

The Disproportionate Impact of COVID-19 on Racial and Ethnic Minorities in the United States

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Main Point: COVID-19 pandemic in the US exposed racial disparities in morbidity and mortality. African Americans, LatinX, and Native Americans are disproportionately impacted by the disease due to biomedical and social factors brought by structural injustices.

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Abstract

The COVID-19 pandemic has disproportionately affected racial and ethnic minority groups, with high rates of death in African American, Native American, and LatinX communities. While the mechanisms of these disparities are being investigated, they can be conceived as arising from biomedical factors as well as social determinants of health. Minority groups are disproportionately affected by chronic medical conditions and lower access to healthcare that may portend worse COVID-19 outcomes. Furthermore, minority communities are more likely to experience living and working conditions that predispose them to worse outcomes. Underpinning these disparities are long-standing structural and societal factors that the COVID-19 pandemic has exposed. Clinicians can partner with patients and communities to reduce the short-term impact of COVID-19 disparities while advocating for structural change.

Key words: COVID-19, Marginalized Communities, Pandemic, Racial Disparities, SARS-CoV-2

Introduction

In the United States (US), coronavirus disease (COVID-19) caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) has disproportionately affected racial/ethnic minority and underserved groups, especially African American, LatinX, and Native American communities. The stark disparities underscore important medical, social, economic, environmental, and political contexts that pre-date the pandemic. In this paper, we describe potential factors contributing to COVID-19 disparities in the US from both biomedical and social determinants of health perspectives. We also discuss the roles clinicians can play in addressing these disparities.

As of June 2020, the Centers for Disease Control and Prevention (CDC) reported that 21.8% of COVID-19 cases in the US were African Americans and 33.8% were LatinX, despite the fact that these groups comprise only 13% and 18% of the US population, respectively. These data are limited by underreporting of race (47% of cases) and ethnicity (43% of cases) [2, 3]. In a report of hospitalized patients, 33% were African Americans, despite representing only 18% of a catchment area population [4]. The numbers have changed throughout time but the disproportion has been consistent across the US.

The mortality rate for COVID-19 among African Americans is more than two-fold higher than Whites. In majority of the reporting states and Washington, DC, African Americans comprise higher proportion of deaths relative to their percentage in those jurisdictions' population [5].

The numbers have changed throughout time but the signal of racial disproportion is clear.

In the hardest hit city in the US, New York City, age-adjusted confirmed COVID-19 deaths were 220 and 236 per 100,000 for African American and LatinX patients, respectively. This is double compared to 110 and 102 per 100,000 for Whites and Asians, respectively [6]. In Arizona, 13% of cases, and 18% of deaths are Native Americans, who only make up 5.3% of the state's population [7, 8].

COVID-19 Disparities through a Biomedical Lens

Models of COVID-19 mortality by race and ethnicity adjusted for medical complexity are not yet available, but a disproportionate burden of pre-existing chronic medical problems likely contribute to disparities in COVID-19 outcomes. Preliminary data show that diabetes mellitus, hypertension, renal disease, and obesity increase a patient's risk for severe COVID-19 disease and mortality [9]. African Americans have a disproportionately high prevalence of such co-morbidities, including diabetes, hypertension, obesity, and coronary artery disease [10, 11, 12], and they are more likely to die prematurely compared to Whites due to all causes [13]. Therefore, these long-standing health disparities contribute to disproportionate deaths among African Americans with COVID-19.

The disproportionate burden of chronic medical conditions is compounded by lower access to healthcare among some racial and ethnic minority groups. Uninsured rates among non-elderly Americans are significantly higher for Native Americans (22%), Hispanics (19%), and African Americans (12%) compared with Whites (8%) [14]. They also tend to live in areas where medical care is of poor quality or is underserved. Therefore, racial and ethnic minorities may receive lower quality care for COVID-19.

COVID-19 Disparities through Social Determinants of Health Lens

A wider societal lens is required to understand disparities in pre-existing medical conditions, healthcare access and other factors that may contribute to the disproportionate impact of COVID-19 on minority populations. Social determinants of health are the “conditions in the places where people live, learn, work, and play that affect a wide range of health risks and outcomes.” [15]

Before the pandemic and associated economic fallout, poverty rates in the US were 24% for Native Americans, 22% for African Americans, and 19% for Hispanics, compared to 9% for Whites [16]. Across all income brackets, the median wealth of white households is ten times the wealth of African American households [17]. Therefore, these minority groups have less financial capacity to make healthful decisions in the midst of the financial hardships that have accompanied the pandemic.

It is not surprising then that minority groups comprise a disproportionate percentage of workers in essential industries during the pandemic. Furthermore, only 20% of African American workers have the *privilege* of working from home compared to 30% of Whites [18]. A report by New York City’s comptroller showed that 75% of frontline workers in the city are people of color. African Americans make up 40% of the transit workers. More than half use public transportation [19], and across the country, African Americans are more likely to use public transportation to commute to work compared to Whites, 34% vs 14%, respectively [20]. These occupational hazards are compounded by the fact that only 55% of essential workers in the food service

industry have access to paid sick leave [21]. These working conditions undoubtedly contribute to the disproportionate impact of COVID-19 on minority communities.

Living conditions in some minority communities further increase risk for SARS-CoV-2 infection and/or transmission. Communities with higher racial and ethnic minority populations have higher housing density, more housing insecurity, scarcity of potable water, and more multigenerational households which makes social distancing harder [22, 23, 24]. Likewise, there is often less access to healthy foods which makes chronic disease management more difficult [25]. Furthermore, communities with higher minority populations are more likely to be targeted for marketing of unhealthful products like alcohol, cigarettes, and fast food that may negatively influence chronic medical conditions [26]. Finally, there is emerging evidence that air pollution, which is higher in minority communities, may play a role in COVID-19 severity [27, 28].

During a pandemic, it is essential that credible, accurate health information is disseminated from health and healthcare institutions to the public in real time. Minority groups are more likely to have communication gaps due to issues of health literacy, socioeconomic disadvantage, and limited English language proficiency [29]. These gaps are exacerbated by justifiable mistrust of health institutions in some minority communities [30]. The result is a relative lack of credible COVID-19 information reaching marginalized communities, thereby elevating risk of disease contraction and transmission.

Both the disproportionate biomedical risk factors and social determinants that contribute to COVID-19 health disparities may be traced, in part, to a foundation of structural racism. The legacy of redlining and housing segregation, a policy which made African American communities pay more in mortgage but with less return in investment, is just one example of the ways in which these inequities were put in place by design [31]. Achieving health equity will require deconstruction of the legacy of structural racism.

Implications for the Clinician

As clinicians who are already overwhelmed by tending to the medical needs of COVID-19 patients and the challenges of resuming routine clinical care, it can be overwhelming to consider the root causes of disparities that often fall outside our realm of expertise. At the most basic level, clinicians should focus on providing high quality standard of care for all patients, regardless of background.

The CDC recommended interventions that address the disproportionate impact of COVID-19 to African American, LatinX, and Native American communities [32]. Standardized treatment and management protocols should be in place for all patients. Quality improvement endeavors must include health equity as a focus. A vital resource in health care facilities is adequately staffed and integrated support services (e.g., navigation and professional interpreter service).

In addition, clinicians may advocate within their institutions and work units to foster sustainable partnerships with community-based organizations who serve vulnerable populations and to empower patients and communities by sharing resources. Community empowerment is

especially critical in the context of a pandemic. Health care institutions are usually prominent member of the communities where they are located and should have a role in improving the communities' health across all domains (physical, social, and psychological).

Implicit bias among clinicians and other healthcare workers can compound socioeconomic disadvantage for patients; contribute to poorer communication with patients, mistrust, and lower quality of care received; and, potentially affect the outcomes of care [33, 34]. Although much work is needed to understand the ways to effectively address implicit bias through educational or training programs, clinicians are encouraged to practice self-awareness on racial bias and stigma in the delivery of care [35]. Of particular relevance is evidence that equitable access to the same high-quality care can eliminate health disparities but underserved and socioeconomically disadvantaged people need additional levels of support to remove structural barriers and benefit equitably from the same intervention strategy.

The COVID-19 crisis provides an opportunity for clinicians to collectively act on the root causes of these fundamental inequities that have been flagrantly demonstrated by the pandemic. Clinicians have a powerful voice at the health policy table. We can reflect to institutional and professional societies and national decision makers what we are seeing when caring for our patients. The disproportionate impacts of the pandemic on marginalized communities can be captured powerfully by stories of clinicians and their patients. Since many systemic inequities were put in motion by design, clinicians and other front-line healthcare workers can be important catalysts in designing a new more equitable system that promotes health for all Americans irrespective of social or economic background.

Notes

Dr. Tai, Shah, Sia, Doubeni, and Wieland have nothing to disclose.

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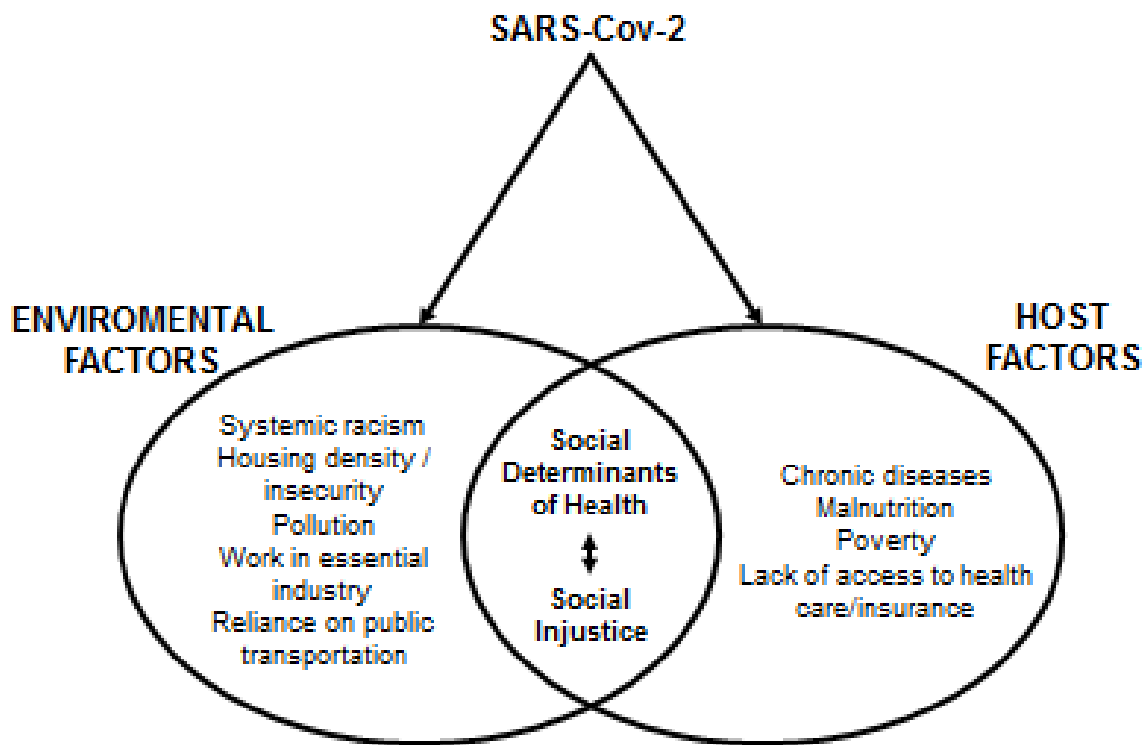
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Figure 1: Pathogen, host, environment interplay in racial disparities in COVID-19



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