Introduction
The Continuous Distribution of Lungs Workgroup (Hereafter referred to as the “Workgroup”) met via Citrix GoTo teleconference on 05/16/2019 to discuss the following agenda items:

1. Summary of Previous Meeting’s Decisions
2. Geography: Discuss Travel Mode

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

1. Summary of Previous Meeting’s Decisions
UNOS staff reviewed last week’s discussions regarding blood type in a continuous distribution allocation system and transitioned to discussing mode of transportation.

Summary of discussion:
UNOS staff summarized the following decisions made regarding blood type:

- Identical blood types should be prioritized over compatible blood types based on issues of access for blood type O candidates (boost points may be given in order to address any outcome issues under a continuous distribution system).
- Prioritize compatible versus incompatible blood type transplants, based on clinical outcomes.
- Continue prioritizing pediatric candidates less than 2 years of age, because they can receive any blood type (relates to both improved access and clinical outcomes).
- Agreed that sicker candidates should be factored into the continuous distribution system, so that at some point during allocation, such candidates with high LAS scores can receive a compatible blood type.

2. Geography: Discuss Travel Mode
UNOS staff initiated the discussions for travel mode, specifically as to how this factor currently groups and prioritized candidates, how it connects with the OPTN Final Rule, the options for smoothing classifications and how to categorize any sub-factors.

Summary of discussion:
UNOS staff provided an overview of the factors that impact the decision to change travel mode, including travel distance, travel time, donor factors, candidate factors. UNOS staff clarified that other factors such as vehicular traffic, were sub-factors under travel mode. Workgroup members discussed what other factors may impact the decisions to drive versus fly. One Workgroup member stated that topography was an important factor for their center, because they are unable to fly during the winter season due to mountainous terrain. Other Workgroup members agreed that topography was important, as well as other factors such as weather. Though UNOS staff acknowledged that these factors were important, they encouraged Workgroup members to focus on which factors would be known at the time of organ offer and what data may be
collected in the future. One Workgroup member stated that though the timing of the donor procurement is not known at the time of organ offer, if the donor time is narrow, then this can still impact transportation mode.

Another Workgroup member was concerned that OPO resources may be limited for transportation if they are helping another center. Centers may have to secure their own mode of transportation, which could affect which type of transportation is utilized. Workgroup members expressed a desire to collect more detailed data on OPOs and transplant centers, such as how they allocate their resources. Another member stated that though traffic is not known at the time of organ offer, this too is an important factor. For example, depending upon the time of day, there may be heavier traffic or city-wide events that prevent driving. As such, though it may seem feasible to drive, it may be more reasonable to fly in these situations. Also, traffic is noted to be less on holidays and distance is less when an OPO has a surgical center. However, the Workgroup members acknowledged that none of the above factors are known at the time of organ offer.

Next, a Workgroup members stated that centers do not have a choice over what the OPOs decide to do for transportation mode. However, this sentiment was not the same for all Committee members, with some stating that their local OPOs do not determine transportation mode. Many of the Workgroup felt that with all the different factors that go into determining transportation mode, that the OPO and transplant center must work together more effectively.

One Workgroup member asked whether candidates would be given more priority if they had to drive versus fly under the new allocation system. UNOS staff stated that due to system efficiency, the various travel modes are important (especially in relation to cost). Also, eventually the goal of this project would be to weigh each factor against each other. Nevertheless, Workgroup members were concerned that candidates located in rural areas may be disadvantaged if the only available mode of transportation is vehicular. Furthermore, one Workgroup member voiced concerns that some transplant centers are having to fly for all organs, which should be considered further by the Workgroup. UNOS staff acknowledged that to the extent possible, they want to minimize any unintended consequences, and so the discussion about rural versus metropolitan locations will be more relevant when the factors are weighed.

Next, UNOS staff presented four polling questions aimed at determining the different hours and miles that transplant centers and/or OPOs change their transportation mode:

1. **On average, what is the time threshold (in hours) your program switches from driving to flying for adult lungs?**
   - The majority of respondents stated that they switch from driving to flying at 1-1.5 hours. However, there were 3 votes where they switched transportation mode at 2 hours or more. There was only one respondent who switched transportation at less than an hour.

2. **On average, what is the time threshold (in hours) your program switches from driving to flying for pediatric lungs?**
   - The majority of respondents did not have an affiliated pediatric lung program. However, those that did stated that they switched transportation modes between 1-1.5 hours.

3. **On average, at what distance (miles) does your program transition from driving to flying for adult lungs?**
   - The majority of respondents fly when distance exceeds 60 miles (between 60 miles and 150 miles). There was only one member whose program flew all the
time. Furthermore, there were only 2 votes where they transitioned from driving to flying less than 60 miles.

4. On average, at what distance (miles) does your program transition from driving to flying for pediatric lungs?

The majority of respondents did not have an affiliated pediatric lung program. However, those respondents that did have a pediatric lung program stated that all of them switched from driving to flying under 60 miles. UNOS staff asked whether there is a transition zone (when travel mode could be driving or flying but not consistently either) between usually driving and usually flying, or whether there is a clear demarcation. For example: always driving ($x$ hours), transition zone, or always flying ($y$ hours). In response, one Committee member opined that they did not understand why there had to necessarily be a “demarcation”, because even if the Workgroup does not explicitly define a transition zone, it would still need to be developed when smoothing out the curve.

One Workgroup member asked when smoothing out the slope of the line would occur. UNOS staff replied that the Workgroup will decide how to prioritize transportation costs and travel mode. For example, the most precise function would be to include travel cost in the slope, but that this would take the longest function to develop due to a lack of data. Another Workgroup member said the group should also consider at what difference in LAS score makes it meaningful enough to fly for an organ (when is it meaningful enough to absorb the costs). UNOS staff replied that this discussion will also happen when all the factors are combined and weighed against one another. There was concern from one Workgroup member, who cautioned against replacing one geographic disparity with another, and voiced support in determining how differences in LAS scores factor into transportation mode. For example, it was noted that there are differences between how transplant centers utilize transportation. Another Workgroup member stated that most people will fly unless the recipient is close by.

UNOS staff then spoke to how the OPTN had previously surveyed transplant programs and OPOs. A Workgroup member followed up by saying that they do not see the value in having a narrow transition zone unless the modeling will use buckets. Furthermore, this member opined that there will be less of a change in the “usually driving” and “usually flying” zones. However, other Workgroup members stated that there are fixed-time costs to flying, so that people make the decisions based on driving to and from airports plus flying versus just flying.

Next, UNOS staff began to discuss how the SRTR might analyze travel mode via a data request. Another Workgroup member stated that a data request could be made, but only to be able to defend any decisions made by the Committee on travel distance and travel mode. Furthermore, any decisions made from the data request need to be assessed for clinical meaningful differences in relation to distance. For example, the slopes may change depending on factors such as ischemic time as distances increase. Another Workgroup member suggested to include data on primary graft dysfunction or graft failure.

Next steps:
UNOS staff will look at the poll data and provide a recommendation to the Workgroup at the next meeting.

Upcoming Meeting
- May, 2019