OPTN Thoracic Organ Transplantation Committee
Continuous Distribution of Lungs Workgroup
Meeting Summary
February 20, 2020
Conference Call

Erika Lease, MD, Committee Vice Chair

Introduction

The Thoracic Committee's Continuous Distribution of Lungs Workgroup met via Citrix GoTo teleconference on 02/20/2020 to discuss the following agenda items:

1. Discussion of Analytical Hierarchy Process (AHP) Exercise and Results

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

1. Discussion of AHP Exercise and Results

Workgroup members were asked to complete an online prioritization exercise using software based on AHP methodology. The purpose of this call was to review the Workgroup's results.

Summary of discussion:

UNOS staff briefed the Workgroup on their results. The Workgroup participants ranked medical urgency and pediatric age group as the top priorities at 25.77% and 24.8% respectively, followed by reducing biological disadvantages in transplant and post-transplant survival at 18.5% and 16.33%, followed by prior living donor and travel efficiency at 7.31% and 7.27%. One member expressed surprise that post-transplant survival did not rank higher as a priority.

UNOS staff noted that the OPTN Final Rule requires the OPTN to consider both equity and utility in organ allocation, and while the Final Rule does not specify how these goals should be weighed against each other, the results of the Workgroup's prioritization exercise weighted each of these goals equally at about 50% each.

Next, UNOS staff reviewed some of the pairwise comparisons from the prioritization exercise with the Workgroup to gather their feedback and answer any questions.

Medical Urgency vs. Pediatric Age Group

The first pairwise comparison reviewed was medical urgency vs. pediatric age group. UNOS staff noted that there was a broad distribution of responses, with some members heavily weighting one or the other and some members weighting them equally. One member expressed concern about this pairwise comparison, noting that the pediatric variable is dichotomous (either under age 18 or age 18 and over) whereas medical urgency can be defined as a continuous variable. The member asked the Workgroup to consider whether it would be fair to have a continuous distribution for age that prioritizes younger recipients over older recipients, so that 10-year-olds would be prioritized over 30-year-olds, who would in turn be prioritized over 75-year-olds. Workgroup members noted that the National Organ Transplant Act requires giving special consideration to children. Workgroup members generally agreed that policies based solely on age could be discriminatory but that policies based on outcomes – which may be associated with age – may be more appropriate. One member noted that the current system prioritizes

older candidates by assigning them a higher lung allocation score (LAS), so granting more priority to younger candidates would be a significant change.

Some Workgroup members said that they chose pediatric age group over medical urgency in the prioritization exercise because they understand the policy requirements to do so, and they wanted to ensure that pediatric priority is taken into account in the composite allocation score. One member noted that people less familiar with the policy history may believe that medical urgency should trump pediatric age group.

Another member noted that the pediatric age group definition may be confusing to some people, given the emphasis on the under-12 age group for lung candidates. UNOS staff agreed to review the definition to see if additional clarification should be added. A member noted that the Workgroup made a conscious decision as a group to eliminate the subdivision in pediatrics for the continuous distribution process, so the Workgroup will need to make sure that the under-12 group is not disadvantaged under the new framework. UNOS staff noted that Workgroup members will want to look at the impact on this group when reviewing modeling results following the development of an initial composite allocation score. A member noted that including size as a consideration may ensure the under-12 group is not disadvantaged. UNOS staff noted that one member commented in the exercise that giving a lot of priority to the pediatric group is not likely to impact adult lung allocation substantially because of size matching issues.

Medical Urgency vs. Post-Transplant Survival

The second pairwise comparison reviewed was medical urgency vs. post-transplant survival. One member noted that in completing the exercise, they thought about post-transplant survival as a broad concept rather than thinking about post-transplant survival at one year as it is currently defined in the LAS model. The member said that in their mind, there is a tipping point where the quality-adjusted life years gained or longevity after a transplant that would weigh heavily into decision-making if all else were equal, and that tipping point is beyond the one-year survival mark. For example, cystic fibrosis patients have the best long-term survival and the member values that, whereas evaluating post-transplant survival after one year is less discerning.

UNOS staff asked the Workgroup whether the definition for post-transplant survival should be limited to one-year or defined more broadly when the exercise is sent out to the public. UNOS staff noted that the OPTN does not have data on other metrics of post-transplant survival (e.g. five-year or ten-year). The Workgroup and SRTR staff agreed that a broader definition of post-transplant survival would be more helpful in understanding the values of the community on prioritizing organ offers for candidates with the same medical urgency but different post-transplant survival probabilities. UNOS staff agreed to revisit this definition to make sure it refers to post-transplant survival as a global concept.

The Workgroup and SRTR staff discussed how they should best account for post-transplant survival in the continuous distribution system. SRTR staff noted that some members of the transplant community dislike that the current system grants priority to someone who lives a year on average after transplant over someone who could live ten years after transplant. The Workgroup and SRTR staff noted the difficulty of predicting post-transplant survival with a high degree of certainty based on pre-transplant data in order to avoid futile transplants. The Workgroup and SRTR staff noted that it is easier to make post-transplant survival estimates for a population than for an individual, which could be a better way to account for post-transplant survival without using a policy that discriminates based on age. SRTR staff noted that age is the biggest predictor of post-transplant survival based on outcomes data, and Workgroup members agreed to consider this approach moving forward.

Additional Discussion of Prioritization Exercise

UNOS staff reviewed the definitions for two attributes: prior living donor and reducing biological disadvantages in transplant access. UNOS staff also explained how the prioritization exercise software assigns consistency scores for participants as a group and as individuals. The Workgroup did not have additional questions.

Next steps:

UNOS staff will ask the Workgroup to repeat the AHP exercise, and will later use the exercise to solicit feedback from the public on their priorities. UNOS staff will receive the results of the revealed preference analysis, which will help the Workgroup to understand how the current lung allocation system prioritizes various attributes, and offers an opportunity to compare this baseline to the results of the AHP exercise. UNOS staff will continue developing rating scales for the Workgroup to review in future meetings. Members of the Thoracic Committee will meet in person in Chicago on April 17, which will provide an opportunity for more in-depth discussion.

Upcoming Meetings

- March 12, 2020
- March 19, 2020
- April 9, 2020
- April 17, 2020, in-person meeting

Attendance

- **Workgroup Members**
  - Selim Arcasoy
  - Alan Betensley
  - Whitney Brown
  - Marie Budev
  - Staci Carter
  - Kevin Chan
  - Jonathan D'Cunha
  - Gundeep Dhillon
  - Matthew Hartwig
  - Erika Lease
  - Masina Scavuzzo
  - Stuart Sweet
- **HRSA Representatives**
  - Jim Bowman
  - Marilyn Levi
- **SRTR Staff**
  - Katie Audette
  - Maryam Valapour
- **UNOS Staff**
  - James Alcorn
  - Scott Castro
  - Rebecca Goff
  - Eric Messick
  - Elizabeth Miller
  - Leah Slife
  - Kaitlin Swanner
  - Susan Tlusty
  - Karen Williams
- **Other Attendees**
  - Hannah Byford