## COVID-19, Racism, and Racial Disparities in Kidney Disease: Galvanizing the Kidney Community Response

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JASN 31: •••-, 2020. doi: https://doi.org/10.1681/ASN.2020060809

And I've been tired so long, now I am sick and tired of being sick and tired. And we want a change. We want a change in this society in America. —Civil rights leader Mrs. Fannie Lou Hamer

Racial disparities in health and racism in the lived experiences of Black Americans have come into sharp focus in the context of the ongoing coronavirus disease 2019 (COVID-19) pandemic and increased awareness of brutal attacks on Black persons. Black Americans continue to experience higher rates of COVID-19 transmission, morbidity, and mortality than their representation in the United States population.<sup>1</sup> At the same time, recent acts of violence targeting Black individuals have heightened awareness of the persistence of interpersonal and structural racism in the United States and its devastating consequences. As a kidney community, we have an opportunity to mitigate racial disparities through deliberative actions to support the patients and professionals most likely to be affected.

### ENDURING RELEVANCE OF THE "WEATHERING" HYPOTHESIS

In 1992, Dr. Arline Geronimus<sup>1</sup> proposed the "weathering" hypothesis, which posits that Black individuals experience early health deterioration as a consequence of the cumulative effect of repeated experience with social or economic adversity and political marginalization.<sup>2</sup> The COVID-19 pandemic and related mitigation efforts have handed Black Americans yet another adverse experience to "weather." Collectively, they represent 12.9% of the population but have suffered 25.1% of deaths among all American deaths where race and ethnicity are known.<sup>3</sup> On the basis of estimates as of May 27, 2020, if Black Americans had died of COVID-19 at the same rate as White Americans, about 13,000 Black Americans would still be alive.<sup>3</sup>

Black Americans and other descendants of the African Diaspora are overrepresented in low-wage and publicfacing jobs that have recently, and quite ironically, been dubbed "essential" but raise the risk of exposure to COVID-19. Moreover, many Black individuals live in crowded, poor-quality, and multigenerational housing that limits ability to socially distance. They also may face barriers to COVID-19 testing, fragmented access to primary and specialty care, and disruptions in social services and safety net programs due to social distancing measures as well as increased vulnerability to the economic consequences of the pandemic.

Social disadvantage has contributed to Black individuals' greater burden of multiple chronic conditions compared with White persons, including kidney disease.<sup>4</sup> These same conditions have proven to elevate observed risk of COVID-19 morbidity and mortality.<sup>1</sup> A study of 5449 persons hospitalized with COVID-19 in metropolitan New York found that Black race was associated with 23% greater odds of AKI after accounting for underlying health conditions, mechanical ventilation, and use of vasoactive medications.<sup>5</sup>

Not everything that is faced can be changed. But nothing can be changed until it is faced. —Essayist, playwright, and novelist James Baldwin

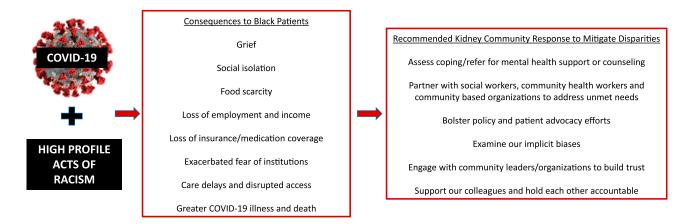
# FACING THE ROLE OF RACISM IN RACIAL DISPARITIES IN HEALTH

Structural racism refers to the mechanisms in which societies foster racial discrimination through systems of housing, education, employment, earnings, benefits, credit, media, health care, and criminal justice that reinforce discriminatory beliefs, values, and distribution of resources.<sup>6</sup> For example, multiple cities in the United States have a long legacy of

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Published online ahead of print. Publication date available at www.jasn.org.

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**Figure 1.** There are numerous potential consequences to patients with kidney disease stemming from the COVID-19 and racism crises. The kidney community should respond to mitigate disparities. COVID-19 photo credit: Alissa Eckert and Dan Higgins (https://phil.cdc. gov/Details.aspx?pid=23311).

residential segregation, including the practice of redlining—the drawing of red lines around portions of a map (often those where racial, ethnic, or religious minorities dwell) to indicate areas in which mortgage lenders were instructed by the government to not make loans. The effect of residential segregation on kidney health outcomes has been well documented. An analysis of United States patients initiating hemodialysis between 2000 and 2008 found that, among Black Americans exclusively, residence in highly racially segregated areas was associated with increased mortality.<sup>7</sup>

The effect of structural racism can also be observed in the United States food system. Greater availability of healthy foods has been noted in predominantly White and higher-income neighborhoods.<sup>8</sup> This can pose significant challenges for individuals with diet-sensitive health conditions, such as diabetes, hypertension, and kidney disease. Environmental exposures, such as lead in water systems or air pollutants, are also geographically patterned in ways that reinforce racial discrimination. Many of these same exposures increase risk of kidney disease.<sup>9</sup>

### GALVANIZING THE KIDNEY COMMUNITY RESPONSE TO THESE CRISES

These systems of structural racism also drive persistent racial disparities across

the continuum of kidney disease from its risk factors to its treatments for ESKD.<sup>4</sup> Many of these disparities will also likely worsen following COVID-19 and recent publicized killings of Black Americans by police. In Figure 1, we outline some potential consequences to patients stemming from these dual crises and ways that our community might be responsive to their new and/or amplified needs. Because of the disproportionate effect of COVID-19 on Black individuals, many are grieving the loss of family and/or community members and have not been able to fully access their support systems (e.g., faith-based organizations) due to social distancing measures. This grief has been compounded recently by bearing witness, through the media, to the killings of unarmed Black personsan experience documented to have adverse effects on the mental health of Black individuals in the general population.10 In our clinical visits, we should acknowledge these dual crises, inquire as to how our patients are coping, and have on-hand resources to which we can refer them for further support and counseling as needed.

The economic effect of COVID-19 is profound. Unemployment rates have soared, and many have lost their health insurance coverage. Some people are newly being forced to make trade-offs between their basic needs and their health needs (*e.g.*, paying their rent versus purchasing medications), and problems, such as food insecurity, are expected to rise and disproportionately affect Black Americans as they did following the Great Recession.11 We can support patients facing these challenges by assessing their current social needs and strengthening our partnerships with social workers, community health workers, community-based organizations, and others who can assist patients in identifying needed services. We should also bolster our advocacy efforts for public policies that might buffer the economic effects of COVID-19 and confront structural racism, such as those aimed at streamlining Medicaid enrollment for newly eligible persons.12

Among the most concerning expected consequences of the recent crises is heightened fear of institutions-including the United States health care system. Because the very humanity of Black individuals has seemed to be in question for some people with public authority, we should anticipate that some patients will avoid authority figures (e.g., health care professionals) due to anticipated poor treatment. This type of "chilling effect" has been noted among some undocumented immigrant communities who have avoided seeking health care out of fear of being deported.13 In the case of kidney care, this may present as urgent dialysis initiation due to delays in seeing a nephrologist, declines in interest in permanent vascular access placement, and/or declines in completion of living donor and kidney transplant recipient evaluations. This could lead to worsening of existing racial disparities. Overcoming these fears will require that we examine our own implicit biases to ensure that we are providing equitable care worthy of our patients' trust. We should also engage trusted community leaders and organizations as partners in communicating the benefits of timely and appropriate care, even during these tumultuous times. This foundation of trust14 will become increasingly important as a vaccine and effective treatments for COVID-19 are developed, which we will want to equitably provide to our patients.

In all of these efforts, we should be mindful that many of our Black colleagues are also experiencing similar grief and other direct and indirect consequences as are our patients during these dual crises. It is important that they be provided emotional as well as instrumental support to mitigate negative effects on their personal and professional lives, as well as bolstered kidney community support to advance health equity.

The COVID-19 pandemic and recent high-profile acts of racism have unleashed new adversity for Black individuals to "weather." Our actions as a kidney community can influence the effect that these crises have on racial disparities and prepare us to better address challenges to come.

#### DISCLOSURES

All authors have nothing to disclose.

#### FUNDING

D.C. Crews was supported, in part, by National Heart, Lung, and Blood Institute grant K24 HL148181. T.S. Purnell was supported, in part, by Agency for Healthcare Research and Quality grant K01HS024600.

#### REFERENCES

- 1. Geronimus AT: The weathering hypothesis and the health of African-American women and infants: Evidence and speculations. *Ethn Dis* 2: 207–221, 1992
- Garg S, Kim L, Whitaker M, O'Halloran A, Cummings C, Holstein R, et al.: Hospitalization rates and characteristics of patients hospitalized with laboratory-confirmed coronavirus disease 2019—COVID-NET, 14 states, March 1-30, 2020. MMWR Morb Mortal Wkly Rep 69: 458–464, 2020
- 3. American Public Media Research Lab Staff: The color of coronavirus: COVID-19 deaths by race and ethnicity in the U.S., 2020. Available at: https://www.apmresearchlab. org/covid/deaths-by-race. Accessed June 7, 2020
- Norton JM, Moxey-Mims MM, Eggers PW, Narva AS, Star RA, Kimmel PL, et al.: Social determinants of racial disparities in CKD. J Am Soc Nephrol 27: 2576–2595, 2016
- Hirsch JS, Ng JH, Ross DW, Sharma P, Shah HH, Barnett RL, et al,: Northwell COVID-19 Research Consortium; Northwell Nephrology COVID-19 Research Consortium: Acute

kidney injury in patients hospitalized with COVID-19. *Kidney Int* 98: 209–218, 2020

- Bailey ZD, Krieger N, Agénor M, Graves J, Linos N, Bassett MT: Structural racism and health inequities in the USA: Evidence and interventions. *Lancet* 389: 1453–1463, 2017
- Kimmel PL, Fwu CW, Eggers PW: Segregation, income disparities, and survival in hemodialysis patients. J Am Soc Nephrol 24: 293–301, 2013
- Franco M, Diez Roux AV, Glass TA, Caballero B, Brancati FL: Neighborhood characteristics and availability of healthy foods in Baltimore. *Am J Prev Med* 35: 561–567, 2008
- Scammell MK, Sennett CM, Petropoulos ZE, Kamal J, Kaufman JS: Environmental and occupational exposures in kidney disease. Semin Nephrol 39: 230–243, 2019
- Bor J, Venkataramani AS, Williams DR, Tsai AC: Police killings and their spillover effects on the mental health of black Americans: A population-based, quasi-experimental study. *Lancet* 392: 302–310, 2018
- United States Department of Agriculture: Trends in Food Insecurity by Race and Ethnicity, 2001-16, 2019. Available at: https:// www.ers.usda.gov/topics/food-nutritionassistance/food-security-in-the-us/keystatistics-graphics/#foodsecure. Accessed November 15, 2019
- Wagner J: Streamlining Medicaid enrollment during COVID-19 public health emergency, 2020. Available at: https://www.cbpp.org/ research/health/streamlining-medicaidenrollment-during-covid-19-public-healthemergency. Accessed June 22, 2020
- Page KR, Polk S: Chilling effect? Postelection health care use by undocumented and mixed-status families. N Engl J Med 376: e20, 2017
- Sullivan LS: Trust, risk, and race in American medicine. *Hastings Cent Rep* 50: 18–26, 2020