

Does Paired Kidney Exchange Reduce Demographic Disparities in Transplant Outcomes?

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There are widespread concerns in the transplant community about racial and other demographic disparities in transplant access and outcomes. Simultaneously, innovative new transplant policies and methods have been introduced with the hope of improving transplant access for all, which may or may not reduce existing disparities. In particular, earlier work finds that the introduction of kidney exchange as a new mode of living donor transplantation significantly improves the overall quantity of living donor transplants, transplant survival, and waiting time. However, if most patients who benefit from kidney exchange are patients who otherwise would already have had sufficient living donor options, kidney exchange programs may perpetuate or exacerbate existing disparities in access to transplantation.

In this paper, we examine the extent to which kidney exchange has exacerbated and/or reduced existing demographic disparities in transplantation. To do this, we exploit quasi-random exposure to exchange activity to obtain causal estimates of the effects of kidney exchange on the outcomes of patients of various races, ages, levels of education, and gender. We find that white patients and older patients experience the smallest gains in transplant quantity and quality as exchange prevalence increases, relative to other race and age groups. These results imply that kidney exchange can help increase access to living donor transplants for racial minorities, though the same relative improvements may not be experienced by patients belonging to other relatively disadvantaged groups.

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