

**OPTN Heart Transplantation Committee
Pediatric Heart Workgroup for ABOi Offers
Meeting Summary
June 11, 2021
Conference Call**

Introduction

The Pediatric Heart Workgroup for ABOi Offers (Workgroup) met via Citrix GoToMeeting teleconference on 06/11/2021 to discuss the following agenda items:

1. Introductions
2. Review project form
3. Questions and next steps

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

1. Introductions

Summary of discussion:

The Vice Chair of the Heart Committee introduced the Workgroup members. The Workgroup consists of members from both the Heart Committee and Pediatric Committee. The members also represent the transplant community as medical directors, cardiologists, surgeons, coordinators, as well as a family member of a heart recipient.

2. Review project form

UNOS staff provided an overview of the project's purpose to update policy to align with current research findings relating to ABO-incompatible (ABOi) pediatric heart transplant in order to potentially increase the donor pool and reduce wait time for eligible pediatric heart candidates. The members are tasked with considering modifications to *Policy 6.6.B: Eligibility for Intended Blood Group Incompatible Offers for Deceased Donor Hearts*.

Summary of discussion:

A member commented that the members are all involved in pediatric heart transplantation and this concept is a familiar. He commented that policy needs to be updated to be based on more current research including what is being accomplished in Canada and the United Kingdom. He also commented that the policy modifications cannot prioritize ABOi candidates over other medically urgent candidates. A member commented that the outcomes for low risk ABOi recipient are equivalent to ABO compatible (ABOc) recipients.

When considering options for how to modify the policy, a member commented that a 1:16 titer threshold could replace the age boundary of 2 years old. Another member commented that the members need to also consider ABOi pediatric recipients who have grown, may need retransplant, and could receive offers from both their blood group or their initial donor's blood group. A member commented that the age threshold may no longer be relevant. A member responded that the age threshold was established based on the fact that younger children are not yet developing antibodies.

The members discussed how expanding ABOi offers would impact medical urgency prioritization in allocation. A member expressed a concern that this needs to be considered when evaluating any policy modification. The members reviewed the classification table.

The Heart Vice Chair commented that that before age 1, ABOi and ABOc is not delineated and therefore ABOc candidates do not receive offers before ABOi candidates. He continued that after age 1, the offers first go to ABOc candidates. He recommended allowing the transplant programs to determine whether an offer is acceptable or not rather than create age or titer thresholds. He commented that this process could be similar to how human leukocyte antigens (HLA) are evaluated when reviewing offers. A member commented that this approach may be harder for the community to accept and additional risks may be taken to ensure a patient gets a heart. A member commented that this scenario already exists as there are no limitations placed on programs relating to HLA sensitization and cross matching.

A member commented that pediatric candidates with low titers should be considered for a primary blood group match. He commented that they should not disallow a high isohemagglutinin titer transplant, just not at a higher priority of ABOc candidates on the waitlist. A member questioned how candidates with rare blood groups who are less likely to have matches would be prioritized. A member responded that length of time on the waitlist is prioritized.

A member commented that blood type AB is rare but can accept organs from AB donors. He continued that O candidates who have high titers are at most risk to be impacted if any potential policy modification increases ABOi offers at higher titers.

The members discussed scenarios, such as receiving blood transfusions, in which a candidate may appear to have lower titers. A member recommended defining what qualifies as a “natural low titer.” A member commented that patients are born with higher isohemagglutinins and HLA antibodies from their parents and receive exchange transfusions before they are listed for transplant.

A member asked the Workgroup if, regardless of age, pediatric patients in a certain titer levels should receive offers for any blood group similar to how hearts are allocated to children under 1 years old. A member recommended only creating a titer threshold and if that criteria is met, then every blood group should be considered a primary blood type. The member shared tables he drafted to illustrate this recommendation. He also presented a table that identified proposed primary and secondary blood types for high titer candidates.

A member asked how the 1:16 titer was originally selected in current policy. A member suggested that this threshold could have originated from Dr. West’s research in the early 2000’s. A member commented that this may have been the only research available at the time.

A member suggested modifying the definition of “primary blood type” by adding titer criteria. This would maintain the classification table. The member commented that the Workgroup will need to determine which heart transplants have equal efficacy and should be equivalent in status.

A member suggested widening the age restriction to 3 years old but acknowledged that it would only be a partial solution. A member raised a concern that this age boundary would eliminate opportunities for children older than 3 who may be able to receive a heart from a wider pool of donors than they are currently. Another member commented that if age is used as a threshold, patients who have already received an ABOi transplant but require a retransplant will need to be considered in their own category.

A member suggested removing the age criteria from the paragraph under *Table 6-4: Blood Type Matching Prioritization for Heart Allocation* to read “Pediatric candidates eligible to receive a heart from an intended blood group incompatible deceased donor will be classified as primary blood type match candidate, if their isohemagglutinin titer against the donor is less than 1:16.” A member agreed but commented that it will still need to be determined whether candidates with titers higher than 1:16 would be considered secondary or primary. Another member asked the members if 1:16 is still an appropriate threshold. The members agreed to discuss the titer threshold further and consult existing research.

The members discussed whether younger children’s isohemagglutinins have less memory than older children. A member commented that isohemagglutinins are different from HLA in the sense that they are not protein antigens, they are polysaccharide antigens. The member commented that based on research and conversations with Dr. West, they believed that there is no difference in memory between younger and older children.

3. Questions and next steps

Summary of discussion:

A member suggested polling the group to determine what the titer threshold should be and whether the higher titer patient group should be considered as secondary candidates. A member added that another question should be about whether there needs to be an age threshold.

Next steps:

The members offered to share research. UNOS staff will reach out to schedule to next meeting.

Upcoming Meeting

- TBD

Attendance

- **Workgroup Members**
 - Adam Schneider
 - Brian Feingold
 - Chris Reilly
 - Fawwaz Shaw
 - J.D. Menteer
 - Johanna Mishra
 - Joseph Hillenburg
 - Rachel White
 - Rocky Daly
 - Shellie Mason
 - Warren Zuckerman
- **HRSA Representatives**
 - Jim Bowman
- **SRTR Staff**
 - Katie Audette
 - Yoon Son Ahn
- **UNOS Staff**
 - Eric Messick
 - Janis Rosenberg
 - Keighly Bradbrook
 - Matt Cafarella
 - Rebecca Brookman
 - Sarah Konigsburg