OPTN Liver and Intestinal Organ Transplantation Committee
Meeting Summary
August 16, 2024
Conference Call

Scott Biggins, MD, Chair
Shimul Shah, MD, MHCM, Vice Chair

Introduction

The OPTN Liver and Intestinal Organ Transplantation Committee (the Committee) met via WebEx teleconference on 08/16/2024 to discuss the following agenda items:

1. August 6 Meeting Recap
2. Continuous Distribution: Geographic Equity Attribute

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

1. August 6 Meeting Recap

The Committee reviewed their deliberations from the August 6, 2024 meeting which included receiving the MELD 3.0, PELD Cr, Status1A and 1B six-month monitoring report. Related to the liver continuous distribution project, the Committee had a pro/con debate for creating a rating scale for the utilization efficiency attribute based on transplant program offer acceptance ratio and received a reintroduction of the geographic equity attribute.

Summary of discussion:

There were no questions or comments.

2. Continuous Distribution: Geographic Equity Attribute

The Committee reviewed a data report on population density and discussed utilizing population density as the input for a rating scale for the geographic equity attribute.

Data summary:

- Demand:
  - The number of waiting list registrations with MELD or PELD scores of 15 or higher in each center's circle increased fairly linearly as the population density circle size increased.
  - The proportion of waiting list registrations meeting this threshold remained consistent across population density circle sizes.
  - Similar trends were seen when the threshold was changed to 12 or higher.
- Supply:
  - The number of deceased liver donors recovered for the purposes of transplant increased fairly linearly as population density circle size increased.
  - The proportion of deceased liver donors recovered and ultimately transplanted among all deceased liver donors recovered also remained consistent across population density circle sizes.

        - Similar trends were seen for donors of any organ and for eligible and imminent deaths.
- Supply/Demand Ratio:
    - Remained fairly consistent across population density circle sizes.
    - The variability of supply/demand ratios decreased as population density circle size increased.
    - Similar trends were seen regardless of whether the supply/demand ratio was weighted.
- Collectively, these results suggest that geographic equity improves as population density circle size increases.

Summary of discussion:

The Chair stated that there appears to be an inflection point between population density sizes of 10 million and 20 million. The Chair added that there is a push-pull between the travel efficiency attribute which is based in distance and the geographic equity attribute. The Chair stated that the travel efficiency attribute's rating scale will likely have an inflection point somewhere between 50 nautical miles (NM) and 250 NM for driving vs flying differences. The Chair stated that the inflection point within a geographic equity rating scale would be much farther out. The Chair explained that the travel efficiency attribute will likely focus on smaller geographic areas while geographic equity attribute will focus on larger geographic areas.

The Chair suggested that the rating scale could begin at a population density size of 10 million or 20 million and then decay linearly out to 50 million. The Chair suggested another rating scale option based on a 50 million binary option, meaning that anything within a 50 million population density size would receive all the points and anything outside of 50 million would receive no points. The Chair opined that a rating scale with a linear decay makes the most sense.

An SRTR representative suggested the Committee consider formulating population density around donor hospitals instead of transplant programs. The Chair stated that the geographic equity attribute considers both supply and demand and aligning demand with the area around a transplant program is more logical than a donor hospital. The Chair noted that population density is used as a surrogate for addressing variation in supply and demand.

A member agreed that centering the population density equation around the transplant program makes sense. The member stated that this attribute is trying to equalize access for those in differently populated areas. The member stated that the travel efficiency attribute addresses distance which may be more important to consider donor hospital location.

Another member noted that the difference between the distance of the 20 million and 30 million population density sizes depend on whether or not it includes a populous area. The member stated that points should be given to areas where there is inequity in terms of supply and demand. The member suggested that supply and demand could be calculated to determine outliers and points could be given to the identified outliers. The Chair stated that that would require supply and demand as the input of the rating scale which is a concept the Committee previously determined not to pursue. The Chair stated that the decision to analyze population density was to have a more neutral input that would also help address supply and demand inequities. The Chair stated that the data report confirms that as population density increases, the variation in supply and demand begins to decrease.

The Committee discussed a rating scale that would provide 100% of the points to inside 20 million population density sizes with a linear decay to 0% of the points to 50 million population density sizes. An SRTR representative expressed concern with having a travel efficiency rating scale and a geographic equity rating scale that both decay. The SRTR representative suggested that a binary rating scale may be more effective if the purpose of the geographic equity attribute is based on equity and not distance or

travel. A member suggested that decisions should align for both geographic equity and travel efficiency rating scales.

Another member stated that the travel efficiency attribute will likely award points to areas of closer proximity while the geographic equity attribute will likely award points to areas that have higher levels of supply and demand variation. The member explained that closer transplant programs will receive points through travel efficiency attribute, while farther away transplant programs can receive additional points through geographic equity but may not receive travel efficiency points. The member stated that perhaps a rating scale with a decay is not necessary if that is the goal. The SRTR representative agreed and stated that a decaying rating scale is not necessary, a rating scale that incorporates a large enough circle size to encompass geographically isolated areas is sufficient. A member agreed that both rating scales should not be decaying functions as it may negate too much of what is trying to be accomplished in terms of equity.

The Committee expressed interest in reviewing two potential rating scales – 1) a binary rating scale with a 20 million population density circle size; 2) a binary rating scale with a 50 million population density circle size.

Next steps:

The Committee will continue developing an initial rating scale for the geographic equity attribute.

Upcoming Meetings

- September 6, 2024 at 2 pm ET (teleconference)
- September 20, 2024 at 2 pm ET (teleconference)

Attendance

- **Committee Members**
  - Aaron Ahearn
  - Allison Kwong
  - Christine Radolovic
  - Erin Maynard
  - James Pomposelli
  - Joseph DiNorcia
  - Neil Shah
  - Omer Junaidi
  - Scott Biggins
  - Shunji Nagai
  - Tovah Dorsey-Pollard
  - Vanessa Cowan
  - Vanessa Pucciarelli
- **HRSA Representatives**
  - Jim Bowman
- **SRTR Staff**
  - Jack Lake
  - Katie Audette
  - Nick Wood
  - Ryo Hirose
- **UNOS Staff**
  - Benjamin Schumacher
  - Erin Schnellinger
  - Laura Schmitt
  - Meghan McDermott
  - Niyati Updahyay