



A Kidney Waitlist Outcomes Timeline to Visualize Candidate Offers and Outcomes

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Introduction

- While transplant centers closely monitor posttransplant outcomes for each transplant recipient, centers currently lack data to monitor waitlist outcomes of individual candidates.
- Candidates who are waiting may receive multiple deceased donor organ offers. Centers may decline offers on behalf of the candidate in order to wait for a better offer.
- These decisions may impact waitlist outcomes because a better offer may not arrive, and dialysis-related morbidity may worsen.
- We sought to develop waitlist outcomes reports to facilitate monitoring of candidates who are receiving donor offers.

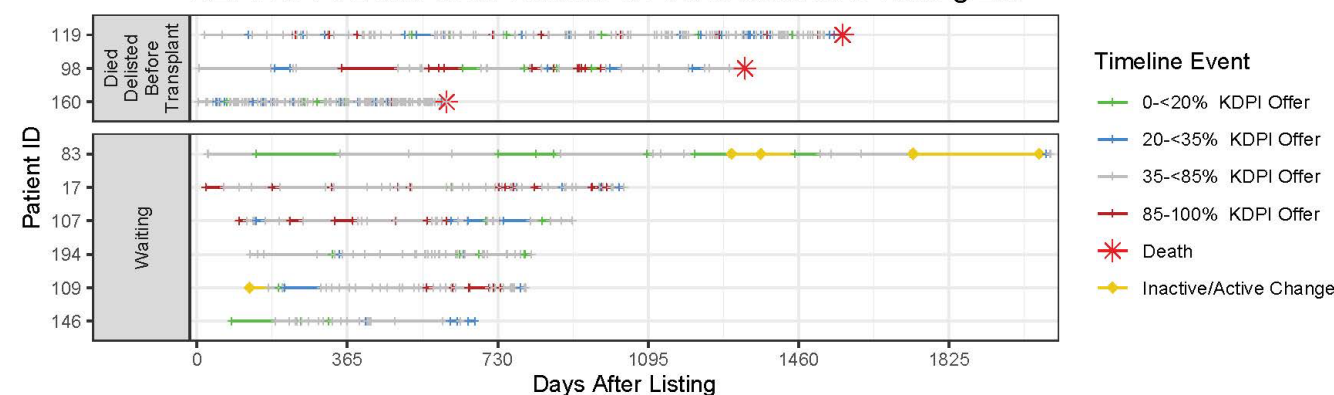
Methods

- Multiple report mockups were developed using patient-level data from the Scientific Registry of Transplant Recipients (SRTR).
- Data included a deidentified random sample of 200 kidney waitlist candidates from across the US who had received at least one offer between May 7, 2019 and May 6, 2020.
- For each candidate, offers were identified from match runs from January 1, 2014 to May 6, 2020.
- Match run data included any offer that was ultimately accepted somewhere and resulted in a transplant.
- Mockups excluded candidates with multiple listings.

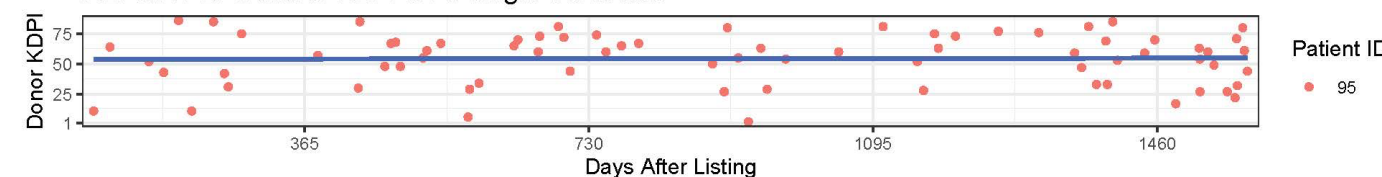
Results

- Reports were designed to visually identify several outcomes:
 - Candidates who had died after receiving offers
 - Additional time on dialysis for candidates receiving offers
 - Changes to quality and frequency of donor offers over time.
- Report A depicts multiple patients on a waitlist.
 - Each horizontal line represents one candidate and each mark represents an offer to the candidate.
- Report B depicts an alternative report showing a single candidate who was an example of offer Kidney Donor Profile Index (KDPI) not improving over time.

REPORT A: Donor Offer Timeline for Candidates on a Waiting List



REPORT B: Trend of KDPI for a Single Candidate



Mockups of a waitlist outcomes timeline to visualize donor offer decisions made on behalf of a candidate. Report A (top) displays timeline events using actual data, including deaths, status changes (active / inactive), and offers. The coloring of offers represents low to high KDPI, where low KDPI donor organs (green and blue marks) are highest quality. Report B (bottom) shows KDPI values for each offer on the y axis, and the linear trend (blue line) shows donor quality over time.

Conclusions

- The reports illustrate how offer frequency and KDPI change while candidates wait and the dialysis burden faced by candidates.
- Future stakeholder feedback will inform improvements and alternatives to reports and identify additional relevant candidate and donor data (e.g. offer number).