OPTN Pancreas Transplantation Committee
Meeting Summary
January 27, 2023
In-person and Conference Call

Rachel Forbes, MD, Chair
Oyedolamu Olaitan, MD, Vice Chair

Introduction

The OPTN Pancreas Transplantation Committee (the Committee) met in Houston, TX and via Citrix GoToMeeting teleconference on 1/27/2023 to discuss the following agenda items:

1. Demo: Policy Analyzing Dashboard
2. Overview/Recap: Attributes, Rating Scales and Focused Discussions
3. Overview/Focused Discussions: Blood Type, Proximity Efficiency
4. Summary/Discussion: Attribute Rating Scales and Weight Recommendations for Organ Allocation Simulator (OASIM) #2

The following is a summary of the Committee's discussions.

1. Demo: Policy Analyzing Dashboard

The Committee received a presentation from Massachusetts Institute of Technology (MIT) representatives on a policy analyzing dashboard tool.

MIT representatives showed a "Policy Analyzer" dashboard tool, which includes thousands of policy options based on different priorities that the user can select. Based on these priorities and weights selected, the dashboard displays graphs depicting outcomes based on a variety of metrics including median distance, average waiting time, transplant rate disparities, etc. MIT representatives walked the Committee members through the functionality of the tool.

Summary of discussion:

The Committee Chair asked for clarification on whether or not the initial modeling request included the screening for blood type. Staff clarified that the first modeling request did include screening for blood type.

A member noted that different population differences would take into account how many people are actually listed in the region. Staff clarified that for transplant rate, this would be the number of transplants and time period divided by the amount of person time. There are different ways that can be defined for transplant rates.

It was clarified that the dashboard metrics being shown were optimized for the kidney-pancreas (KP) metrics, but that the pancreas metrics would be updated for an upcoming meeting.

A member asked what was met by simulated current policy. The MIT representative explained that the different policy results being observed were all simulated and not real data from the real transplant system. The member asked why this was not real data. The MIT representative explained that for different policies, in not having seen how these new policies would work, it is better to compare

simulations with other simulations rather than simulations to real data. This is to avoid some bias that is introduced by the simulated data (when comparing with real data).

An SRTR representative asked that when the priority for one of the attributes is changed, does this decrease the percentages proportionately. The MIT representative confirmed that this was correct. The SRTR representative asked if it was possible for making the prior living donor attribute a dynamic variable and if there was a secondary lock that could be applied. The MIT representative clarified that the prior living donor and organ registration (whole pancreas) attributes were locked to reduce the number of policy variables the model had to learn about. Additionally, the prior living donor population in pancreas is very small and would not impact the other metrics unrelated to prior living donors or organ registration (whole pancreas).

The Committee Chair asked for clarification to a point made on the inability to model on transplants due to this being based on behavior, however, whenever a policy is simulated, there is a graph that that has transplant numbers. The Committee Chair inquired if this was reliable data. The Committee Chair stated that this type of information, if an actual prediction, would be something the Committee would want to know. The MIT representative advised not to looks at this bar graph because it is unknown why the simulator is giving such a wide range for KP and Pancreas transplant that are being predicted. Staff encouraged the Committee to focus more on the other metrics than the transplant counts as the information is based on the 2019 SRTR simulator.

An SRTR representative asked if there was a way to make the individual variables static. The MIT representative stated that this could be adjusted. The SRTR representative added that for the transplant numbers metric, the consistency in acceptance behaviors is more predictable for kidney-alone and that for pancreas, this is the exact opposite which is part of why it has been explained that transplant number may not be an accurate metric to evaluate.

A member commented that when the kidney allocation changed, one of the findings was the higher than expected non-utilization rate which was not a part of the modeling. There is already an issue with utilization of pancreata so these changes may have an exaggerated effect that is not anticipated if not included in the model.

The SRTR representative replied that this was true for kidney allocation. There were logistics related to this with travel distance and for pancreas, this would be amplified due to the shorter ischemia times. A member stated that this can be due to the logistics of travel but also taking into account the increase in OPO behaviors. Another member stated that with this note, there should be a model demonstrating an increased number of transplants. A policy should not be optimized if it demonstrates less transplants and as long as patients are waiting for those organs, policy is not being optimized. The member continued by suggesting that maybe the number of transplants instead of non-utilization should be one of the metrics that are modeled.

The Committee Chair agreed with this and stated that one of the OPTN's goals is to maximize the number of transplants. Staff commented that this is one of the limitations of the modeling. The Committee was asked that when in looking at the metrics that are used, to think about what the Committee would like to optimize on and observing how that compares.

The Committee Vice Chair asked how much the dashboard simulation correlates with the OASIM. The MIT representative stated that the only data received from the OASIM data are the reports the Committee has received of the four simulated scenarios. There were limited metrics that the dashboard was able to compare on. The relationship between these data has not been detailed but it is somewhat validated.

The Committee Chair asked how the dashboard would work together with the Tableau sensitivity tool. Staff replied that both tools demonstrate different information and can be used in combination. In looking at the dashboard, this helps to identify and hone in on some optimized policy models. The incentive of the Tableau tool is to look at how this could be simulated on the match run and the ability to compare candidates. Another staff member clarified further that the use of the tools together is to help get to the answers and the goals the Committee have established and are looking for. The Tableau tool has specific features, such as how a match may be organized a certain way and the dashboard can show the outcomes and themes across metrics.

The Committee Chair asked if the Committee comes up with something based on the Tableau tool where the percentages can be adjusted without restrictions, can this be used in the dashboard to see what the metrics would look like. Staff clarified that this functionality would be updated on the dashboard so that there will not be a lock on the metrics.

The Committee Chair asked what the deadline was for the second modeling request. Staff explained that this would be dependent on Committee discussion and the decisions that are made, but it is thought that the request would be submitted sometime in February. The Committee Chair asked if further feedback would be needed on this from public comment. Staff explained that during the current public comment period, the update that is being given is that the OASIM report and addendum is currently being reviewed by the Committee and that if there is any feedback from public comment, this can be provided to the Committee for further consideration.

The Committee Chair stated that it would be worth seeing what the early regional meetings produce feedback wise. If there are comments in particular to anything regarding wanting to see data, this should be considered.

Next steps:

Committee members will review the dashboard and use it as a guide in their discussions on optimized policy scenarios for the second Organ Allocation Simulator (OASIM) modeling request.

2. Overview/Recap: Attributes, Rating Scales and Focused Discussions

The Committee reviewed the attributes, rating scales and focused discussions to date.

Presentation summary:

The Committee reviewed the attribute rating scales as well as the relevant scenarios for kidney-pancreas (KP) and pancreas that were modeled in the first modeling request (Combined AHP and All Donor Efficiency scenarios).

The Committee then reviewed the consensus made to date for the attributes, rating scales and established goals for the second round of modeling as follows:

- Pediatrics
    - Rating Scale: Binary (yes/no)
    - Goal: High priority (at/near the top of the match run) in rare event pediatric candidate is on the match run
- Prior Living Donor
    - Rating Scale: Binary (yes/no)
    - Goal: High priority (at/near the top of the match run) in rare event prior living donor is on the match run
- Qualifying Time

    - Rating Scale: Two-piece linear, inflection point 90% at 5 years; shallower line beyond 5 years to max
    - Goal: More emphasis should be placed (in consideration to placement efficiency)
- Organ Registration
    - Rating Scale: Binary (yes/no)
    - Goal: Prioritize whole pancreas candidates for donor age $\leq$ 45 &BMI $\leq$ 30, and prioritize islet candidates for donors > 45 or BMI > 30
- CPRA
    - Rating Scale: Steep, nonlinear curve

The remaining attributes that the Committee would need to discuss are Blood Type and Proximity Efficiency. For the Blood Type attribute, the Committee will come to a consensus on screening for KP and the rating scale. For the Proximity Efficiency attribute, the Committee will come to a consensus on the rating scale. The Committee will be asked to focus on the modeling and tying this into the Committee's established goal of the attribute to come to a consensus on the rating scale.

Summary of discussion:

There were no questions or comments.

3. Overview/Focused Discussions: Blood Type, Proximity Efficiency

The Committee focused their discussions on the blood type and placement efficiency attributes to finalize rating scale discussions for the second modeling request. Summary of discussion:

Blood Type

The Committee previously discussed their goal of the blood type attribute in maintaining screening for kidney-pancreas (KP). There was also consensus in not having one blood type being prioritized over another blood type. Based on these established goals, the Committee was presented with two blood type screening options:

- Option 1: Maintain KP screening and remove ABO attribute for KP; keep ABO as an attribute for pancreas.
- Option 2: Maintain KP screening; remove ABO attribute for KP and pancreas.

Both options would maintain screening for KP. The removal of the ABO attribute for KP in Option 1 would mean that no ABO points would be awarded for KP, but there would be ABO points awarded for pancreas/pancreas islets. This option would present differences for KP and pancreas/pancreas islets on the match run (as KP, pancreas, and pancreas islets are on the same match run). Option 2 would remove the ABO attribute for both KP and pancreas resulting in neither KP or pancreas/pancreas islets receiving ABO points. This option would be consistent with current policy.

The Committee Chair asked if all blood types were mixed in on a pancreas alone match run. A Committee member confirmed this would be the case. An SRTR representative mentioned that the biggest disparities are currently between blood types B and O. With this in mind, the Committee Chair commented that blood type should be as close to current policy as possible, at least for the first iteration of Continuous Distribution (CD).

The Committee was then asked to discuss which screening method should be modeled in the second OASim request. The Committee can to a vote and unanimously agreed on maintaining KP screening and removing the ABO attribute for KP and pancreas. The Committee discussed the amount of wait time between each of the blood types. An SRTR representative pointed out that candidates with blood type B

have a disproportionate amount of wait time compared to other blood types. The Committee believes these are things to be monitored and discussed in a future iteration of CD.

Proximity Efficiency

The Committee previously discussed their preference of the all donor efficiency scenario modeled in the first Organ Allocation Simulator (OASIM) modeling request as it had the closest results to the Committee's desired goal of increasing the utilization of pancreata. This was in part because it placed a higher weight on placement efficiency, which was set at thirty percent.

The Committee was asked their thoughts on the current rating scale for the placement efficiency attribute. A member voiced concern about the Organ Procurement Organizations (OPOs) that do not have transplant programs within 200 nautical miles (NM). In these instances, placement efficiency is going to be highly dependent on the transportation method, which would be most likely by airplane. This dependency could create an issue resulting in pancreas non-utilization rates increasing. The member continued by asking how altering the placement efficiency weight could change that outcome. Another Committee member stated that was previously discussed and that from previous data analyzing disparities between rural and urban programs, it was found that there was no significant difference in the amount of non-utilized pancreata between them. The Committee was called to a vote in support or opposition of the current rating scale for the placement efficiency attribute. The Committee voted in support of the current rating scale for placement efficiency.

4. Summary/Discussion: Attribute Rating Scales and Weight Recommendations for Organ Allocation Simulator (OASIM) #2

The Committee discussed potential scenarios and weight for the second OASIM modeling request.

Summary of Discussion:

A Committee member pointed out that it may be beneficial to first optimize the transplant rates then refine the model for it. The Committee was reminded to think of their goals for each attribute. There is an understanding that the Committee want to see an increase in transplant rates, but although this cannot be directly modeled, the Committee was advised to be more specific towards the outcomes of each scenario that could results in an increase in transplants.

The Committee voiced their preference in placing a strong emphasis on proximity efficiency. The Committee discussed the pattern of inconsistency regarding transportation. One member suggested that optimizing the proximity efficiency attribute could potentially results in a decrease of discarded organs. An SRTR representative mentioned that a change in policy would need to be made in order for there to be a significant increase in transplants. The SRTR representative continued that the goal of the first iteration of CD is not to final product and serves as a baseline that is closely related to the current policy. The SRTR warns that creating radical changes in the hopes of drastically raising the transplant rate for the first iteration could potentially have negative unintended consequences.

Some Committee members voiced concern in decreasing the weights from the pediatrics and prior living donor attributes as they may not be prioritized as much as intended. A member, in reference to the tableau tool, stated that when running a match run list, pediatrics and prior living donors are not on the top of the list. Staff clarified that pediatric and prior living donor candidates for pancreas are rare to never events, but based on previous discussions, the Committee wanted to place emphasis on those candidates when those instances do occur.

The Committee Chair asked if there were any issues not been mentioned regarding attributes in CD. An SRTR representative mentioned waiting (qualifying) time and that median time to transplant has increased to 14.1 months. That number is up 12.3 months in the prior period.

The Committee was encouraged to consider the outcomes being similar to what currently exists in policy to avoid creating unintended consequences. The Committee reviewed and discussed the following sample scenarios and weights in considering what would be submitted for the second modeling request:

All Donor Efficiency (baseline scenario)

- Blood Type: 11.67%
- CPRA: 11.67%
- Prior Living Donor: 15.56%
- Pediatrics: 15.56%
- Qualifying Time: 7.78%
- Placement Efficiency: 30%
- Organ Registration: 7.78%

No Worse for All:

- Blood Type: 12.4%
- CPRA: 19.9%
- Prior Living Donor: 20%
- Pediatrics: 8.2%
- Qualifying Time: 8.9%
- Placement Efficiency: 20.8%
- Organ Registration: 10%

Optimize on Distance:

- Blood Type: 5.4%
- CPRA: 11.5%
- Prior Living Donor: 20%
- Pediatrics: 14%
- Qualifying Time: 8%
- Placement Efficiency: 31%
- Organ Registration: 10%

Optimize on Distance and CPRA:

- Blood Type: 16.1%
- CPRA: 17.1%
- Prior Living Donor: 20%
- Pediatrics: 6.7%
- Qualifying Time: 11.1%
- Placement Efficiency: 19.1%
- Organ Registration: 10%

Optimize All:

- Blood Type: 15.3%
- CPRA: 9.5%

- Prior Living Donor: 20%
- Pediatrics: 13%
- Qualifying Time: 15.9%
- Placement Efficiency: 16.3%
- Organ Registration: 10%

Additional Consideration:

- Blood Type: 0%
- CPRA: 15%
- Prior Living Donor: 20%
- Pediatrics: 20%
- Qualifying Time: 15%
- Placement Efficiency: 20%
- Organ Registration: 10%

The Committee agreed on removing the blood type attribute for the all donor efficiency model. A member stated that the all donor efficiency model should see an increase in proximity efficiency as well. The Committee voiced concern over some aspects of the high CPRA column. Committee members feel that it is very similar to the no worse scenario, because the rank order of the attributes are similar to each other.

The Committee was encouraged to practice with the simulation tools provided to create their own scenarios or adjustments to the current scenarios and bring their suggestions and/or modifications to the next Committee meeting.

Next Steps:

The Committee will continue their discussions to finalize scenarios and weights for the second round of modeling.

Upcoming Meetings

- February 17, 2023 (Teleconference)
- March 6, 2023 (Teleconference)

Attendance

- **Committee Members**
  - Colleen Jay
  - Dean Kim
  - Diane Cibrik
  - Dalamu Olaitan
  - Maria Helena Friday
  - Muhammad Yaqub
  - Nicolae Leca
  - Nikole Neidlinger
  - Rachel Forbes
  - Randeep Kashyap
  - Rupi Sodhi
  - Sarah Booker
  - Ty Dunn
  - William Asch
- **HRSA Representatives**
  - Marilyn Levi
- **SRTR Staff**
  - Bryn Thompson
  - Raja Kandaswamy
  - Arjun Naik
- **UNOS Staff**
  - James Alcorn
  - Joann White
  - Kieran Mcmahon
  - Lauren Mauk
  - Lauren Motley
  - Austin Chapple
  - Amber Fritz
  - Krissy Laurie
- Guest Attendees
  - Elijah Pivo