



Invited Commentary | Surgery

# Racial Disparities in Living Donor Kidney Transplantation— How Can We Bridge the Gap?

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Living donor kidney transplant (LDKT) is the standard treatment for end-stage kidney disease (ESKD) with superior outcomes when compared with both deceased donor kidney transplant and dialysis. Yet, Black patients receive LDKTs less frequently than White patients, despite higher prevalence of ESKD in Black individuals compared with other racial or ethnic groups.<sup>1-4</sup> Black patients are less likely to be referred (preemptively and following initiation of dialysis) for kidney transplant evaluation than White patients. Once evaluated, Black patients are less likely than White patients to be added to the kidney transplant waiting list.<sup>2-4</sup>

Over the last 30 years these inequities have been scrutinized; many studies highlight various factors associated with unequal access to transplant.<sup>1,2</sup> Racial inequities have been attributed to patient-level factors, including negative attitudes about transplantation, lack of awareness about living donation, and limited access to potential living donors.<sup>5</sup> LDKT also requires recognition of a suitable donor. Black patients may not have as many viable donors due to blood type and human leukocyte antigen mismatch, financial barriers, or medical comorbidities. Community-level social determinants of health such as health care access, education, affordable housing, and economic stability play a substantial role in racial disparities in transplant access. Prior studies found kidney transplant recipients living in communities with a greater social vulnerability index (ie, more social risks) were less likely to receive LDKT.<sup>5</sup> However, Black patients were less likely to receive LDKT compared with their White counterparts, even after considering community factors, and even among those living in affluent neighborhoods. Despite accounting for patient- and community-level factors, LDKT disparities persist. The role of the transplant center has been underexplored.

McElroy and colleagues<sup>1</sup> examined community and center-level factors associated with racial equity in LDKT in the US from 2008 to 2018. They calculated the annual ratio of LDKT rates for Black patients compared with White patients at 89 transplant centers over an 11-year period, and assessed both modifiable center factors (eg, percentage of kidney transplants that were LDKT, state-level Medicaid expansion) as well as nonmodifiable characteristics (including waiting list sociodemographic characteristics). Racial disparities in LDKT were persistent over time and across centers. Overall, Black patients were approximately 70% less likely to receive a LDKT than their White counterparts (mean [SD] risk ratio [RR], 0.298 [0.287]). At all transplant centers, Black patients received LDKTs at a lower rate than White patients, with minor improvement in this disparity noted over the 11-year evaluation period. Despite persistent disparities, there was significant variation between centers in the magnitude of disparities with Black patients being 23%-95% less likely to receive LDKT. Center factors associated with higher LDKT rates for both Black and White patients included higher center proportion of LDKTs, location in a state with Medicaid expansion, and higher proportion of waitlist candidates with postsecondary education. Center factors associated with increased LDKT rate only for Black patients included waitlist population with higher sensitization levels and higher prevalence of B blood type. In addition, the investigators found that transplant referral regions with wider socioeconomic disparities increased LDKT rates for White patients but not Black patients.

This study deepens our understanding of the center and community factors associated with racial inequities in LDKT; however, due to the limits of available data, important questions remain unanswered. We do not know what transplant center practices or policies are associated with

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increased LDKT equity. We do not know why a more challenging waitlist—greater proportion with higher panel reactive antibodies or B blood type—is associated with reduced LDKT disparity. Perhaps these centers have a greater incentive to encourage living donation, have larger transplant support staff, or are more likely to transplant incompatible blood types and desensitize high PRA candidates. Finally, it is unclear how state-level Medicaid expansion is associated with improved LDKT equity. We think that Medicaid expansion is a modifiable characteristic of the community rather than the center. Medicaid expansion may not only benefit Black patients directly through insurance coverage, but may also serve as a proxy for the political and social policies that affect other structural factors that support health equity.

While the transplant community should continue to support programs and policies to eliminate structural inequities nationally and locally, there is still work to do at home, in our own transplant centers. Transplant centers should increase outreach within minoritized racial and ethnic communities to educate people about kidney health, transplantation, and living donation. Centers should participate in programs that help healthy, willing living donors to donate. National programs including paired exchange (National Kidney Registry [NKR], Organ Procurement and Transplantation Network/United Network for Organ Sharing [OPTN/UNOS], and the Alliance for Paired Donation) and the NKR voucher program could help reduce racial disparities in LDKT by serving immunologically and chronologically incompatible pairs. In addition, the NKR and National Living Donor Assistance Center reimburse low-income donors for lost wages, travel, and family care expenses. We should also expand the use of and familiarize our patients with center-based paired exchanges and desensitization therapies. We must also evaluate how transplant center practices limit access to living donor transplant. Implicit bias among transplant practitioners may negatively influence the patient-provider relationship and impair clinical judgment.<sup>6</sup> Race-based estimated glomerular filtration rate (eGFR) calculation and apolipoprotein L1 (APO L1) genetic screening may limit identification of suitable Black living donors and listing of prospective Black recipients.<sup>7</sup> Transplant teams should use evidence-based criteria and apply them equally to all potential donors and recipients. Further, we should acknowledge Black patients' justified mistrust of the medical system which is rooted in historical exploitation and transgenerational trauma as well as recent personal and vicarious experiences.<sup>5</sup> Ongoing racial disparities in transplantation perpetuates this distrust. Transplant practitioners can improve equity among their patients by practicing bias-mitigation strategies and maintaining cultural humility.<sup>1,4,5</sup>

This study underscores the need to incorporate health equity measures into transplant centers' processes, reporting, and payment. Data on patients' social risks should be used to provide services and support, rather than to deem them unworthy of transplant or donation. Addressing racial disparities in LDKT is a critical, multifaceted issue that demands our continued attention. As transplant providers, bridging the gap is our responsibility.

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#### ARTICLE INFORMATION

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