

No Kidney Left Behind: Interventions Needed to Improve Use of Donor Kidneys

By Karen Blum

Undergoing a transplant in the United States is a complex, multistep process and one historically focused almost exclusively on outcomes, speakers said during a Kidney Week 2023 session on optimizing use of deceased and living donor kidneys. A more transparent process and open communication with patients could lead to better shared decision making and potentially, use of more extended criteria organs and better health outcomes.

Patients with end stage kidney disease need to be educated about dialysis and referred to a transplant center for a comprehensive evaluation, said Sumit Mohan, MD, MPH, FASN, associate professor of medicine and epidemiology at Columbia University in New York City and director of quality and outcomes research for the transplant initiative at New-York-Presbyterian Hospital. Then, there is somewhat of a “black box” of being selected to get on a waitlist, he said, which no doubt leads to attrition at each step.

“What’s frequently not discussed is that there is a lot of variation in terms of what happens between the waitlist and transplantation,” Mohan said. “The common refrain is, ‘If we need to increase transplantation rates, we need more donors.’ I would argue perhaps a better first step would be improving deceased organ utilization rates, which are abysmal in the U.S.”

Approximately 7500 kidneys procured for transplant were discarded in 2022, he said, and we are on pace to discard 8000 kidneys this year. Common reasons cited for passing up organs include physicians thinking an organ is of poor quality, taking too long to find a recipient, or not locating a recipient, he said. However, studies have shown that kidneys from donors who are diabetic, for example, do well (1). Approximately half of the kidneys ranked at 60% or higher using the Kidney Donor Profile Index are being discarded, Mohan said, equivalent to a kidney from a 55-year-old donor with hypertension (2). “I think the vast majority of us in this room, if we needed a kidney transplant, would say yes to that,” he said.

Kidneys often are turned away because of subconscious bias or preferences on the part of physicians, he added, or because medical centers set up filters for certain characteristics, which results in organs not being offered to their patients. Additionally, kidneys procured over the weekend are 20% more likely to be unused (2). “That’s not a quality problem; that’s a transplant center challenge,” Mohan continued. Whether a patient gets a transplant also can rely on geographic region, with areas more likely to accept organs more likely to be transplanted. The process often is opaque to patients, he said.

From 2008 to 2015, 14 million deceased donor kidney offers were made, Mohan stated (3). Of those, 84% were declined at least once, and 76% of patients on the waitlist received at least one offer for a kidney. However, only 2.6% of offers were declined for a recipient-related reason.

To improve access to transplantation and lower discards, Mohan posits that transplant centers need to begin with transparency with patients and incorporate patient preferences to inform organ-offer choice. However, he noted, they should not wait until they

have an organ in hand to decide. Instead, they should begin communications early and periodically update people on the waitlist about organs offered for them that the center declined, providing reasons. The process would allow for increased engagement with both patients and nephrologists and “eliminate this idea of paternalism that exists in traditional medicine, where we think these decisions are too complex for our patients,” he said.

Enhancing live donor kidney transplants among the Black community

Another discussion in the session examined expanding live donor kidney transplantation for Black or African American individuals by engaging their friends and family members to become living donors. Black individuals are less likely to receive live donor kidney transplants in the United States, and data indicate that the trend is worsening, said L. Ebony Boulware, MD, MPH, dean of Wake Forest University School of Medicine and chief science officer and vice chief academic officer of Advocate Health in Winston-Salem, NC. Black individuals were 55% less likely than White individuals to receive a live donor kidney transplant from 1995 to 1999 and 73% less likely from 2010 to 2014 (4).

Black individuals with kidney diseases face multiple obstacles to live donor transplant, from worries about donor and recipient safety and finances to recipient guilt, hesitation to discuss live donor transplants with potential donors, social determinants of health, and more. Boulware said, “One little intervention is not going to solve this issue. This is a complex, multidimensional problem, and we need to think about how we can address several barriers simultaneously.”

In some cases, physicians discussed live donor transplantation less often with people with advanced chronic kidney disease (CKD) who were Black, as well as with females, people with a low educational level, and those living in poverty, Boulware said, suggesting that variability in patient-practitioner interactions also affects people’s knowledge and understanding of live donor kidney transplantation as a treatment option (5).

Boulware discussed several initiatives in which she has been involved to try to increase live kidney donation among the Black community. One decade ago, her group developed a social worker intervention called TALK (Talking About Live Kidney Donation) to increase discussion about live kidney donation and transplantation (6). Participants with CKD were randomized to receive usual care (routine care with their nephrologist); an educational video and booklet that explained the donor and recipient process to live kidney transplantation; or the video and booklet plus outreach by a social worker to discuss any barriers. Those who received the video and booklet were more likely to have discussions about live transplantation with family and friends and their physicians; that was amplified with the addition of the social worker intervention.

An update to that work among newly registered Black adults on the kidney waiting list randomly assigned individuals to receive the TALK intervention

with or without the offer of financial assistance to cover items such as travel, lost wages, and childcare (7). Surprisingly, neither intervention improved donor activation. Many on the waitlist said they already had discussed donation with family and friends, and others did not use the financial help. “I’m still thinking about why this study didn’t work,” Boulware said.

Boulware is now engaged in a National Institutes of Health-funded study, called STEPS (System Interventions to Achieve Early and Equitable Transplants), looking at ways to address several roadblocks accessing live donor kidney transplants. The study, which has recruited nearly 1200 of a projected 1500 patients, aims to identify patients who may need a transplant early and encourage them to discuss transplantation with physicians and family members; provide quick referral to kidney transplant centers; and get patients to complete a pre-transplant evaluation. The host sites are Geisinger Health System in Pennsylvania, Duke University Medical Center in North Carolina, and The University of Mississippi Medical Center in Jackson.

The study has several components, Boulware said, including assigning some participants to receive social worker outreach and education and screening for and addressing social determinants of health, including housing instability and food insecurity. ■

References

- Mohan S, et al. Availability, utilization and outcomes of deceased diabetic donor kidneys; analysis based on the UNOS registry. *Am J Transplant* 2012; 12:2098–2105. doi: 10.1111/j.1600-6143.2012.04167.x
- Mohan S, et al. The weekend effect alters the procurement and discard rates of deceased donor kidneys in the United States. *Kidney Int* 2016; 90:157–163. doi: 10.1016/j.kint.2016.03.007
- Husain SA, et al. Association between declined offers of deceased donor kidney allograft and outcomes in kidney transplant patients. *JAMA Netw Open* 2019; 2:e1910312. doi: 10.1001/jamanetworkopen.2019.10312
- Purnell TS, et al. Association of race and ethnicity with live donor kidney transplantation in the United States from 1995 to 2014. *JAMA* 2018; 319:49–61. doi: 10.1001/jama.2017.19152
- Barrett TM, et al. Disparities in discussions about kidney replacement therapy in CKD care. *Kidney360* 2021; 3:158–163. doi: 10.34067/KID.0004752021
- Boulware LE, et al. Effectiveness of educational and social worker interventions to activate patients’ discussion and pursuit of preemptive living donor kidney transplantation: A randomized, controlled trial. *Am J Kidney Dis* 2013; 61:476–486. doi: 10.1053/j.ajkd.2012.08.039
- Boulware LE, et al. Transplant social worker and donor financial assistance to increase living donor kidney transplants among African Americans: The TALKS Study, a randomized comparative effectiveness trial. *Am J Transplant* 2021; 21:2175–2187. doi: 10.1111/ajt.16403