OPTN Kidney Transplantation Committee
Kidney Paired Donation Workgroup
Meeting Summary
September 20, 2021
Conference Call

Peter Kennealey, MD, FACS, Chair

Introduction

The Kidney Paired Donation Workgroup (the Workgroup) met via teleconference on 09/20/2021 to discuss the following agenda items:

1. Review of Project Goals: Alignment of Kidney Paired Donation (KPD) Policy and Guidelines
2. Review KPD Operational Guidelines
3. Review OPTN KPD Program Data
4. Begin Review of OPTN KPD Policy

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

1. Review of Project Goals: Alignment of Kidney Paired Donation (KPD) Policy and Guidelines

The Workgroup reviewed the main project goals.

Data summary:

Main Project Goals:

- Removal of KPD Operational Guidelines
- Review existing KPD policy to:
    o Ensure alignment with other OPTN policies
    o Identify areas in need of clarification
    o Identify potential items for future Workgroup projects

Summary of discussion:

The Workgroup had no questions or comments.

2. Review KPD Operational Guidelines

The Workgroup reviewed the KPD Operational Guidelines.

Data summary:

KPD Operational Guidelines:

- Requirements for Participation captured in OPTN Policies 13.3.A, 13.4.A, and 13.4.B
- Receiving and Accepting Match Offers captured in OPTN Policy 13.11
- Information Sharing Between Transplant Centers are no longer relevant due to OPTN Policies 13.3.A and 13.4.A
- Process for Modifying KPD Pilot Program Operational Guidelines – the KPD Workgroup sends recommendations for modification to the OPTN Kidney Transplantation Committee for a majority vote

- Donor Pre-Select is captured in OPTN Policy 13.7.E, and instructions moved to the new KPD e-manual

Recommendation: Remove Operational Guidelines, as they are out of date and largely repeated in OPTN Policy. There are minimal outstanding items from the Operational Guidelines that could be incorporated into OPTN policy as part of the new project to review and modify OPTN KPD policy.

Summary of discussion:

The Chair remarked that this recommendation will significantly streamline OPTN KPD operations, rules, and policies. Other Workgroup members agreed.

The Workgroup supported recommending the removal of operational guidelines.

3. Review OPTN KPD Program Data

The Workgroup reviewed current data on the OPTN Kidney Paired Donation Pilot Program (KPDPP).

Data summary:

The OPTN KPDPP was made operational in 2010. From 2010, the number of transplants per year increased to 52 in 2013, and hovering between 40 and 50 over the next few years. In 2020, there was a sharp drop due to the COVID-19 pandemic.

- Directed donors make up the majority of KPD donors, followed by non-directed and then bridge donors
- Over the 11 years the OPTN KPD program has been operational, a several candidates from the deceased donor waitlist have received a transplant through the KPD program from being at the end of a chain

The percentage of KPDPP transplants by blood group show highest participation in the A and O blood groups.

The percentage of KPDPP additions by gender show nearly equal percentages of male and female candidates, and higher percentages of female donors, non-directed donors, bridge donors.

The percentage of KPDPP additions by ethnicity shows a large majority of white candidates and donors.

Summary of discussion:

The Workgroup had no questions or comments.

4. Begin Review of OPTN KPD Policy

The Workgroup began a review of OPTN KPD policy and operations.

Data summary:

There are several steps in the KPD matching process:

- First, the transplant hospital has to identify a donor and candidate pair that is eligible and willing to participate in KPD, and then enter their information into the system
- Currently, the OPTN runs KPD matches every other week on Tuesdays. The first thing the match does is evaluate each candidate and donor, and groups donor-candidate pairs together in one-on-one matches. The system will then assign priority points to the donor-candidate pairs.
  - The donor-candidate screening is based on a series of information entered for the donors and the candidate, including blood type, human leukocyte antigens (HLA), and other donor and candidate choices.

- o Donor prescreen allows centers to decline or accept predefined donors before a match is offered. If a candidate has a calculated panel reactive antibodies (cPRA) of 90 percent or greater, it is required for the transplant center to pre-accept in order to match.
- The system then takes all of those matches and groups them into different exchanges, which can include hundreds of exchanges.
- From here, the system takes these exchanges and puts them into different solutions, optimizing. These solutions include all of the exchanges where there are no competing exchanges, so each donor-candidate pair only appears once. Then, the system adds up all of the points for each individual match, and generates a total number of points. The solution with the highest number of points is the solution that the system offers out. The OPTN system only shows the one highest point solution.

Summary of discussion:

The Chair pointed out that once a match run is run, there are active donors and candidates who join afterwards that would not fall into a match run. The Chair asked if the OPTN has been able to track the attrition of donor and recipient candidates that don't appear in a match over subsequent weeks. Staff explained that donor and candidate attrition is tracked, and noted that the overwhelming majority of candidates who leave the KPDPP left because they have been transplanted with a deceased donor kidney, another living donor, or from another KPD program.

The Chair asked when the priority points were last reviewed, and recommended that the Workgroup review priority points in KPD. The Chair shared that, in discussion with the Kidney Pancreas Continuous Distribution Workgroup, he realized that prior living donors have relatively low priority. Staff informed the Workgroup that the KPD priority points were most recently changed in 2016.

Staff explained that an Orphan candidate is a candidate whose donor donated their kidney, but for some reason, did not receive the kidney they were supposed to receive. That candidate would then not have a living donor to rejoin the program with, and so would receive 1 million points to ensure that if there was someone in the system who could match with them, that match would occur. Staff noted that there have been no orphan candidates in the OPTN KPDPP.

One member remarked that in some cases, the "optimal chain" could transplant four people instead of three, and asked why the three way chain is more optimal. Staff clarified that in such a scenario, the algorithm is making a trade-off, trying to get higher priority candidates (highly sensitized, pediatric, etc.) transplanted in lieu of more exchanges.

Upcoming Meetings

October 18 – Teleconference

Attendance DONE 10/1

- **Committee Members**
  - Peter Kennealey
  - Aneesha Shetty
  - Jim Kim
  - JoAnn Morey
  - Justine Van Der Pool
  - Vineeta Kumar
  - Nancy Metzler
  - Sanjeev Akkina
  - Stephen Gray
  - Valia Bravo-Egana
- **HRSA Representatives**
  - Jim Bowman
  - Marilyn Levi
- **SRTR Staff**
  - Bryn Thompson
- **UNOS Staff**
  - Lindsay Larkin
  - Ruthanne Leishman
  - Anne McPherson
  - Jennifer Musick
  - Katrina Gauntt
  - Kayla Temple
  - Kerrie Masten
  - Leah Slife
  - Megan Oley
  - Meghan McDermott
  - Melissa Lane
  - Nicole Benjamin
  - Ross Walton