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TRANSPLANT
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SRTR Update: COVID-19 and SRTR Reporting

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Disclosures

The views expressed do not necessarily reflect the official policies of the U.S. Department of Health and Human Services nor does mention of trade names, commercial practices, or organizations imply endorsement by the U.S. Government.

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Team Acknowledgements

- Andrew Wey, PhD, Principal Biostatistician
- Jon Miller, PhD, Biostatistician
- Donnie Musgrove, PhD, Biostatistician
- Yoon Son Ahn, MS, Biostatistician

SRTR Is Modifying Performance Evaluations in Response to the Pandemic

Beginning with the public reports released in **January 2021**, SRTR will not include information beyond **March 12, 2020** in any **risk adjusted performance metrics**.

Transplant Program Metrics:

- Waitlist mortality rate ratios
- Transplant rate ratios
- Overall mortality following listing rate ratios
- Offer acceptance rate ratios
- Post-transplant graft and patient survival hazard ratios (1-month, 1-year, 3-year)

OPO Metrics:

- Eligible Death Donor Conversion Rate Ratios
- Deceased Donor Yield Ratios

Background

COVID-19 significantly impacted the medical system, including transplantation.

We sought to evaluate the impact of COVID-19 with several unadjusted and adjusted analyses. The adjusted analyses were

- Pre/post COVID-19 comparisons
- Differences across programs and DSAs
- Trend analyses
- Subgroup analyses

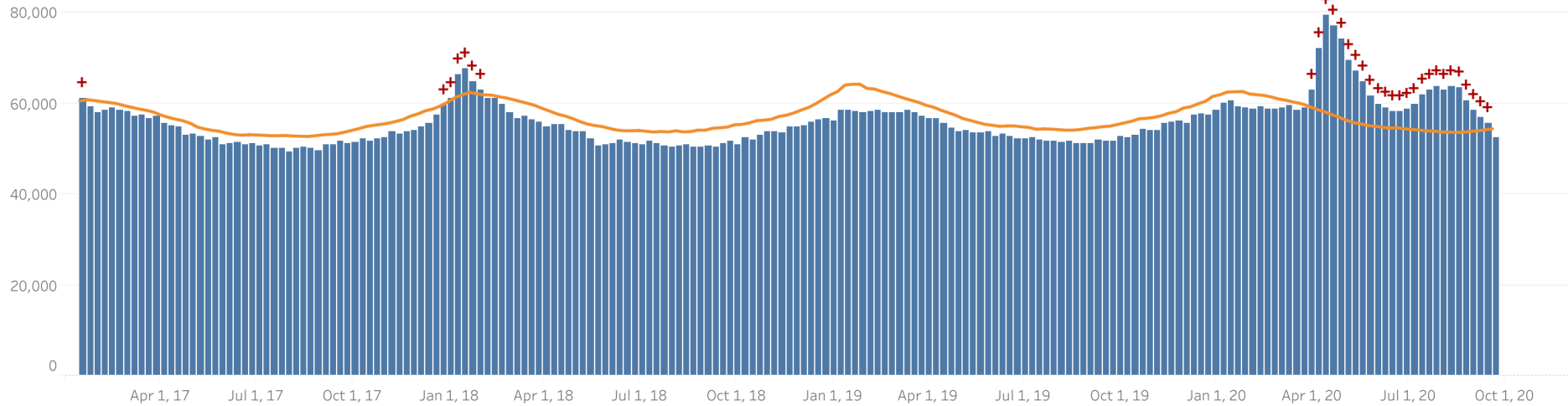
The effect of COVID-19 Nationally

Source:

https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm#dashboard

- + indicates observed count above threshold
- g Predicted number of deaths from all causes
- threshold for excess deaths

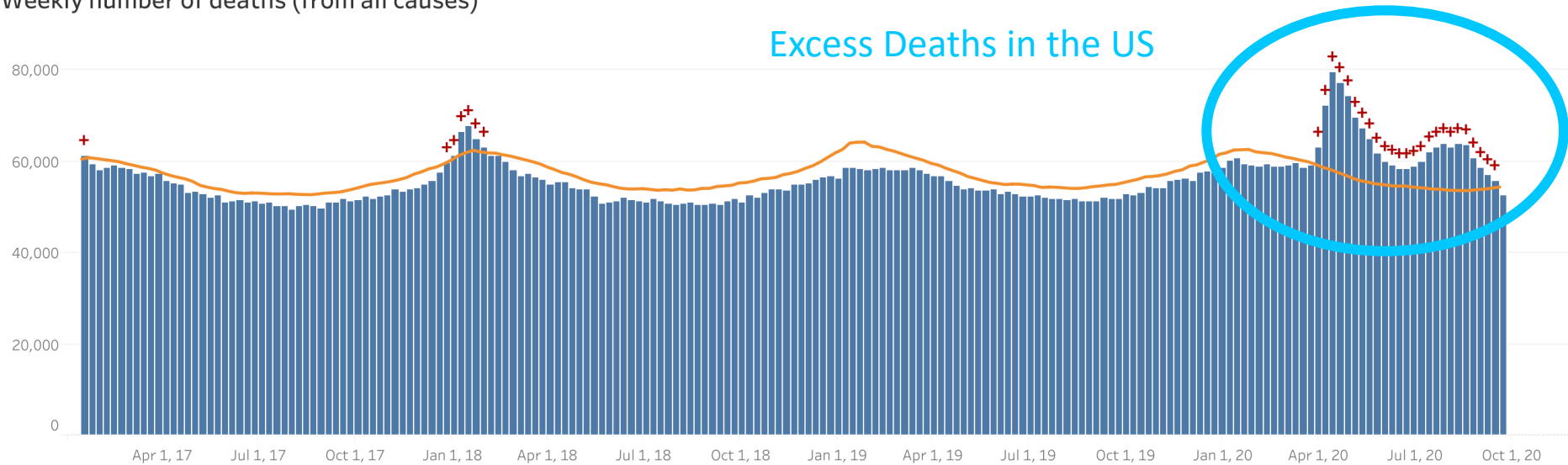
Weekly number of deaths (from all causes)



The effect of COVID-19 Nationally

- + indicates observed count above threshold
- g Predicted number of deaths from all causes
- threshold for excess deaths

Weekly number of deaths (from all causes)



Source: https://www.cdc.gov/nchs/nvss/vsrr/covid19/excess_deaths.htm#dashboard

SRTR's COVID-19 Evaluation

Select Organ ▾

Search by Postal Code or Program Name (optional)

SEARCH

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REPORTS & TOOLS ▾

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REQUESTING SRTR DATA ▾

FAQS ▾

CONTACT US

Over 20,
been pe
year.

HHRI Awarded Co Contract

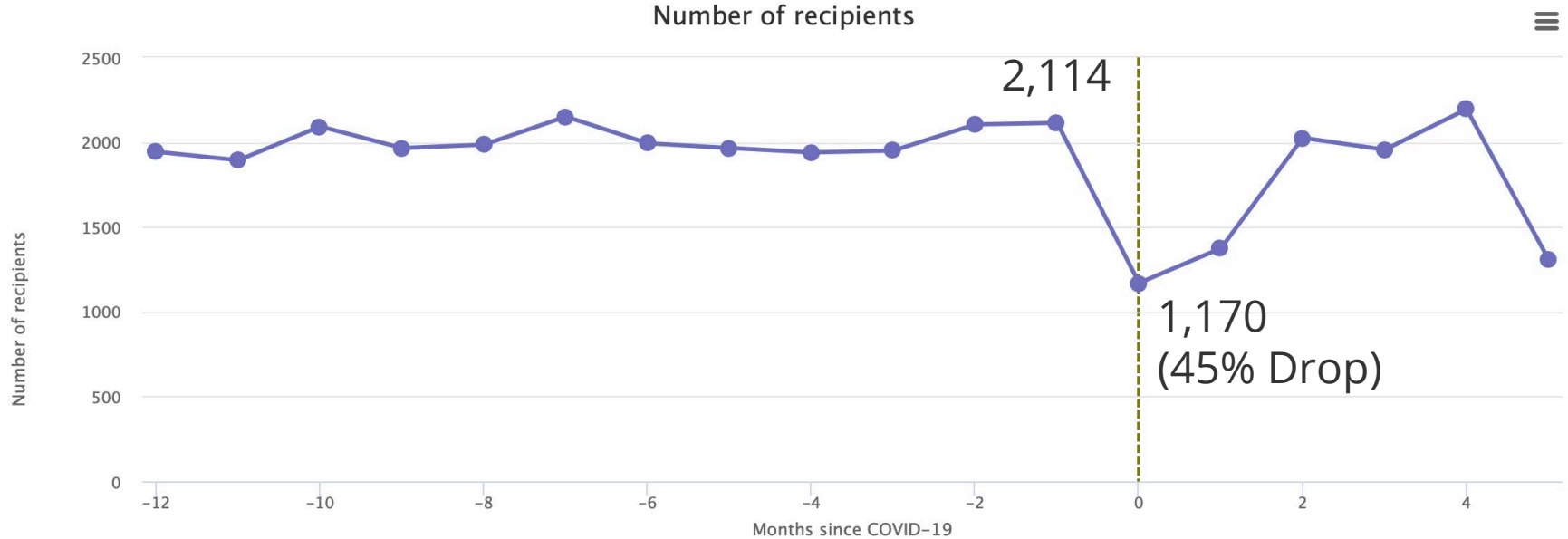
The Chronic Disease Rese
Hennepin Healthcare Res
been awarded its federal
Scientific Registry of Transplant Recipients (SRTR).
Read the announcement:

NEWS

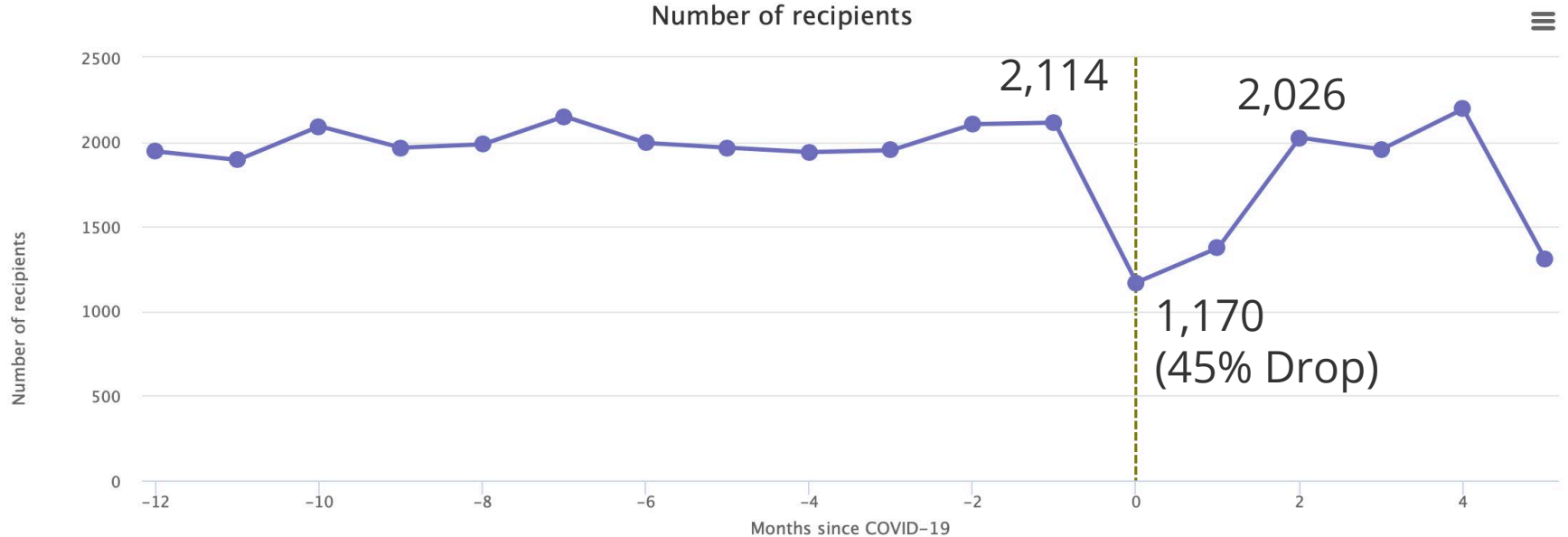
About SRTR Reports
SRTR/OPTN Annual Data Report
Program-Specific Reports
Organ Procurement Organization Reports
Risk Adjustment Models ▾
Posttransplant Outcomes
Waiting List
Offer Acceptance
Deceased Donor Yield
Mortality After Listing
PSR Reporting Timeline
OSR Reporting Timeline
Kidney Transplant Decision Tool
Liver Waiting List Calculator
Acuity Circles Evaluation
[COVID-19 Evaluation](#)

plants have
far this

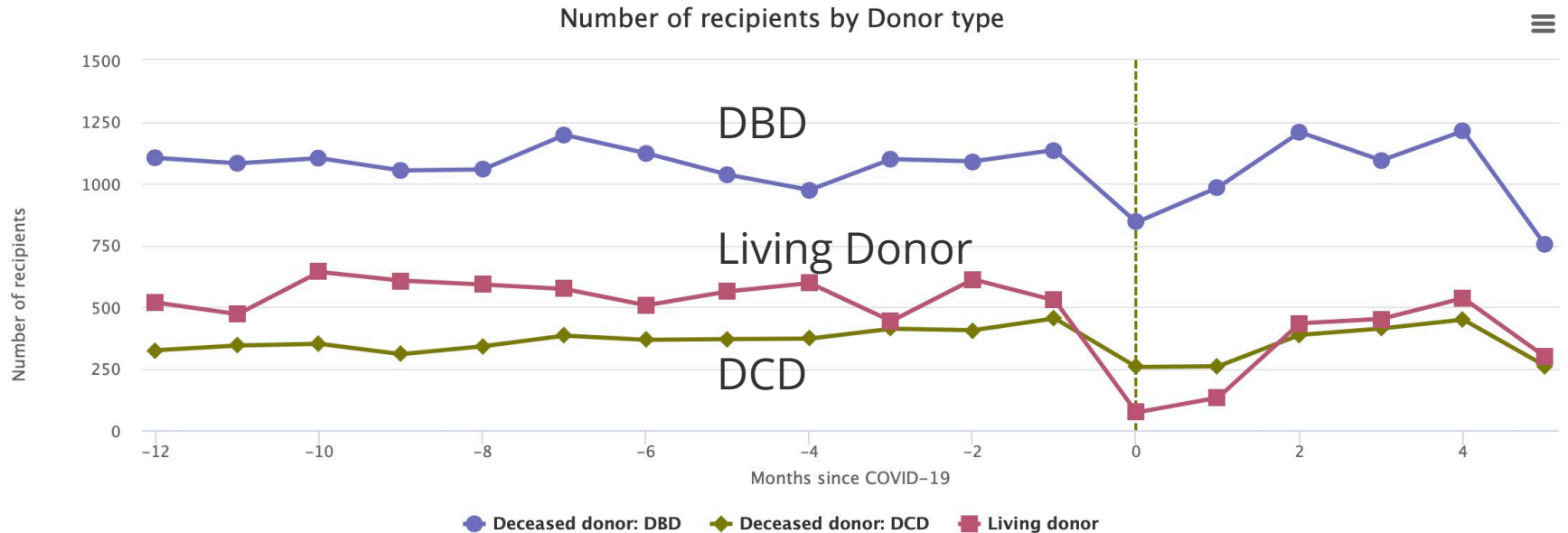
Monthly Kidney Transplant Counts



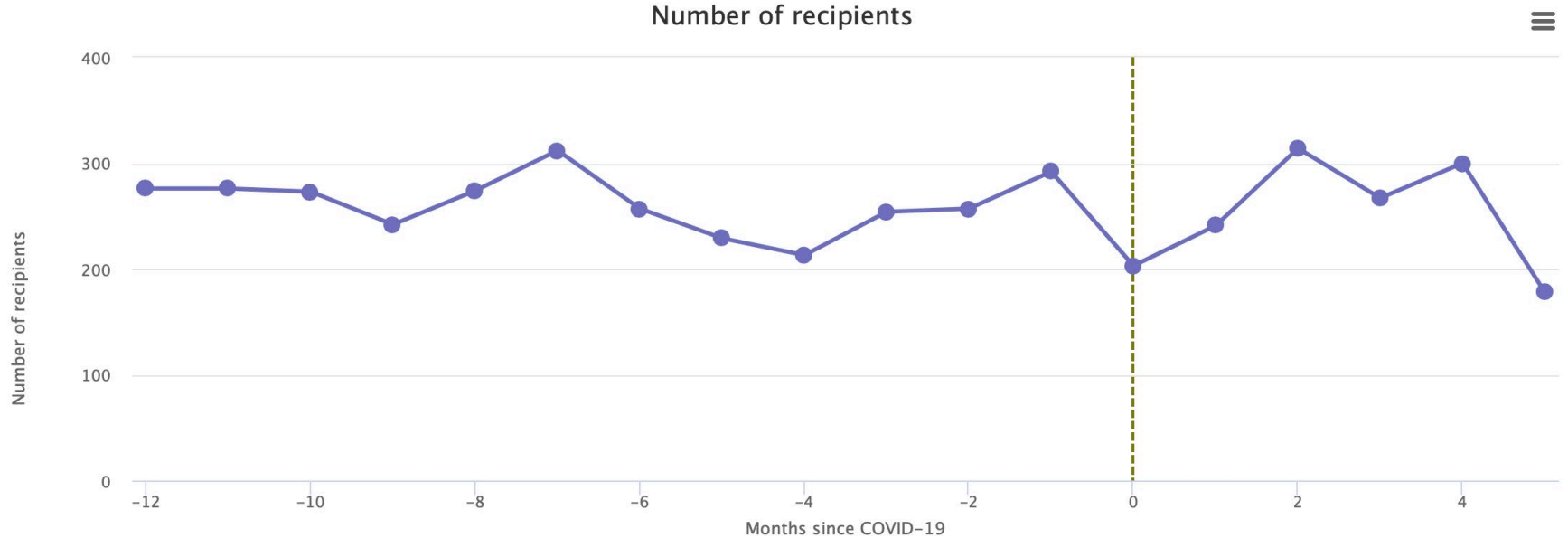
Monthly Kidney Transplant Counts



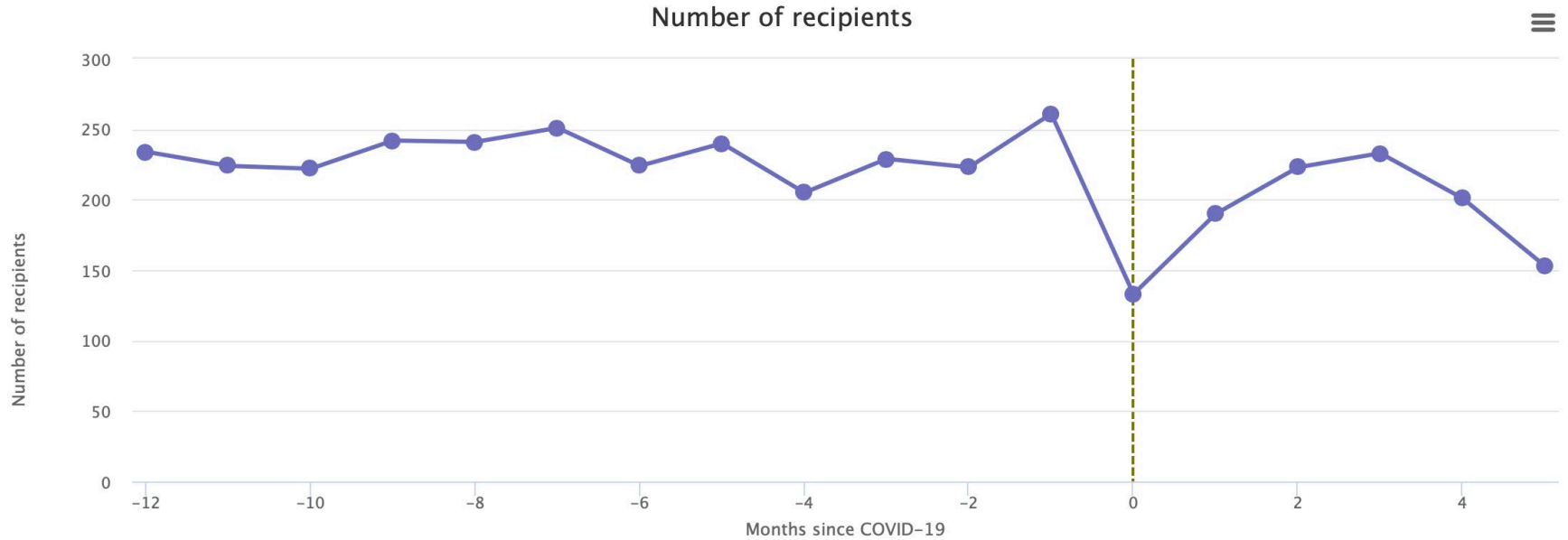
Kidney Transplants by Donor Type



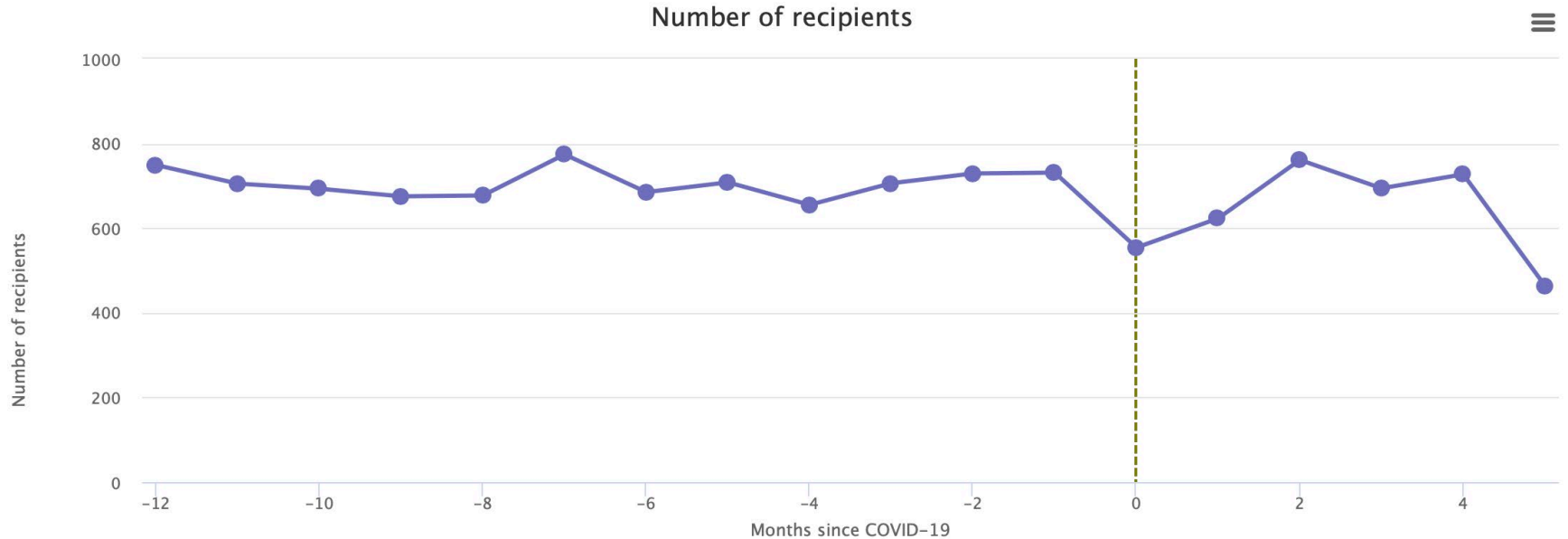
Heart Transplants



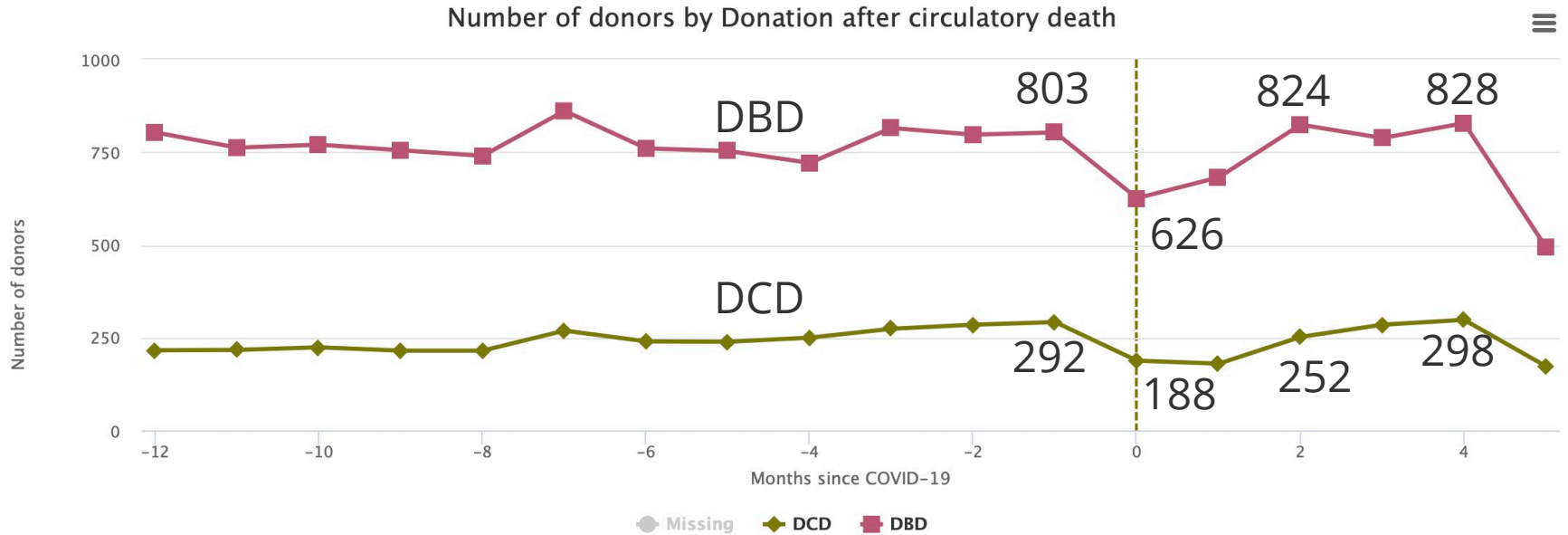
Lung Transplants



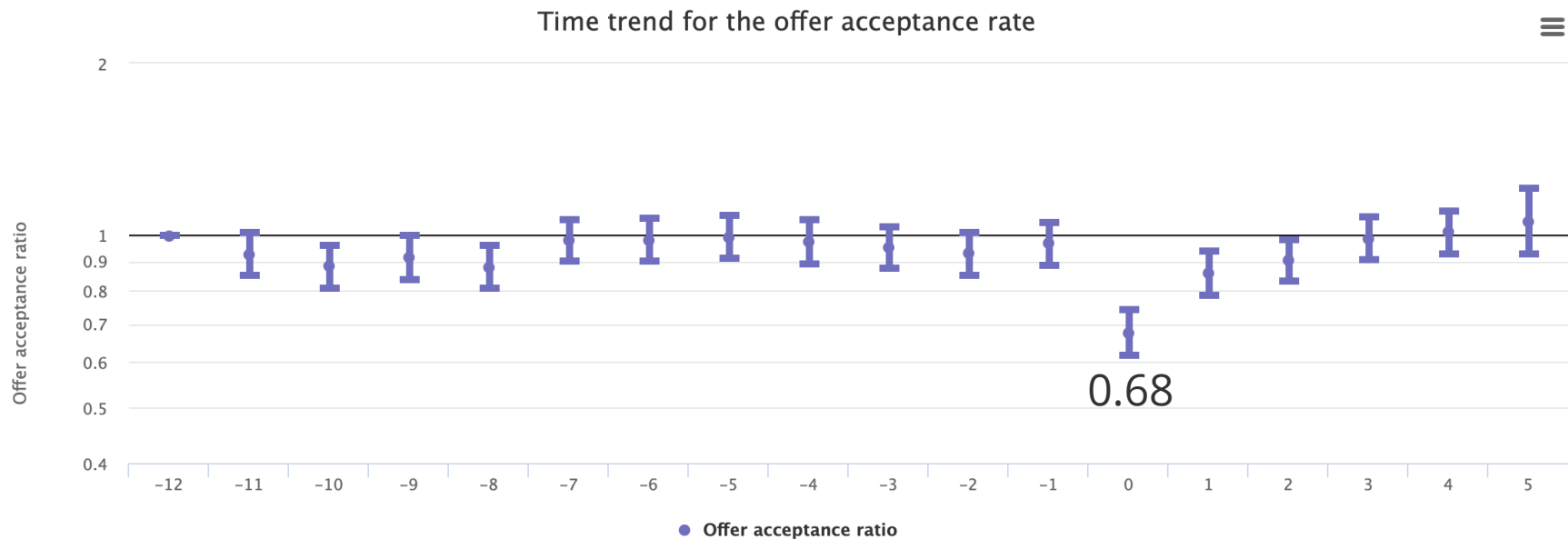
Liver Transplants



Deceased Donors: DBD vs. DCD

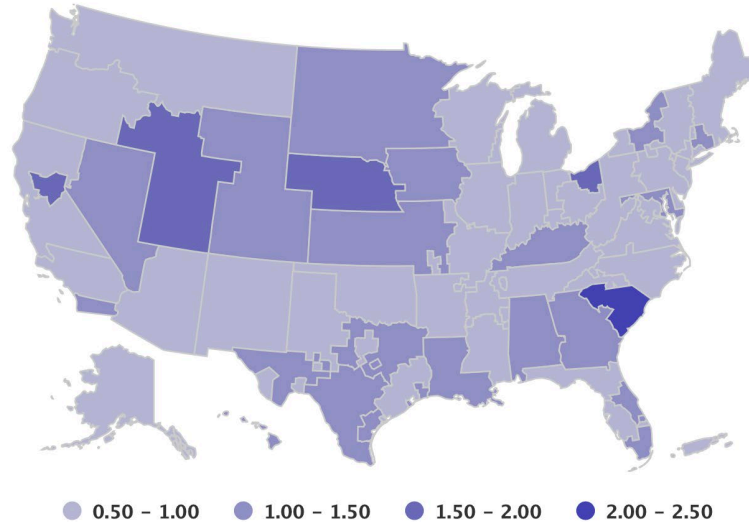


Adjusted Trend in Kidney Offer Acceptance



Kidney Offer Acceptance After vs. Before COVID-19 (March 13, 2020)

Offer acceptance ratios before and after emergence of COVID-19



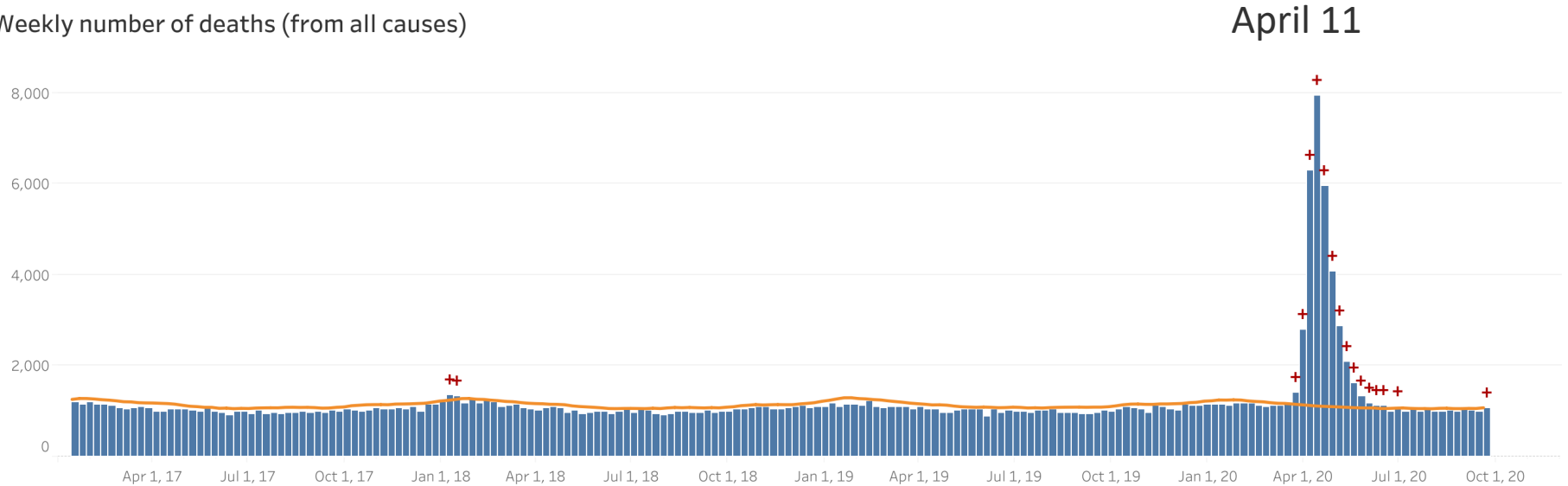
Regional Variation in Excess Deaths - NYC

Select a jurisdiction:

New York City

- + indicates observed count above threshold
- g Predicted number of deaths from all causes
- threshold for excess deaths

Weekly number of deaths (from all causes)



Regional Variation in Excess Deaths - AZ

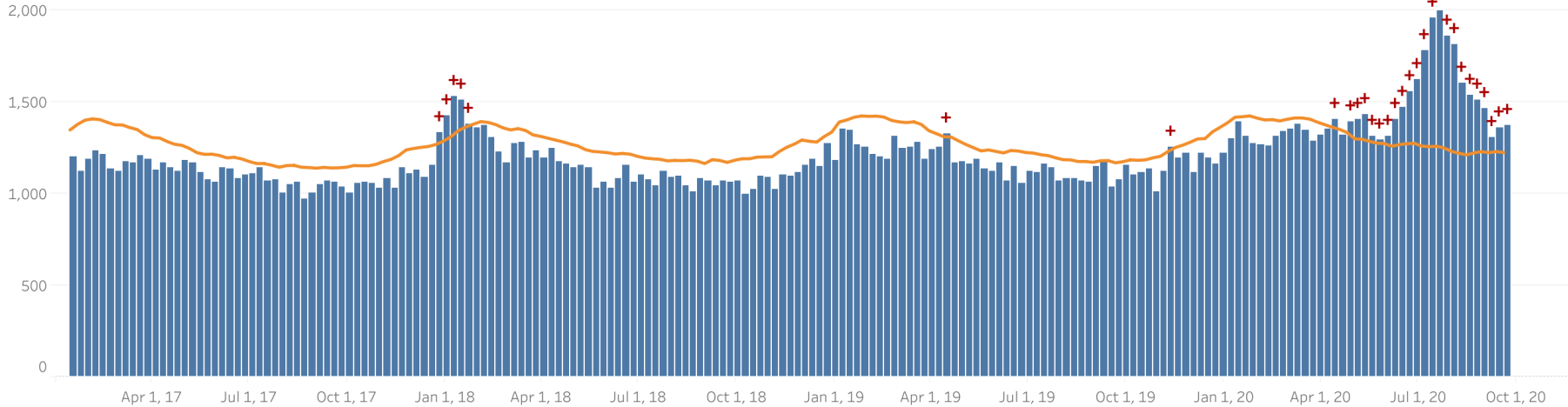
Select a jurisdiction:

Arizona

- + indicates observed count above threshold
- g Predicted number of deaths from all causes
- threshold for excess deaths

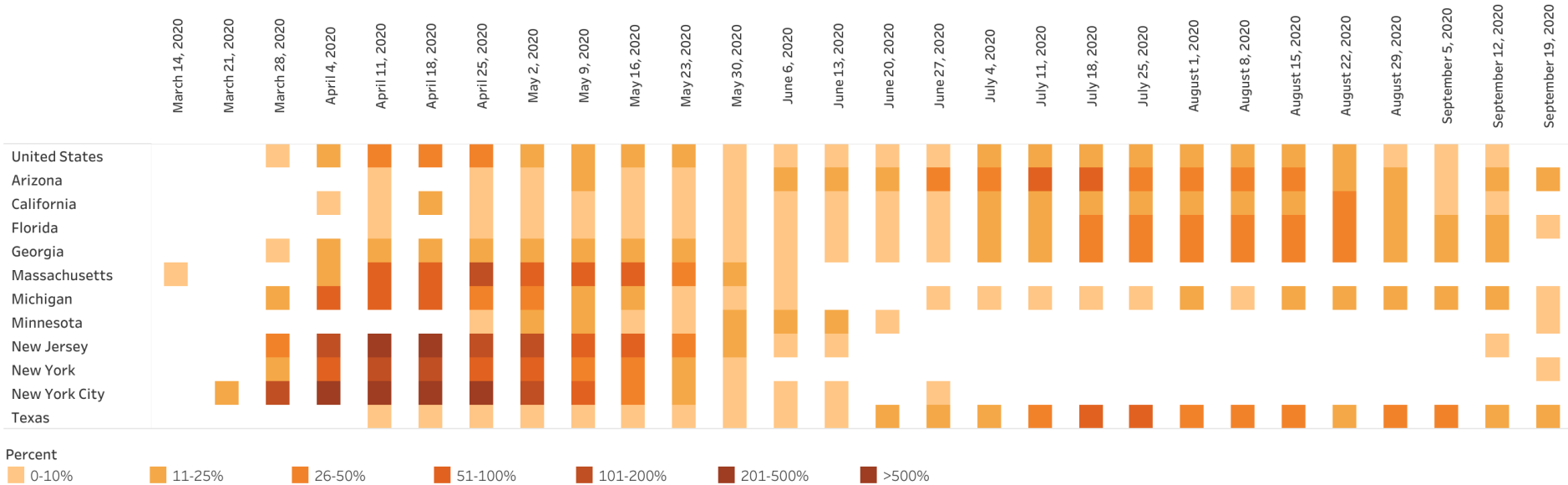
Weekly number of deaths (from all causes)

July 25



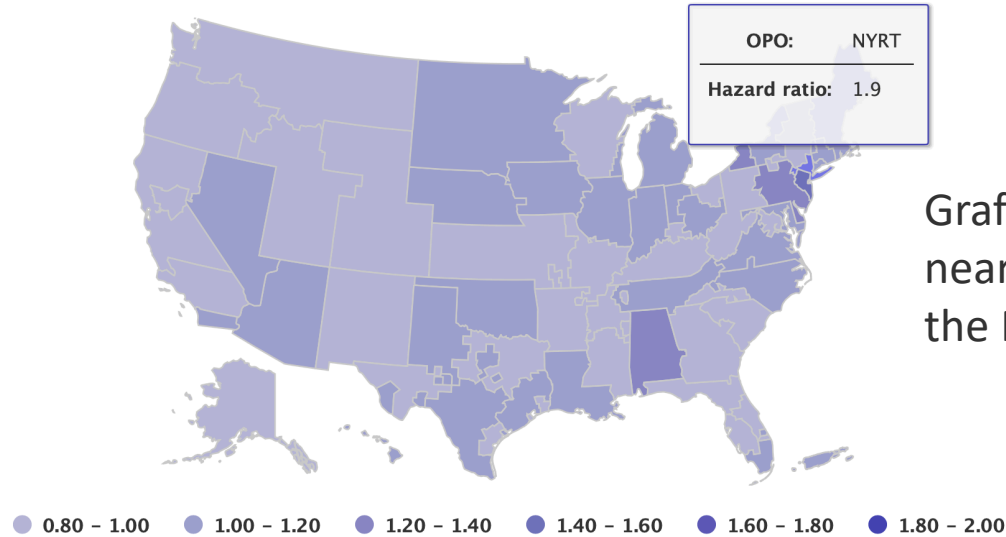
Regional Variation in Excess Deaths

Percent by which predicted count exceeds threshold, by week



Change in Post-Transplant Graft Failure Rate Post vs. Pre COVID (March 13, 2020)

Hazard ratios for the change in graft failure before and after emergence of COVID-19



Graft failure rate nearly doubled in the NYRT DSA

Conclusions

There are two primary conclusions:

- COVID-19 significantly affected most metrics in the PSRs and OSRs.
- The effect of COVID-19 on performance metrics is different depending on geographic location and calendar time.



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Handling COVID-19 in the PSRs/OSRs

SRTR Visiting Committee Recommendation on
July 7, 2020

The Traditional Evaluations:

The Fall/Winter 2020 PSR cycle will be the first cycle with post-COVID-19 data. The traditional risk-adjusted evaluation cohorts are...

- Waiting list outcomes: Cohorts would end on June 30, 2020.
 - Transplant rate
 - Waitlist mortality rate
 - Patient mortality after listing
 - Offer acceptance
- Posttransplant outcomes: Cohorts will include recipients transplanted on or before December 31, 2019, but include follow-up up to June 30, 2020.
- Donor yield: Cohorts would end on June 30, 2020.
- Donation rates: Cohorts would end on June 30, 2020.

PSR/OSR modification

In the January 2021 PSR/OSR cycle...

SRTR will ending follow-up for all risk-adjusted evaluations on March 12, 2020, or the day before the national emergency declaration.

Unadjusted, descriptive statistics unrelated to the risk-adjustment models will continue using normal cohorts, including information after March 12, 2020.

Modification to waiting list models

Transplant rate, waitlist mortality rate, patient mortality after listing:

- Start date: July 1, 2018
- Stop date: March 12, 2020 (from June 30, 2020)

Offer acceptance:

- Start date: July 1, 2019
- Stop date: March 12, 2020 (from June 30, 2020)

Modification to posttransplant models

1-year posttransplant models:

- Start date: July 1, 2017
- Stop date: December 31, 2019
- Censoring date: March 12, 2020 (from June 30, 2020)

3-year posttransplant models:

- Start date: January 1, 2015
- Stop date: June 30, 2017
- Censoring date: March 12, 2020 (from June 30, 2020)

Modification to OSR models

Organ yield models

- Start date: July 1, 2018
- Stop date: March 12, 2020 (from June 30, 2020)

Donation rate models

- Start date: July 1, 2019
- Stop date: March 12, 2020 (from June 30, 2020)

Summary

COVID-19 has caused significant disruption, uncertainty, and apprehension in the transplant community. There is particular concern about the effect of the pandemic on the regulatory review and public reporting of programs.

Because COVID-19 has a differential effect across DSAs/States/Regions for almost all metrics, it will likely confound the risk-adjusted evaluations in the PSR/OSRs.

MPSC and CMS are aware of the SRTR's changes.

SRTR is continuing to monitor. Application is updated monthly.

What happens next?

SRTR and our SRTR Review Committee (previously the SRTR Visiting Committee) will continue to monitor.

No decision yet about when monitoring will resume, and how the “COVID period” will or will not be included in future evaluations.

SRTR will keep the community informed as we know more. Watch the website, sign up for our newsletter, follow us on Twitter!



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