



## Kidney Health Disparities: The Goal is Elimination

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Decades of progress have documented racial and ethnic health disparities, including those of kidney health. Less progress has been made, however, in developing solutions to eliminate this persistent health challenge. The *Journal of the American Society of Nephrology* inaugurates this special series to focus attention on kidney health disparities with an emphasis on potential strategies for their elimination. We intend to stimulate further research into solutions to make health systems what we strive for them to be: havens for the restoration of health for all, providers of guidance as to maintenance of optimal health for all, and inclusive engines for the continued generation of knowledge to drive both enterprises for all who seek to contribute to it.

Despite ongoing efforts to eliminate the unequal distribution of health in the United States<sup>1</sup> that includes kidney health disparities,<sup>2</sup> these disparities persist.<sup>1,2</sup> Their elimination requires going beyond solely addressing the disparities themselves to include elimination of structural racism that enables disparities established by past social and economic policies to persist.<sup>1,3</sup> Elevating to this “elimination” posture obliges transitioning from the common US medical paradigm that attributes differences in health and health outcomes among US population groups to innate biologic differences.<sup>1,4</sup> We must instead embrace a paradigm that redresses the upstream root causes of inequities in health systems and in the social and economic contexts that encompass them, and factors such as structural racism that enable their persistence.<sup>5</sup>

Health disparities are so embedded in our health systems that we have come accept them as the natural, inevitable order,<sup>3</sup> and not as aberrations that compel elimination. Systems, laws, and policies created racial and ethnic inequities in US health and its determinants; systems, laws, and policies can

eliminate them.<sup>3</sup> This speaks against the common strategy of trying to eliminate health disparities by assigning this responsibility to individuals within responsible entities, rather than the entity itself embracing the responsibility as its own. Recognizing the systemic nature of health disparities and their persistence and embeddedness, efforts to eliminate kidney health disparities must be scaled, sustained, and conducted at multiple levels by responsible entities. Measurements can help identify aspects of structural racism<sup>6,7</sup> as we will discuss, and entities with authority to do so can eliminate them. This editorial describes examples of identified health inequities and enabling structures within responsible entities that allow them to persist.

Amid the ongoing coronavirus disease 2019 (COVID-19) pandemic, Tummalapalli *et al.*<sup>8</sup> asked if there were racial and ethnic disparities in COVID-19 incidence among patients with CKD on hemodialysis. Secondly, they asked if such disparities were identified, could they be accounted for by socioeconomic factors. These questions are important because (1) if certain racial and ethnic groups have higher COVID-19 incidence, they might become special foci for mitigation efforts, and (2) identifying socioeconomic or other structures that drive disparities might inform efforts to eliminate these structures.

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The investigators found that Black and Hispanic patients were more likely to develop symptomatic COVID-19 than non-Hispanic White patients. The social vulnerability index, a composite of census indicators used by the Centers for Disease Control and Prevention for emergency preparedness and disaster response, unadjusted or adjusted, did not associate with overall COVID-19 incidence. Follow-up analyses showed that among non-Hispanic White patients, the following associated with increased incidence of symptomatic COVID-19 in unadjusted analysis: (1) neighborhood-level socioeconomic status; (2) minority status and language; and (3) housing crowding. In the adjusted analysis, housing crowding remained a significant associated factor.

Historic racial social and economic policies such as neighborhood “redlining” contributed to segregation of racial and ethnic groups into under-resourced, crowded neighborhoods that led to conditions that mediate health disparities.<sup>1</sup> Although many of these racial social and economic policies have been removed, the neighborhood contexts they created, and their resulting adverse disparate health effects, persist.<sup>3,4</sup> The health community can engage with policy makers to help eliminate policies that lead to areas of concentrated poverty that disproportionately include racial and ethnic minorities. We can also engage with corporate leaders to help eliminate mortgage-lending practices that preclude individuals of racial and ethnic minority groups from living in higher-resourced areas with healthier outcomes.

Schmidt and Waikar in their perspective<sup>9</sup> asked if the false assertion that “race is a fundamental determinant of human traits and capabilities” nevertheless informs nephrology algorithms. Secondly, they asked if these so-informed algorithms cause harm to patients. The answers can lead to a re-evaluation or elimination of current algorithms that include “race.” This also empowers a medical specialty/subspecialty entity to eliminate a structure causing health disparities and/or is enabling them to persist.

The authors examined an algorithm that predicts if presenting symptoms and signs to an emergency department were associated with the acute presentation of a kidney stone. The algorithm assigned three points on a 13-point scale to non-Black patients, predicting *a priori* that Black patients would be considered at lower risk for having a stone. The authors note that the algorithm could lead to underdiagnosis of acute kidney stones in Black patients. They also examined an algorithm to predict death and graft loss from donor kidneys on the basis of donor characteristics that includes Black “race” in a way that makes donor kidneys less acceptable. The algorithm could lead to fewer Black recipients of kidneys and fewer transplanted kidneys from Black donors.

These are examples of algorithms developed from analyses that attributed outcomes for Black individuals to innate traits that more likely related to environments to which racist societal and economic constraints relegated them. These algorithms constitute structures that “hardwire” adversely disparate outcomes for Black patients, even after societal and economic factors that led to the disparities have been removed. It is an

example of how the effects of past racism can be “structured” to persist even without racist intent of operators of the algorithms. Special and subspecialty medical entities such as the ASN can identify disparate effects of such algorithms, own them, then eliminate them.

Recognizing that kidney transplant compared with maintained dialysis leads to better outcomes for patients with ESKD, Schold *et al.*<sup>10</sup> examined outcomes of patients with ESKD and top 20% estimated post-transplant survival (EPTS) who were pre-emptively waitlisted compared with those starting dialysis. They secondarily examined determinants of being pre-emptively waitlisted. The question answers will lead to expeditious kidney transplantation for patients with ESKD and their better quantity and quality of life.

The investigators reported that the 3-year incidence of kidney transplantation was higher in patients who were pre-emptively waitlisted, compared with those who were not. More patients initiating dialysis lost their top 20% EPTS status after 30 months than those pre-emptively waitlisted. Independent determinants of not being pre-emptively waitlisted included (1) Black “race”; (2) having noncommercial insurance; and (3) living in lower-income communities. The authors noted regional and facility-level variation in these outcomes and advocated expedited care for patients qualifying for EPTS and automated transplant referral for those with the best prognosis.

Regional and facility-level variation in these outcomes reveal opportunities for health system leaders to identify local factors that structure better or worse outcomes than comparable health systems. Eliminating worse practices and sharing best practices will contribute to eliminating kidney health disparities. Also, identifying and amending limiting aspects of noncommercial insurance, which disproportionately covers racial and ethnic minorities, might enhance their being pre-emptively waitlisted, and thereby help eliminate these disparities.

With the recognition of kidney and other health disparities and the need to eliminate structures that enable their persistence, we can act at the following entity levels:

- Society at large: engage with government/corporate leaders to eliminate societal/economic factors that increase CKD risk and its adverse outcomes.
- Specialty/subspecialty societies: correct enabling infrastructure for kidney health disparities.
- Health systems: eliminate health system and health insurance structures that promote disparate care delivery.

No matter our position in the kidney health enterprise, these multiple levels at which we might act allow us all the opportunity to contribute to elimination of kidney health disparities.

## DISCLOSURES

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Medscape, The Methodist Hospital (Houston), and University of Rochester School of Medicine; and reports having an advisory or leadership role with the editorial boards of the *American Journal of Nephrology*, *CJASN*, *Kidney International*, *Journal of Renal Nutrition*, and as *JASN* Deputy Clinical Editor.

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## AUTHOR CONTRIBUTIONS

D. Wesson conceptualized the study, wrote the original draft, and reviewed and edited the manuscript.

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