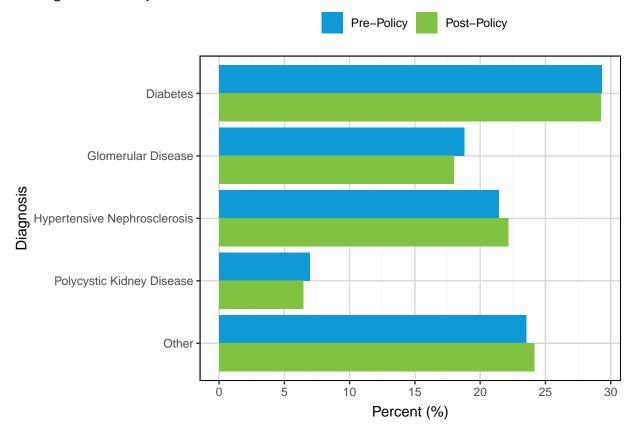


Table A39: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Diagnosis at Transplant

	Pre-I	Pre-Policy		Policy
Diagnosis	N	%	N	%
Diabetes	10102	29.30	11345	29.22
Glomerular Disease	6479	18.79	6985	17.99
Hypertensive Nephrosclerosis	7385	21.42	8606	22.17
Polycystic Kidney Disease	2399	6.96	2511	6.47
Other	8114	23.53	9376	24.15
Total	34479	100.00	38823	100.00

Figure A37 and **Table A40** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and EPTS at transplant. There was little change in the distribution of EPTS at transplant after the policy was implemented.

Figure A37: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and EPTS at Transplant

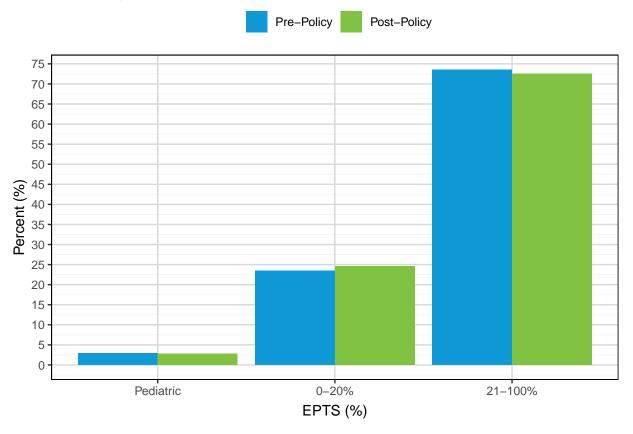


Table A40: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and EPTS at Transplant

	Pre-Policy		Post-	Policy
EPTS	N	%	N	%
Pediatric 0-20%	1018 8105	2.95 23.51	1093 9572	2.82 24.66
0-20 % 21-100%	25356	73.54	28158	72.53
Total	34479	100.00	38823	100.00

Figure A38 and **Table A41** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and KDPI. There was little change in the distribution of KDPI after the policy was implemented.

Figure A38: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and KDPI

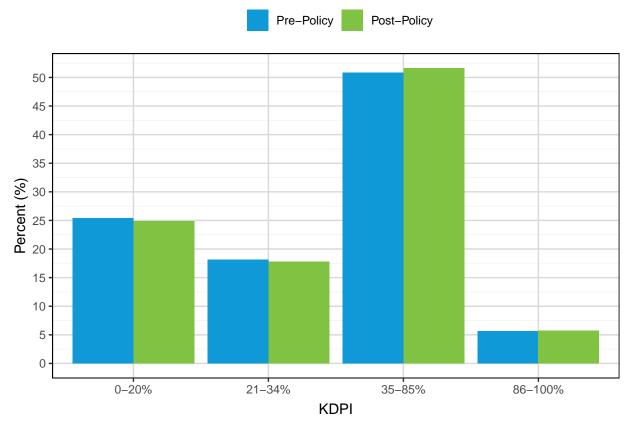


Table A41: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and KDPI

	Pre-Policy		Post-	Policy
KDPI	N	%	N	%
0-20%	8751	25.38	9658	24.88
21-34%	6255	18.14	6898	17.77
35-85%	17523	50.82	20037	51.61
86-100%	1950	5.66	2230	5.74
Total	34479	100.00	38823	100.00

Figure A39 and **Table A42** show deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and donor DCD status. The proportion of DCDs increased from 26.4% pre-policy to 31.19% post-policy.

Figure A39: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and DCD Status

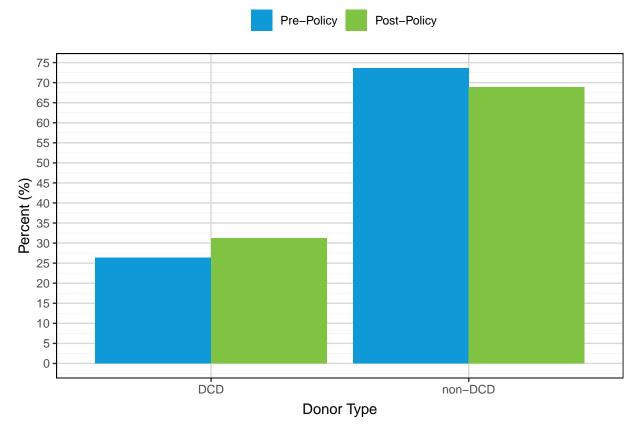
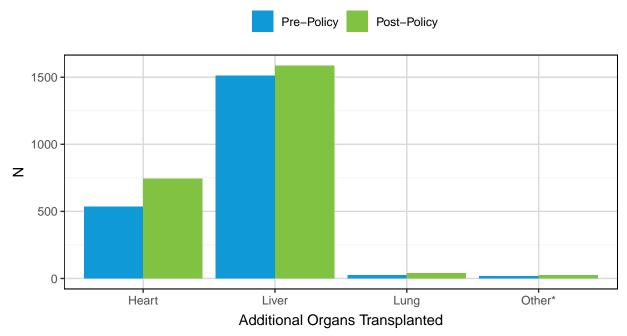


Table A42: Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and DCD Status

	Pre-I	Policy	Post-	Policy
DCD Donor	N	%	N	%
DCD	9102	26.40	12108	31.19
non-DCD	25377	73.60	26715	68.81
Total	34479	100.00	38823	100.00

Figure A40 and **Table A43** show multi-organ deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era, organ, and KDPI, excluding kidney-pancreas transplants. There were 534 heart-kidney transplants pre-policy implementation and 743 post-policy. There were 1510 liver-kidney transplants pre-policy and 1587 post-policy. The other category contains VCA and intestine MOT transplants.

Figure A40: Multi-Organ Deceased Donor Kidney Transplants from from March 16, 2019 - March 14, 2023 by Policy Era



*Does not include kidney-pancreas transplants.

Table A43: Multi-Organ Deceased Donor Kidney Transplants from from March 16, 2019 - March 14, 2023 by Policy Era and KDPI

		Pre-	Policy	Post	-Policy
Organ	KDPI	N	%	N	%
Heart	0-20%	290	54.31	405	54.51
	21-34%	123	23.03	178	23.96
	35-85%	121	22.66	160	21.53
	86-100%	0	0.00	0	0.00
	Total	534	100.00	743	100.00
Liver	0-20%	583	38.61	635	40.01
	21-34%	322	21.32	323	20.35
	35-85%	573	37.95	601	37.87
	86-100%	32	2.12	28	1.76
	Total	1510	100.00	1587	100.00
Lung	0-20%	13	50.00	23	57.50
	21-34%	5	19.23	5	12.50
	35-85%	8	30.77	12	30.00
	86-100%	0	0.00	0	0.00
	Total	26	100.00	40	100.00
Other*	0-20%	14	77.78	16	66.67
	21-34%	2	11.11	2	8.33
	35-85%	2	11.11	6	25.00
	86-100%	0	0.00	0	0.00
	Total	18	100.00	24	100.00

^{*} Does not include kidney-pancreas transplants.

Post-Transplant Outcomes

Figure A41 and **Table A44** show one year unadjusted Kaplan Meier post-transplant patient survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient age at transplant. Patient survival did not change for any age groups after policy implementation.

Figure A41: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Age at Transplant

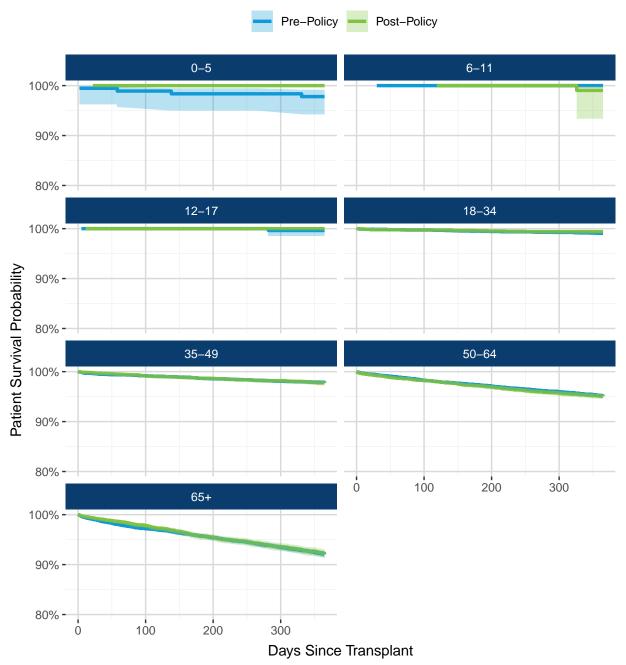


Table A42: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Age at Transplant

Recipient Age	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
0-5	Pre-Policy	186	4	176	97.8	(94.2, 99.2)
0-5	Post-Policy	108	0	65	100	_
6-11	Pre-Policy	238	0	228	100	_
0-11	Post-Policy	113	1	72	99	(93.4, 99.9)
12-17	Pre-Policy	542	2	524	99.6	(98.5, 99.9)
12-17	Post-Policy	340	0	210	100	_
18-34	Pre-Policy	3379	31	3210	99.1	(98.7, 99.3)
10-34	Post-Policy	1901	11	1031	99.4	(98.9, 99.7)
2F 40	Pre-Policy	7835	165	7400	97.9	(97.5, 98.2)
35-49	Post-Policy	4152	90	2255	97.7	(97.2, 98.1)
E0 64	Pre-Policy	12765	610	11750	95.2	(94.8, 95.5)
50-64	Post-Policy	6635	315	3513	95.1	(94.5, 95.6)
65+	Pre-Policy	7446	583	6664	92.1	(91.4, 92.7)
03+	Post-Policy	3763	280	2016	92.2	(91.3, 93.1)

Figure A42 and **Table A45** show one year unadjusted Kaplan Meier post-transplant graft survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient age at transplant. Graft survival did not change for any age group after policy implementation.

Figure A42: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Age at Transplant

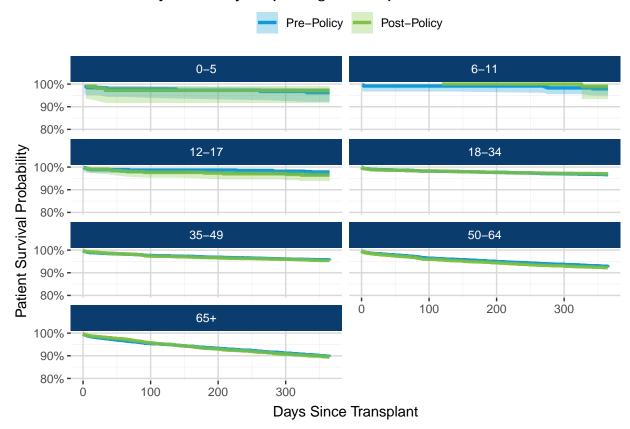


Table A43: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Age at Transplant

Recipient Age	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
0-5	Pre-Policy	186	7	175	96.2	(92.2, 98.2)
0-5	Post-Policy	108	3	64	97.2	(91.6, 99.1)
6-11	Pre-Policy	238	5	226	97.9	(95.0, 99.1)
0-11	Post-Policy	113	1	72	99	(93.4, 99.9)
12-17	Pre-Policy	542	12	521	97.8	(96.1, 98.7)
12-17	Post-Policy	340	12	209	96.4	(93.8, 98.0)
18-34	Pre-Policy	3379	112	3189	96.7	(96.0, 97.2)
10-34	Post-Policy	1901	55	1021	97.1	(96.2, 97.7)
35-49	Pre-Policy	7835	337	7345	95.7	(95.2, 96.1)
33-49	Post-Policy	4152	187	2234	95.4	(94.7, 96.0)
50-64	Pre-Policy	12765	920	11629	92.8	(92.3, 93.2)
50-04	Post-Policy	6635	503	3471	92.2	(91.6, 92.9)
65+	Pre-Policy	7446	762	6571	89.7	(89.0, 90.4)
	Post-Policy	3763	386	1991	89.5	(88.5, 90.5)

Figure A43 and **Table A46** show one year unadjusted Kaplan Meier post-transplant patient survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient gender. Patient survival did not change for either gender after policy implementation.

Figure A43: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Gender

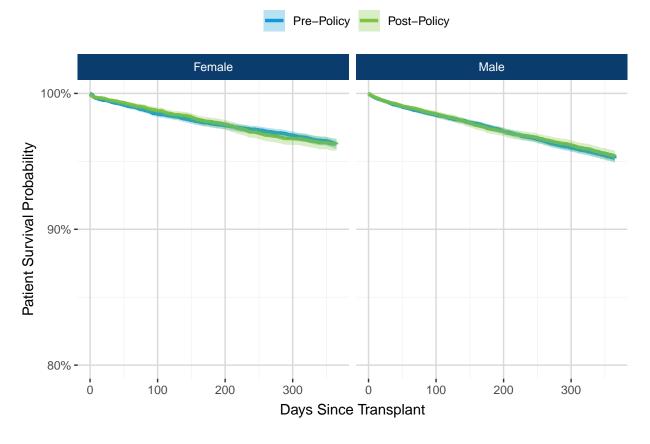


Table A44: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Gender

Recipient Gender	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
Female	Pre-Policy	12753	470	11894	96.3	(95.9, 96.6)
	Post-Policy	6775	245	3743	96.2	(95.8, 96.7)
Male	Pre-Policy	19638	925	18058	95.2	(94.9, 95.5)
	Post-Policy	10237	452	5419	95.4	(94.9, 95.8)

Figure A44 and **Table A47** show one year unadjusted Kaplan Meier post-transplant graft survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient gender. Graft survival did not change for either gender after policy implementation.

Figure A44: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Gender

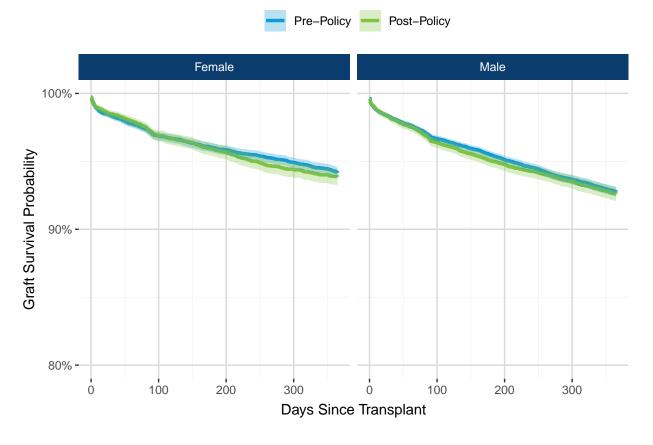


Table A45: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Gender

Recipient Gender	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Female	Pre-Policy	12753	741	11793	94.2	(93.7, 94.6)
	Post-Policy	6775	408	3708	93.9	(93.3, 94.4)
Male	Pre-Policy	19638	1414	17863	92.8	(92.4, 93.1)
	Post-Policy	10237	739	5354	92.6	(92.0, 93.1)

Figure A45 and **Table A48** show one year unadjusted Kaplan Meier post-transplant patient survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient race/ethnicity. Patient survival did not change for any race/ethnicity groups after policy implementation.

Figure A45: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Race/Ethnicity

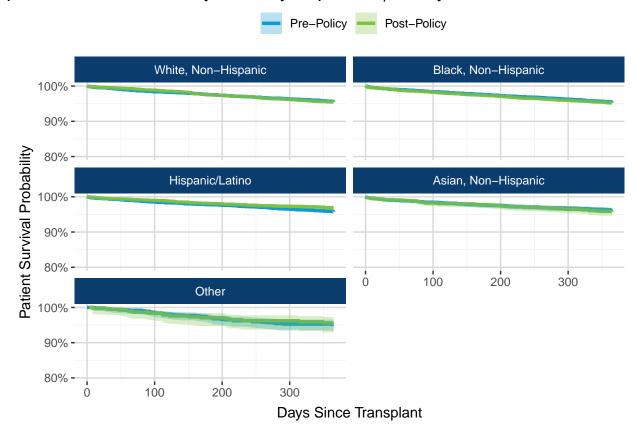


Table A46: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Race/Ethnicity

Recipient Race/Ethnicity	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
White, Non-Hispanic	Pre-Policy	12022	521	11189	95.6	(95.2, 96.0)
vvinte, Non-Frispanic	Post-Policy	5688	247	3067	95.5	(94.9, 96.0)
Black, Non-Hispanic	Pre-Policy	10776	480	9865	95.5	(95.1, 95.9)
Diack, Non-Hispanic	Post-Policy	5948	270	3214	95.2	(94.6, 95.7)
Hispanic/Latino	Pre-Policy	6439	267	5972	95.8	(95.3, 96.3)
rnspanic/Latino	Post-Policy	3648	109	1951	96.9	(96.3, 97.4)
Asian, Non-Hispanic	Pre-Policy	2405	91	2241	96.2	(95.3, 96.9)
Asian, Non-Hispanic	Post-Policy	1349	55	725	95.7	(94.5, 96.7)
Other	Pre-Policy	749	36	685	95.1	(93.3, 96.5)
Other	Post-Policy	379	16	205	95.6	(93.0, 97.3)

Figure A46 and **Table A49** show one year unadjusted Kaplan Meier post-transplant graft survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient race/ethnicity. Graft survival did not change for any race/ethnicity group after policy implementation.

Figure A46: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Race/Ethnicity

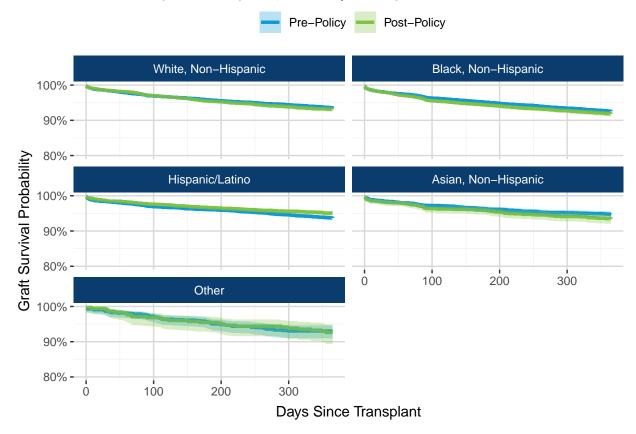


Table A47: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Race/Ethnicity

Recipient Race/Ethnicity	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
White, Non-Hispanic	Pre-Policy	12022	772	11074	93.6	(93.1, 94.0)
	Post-Policy	5688	384	3037	93.1	(92.4, 93.7)
Black, Non-Hispanic	Pre-Policy	10776	798	9755	92.6	(92.0, 93.0)
	Post-Policy	5948	473	3168	91.8	(91.1, 92.5)
Hispanic/Latino	Pre-Policy	6439	404	5915	93.7	(93.1, 94.3)
	Post-Policy	3648	176	1935	95.1	(94.3, 95.7)
Asian, Non-Hispanic	Pre-Policy	2405	128	2231	94.7	(93.7, 95.5)
	Post-Policy	1349	87	720	93.4	(91.9, 94.6)
Other	Pre-Policy	749	53	681	92.9	(90.8, 94.5)
	Post-Policy	379	27	202	92.6	(89.4, 94.9)

Figure A47 and **Table A50** show one year unadjusted Kaplan Meier post-transplant patient survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient CPRA at transplant. Patient survival did not change for any CPRA groups after policy implementation.

Figure A47: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient CPRA at Transplant



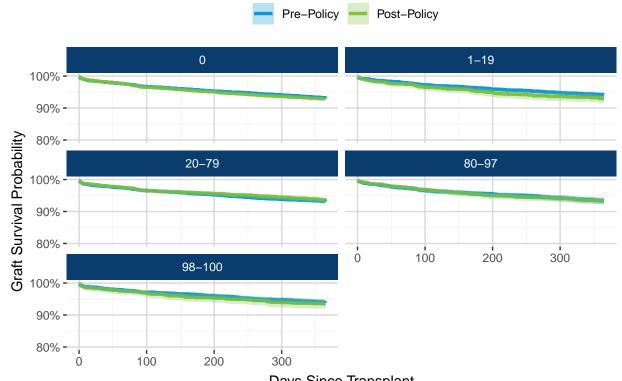
Recipients transplanted on or after January 26th, 2023 with a NULL CPRA due to not reporting unacceptable antigens was recoded to have a CPRA of 0%

Table A48: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient CPRA at Transplant

CPRA (%)	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
0	Pre-Policy	19088	836	17602	95.6	(95.3, 95.8)
	Post-Policy	9604	408	5092	95.5	(95.1, 95.9)
1-19	Pre-Policy	2916	118	2720	95.9	(95.1, 96.6)
	Post-Policy	1437	54	770	96	(94.9, 97.0)
20-79	Pre-Policy	5557	245	5154	95.5	(95.0, 96.1)
	Post-Policy	2857	103	1577	96.2	(95.4, 96.9)
80-97	Pre-Policy	2457	98	2275	95.9	(95.1, 96.7)
	Post-Policy	1987	87	1075	95.5	(94.5, 96.3)
98-100	Pre-Policy	2373	98	2201	95.8	(94.9, 96.6)
	Post-Policy	1127	45	648	95.9	(94.5, 96.9)

Figure A48 and **Table A51** show one year unadjusted Kaplan Meier post-transplant graft survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient CPRA at transplant. Graft survival did not change for any CPRA group after policy implementation.

Figure A48: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient CPRA at Transplant



Days Since Transplant
Recipients transplanted on or after January 26th, 2023 with a NULL CPRA

due to not reporting unacceptable antigens was recoded to have a CPRA of 0%

Table A49: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient CPRA at Transplant

CPRA (%)	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
0	Pre-Policy	19088	1299	17418	93.2	(92.8, 93.5)
	Post-Policy	9604	670	5032	92.9	(92.3, 93.4)
1-19	Pre-Policy	2916	170	2695	94.1	(93.2, 94.9)
1-19	Post-Policy	1437	99	764	92.9	(91.5, 94.2)
20-79	Pre-Policy	5557	379	5103	93.2	(92.5, 93.8)
20-19	Post-Policy	2857	179	1558	93.5	(92.5, 94.4)
80-97	Pre-Policy	2457	161	2253	93.4	(92.4, 94.3)
00-91	Post-Policy	1987	128	1063	93.4	(92.2, 94.4)
98-100	Pre-Policy	2373	146	2187	93.8	(92.8, 94.7)
90-100	Post-Policy	1127	71	645	93.6	(92.0, 94.9)

Figure A49 and **Table A52** show one year unadjusted Kaplan Meier post-transplant patient survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient blood type. Patient survival did not change for any blood type after policy implementation.

Figure A49: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Blood Type

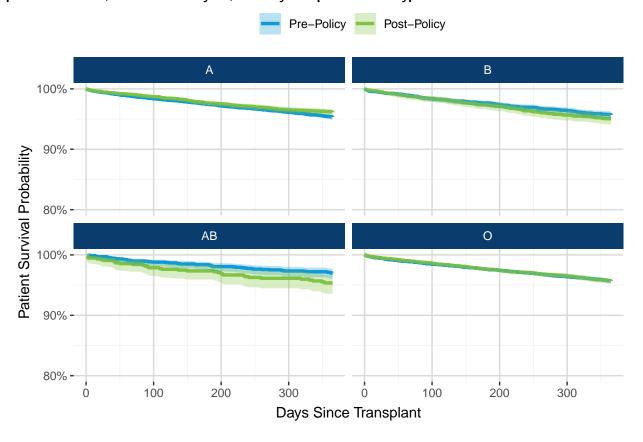


Table A50: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Blood Type

ABO	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
Α	Pre-Policy	11285	519	10428	95.3	(94.9, 95.7)
	Post-Policy	5794	216	3121	96.1	(95.6, 96.6)
В	Pre-Policy	4481	191	4158	95.7	(95.0, 96.2)
	Post-Policy	2525	120	1337	95.1	(94.1, 95.8)
AB	Pre-Policy	1661	50	1566	97	(96.0, 97.7)
	Post-Policy	760	34	433	95.4	(93.6, 96.7)
0	Pre-Policy	14964	635	13800	95.7	(95.4, 96.0)
	Post-Policy	7933	327	4271	95.7	(95.2, 96.1)

Figure A50 and **Table A53** show one year unadjusted Kaplan Meier post-transplant graft survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient blood type. Graft survival did not change for any blood type after policy implementation.

Figure A50: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Blood Type

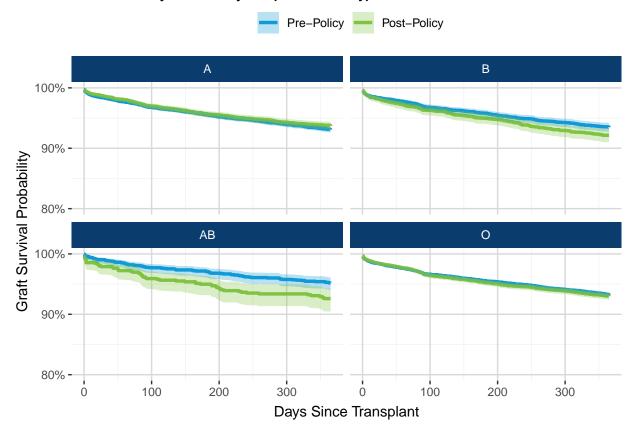


Table A51: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Blood Type

ABO	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
A	Pre-Policy	11285	777	10318	93.1	(92.6, 93.5)
	Post-Policy	5794	356	3091	93.7	(93.0, 94.3)
В	Pre-Policy	4481	291	4116	93.5	(92.7, 94.2)
	Post-Policy	2525	194	1315	92.1	(91.0, 93.1)
AB	Pre-Policy	1661	80	1554	95.2	(94.0, 96.1)
	Post-Policy	760	55	426	92.6	(90.5, 94.3)
0	Pre-Policy	14964	1007	13668	93.2	(92.8, 93.6)
	Post-Policy	7933	542	4230	93	(92.4, 93.5)

Figure A51 and **Table A54** show one year unadjusted Kaplan Meier post-transplant patient survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by donor/recipient HLA mismatch. Patient survival did not change after policy implementation.

Figure A51: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Donor/Recipient HLA Mismatch



Table A52: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Donor/Recipient HLA Mismatch

HLA Mismatch	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
0 ABDR MM	Pre-Policy	1558	54	1468	96.5	(95.5, 97.3)
	Post-Policy	820	18	431	97.7	(96.4, 98.6)
Non-0 ABDR MM	Pre-Policy	30833	1341	28484	95.6	(95.4, 95.8)
	Post-Policy	16192	679	8731	95.6	(95.3, 95.9)

Figure A52 and **Table A55** show one year unadjusted Kaplan Meier post-transplant graft survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by donor/recipient HLA mismatch. Graft survival did not change after policy implementation.

Figure A52: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Donor/Recipient HLA Mismatch

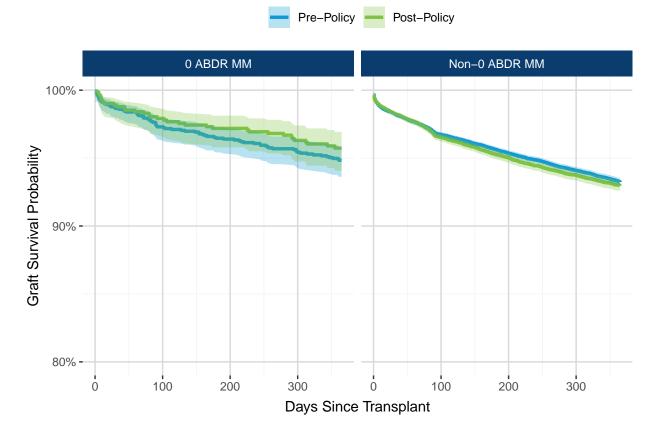


Table A53: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Donor/Recipient HLA Mismatch

HLA Mismatch	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
0 ABDR MM	Pre-Policy	1558	80	1453	94.8	(93.6, 95.8)
	Post-Policy	820	34	427	95.7	(94.1, 96.9)
Non-0 ABDR MM	Pre-Policy	30833	2075	28203	93.2	(93.0, 93.5)
	Post-Policy	16192	1113	8635	93	(92.5, 93.3)

Figure A53 and **Table A56** show one year unadjusted Kaplan Meier post-transplant patient survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by cold ischemic time. Patient survival did not change for any cold ischemic time group after policy implementation.

Figure A53: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Cold Ischemic Time

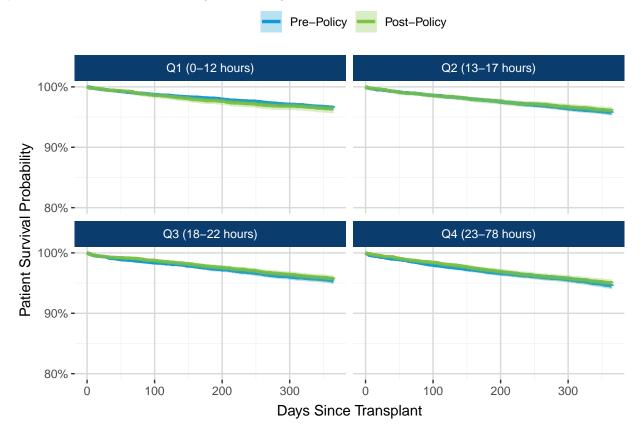


Table A54: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Cold Ischemic Time

Cold Ischemic Time	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
Q1 (0-12 hours)	Pre-Policy	10181	346	9566	96.6	(96.2, 96.9)
	Post-Policy	3241	114	1857	96.4	(95.6, 97.0)
Q2 (13-17 hours)	Pre-Policy	7820	331	7240	95.7	(95.2, 96.1)
	Post-Policy	4227	159	2302	96.1	(95.4, 96.6)
Q3 (18-22 hours)	Pre-Policy	6973	319	6426	95.4	(94.8, 95.8)
	Post-Policy	4618	191	2457	95.7	(95.0, 96.2)
Q4 (23-78 hours)	Pre-Policy	7287	391	6615	94.5	(94.0, 95.0)
	Post-Policy	4837	231	2515	95	(94.3, 95.6)

Figure A54 and **Table A57** show one year unadjusted Kaplan Meier post-transplant graft survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by cold ischemic time. Graft survival did not change for any cold ischemic time group after policy implementation.

Figure A54: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Cold Ischemic Time

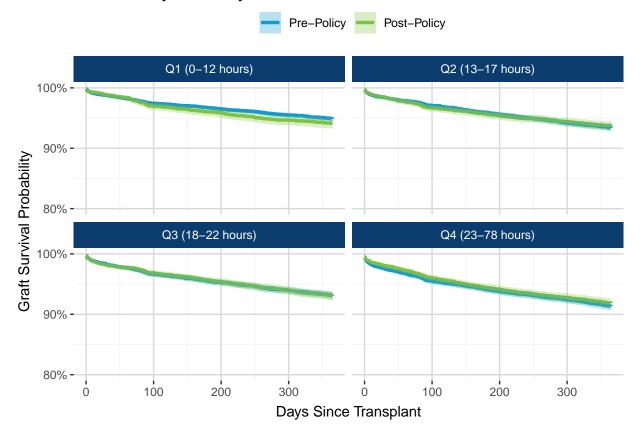


Table A55: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Cold Ischemic Time

Cold Ischemic Time	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Q1 (0-12 hours)	Pre-Policy	10181	519	9502	94.9	(94.4, 95.3)
	Post-Policy	3241	186	1843	94.1	(93.3, 94.9)
Q2 (13-17 hours)	Pre-Policy	7820	516	7165	93.4	(92.8, 93.9)
	Post-Policy	4227	259	2283	93.8	(93.0, 94.4)
Q3 (18-22 hours)	Pre-Policy	6973	477	6372	93.1	(92.5, 93.7)
	Post-Policy	4618	313	2426	93	(92.3, 93.7)
Q4 (23-78 hours)	Pre-Policy	7287	630	6513	91.3	(90.6, 91.9)
	Post-Policy	4837	384	2479	91.9	(91.1, 92.6)

Figure A55 and **Table A58** show one year unadjusted Kaplan Meier post-transplant patient survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient diagnosis. Patient survival did not change for any diagnosis after policy implementation.

Figure A55: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Diagnosis



Table A56: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Diagnosis

Diagnosis Group	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
Diabetes	Pre-Policy	9637	675	8677	92.9	(92.4, 93.4)
Diabetes	Post-Policy	5030	335	2673	93	(92.3, 93.7)
Glomerular Disease	Pre-Policy	6361	156	5980	97.5	(97.1, 97.9)
Giornerulai Disease	Post-Policy	3188	74	1735	97.6	(96.9, 98.1)
Hyportonsiyo Nonbrosslorosis	Pre-Policy	7245	279	6707	96.1	(95.6, 96.5)
Hypertensive Nephrosclerosis	Post-Policy	3938	128	2115	96.6	(96.0, 97.1)
Dalvavatia Kidaav Diasaa	Pre-Policy	2292	68	2162	97	(96.2, 97.6)
Polycystic Kidney Disease	Post-Policy	1138	31	607	97.1	(96.0, 98.0)
Other	Pre-Policy	6856	217	6426	96.8	(96.3, 97.2)
Other	Post-Policy	3718	129	2032	96.4	(95.7, 97.0)

Figure A56 and **Table A59** show one year unadjusted Kaplan Meier post-transplant graft survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient diagnosis. Graft survival did not change for any diagnosis after policy implementation.

Figure A56: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Diagnosis

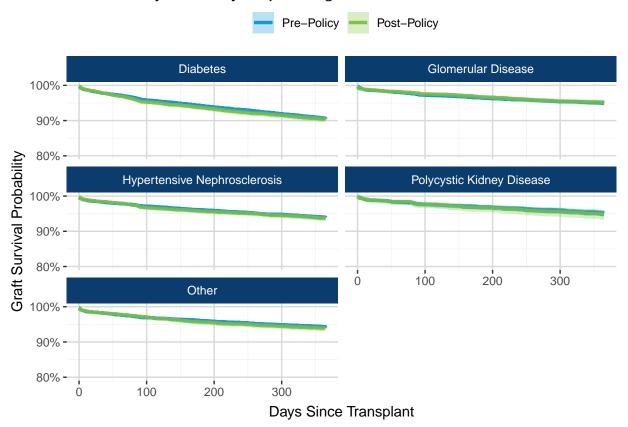


Table A57: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Diagnosis

Diagnosis Group	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Diabetes	Pre-Policy	9637	902	8566	90.6	(90.0, 91.2)
	Post-Policy	5030	474	2644	90.3	(89.5, 91.1)
Glomerular Disease	Pre-Policy	6361	320	5926	95	(94.4, 95.5)
	Post-Policy	3188	150	1719	95.2	(94.4, 95.9)
Hypertensive Nephrosclerosis	Pre-Policy	7245	433	6651	94	(93.4, 94.5)
	Post-Policy	3938	242	2088	93.7	(92.9, 94.4)
Polycystic Kidney Disease	Pre-Policy	2292	110	2151	95.2	(94.2, 96.0)
	Post-Policy	1138	58	603	94.8	(93.3, 95.9)
Other	Pre-Policy	6856	390	6362	94.3	(93.7, 94.8)
	Post-Policy	3718	223	2008	93.9	(93.0, 94.6)

Figure A57 and **Table A60** show one year unadjusted Kaplan Meier post-transplant patient survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient dialysis time. Patient survival did not change for any dialysis time after policy implementation.

Figure A57: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Dialysis Time

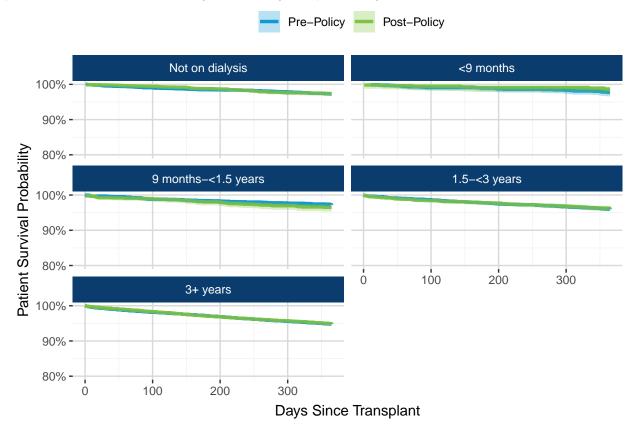


Table A58: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Dialysis Time

Dialysis Time	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
Not on dialysis	Pre-Policy	4992	134	4720	97.3	(96.8, 97.7)
	Post-Policy	2593	65	1400	97.4	(96.7, 97.9)
<9 months	Pre-Policy	1023	23	979	97.7	(96.6, 98.5)
	Post-Policy	561	7	312	98.7	(97.2, 99.4)
9 months-<1.5 years	Pre-Policy	2317	64	2174	97.2	(96.4, 97.8)
	Post-Policy	1242	42	657	96.5	(95.3, 97.4)
1.5-<3 years	Pre-Policy	5443	217	5051	96	(95.4, 96.5)
	Post-Policy	2688	99	1452	96.1	(95.3, 96.8)
3+ years	Pre-Policy	18616	957	17028	94.8	(94.5, 95.1)
	Post-Policy	9928	484	5341	94.9	(94.4, 95.3)

Figure A58 and **Table A61** show one year unadjusted Kaplan Meier post-transplant graft survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient dialysis time. Graft survival did not change for any dialysis time after policy implementation.

Figure A58: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Dialysis Time



Table A59: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Dialysis Time

Dialysis Time	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Nat an district	Pre-Policy	4992	225	4692	95.5	(94.9, 96.0)
Not on dialysis	Post-Policy	2593	128	1386	95	(94.0, 95.7)
<9 months	Pre-Policy	1023	44	968	95.7	(94.3, 96.8)
< 9 months	Post-Policy	561	23	309	95.8	(93.7, 97.2)
0 manths <1 E vesus	Pre-Policy	2317	117	2154	94.9	(94.0, 95.8)
9 months-<1.5 years	Post-Policy	1242	72	650	94.1	(92.6, 95.3)
1 F < 2 years	Pre-Policy	5443	340	5003	93.7	(93.0, 94.3)
1.5-<3 years	Post-Policy	2688	165	1433	93.7	(92.7, 94.6)
2	Pre-Policy	18616	1429	16839	92.3	(91.9, 92.7)
3+ years	Post-Policy	9928	759	5284	92.2	(91.6, 92.7)

Figure A59 and **Table A62** show one year unadjusted Kaplan Meier post-transplant patient survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient EPTS at transplant. Patient survival did not change for any EPTS after policy implementation.

Figure A59: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient EPTS at Transplant



Table A60: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient EPTS at Transplant

EPTS	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
Pediatric	Pre-Policy	971	6	933	99.4	(98.6, 99.7)
	Post-Policy	563	1	347	99.8	(98.6, 100.0)
0-20%	Pre-Policy	7649	76	7293	99	(98.7, 99.2)
	Post-Policy	4242	35	2304	99.1	(98.8, 99.4)
21-100%	Pre-Policy	23771	1313	21726	94.4	(94.1, 94.7)
	Post-Policy	12207	661	6511	94.3	(93.9, 94.7)

Figure A60 and **Table A63** show one year unadjusted Kaplan Meier post-transplant graft survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient EPTS at transplant. Graft survival did not change for any EPTS after policy implementation.

Figure A60: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient EPTS at Transplant



Table A61: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient EPTS at Transplant

EPTS	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
Pediatric	Pre-Policy Post-Policy	971 563	0	927 345	97.5 96.9	(96.3, 98.3) (95.1, 98.1)
0-20%	Pre-Policy	7649	1	7252	96.9	(96.5, 97.3)
	Post-Policy	4242	0	2280	97.1	(96.6, 97.6)
21-100%	Pre-Policy	23771	6	21477	92	(91.6, 92.3)
	Post-Policy	12207	3	6437	91.5	(91.0, 92.0)

Figure A61 and **Table A64** show one year unadjusted Kaplan Meier post-transplant patient survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by donor KDPI. Patient survival did not change for any donor KDPI after policy implementation.

Figure A61: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Donor KDPI



Table A62: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Donor KDPI

KDPI	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
0-20%	Pre-Policy	7851	136	7469	98.2	(97.9, 98.5)
	Post-Policy	4122	64	2284	98.4	(98.0, 98.7)
21-34%	Pre-Policy	5803	226	5423	96.1	(95.5, 96.5)
	Post-Policy	2945	115	1588	95.9	(95.1, 96.6)
35-85%	Pre-Policy	16819	895	15344	94.6	(94.2, 94.9)
	Post-Policy	8952	439	4768	94.9	(94.4, 95.3)
86-100%	Pre-Policy	1918	138	1716	92.7	(91.4, 93.8)
	Post-Policy	993	79	522	91.6	(89.7, 93.2)

Figure A62 and **Table A65** show one year unadjusted Kaplan Meier post-transplant graft survival for deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by donor KDPI. Graft survival did not change for any KDPI after policy implementation.

Figure A62: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Donor KDPI

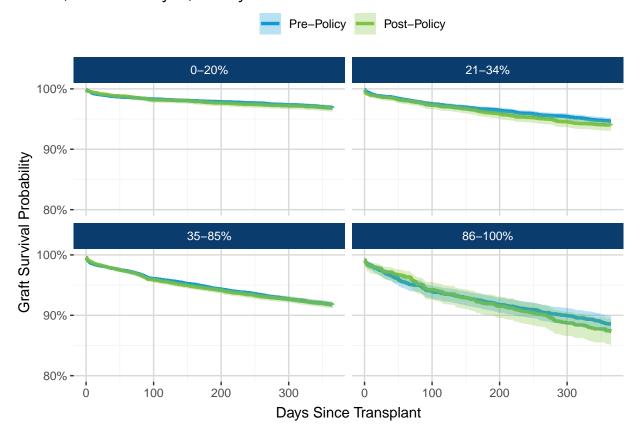


Table A63: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Donor KDPI

KDPI	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
0-20%	Pre-Policy	7851	245	7436	96.9	(96.5, 97.2)
	Post-Policy	4122	127	2270	96.8	(96.3, 97.3)
21-34%	Pre-Policy	5803	308	5396	94.7	(94.1, 95.2)
	Post-Policy	2945	174	1575	93.9	(93.0, 94.8)
35-85%	Pre-Policy	16819	1383	15144	91.7	(91.3, 92.1)
	Post-Policy	8952	723	4704	91.7	(91.1, 92.3)
86-100%	Pre-Policy	1918	219	1680	88.6	(87.0, 89.9)
	Post-Policy	993	123	513	87.3	(85.0, 89.3)

Utilization and Efficiency of Allocation

Figure A63 and **Table A66** show total deceased kidneys donors recovered for the purpose of transplant from March 16, 2019 to March 14, 2023 by policy era. There were 23407 kidney donors recovered pre-policy, and another 27926 recovered post-policy.

Figure A63: Deceased Kidney Donors Recovered March 16, 2019 - March 14, 2023 by Policy Era

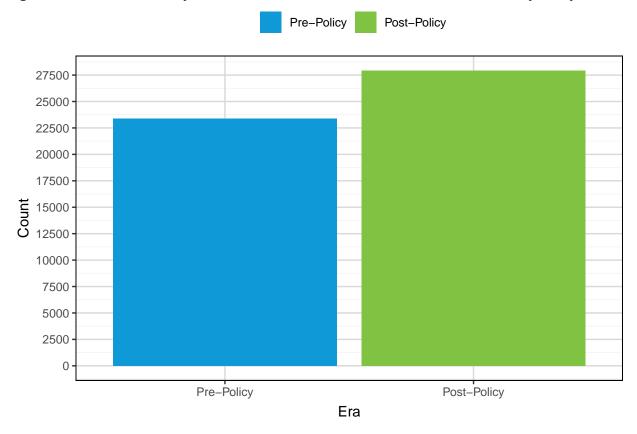


Table A66: Deceased Kidney Donors Recovered March 16, 2019 - March 14, 2023 by Policy Era

Era	Kidney Donors Recovered
Pre-Policy	23407
Post-Policy	27926

Figure A64 and **Table A67** show deceased kidney donors recovered from March 16, 2019 to March 14, 2023 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 A64: Deceased Kidney Donors Recovered March 16, 2019 - March 14, 2023 by Policy Era and KDPI

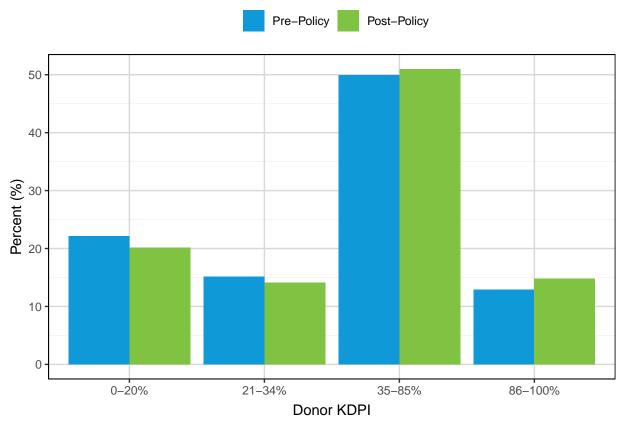


Table A67: Deceased Kidney Donors Recovered March 16, 2019 - March 14, 2023 by Policy Era and KDPI

	Pre-l	Pre-Policy		Policy
KDPI	N	%	N	%
0-20%	5177	22.12	5626	20.15
21-34%	3537	15.11	3942	14.12
35-85%	11678	49.89	14233	50.97
86-100%	3013	12.87	4125	14.77
Total	23407	100.00	27926	100.00

Figure A65 and **Table A68** show deceased kidney donors recovered from March 16, 2019 to March 14, 2023 by policy era and DCD status. The proportion of donors that were DCD increased from 26.28% to 32.86% after policy implementation.

Figure A65: Deceased Kidney Donors Recovered March 16, 2019 - March 14, 2023 by Policy Era and DCD Status

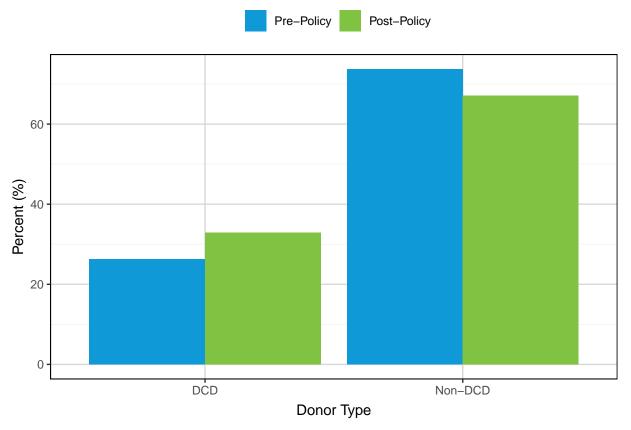


Table A68: Deceased Kidney Donors Recovered March 16, 2019 - March 14, 2023 by Policy Era and DCD Status

	Pre-Policy		Post-Policy		
Donor Type	N	%	N	%	
DCD Non-DCD	6151 17256	26.28 73.72	9177 18749	32.86 67.14	
Total	23407	100.00	27926	100.00	

Figure A66 and **Table A69** show deceased kidney donors recovered from March 16, 2019 to March 14, 2023 by policy era and age. The proportion of donors aged 18-34 went from 28.97% to 25.67% after policy implementation.

Figure A66: Deceased Kidney Donors Recovered March 16, 2019 - March 14, 2023 by Policy Era and Donor Age

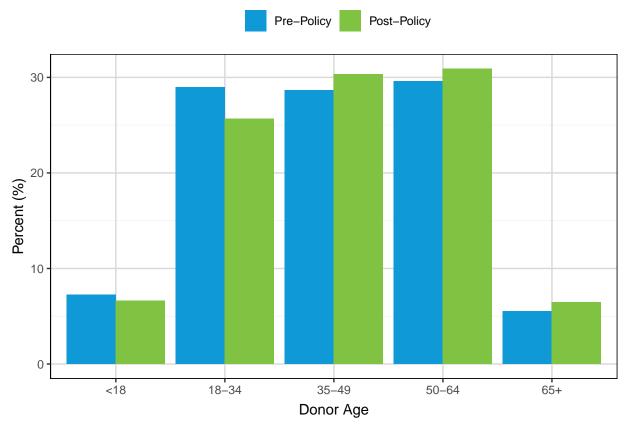


Table A69: Deceased Kidney Donors Recovered March 16, 2019 - March 14, 2023 by Policy Era and Donor Age

	Pre-Policy		Post-Policy		
Donor Age	N	%	N	%	
<18	1696	7.25	1854	6.64	
18-34	6780	28.97	7169	25.67	
35-49	6709	28.66	8467	30.32	
50-64	6924	29.58	8629	30.90	
65+	1298	5.55	1807	6.47	
Total	23407	100.00	27926	100.00	

Table A70 shows deceased donor kidneys recovered for transplant but not transplanted from March 16, 2019 to March 14, 2023 by policy era and non-use reason. The most common reason for non-use both pre- and post-policy implementation was "No recipient located - list exhausted," increasing from 49.41% to 61.37% after the policy change.

Table A70: Deceased Donor Kidneys Recovered for Transplant but not Transplanted March 16, 2019 - March 14, 2023 by Policy Era and Non-Use Reason

	Pre-	Policy	Post-	Policy
Non-use Reason	N	%	N	%
Anatomical abnormalities	379	3.85	434	3.00
Biopsy findings	2167	22.00	2203	15.22
Diseased organ	215	2.18	191	1.32
Donor Medical history	88	0.89	154	1.06
Donor social history	4	0.04	0	0.00
Inadequate urine output	2	0.02	8	0.06
Infection	15	0.15	28	0.19
No recipient located - list exhausted	4868	49.41	8882	61.37
Organ not as described	28	0.28	30	0.21
Organ trauma	99	1.00	93	0.64
Other, specify	1144	11.61	1529	10.56
Poor organ function	501	5.09	445	3.07
Positive Hepatitis	28	0.28	23	0.16
Positive HIV	0	0.00	5	0.03
Recipient determined to be unsuitable for TX in OR	25	0.25	38	0.26
Too old on ice	88	0.89	160	1.11
Too old on pump	29	0.29	39	0.27
Ureteral damage	26	0.26	36	0.25
Vascular damage	88	0.89	89	0.61
Warm ischemic time too long	51	0.52	86	0.59
Missing	7	0.07	0	0.00
Total	9852	100.00	14473	100.00

Table A71 shows the disposition of kidneys with a final acceptance from March 16, 2019 to March 14, 2023 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.

Table A71: Disposition of Kidneys with a Final Acceptance March 16, 2019 - March 14, 2023 by Policy Era and OPTN Region

Era	Region	N	Accepting Patient	Accepting Center	Different Center	Non-use	Non- Recovery
Pre-Policy	1	1181	971 (82.2%)	92 (7.8%)	58 (4.9%)	60 (5.1%)	0 (0.0%)
	2	4197	3,547 (84.5%)	302 (7.2%)	145 (3.5%)	201 (4.8%)	2 (0.0%)
	3	5475	4,197 (76.7%)	568 (10.4%)	195 (3.6%)	512 (9.4%)	3 (0.1%)
	4	3548	2,843 (80.1%)	277 (7.8%)	211 (5.9%)	213 (6.0%)	4 (0.1%)
	5	5498	4,656 (84.7%)	366 (6.7%)	208 (3.8%)	255 (4.6%)	13 (0.2%)
	6	1655	1,382 (83.5%)	132 (8.0%)	53 (3.2%)	88 (5.3%)	0 (0.0%)
	7	2527	2,132 (84.4%)	174 (6.9%)	104 (4.1%)	114 (4.5%)	3 (0.1%)
	8	2810	2,323 (82.7%)	240 (8.5%)	106 (3.8%)	135 (4.8%)	6 (0.2%)
	9	1322	1,057 (80.0%)	101 (7.6%)	75 (S.7%)	82 (6.2%)	7 (0.5%)
	10	3267	2,618 (80.1%)	342 (10.5%)	117 (3.6%)	189 (5.8%)	1 (0.0%)
	11	4393	3,166 (72.1%)	505 (11.5%)	308 (7.0%)	355 (8.1%)	59 (1.3%)
	Total	35873	28,892 (80.5%)	3,099 (8.6%)	1,580 (4.4%)	2,204 (6.1%)	98 (0.3%)
Post-Policy	1	1425	1,089 (76.4%)	116 (8.1%)	172 (12.1%)	48 (3.4%)	0 (0.0%)
-	2	4440	3,460 (77.9%)	403 (9.1%)	310 (7.0%)	267 (6.0%)	0 (0.0%)
	3	6258	4,834 (77.2%)	613 (9.8%)	362 (5.8%)	444 (7.1%)	5 (0.1%)
	4	3877	3,065 (79.1%)	310 (8.0%)	308 (7.9%)	191 (4.9%)	3 (0.1%)
	5	5957	4,903 (82.3%)	472 (7.9%)	279 (4.7%)	279 (4.7%)	24 (0.4%)
	6	1820	1,515 (83.2%)	138 (7.6%)	91 (5.0%)	75 (4.1%)	1 (0.1%)
	7	2811	2,308 (82.1%)	201 (7.2%)	144 (5.1%)	158 (5.6%)	0 (0.0%)
	8	3209	2,609 (81.3%)	279 (8.7%)	159 (5.0%)	150 (4.7%)	12 (0.4%)
	9	1825	1,380 (75.6%)	197 (10.8%)	150 (8.2%)	97 (5.3%)	1 (0.1%)
	10	3755	2,813 (74.9%)	392 (10.4%)	289 (7.7%)	255 (6.8%)	6 (0.2%)
	11	4744	3,457 (72.9%)	491 (10.3%)	419 (8.8%)	338 (7.1%)	39 (0.8%)
	Total	40121	31,433 (78.3%)	3,612 (9.0%)	2,683 (6.7%)	2,302 (5.7%)	91 (0.2%)

Table A72 shows the disposition of kidneys with a final acceptance from March 16, 2019 to March 14, 2023 by policy era and KDPI. The proportion of kidneys transplanted to same patient accepting the organ was highest for KDPI 0-20% kidneys (approximately 90.0% pre- and 85.3% post-policy) and lowest for KDPI 86-100% kidneys (~63.7% pre- and 69.3% post-policy.

Table A72: Disposition of Kidneys with a Final Acceptance March 16, 2019 - March 14, 2023 by Policy Era and KDPI

Era	KDPI	N	Accepting Patient	Accepting Center	Different Center	Non-Use	Non- Recovery
Pre-Policy	0-20	6697	6,030 (90.0%)	301 (4.5%)	281 (4.2%)	78 (1.2%)	7 (0.1%)
	21-34	5363	4,588 (85.5%)	376 (7.0%)	251 (4.7%)	135 (2.5%)	13 (0.2%)
	35-85	20063	15,879 (79.1%)	1,939 (9.7%)	918 (4.6%)	1,276 (6.4%)	51 (0.3%)
	86-100	3732	2,379 (63.7%)	483 (12.9%)	130 (3.5%)	715 (19.2%)	25 (0.7%)
	Not Reported	18	16 (88.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	2 (11.1%)
Post-Policy	Total	35873	28,892 (80.5%)	3,099 (8.6%)	1,580 (4.4%)	2,204 (6.1%)	98 (0.3%)
	0-20	8108	6,920 (85.3%)	455 (5.6%)	620 (7.6%)	108 (1.3%)	5 (0.1%)
	21-34	6367	5,228 (82.1%)	492 (7.7%)	457 (7.2%)	175 (2.7%)	15 (0.2%)
	35-85	22272	16,947 (76.1%)	2,303 (10.3%)	1,483 (6.7%)	1,480 (6.6%)	59 (0.3%)
	86-100	3370	2,334 (69.3%)	362 (10.7%)	123 (3.6%)	539 (16.0%)	12 (0.4%)
	Not Reported	4	4 (100.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	0 (0.0%)
	Total	40121	31,433 (78.3%)	3,612 (9.0%)	2,683 (6.7%)	2,302 (5.7%)	91 (0.2%)

Table A73 shows the disposition of kidneys with a final acceptance from March 16, 2019 to March 14, 2023 by policy era and CPRA of the accepting patient.

Table A73: Disposition of Kidneys with a Final Acceptance March 16, 2019 - March 14, 2023 by Policy Era and Accepting Patient CPRA

Era	CPRA	N	Accepting Patient	Accepting Center	Different Center	Non-Use	Non- Recovery
Pre-Policy	0% 1-19% 20-79% 80-98% 99-100% Total	19695 3913 6194 3107 2964 35873	16,049 (81.5%) 3,217 (82.2%) 5,010 (80.9%) 2,302 (74.1%) 2,314 (78.1%) 28,892 (80.5%)	1,605 (8.1%) 330 (8.4%) 548 (8.8%) 379 (12.2%) 237 (8.0%) 3,099 (8.6%)	663 (3.4%) 158 (4.0%) 265 (4.3%) 194 (6.2%) 300 (10.1%) 1,580 (4.4%)	1,329 (6.7%) 193 (4.9%) 361 (5.8%) 219 (7.0%) 102 (3.4%) 2,204 (6.1%)	49 (0.2%) 15 (0.4%) 10 (0.2%) 13 (0.4%) 11 (0.4%) 98 (0.3%)
Post-Policy	0% 1-19% 20-79% 80-98% 99-100% Total	20772 4473 6962 4816 3098 40121	16,468 (79.3%) 3,535 (79.0%) 5,304 (76.2%) 3,681 (76.4%) 2,445 (78.9%) 31,433 (78.3%)	1,771 (8.5%) 403 (9.0%) 725 (10.4%) 461 (9.6%) 252 (8.1%) 3,612 (9.0%)	1,149 (5.5%) 276 (6.2%) 511 (7.3%) 443 (9.2%) 304 (9.8%) 2,683 (6.7%)	1,347 (6.5%) 241 (5.4%) 409 (5.9%) 218 (4.5%) 87 (2.8%) 2,302 (5.7%)	37 (0.2%) 18 (0.4%) 13 (0.2%) 13 (0.3%) 10 (0.3%) 91 (0.2%)

Figure A67 and **Table A74** show offers per active patient year for kidney matches from March 16, 2019 to March 14, 2023 by policy era and age at listing. Offer rates increased for all age groups after policy implementation.

Figure A67: Offers per Active Patient Year for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing



Table A74: Offer and Acceptance Rates for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

Age	Era	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
0-5	Pre-Policy	219.72	11960	234	54.43	19.57
	Post-Policy	158.76	15955	232	100.50	14.54
6-11	Pre-Policy	216.35	9738	254	45.01	26.08
	Post-Policy	153.82	12861	255	83.61	19.83
12-17	Pre-Policy	470.15	16139	589	34.33	36.50
	Post-Policy	331.73	23237	634	70.05	27.28
18-34	Pre-Policy	13423.47	1031444	4571	76.84	4.43
	Post-Policy	11063.90	1600868	4551	144.69	2.84
35-49	Pre-Policy	34021.03	2726539	9838	80.14	3.61
	Post-Policy	29038.18	4376634	9983	150.72	2.28
50-64	Pre-Policy	52109.17	4510390	14691	86.56	3.26
	Post-Policy	45333.43	7323630	14515	161.55	1.98
65+	Pre-Policy	20746.87	1933450	6692	93.19	3.46
	Post-Policy	18921.22	3258900	7136	172.24	2.19

Figure A68 shows acceptances per 1000 offers for kidney match runs from March 16, 2019 to March 14, 2023 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 A68: Acceptances per 1000 Offers for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

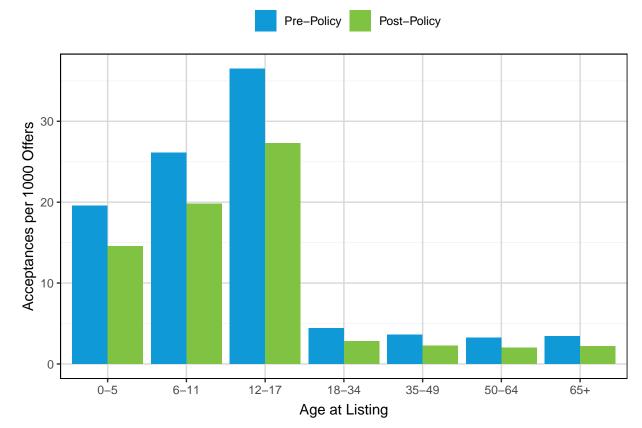


Figure A69 and **Table A75** show offers per active patient year for kidney matches from March 16, 2019 to March 14, 2023 by policy era and time on dialysis at listing. Groupings are based on the 25th, 50th, and 75th percentiles of dialysis time (see **Table 12**). Offer rates increased for pre-emptively listed patients as well as those on dialysis after policy implementation.

Figure A69: Offers per Active Patient Year for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Dialysis Time at Offer

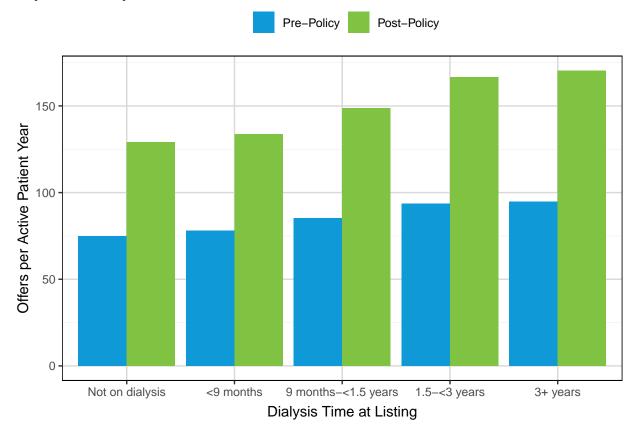


Table A75: Offer and Acceptance Rates for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Dialysis Time at Offer

Dialysis Time	Era	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Not on dialysis	Pre-Policy	40911.46	3068501	9131	75.00	2.98
	Post-Policy	40379.27	5219204	9503	129.25	1.82
<9 months	Pre-Policy	25235.10	1967524	5642	77.97	2.87
	Post-Policy	22307.90	2985237	5392	133.82	1.81
9 months-<1.5 years	Pre-Policy	24068.94	2051887	5731	85.25	2.79
	Post-Policy	22137.61	3289455	5773	148.59	1.76
1.5-<3 years	Pre-Policy	20032.66	1875561	6096	93.63	3.25
	Post-Policy	18971.96	3159966	6265	166.56	1.98
3+ years	Pre-Policy	13452.21	1276392	10269	94.88	8.05
	Post-Policy	11495.63	1958399	10373	170.36	5.30

Figure A70 shows acceptances per 1000 offers for kidney match runs from March 16, 2019 to March 14, 2023 by policy era and time on dialysis at offer. 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 3+ years at listing had the highest offer acceptance rate both before and after policy implementation.

Figure A70: Acceptances per 1000 Offers for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Dialysis Time at Offer

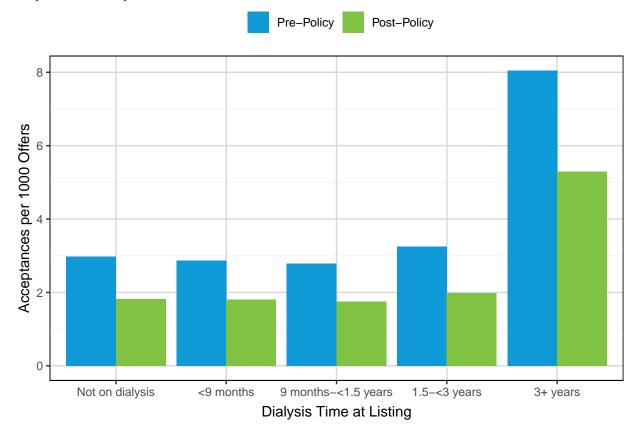


Figure A71 and **Table A76** show offers per active patient year for kidney matches from March 16, 2019 to March 14, 2023 by policy era and race/ethnicity. Offer rates increased for candidates of all ethnicities after policy implementation.

Figure A71: Offers per Active Patient Year for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Race/Ethnicity

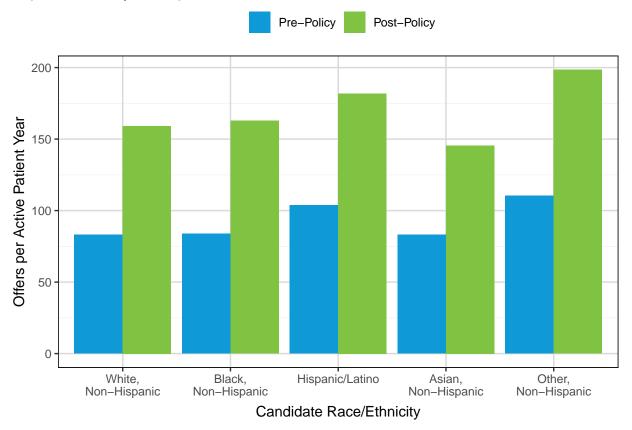


Table A76: Offer and Acceptance Rates for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Race/Ethnicity

Race/Ethnicity	Era	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
White, Non-Hispanic	Pre-Policy	38430.30	3194710	13203	83.13	4.13
	Post-Policy	33191.35	5281862	12502	159.13	2.37
Black, Non-Hispanic	Pre-Policy	38208.28	3203244	12389	83.84	3.87
	Post-Policy	32377.91	5274047	12679	162.89	2.40
Hispanic/Latino	Pre-Policy	25848.99	2682500	7361	103.78	2.74
	Post-Policy	23145.99	4209856	7978	181.88	1.90
Asian, Non-Hispanic	Pre-Policy	10791.40	897237	2684	83.14	2.99
	Post-Policy	9862.50	1434540	2955	145.45	2.06
Other, Non-Hispanic	Pre-Policy	2374.27	262174	1232	110.42	4.70
	Post-Policy	2076.50	411956	1192	198.39	2.89

Figure A72 shows acceptances per 1000 offers for kidney match runs from March 16, 2019 to March 14, 2023 by policy era and race/ethnicity. Acceptance rates decreased for all races/ethnicities after policy implementation.

Figure A72: Acceptances per 1000 Offers for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Race/Ethnicity

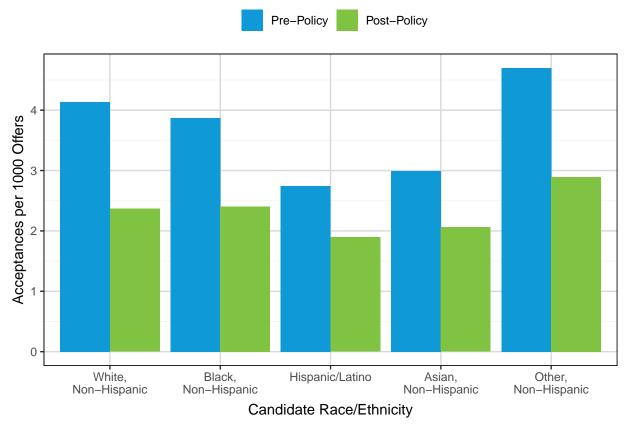


Figure A73 and **Table A77** show offers per active patient year for kidney matches from March 16, 2019 to March 14, 2023 by policy era and blood type. Offer rates increased for all blood types after policy implementation.

Figure A73: Offers per Active Patient Year for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Blood Type

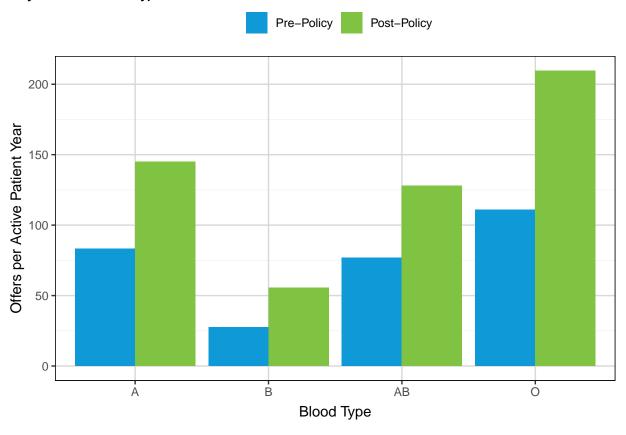


Table A77: Offer and Acceptance Rates for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Blood Type

Blood Type E	Era	Active Patient Years	Offers	۸ .	0.66	
			Officia	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
A F	Pre-Policy	30112.55	2502191	12732	83.09	5.09
F	Post-Policy	25272.13	3665204	12525	145.03	3.42
B F	Pre-Policy	19458.54	532919	5116	27.39	9.60
F	Post-Policy	16872.47	938734	5436	55.64	5.79
AB F	Pre-Policy	2445.04	187909	1892	76.85	10.07
F	Post-Policy	2075.45	265367	1715	127.86	6.46
0 F	Pre-Policy	63196.35	7016846	17129	111.03	2.44
F	Post-Policy	56040.08	11742956	17630	209.55	1.50

Figure A74 shows acceptances per 1000 offers for kidney match runs from March 16, 2019 to March 14, 2023 by policy era and blood type. Acceptance rates decreased for all blood types after policy implementation.

Figure A74: Acceptances per 1000 Offers for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Blood Type

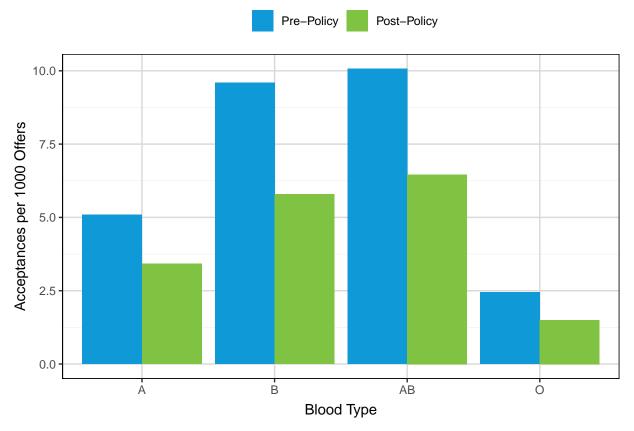
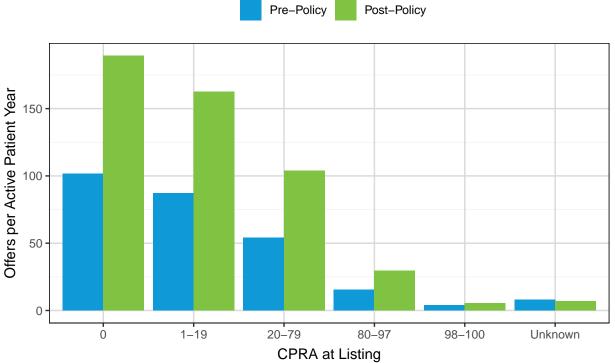


Figure A75 and **Table A78** show offers per active patient year for kidney matches from March 16, 2019 to March 14, 2023 by policy era and CPRA at listing. Offer rates increased for all CPRA groups after policy implementation.

Figure A75: Offers per Active Patient Year for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and CPRA at Listing



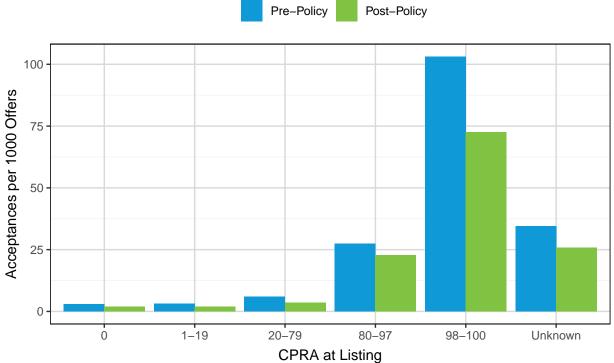
Candidates with unknown CPRA at listing were listed prior to October 1st, 2009, when CPRA was implemented in allocation Registrations listed on or after January 26th, 2023 with a NULL CPRA due to not reporting unacceptable antigens was recoded to have a CPRA of 0%

Table A78: Offer and Acceptance Rates for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and CPRA at Listing

CPRA	Era	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
0	Pre-Policy	84296.01	8561576	25430	101.57	2.97
	Post-Policy	72162.80	13659624	25113	189.29	1.84
1-19	Pre-Policy	8552.82	744827	2408	87.09	3.23
	Post-Policy	8159.78	1327367	2636	162.67	1.99
20-79	Pre-Policy	15384.60	830202	4890	53.96	5.89
	Post-Policy	14215.26	1478318	5222	104.00	3.53
80-97	Pre-Policy	5328.35	82509	2262	15.48	27.42
	Post-Policy	4217.26	125265	2854	29.70	22.78
98-100	Pre-Policy	4196.45	16958	1748	4.04	103.08
	Post-Policy	3756.72	19706	1430	5.25	72.57
Unknown	Pre-Policy	480.37	3793	131	7.90	34.54
	Post-Policy	292.06	1981	51	6.78	25.74

Figure A76 shows acceptances per 1000 offers for kidney match runs from March 16, 2019 to March 14, 2023 by policy era and CPRA at listing. Acceptance rates decreased for all CPRA groups after policy implementation with the exception of those with unknown CPRA.

Figure A76: Acceptances per 1000 Offers for Kidney Match Runs March 16, 2019 - March 14, 2023 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 Registrations listed on or after January 26th, 2023 with a NULL CPRA due to not reporting unacceptable antigens was recoded to have a CPRA of 0%

Figure A77 and **Table A79** show offers per active patient year for kidney matches from March 16, 2019 to March 14, 2023 by policy era and EPTS at listing. Offer rates increased for all EPTS groups after policy implementation.

Figure A77: Offers per Active Patient Year for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and EPTS at Listing

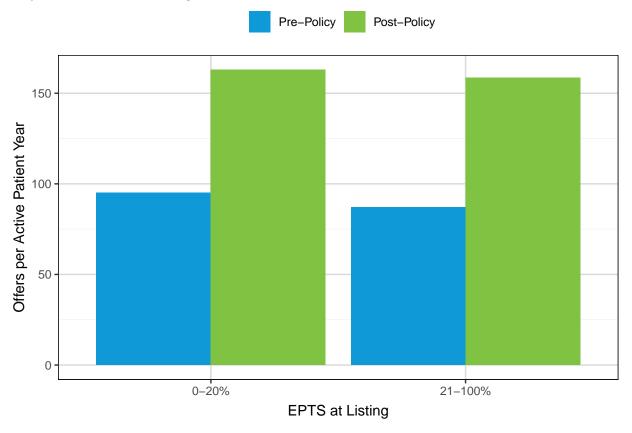


Table A79: Offer and Acceptance Rates for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and EPTS at Listing

EPTS	Era	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
0-20%	Pre-Policy	31946.93	3041375	12371	95.20	4.07
	Post-Policy	29111.63	4743828	12428	162.95	2.62
21-100%	Pre-Policy	82698.89	7198112	24496	87.04	3.40
	Post-Policy	74896.08	11867553	24871	158.45	2.10

Figure A78 shows acceptances per 1000 offers for kidney match runs from March 16, 2019 to March 14, 2023 by policy era and EPTS at listing. Acceptance rates decreased for all EPTS groups after policy implementation.

Figure A78: Acceptances per 1000 Offers for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and EPTS at Listing

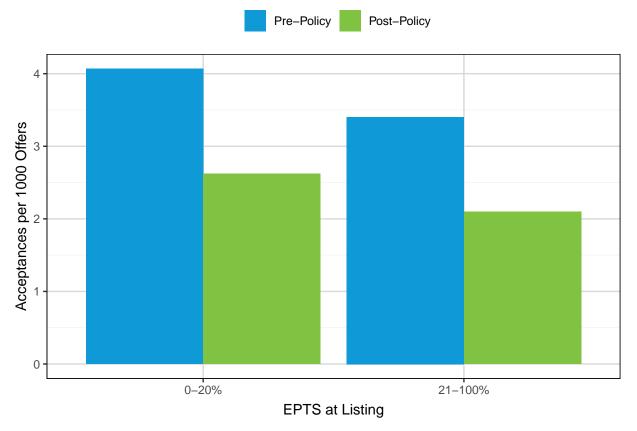


Figure A79 and **Table A80** show offers per active patient year for kidney matches from March 16, 2019 to March 14, 2023 by policy era and diagnosis. Offer rates increased for all diagnoses after policy implementation.

Figure A79: Offers per Active Patient Year for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Diagnosis

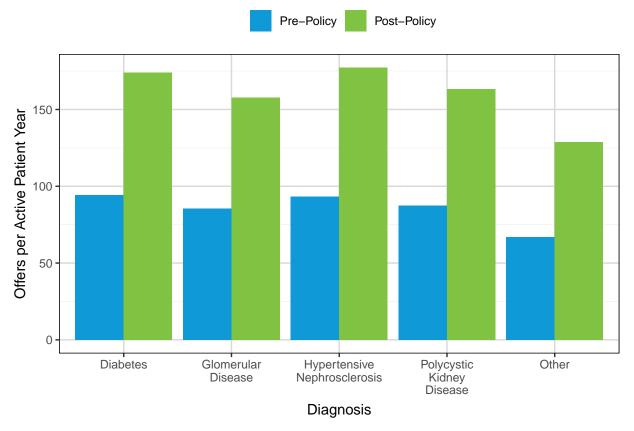


Table A80: Offer and Acceptance Rates for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Diagnosis

Diagnosis	Era	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
Diabetes	Pre-Policy	42408.72	4000885	10677	94.34	2.67
	Post-Policy	37211.80	6475858	11008	174.03	1.70
Glomerular Disease	Pre-Policy	20187.48	1725990	6937	85.50	4.02
	Post-Policy	17304.22	2730204	6793	157.78	2.49
Hypertensive Nephrosclerosis	Pre-Policy	24364.73	2271801	8075	93.24	3.55
	Post-Policy	20487.87	3631443	8335	177.25	2.30
Polycystic Kidney Disease	Pre-Policy	7767.09	679645	2525	87.50	3.72
	Post-Policy	6815.23	1112192	2378	163.19	2.14
Other	Pre-Policy	23285.88	1561544	8655	67.06	5.54
	Post-Policy	20663.96	2662564	8792	128.85	3.30

Figure A80 shows acceptances per 1000 offers for kidney match runs from March 16, 2019 to March 14, 2023 by policy era and diagnosis. Acceptance rates decreased for all diagnoses after policy implementation.

Figure A80: Acceptances per 1000 Offers for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Diagnosis

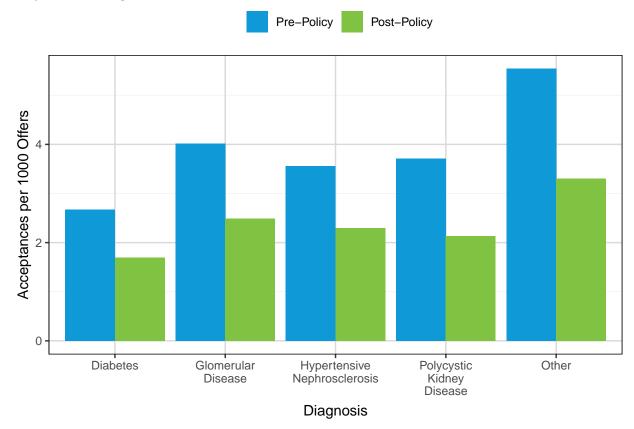


Figure A81 and **Table A81** show acceptances per 1000 offers for kidney match runs from March 16, 2019 to March 14, 2023 by policy era and share type. The acceptance rate for organs recovered in the same DSA as the potential transplant recipient's transplant center decreased from 13.44 to 9.51 acceptances per 1000 offers after policy implementation. The acceptance rate for organs recovered outside the same DSA as the potential transplant recipient increased from 1.27 to 1.49 acceptances per 1000 offers.

Figure A81: Acceptances per 1000 Offers for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Share Type

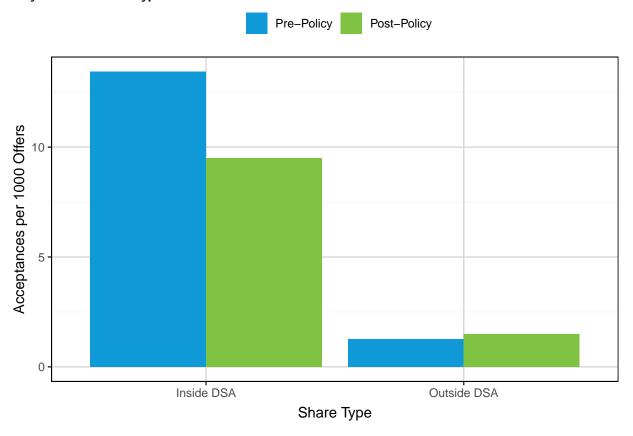


Table A81: Acceptances per 1000 Offers for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Share Type

-		Pre-Policy		Post-Policy		
Share Type	Offers	Acceptances	Acceptances per 1000 Offers	Offers	Acceptances	Acceptances per 1000 Offers
Inside DSA Outside DSA	1963469 8276396	26381 10488	13.44 1.27	1558932 15053329	14822 22484	9.51 1.49

Figure A82 and **Table A82** show acceptances per 1000 offers for kidney match runs from March 16, 2019 to March 14, 2023 by policy era and distance from the donor hospital. Acceptance rates decreased for both distance groups after policy implementation.

Figure A82: Acceptances per 1000 Offers for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Distance

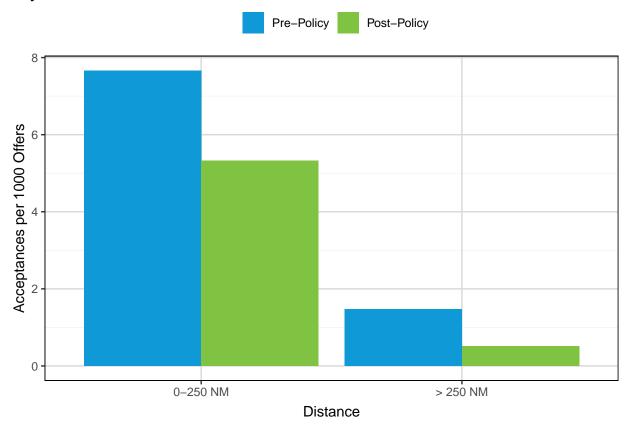


Table A82: Acceptances per 1000 Offers for Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Distance

Pre-Policy				Post-Policy			
Distance	Offers	Acceptances	Acceptances per 1000 Offers	Offers	Acceptances	Acceptances per 1000 Offers	
0-250 NM > 250 NM	3526604 6713261	27011 9858	7.66 1.47	5996559 10615702	31896 5410	5.32 0.51	

Figure A83 and **Table A83** show refusals due to positive crossmatch for kidney matches from March 16, 2019 to March 14, 2023 by policy era and CPRA. Less than 0.2 percent 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 (17.63% pre-policy and 6.16% post-policy).

Figure A83: Refusals Due to Positive Crossmatch for Kidney Matches March 16, 2019-March 14, 2023 by Policy Era and CPRA

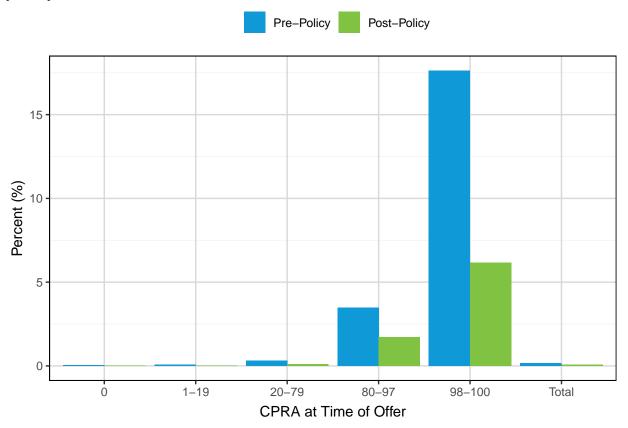


Table A83: Refusals Due to Positive Crossmatch for Kidney Matches March 16, 2019-March 14, 2023 by Policy Era and CPRA

		Pre-Policy	Post-Policy			
CPRA	Refusals	Due to Xmatch	%	Refusals	Due to Xmatch	%
0	3069308	1439	0.05	4422157	616	0.01
1-19	432500	380	0.09	671785	186	0.03
20-79	468414	1431	0.31	757093	774	0.10
80-97	46455	1612	3.47	71127	1217	1.71
98-100	12295	2167	17.63	12892	794	6.16
Total	4028972	7029	0.17	5935054	3587	0.06

Pediatrics

Figure A84 and **Table A84** show deceased donor transplants per 100 active patient years for pediatric kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and age at listing. The transplant rate for all pediatric age groups increased after policy implementation. The transplant rate for registrations aged 0 to 5 years at listing increased from 114.69 to 160.62 transplants per 100 active patient years. The transplant rate for registrations aged 6 to 10 years at listing increased from 118.33 to 176.83 transplants per 100 active patient years. The transplant rate for registrations aged 12 to 17 years at listing increased from 141.02 to 228.8 transplants per 100 active patient years.

Figure A84: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

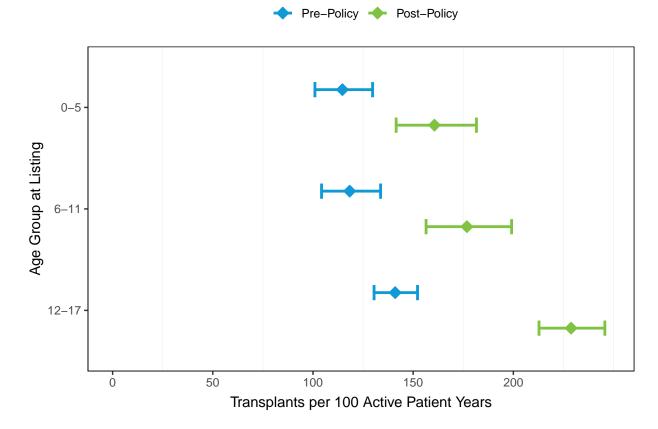


Table A84: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

Age at Listing	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
0-5	Pre-Policy	453	252	114.69	(100.97, 129.76)
	Post-Policy	430	255	160.62	(141.51, 181.6)
6-11	Pre-Policy	451	256	118.33	(104.28, 133.75)
	Post-Policy	424	272	176.83	(156.44, 199.14)
12-17	Pre-Policy	1124	663	141.02	(130.49, 152.18)
	Post-Policy	1134	759	228.80	(212.81, 245.67)

Figure A85 and **Table A85** show deceased donor transplants per 100 active patient years for pediatric kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and blood type. Transplant rates increased significantly from 150.11 to 205.03 transplants per 100 active patient years for type A pediatric registrations, 64.63 to 115.48 for type B pediatric registrations, 143.36 to 231.2 for type O pediatric registrations. Transplants per 100 active patient years for type AB pediatric registrations did not significantly increase.

Figure A85: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Blood Type

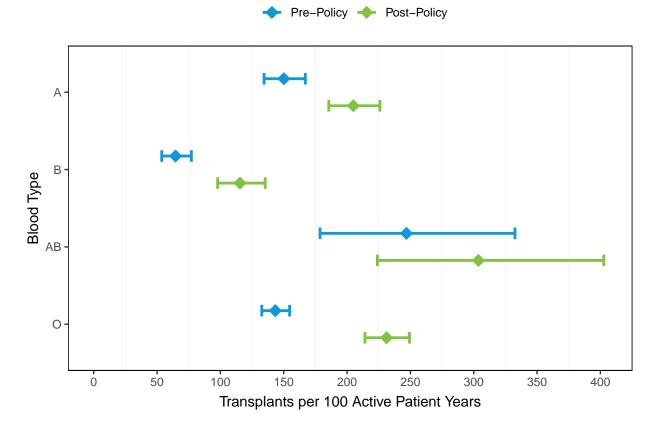
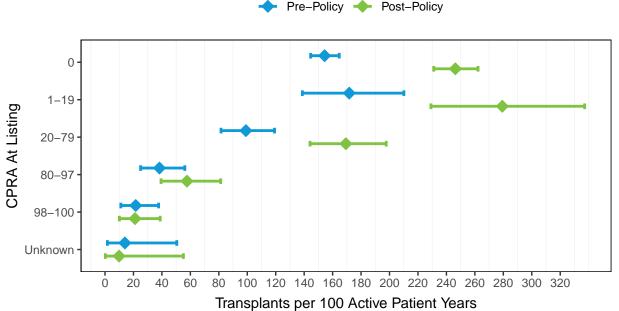


Table A85: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Blood Type

Blood Type	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
Α	Pre-Policy	597	336	150.11	(134.49, 167.05)
	Post-Policy	614	407	205.03	(185.59, 225.95)
В	Pre-Policy	297	123	64.63	(53.71, 77.11)
	Post-Policy	287	152	115.48	(97.85, 135.37)
AB	Pre-Policy	60	43	246.89	(178.68, 332.56)
	Post-Policy	68	48	303.74	(223.96, 402.72)
0	Pre-Policy	1044	667	143.36	(132.68, 154.66)
	Post-Policy	991	679	231.20	(214.13, 249.26)

Figure A86 and **Table A86** show deceased donor transplants per 100 active patient years for pediatric kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and CPRA at listing. Transplant rates increased significantly for pediatric candidates with a CPRA 0-79% at listing in the post-policy era compared to the pre. Transplant rates did not change for pediatric registrations with a CPRA 80-100% or unknown. The largest increase in transplant rate was seen for registrations with CPRA 1-19% at listing, going from 171.68 to 279.28 transplants per 100 active patient years.

Figure A86: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 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 Registrations listed on or after January 26th, 2023 with a NULL CPRA due to not reporting unacceptable antigens was recoded to have a CPRA of 0%

Table A86: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and CPRA at Listing

CPRA	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
0	Pre-Policy	1516	924	154.36	(144.56, 164.64)
	Post-Policy	1438	976	246.29	(231.07, 262.23)
1-19	Pre-Policy	140	94	171.68	(138.73, 210.09)
	Post-Policy	160	108	279.28	(229.1, 337.18)
20-79	Pre-Policy	220	112	99.04	(81.55, 119.17)
	Post-Policy	241	160	169.32	(144.1, 197.69)
80-97	Pre-Policy	80	26	38.28	(25, 56.08)
	Post-Policy	84	32	57.59	(39.39, 81.3)
98-100	Pre-Policy	53	12	21.57	(11.14, 37.67)
	Post-Policy	49	10	21.09	(10.11, 38.78)
Unknown	Pre-Policy	9	2	13.97	(1.69, 50.45)
	Post-Policy	7	1	9.89	(0.25, 55.1)

Figure A87 and **Table A87** show deceased donor transplants per 100 active patient years for pediatric kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and OPTN region at listing. Transplant rates increased significantly for all regions except for OPTN Regions 4, 5, 6 or 8.

Figure A87: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and OPTN Region at Listing

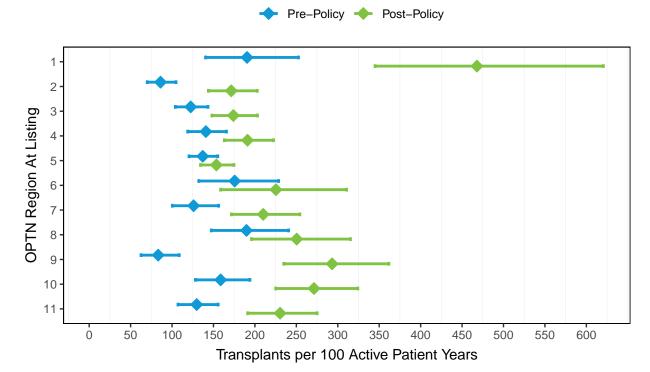


Table A87: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and OPTN Region at Listing

OPTN Region	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
1	Pre-Policy	66	48	190.50	(140.46, 252.57)
	Post-Policy	62	48	467.95	(345.03, 620.43)
2	Pre-Policy	204	100	86.11	(70.06, 104.73)
	Post-Policy	216	136	171.47	(143.87, 202.83)
3	Pre-Policy	275	155	122.48	(103.95, 143.35)
	Post-Policy	247	161	174.01	(148.17, 203.06)
4	Pre-Policy	246	146	140.83	(118.91, 165.62)
	Post-Policy	254	166	191.08	(163.11, 222.46)
5	Pre-Policy	411	249	137.02	(120.52, 155.13)
	Post-Policy	368	231	153.50	(134.34, 174.62)
6	Pre-Policy	73	55	175.59	(132.28, 228.55)
	Post-Policy	57	37	225.35	(158.66, 310.61)
7	Pre-Policy	147	83	126.00	(100.36, 156.19)
	Post-Policy	156	105	210.00	(171.76, 254.22)
8	Pre-Policy	115	68	189.83	(147.41, 240.65)
	Post-Policy	116	72	250.40	(195.93, 315.34)
9	Pre-Policy	123	54	83.28	(62.56, 108.66)
	Post-Policy	134	87	293.16	(234.81, 361.61)
10	Pre-Policy	153	95	158.61	(128.32, 193.89)
	Post-Policy	177	121	271.30	(225.12, 324.17)
11	Pre-Policy	198	116	129.74	(107.21, 155.61)
	Post-Policy	188	122	230.36	(191.3, 275.04)

Figure A88 and **Table A88** show deceased donor transplants per 100 active patient years for pediatric kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and gender. The transplant rate for female pediatric registrations increased significantly from 142.15 to 208.84 transplants per 100 active patient years. The rate for male pediatric registrations increased significantly from 122.44 to 196.07 transplants per 100 active patient years.

Figure A88: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Gender

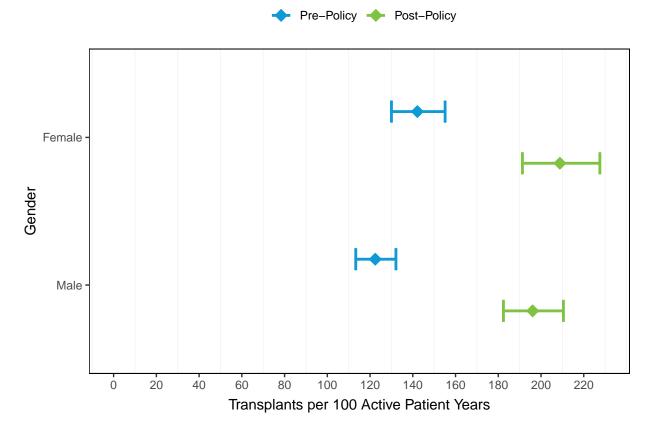


Table A88: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Gender

Gender	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
Female	Pre-Policy Post-Policy	807 801	504 522	142.15 208.84	(130.01, 155.12) (191.3, 227.54)
Male	Pre-Policy Post-Policy	1192 1159	665 764	122.44 196.07	(113.31, 132.11) (182.41, 210.48)

Figure A89 and **Table A89** show deceased donor transplants per 100 active patient years for pediatric kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and time on dialysis at listing. Groupings are based on the 25th, 50th, and 75th percentiles of pediatric dialysis time at listing. Transplant rates increased for pre-emptively listed candidates, as well as candidates with any amount of dialysis time at listing except for those with 1 to 2 years of dialysis time, as this group did not significantly change. The largest change was seen for candidates with 0-6 months of dialysis time at listing, for whom the transplant rate increased from 144.23 to 222.87 transplants per 100 active patient years.

Figure A89: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Time on Dialysis at Listing

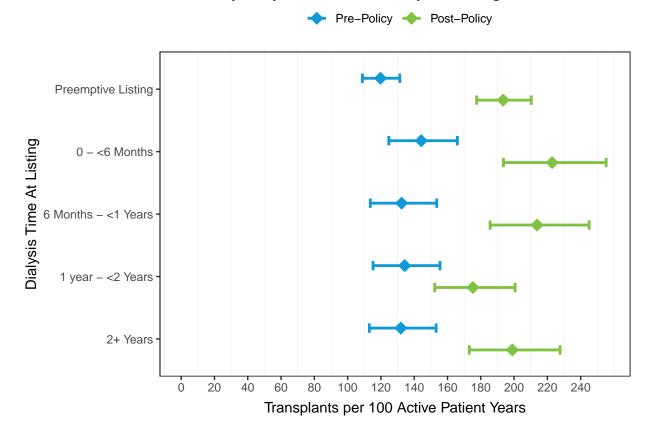


Table A89: Transplants per 100 Active Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Time on Dialysis at Listing

Dialysis Time	Era	Registrations	Transplants	Transplants per 100 Active Patient Years	95% CI
Preemptive Listing	Pre-Policy	821	447	119.71	(108.87, 131.34)
	Post-Policy	843	545	193.40	(177.5, 210.34)
0 - < 6 Months	Pre-Policy	314	196	144.23	(124.74, 165.9)
	Post-Policy	312	208	222.87	(193.61, 255.3)
6 Months - <1 Years	Pre-Policy	294	176	132.44	(113.6, 153.52)
	Post-Policy	300	206	213.81	(185.61, 245.08)
$1 ext{ year -} < 2 ext{ Years}$	Pre-Policy	303	178	134.26	(115.26, 155.49)
	Post-Policy	317	210	175.25	(152.35, 200.63)
2+ Years	Pre-Policy	293	173	131.96	(113.03, 153.15)
	Post-Policy	298	212	198.95	(173.07, 227.61)

Figure A90 and **Table A90** show pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and recipient race/ethnicity. The distribution of race/ethnicity for pediatric recipients was similar to the pre-policy era after policy implementation.

Figure A90: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Recipient Race/Ethnicity

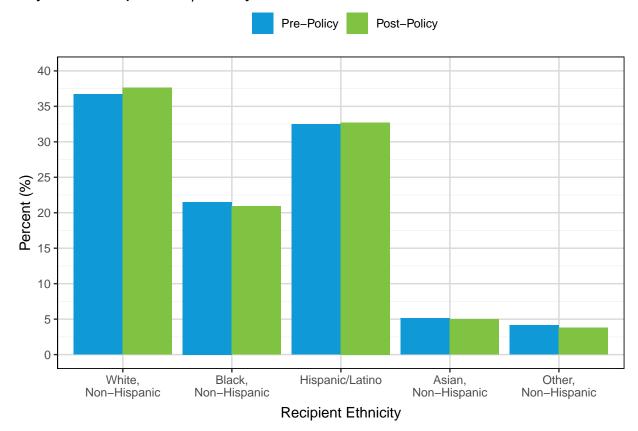
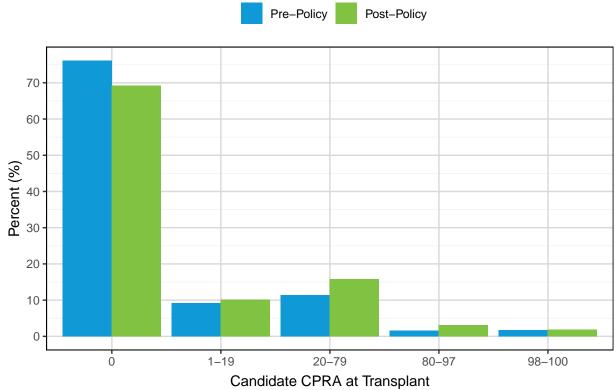


Table A90: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Recipient Race/Ethnicity

	Pre-	Pre-Policy		-Policy
Race/Ethnicity	N	%	N	%
White, Non-Hispanic	372	36.72	408	37.60
Black, Non-Hispanic	218	21.52	227	20.92
Hispanic/Latino	329	32.48	355	32.72
Asian, Non-Hispanic	52	5.13	54	4.98
Other, Non-Hispanic	42	4.15	41	3.78
Total	1013	100.00	1085	100.00

Figure A91 and **Table A91** show pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and CPRA at transplant. The proportion of pediatric recipients with CPRA 0% decreased from 76.11% to 69.22% after policy implementation, while the proportion of recipients with CPRA 20-79% increased from 11.35% to 15.76%.

Figure A91: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and CPRA at Transplant



Registrations transplanted on or after January 26th, 2023 with a NULL CPRA due to not reporting unacceptable antigens was recoded to have a CPRA of 0%

Table A91: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and CPRA at Transplant

	Pre-Policy		Post-Policy	
CPRA %	N	%	N	%
0	771	76.11	751	69.22
1-19	93	9.18	110	10.14
20-79	115	11.35	171	15.76
80-97	16	1.58	33	3.04
98-100	18	1.78	20	1.84
Total	1013	100.00	1085	100.00

Figure A92 and **Table A92** show pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and dialysis status at the time of transplant as reported to the OPTN. 70.29% and 69.31% of pediatric transplant recipients were on dialysis both pre- and post-policy, respectively.

Figure A92: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Dialysis Status at Transplant

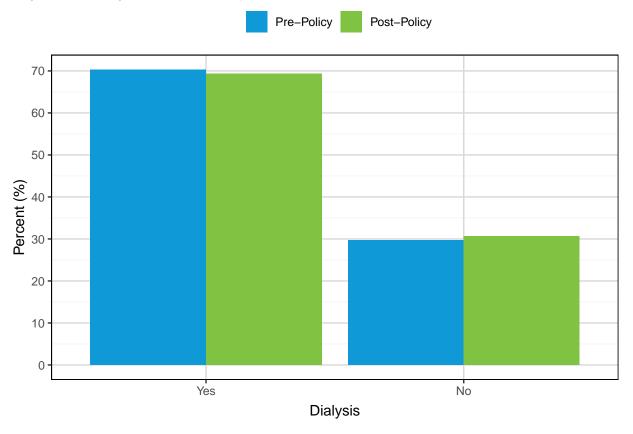


Table A92: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Dialysis Status at Transplant

	Pre-Policy		Post-Policy	
Dialysis	N	%	N	%
Yes	712	70.29	752	69.31
No	301	29.71	333	30.69
Total	1013	100.00	1085	100.00

Figure A93 and **Table A93** show pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and time on dialysis at transplant as reported to the OPTN. Median dialysis time at transplant for pediatric recipients was roughly 1.6 years both pre- and post-policy.

Figure A93: Distribution of Time on Dialysis (Years) at Transplant for Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

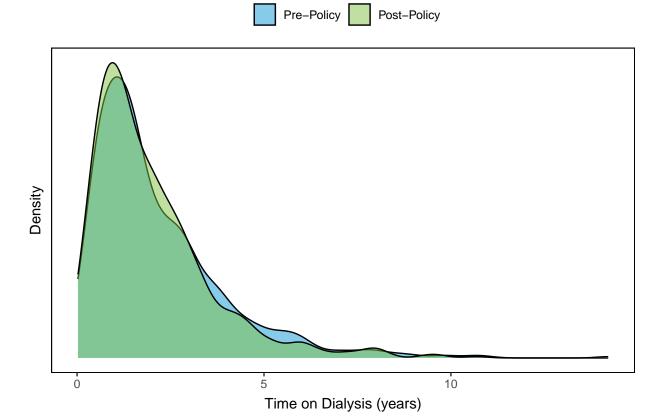


Table A93: Distribution of Time on Dialysis (Years) at Transplant for Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

Era	Total	Min	25th Percentile	Median	Mean	75th Percentile	Max
Pre-Policy	712	0.06	0.93	1.59	2.15	2.85	10.83
Post-Policy	752	0.02	0.88	1.55	2.02	2.64	14.21

Figure A94 and **Table A94** show pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and KDPI. Over 97% of pediatric transplants both pre- and post-policy utilized kidneys recovered from KDPI 0-34% donors.

Figure A94: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and KDPI

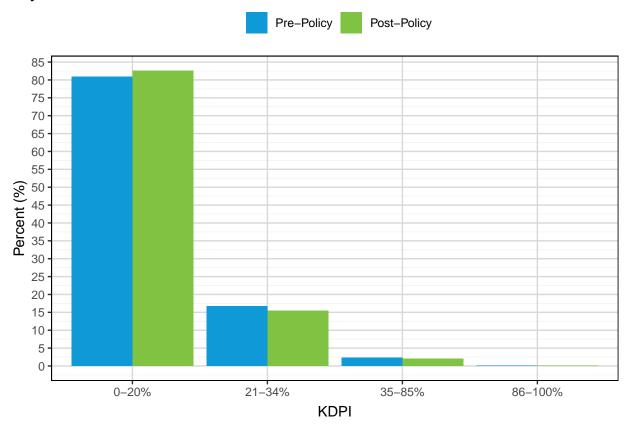


Table A94: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and KDPI

	Pre-Policy		Post-Policy	
KDPI	N	%	N	%
0-20%	819	80.85	896	82.58
21-34%	170	16.78	167	15.39
35-85%	24	2.37	22	2.03
86-100%	0	0.00	0	0.00
Total	1013	100.00	1085	100.00

Figure A95 and **Table A95** show pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and distance from donor hospital to transplant center. The distribution of pediatric deceased donor kidney transplants changed slightly with 95.48% of pediatric transplants performed at transplant hospitals within 250 NM of the donor hospital post-policy, compared to 89.54% pre-policy.

Figure A95: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Distance from Donor Hospital to Transplant Center

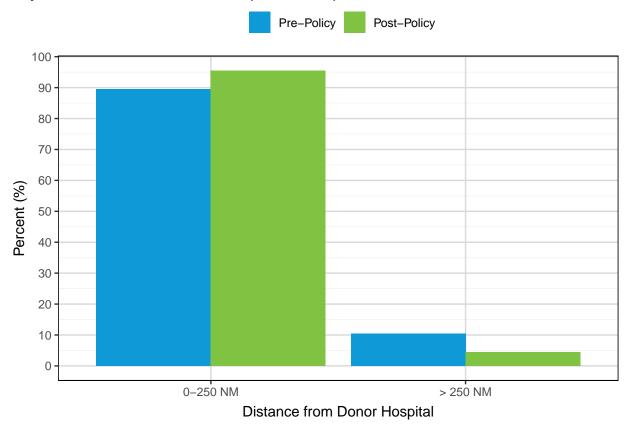


Table A95: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Distance from Donor Hospital to Transplant Center

	Pre-	Policy	Post	-Policy
Distance	N	%	N	%
0-250 NM	907	89.54	1036	95.48
> 250 NM	106	10.46	49	4.52
Total	1013	100.00	1085	100.00

Figure A96 and **Table A96** show pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and blood type. The majority of pediatric recipients were type O both before and after the policy change.

Figure A96: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Blood Type

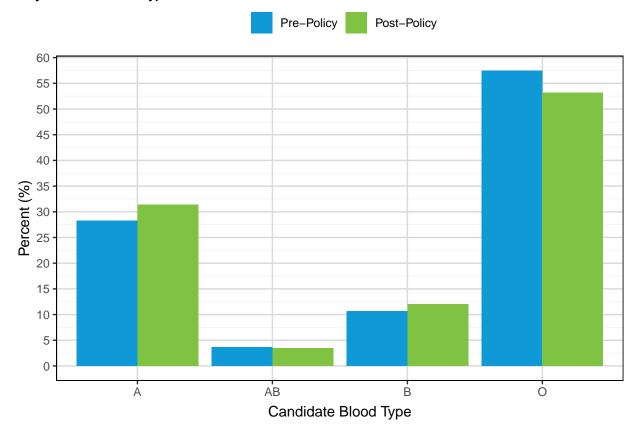


Table A96: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Blood Type

	Pre-Policy		Post	-Policy
KDPI	N	%	N	%
A	286	28.23	340	31.34
AB	37	3.65	38	3.50
В	108	10.66	130	11.98
Ο	582	57.45	577	53.18
Total	1013	100.00	1085	100.00

Figure A97 and **Table A97** show pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and level of HLA mismatch. Multi-organ transplants including a kidney were excluded. The proportion of 0 ABDR mismatch pediatric transplants decreased slightly after policy implementation, going from roughly 1.76% to 0.57%. There was also a slight increase in 3 ABDR mismatch pediatric transplants, going from 11.18% to 13.51% after policy implementation.

Figure A97: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and HLA Mismatch

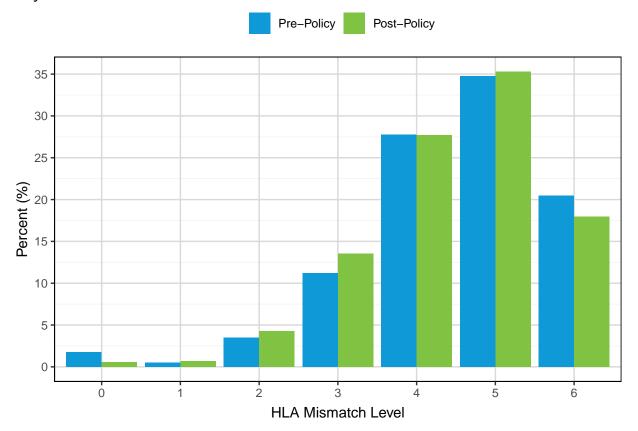


Table A97: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and HLA Mismatch

	Pre	Pre-Policy		-Policy
HLA Mismatch Level	N	%	N	%
0	17	1.76	6	0.57
1	5	0.52	7	0.67
2	34	3.52	45	4.28
3	108	11.18	142	13.51
4	268	27.74	291	27.69
5	336	34.78	371	35.30
6	198	20.50	189	17.98
Total	966	100.00	1051	100.00

Figure A98 and **Table A98** show pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and donor DCD status. The proportion of pediatric transplants using DCDs decreased from 4.94% pre-policy to 3.69% post-policy.

Figure A98: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and DCD Status

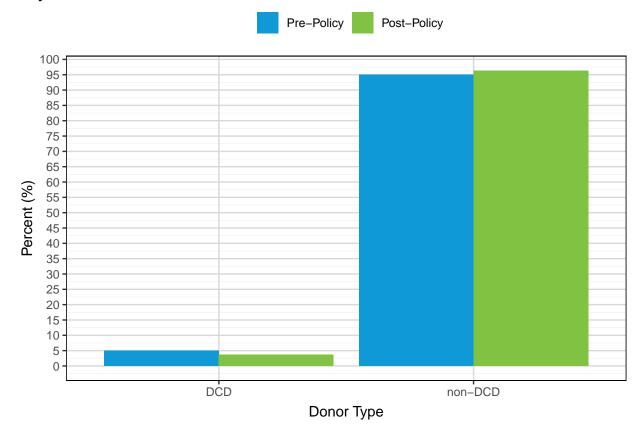


Table A98: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and DCD Status

	Pre-	Policy	Post	-Policy
DCD Donor	N	%	N	%
DCD	50	4.94	40	3.69
non-DCD	963	95.06	1045	96.31
Total	1013	100.00	1085	100.00

Figure A99 and **Table A99** show pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and share type. The proportion of transplants using kidneys recovered in the same DSA as the transplant hospital decreased from 91.21% to 34.38% after the policy change. The proportion of regional shares increased from 5.33% to 37.33% and the proportion of national shares increased from 3.46% to 28.29%.

Figure A99: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Share Type

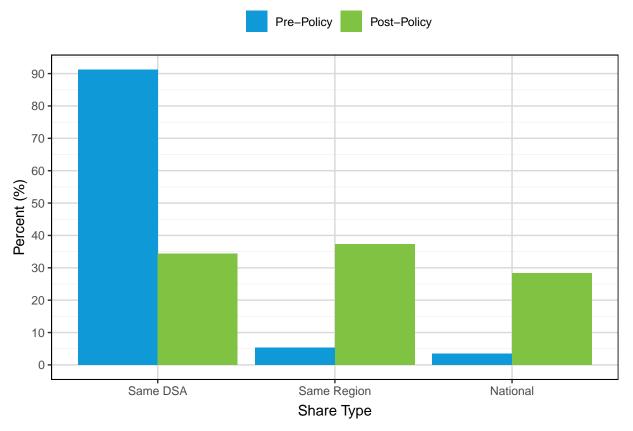


Table A99: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and Share Type

	Pre-Policy		Post	-Policy
Share Type	N	%	N	%
Same DSA	924	91.21	373	34.38
Same Region	54	5.33	405	37.33
National	35	3.46	307	28.29
Total	1013	100.00	1085	100.00

Figure A100 and **Table A100** show pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era and OPTN region. The total number of transplants decreased after policy implementation in Regions 1, 5, and 6. Total number of transplants increased or stayed the same in the remaining regions.

Figure A100: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and OPTN Region

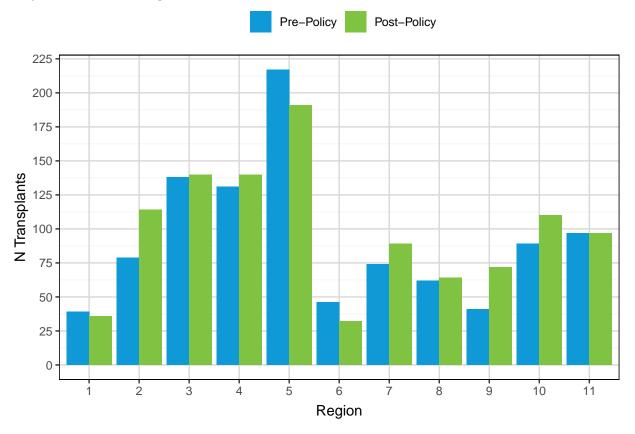
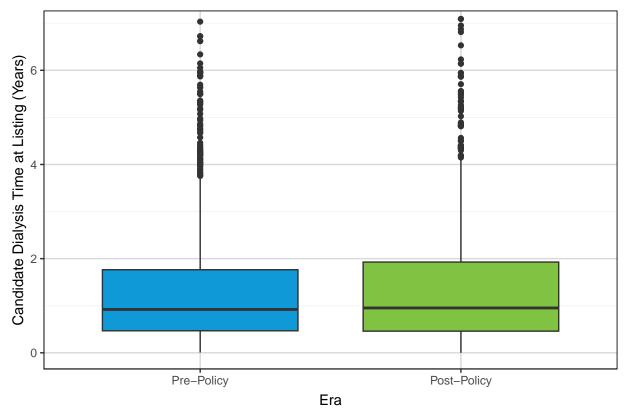


Table A100: Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era and OPTN Region

	Pre-	Policy	Post	-Policy
Region	N	%	N	%
1	39	3.85	36	3.32
2	79	7.80	114	10.51
3	138	13.62	140	12.90
4	131	12.93	140	12.90
5	217	21.42	191	17.60
6	46	4.54	32	2.95
7	74	7.31	89	8.20
8	62	6.12	64	5.90
9	41	4.05	72	6.64
10	89	8.79	110	10.14
11	97	9.58	97	8.94
Total	1013	100.00	1085	100.00

Figure A101 and **Table A101** show the distribution of time on dialysis at listing as reported to the OPTN for pediatric kidney registrations added to the waiting list from March 16, 2019 to March 14, 2023 by policy era. The view is restricted to the 99th percentile of dialysis time. Median dialysis time at listing was roughly 1 year both pre- and post-policy.

Figure A101: Distribution of Time on Dialysis (Years) at Listing for Pediatric Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era



View restricted to 99th percentile.

Table A101: Distribution of Time on Dialysis (Years) at Listing for Pediatric Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era

Era	N	Min	25th %-tile	Med	Mean	75th %-tile	Max
Pre-Policy Post-Policy			•		1.41 1.39		11.52 16.66

Figure A102 and **Table A102** show the distribution of distance in NM from donor hospital to transplant center for pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era. Median distance from the donor hospital increased from 29 NM to 129 NM after policy implementation.

Figure A102: Distribution of Distance from Donor Hospital to Transplant Center for Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

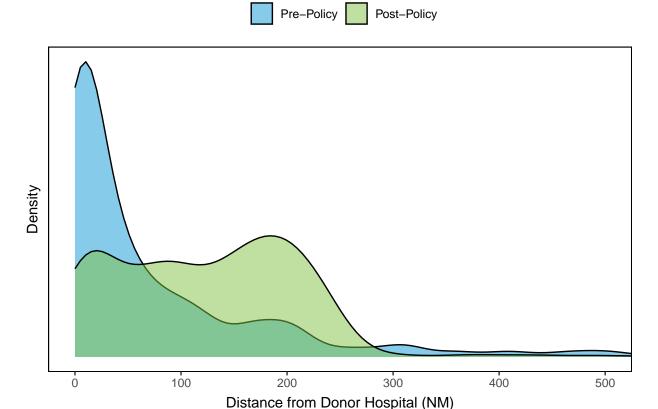
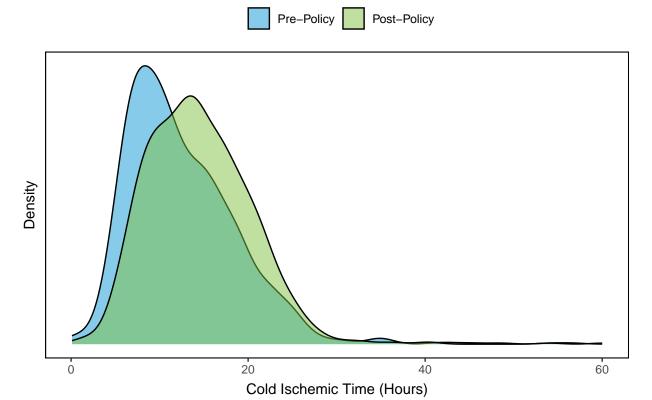


Table A102: Distribution of Distance from Donor Hospital to Transplant Center for Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	1013	0	0	5	29	109	114	2610
Post-Policy	1085	0	0	51	129	147	194	1776

Figure A103 and **Table A103** show the distribution of cold ischemic time in hours for pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era. Median cold ischemic time increased from 11.24 to 14 hours after policy implementation. Cold ischemic time was missing for 1.48% of pediatric transplants pre-policy and 1.84% post-policy.

Figure A103: Distribution of Cold Ischemic Time (Hours) for Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era



Cold ischemic time was missing for 1.48% of pediatric transplants pre-policy and 1.84% post-policy.

Table A103: Distribution of Cold Ischemic Time (Hours) for Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

Era	Total	Missing	Min	25th %-tile	Median	Mean	75th %-tile	Max
Pre-Policy	1013	15	0.10	7.97	11.24	12.60	16.12	56.7
Post-Policy	1085	20	0.68	10.00	14.00	14.51	18.23	60.0

Figure A104 and **Table A104** show rate of delayed graft function for pediatric deceased donor kidney transplants from March 16, 2019 to March 14, 2023 by policy era. The rate of delayed graft function for pediatric recipients was 6.12% pre-policy and 7.19% post-policy.

Figure A104: Rate of Delayed Graft Function for Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

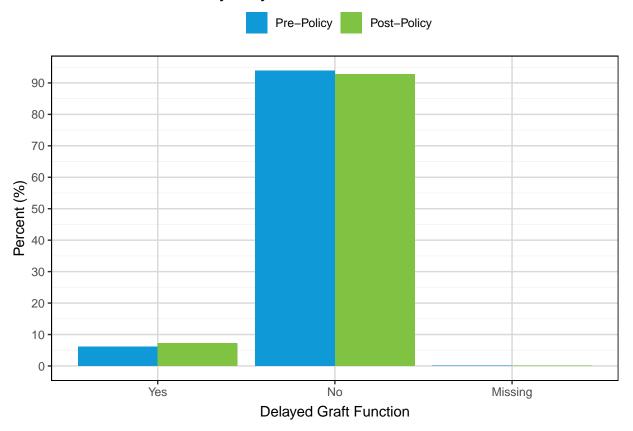


Table A104: Rate of Delayed Graft Function for Pediatric Deceased Donor Kidney Transplants from March 16, 2019 - March 14, 2023 by Policy Era

	Pre-Policy		Post-Policy	
Delayed Graft Function	N	%	N	%
Yes	62	6.12	78	7.19
No	951	93.88	1006	92.72
Missing Total	0 1013	0.00 100.00	1 1085	0.09 100.00

Figure A105 and **Table A105** show one year unadjusted Kaplan Meier post-transplant patient survival for pediatric deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient age at transplant. Patient survival did not change for any age groups after policy implementation.

Figure A105: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Age at Transplant

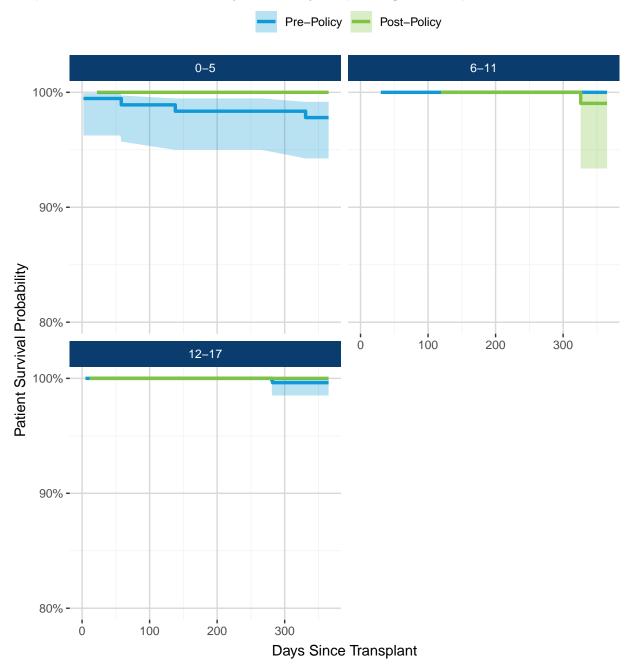


Table A105: One Year Unadjusted Post-Transplant Patient Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Age at Transplant

Recipient Age	Era	N Transplants	N Deaths	N at Risk	Estimate	95% Confidence Interval
0-5	Pre-Policy Post-Policy	186 108	4 0	176 65	97.8 100	(94.2, 99.2)
6-11	Pre-Policy Post-Policy	238 113	0 1	228 72	100 99	(93.4, 99.9)
12-17	Pre-Policy Post-Policy	542 340	2 0	524 210	99.6 100	(98.5, 99.9)

Figure A106 and **Table A106** show one year unadjusted Kaplan Meier post-transplant graft survival for pediatric deceased donor kidney transplants from March 16, 2019 to February 28, 2022 by recipient age at transplant. Graft survival did not change for any age group after policy implementation.

Figure A106: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Age at Transplant



Table A106: One Year Unadjusted Post-Transplant Graft Survival for Deceased Donor Kidney Transplants March 16, 2019 - February 28, 2022 by Recipient Age at Transplant

Recipient Age	Era	N Transplants	N Graft Failures	N at Risk	Estimate	95% Confidence Interval
0-5	Pre-Policy Post-Policy	186 108	7 3	175 64	96.2 97.2	(92.2, 98.2) (91.6, 99.1)
6-11	Pre-Policy	238	5	226	97.9	(95.0, 99.1)
	Post-Policy	113	1	72	99	(93.4, 99.9)
12-17	Pre-Policy	542	12	521	97.8	(96.1, 98.7)
	Post-Policy	340	12	209	96.4	(93.8, 98.0)

Figure A107 and **Table A107** show offers per active patient year for pediatric kidney matches from March 16, 2019 to March 14, 2023 by policy era and age at listing. Offer rates increased for all pediatric age groups after policy implementation.

Figure A107: Offers per Active Patient Year for Pediatric Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

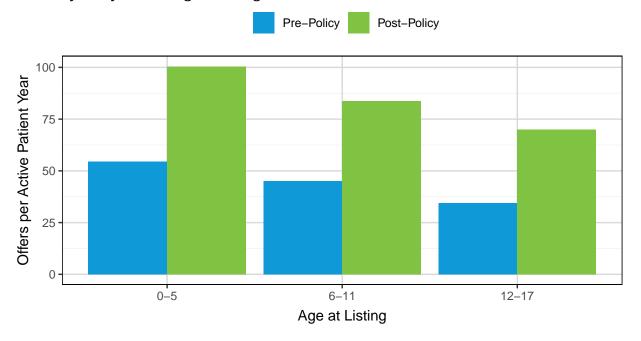


Table A107: Offer and Acceptance Rates for Pediatric Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

Age	Era	Active Patient Years	Offers	Acceptances	Offers per Active Patient Year	Acceptances per 1000 Offers
0-5	Pre-Policy	219.72	11960	234	54.43	19.57
	Post-Policy	158.76	15955	232	100.50	14.54
6-11	Pre-Policy	216.35	9738	254	45.01	26.08
	Post-Policy	153.82	12861	255	83.61	19.83
12-17	Pre-Policy	470.15	16139	589	34.33	36.50
	Post-Policy	331.73	23237	634	70.05	27.28

Figure A108 shows acceptances per 1000 offers for Pediatric kidney match runs from March 16, 2019 to March 14, 2023 by policy era and age at listing. Acceptance rates decreased after policy implementation across all pediatric candidate age groups.

Figure A108: Acceptances per 1000 Offers for Pediatric Kidney Match Runs March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

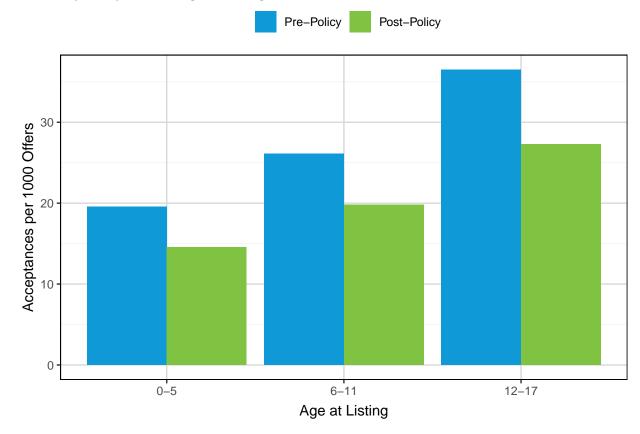


Figure A109 and **Table A108** show deaths per 100 patient years for pediatric kidney registrations ever waiting between March 16, 2019 and March 14, 2023 by policy era and age at listing. Waiting list mortality for pediatric registrations was not significantly different pre to post policy.

Figure A109: Deaths per 100 Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

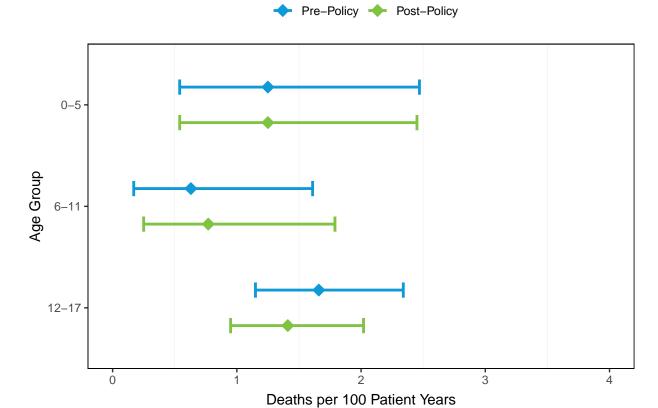
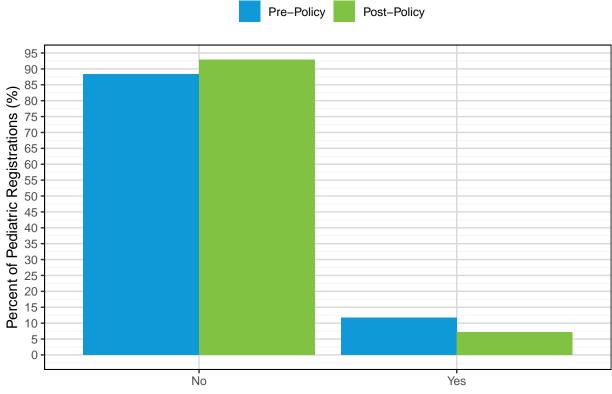


Table A108: Deaths per 100 Patient Years for Pediatric Kidney Registrations Ever Waiting March 16, 2019 - March 14, 2023 by Policy Era and Age at Listing

Age at Listing	Era	Registrations	Deaths	Deaths per 100 Patient Years	95% CI
0-5	Pre-Policy	782	8	1.25	(0.54, 2.47)
	Post-Policy	791	8	1.25	(0.54, 2.45)
6-11	Pre-Policy	738	4	0.63	(0.17, 1.61)
	Post-Policy	764	5	0.77	(0.25, 1.79)
12-17	Pre-Policy	2159	33	1.66	(1.15, 2.34)
	Post-Policy	2316	30	1.41	(0.95, 2.02)

Figure A110 and **Table A109** show pediatric pre-emptively listed kidney registrations added to the waiting list from March 16, 2019 to March 14, 2023 by policy era and dialysis status. The distribution of pediatric registrations on dialysis after being pre-emptively listed changed after policy implementation from 11.68% in the pre-policy era to 7.09% in the post-policy era.

Figure A110: Pediatric Pre-emptively Listed Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Dialysis Status



Registration on dialysis after pre-emptive listing

Table A109: Pediatric Pre-emptively Listed Kidney Registrations Added March 16, 2019 - March 14, 2023 by Policy Era and Dialysis Status

	Pre-Policy		Post-Policy	
Dialysis Status	N	%	N	%
No	1172	88.32	1349	92.91
Yes	155	11.68	103	7.09
Total	1327	100.00	1452	100.00

Table A110 shows the number of Pediatric donors recovered for transplantation between March 16, 2019 - March 14, 2023 by policy era and recipient age at transplant. The distribution of recipients of pediatric donor kidneys changed slightly after policy implementation, with more pediatric donor kidneys going to recipients aged 18-49 and less going to recipients aged 50 and older.

Figure A111: Pediatric Donors Recovered for Transplantation between March 16, 2019 - March 14, 2023 by Policy Era and Recipient Age at Transplant

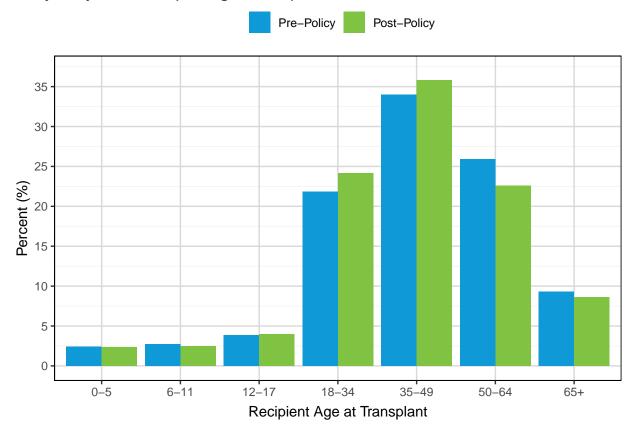


Table A110: Pediatric Donors Recovered for Transplantation between March 16, 2019 - March 14, 2023 by Policy Era and Recipient Age at Transplant

	Pre-Policy		Post-Policy	
Recipient Age at Transplant	N	%	N	%
0-5	67	2.41	71	2.36
6-11	76	2.73	75	2.49
12-17	107	3.85	120	3.99
18-34	608	21.85	727	24.14
35-49	945	33.97	1078	35.80
50-64	720	25.88	681	22.62
65+	259	9.31	259	8.60
Total	2782	100.00	3011	100.00