Final Report

OPTN Executive Committee | Descriptive Data Request

Summary of COVID-19 Emergency Policy and IT Changes

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Background/Purpose

The COVID-19 crisis has created challenges to conducting routine outpatient activities, including clinical testing, which are needed to obtain information required for transplant candidates, recipients, and living donors. The goal of these emergency policies is to suspend or modify certain existing policy requirements due to unforeseen circumstances that prevent patients from reaching the transplant program or other health care facility for needed testing or evaluation.

Updates to Candidate Data during 2020 COVID-19 Emergency

One of the many effects of the national emergency is the inability to conduct routine clinical testing that is needed to obtain data required for transplant candidates. Several OPTN organ allocation policies require periodic refreshing of clinical data to establish and maintain waitlist priority. If deadlines for refreshing these data are not met, candidates' urgency, eligibility, or status can be automatically "downgraded." The scope and scale of the COVID-19 crisis necessitates providing an emergency policy solution so that candidates waiting for lifesaving organ transplants are not adversely affected solely because they are unable to undergo testing.

In order to ensure that candidates' allocation scores are not negatively impacted by challenges with clinic visits and laboratory testing, the OPTN Executive Committee approved an emergency policy allowing transplant programs to certify that the lab values already in the system are the most currently available labs and "carry forward" this data, preventing automatic downgrades. Hospitals that wish to update lab values for candidates can still do so. This emergency policy went into effect on March 17, 2020, and expires one year from implementation.

Modifications to wait time initiation for non-dialysis kidney candidates

Modifications to wait time initiation for non-dialysis kidney candidates policy prevents potential non-dialysis candidates who meet creatinine clearance or glomerular filtration rate (GFR) criteria from being disadvantaged. The COVID-19 public health emergency has created a scenario where a patient with a qualifying GFR, at a program that has decided to register the candidate, may be unable to obtain other testing required for registration. As a result, a candidate would be ready for registration but unable to begin accruing waiting time per Policy 8.4. This emergency policy allows transplant programs to submit a waiting time modification application to retroactively initiate waiting time for affected candidates. The OPTN will promulgate information about the special wait time modification form and will be able to backdate the initiation of wait time, retroactive to April 3, 2020, the effective date of the emergency policy.

Relax data submission requirements

Current OPTN policy requires that transplant programs submit numerous data for transplant recipients and living donors. This emergency policy change relaxes requirements for follow-up form submission. The intent of the policy is to prevent unnecessary exposure risk to transplant recipients and living donors, and also to alleviate data burden for centers in the midst of COVID-19 crisis.

This emergency policy suspends the requirements for data collection and submission for the living donor follow-up (LDF), organ specific transplant recipient follow-up (TRF), and recipient malignancy (PTM) forms. The suspension of these requirements is backdated to March 13, 2020 and will expire on September 30, 2020 if the Executive Committee or Board of Directors has not acted before that date. This will not suspend the requirement to report recipient death or graft failure, but will extend the time frame for reporting that information for transplant recipients from 14 days to 30 days of knowledge of the event.

Maintaining waiting time for inactive candidates

Transplant programs may decide that some individual transplant candidates should not receive organ offers at this time due to issues relating to COVID-19. In those cases, they have the option of either temporarily inactivating them or temporarily setting the screening criteria to make them ineligible for organ offers. The option selected may depend on the organ type, the candidate needs, and the program's assessment of their current medical circumstances.

All candidates listed for kidney, kidney-pancreas, pancreas and pancreas islet, as well as lung candidates less than 12 years old continue to accrue unlimited waiting time while at an inactive status. Candidates for heart, lung

(at least 12 years old), liver, intestine and VCA organs do not accrue waiting time while in inactive status per OPTN Policy 3.6.A: Waiting Time for Inactive Candidates. To allow them to continue to accrue waiting time but temporarily render them unable to receive organ offers, programs may adjust their organ acceptance criteria instead of using the COVID-19 inactivation code. Candidates can be listed at the appropriate medical urgency status, and transplant programs can eliminate organ offers for these candidates by ensuring that they are screened from matches.

The recommendation is to set the acceptable donor age acceptance criteria to 98 years (minimum) and 99 years (maximum).

COVID-19 IT modifications

Part 1

A new candidate temporarily inactive reason code, "COVID-19 precaution," has been added to Waitlist to address instances where a transplant program opts to temporarily defer organ offers for a transplant candidate due to issues relating to the COVID-19 outbreak.

Part 2

Due to the COVID-19 pandemic, some transplant programs may want to refuse certain organ offers for reasons related to the candidate, the donor, or OPO or transplant hospital operational issues. For this purpose, beginning March 25, three new refusal codes may be used for COVID-19-related reasons:

- Refusal code 840: COVID-19 candidate-related reason
- Refusal code 841: COVID-19 donor-related reason
- Refusal code 842: COVID-19 OPO or transplant hospital operational issue

Part 3

A new cause of death code for COVID-19 viral infection has been added to Waitlist and TIEDI® to allow transplant program staff to more accurately report data. This new code will allow for better assessment of the impacts of the COVID-19 pandemic on transplant candidates and recipients.

Incorporation of COVID-19 infectious disease testing into DonorNet®

DonorNet® currently captures information regarding potential infectious diseases identified as a result of testing performed on deceased donors, but previously did not include COVID-19. This action adds COVID-19 testing to DonorNet® so accepting centers can see whether donors were tested, and if so what the results were. New data collection elements have been added to DonorNet® to capture information regarding donor COVID-19 (SARS-CoV-2) testing beginning April 21, 2020. OPOs can record whether testing was performed on the donor, and will have the ability to report more than one test result. This new data collection is located under the "Infectious Diseases" tab for OPOs and under "Other Infectious Diseases" tab for transplant programs on a donor record within DonorNet. This action adds COVID-19 testing to DonorNet® so accepting centers can see whether donors were tested, and if so what the results were. Entering this information is not mandatory.

Committee Request

Updates to Candidate Data during 2020 COVID-19 Emergency

The #/% of registrations, by week, that appear to be utilizing this policy based on the following process flow:

- The change date for urgency scores is after the policy was effective, and
- The change date for the urgency scores is different than a prior entry and the same as the modification date, and
- The dates for all required labs (or groups of labs expected to be completed simultaneously) for the urgency scores have changed and are identical, and
- None of the values for the required labs have changed.

Potential policy usage will be reported for adult liver (MELD), pediatric liver (PELD), adult and pediatric lung (LAS), and adult heart (status).

Modifications to wait time initiation for non-dialysis kidney candidates

- January 1, 2020 - current: The #/% of adult kidney registrations added to waiting list (WL), by week, that indicate no dialysis but have a calculated/lab CrCl/GFR of <=20, by week, since January 1, 2020, to determine if there is a decrease in listings for this sub-population during COVID-19. This analysis will rely on dialysis data reported to the OPTN.
- The #/% of wait time modification form requests submitted citing COVID-19, by week, since April 3, 2020.

Relax data submission requirements

For January 1, 2020 – policy expiration:

- The #/% of TRF and LDF forms in each status (validated vs. amnesty), by week form expected and further stratified by organ and region.
- The #/% of total PTM forms generated by week and by status (validated vs. amnesty), and further stratified by organ and region.
- The # of recipient graft failure and death follow-ups reported by week and further stratified by organ and region. Include the median days from event to report.

Maintaining waiting time for inactive candidates

- The # of registrations, by organ (heart, lung (at least 12 years old), liver, intestine), that set their donor age acceptance criteria as recommended: set the acceptable donor age acceptance criteria to 98 years (minimum) and 99 years (maximum).
- The # of registrations, by organ (heart, lung (at least 12 years old), liver, intestine), that move from inactive status to having the recommended donor age acceptance criteria.

COVID-19 IT modifications

- The #/% of new registrations by week in inactive status due to 'COVID-19 precaution' reason code by week, desired organ, geography, and age group, as well as the % of the waiting list at the end of each day that are waiting in inactive status due to 'COVID-19 precaution' by desired organ, geography, and age group.
- The % of matches with at least one COVID-19 refusal reason entered, and #/% of patient refusals by reason (including COVID-19 reasons) by organ and week.
- The #/% of candidates and the #/% of recipients with COVID-19 listed as cause of death by week. Will stratify by organ if data allow.

Incorporation of COVID-19 infectious disease testing into DonorNet®

For donors with at least one organ recovered for transplant:

- The #/% of OPOs utilizing optional COVID testing fields
- The #/% of deceased donors indicating COVID testing was performed
- The national distribution of results if donor was indicated with a 'yes' to COVID testing:
  - Specimen type

- Hemodiluted specimen?
- Test method
- Test result (positive, negative, unknown, cannot disclose, not done, indeterminate)
- A thematic summary of free text entered, as appropriate

Data and Methods

Data Sources:

OPTN data analyzed are as of July 01, 2020 and subject to change based on future data submission or correction.

Methods and Cohort:

Updates to Candidate Data during 2020 COVID-19 Emergency

Adult (age 12 and older) Liver:

The following database fields that have associated dates are required reporting for the re-certification and calculation of MELD labs for candidates age 12 and older: Serum Creatinine, had dialysis twice (24 hours of CVVHD within a week prior to the Serum Creatinine test), Serum Sodium, Bilirubin or Bilirubin (PBC/PSC/Other Cholestatic), and INR.

All instances of a modification to the labs or their corresponding dates, for waiting list registrations of liver candidates age 12 and older since implementation of the policy on March 17, 2020 at 7pm EST, were reviewed. Waiting list registrations were flagged as potential users of this policy based on the following (with the exception of the dialysis field since the OPTN does not collect a date for this):

- The change date for the calculated MELD lab score is on or after March 17, 2020 at 7pm EST, and
- The change date for the calculated MELD lab score is different than the prior entry and
- The dates for all required labs for the calculated MELD lab score have changed, are identical, and are the same as the date of the modification, and
- The values for none of the required labs have changed.

Pediatric (age 11 and younger) Liver:

The following database fields that have associated dates are required reporting for the re-certification and calculation of PELD labs for candidates age 11 and younger: Albumin, Bilirubin or Bilirubin (PBC/PSC/Other Cholestatic), and INR.

All instances of a modification to the labs or their corresponding dates, for waiting list registrations of liver candidates age 12 and older since implementation of the policy on March 17, 2020 at 7pm EST, were reviewed. Waiting list registrations were flagged as potential users of this policy based on the following (with the exception of the dialysis field since the OPTN does not collect a date for this):

- The change date for the calculated PELD lab score is on or after March 17, 2020 at 7pm EST, and
- The change date for the calculated PELD lab score is different than the prior entry, and
- The dates for all required labs for the calculated PELD lab score have changed, are identical, and are the same as the date of the modification, and
- The values for none of the required labs have changed.

Adult/Adolescent (age 12 and older) Lung:

The following groups of database fields that have associated dates are required reporting for the recertification and calculation of LAS labs for candidates age 12 and older: CVP (central venous pressure), Hgb/Hct Test, Pulmonary Function Testing Results (including FVC and FEV data), Bilirubin and Creatinine, Blood Gas information (including pH, pCO2, and PO2), and Heart Catheterization results (including Pulmonary Artery Systolic/Diastolic Pressures, Mean Pulmonary Artery Pressure, Cardiac Output, and Cardiac Index).

All instances of a modification to the labs in each section or their corresponding dates, for waiting list registrations of lung candidates age 12 and older since implementation of the policy on March 17, 2020 at 7pm EST, were reviewed. Waiting list registrations were flagged as potential users of this policy if the following occurred in any one of the groups of testing results:

- The date of modification to the LAS elements is on or after March 17, 2020 at 7pm EST, and
- The given lab date for one of the group of elements is different than the prior entry, and
- The values for all the elements in the corresponding group have not changed from the prior entry.

Pediatric (age 11 and younger) Lung:

The following groups of database fields that have associated dates are required reporting for the recertification and calculation of pediatric Priority 1 Status for candidates age 11 and younger: Blood Gas information (including pH, pCO2, and PO2) and Heart Catheterization results (including Pulmonary Artery Systolic/Diastolic Pressures, Mean Pulmonary Artery Pressure, Cardiac Output, and Cardiac Index).

All instances of a modification to the labs in each section or their corresponding dates, for waiting list registrations of lung candidates age 11 and younger in pediatric Priority Status 1 since implementation of the policy on March 17, 2020 at 7pm EST, were reviewed. Waiting list registrations were flagged as potential users of this policy if the following occurred in any one of the groups of testing results:

- The date of modification to the elements used in determination of Priority 1 status is on or after March 17, 2020 at 7pm EST, and
- The given lab date for one of the group of elements is different than the prior entry, and
- The values for all the elements in the corresponding group have not changed from the prior entry.

Adult (age 18 and older) Heart:

The following groups of database fields that have associated dates are required reporting for the recertification of heart statuses for candidates age 18 and older:

- Status 1: Criteria 1 (hemodynamics, without hemodynamics), or
- Status 2: Criteria 1 (MAP and CI and PCW and SvO2) or Criteria 4 (hemodynamics, without hemodynamics) or Criteria 5 (hemodynamics, without hemodynamics), or
- Status 3: Criteria 2 (CI and PCW and SBP) or Criteria 5 (Therapies A and/or B), or
- Status 4: Criteria 2 (CI and PCW), or
- Statuses 5 and 6 do not have labs that require accompanying dates entries.: Criteria 1 (hemodynamics, without hemodynamics).

All instances of a modification to the required labs or their corresponding dates, for waiting list registrations of heart candidates age 18 and older since implementation of the policy on March 17, 2020 at 7pm EST, were reviewed. Waiting list registrations were flagged as potential users of this policy based on the following:

- The change date for the adult heart justification form is on or after March 17, 2020 at 7pm EST, and
- The adult heart justification form is to qualify the candidate for the same status as the previously submitted form (but can be for different criteria within the same status), and
- The change date for the adult heart justification form is different than the date for the previous justification form, and
- The dates for the required labs, that are the same as the required labs on the previous adult heart justification form, are identical, and the same as the modification date, and
- The values for all the labs within criteria that were required on the previous adult heart justification form have not changed.

Only candidates remaining in the same status were considered; justification forms to move from one status to another were not tabulated.

Modifications to wait time initiation for non-dialysis kidney candidates

Adult kidney registrations added to waiting list that indicate no dialysis but have a CrCl/GFR of <= 20 when added to the waiting list (i.e. at listing) from January 6, 2020 to present. Dialysis indication was based on data reported to the OPTN only.

Waiting time modification forms submitted to the UNOS Organ Center were counted for each month based on submission date, and the percentage of COVID-19 specific requests out of all requests was computed.

Relax data submission requirements

All TRF (transplant recipient follow-up), LDF (living donor follow-up), and PTM (post-transplant malignancy) forms due/expected between January 5, 2020 and present were compiled. Data around the percent of forms in an amnesty status is limited to those forms with a due date/expected date on or after implementation on March 15, 2020. Reporting of graft failures and patient deaths on TRF forms were compiled based on the date form validated since it can be from the original standard follow-up form. Data were stratified by form validation type, organ type, OPTN Region of responsible center, and week form due. Reports of recipient graft failure and death were also displayed by week form validated and the median days from event (graft failure or patient death) to form validation to assess the impact of lengthening the requirement for reporting of these events from 14 to 30 days.

Maintaining waiting time for inactive candidates

The number of active registrations in which the donor age were set as guidance laid out were counted; only the first instance was counted, as registrations can move in and out of active status, and centers can change donor acceptance criteria at any time.

The number of registrations that moved from inactive status to active status, with donor age acceptance criteria set as guidance laid out. Only the first instance of moving from inactive to active is counted per registration.

Data is captured for any registration changes from March 18, 2020 to present.

COVID-19 IT modifications

- Waiting list registration information can be found here: https://unos.org/covid/
- All organ matches with at least one offer made were examined from March 25, 2020 to present. The number of matches with at least one COVID-19 related refusal were counted (match level), and the number of potential transplant recipient COVID-19 related refusals were counted (candidate level). For match level percentages we divided the count of distinct match ids that had one of the three COVID-19 refusal codes entered by the total count of distinct match ids for the same time period by organ. For patient level percentages we divided the sum of each refusal id by the total count of refusals.
- COVID-19 related waiting list deaths were identified as removals from the waiting list for reason of 'Died', and the reported related cause of death was one of the new COVID-19 related causes. Data were stratified by date of removal from the waiting list, which may be later than the date of death when the center doesn't learn of the death immediately.
- COVID-19 related deaths during or post-transplant were identified as deaths reported on the TRR or TRF, and the cause of death was COVID-19. Deaths at recipient follow-up were counted as that recipients' most recent follow-up time period to better represent death date relative to transplant date. Data were examined from March 29, 2020 to present.

Incorporation of COVID-19 infectious disease testing into DonorNet®

DonorNet® COVID-19 infectious disease fields were examined weekly from April 21, 2020 to present. Deceased donors that were recovered (at least one organ recovered for purpose of transplant) were included. Weeks were identified by donor recovery date from April 21, 2020 to present. The testing data reflects only what is reported to the OPTN in the new optional COVID-19 donor testing fields in DonorNet®; in some cases donors may be tested but information was either not entered in DonorNet® or provided in donor highlight text fields or in attachments. For OPO specific results, OPOs must only have indicated testing for at least one deceased donor recovered during the week. For donor specific results, only unique recovered donors are counted. For test specific results, the same donor could have multiple tests recorded, and all results are included.

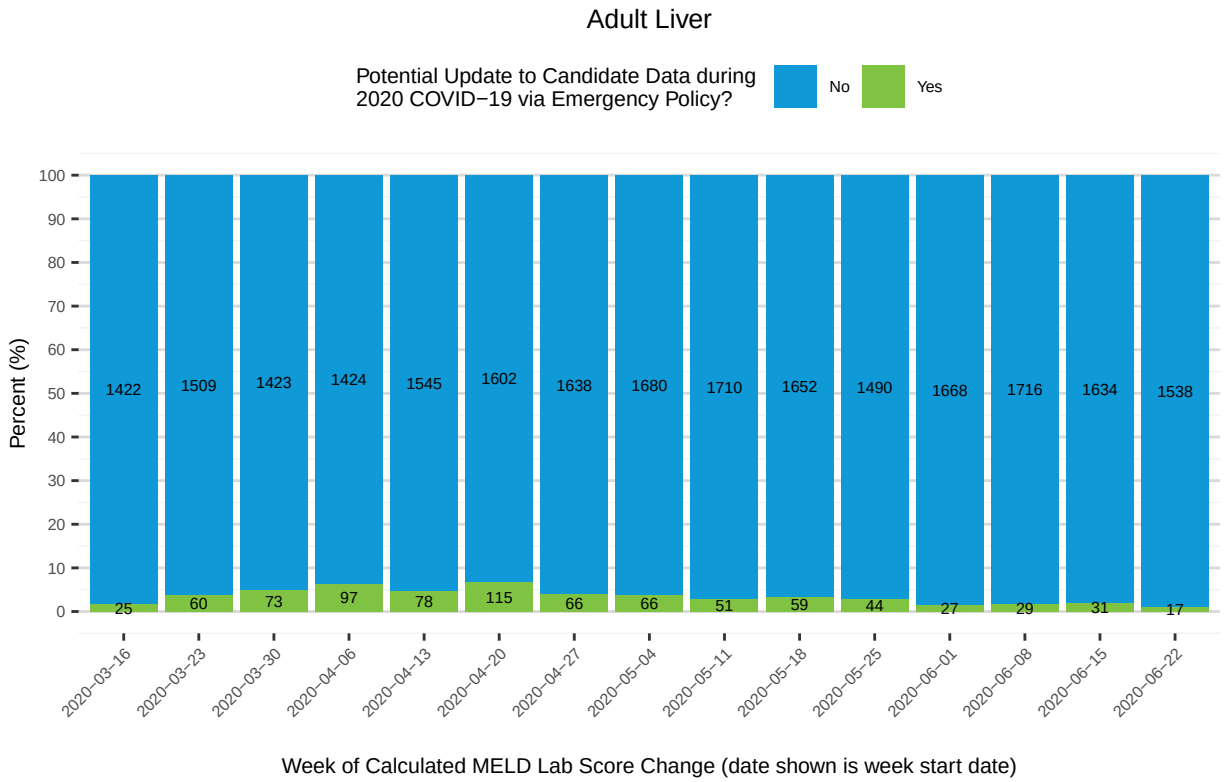
It was observed that not all donors had testing results reported in the new DonorNet® field, but there were some cases where results were recorded in the free-text fields on DonorNet. A natural language analysis was done to

look at how often testing results are reported in both free-text fields and donor attachments. COVID-related terminology ("COVID-19", "COVID", "coronavirus", "SARS-COV-2", etc.) is searched for via regular expressions. Some OPOs have boilerplate language in their free-text related to COVID in general but do not indicate that a specific donor was tested. For example, language like "OPO increased risk due to known cases of COVID-19". This analysis ignores boilerplate comments when searching for COVID terminology. However as a disclaimer, we cannot guarantee that all boilerplate comments were identified.

Results

Updates to candidate lab data during 2020 COVID-19 emergency

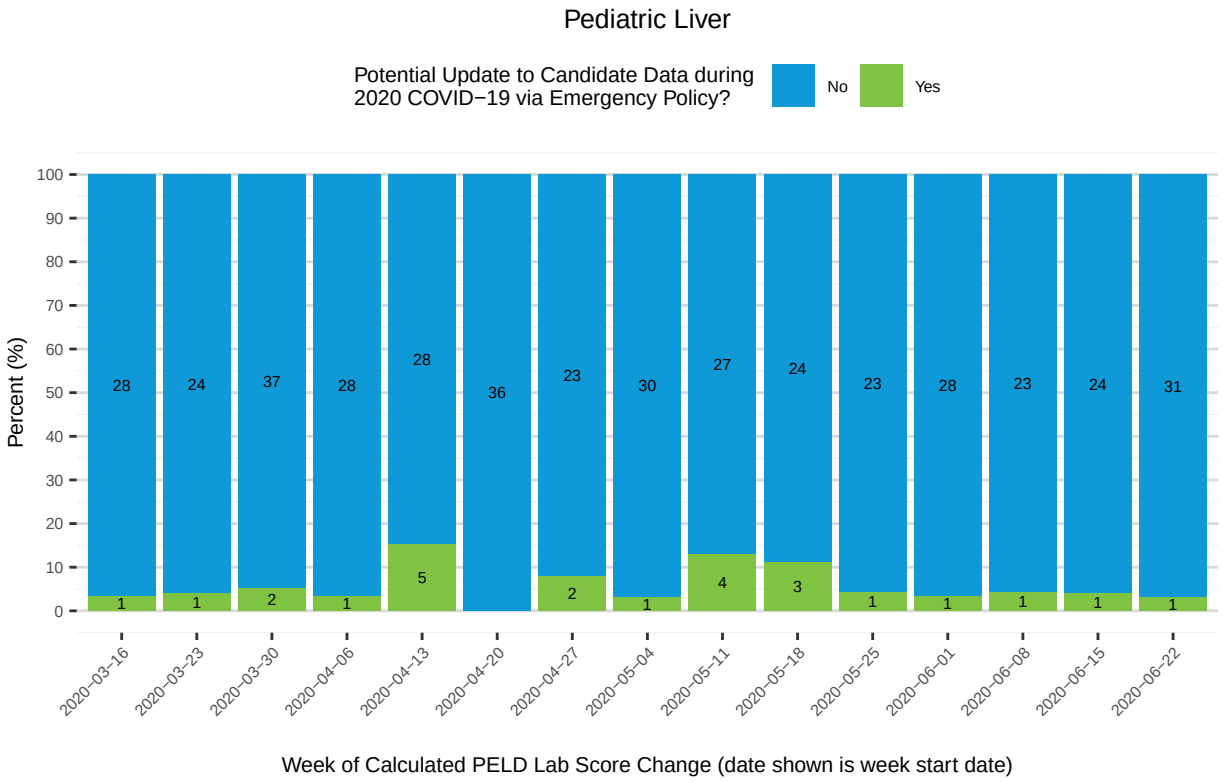
The following sets of graphics and tables shows the number and percent of candidates that appear to use the emergency policy, allowing them to carry labs forward to maintain their wait list status. In general, there appears to be low usage of this policy across all organs/age groups examined. The data presented are the maximum count we can identify, but it's possible that candidates may have had their labs redone and just returned the same values, which the OPTN can not identify.



Weeks run Monday−Sunday.

Table 1: Adult Liver Candidate Labs

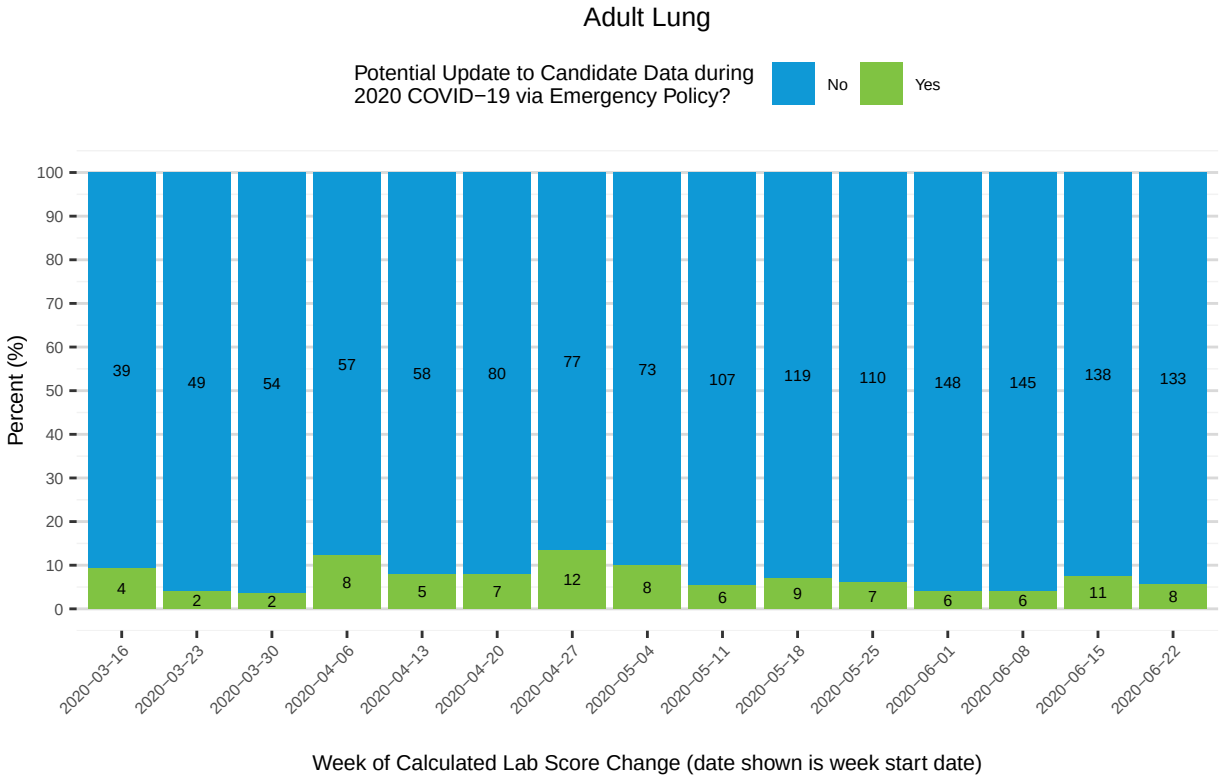
	Potential Emergency Policy for Calculated Lab MELD	
Week (start)	No	Yes
2020-03-16	1422 (98%)	25 (2%)
2020-03-23	1509 (96%)	60 (4%)
2020-03-30	1423 (95%)	73 (5%)
2020-04-06	1424 (94%)	97 (6%)
2020-04-13	1545 (95%)	78 (5%)
2020-04-20	1602 (93%)	115 (7%)
2020-04-27	1638 (96%)	66 (4%)
2020-05-04	1680 (96%)	66 (4%)
2020-05-11	1710 (97%)	51 (3%)
2020-05-18	1652 (97%)	59 (3%)
2020-05-25	1490 (97%)	44 (3%)
2020-06-01	1668 (98%)	27 (2%)
2020-06-08	1716 (98%)	29 (2%)
2020-06-15	1634 (98%)	31 (2%)
2020-06-22	1538 (99%)	17 (1%)



Weeks run Monday−Sunday.

Table 2: Pediatric Liver Candidate Labs

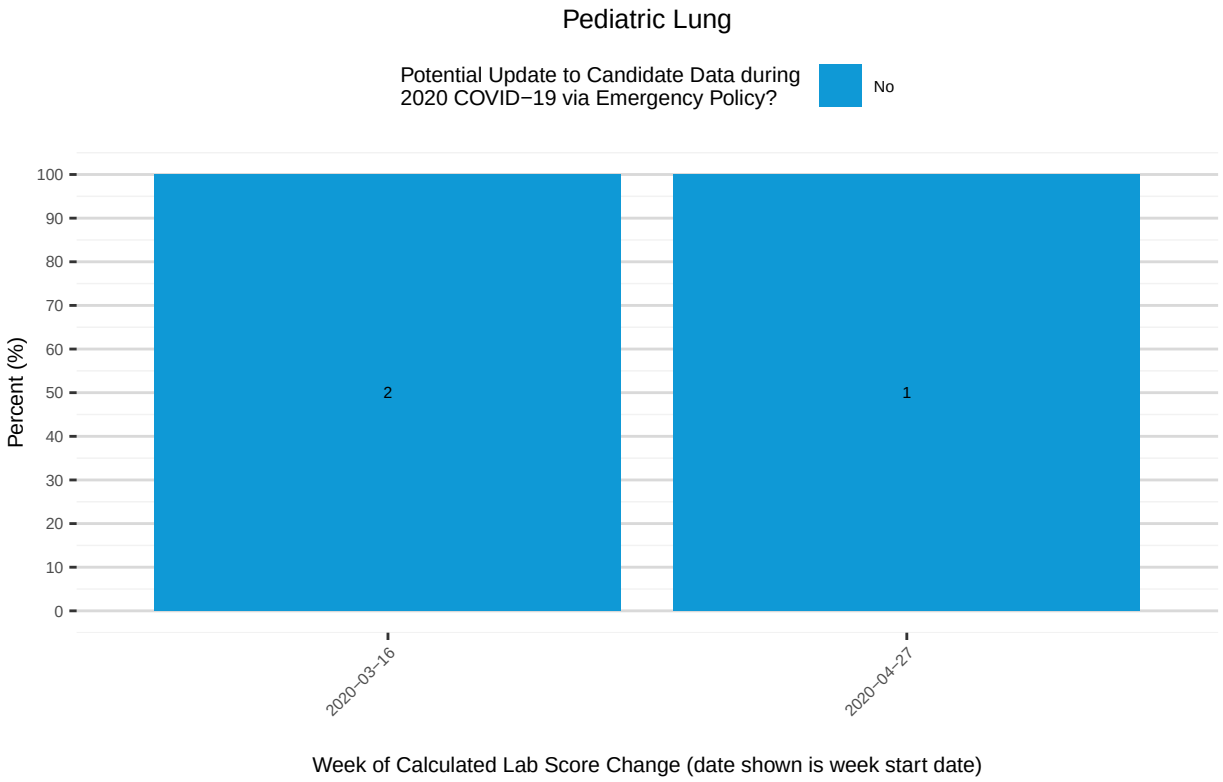
	Potential Emergency Policy for Calculated Lab PELD	
Week (start)	No	Yes
2020-03-16	28 (97%)	1 (3%)
2020-03-23	24 (96%)	1 (4%)
2020-03-30	37 (95%)	2 (5%)
2020-04-06	28 (97%)	1 (3%)
2020-04-13	28 (85%)	5 (15%)
2020-04-20	36 (100%)	0 (0%)
2020-04-27	23 (92%)	2 (8%)
2020-05-04	30 (97%)	1 (3%)
2020-05-11	27 (87%)	4 (13%)
2020-05-18	24 (89%)	3 (11%)
2020-05-25	23 (96%)	1 (4%)
2020-06-01	28 (97%)	1 (3%)
2020-06-08	23 (96%)	1 (4%)
2020-06-15	24 (96%)	1 (4%)
2020-06-22	31 (97%)	1 (3%)



Weeks run Monday−Sunday.

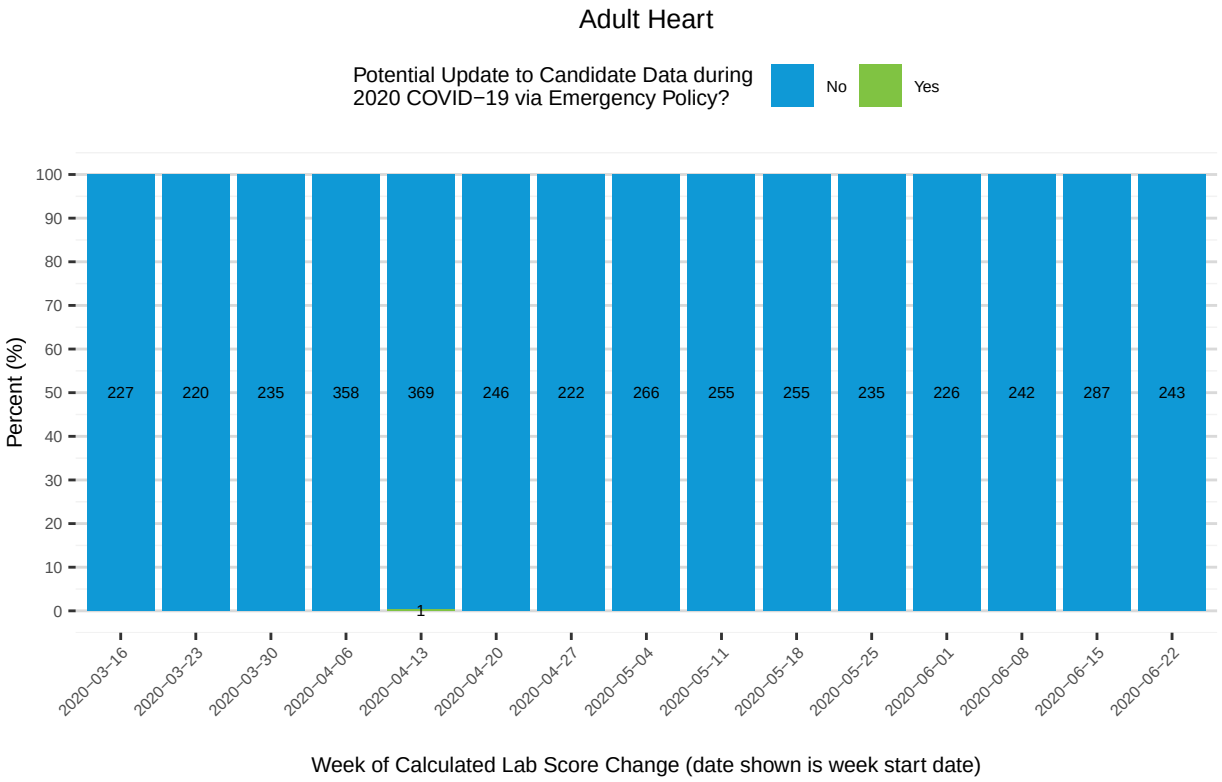
Table 3: Adult Lung Candidate Labs

	Potential Emergency Policy for Calculated Labs	
Week (start)	No	Yes
2020-03-16	39 (91%)	4 (9%)
2020-03-23	49 (96%)	2 (4%)
2020-03-30	54 (96%)	2 (4%)
2020-04-06	57 (88%)	8 (12%)
2020-04-13	58 (92%)	5 (8%)
2020-04-20	80 (92%)	7 (8%)
2020-04-27	77 (87%)	12 (13%)
2020-05-04	73 (90%)	8 (10%)
2020-05-11	107 (95%)	6 (5%)
2020-05-18	119 (93%)	9 (7%)
2020-05-25	110 (94%)	7 (6%)
2020-06-01	148 (96%)	6 (4%)
2020-06-08	145 (96%)	6 (4%)
2020-06-15	138 (93%)	11 (7%)
2020-06-22	133 (94%)	8 (6%)



Weeks run Monday−Sunday.

No table is provided for pediatric lung due to small sample size.



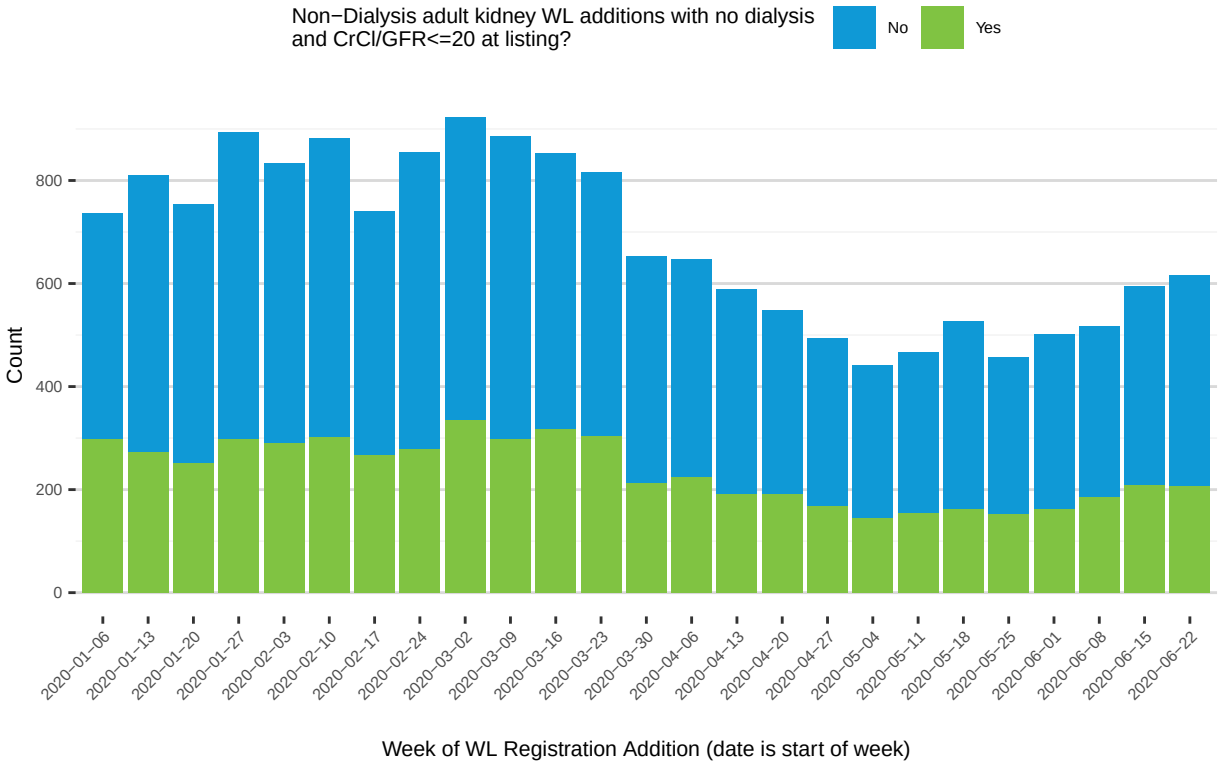
Weeks run Monday−Sunday.

Table 4: Adult Heart Candidate Labs

	Potential Emergency Policy for Calculated Labs	
Week (start)	No	Yes
2020-03-16	227 (100%)	0 (0%)
2020-03-23	220 (100%)	0 (0%)
2020-03-30	235 (100%)	0 (0%)
2020-04-06	358 (100%)	0 (0%)
2020-04-13	369 (100%)	1 (0%)
2020-04-20	246 (100%)	0 (0%)
2020-04-27	222 (100%)	0 (0%)
2020-05-04	266 (100%)	0 (0%)
2020-05-11	255 (100%)	0 (0%)
2020-05-18	255 (100%)	0 (0%)
2020-05-25	235 (100%)	0 (0%)
2020-06-01	226 (100%)	0 (0%)
2020-06-08	242 (100%)	0 (0%)
2020-06-15	287 (100%)	0 (0%)
2020-06-22	243 (100%)	0 (0%)

Modifications to wait time initiation for non-dialysis kidney candidates

The next set of graphics and tables show the number of adult (18+) kidney alone registrations. Registrations overall dipped during COVID-19, but recent weeks have shown a slow increase. The proportion of candidates that were non-dialysis (i.e. qualified for waiting time through eGFR or Creatinine Clearance thresholds) remained stable.

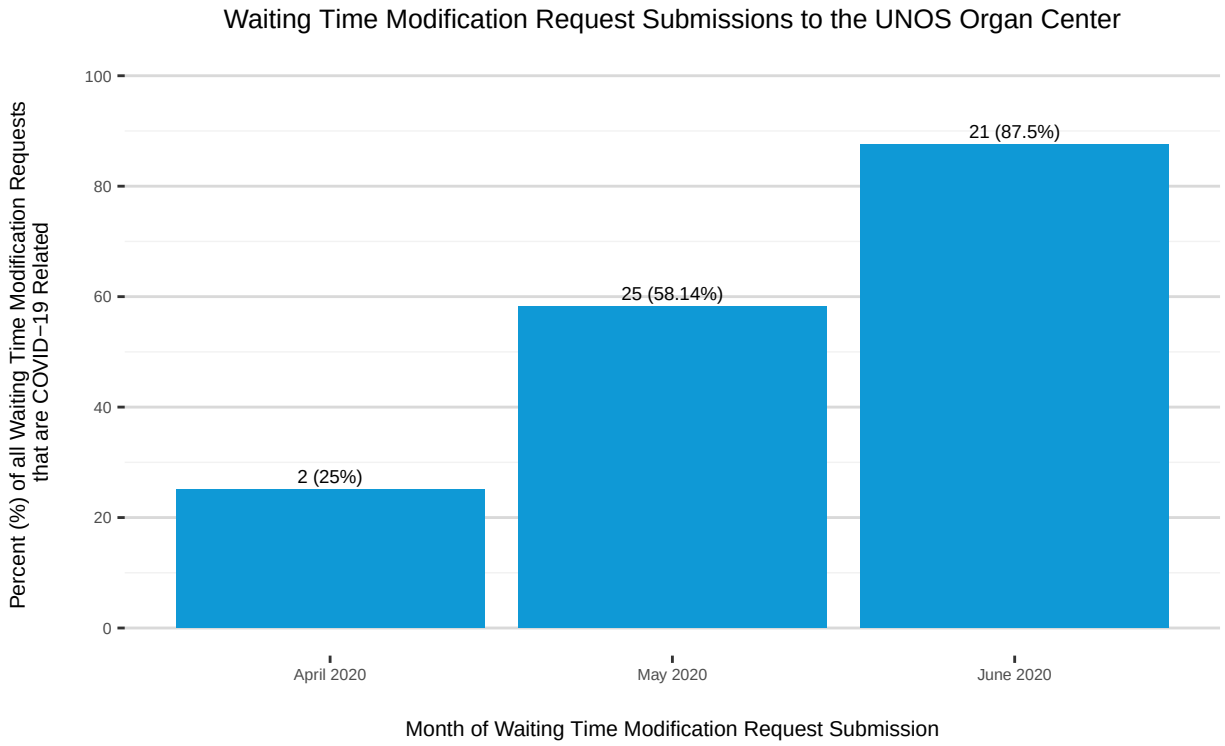


Weeks run Monday−Sunday.

Table 5: Non-Dialysis Adult Kidney WL Additions

	Non-Dialysis adult kidney WL additions with no dialysis and CrCl/GFR<=20 at listing?	
Week (start)	No	Yes
2020-01-06	440 (59.7%)	297 (40.3%)
2020-01-13	537 (66.3%)	273 (33.7%)
2020-01-20	502 (66.6%)	252 (33.4%)
2020-01-27	596 (66.7%)	297 (33.3%)
2020-02-03	544 (65.2%)	290 (34.8%)
2020-02-10	579 (65.7%)	302 (34.3%)
2020-02-17	474 (64%)	267 (36%)
2020-02-24	575 (67.3%)	279 (32.7%)
2020-03-02	587 (63.7%)	335 (36.3%)
2020-03-09	587 (66.3%)	298 (33.7%)
2020-03-16	537 (62.9%)	317 (37.1%)
2020-03-23	511 (62.7%)	304 (37.3%)
2020-03-30	440 (67.4%)	213 (32.6%)
2020-04-06	423 (65.3%)	225 (34.7%)
2020-04-13	396 (67.3%)	192 (32.7%)
2020-04-20	357 (65%)	192 (35%)
2020-04-27	327 (66.2%)	167 (33.8%)
2020-05-04	298 (67.4%)	144 (32.6%)
2020-05-11	311 (66.7%)	155 (33.3%)
2020-05-18	364 (69.2%)	162 (30.8%)
2020-05-25	304 (66.5%)	153 (33.5%)
2020-06-01	339 (67.7%)	162 (32.3%)
2020-06-08	332 (64.2%)	185 (35.8%)
2020-06-15	388 (65.1%)	208 (34.9%)
2020-06-22	408 (66.3%)	207 (33.7%)

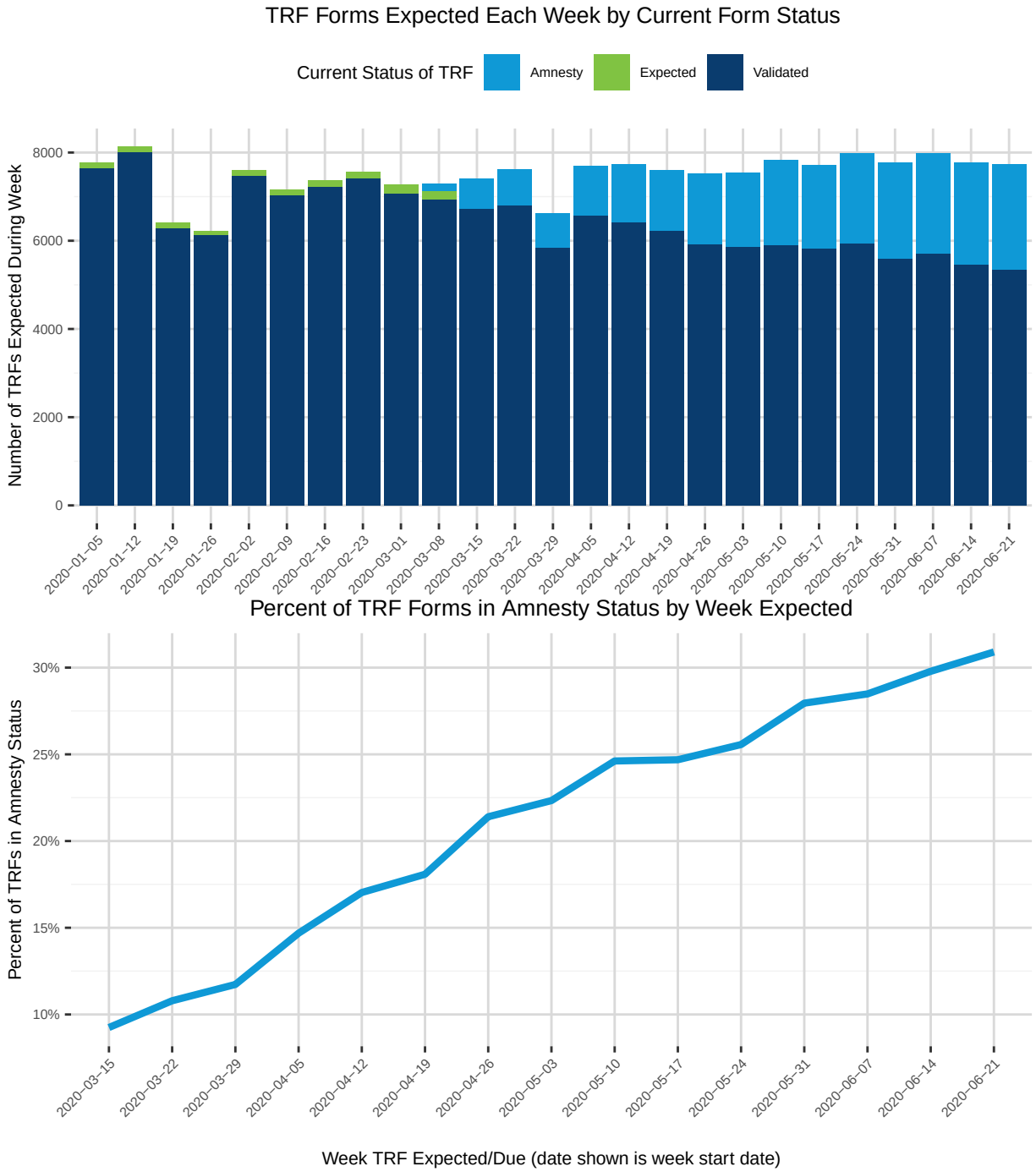
By month, the next graphic shows the number and percent of waiting time modification request forms submitted to the UNOS Organ Center that were related to COVID-19, meaning the candidate could be ready for registration during COVID-19 but unable to begin accruing waiting time per Policy 8.4 if they weren't able to obtain other testing required for registration during this time.



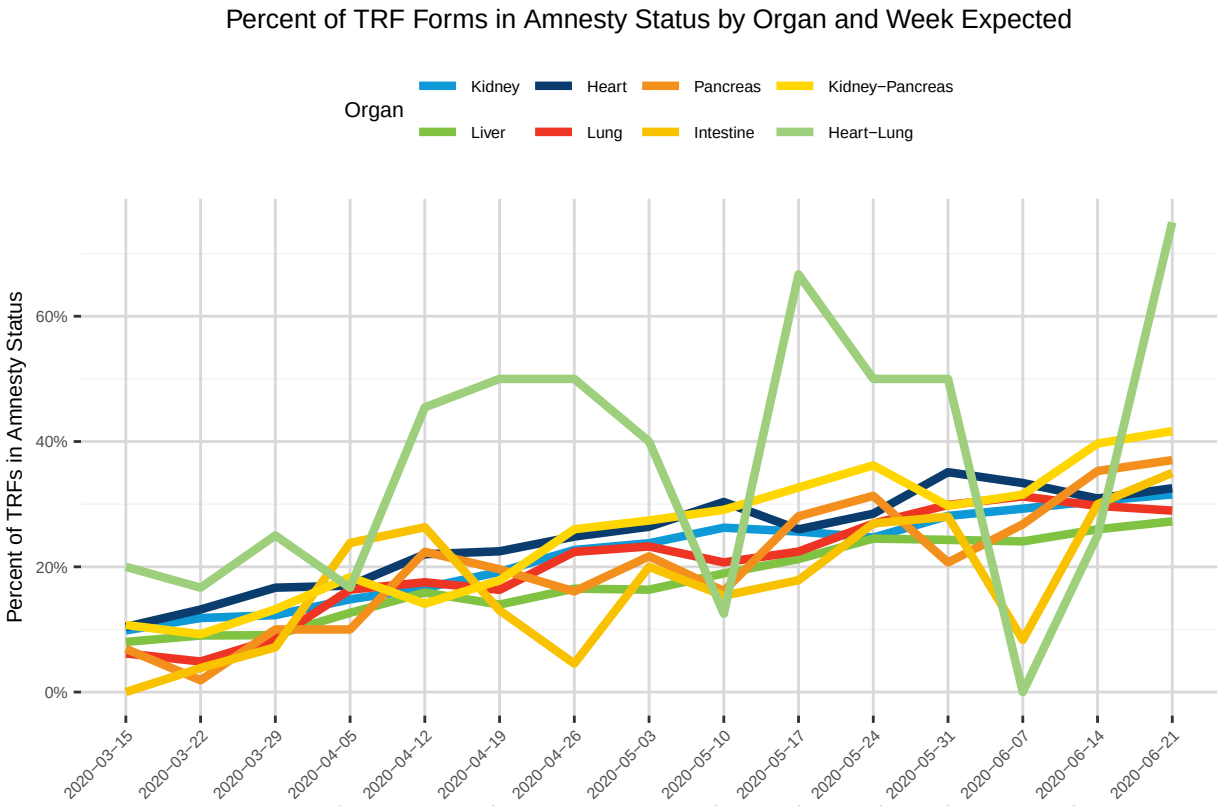
Relax data submission requirements

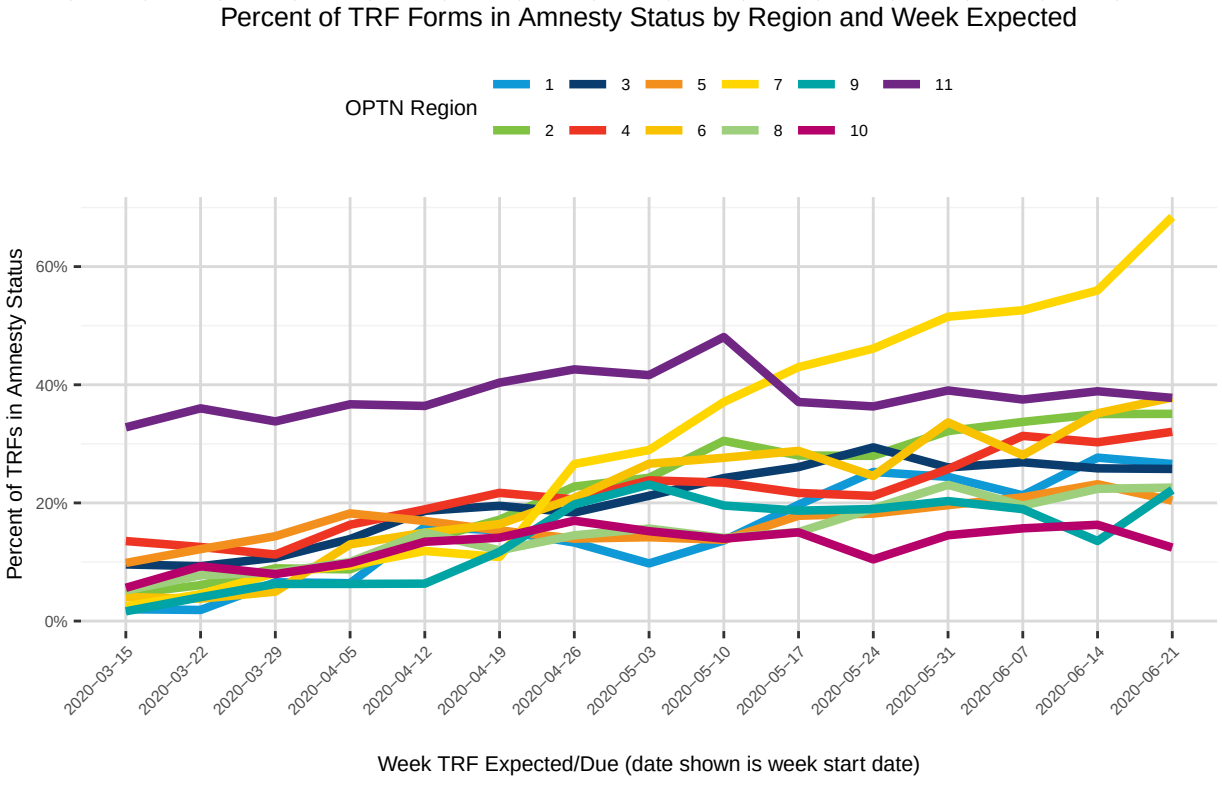
Each night until September 30, 2020, the current expiration date for this policy, forms in expected status switch to amnesty status.

The following set of graphics show the number and percent of transplant recipient follow-up (TRF) forms in amnesty status by week, OPTN region, and organ. As expected, the number of forms with expected dates that move into amnesty status is increasing over time since policy implementation.



Weeks run Sunday–Saturday.

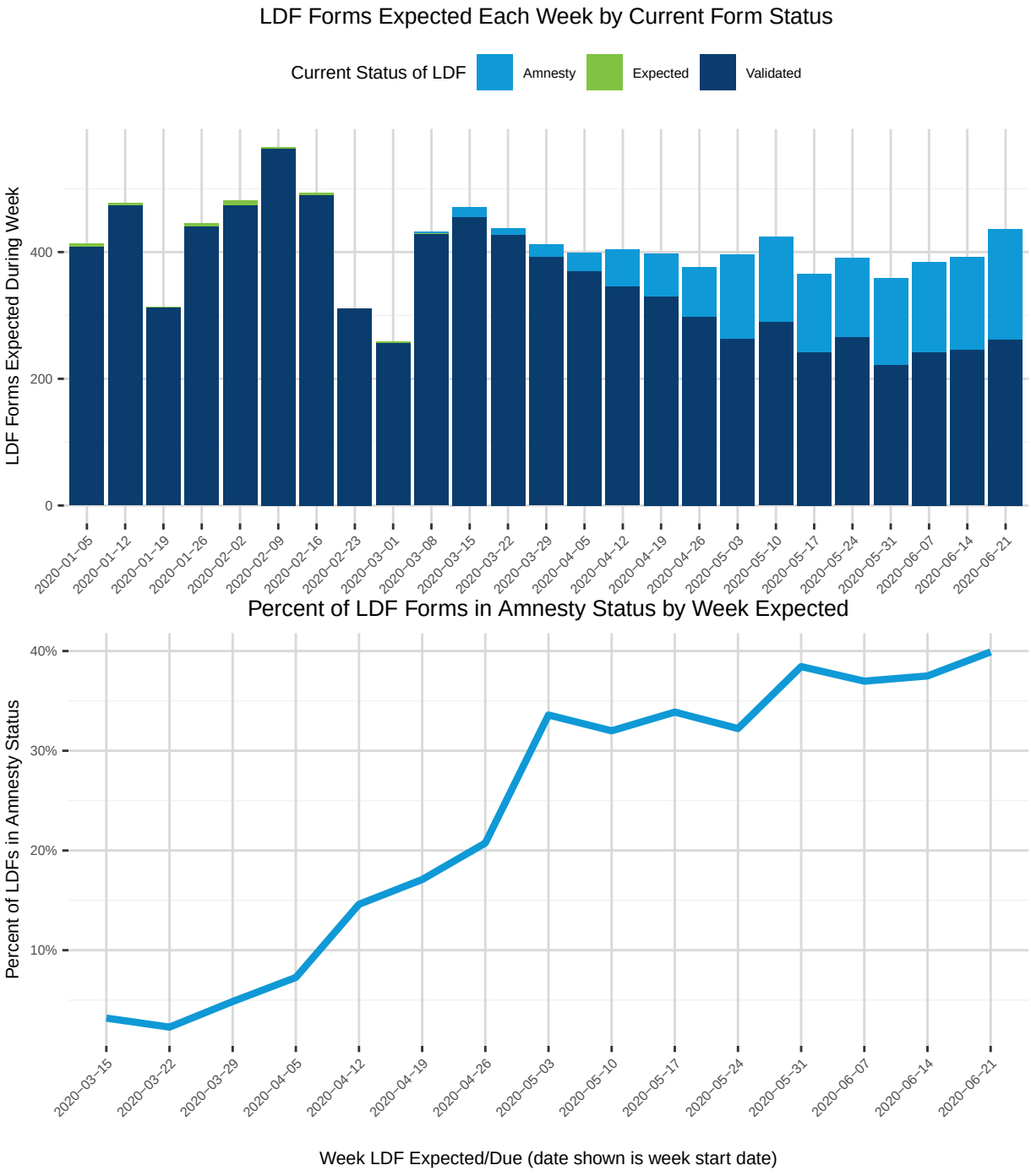




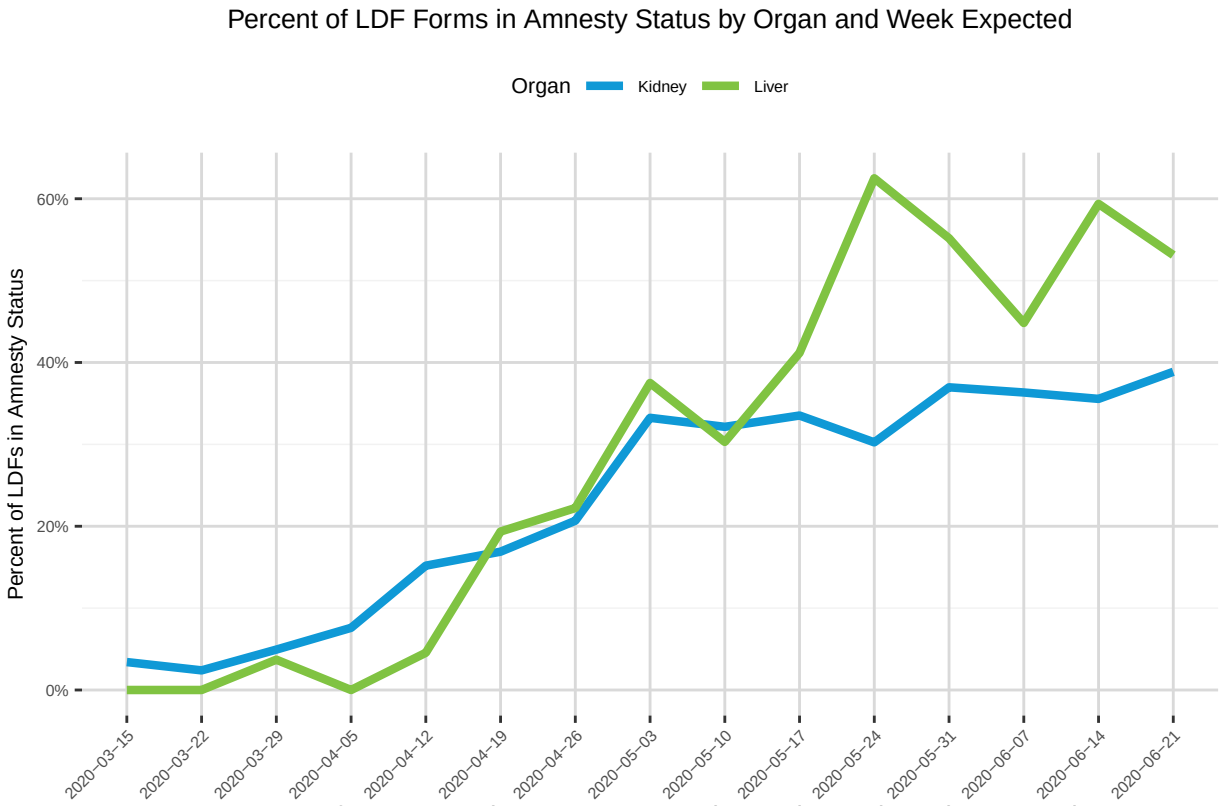
Week TRF Expected/Due (date shown is week start date)

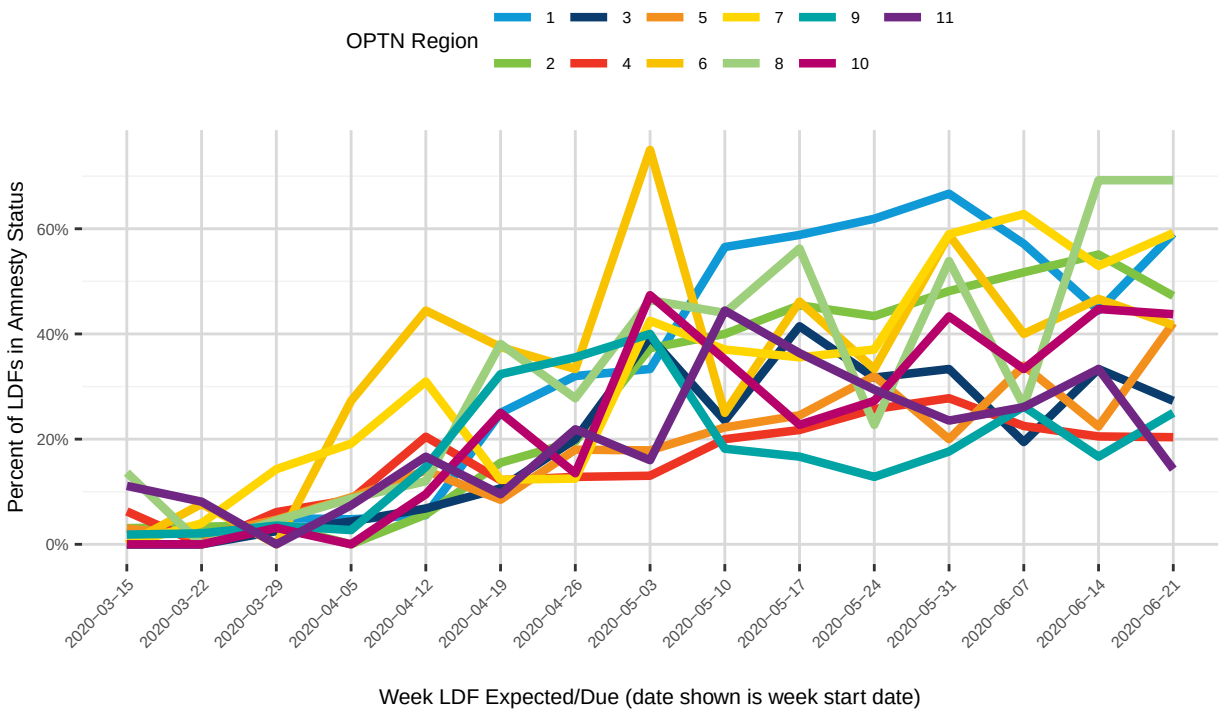
Weeks run Sunday−Saturday.

The following set of graphics show the number and percent of living donor follow-up (LDF) forms in amnesty status by week, OPTN region, and organ. As expected, the number of forms with expected dates that move into amnesty status is increasing over time since policy implementation. Centers could fill out this form without seeing the patient.



Weeks run Sunday–Saturday.

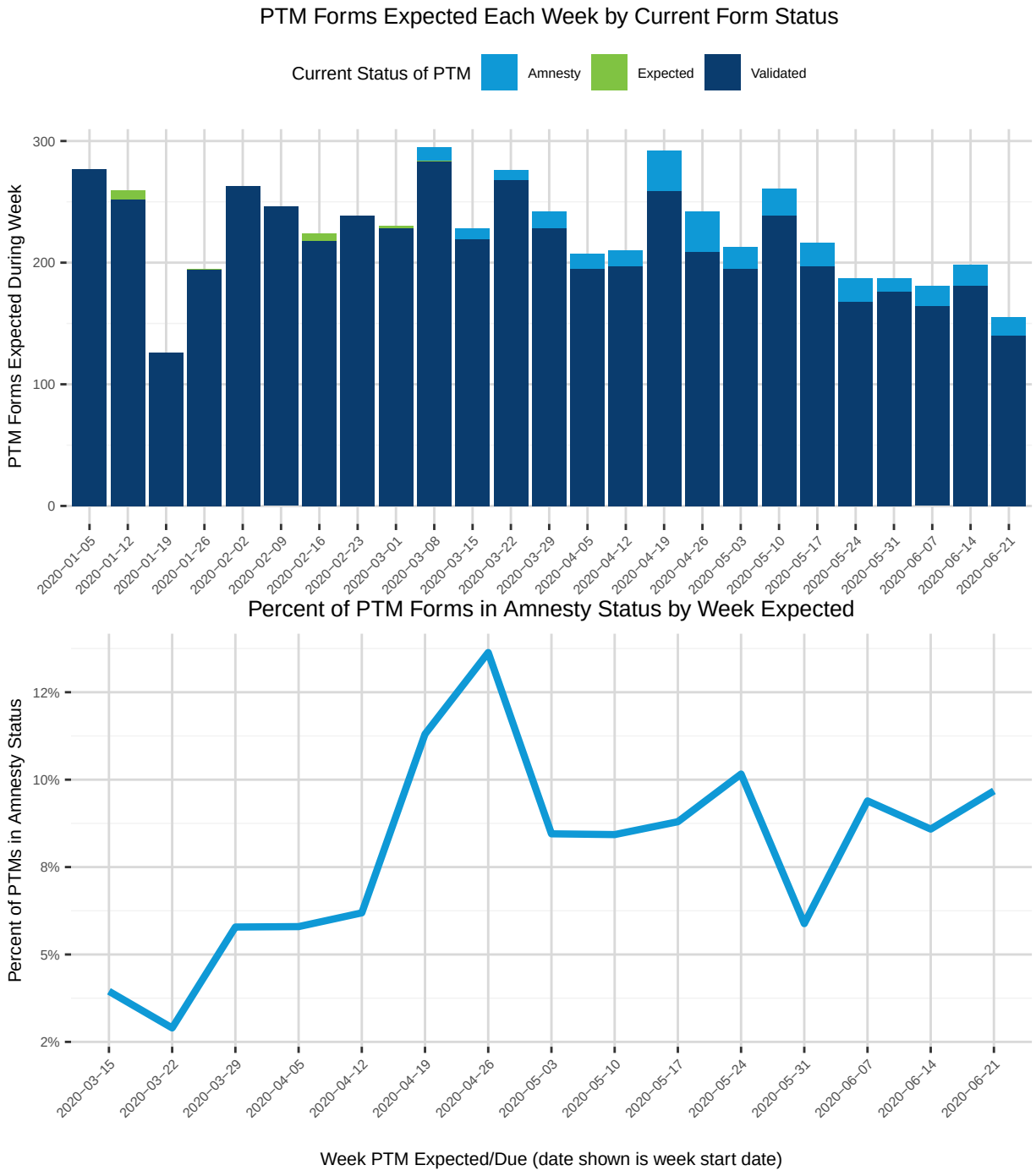




Week LDF Expected/Due (date shown is week start date)

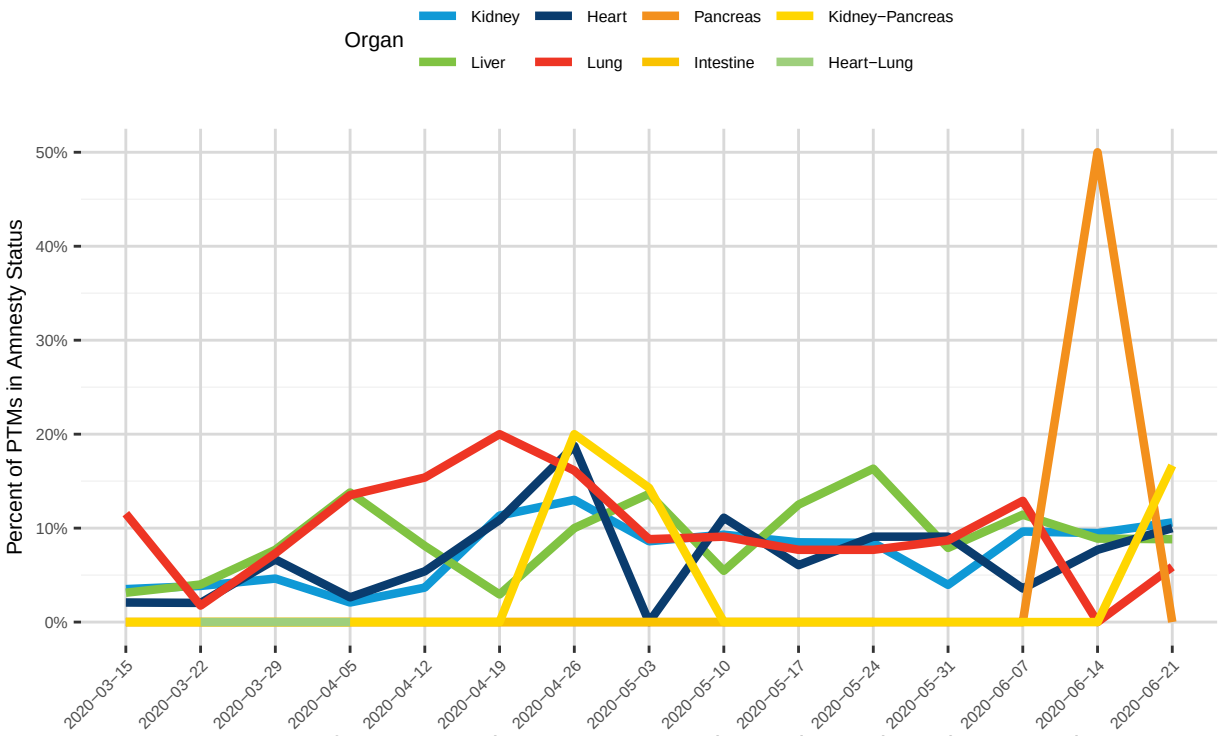
Weeks run Sunday–Saturday.

The following set of graphics show the number and percent of post-transplant malignancy (PTM) forms in amnesty status by week, OPTN region, and organ. These forms only generate from an indication of malignancy of the TRF, and the percent of PTM forms in amnesty status has increased slightly during COVID-19.

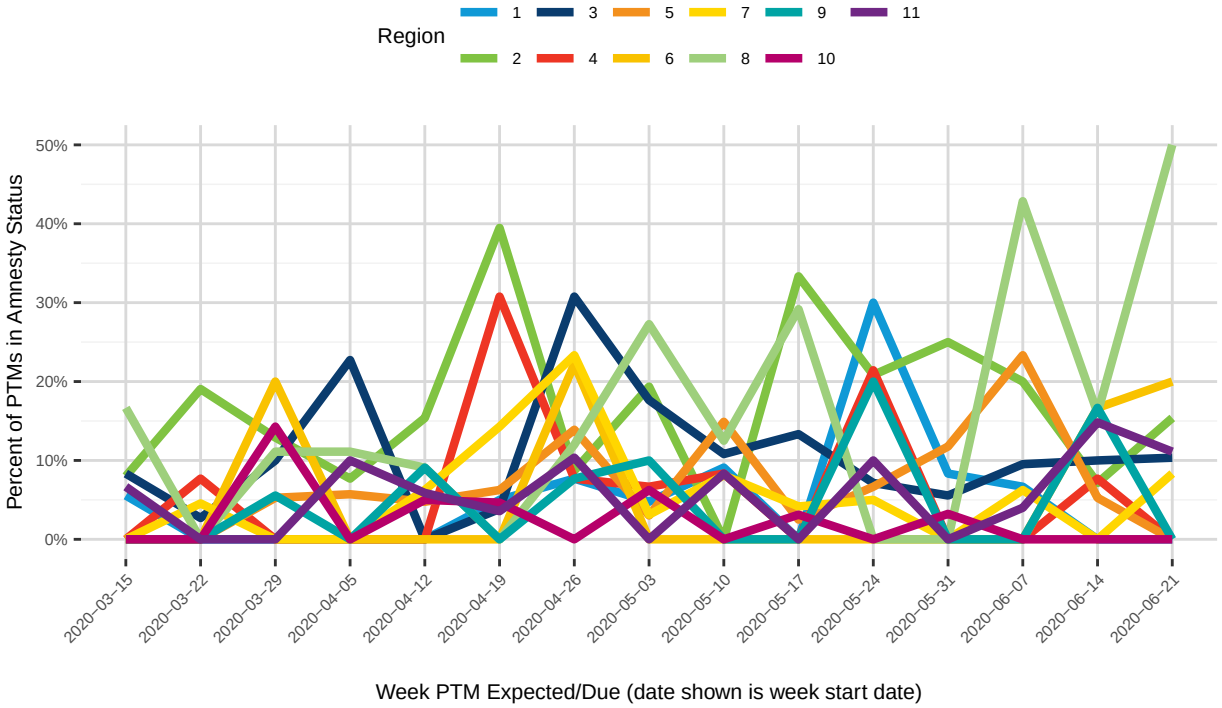


Weeks run Sunday–Saturday.

Percent of PTM Forms in Amnesty Status by Organ and Week Expected



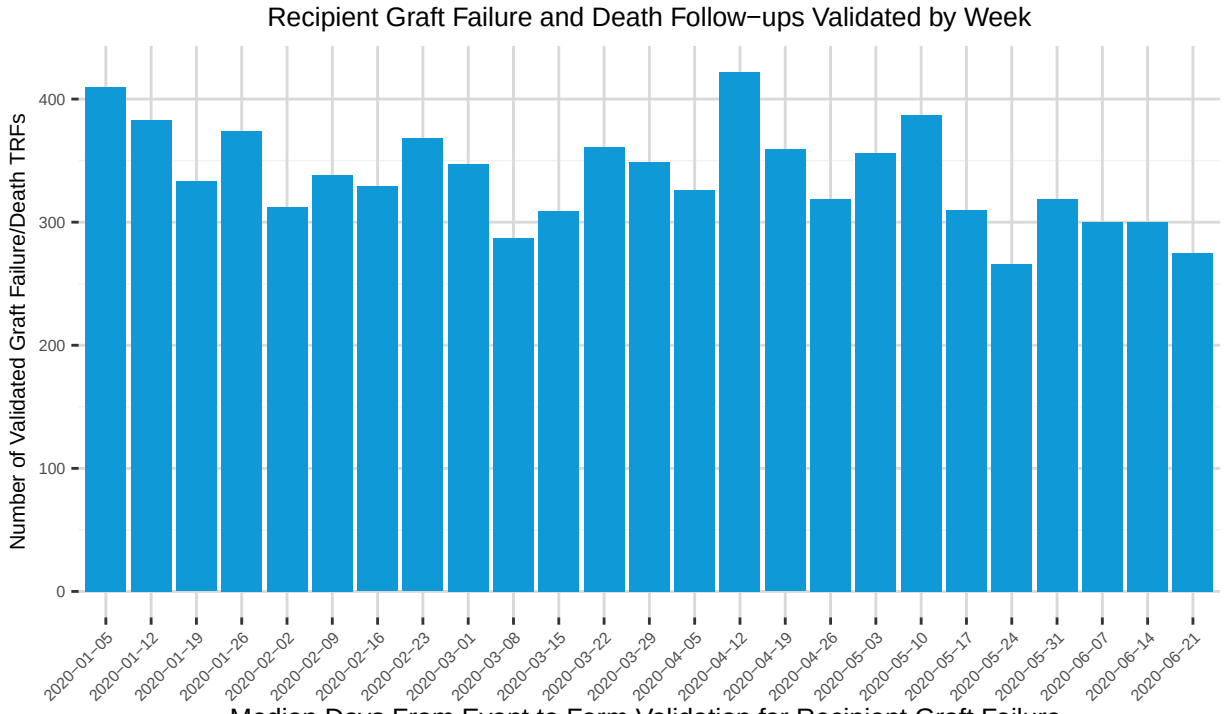
Percent of PTM Forms in Amnesty Status by Region and Week Expected

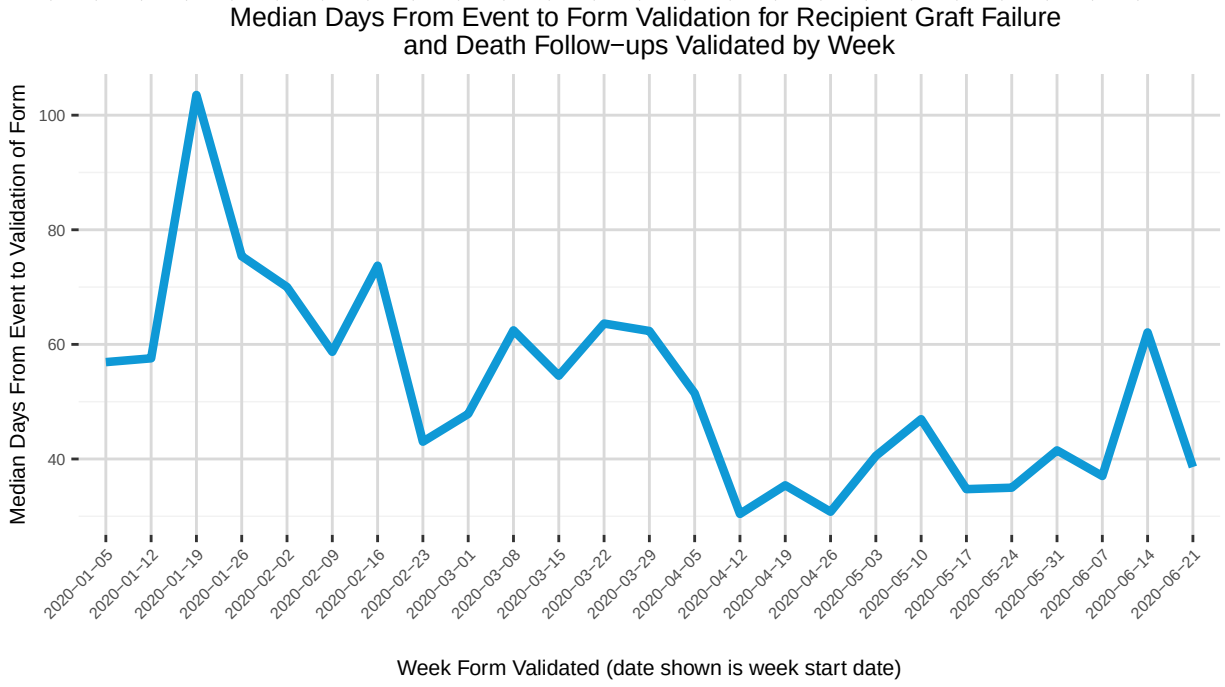


Week PTM Expected/Due (date shown is week start date)

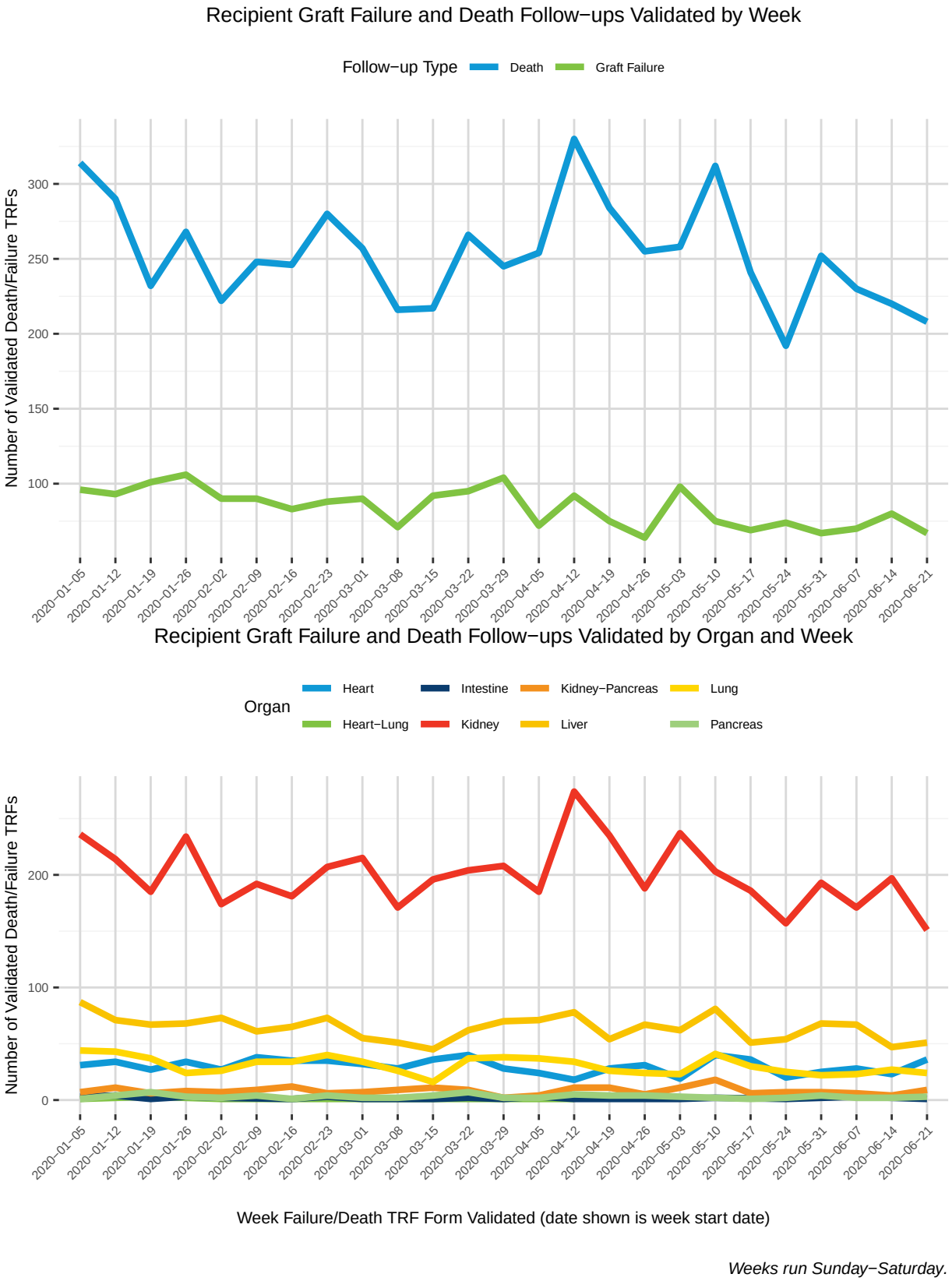
Weeks run Sunday−Saturday.

The following set of graphics show the number of graft failiure and patient deaths reported on TRF forms by week, OPTN region, and organ. Emergency policy requires these events still be reported, but extended the timeframe from 14 to 30 days. The number of forms indicating these events has remained stable week over week. Recently, there appears to be decrease from expected date of form validation and event date, which may be indicative of increased communication with patients during COVID-19.

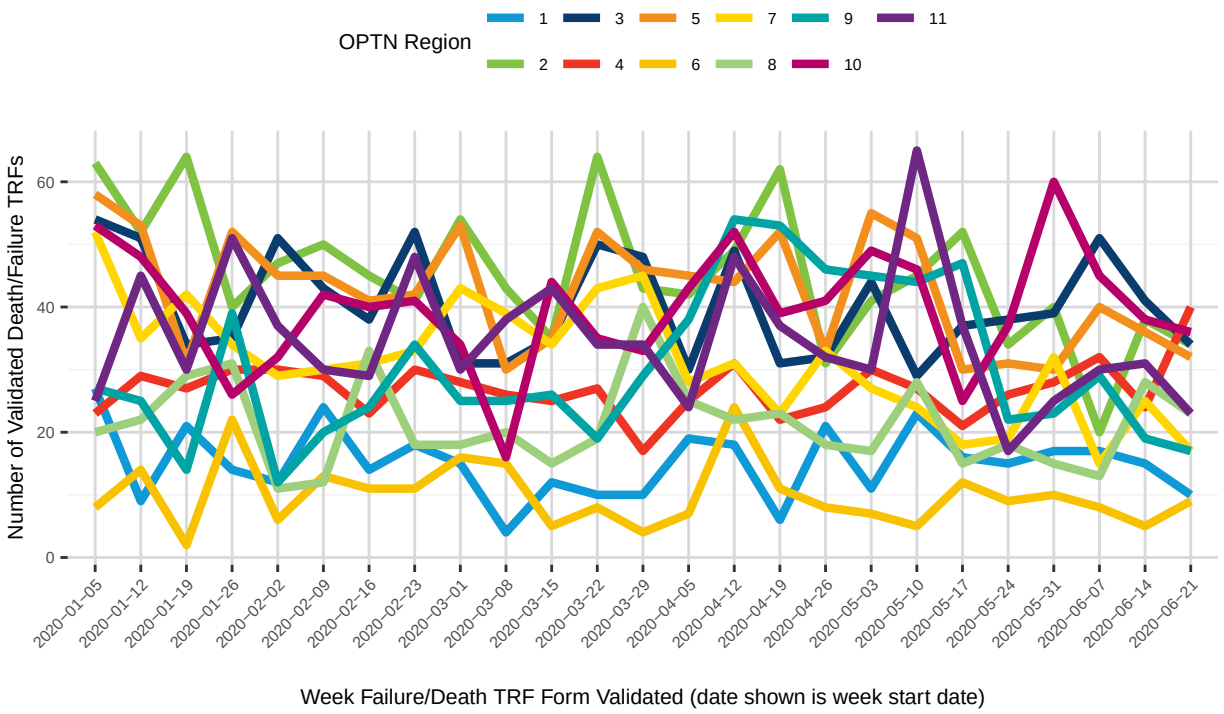




Weeks run Sunday−Saturday.



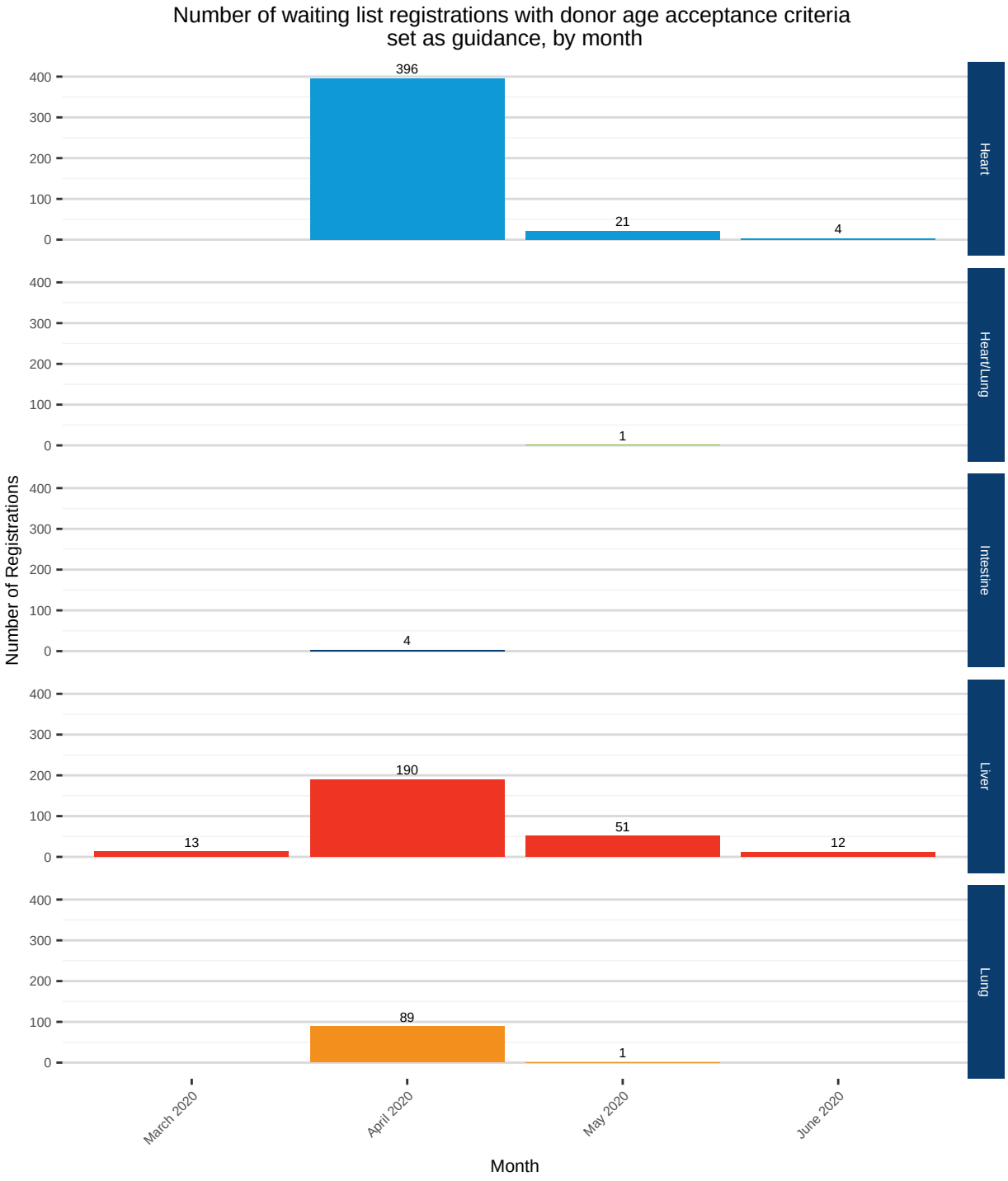
Weeks run Sunday−Saturday.



Weeks run Sunday−Saturday.

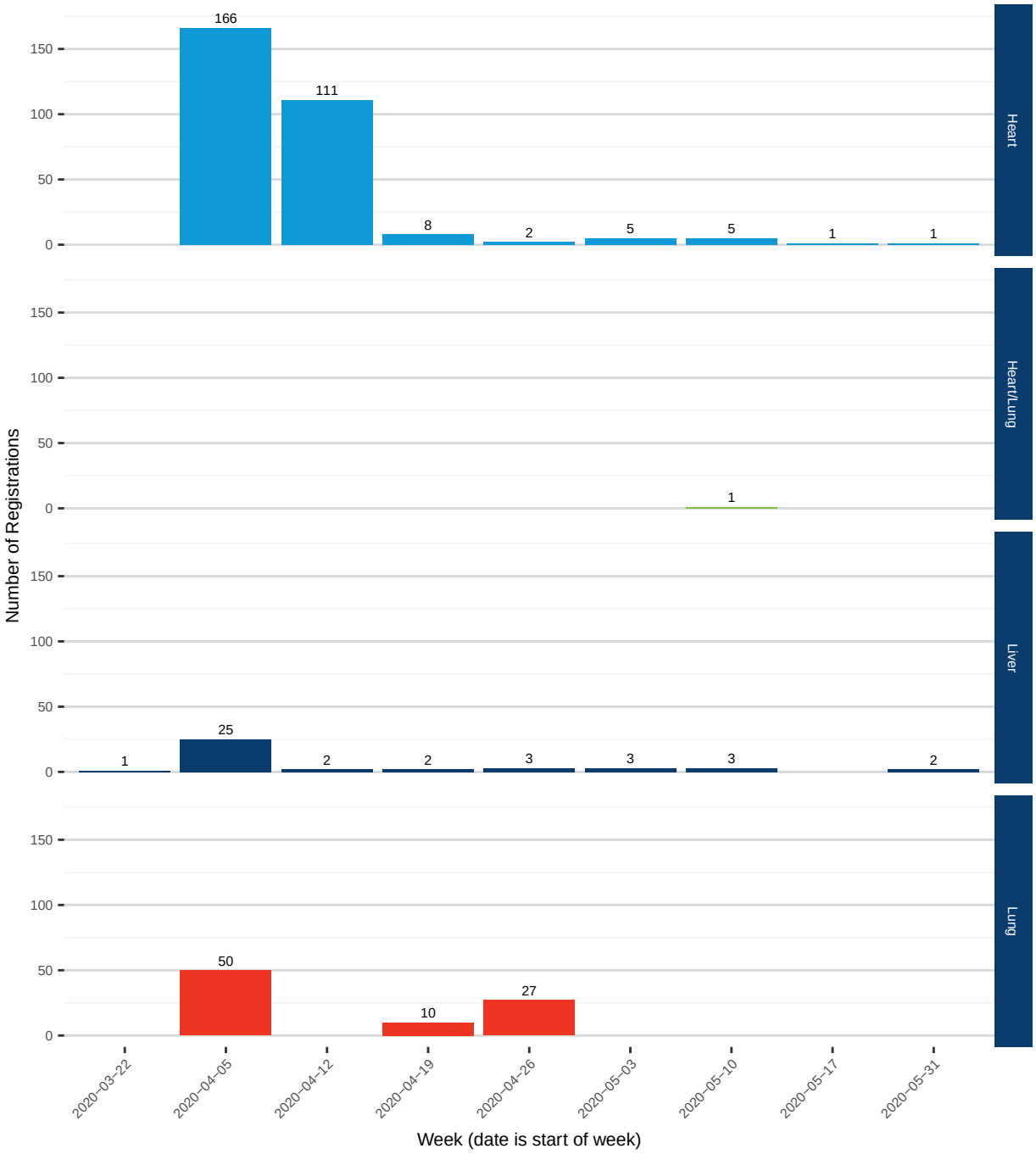
Maintaining waiting time for inactive candidates

A key message from the next two graphics is that the communcation to members regarding the recommended donor acceptance criteria setting for age to ensure candidates maintain accural of waiting time was recieved. After guidance was posted, the number of registrations altering the acceptance criteria as suggested increased dramatically. The number of registrations moving into this guidance criteria is not expected to see another bolus.



Heart, lung (at least 12 years old), liver, intestine.
Weeks run Sunday–Saturday.

Number of waiting list registrations moved from inactive status to donor age acceptance criteria set as guidance, by week

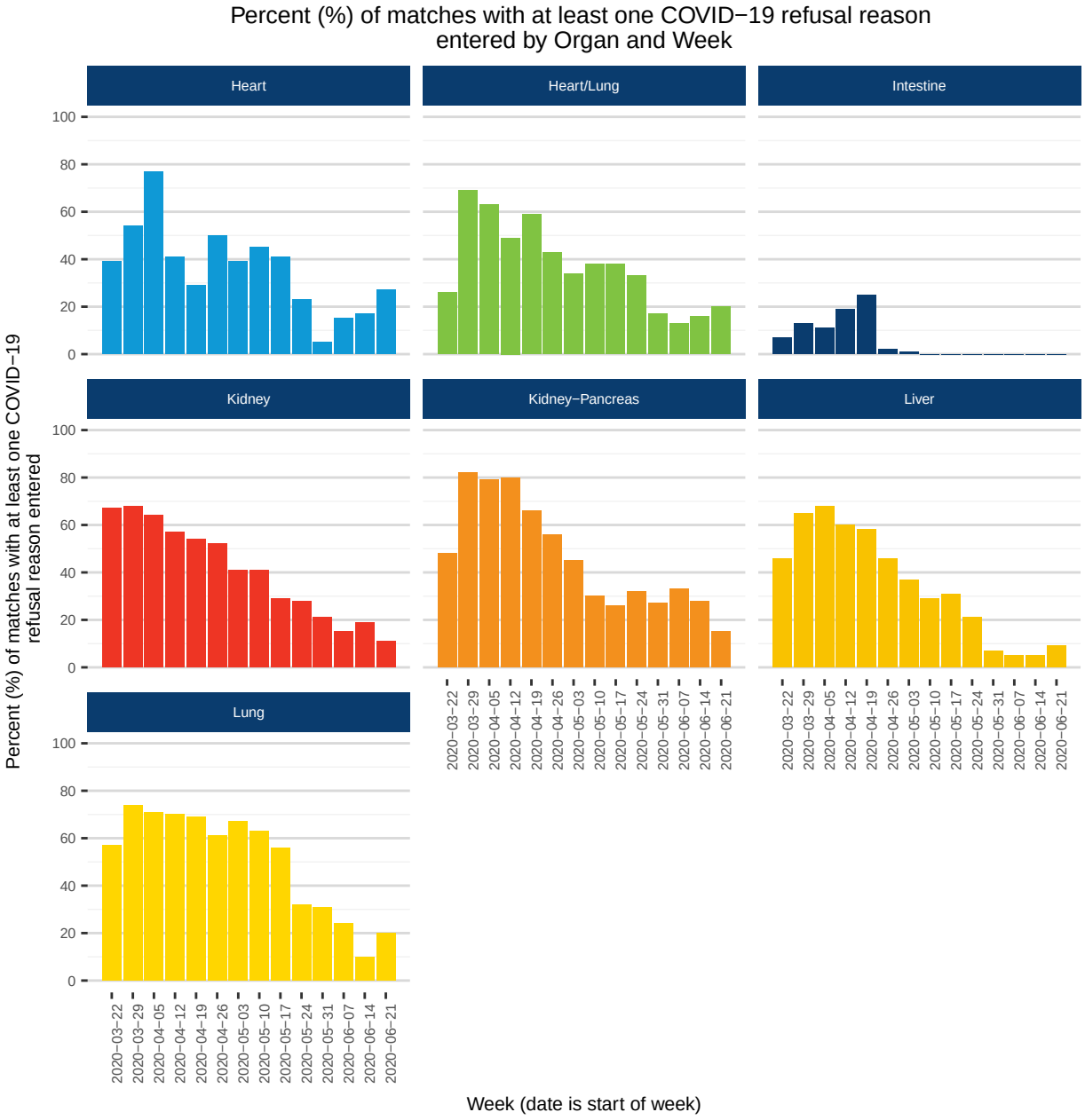


Heart, lung (at least 12 years old), liver, intestine.
Weeks run Sunday–Saturday.

COVID-19 IT modifications

Organ Offer Refusals

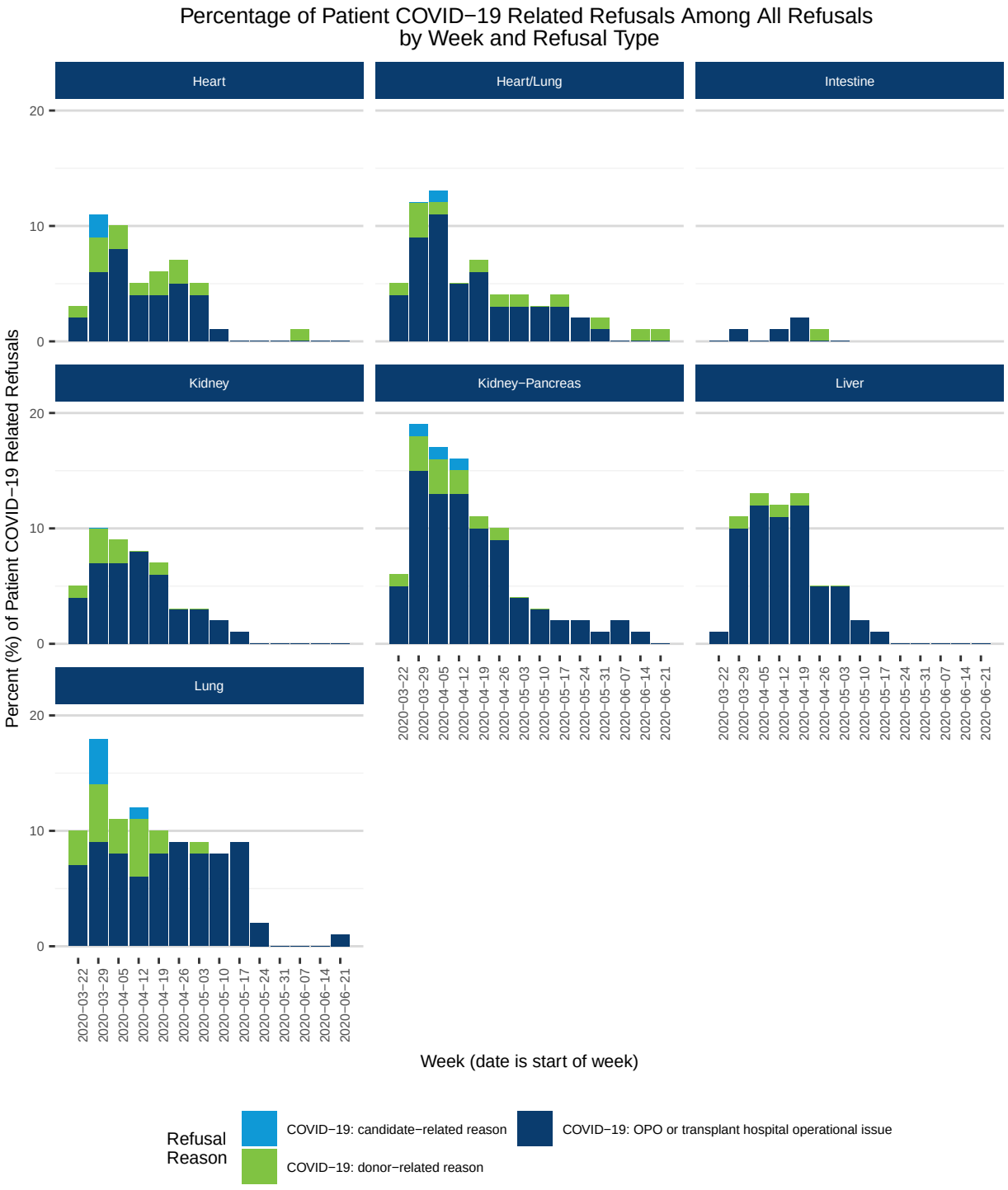
The first graphic shows the percentage of matches with at least one COVID-19 refusal reason entered, while the second shows the distribution of patient level COVID-19 refusal reasons. We've seen a decrease in the use of COVID-19 related refusal reasons in recent weeks.



Weeks run Monday−Sunday.

Table 6: Match Level COVID-19 Refusals on Organ Matches

	Percent (%) of matches with at least one COVID-19 refusal reason entered by Organ						
StartOfWeek	Heart	Heart/Lung	Intestine	Kidney	Kidney-Pancreas	Liver	Lung
2020-03-22	39%	26%	7%	67%	48%	46%	57%
2020-03-29	54%	69%	13%	68%	82%	65%	74%
2020-04-05	77%	63%	11%	64%	79%	68%	71%
2020-04-12	41%	49%	19%	57%	80%	60%	70%
2020-04-19	29%	59%	25%	54%	66%	58%	69%
2020-04-26	50%	43%	2%	52%	56%	46%	61%
2020-05-03	39%	34%	1%	41%	45%	37%	67%
2020-05-10	45%	38%	0%	41%	30%	29%	63%
2020-05-17	41%	38%	0%	29%	26%	31%	56%
2020-05-24	23%	33%	0%	28%	32%	21%	32%
2020-05-31	5%	17%	0%	21%	27%	7%	31%
2020-06-07	15%	13%	0%	15%	33%	5%	24%
2020-06-14	17%	16%	0%	19%	28%	5%	10%
2020-06-21	27%	20%	0%	11%	15%	9%	20%



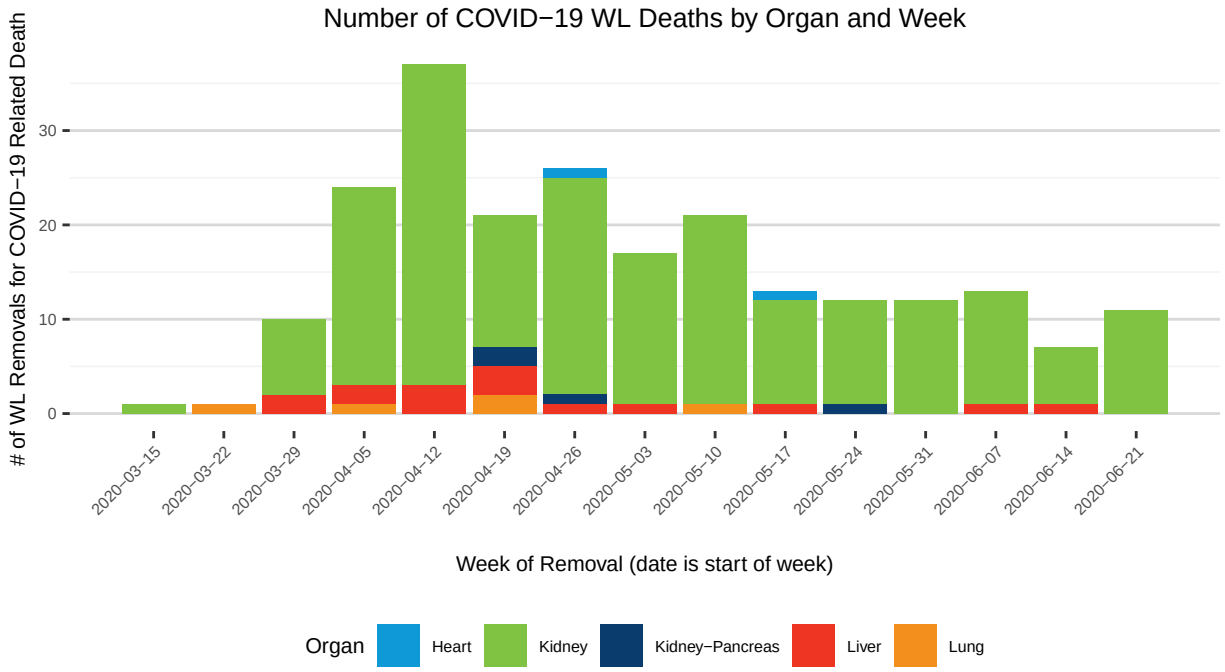
Weeks run Monday−Sunday.

Table 7: Patient Level COVID-19 Refusals on Organ Matches

		Percentage (%) of Patient COVID-19 Related Refusals Among All Refusals						
RefusalDescription	StartOfWeek	Heart	Heart/Lung	Intestine	Kidney	Kidney-Pancreas	Liver	Lung
COVID-19: candidate-related reason	2020-03-22	14 (0%)	3 (0%)	1 (0%)	1326 (0%)	15 (0%)	58 (0%)	23 (0%)
	2020-03-29	58 (2%)	30 (0%)	1 (0%)	2223 (0%)	53 (1%)	192 (0%)	419 (4%)
	2020-04-05	7 (0%)	52 (1%)	3 (0%)	2149 (0%)	59 (1%)	70 (0%)	8 (0%)
	2020-04-12	10 (0%)	43 (0%)	2 (0%)	2507 (0%)	53 (1%)	146 (0%)	131 (1%)
	2020-04-19	6 (0%)	31 (0%)	0 (0%)	1012 (0%)	25 (0%)	111 (0%)	14 (0%)
	2020-04-26	4 (0%)	9 (0%)	0 (0%)	1772 (0%)	17 (0%)	109 (0%)	3 (0%)
	2020-05-03	3 (0%)	9 (0%)	0 (0%)	443 (0%)	6 (0%)	29 (0%)	4 (0%)
	2020-05-10	9 (0%)	26 (0%)	0 (0%)	445 (0%)	4 (0%)	19 (0%)	7 (0%)
	2020-05-17	11 (0%)	33 (0%)	0 (0%)	384 (0%)	6 (0%)	24 (0%)	1 (0%)
	2020-05-24	7 (0%)	16 (0%)	0 (0%)	461 (0%)	2 (0%)	18 (0%)	0 (0%)
	2020-05-31	1 (0%)	2 (0%)	0 (0%)	717 (0%)	5 (0%)	10 (0%)	0 (0%)
	2020-06-07	0 (0%)	0 (0%)	0 (0%)	378 (0%)	3 (0%)	13 (0%)	0 (0%)
	2020-06-14	0 (0%)	1 (0%)	0 (0%)	298 (0%)	4 (0%)	11 (0%)	0 (0%)
	2020-06-21	2 (0%)	4 (0%)	0 (0%)	337 (0%)	0 (0%)	14 (0%)	0 (0%)
COVID-19: donor-related reason	2020-03-22	35 (1%)	17 (1%)	1 (0%)	3602 (1%)	23 (1%)	231 (0%)	102 (3%)
	2020-03-29	70 (3%)	222 (3%)	4 (0%)	19003 (3%)	164 (3%)	911 (1%)	484 (5%)
	2020-04-05	74 (2%)	70 (1%)	0 (0%)	10844 (2%)	170 (3%)	395 (1%)	209 (3%)
	2020-04-12	27 (1%)	42 (0%)	5 (0%)	2507 (0%)	85 (2%)	304 (1%)	470 (5%)
	2020-04-19	26 (2%)	63 (1%)	1 (0%)	4041 (1%)	66 (1%)	556 (1%)	229 (2%)
	2020-04-26	48 (2%)	52 (1%)	25 (1%)	3951 (0%)	41 (1%)	135 (0%)	64 (0%)
	2020-05-03	22 (1%)	77 (1%)	0 (0%)	1542 (0%)	24 (0%)	217 (0%)	93 (1%)
	2020-05-10	12 (0%)	34 (0%)	0 (0%)	2367 (0%)	21 (0%)	54 (0%)	5 (0%)
	2020-05-17	21 (0%)	48 (1%)	0 (0%)	46 (0%)	0 (0%)	74 (0%)	2 (0%)
	2020-05-24	10 (0%)	30 (0%)	0 (0%)	3800 (0%)	42 (0%)	89 (0%)	21 (0%)
	2020-05-31	0 (0%)	68 (1%)	0 (0%)	757 (0%)	3 (0%)	36 (0%)	95 (0%)
	2020-06-07	18 (1%)	32 (0%)	0 (0%)	302 (0%)	26 (0%)	0 (0%)	30 (0%)
	2020-06-14	24 (0%)	49 (1%)	0 (0%)	755 (0%)	7 (0%)	339 (0%)	38 (0%)
	2020-06-21	9 (0%)	71 (1%)	0 (0%)	347 (0%)	15 (0%)	255 (0%)	21 (0%)
COVID-19: OPO or transplant hospital operational issue	2020-03-22	56 (2%)	75 (4%)	2 (0%)	9337 (4%)	112 (5%)	416 (1%)	240 (7%)
	2020-03-29	129 (6%)	586 (9%)	17 (1%)	36379 (7%)	801 (15%)	5192 (10%)	833 (9%)
	2020-04-05	223 (8%)	414 (11%)	11 (0%)	29647 (7%)	740 (13%)	2707 (12%)	515 (8%)
	2020-04-12	67 (4%)	235 (5%)	22 (1%)	29277 (8%)	578 (13%)	3105 (11%)	525 (6%)
	2020-04-19	51 (4%)	312 (6%)	29 (2%)	22618 (6%)	420 (10%)	3554 (12%)	674 (8%)
	2020-04-26	121 (5%)	107 (3%)	2 (0%)	17486 (3%)	350 (9%)	1928 (5%)	699 (9%)
	2020-05-03	59 (4%)	169 (3%)	1 (0%)	8193 (3%)	225 (4%)	2007 (5%)	744 (8%)
	2020-05-10	33 (1%)	182 (3%)	0 (0%)	8636 (2%)	173 (3%)	860 (2%)	853 (8%)
	2020-05-17	21 (0%)	172 (3%)	0 (0%)	2964 (1%)	122 (2%)	650 (1%)	711 (9%)
	2020-05-24	11 (0%)	89 (2%)	0 (0%)	1537 (0%)	111 (2%)	283 (0%)	193 (2%)
	2020-05-31	3 (0%)	73 (1%)	0 (0%)	405 (0%)	116 (1%)	11 (0%)	105 (0%)
	2020-06-07	1 (0%)	27 (0%)	0 (0%)	149 (0%)	110 (2%)	1 (0%)	65 (0%)
	2020-06-14	8 (0%)	7 (0%)	0 (0%)	196 (0%)	106 (1%)	45 (0%)	45 (0%)
	2020-06-21	7 (0%)	11 (0%)	0 (0%)	250 (0%)	22 (0%)	57 (0%)	83 (1%)

COVID-related Deaths

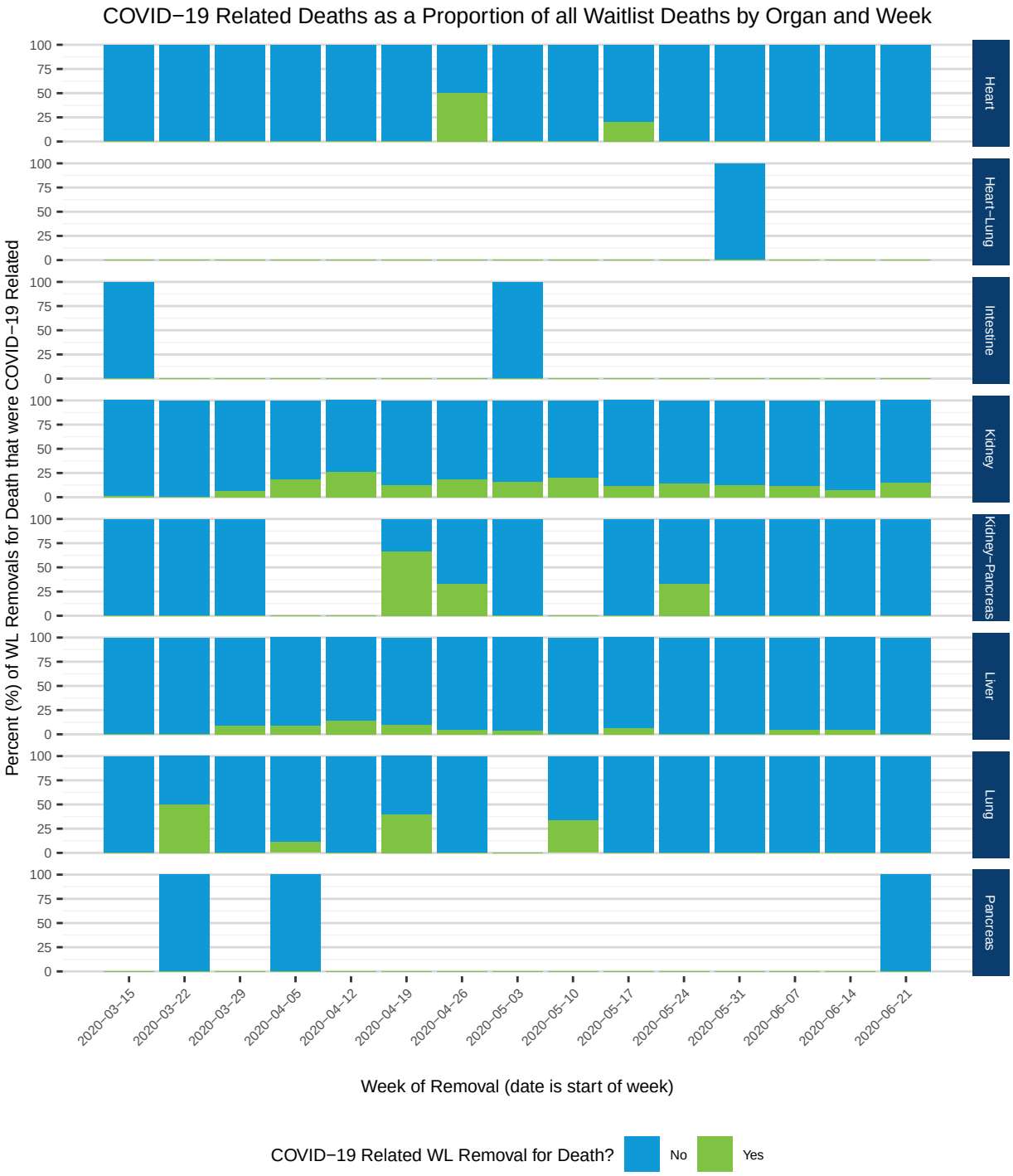
The first graphic shows the number of waitlist removals for COVID-19 related death. Most waitlist deaths are attributed to kidney candidates, and we've seen a slight decline in recent weeks. The second graphic shows the percent of COVID-19 related deaths out of all WL removals for death by week.



Weeks run Sunday−Saturday.

Table 8: Waitlist COVID-19 Related Deaths

	Number of COVID-19 WL Deaths by Organ				
WeekDate	Heart	Kidney	Kidney-Pancreas	Liver	Lung
2020-03-15	0	1	0	0	0
2020-03-22	0	0	0	0	1
2020-03-29	0	8	0	2	0
2020-04-05	0	21	0	2	1
2020-04-12	0	34	0	3	0
2020-04-19	0	14	2	3	2
2020-04-26	1	23	1	1	0
2020-05-03	0	16	0	1	0
2020-05-10	0	20	0	0	1
2020-05-17	1	11	0	1	0
2020-05-24	0	11	1	0	0
2020-05-31	0	12	0	0	0
2020-06-07	0	12	0	1	0
2020-06-14	0	6	0	1	0
2020-06-21	0	11	0	0	0

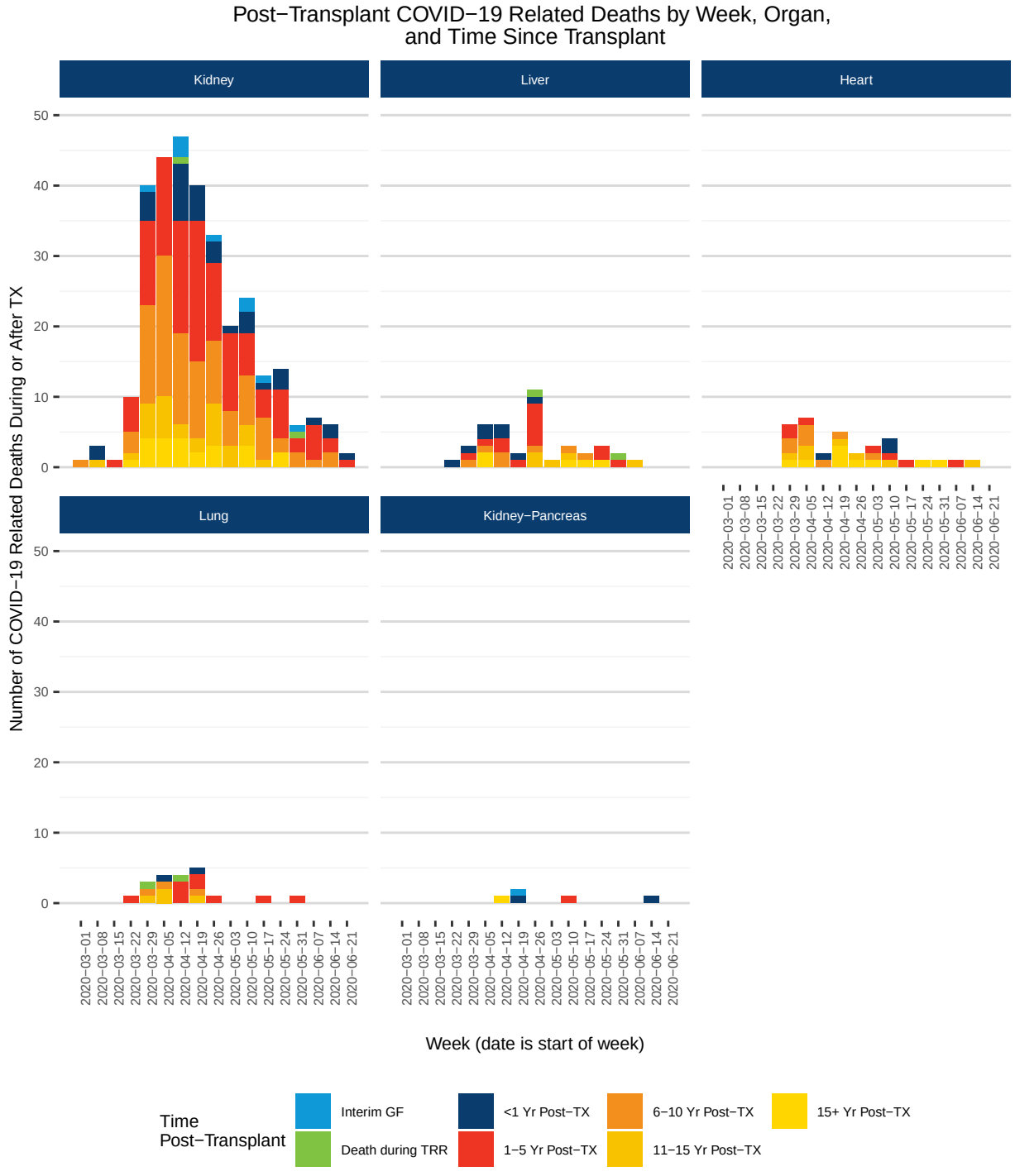


Weeks run Sunday−Saturday.
Blank spaces indicate no WL removals for death for that organ in that week.

Table 9: COVID-19 Related Deaths as a Proportion of all Waitlist Deaths

	Percent of WL Deaths that were COVID-19 Related by Organ							
WeekDate	Heart	Heart-Lung	Intestine	Kidney	Kidney-Pancreas	Liver	Lung	Pancreas
2020-03-15	0%	0%	0%	1.4%	0%	0%	0%	0%
2020-03-22	0%	0%	0%	0%	0%	0%	50%	0%
2020-03-29	0%	0%	0%	6.7%	0%	8.7%	0%	0%
2020-04-05	0%	0%	0%	18.8%	0%	9.1%	11.1%	0%
2020-04-12	0%	0%	0%	26.2%	0%	14.3%	0%	0%
2020-04-19	0%	0%	0%	12.2%	66.7%	10%	40%	0%
2020-04-26	50%	0%	0%	18.1%	33.3%	4.5%	0%	0%
2020-05-03	0%	0%	0%	16.2%	0%	3.6%	0%	0%
2020-05-10	0%	0%	0%	20.4%	0%	0%	33.3%	0%
2020-05-17	20%	0%	0%	11.6%	0%	6.2%	0%	0%
2020-05-24	0%	0%	0%	14.5%	33.3%	0%	0%	0%
2020-05-31	0%	0%	0%	12.6%	0%	0%	0%	0%
2020-06-07	0%	0%	0%	11.2%	0%	4.3%	0%	0%
2020-06-14	0%	0%	0%	7.6%	0%	4.5%	0%	0%
2020-06-21	0%	0%	0%	15.1%	0%	0%	0%	0%

This graphic shows the number of deaths post-transplant by time post-transplant (time is tied to the most recent submitted TRF, not event date). Again, most deaths are attributed to kidney recipients. The decline we see here may not be real, as centers have 30 days, not 14, to submit their forms indicated death events. We may see some of the previous weeks' death counts increase over time as those forms are submitted, as indicated in the footnote.



Weeks run Sunday−Saturday.
As centers have longer to submit their forms, we may continue to get deaths from previous weeks.

Table 10: Post-Transplant COVID-19 Related Deaths

		Number of COVID-19 Deaths by Organ					
WeekDate	CD2	Kidney	Liver	Lung	Heart	Kidney-Pancreas	Total
2020-03-01	6-10 Yr Post-TX	1	0	0	0	0	1
2020-03-08	<1 Yr Post-TX	2	0	0	0	0	2
	11-15 Yr Post-TX	1	0	0	0	0	1
2020-03-15	1-5 Yr Post-TX	1	0	0	0	0	1
2020-03-22	1-5 Yr Post-TX	5	0	1	0	0	6
	6-10 Yr Post-TX	3	0	0	0	0	3
	11-15 Yr Post-TX	1	0	0	0	0	1
	15+ Yr Post-TX	1	0	0	0	0	1
	<1 Yr Post-TX	0	1	0	0	0	1
2020-03-29	Interim GF	1	0	0	0	0	1
	<1 Yr Post-TX	4	1	0	0	0	5
	1-5 Yr Post-TX	12	1	0	2	0	15
	6-10 Yr Post-TX	14	1	1	2	0	18
	11-15 Yr Post-TX	5	0	1	1	0	7
	15+ Yr Post-TX	4	0	0	1	0	5
	Death during TRR	0	0	1	0	0	1
2020-04-05	Interim GF	3	0	0	0	0	3
	<1 Yr Post-TX	7	2	1	0	0	10
	1-5 Yr Post-TX	14	1	0	1	0	16
	6-10 Yr Post-TX	20	1	1	3	0	25
	11-15 Yr Post-TX	6	0	2	2	0	10
	15+ Yr Post-TX	4	2	0	1	0	7
2020-04-12	Interim GF	3	0	0	0	0	3
	Death during TRR	1	0	1	0	0	2
	<1 Yr Post-TX	8	2	0	1	0	11
	1-5 Yr Post-TX	16	2	3	0	0	21
	6-10 Yr Post-TX	13	2	0	1	0	16
	11-15 Yr Post-TX	2	0	0	0	0	2
	15+ Yr Post-TX	4	0	0	0	1	5
2020-04-19	<1 Yr Post-TX	5	1	1	0	1	8
	1-5 Yr Post-TX	20	1	2	0	0	23
	6-10 Yr Post-TX	11	0	1	1	0	13
	11-15 Yr Post-TX	2	0	1	1	0	4
	15+ Yr Post-TX	2	0	0	3	0	5
	Interim GF	0	0	0	0	1	1
2020-04-26	Interim GF	1	0	0	0	0	1
	<1 Yr Post-TX	3	1	0	0	0	4
	1-5 Yr Post-TX	11	6	1	0	0	18
	6-10 Yr Post-TX	9	1	0	0	0	10
	11-15 Yr Post-TX	6	2	0	1	0	9
	15+ Yr Post-TX	3	0	0	1	0	4
	Death during TRR	0	1	0	0	0	1
2020-05-03	<1 Yr Post-TX	1	0	0	0	0	1
	1-5 Yr Post-TX	11	0	0	1	0	12
	6-10 Yr Post-TX	5	0	0	1	0	6
	11-15 Yr Post-TX	3	1	0	0	0	4
	15+ Yr Post-TX	0	0	0	1	0	1
2020-05-10	Interim GF	2	0	0	0	0	2
	<1 Yr Post-TX	3	0	0	2	0	5
	1-5 Yr Post-TX	6	0	0	1	1	8
	6-10 Yr Post-TX	7	1	0	0	0	8
	11-15 Yr Post-TX	3	1	0	1	0	5
	15+ Yr Post-TX	3	1	0	0	0	4
2020-05-17	Interim GF	1	0	0	0	0	1
	<1 Yr Post-TX	1	0	0	0	0	1
	1-5 Yr Post-TX	4	0	1	1	0	6
	6-10 Yr Post-TX	6	1	0	0	0	7
	11-15 Yr Post-TX	1	0	0	0	0	1

Table 10: Post-Transplant COVID-19 Related Deaths *(continued)*

		Number of COVID-19 Deaths by Organ					
WeekDate	CD2	Kidney	Liver	Lung	Heart	Kidney-Pancreas	Total
	15+ Yr Post-TX	0	1	0	0	0	1
2020-05-24	<1 Yr Post-TX	3	0	0	0	0	3
	1-5 Yr Post-TX	7	2	0	0	0	9
	6-10 Yr Post-TX	2	0	0	0	0	2
	15+ Yr Post-TX	2	1	0	1	0	4
2020-05-31	Interim GF	1	0	0	0	0	1
	Death during TRR	1	1	0	0	0	2
	1-5 Yr Post-TX	2	1	1	0	0	4
	6-10 Yr Post-TX	2	0	0	0	0	2
	15+ Yr Post-TX	0	0	0	1	0	1
2020-06-07	<1 Yr Post-TX	1	0	0	0	0	1
	1-5 Yr Post-TX	5	0	0	1	0	6
	6-10 Yr Post-TX	1	0	0	0	0	1
	11-15 Yr Post-TX	0	1	0	0	0	1
2020-06-14	<1 Yr Post-TX	2	0	0	0	1	3
	1-5 Yr Post-TX	2	0	0	0	0	2
	6-10 Yr Post-TX	2	0	0	0	0	2
	11-15 Yr Post-TX	0	0	0	1	0	1
2020-06-21	<1 Yr Post-TX	1	0	0	0	0	1
	1-5 Yr Post-TX	1	0	0	0	0	1
Total	NA	321	41	20	34	5	421

COVID Donor Testing

For the natural language processing analysis, the COVID word list was last updated on June 23, 2020. The OPO boilerplate language list was last updated on June 23, 2020.

All donors with at least one organ recovered for transplant between April 21, 2020 and July 01, 2020 are considered. The OPOs highlighted in yellow in the table below have less than 50% of donors with testing results reported in DonorNet®. However, OPOs do have testing results reported in donor text or attachments. The table below lists data from all 58 OPOs.

There is one recently recovered donor from late June who currently shows no COVID-19 testing in DonorNet. Though entering the data into DonorNet is optional, the data quality team in the UNOS Research Department is contacting the OPO regarding the missing data.

		Results Reported In DonorNet . . .			
OPO	N Recovered Donors	Field	Text	Attachments	Any
All OPOs	**2297**	**71.9%**	**66.1%**	**96.6%**	**100.0%**
ALOB-OP1	27	11.1%	85.2%	92.6%	96.3%
AROR-OP1	15	80.0%	40.0%	80.0%	100.0%
AZOB-OP1	57	80.7%	100.0%	96.5%	100.0%
CADN-OP1	79	94.9%	29.1%	100.0%	100.0%
CAGS-OP1	24	75.0%	62.5%	95.8%	100.0%
CAOP-OP1	113	36.3%	97.3%	96.5%	100.0%
CASD-IO1	21	95.2%	100.0%	100.0%	100.0%
CORS-OP1	38	100.0%	21.1%	100.0%	100.0%
CTOP-OP1	18	94.4%	72.2%	100.0%	100.0%
DCTC-OP1	25	32.0%	100.0%	96.0%	100.0%
FLFH-IO1	43	7.0%	27.9%	97.7%	100.0%
FLMP-OP1	36	5.6%	100.0%	100.0%	100.0%
FLUF-IO1	42	100.0%	95.2%	100.0%	100.0%
FLWC-OP1	64	60.9%	98.4%	96.9%	100.0%
GALL-OP1	67	17.9%	94.0%	98.5%	100.0%
HIOP-OP1	11	81.8%	18.2%	100.0%	100.0%
IAOP-OP1	15	100.0%	100.0%	100.0%	100.0%
ILIP-OP1	87	98.9%	16.1%	97.7%	100.0%
INOP-OP1	43	69.8%	88.4%	95.3%	100.0%
KYDA-OP1	31	35.5%	41.9%	100.0%	100.0%
LAOP-OP1	45	75.6%	84.4%	97.8%	100.0%
MAOB-OP1	39	82.1%	48.7%	100.0%	100.0%
MDPC-OP1	23	95.7%	91.3%	100.0%	100.0%
MIOP-OP1	66	81.8%	13.6%	100.0%	100.0%
MNOP-OP1	32	46.9%	93.8%	100.0%	100.0%
MOMA-OP1	57	98.2%	15.8%	75.4%	100.0%
MSOP-OP1	18	88.9%	83.3%	100.0%	100.0%
MWOB-OP1	61	95.1%	72.1%	93.4%	100.0%
NCCM-IO1	23	87.0%	95.7%	100.0%	100.0%
NCNC-OP1	54	100.0%	72.2%	96.3%	100.0%
NEOR-OP1	11	100.0%	100.0%	100.0%	100.0%
NJTO-OP1	37	67.6%	13.5%	97.3%	100.0%
NMOP-OP1	12	33.3%	91.7%	100.0%	100.0%
NVLV-OP1	33	42.4%	72.7%	100.0%	100.0%
NYAP-OP1	18	100.0%	100.0%	88.9%	100.0%
NYFL-IO1	5	80.0%	100.0%	40.0%	100.0%
NYRT-OP1	43	76.7%	97.7%	97.7%	100.0%

(continued)

OPO	N Recovered Donors	Field	Text	Attachments	Any
NYWN-OP1	10	100.0%	30.0%	0.0%	100.0%
OHLB-OP1	30	96.7%	53.3%	96.7%	100.0%
OHLC-OP1	31	71.0%	96.8%	100.0%	100.0%
OHLP-OP1	35	74.3%	60.0%	100.0%	100.0%
OHOV-OP1	11	90.9%	90.9%	90.9%	100.0%
OKOP-OP1	41	51.2%	75.6%	100.0%	100.0%
ORUO-IO1	26	42.3%	57.7%	100.0%	100.0%
PADV-OP1	118	83.1%	93.2%	95.8%	100.0%
PATF-OP1	63	96.8%	54.0%	100.0%	100.0%
PRLL-OP1	21	100.0%	100.0%	90.5%	100.0%
SCOP-OP1	34	76.5%	67.6%	100.0%	100.0%
TNDS-OP1	77	67.5%	36.4%	98.7%	100.0%
TNMS-OP1	10	80.0%	80.0%	100.0%	100.0%
TXGC-OP1	82	98.8%	25.6%	98.8%	100.0%
TXSA-OP1	34	97.1%	97.1%	100.0%	100.0%
TXSB-OP1	82	0.0%	54.9%	100.0%	100.0%
UTOP-OP1	23	73.9%	95.7%	100.0%	100.0%
VATB-OP1	42	90.5%	54.8%	83.3%	100.0%
WALC-OP1	51	100.0%	47.1%	100.0%	100.0%
WIDN-OP1	19	78.9%	89.5%	100.0%	100.0%
WIUW-IO1	24	100.0%	100.0%	100.0%	100.0%

The below table lists where COVID-19 testing information was provided for donors by week, starting on April 21, 2020.

		Results Reported In DonorNet . . .			
Week of	N Recovered Donors	Field	Text	Attachments	Any
Total	**2297**	**1651 (71.9%)**	**1518 (66.1%)**	**2220 (96.6%)**	**2296 (100.0%)**
Apr 21 2020	209	130 (62.2%)	155 (74.2%)	205 (98.1%)	209 (100.0%)
Apr 28 2020	210	163 (77.6%)	161 (76.7%)	203 (96.7%)	210 (100.0%)
May 05 2020	201	148 (73.6%)	136 (67.7%)	195 (97.0%)	201 (100.0%)
May 12 2020	245	180 (73.5%)	151 (61.6%)	237 (96.7%)	245 (100.0%)
May 19 2020	230	154 (67.0%)	157 (68.3%)	223 (97.0%)	230 (100.0%)
May 26 2020	244	173 (70.9%)	149 (61.1%)	237 (97.1%)	244 (100.0%)
Jun 02 2020	255	194 (76.1%)	159 (62.4%)	246 (96.5%)	255 (100.0%)
Jun 09 2020	234	162 (69.2%)	151 (64.5%)	224 (95.7%)	234 (100.0%)
Jun 16 2020	251	189 (75.3%)	163 (64.9%)	245 (97.6%)	251 (100.0%)
Jun 23 2020	216	156 (72.2%)	135 (62.5%)	203 (94.0%)	215 (99.5%)
Jun 30 2020	2	2 (100.0%)	1 (50.0%)	2 (100.0%)	2 (100.0%)

The following 4 tables show COVID testing results by week for donors that were indicated as having COVID testing in the newly added COVID-19 DonorNet® data fields. The following 4 tables do not examine testing results mentioned in the donor text field or in donor attachments. The date shown is the start of the week (weeks run Sunday-Saturday).

Week Donor Recovered	Specimen Type				
	Blood	Lower Respiratory (e.g. (BAL) bronchoalveo-lar lavage)	Upper Respiratory (e.g. (NP) nasopharyn-geal swab, tracheal aspirate)	Other, specify	Not Reported
2020-04-19	1 (0.87%)	11 (9.57%)	99 (86.09%)	4 (3.48%)	0
2020-04-26	1 (0.46%)	23 (10.55%)	184 (84.4%)	10 (4.59%)	0
2020-05-03	4 (1.87%)	31 (14.49%)	173 (80.84%)	6 (2.8%)	0
2020-05-10	3 (1.28%)	28 (11.97%)	195 (83.33%)	8 (3.42%)	0
2020-05-17	2 (0.8%)	31 (12.35%)	208 (82.87%)	10 (3.98%)	0
2020-05-24	4 (1.51%)	33 (12.45%)	222 (83.77%)	6 (2.26%)	0
2020-05-31	3 (1.08%)	32 (11.47%)	227 (81.36%)	17 (6.09%)	0
2020-06-07	0	32 (12.31%)	219 (84.23%)	8 (3.08%)	1 (0.38%)
2020-06-14	1 (0.33%)	39 (12.7%)	257 (83.71%)	10 (3.26%)	0
2020-06-21	0	42 (15.16%)	227 (81.95%)	8 (2.89%)	0
2020-06-28	0	11 (22.45%)	37 (75.51%)	1 (2.04%)	0

Note:
Each donor may have multiple tests done

The table below shows the distribution of specimens that are hemodiluted on test results for donors that have been tested for COVID, as reported in the newly added DonorNet® fields.

Week Donor Recovered	Hemodiluted specimen?		
	No	Unknown	Not Reported
2020-04-19	1 (0.87%)	0	114 (99.13%)
2020-04-26	1 (0.46%)	0	217 (99.54%)
2020-05-03	4 (1.87%)	0	210 (98.13%)
2020-05-10	3 (1.28%)	0	231 (98.72%)
2020-05-17	2 (0.8%)	0	249 (99.2%)
2020-05-24	2 (0.75%)	2 (0.75%)	261 (98.49%)
2020-05-31	3 (1.08%)	0	276 (98.92%)
2020-06-07	0	0	260 (100%)
2020-06-14	1 (0.33%)	0	306 (99.67%)
2020-06-21	0	0	277 (100%)
2020-06-28	0	0	49 (100%)

The table below tabulates the test methods for donors being tested for COVID, as reported in the DonorNet® fields.

Week Donor Recovered	Testing Method				
	Antibody (IgG/IgM/IgA)	Antigen	Nucleic acid detection (e.g. real time RT-PCR)	Other, specify	Not Reported
2020-04-19	1 (0.87%)	0	107 (93.04%)	7 (6.09%)	0
2020-04-26	0	0	207 (94.95%)	11 (5.05%)	0
2020-05-03	3 (1.4%)	0	203 (94.86%)	8 (3.74%)	0
2020-05-10	2 (0.85%)	0	220 (94.02%)	12 (5.13%)	0
2020-05-17	3 (1.2%)	0	240 (95.62%)	8 (3.19%)	0
2020-05-24	4 (1.51%)	0	250 (94.34%)	11 (4.15%)	0
2020-05-31	3 (1.08%)	0	273 (97.85%)	3 (1.08%)	0
2020-06-07	0	2 (0.77%)	247 (95%)	10 (3.85%)	1 (0.38%)
2020-06-14	1 (0.33%)	8 (2.61%)	283 (92.18%)	15 (4.89%)	0
2020-06-21	0	1 (0.36%)	266 (96.03%)	10 (3.61%)	0
2020-06-28	0	0	48 (97.96%)	1 (2.04%)	0

Note:
Each donor may have multiple tests done

The table below shows the test results reported in the new DonorNet® data field for donors being tested for COVID. The donor below showing a positive COVID-19 result in this report was not an active infection. A UNOS Patient Safety Coordinator spoke with the OPO who confirmed it was a pediatric donor who had a negative COVID-19 PCR result, but did test positive for the antibody. The OPO reports they feel the donor's antibodies resulted from the birth mother who had COVID-19 during pregnancy. All centers knew of these results prior to donation.

Week Donor Recovered	Testing Result				
	Indeterminate	Negative	Positive	Pending	Not Reported
2020-04-19	0	114 (99.13%)	0	1 (0.87%)	0
2020-04-26	0	214 (98.17%)	0	4 (1.83%)	0
2020-05-03	1 (0.47%)	210 (98.13%)	0	3 (1.4%)	0
2020-05-10	1 (0.43%)	229 (97.86%)	0	4 (1.71%)	0
2020-05-17	1 (0.4%)	240 (95.62%)	0	10 (3.98%)	0
2020-05-24	0	256 (96.6%)	0	9 (3.4%)	0
2020-05-31	0	263 (94.27%)	1 (0.36%)	15 (5.38%)	0
2020-06-07	2 (0.77%)	245 (94.23%)	0	12 (4.62%)	1 (0.38%)
2020-06-14	0	293 (95.44%)	0	14 (4.56%)	0
2020-06-21	0	269 (97.11%)	0	8 (2.89%)	0
2020-06-28	0	47 (95.92%)	0	2 (4.08%)	0

Note:
Each donor may have multiple tests done

There are no themes from the comments that aren't shown in the discrete data fields.

Summary and Conclusions

The number and percent of candidates that appear to be taking advantage of carrying labs forward to maintain their waiting list status is small across any organ. Data shown should be the maximum useage; one limitation of the analysis is that there is no way to tell in the OPTN database if candidates got their labs drawn and happened to have the same values from their last draw or if they carried their last values forward.

The number of waiting list additions has decreased during COVID-19 (both for dialysis and non-dialysis kidney candidates), but the percentage of candidates that are non-dialysis patients qualifying for waiting time by eGFR/CrCl has remained fairly stable. As we move further into 2020, it will become known if these candidates will be listed at a later date and use a waiting time modification form to request waiting time back to these COVID-19 times when they were not being listed.

The number and percent of TRF, LDF, and PTM forms in 'Amnesty' status has grown throughout the most recent months as expected. For the most part, forms in amnesty status does not appear to be limited to a single organ or OPTN region. This will have analytic implications if centers do not go back and fill in the data retrospectively, which is not required by OPTN policy. The number of graft failure and patient death forms have remained stable, which means centers are still reporting them, and are even reporting them faster than pre-COVID-19 weeks, perhaps due to increased communication with patients.

Counts of registrations having donor age acceptance criteria set as guidance recommended (donor age minimum 98 and maximum 99 for local and import offers) in order for those candidates to continue to accrue waiting time vary by organ, but appear mostly used in heart registrations. We saw a large number move from inactive to active status with the recommended acceptance criteria after guidance was issued, and that number has tapered over time. This is reassuring from a communications standpoint.

We continue to see a decline in the percent of matches with at least one COVID-19 refusal reason for all organs. We also continue to see a decline in the percent of COVID-19 related patient refusal reasons across organs. Most refusals were related to OPO or TXC operations.

The majority of registrations removals from the waiting list for COVID-19 related death were kidney patients, as were most post-transplant reported death related to COVID-19. Though these numbers appear to be tapering over time, this decline may not be real as centers have longer to submit their forms (up to 30 days from 14 days), so previous weeks may change as data becomes available.

All OPOs that had recovered donors are reporting COVID-19 donor testing results thorough the optional donor infectious disease fields in DonorNet, or through free response donor text fields or attachments. To date, no true positive COVID-19 donors have been transplanted.