

Overcoming the Blues: Can Managing Depressive Symptoms Improve Access to Kidney Transplantation?



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Kidney Int Rep (2022) 7, 1153–1156; <https://doi.org/10.1016/j.ekir.2022.04.015>

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Lack of access to kidney transplantation—the preferred treatment for most patients with end-stage kidney disease (ESKD), in terms of costs, health-related quality of life, and clinical outcomes—remains an issue worldwide. In the United States, fewer than one-third of patients with prevalent ESKD had a functioning graft in 2019 and only 3% of patients with ESKD had a pre-emptive kidney transplant.¹ Disparities in kidney transplant access by age and race/ethnicity are also prominent in the United States: for example, 14%, 11%, and 7% of White, Black, and Native American patients with ESKD being waitlisted or transplanted within 1 year of diagnosis, and adults aged 18 to 44 years are twice as likely

to be waitlisted or transplanted within a year as those aged 65 to 74 years (14% vs. 7%).¹ Importantly, most of the disparities in access may occur at earlier, prewaitlisting steps in the transplantation process (e.g., transplant evaluation).

Obtaining a kidney transplant is a complex and time-intensive process, requiring patients to complete a battery of medical tests and appointments. Multiple barriers to completing the kidney transplantation process have been identified² and may include undiagnosed and untreated depressive symptoms among patients presenting for evaluation. To explore this, Chen *et al.*³ administered the Center for Epidemiologic Studies—Depression scale to a cohort of 3879 patients being evaluated for kidney transplantation at a single US center in the course of 11 years (January 2009–March 2020). The authors found that depressive symptoms were highly prevalent (86% reporting any symptoms; minimal, mild, moderate, and

severe symptoms were reported by 67%, 7%, 5%, and 7% of patients, respectively). Younger, male, and Black patients were less likely to report depressive symptoms, compared with their counterparts. Those with at least minimal symptoms were 25% less likely to be transplanted or waitlisted within a year of evaluation, independent of several sociodemographic and clinical factors and despite the Center for Epidemiologic Studies—Depression results collected in the study not being considered during the clinical evaluation of the patients.³

These novel results suggest that depressive symptoms among patients with ESKD presenting for evaluation can adversely affect subsequent transplant access. This potential effect is likely through 2 main pathways. First, providers may be less likely to place candidates with depressive symptoms on the waitlist after evaluation (Figure 1). Even without a formal assessment, it is likely that providers are aware of a patient's depressive affect, particularly in the presence of more severe depressive symptoms. However, providers might not recognize this phenomenon as depressive symptoms and may instead assume that the patient is uninterested in, or unmotivated to pursue, kidney transplant; long-term undiagnosed and untreated depressive symptoms may indeed affect a patient's ability to be engaged and activated in their care. Untreated depressive symptoms may also directly influence transplant providers' assessment of factors that are weighed heavily in the transplant evaluation process, including perceptions of patients' lack of adherence to complex medical treatment regimens (to dialysis treatments, medications, and/or diet or fluid

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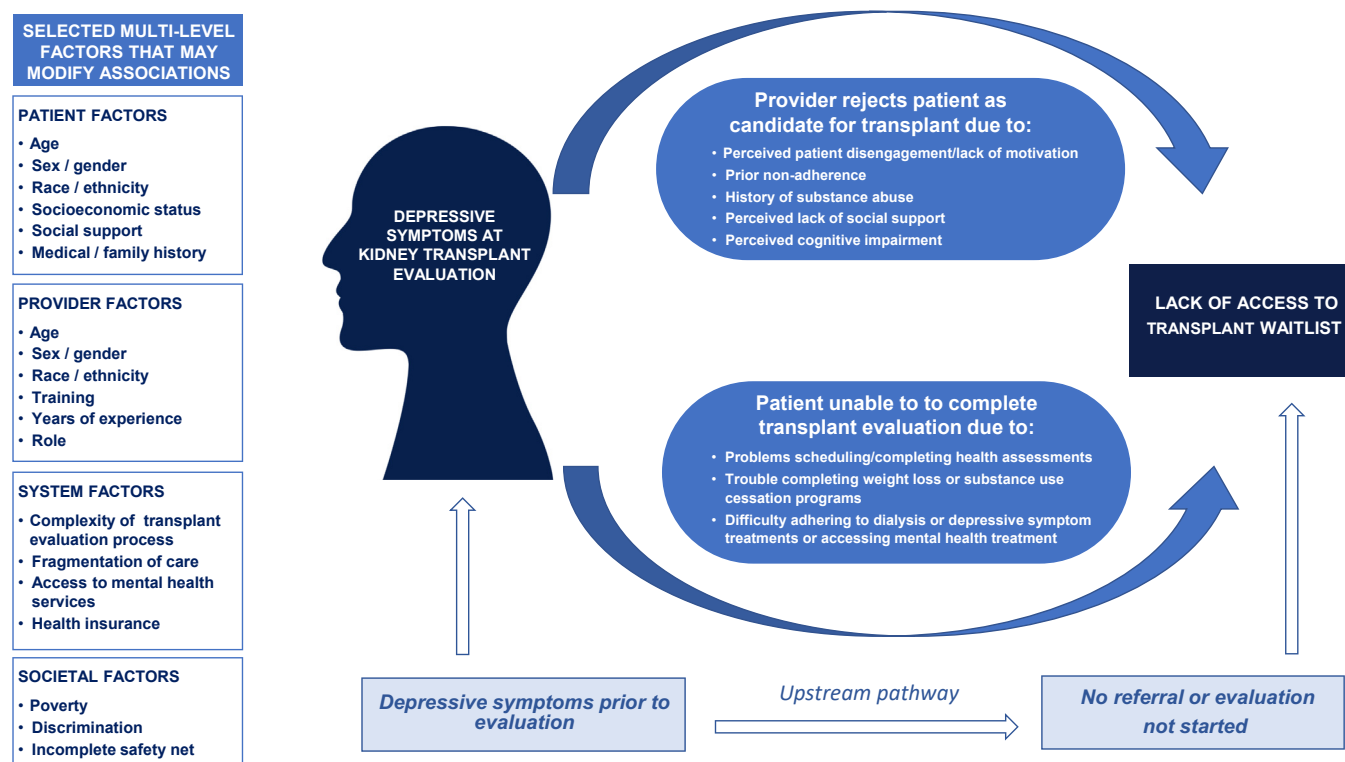


Figure 1. Potential pathways through which depressive symptoms might affect likelihood of waitlisting.

recommendations), lack of social support, substance abuse, and cognitive impairment. Thus, depressive symptoms may be intimately tied to the opaque criteria used to determine kidney transplant waitlist placement.

The second main pathway through which the presence of depressive symptoms might decrease the likelihood of kidney transplant waitlisting after evaluation is the potential reduced ability of the patient to complete the necessary transplant evaluation steps (Figure 1). In the case of recognized depressive symptoms, the patient is likely to be referred for and required to engage in mental health treatment, which is difficult for individuals with depressive symptoms in the general population and likely to be even more difficult in patients with ESKD, who already struggle with adherence to their complex medication and treatment regimens.⁴ Even without direct orders to treat depressive symptoms, the

myriad tasks that may be required of patients as part of the kidney transplant evaluation (e.g., multiple preventative screenings, including dental examinations; completion of weight loss and/or substance use cessation programs; demonstration of consistent social and financial support) may prove overwhelming to patients with depressive symptoms, which might include fatigue, lack of energy, difficulty concentrating, sleeplessness, and loss of interest in usual activities, among others.

There are also likely upstream effects of depressive symptoms on access to the waitlist (Figure 1). Nephrologists and dialysis providers may be less likely to refer patients whom they consider to be uninterested in kidney transplant, and patients experiencing depressive symptoms may be less likely to seek out transplant or attend a transplant evaluation appointment, even if referred. Depressive symptoms are highly prevalent during the transition to ESKD,⁵

particularly for those whose transition was abrupt because of lack of awareness of their kidney disease and/or reduced access to pre-ESKD chronic kidney disease nephrology care¹; this is the fraught period when most patients are initially approached regarding transplantation as a treatment option. In addition, there may be downstream effects: even in waitlisted patients, it is likely that untreated depressive symptoms still exert an adverse effect on intermediate outcomes, which could lead to removal from the waitlist and/or poor transplantation outcomes. Thus, examination of depressive symptoms and development and implementation of provider-level and health system-level interventions to mitigate these symptoms at all steps in the transplantation process are warranted.

Depressive symptoms may also adversely affect equity in access to kidney transplantation: the populations who are least likely to be

transplanted may be the most likely to experience depressive symptoms and the effect of these symptoms on access may be stronger among these individuals. Although older and Black transplant candidates were less likely to report depressive symptoms in the study by Chen *et al.*,³ it is possible that this is because older and Black participants with these symptoms were never referred for transplant evaluation. In fact, patients with ESKD who are older and/or female are less likely to be informed of transplant options,⁶ and those of minority race/ethnicity may be more likely to have psychosocial barriers limiting their access to transplant.⁷ In addition, patients with ESKD may experience difficulty trying to access mental health services because of a demanding dialysis treatment schedule, competing transplant evaluation appointments, and limited coverage (e.g., for those insured by Medicare as a primary payer); this difficulty is likely disproportionate among the populations already least likely to be transplanted.

Given these issues, it is important for all ESKD providers to not only recognize depressive symptoms in kidney transplant candidates but also ensure that these patients are supported in attempts to improve these symptoms. For the transplant provider, an assessment of depressive symptoms at evaluation can provide context for other social and clinical characteristics of the patient and, potentially, a target for intervention. Furthermore, the effect of ESKD on depressive symptoms should be considered: that is, to what extent would the receipt of a kidney transplant improve the severity of symptoms, even without other intervention? Advanced kidney disease and dialysis providers also

play an important role, because early intervention on depressive symptoms may improve outcomes, including improving the likelihood of kidney transplantation. Given that depressive symptoms can be intermittent and related to changes in disease state, repeated measurement may also be warranted. Specifically in the United States, the recent ESKD Quality Incentive Program requirements for universal annual depression screening and as-needed follow-up for patients receiving dialysis⁸ could be leveraged to improve identification and treatment of depressive symptoms among all patients with ESKD.

Clinical social workers are members of the care team in both the transplant and dialysis settings, and they are trained in the identification and management of depressive symptoms. Thus, they are the most likely ESKD providers to effectively provide the support patients need. However, nephrology social work is plagued by high turnover and burnout⁹; reduced caseloads and fewer administrative tasks (e.g., transportation arrangement) would allow them to engage more fully with patients who experience depressive symptoms. Because patients receiving hemodialysis often have little time before or after their treatment sessions due to transportation limitations and treatment spaces that offer little privacy, the use of telehealth by social workers in this setting—accelerated by the COVID-19 pandemic—may help social workers provide more targeted clinical interventions to relieve depressive symptoms. Moreover, the presence of clinical social workers is not currently the norm in most chronic kidney disease clinics, where earlier intervention on depressive symptoms, before the transition to ESKD, could be performed.

In conclusion, Chen *et al.*³ have provided crucial data to inform the importance of treatment of depressive symptoms among kidney transplant candidates. Future studies could evaluate multiple questions of interest, including the following: the impact of receipt of a kidney transplant on depressive symptoms; the risk factors for depressive symptoms among patients who are eligible for or who have been referred for transplantation; exploration of the provider and health system factors that could serve as facilitators or barriers to interventions; and the effectiveness of interventions to mitigate depressive symptoms among patients with ESKD at all stages of the transplantation process. Together, this work has the potential to improve access to, and equity in access to, kidney transplantation.

DISCLOSURE

All the authors declared no competing interests.

ACKNOWLEDGMENTS

MU is supported by a grant (TL1TR002382) from the Georgia Clinical & Translational Science Alliance (supported by the National Center for Advancing Translational Sciences of the National Institutes of Health under award number UL1TR002378).

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