

Race and sex contributions to differences in access to cardiac transplantation

Kelly A. Hyles, Olivia O. Okoli, Matthew Leipzig, Katy Pines, Maria E. Currie

ABSTRACT

Background: It has been well-documented that minority patients, particularly Black and Hispanic patients, have increased morbidity and mortality following cardiac transplantation. The reasons for these disparities remain to be understood and are crucial for a path toward equitable care. Our study utilizes directed-acyclic graphs (DAGs) to better understand the relationship between race, sex, and access to cardiac transplantation. We hypothesized that race and sex affect status at listing, and that socioeconomic factors mediate this relationship.

Methods: This study included all patients within the United Network for Organ Sharing database who underwent isolated adult cardiac transplantation. We performed regression adjustments on education, employment and insurance type to measure the direct effect of sex and race on status at listing.

Results: Compared to white patients, Black, Hispanic, and Asian patients are more likely to present with a higher status at listing, signifying a more urgent case. Similarly, male recipients are more likely to have a higher status at listing compared to female recipients.

Conclusions: The observed difference in status at listing suggests that these groups may have delayed or less access to cardiac transplantation. We propose the use of DAGs to better understand the nuances that contribute to the disparities identified in these groups. Although strides have been made in equalizing post-transplant outcomes among patients of varying races, sex, and socioeconomic factors, work remains to be done. Future projects will focus on better elucidating the systems that affect the disparate status at listing for these patients, including pre-waitlist factors.

Funding provided by the Stanford Medical Scholars Fellowship Program