Exploring Factors Associated with Disparities in Accessing the Kidney Transplant Waitlist within the Southeastern, United States

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Background:

Kidney transplantation (KTx) is considered the treatment of choice for patients with end-stage renal disease (ESRD). Proven benefits of KTx consist of improved patient quality of life (QoL), survival outcomes, and substantial cost savings across the life-span.

Of patients with ESRD initiating dialysis in the Southeastern, United States (U.S.), 33.7% are referred for transplant within a year of starting dialysis, and of these, roughly 17% began the actual evaluation process, indicating important barriers between referral and evaluation (2).

Disparities impacting the early steps to accessing the KTx waitlist (i.e., referral, and waitlist evaluation) have not been well characterized within the Southeastern, U.S., (particularly North Carolina (NC) and South Carolina (SC)), a region with the highest prevalence of ESRD, and the lowest rates of KTx in the nation (3).

Identifying the potential patient, provider, and systemic-level factors contributing to disparities impacting KTx waitlist access is needed to promote awareness and improve equity in accessing the waitlist.

METHODS:

PubMed was used to conduct a scoping literature review examining multifactorial disparities to accessing the KTx waitlist, published between 2013 to 2023. A hierarchical cluster analysis is being performed and factors associated with disparities in access to the KTx waitlist within NC and SC are being assessed using the Surgical Equity Index (SEI), a quantitative measure of surgical disparity (4).

Data was obtained at the county level from various sources, including the US Renal Data System (USRDS), United Network for Organ Sharing (UNOS), US census, Area Health Resource Files (AHRF), and Robert Wood Johnson County Health Rankings (RWJF). Annual rates of KTx waitlist per 100,000 population was calculated for each county using waitlist count numerators from UNOS and dialysis count denominators from the USRDS. County-level characteristics, including access to care, social factors, and economic factors, were obtained from the AHRF and the RWJF.

RESULTS:

North Carolina

Spearman Correlation: -0.616; p<.001

Keywords: adults, kidney, transplant, waitlist, disparities, access

South Carolina

Spearman Correlation: -0.616; p<.001

Included: 51% met criteria for final review: n=118

Screening: Peer-reviewed articles screened: n=134

49% were excluded as they did not meet criteria of adults with ESRD, within the U.S.

Identification: Articles identified during initial PubMed search: n=134

REFERENCES:


CONCLUSION:

Multiple regression analysis, commonly used in our scoping literature review, may be compromised when variables are highly correlated (multicollinearity). This can lead to inaccurate or possibly incorrect conclusions. We plan to use analytic methods that reduce the complexity of multiple variables into a smaller set of underlying factors that can eliminate unnecessary “noise” or suppressor variables within the data, while maintaining the highest possible prediction in accuracy to understand disparities in KTx waitlist access within NC and SC.

ACKNOWLEDGEMENTS:

Special thanks to Reba Boulard, Cristal Harris, Trisha Aponte, Dr. Ashley Burch, and Dr. Carl Haisch, as well as all the members of the Department of Surgery, Division of Surgical Disparities research team.