Race and Place in ESKD

Daniel J. Watford¹ and Glenn M. Chertow¹,²

¹Division of Nephrology, Department of Medicine, Stanford University School of Medicine, Stanford, California, USA; and ²Department of Epidemiology and Population Health, Stanford University School of Medicine, Stanford, California, USA

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In the current issue of the Kidney International Reports, Golestaneh et al.¹ report higher rates of death and hospitalization among Black men receiving hemodialysis living in neighborhoods characterized by the proportion of Black residents. The authors wisely linked 2 national data sources, a recent wave of the Dialysis Outcomes Practice Patterns Study and the American Community Survey, to explore a critically important question facing those of us caring for patients with end-stage kidney disease (ESKD): how does place (i.e., the multidimensional environment in which persons or patients live, raise and educate children, work, shop, and typically receive primary and longitudinal health care) relate to outcomes among vulnerable populations receiving hemodialysis?

The authors focus on Black men, who experience markedly higher rates of ESKD than non-Black men, particularly at younger ages. The authors highlight one element of place (i.e., the proportion of Black neighborhood residents) that might contribute to health outcomes. It is conceivable that young Black men living in neighborhoods inhabited by many other Black men (and women), might be less reluctant to discuss health issues and seek care, particularly for typically asymptomatic chronic conditions, including hypertension, obesity, and type 2 diabetes, than would Black men living in majority white neighborhoods. Informal interactions within community settings, including churches and barber shops, might facilitate this communication. However, any potential advantages afforded to Black men through enhanced social networks in higher-proportion Black neighborhoods might be outweighed by well-known disadvantages related to diminished access to affordable housing, high-quality schools, employment opportunities, fresh produce and other nutritious foods, and primary and preventive health care.

The authors considered the proportion of Black residents in the neighborhood of the dialysis facility as the primary exposure variable and analyzed the relative risks of death and hospitalization per 10% increments over the range of values (median 30%). Doing so could optimize the power to detect an association, but assumes that the relative risks related to differences in exposure (the proportion of Black residents) are uniform across the range of exposure (e.g., 10% and 20% vs. 80% and 90%), an assumption that is unlikely to hold true in this setting. To complement the linear approach, the authors also reported differences in the observed risks of death and hospitalization comparing majority (50% or more) with minority (<10%) Black neighborhoods. These comparisons highlight the dramatic increases in risk by place.

Among the 702 Black men included in the cohort, there were 97 deaths and a total of 1328 hospitalizations. Black men residing in majority Black neighborhoods experienced twice the risk of death (hazard ratio 2.14, 95% confidence interval 1.14–4.03) and a more than 60% increase in the rate of hospitalization (incidence rate ratio 1.62, 95% confidence interval 1.05–2.45) compared with Black men living in minority Black neighborhoods. These results were adjusted for differences in patient and facility characteristics. Clearly, the proportion of Black neighborhood residents does not comprehensively capture the full construct of place, and adjustment for age, comorbid conditions, and profit status or other facility characteristics cannot adequately adjust for confounding; thus, these results may underestimate the magnitude of the associations.

The authors highlight several issues, including the effects of historical and existing patterns of segregation and systemic racism, which remain fiercely alive and sadly well in the United States, as fundamentally related to these findings.

Correspondence: Glenn M. Chertow, Department of Medicine, Stanford University School of Medicine, 1070 Arastradero Road, Suite 311, Palo Alto, California 94034, USA. E-mail: gchertow@stanford.edu. Twitter: @gchertow
A natural extension can be made to the realm of kidney transplantation where race and place contribute to stark disparities in access. We and others\textsuperscript{2–4} have demonstrated that Black patients with ESKD in the United States are much less likely to be listed for, and eventually to undergo, deceased donor kidney transplantation compared with white patients; the bulk of disparities in access can be attributed to health insurance coverage and neighborhood poverty.

Solutions to inequities in kidney health along with dialysis and transplant care will not be straightforward. They will require engagement of the nephrology community, policymakers, legislators, and other community leaders. We should not tire in reminding all Americans that kidney disease and kidney failure disproportionately affect the Black community and other communities of color. The work of Golestaneh et al.\textsuperscript{1} highlights not only the importance of race in ESKD, but of the racial composition of the community in which patients receive dialysis: one of many elements of place. Next steps will require action. As we (hopefully) emerge from the COVID-19 pandemic in the coming months, nephrologists and dialysis providers should use whatever energy we have left to correct health disparities in our vulnerable communities, where social determinants of health are costing the lives of Black men (and women) from ESKD as well as from severe acute respiratory syndrome coronavirus 2. This is our civic duty.

**DISCLOSURE**

GMC serves on the Board of Directors for Satellite Healthcare, a nonprofit dialysis provider. The other author declared no competing interests.

**REFERENCES**

1. Golestaneh L, Karaboyas A, Cavanaugh K, et al. The role of place in disparities affecting Black men receiving hemodialysis. *Kidney Int Rep*. 2021;6:357–365.
2. Epstein AM, Ayanian JZ, Keogh JH, et al. Racial disparities in access to renal transplantation—clinically appropriate or due to underuse or overuse? *N Engl J Med*. 2000;343:1537–1544.
3. Hall YN, Choi AI, Xu P, et al. Racial-ethnic differences in rates and determinants of deceased donor kidney transplantation in the United States. *J Am Soc Nephrol*. 2011;22:743–751.
4. Murphy KA, Jackson JW, Purnell TS, et al. Association of socioeconomic status and comorbidities with racial disparities during kidney transplant evaluation. *Clin J Am Soc Nephrol*. 2020;15:843–851.