HHS Public Access

Author manuscript

Adv Chronic Kidney Dis. Author manuscript; available in PMC 2024 June 26.

Published in final edited form as:

Adv Chronic Kidney Dis. 2021 November ; 28(6): 517–527. doi:10.1053/j.ackd.2021.10.009.

A Cascade of Structural Barriers Contributing to Racial Kidney Transplant Inequities

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Abstract

Stark racial disparities in access to and receipt of kidney transplantation, especially living donor and pre-emptive transplantation, have persisted despite decades of investigation and intervention. The causes of these disparities are complex, are inter-related, and result from a cascade of structural barriers to transplantation which disproportionately impact minoritized individuals and communities. Structural barriers contributing to racial transplant inequities have been acknowledged but are often not fully explored with regard to transplant equity. We describe longstanding racial disparities in transplantation, and we discuss contributing structural barriers which occur along the transplant pathway including pretransplant health care, evaluation, referral processes, and the evaluation of transplant candidates. We also consider the role of multilevel socio-contextual influences on these processes. We believe focused efforts which apply an equity lens to key transplant processes and systems are required to achieve greater structural competency and, ultimately, racial transplant equity.

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Financial Disclosure: The authors declare that they have no relevant financial interests.

Keywords

Equity; Racial disparities; Structural competency; Pretransplant kidney care; Transplant referral; Transplant evaluation

RACIAL TRANSPLANT DISPARITIES IN THE UNITED STATES

Black Americans in the United States have a 4-fold higher risk of developing end-stage kidney disease than their White counterparts, yet they remain less likely to receive pre-emptive deceased donor and living donor kidney transplants.[1–4] Before the implementation of the 2014 revised kidney allocation system (KAS) which reduced inequities in waitlist time (based on dialysis vintage) and immunologic barriers (high panel reactive antibodies), significant racial disparities in the receipt of deceased donor kidney transplants (DDKTs) were intractable for decades.[5,6] Although the KAS reduced disparities in DDKT recipients, racial and ethnic waitlist disparities persist despite interventions. For instance, in 2020, Black patients were less likely than White patients to be pre-emptively waitlisted for transplant (3.9% vs 5%) (United States Renal Data System),[4] and rates of pre-emptive DDKT are worsening among Black compared with White individuals.[1,7] This finding is notable[8,9] because pre-emptive kidney transplantation confers the unique benefits of reducing time spent on dialysis, reduced dialysis-associated morbidity, inferior quality of life, and higher dialysis-related costs.[10–13]

In a study of pre-emptive transplantation before and after KAS, individuals with non-White race, younger age, male sex, lower educational attainment, and public primary insurance had lower odds of pre-emptive transplant after (versus before) KAS.[7] Notably, racial disparities between Black and White individuals also widened by 21%, indicating the need for further identification and implementation of interventions to address root causes.[7] Furthermore, racial disparities in living donor kidney transplantation, which confers superior outcomes for graft survival and morbidity when compared with all other transplants, have worsened over the last decade, whereby Black individuals have 73% lower hazard of receiving living donor kidney transplants than White individuals.[14,15]

A CASCADE OF CONTRIBUTORS TO RACIAL DISPARITIES IN US KIDNEY TRANSPLANTS

Racial disparities in the receipt of kidney transplants stem from inequities which occur at several phases of the transplant journey, including during pretransplant kidney health and kidney care, referral for transplant, and completion of the transplant evaluation and waitlisting processes.[1,14,16–18]

Pretransplant Health and Kidney Care

Racial differences in pretransplant health and kidney care may contribute to racial kidney transplant inequities.[19–21] For instance, individuals with diabetes are less likely to be referred for pre-emptive transplant than their counter-parts.[22,23] Because diabetes disproportionately burdens individuals who are Black, Hispanic-Latinx, Asian, and Native

American Pacific Islander when compared with White individuals, lower referrals to transplants among individuals with diabetes may disproportionately impact ethnic/racial minority individuals and contribute to racial kidney transplant inequities.[24]

Timely recognition of CKD by patients and their clinicians is also important to ensure patients receive timely referrals for kidney transplants.[25–28] Yet, numerous studies have demonstrated low patient awareness of kidney disease (7.8% among individuals with CKD risk factors)[25] and low perceived individual risk (26% among African Americans who had CKD and risk factors in a multistate survey).[29] Evidence also suggests racial minorities with CKD risk factors may be more unaware than others of their CKD risks or options for kidney care including transplant.[30,31] Low CKD knowledge has been associated with low health literacy and may result from limited access to CKD education, among other factors (including low education level or poor access to health information sources such as the internet), which are structural and modifiable. Racial disparities in kidney disease awareness have also been a notable contributor to poor control of kidney-impacting comorbidities including diabetes and hypertension, which may negatively impact transplant evaluation and candidacy.[23,32] Low CKD awareness is exacerbated by suboptimal adherence to recommended clinical testing for CKD diagnosis and management among internal medicine and family physicians,[33] as well as implicitly and explicitly biased interactions with patients that sometimes impair effective, equitable shared decision-making.[34,35]

Racial differences in receipt of high-quality care including the diagnosis and treatment of hypertension[36] and diabetes[37,38] may also contribute to transplant disparities. In primary care, physicians' discussions about CKD and risks among African Americans have been demonstrated to be suboptimal[39,40] and noted to occur in few (26%) high-risk patient visits, even though some of these individuals may benefit from early transplant education.[40] In one study, Black race was associated with lower rates of sodium-glucose cotransporter-2 inhibitor use among Black individuals than others (odds ratio [OR] 0.83; 95% confidence interval [CI]: 0.81–0.85).[41]

Physicians' suboptimal adherence to pretransplant nephrology referral guidelines may also play a role in transplant inequities. Despite national recommendations to refer patients to nephrologists for patients with acute kidney injury, estimated glomerular filtration rate (eGFR) <30 mL/min/1.73 m^2, severe albuminuria, rapid GFR decline, hematuria, and/or CKD complications,[23] racial minorities are 33% less likely than others to receive timely nephrology care, a critical juncture before referral for transplantation.[1,42–47] Other systemic health care practices, including the inclusion of a Black race coefficient used to estimate kidney function across the United States, may have contributed to ongoing racial inequities.[48–51] Developed with the intent of enhancing the precision of prior kidney function estimating equations, this coefficient as used in the Chronic Kidney Disease Epidemiology Collaboration equation raises the estimated GFR for Black individuals by 16%.[52] This adjustment systematically impacts individuals racialized as "Black" by delaying the time to transplant referral and waitlisting by an estimated period of 1.9 median years.[48,53]

In a study of referral patterns to an urban nephrology academic practice, non-White individuals had 5.6 times higher odds of delayed referral than White individuals.[54] Numerous studies further demonstrate that Black, Hispanic, and Asian individuals receive less pre–end-stage kidney disease (ESKD) nephrology care than their White counterparts[55] for multiple reasons including time required to coordinate care, lack of integrated medical records, the lack of coordinated care between primary care and nephrology providers, inconsistent health care coverage mechanisms, and inconsistently applied standards for practice referral and CKD care such as those applied in the VA system.[17,44,55] Later referrals to transplant and nephrology care for Black individuals compared with others have been demonstrated to result in substantial racial disparities in mortality.[56–59]

Referral for Transplant

Inequalities in socioeconomic status (eg, income, health insurance status) and individuals' social contexts, which are shaped by structural racism and other forms of structured inequality, have been associated with racial inequities in transplant referrals.[43,44] For instance, Black patients are more likely than others to be uninsured, and less likely than others to have a private insurer, which has been associated with lower rates of transplant evaluations among Black patients.[43,44,60] Neighborhood factors (including neighborhood poverty) have also been associated with transplant referral[47,61] and waitlist.[62,63] For instance, African American patients had 37% lower odds of being pre-emptively referred for evaluation than White individuals after adjusting for patient, clinical, individual socioeconomic status and neighborhood factors, despite constituting the majority of patients with ESKD in the Southeast (66%) and the bulk of patients referred for evaluation overall.[64] Other studies have determined that although Black race is associated with significantly longer median wait times between dialysis initiation and waitlisting, positive associations between race, having Medicare due to disability, and living in neighborhood poverty are also substantial contributors to racial disparities.[10] In one U.S. study, the odds of not being assessed for kidney transplant at the time of dialysis initiation were 1.05 (CI: 1.04–1.07) among Black individuals compared with others and 1.51 (CI: 1.30–1.75) among individuals without any insurance compared with individuals with insurance.[60] Unequal educational opportunity including in transplant education delivery, inequitable employment opportunities, and racial disparities in transportation have also been associated with racial disparities in transplant evaluations.[61,62,65,66] Health care providers' inadequate understanding of racial inequities or misperceptions of "disinterest" among Black Americans[67] may also contribute to racial disparities in referral. For example, only 19% of dialysis facility providers in a national survey were aware of racial disparities in waitlisting. Providers practicing in dialysis facilities within the Southern United States (compared with the North East) (OR 3.05, CI: 10.4–8.94) and those with a low (compared with high) percent-age of Black patients (OR 1.86, CI: 1.02–3.39) were more likely to be unaware of racial disparities.[68]

Transplant Evaluation and Waitlisting

After referral, Black individuals face additional barriers to receipt of kidney transplants. For instance, in a study of adult patients already referred for kidney transplant in the Southeastern United States, Black individuals had a lower relative hazard of transplant

than White individuals (hazard ratio [HR]: 0.41 CI: 0.28–0.58) even after adjusting for demographic, clinical, and other socioeconomic factors.[47] The interaction between poverty and racism may also be a potent one, requiring further study. For instance, although median distance from patient homes to transplant center did not predict waitlisting, race and neighborhood poverty were associated with waitlisting, and as the level of poverty increased, the likelihood of waitlisting decreased for Black vs White individuals.[61] In another study, Black individuals had higher rates of referral than White non-Hispanic individuals (HR: 1.22 [CI 1.18–1.27]); however, they had lower rates of initiating the transplant evaluation process (HR: 0.93 [CI: 0.88–0.98]).[45] Some studies have indicated patients' experiences of racial and other discrimination may influence patient willingness to initiate transplant evaluations.[69,70]

Specific aspects of the transplant evaluation process itself may also be subject to biases which contribute to racial inequities in transplant waitlisting. A systematic review of waitlisting guidelines revealed that recommendations are somewhat consistent across guidelines that embody medical criteria. However, differences in guidelines exist with regard to the importance of age, medical comorbidity, life expectancy, and especially with regard to psychosocial considerations in the evaluation process.[71] For instance, the American Society of Transplantation has recommended that all patients have a psychosocial assessment conducted by a licensed professional using measurement tools completed by patients and clinicians. However, guidelines regarding the nature of these evaluations are not established, thus opening the door to potential biases and disparities among providers and centers.[72,73] Notably, there is a lack of consensus regarding national standards by which psychosocial evaluations are conducted.[74] The lack of objective criteria for these assessments spurred the development of validated tools that assess psychosocial risk including the Psychosocial Assessment of Candidates for Transplantation,[73] Transplant Evaluation Rating Scale,[75] and the Stanford Integrated Psychosocial Assessment for Transplantation.[76] Each of these instruments assesses key domains essential for a psychosocial transplant evaluation including psychiatric (eg, coping, adjustment, substance use), social (collaboration, social support, housing, financial status), and functional status (eg, adherence, values, motivation, etc.).[74,77] However, these instruments may be subject to bias in and of themselves. These instruments often consist of multicomponent evaluation through which there are several potential opportunities for bias to influence the assessment (Table 1). A survey of transplant program criteria for psychosocial evaluation suggest assessment on these factors (including dietary noncompliance) were considered relative contraindications to kidney transplantation, as was poor understanding of transplant, denial of illness severity, and use of addictive drugs in the last 6 months.[72] Nonstandard assessments in these areas could allow for bias toward eliminating socially disadvantaged individuals (who are often Black) and may not account for structurally competent supportive actions which may have been taken to overcome these factors. For instance, in the case of 'dietary noncompliance', it would be important to consider numerous factors that may contribute, including the limited availability of health-promoting foods within a patient's neighborhood as well as financial/resource limitations.[78–81]

Social support is also considered in the evaluation of transplant candidates because of its association with medical adherence (eg, immune suppression regimens) and overall

health.[82–85] Poor social support has been noted to be associated with negative outcomes including graft survival, although data supporting this have been more mixed and inconsistent,[82,86] with meta-analyses of this demonstrating a lack of clear association between social support and post-transplant outcomes including adherence.[87] It is important to consider how strict criteria for evaluating social support may disproportionately limit transplantation to marginalized individuals, who may be more likely to have caregivers/supportive partners who are less able to come to all critical appointments (eg, due to working multiple jobs or because of other caregiving concerns, transportation barriers).[88] Ethicists have noted historical examples of how prioritization of people with certain social support structures (eg, prioritizing people with families for dialysis receipt) has been contentious, discriminatory, and potentially unjust.[86] Some studies have demonstrated inconsistencies in the use of social support–based decisions, as well as the prevalence of perceived unfairness of this process, and its disproportionate impact on patients with low socioeconomic status.[89,90] For instance, in a national study of national transplant providers, 10–22% of candidates were estimated to have been excluded because of inadequate support in the prior year, with only 52% of providers believing this was a modifiable factor.[89]

Other behavioral assessments may also influence racial kidney transplant disparities. For instance, determination of substance use and its role as a relative or full contraindication to transplant waitlisting is marked by substantial variability in center-level practices and tolerance and may be subject to bias. For example, a White individual with an opiate dependence may be treated differently from other individuals (eg, using less highly stigmatizing language like opiate vs narcotic) in the medical record.[91] Differential approaches to agents like marijuana in U.S. centers are also notable.[92,93] Although some centers may have lenient standards, many centers reject all candidates registering marijuana use, in part because of concerns for association between dependence with other psychiatric comorbidities and substance use disorders that have negative implications for overall graft function.[94,95] These discrepancies and lack of objective criteria to standardize practice patterns leave room for individual- and center-level bias.[96,97]

ROLE OF MULTILEVEL SOCIO-CONTEXTUAL INFLUENCES ON THE PATHWAY TO TRANSPLANT

Little work has been carried out to explore how socio-contextual factors at the individual, interpersonal, systemic, or societal barriers may work jointly to impact transplant racial inequities.[98] For example, one of the leading reasons for inactive status among new transplant listings includes incomplete candidate workups (66.8%).[99] These incomplete workups may not simply reflect individuals' personal fears, knowledge or beliefs, or intrinsic capabilities. Rather, they may reflect a complex set of socio-contextual personal experiences (eg, prior discrimination increasing a sense of low trust in the system)[69] as well as system-level barriers including financial strain due to lack of universal health care coverage for preventive services or lack of equity in employment opportunity.[100]

Neighborhood contexts are also associated with racial disparities in kidney transplant receipt. For instance, in an early study of transplant waitlisting among individuals with

ESKD living in the Southeastern United States, increased neighborhood poverty was associated with decreased likelihood of waitlisting among Black individuals compared with White individuals in all poverty categories.[61] This work has been corroborated in other examinations of the association between neighborhood poverty, racial composition, and waitlisting.[47,61] In one study, Black individuals in poor predominantly Black neighborhoods (adjusted HR 0.57, CI: 0.53–0.62) were less likely to be waitlisted than those in wealthy Black neighborhoods (HR 0.80, CI: 0.67–0.96) and in poor primarily White neighborhoods (HR 0.79, CI: 0.70–0.89).[63]

Financial barriers to kidney transplantation are also a key driver of racial inequity in kidney transplantation in the United States. Individuals with limited finances are less likely to receive living donor kidney transplants[101] and/or pre-emptive transplants.[102] Transplant recipients have higher income and fewer concerns regarding transplant costs than nonrecipients.[103] Health care insurance type (eg, private insurance which may cover more high-income workers) has also been associated with higher transplant survival, as well as rates and duration of waitlisting.[20,104–106] In addition, in qualitative investigations, African American and non-African American pretransplant patients expressed many concerns regarding costs of transplant and donor evaluation, as well as post-transplantation financial fears (cost of immune suppression, loss of insurance) and living donor experiences.[104] In several studies, financial concerns outweighed fears about transplantation, specifically concerns about transportation, scheduling, the operation, and medications and their coverage after transplant.[27,101,102]

FORGING A PATH TOWARD EQUITY: ENHANCING STRUCTURAL COMPETENCY AND APPLYING AN EQUITY LENS TO EVALUATION

Despite our best efforts to individualize patients' care and increase transplant access and receipt, our efforts may fail when we cannot recognize biases and other structural barriers to kidney transplantation. To begin to forge a path toward equity, nephrology professionals may benefit from enhancing our structural competency—our understanding of how complex social institutions including health insurance,[107,108] immigration policy,[109] and housing agencies[110,111] influence kidney health, transplant access, and behaviors.[112] This also requires that professionals address the compounded and intersectional experiences of individuals for whom forms of marginalization occur across multiple identity domains (eg, race, gender, sexual orientation).[113] In Table 2, we suggest key approaches for achieving equity in transplant evaluation using a structurally competent lens.

First, pretransplant kidney care should strive to be structurally competent, thus recognizing and addressing that structural/social-contextual factors are vital in shaping our patients' lives, opportunities, health, and behaviors.[114] More specifically, individual behaviors (antihypertension medication adherence, diabetes control) should be considered as a product of an individual's sociopolitical context (eg, adherence issues would be considered in the context of medication physical and financial availability) instead of through a lens which places blame or full responsibility on the individual. Structural solutions would allow centers and providers to account for neighborhood and other structural barriers to equity

(eg, addressing lack of insurance, inequitable education, and barriers to kidney-promoting medications including sodium-glucose co-transporter-2 inhibitors) in the financial, social support, and psychosocial domains.

Second, transplant referral processes should be reviewed and executed through an equity and structural competency lens. Dialysis and general nephrology providers should be equipped with antibias training and transparent metrics for determining who is referred for transplantation so that potentially biased factors (eg, adherence to insulin if affordability is a key barrier) do not unduly impede transplant. A structurally competent referral process would require transparency about criteria and iterative review of factors impeding referral among individuals, during which a careful evaluation of financial, social support, and other barriers could be addressed (eg, social support/availability of donors, financial needs and concerns, income). Each of these interventions would require multidisciplinary collaboration and advocacy that places the needs of marginalized individuals at the center of "intervention" development.[115] This may also require collaboration and long-term investments in mental health and other infrastructures that promote health (eg, safety, access to high-quality education, food, housing, expanded insurance access).

In addition to enhancing structural competency among transplant center providers, greater clarity and transparency are needed regarding center-level/national criteria for the psychosocial assessment of patients. Clear measures to reduce interpersonal explicit or implicit biases[34] that may interfere with evaluation, including around trauma, are needed. More comprehensive holistic and nuanced evaluation of candidates in which implicit and explicit biases are mitigated could aid efforts to avoid producing inequities in transplant candidacy.

CONCLUSION

Equity—or ensuring equal chances of tailored treatment and resource delivery to patients with varying social contexts and circumstances—is essential in transplantation. Decades-long stark racial and ethnic disparities continue to persist in the United States. A cascade of structural barriers across the kidney transplant journey provides important targets for intervention. Structural competency—or a comprehensive recognition of how institutions, neighborhood infrastructure and contexts, economic forces, public policies, and health care systems impact individual health and behaviors—is essential to addressing these structural barriers and enhancing racial transplant equity.

Support:

D.M. and L.M.M. were supported by the Duke Center for Research to Advance Healthcare Equity (REACH Equity), which is supported by the National Institute on Minority Health and Health Disparities under award number U54MD012530.

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CLINICAL SUMMARY

- Structural barriers contribute to racial and ethnic disparities in kidney transplantation and occur during pretransplant kidney care, referral, and in the evaluation process.
- Structural competency, antiracist, and antibiased principles should be adopted by kidney and transplant care professionals to enhance equity.
- An equity lens should be applied when conducting psychosocial, financial, social support, and adherence evaluation during pretransplant kidney care, referral, and throughout the evaluation process.

Table 1.

Recommended Domains for Transplant Psychosocial Evaluation, Example Items Assessed, and Potential Limitations of Assessment When Applying an Equity Lens

Domain for Assessment	Example Items Assessed	Potential Bias in Assessment Which Could Lead to Transplant Inequity
Functional	Knowledge and understanding of medical illness process (that caused specific organ failure) and knowledge and understanding of the process of transplantation	Racial disparities exist in transplant knowledge, education, and information delivery[116,117]
	Willingness/desire for treatment (transplant)	May be influenced by lack of trust mediated by personal, vicarious, or historical discrimination or abuse[71,72]
	History of treatment adherence/compliance (pertinent to medical issues)	May be influenced by discrimination and social/structural barriers to 'adhering' (eg, lack of transport to the dialysis unit, lack of available fresh vegetables, safe spaces to engage in physical activity)
	Lifestyle factors (including diet, exercise, fluid restrictions, and other habits)	Influenced by structural inequity (eg, food availability, physical access to safely exercise, income)
Social	Availability and function of social support system	The support network influenced by their circumstances and socio-contextual contexts (eg, financial strain, employment demands) and variations in workplace and other caregiving schedules[86]
	Appropriateness of physical living space and environment	Housing[118] and infrastructure inequities are substantial across racial and ethnic lines and by other domains (eg, income, immigration status)
Psychological	Presence of psychopathology (other than personality disorders and organic psychopathology)	Evidence suggests some racial minority groups may be more likely to be diagnosed with psychiatric disorders than White individuals[119]
	Alcohol use, abuse, and dependence; risk for recidivism; illicit substance abuse and dependence and risk for recidivism, nicotine use, abuse, and dependence	Ethnic/racial minoritized individuals may disproportionately experience psychosocial stressors (eg, trauma, discrimination)[120] Extensive persistent disparities in access to mental health care disproportionately impact ethnic/racial minority individuals (vs White individuals)

Adv Chronic Kidney Dis. Author manuscript; available in PMC 2024 June 26.

Table 2.

Key Approaches for Achieving Equity in Transplant Evaluation

Consideration	Goal	Example	Potential Equity-promoting Actions
Pretransplant kidney care			
Psychosocial	Apply a structural competency lens to understand patients' kidney care behaviors (eg, CKD or dialysis self-management) Promote trauma-informed approaches	A patient with untreated mental health concerns may have difficulty with medication or dialysis adherence	Train kidney care providers in structurally competent care (eg, factors including social support, neighborhood resources influence coping and adherence) Advocate for mental health and comprehensive care Ensure accountability and transparency in psychosocial evaluation Provide interventions that reduce interpersonal explicit or implicit biases[35] Address depression and low self-reported QoL, which may impair kidney transplant pursuit
Financial support	Promote equity-focused policy reform	A patient who is uninsured or underinsured may lack access to key interventions (eg, SGLT2 inhibitors) and resources (eg, healthy food access)	Promote reforms that expand access to insurance and coverage of key kidney health-promoting medications and resources (eg, LDKT education, SGLT2 inhibitors) Support policies that improve inequitable social contexts (eg, housing, education, food access, environmental safety)
Social support	Promote structural competency when determining social support (eg, family circumstances influence availability of caregivers) Engage community organizations and others in enhancing social support structures and kidney health education	A patient who is living alone without a vehicle/public transit but relying on multiple family members for transportation may have difficulty physically accessing care	Leverage community health workers via partnerships to enhance social support for kidney patients Promote policy reforms that account for complex family and social structures/resources to enhance care (eg, time off for loved one who is primary form of transportation, reimbursement for parking, respite care for caregivers)
Referral for transplantation			
Psychosocial considerations	Promote structural competency when assessing psychosocial domains Promote trauma-informed and structurally competent approaches Ensure clarity and transparency in referral criteria	A patient who has experienced prior personal trauma resulting in temporary unemployment may experience lapses in health care coverage and thus have difficulty completing key steps in the transplant evaluation process (eg, echocardiography, etc.) A patient who has experienced prior racial discrimination may have uncertainty re: initiation of transplant evaluation and may require additional tailored resources and support[127]	Ensure that all members of the dialysis team are trained in structurally competent care, antiracism, and antibias Partner with community organizations to disseminate information about transplant Advocate for policy reforms that support access to comprehensive health care Promote reforms that support mental health and psychosocial counseling for candidacy Ensure accountability and reduce interpersonal explicit or implicit biases[35] that may interfere with transplant referral (eg, automated electronic medical systems that query why referrals have been made vs not)[121]
Financial evaluation	Promote equity in financial evaluation Ensure accountability among dialysis and nephrology providers to promote referral when appropriate	A patient with unstable employment benefits may lack financial resources to ensure completion of the transplant workup	Support dialysis financial assistance programs that may mitigate barriers to patients considering transplant (eg, financial planning and saving discussions) Advocate for employment and insurance protection for donors and other equitypromoting reforms Support policies that improve inequitable social contexts that may be barriers to referral (eg, housing, education, food access, environmental) Support financial assistance programs including the National Living Donor Assistance Program[122,123]
Social support	Promote structural competency when assessing social support	Patients with multiple supportive family members who have significant employment demands may not	Demonstrate flexibility in the determination of social support based on the needs and availability of individuals within a patient's social network

Consideration	Goal	Example	Potential Equity-promoting Actions
	Ensure key equity criteria are consistently applied across all potential transplant candidates	meet narrowly defined criteria for social support defined by centers (eg, a single person must be present at all meetings)	Ensure antiracist, antibiased education for all kidney care personnel Support educational efforts partnering with community organizations and other key social networks engaged with transplant referral
Adherence	Promote structural competence when interpreting patient adherence	A patient with financial barriers may have difficulty physically accessing nephrology care consistently	Support expanded coverage for transportation and other barriers (cost of phosphorous binders) Apply equitable criteria for candidacy across all potential candidates
Transplant evaluation			
Psychosocial evaluation	Promote structural competence in evaluation Promote trauma-informed approaches	A patient who has experienced prior personal trauma resulting in temporary unemployment may experience lapses in health care coverage and thus have difficulty maintaining mental health care access	Ensure that all members of the transplant team are trained in structurally competent care, antiracist/antibiased principles, and trauma-informed practices Advocate for policy reforms that support access to health care and other coverage required to complete key phases of the transplant evaluation process Ensure accountability and reduce interpersonal explicit or implicit biases[35] that may interfere with evaluation Ensure clarity, equity, and transparency regarding the criteria for psychosocial factors used to evaluate candidates
Financial evaluation	Promote equity-focused policies and reforms Promote transparency and consistency in financial needs assessments	A patient with unstable employment benefits may lack financial resources to complete evaluation despite strong interest and need for transplant	Ensure financial counselors are trained in equity, antiracist, and antibiased principles Promote insurance and health care reforms that support transplant including the following: Advocate for employment and insurance protection for donors Implement center-level financial assistance programs that may mitigate transplant barriers Financially incentivize centers with best practices for enhancing equity Partner with community organizations that serve marginalized communities to increase access to evaluation
Social support	Promote structural competency in determining adequate social support	Patients with multiple supportive family members who have significant employment demands may not meet narrowly defined criteria for social support defined by centers	Demonstrate flexibility in the determination of social support based on the needs and availability of individuals within patients' social network Ensure antibiased, antiracist education for all transplant personnel evaluating candidates Partner with community organizations and other key partners in a social network Incentivize centers that enhance social support for providers
Adherence	Promote structural competency when considering adherence Ensure key equity criteria are consistently applied across all potential transplant candidates	Patients with significant financial concerns and limited transport options may have difficulty adhering to appointment times and evaluation requirements (eg, echocardiography)	Support policy reform that supports adherence to evaluation requirements (eg, parking vouchers, transportation, financial assistance for consultations and imaging) Promote structural competency and antiracist, antibiased education among all transplant staff

Abbreviation: QoL, quality of life; LDKT, living donor kidney transplants; SGLT2, sodium-glucose cotransporter-2 inhibitors.