Introduction

The OPTN Multi-Organ Policy Review Workgroup (the Workgroup) met via Citrix GoToTraining teleconference on 04/15/2020 to discuss the following agenda items:

1. Priorities for Addressing Multi-Organ Transplant (MOT) Combinations
2. Ideas for Allocating Heart/Liver and Lung/Liver Combinations
3. Next Steps

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

1. Priorities for Addressing MOT Combinations

United Network for Organ Sharing (UNOS) staff reminded the Workgroup members of the priorities for addressing MOT combinations.

Summary of discussion:

Workgroup members were reminded that, during the previous call, there was agreement to address MOT combinations in the following order:

- MOTs involving thoracic organs
- MOTs involving intestines
- MOTs involving kidneys

2. Ideas for Allocating Heart/Liver and Lung/Liver Combinations

The Workgroup reviewed draft ideas for allocating heart/liver and lung/liver combinations.

Summary of discussion:

The Workgroup Chair provided an overview of the process some OPOs use to allocate multiple organs. He noted that some OPOs typically attempt to place cardiothoracic organs first followed by the abdominal organs while also acknowledging there is variability in practice across OPOs. One issue that the Workgroup will need to address is whether to consider policies outlining which match run to use when allocating multi-organ combinations. The Workgroup members were reminded that the recommendations from the Ethics Committee white paper on the “Ethical Implications of Multi-Organ Transplants” should also be considered whenever possible during the discussions.¹

The Workgroup discussed the following draft processes for determining how to allocate multi-organ combinations:

¹ https://optn.transplant.hrsa.gov/media/2989/ethics_boardreport_201906.pdf
Heart/Liver

- If there is a Status 1 heart candidate, that candidate should also receive the liver if they are within 500 nautical miles (NM).
- If there are no Status 1 heart candidates, then the liver alone should be allocated to Status 1A, Status 1B, MELD35 or higher/MPaT (currently 35) or higher by following the liver match run.² ³
- If there are no Status 1 heart candidates or liver Status 1A, 1B, MELD 35 or higher/MPaT (currently 35) or higher liver candidates, then the OPO determines the next step for allocation.

A member asked if heart/liver MOT candidates should receive higher prioritization in order to get them transplanted before they reach heart Status 1 – this could potentially improve outcomes for those candidates. A member suggested comparing the waitlist mortality rate for Status 1 heart candidates and the MELD scores of liver candidates to help determine which to allocate first.

A member inquired about how many heart/liver MOT candidates were Status 1. Another member explained that Status 1 candidates were not very common and that the requirement for MOT should include Status 2 and 3 candidates. A member stated that the Workgroup needs more data before deciding on what statuses to prioritize and that the Workgroup needs to think about these prioritizations from the pediatric perspective as well.

A member expressed concern about the medically urgent patients that also have a congenital heart disease. The member explained that these patients are generally younger patients, despite undergoing multiple cardiac surgeries; therefore, they have a difficult time qualifying for Status 2 without some type of exception. A member stated that Status 3 patients are also in the hospital on inotropes and should be considered for MOTs, although there would need to be data to support this claim.

Lung/Liver

- Lung candidates with LAS of greater than 35 should also receive liver if MOT candidate within 500 NM.
- Lung candidate with LAS of less than 35, allocate liver alone to Status 1A, 1B, MELD 35 or higher/MPaT (currently 35) or higher
- No lung candidates with LAS greater than 35 and no Status 1A, 1B, MELD 35 or higher/MPaT (currently 35) or higher – OPO determines next step for allocation?

A member inquired about the difference in nautical miles between heart/liver and lung/liver MOTs. UNOS staff explained that, for Status 1 and 2 heart candidates, the first four classifications extend to 500 NM. A member suggested using 500 NM for both heart/liver and lung/liver MOTs in order to be consistent. A member noted that this would be helpful for candidates who have a difficult time getting offers; i.e. candidates with blood type B. Members expressed concerns about centers gaming the system because one organ has a larger distance associated with it and the potential for one organ pulling another due to the difference in distance.

A member suggested that the Workgroup analyze the waitlist mortality for MOTs, instead of medical urgency, and putting them on the waitlist in that order. Another member suggested that equity should also be considered when determining how to list candidates on the waitlist. It was explained that while sicker patients typically have worse outcomes, they get the most benefit from MOTs.

² Model for End-Stage Liver Disease
³ Median Pediatric End-Stage Liver Disease (PELD) at Transplant
A member stated that it would be helpful to review lung/liver MOT waitlist mortality rates and the total number of lung/liver MOTs done each year. A member explained that lung/liver MOTs are uncommon across the U.S. (14 performed in 2018) because patients are quite sick and might not be listed for transplant.

The Workgroup requested the following data:

- Heart status for heart/liver MOTs
  - Outcome (survival) stratified by heart statuses from past 5 years
- MELD scores for lung/liver MOTs
  - Outcome (survival) stratified by MELD scores from past 5 years
- Waitlist mortality rates for heart/liver and lung/liver MOTs

3. **Next Steps**

The Workgroup Chair will provide an update to the Policy Oversight Committee. Once available, the Workgroup will analyze the data from previous data requests and continue the discussion surrounding MOT prioritization and allocation. The Workgroup will also begin discussing the appropriate list to use for MOTs.

**Upcoming Meetings**

- TBD