

Double Standards and Double Jeopardy: The Unintended Consequence of Policy Regarding Substance Use in Potential Kidney Transplant Candidates

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Marijuana is the most widely used illicit substance in the world¹ and is increasingly used in the chronic kidney disease population.² With the rapidly evolving legal landscape regarding both medical and recreational marijuana, centers are being called upon to face the issue of marijuana use in patients being evaluated for transplant in a different light than when marijuana was universally illegal. Presently in the United States, medical marijuana use is legal in 36 states along with Washington, DC, and Puerto Rico, whereas recreational use is legal in 18 states and Washington, DC.³ At least 7 states in which marijuana is legal have passed laws banning transplant centers from denying access to transplantation based on marijuana use alone.⁴

Data regarding the effects of marijuana use in kidney transplant recipients remain scant and are largely based upon case reports and single-center series. In a review of 1225 kidney transplant recipients at a single center, of whom 56 were active marijuana users in the posttransplant period, Greenan et al⁵ found no difference in death or graft failure at 1 y, and similar glomerular filtration rate at year between current marijuana users and nonusers. Similarly, Fabbri et al⁶ found patients with marijuana use in the absence of tobacco use (n=48) experienced overall graft survival similar to nonusers in a single-center study of 919 kidney transplant recipients. Balanced against these series describing no significant harm of marijuana use are reports of adverse effects including fungal infections, intrinsic renal disease, altered calcineurin inhibitor metabolism, and noncompliance, among others.⁷

It is worth noting that not all marijuana use is the same. The patient who uses marijuana for a medical purpose under the supervision of a physician is different from

the casual user, who is again different from the habitual user who continues to use despite adverse personal consequences. The latter category, termed cannabis use disorder (CUD),⁸ represents the most detrimental form of marijuana use and that which should give transplant centers the most concern. Approximately 9% of marijuana users will develop dependent behavior.⁷ In a review of national US registry data on kidney transplants, Alhamad et al⁸ found that pretransplant CUD was not associated with adverse patient or graft survival outcomes at 1 y posttransplant. Recipients who suffered from CUD following transplant, on the other hand, had twice the risk of graft loss compared with those without CUD.⁸ Psychosocial complications such as mental health disorders and noncompliance were more common in both CUD cohorts.⁸

Listing practices among transplant centers with regards to marijuana use varies widely, ranging from complete prohibition to total permissiveness.⁹ Although denial of transplant for conditions clearly shown to have significant adverse effects on graft survival is justifiable on the basis of the scarcity of donor organs, the ethical position of prohibiting transplant for conditions without such a clear link to adverse posttransplant outcomes is less tenable. The ethical principle counterbalancing the need to provide stewardship of scarce resources is beneficence to those who would gain a survival benefit from transplantation and protection of vulnerable populations.

In this issue of *Transplantation*, DeBlasio et al¹⁰ describe an insidious effect of blanket denial of transplantation to substance users.¹⁰ In a single-center study examining 1152 patients referred for kidney transplant evaluation, the authors found that Black and other minority patients who used substances were less than half as likely to undergo transplantation than White nonusers. White substance users, on the other hand, had no significant difference in the cumulative incidence of transplantation from White nonusers, nor did Black and other minority nonusers. The main bottleneck Black substance users faced on path to transplantation was access to the waitlist, as they were listed at just under a third the rate of White nonusers. Once on the waitlist, there were no differences in transplant rate across groups categorized by race and substance use.

This work highlights a situation in which a policy that appears on its face to be objective (ie, all candidates must test negative for substances, as opposed to a more “subjective” policy that considers a wider range of factors such as

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social support and degree of use in determining the permissibility of substance use) results in a double standard in which minority patients are denied access to the transplantation for a behavior when no such penalty exists for White patients exhibiting the same behavior. The fact that substance use was more prevalent in minority patients in this study further compounds the degree of disparity, introducing a “double jeopardy” effect in which additional disadvantage is added to a group already with diminished access to transplant.¹⁰ Having identified this disparity, we are now tasked with finding the best way to combat it. A reexamination of transplant center policies regarding marijuana use appears to be a reasonable place to start, given the prevalence of use and lack of clear and consistent evidence of harm. A policy permitting all manner of marijuana use is unlikely to be widely accepted and is also likely ill-advised. Focusing instead on the small subset of users with habitual and problematic use, the only group shown in a large study to have adverse posttransplant outcomes, would likely capture the majority of patients for whom marijuana use would likely be detrimental posttransplant while still allowing the casual or medicinal user to proceed in the transplant process.

For those with problematic use, we must engage resources for treatment and support to assist them in overcoming their substance use disorder. This will require multidisciplinary collaboration between transplant physicians and substance abuse and mental health professionals. As noted by the authors as well as Alhamad et al’s, extra support and education must be marshaled on behalf of the most vulnerable populations with both a greater prevalence of

substance use and less access to transplant.^{8,10} Only when we can overcome the stigma attached to substance use and provide patients with the resources they need to overcome the barrier of dependence will we as a transplant community be able to achieve equity for our patients in this matter.

REFERENCE

1. United Nations Office on Drugs and Crime. Prevalence-general. Available at <https://dataunodc.un.org/data/drugs/Prevalence-general>. Accessed December 6, 2021.
2. Rein JL, Wyatt CM. Marijuana and cannabinoids in ESRD and earlier stages of CKD. *Am J Kidney Dis*. 2018;71:267–274.
3. National Conference of State Legislatures. State medical cannabis laws. Available at <https://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>. Accessed December 6, 2021.
4. Pondrom S. Transplantation and marijuana use. *Am J Transplant*. 2016;16:1–2.
5. Greenan G, Ahmad SB, Anders MG, et al. Recreational marijuana use is not associated with worse outcomes after renal transplantation. *Clin Transplant*. 2016;30:1340–1346.
6. Fabbri KR, Anderson-Haag TL, Spenningsby AM, et al. Marijuana use should not preclude consideration for kidney transplantation. *Clin Transplant*. 2019;33:e13706.
7. Rai HS, Winder GS. Marijuana use and organ transplantation: a review and implications for clinical practice. *Curr Psychiatry Rep*. 2017;19:91.
8. Alhamad T, Koraihy FM, Lam NN, et al. Cannabis dependence or abuse in kidney transplantation: implications for posttransplant outcomes. *Transplantation*. 2019;103:2373–2382.
9. Coffman KL. The debate about marijuana usage in transplant candidates: recent medical evidence on marijuana health effects. *Curr Opin Organ Transplant*. 2008;13:189–195.
10. DeBlasio RN, Myaskovsky L, DiMartini AF, et al. The combined roles of race/ethnicity and substance use in predicting likelihood of kidney transplantation. *Transplantation*. [Epub ahead of print. February 7, 2022]. doi:10.1097/TP.0000000000004054