The Roots of the Pandemic: How Structural Racism Facilitated the Spread of COVID-19 in Marginalized Communities

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Abstract

The COVID-19 pandemic dramatically reshaped the world we live in and how we interact with it, and although its disastrous impact may have been shocking and unexpected to some, its effects continue to operate along very distinct patterns that have existed for centuries. The pandemic exposed the deep-seated inequalities in wealth, health status and access that exist and define daily life in the United States especially to many of its most marginalized groups.

Black, Indigenous, and People of Color (BIPOC) communities have disproportionately borne the brunt of the risk of infection and severe illness from COVID-19, while already enduring disruptive social conditions and circumstances that contribute to poor health (Valenzuela, 2020). These include socioeconomic determinants of health, such as issues of food insecurity, access to housing, schooling and healthcare (Bravemen & Gottlieb, 2014). Social risk factors are fostered through systemic and structural inequalities that permeate the lives of BIPOC and other marginalized communities, including gentrification and segregation, employment discrimination, mass incarceration, and pollution (Egede & Walker, 2020; Singh et al, 2017). Additionally, macrosocial inequalities rooted in historical processes and the law, such as red-lining, concretized disparities in health and wealth in the US, and form the foundations of structural racism endured by generations of Black and Indigenous communities since the country's foundation (Singh et al, 2017).

The cracks in the foundation truly do run deep, and they continue to become more visible. The Kerner report released in response to demonstrations during the Civil Rights Movement era identified social realities that persist to this day and shed light on how federal policies and chronic underfunding of housing, health, education, and social services undermined the ability of lower income Black communities to become economically viable (National Advisory Commission on Civil Disorders & Zelizer, 2016). Mass incarceration, increased policing,

and fossil fuel subsidies have only intensified barriers to health and wellness that marginalized communities have lived with. However, funding for these policies continues to balloon as society's most vulnerable face the consequences of inadequate investment in public health infrastructure to prevent and plan for the pandemic (Trust for America's Health, 2019). Health disparities encompass systematic issues within the healthcare system as well as structural inequities that can impact health, such as residential segregation, food insecurity, racial discrimination, and limited employment and educational opportunities. The spread and severity of COVID-19 cases in disadvantaged communities is due to an amalgamation of these different forms of structural racism (Boulware, 2020).

The laws, policies, and attitudes that contributed to these inequalities are based on a gradient of social identities that determine the nature of the social barriers (or lack thereof), including race and ethnicity, gender identity, ability/disability, immigration status, and primary language. The interplay between these inequalities and the pandemic's impact on BIPOC communities cannot be understood without examining the built and social environments within which different communities reside and the stress induced by these environments. The development of chronic diseases, including cancer, diabetes, asthma, cardiovascular disease, and autoimmune syndromes has been linked to chronic exposure to stress (Mariotti, 2015). This includes both physical stress (as in hunger or exposure to pollutants) and emotional stress, and these illnesses are associated with a more severe course and progression of COVID-19 (Sanyaolu et al, 2020). This model will be used to integrate the pathophysiological mechanisms of disease and infection with the structural inequalities that create the conditions for interlinked social disorders.

Before looking to the present, it is important to understand the macro-social implications of the history of residential segregation. The restriction of Black families into certain neighborhoods, also known as red-lining, where their property was devalued and there was significantly less investment into education and employment, effectively stripped them and their descendants of generational wealth. The Black Women's Health Study found that residential segregation and neighborhood socioeconomic status (SES) has been associated with greater rates of obesity and type 2 diabetes, when adjusting for personal and family factors (Krishnan et al, 2010). Another study in Baltimore showed comparable rates of type 2 diabetes between Black and White residents in a residentially integrated community, highlighting that these effects are driven by neighborhood deprivation (LaVeist, 2011).

Black communities were also redlined into neighborhoods in close proximity to facilities and factories that emit air and water pollutants, such as Flint, Michigan and Grays Ferry in Philadelphia, and as time progressed, construction of public housing continued in these areas. A report from 2017 showed that African Americans are 75%

more likely to live beside facilities producing hazardous waste (N.A.A.C.P., 2017). Similarly, the Environmental Protection Agency (EPA) found that regardless of income level, Black Americans are subjected to higher levels of air pollution than white Americans and to 1.5 times the amount of air pollutants from the industrial burning of fossil fuels as the population at large (Mikati et al, 2018). Citizens are at an increased risk of asthma, cancer, and other illnesses because of this exposure to air pollution, industrial chemicals and toxins and environmental pollution (Kim et al, 2018). It has become very clear throughout this pandemic, these conditions predispose individuals to more severe cases of COVID-19 (Halpin et al, 2020). A recent study of 3000 counties in America shows that a minor increase in long-term exposure to airborne particulates (1 $\mu g/m^3$) is associated with an 8% increase in COVID-19 death rates (Wu et al, 2020). The study adjusted for 20 potential confounding factors related to related to the study populations, including size, time since the issuance of the stay-at-home order, healthcare access, testing facilities, and other socioeconomic and behavioral variables, and although it is virtually impossible to control for all possible confounding factors, this study clearly emphasizes the importance of enforcing significant regulations on companies complicit of environment pollution to protect the health of this country's communities. Overall, these studies convey how the introduction and maintenance of housing and residential segregation predisposed BIPOC and poorer communities to more severe cases of COVID-19.

Hypertension, obesity, and various other chronic illnesses create an increased risk for severe illness from COVID-19 (Katz, 2020). To this day, BlPOC communities still disproportionately fill public housing facilities and lower-income neighborhoods in overcrowded conditions, with restricted access to healthy food and other resources (Jacobs, 2011). What these studies do not show are the essential workers who cannot afford missing a day of work returning home where it is often difficult to social distance from their family and friends living with diabetes and other chronic conditions. To be left with the choice of either missing rent and risking homelessness or placing themselves, their family and friends at risk of contagion is a grave and profound injustice. Chronic illnesses are not individualist experiences, rather one's choices, health behaviors, and disease management are intertwined with factors outside of the patient's control. A recent survey showed that almost 40% of American adults would not be able to cover a $400 emergency with cash, savings, or credit that they could quickly pay off; poverty is pervasive in the US and its connection to chronic illnesses has been well documented (Federal Reserve, 2019). The added challenges of uncertain immigration status and fear of deportation push BIPOC communities into living and employment situations with higher risk of infection and severely limit their opportunities to build a sustainable future.

In 'The New Jim Crow', Michelle Alexander highlights how soaring funds for law enforcement in efforts to militarize the "War on Drugs" led to the dramatic rise of incarceration rates in the United States, ballooning to a current prison population of 2.2 million, of which 33% of imprisoned adults are Black (Alexander, 2020). Jails and prisons are also major sites of novel coronavirus; as of November 17th, 2020, there were 197,659 cases of coronavirus reported among prisoners (The Marshall Project, 2020). Despite early releases for low-level offenders, new arrests, pre-trial detention, and unsanitary conditions in prisons create opportunities for infection through jail-community cycling. A study in Chicago showed that jail-community cycling accounted for 55% of the variance in case rates across the city and Cook County Jail alone was associated with 15.7% of all documented COVID-19 cases in Illinois (Reinhart & Chen, 2020). The prison environment creates very efficient conditions for disease spread, from overcrowding, to shared hygiene facilities and items, and poor health care and nutrition (Equal Justice Initiative, 2020). Additionally, the social isolation and disturbance of incarceration is an acute and chronic stressor on those imprisoned as well as their families and communities (Nowotny et al, 2020). This stress is associated with increased risks for immune dysfunction, mental illness, hypertension, and heart disease among many other stress-related illnesses (Massoglia, 2019). If that exposure were not enough, inmates are often used for low-wage, high-risk hard labor for minimal pay. For instance, inmates in California help fight wildfires for around $1 per hour, increasing risk of chronic respiratory illness and a possible consequent severe case of COVID-19, but still face impediments to social integration after release.

As of 2018, the US detained nearly 400,000 people in immigration jails, which pose similar determinants of health, including poor conditions of confinement, economic instability for detainees and their families, and physical and mental abuse (Saadi et al, 2020). The top complaint received from immigrant detainees is medical neglect and abuse, and of the 33,126 complaints of abuse (this includes all forms of physical and sexual abuse) received from January 2010 to July 2016, only 1.72% are investigated (Saadi et al, 2020). The adverse effects of detention continue long after release and reach far beyond the individual, especially if families are financially dependent on the detainee. The mental health impacts of punitive measures of can also persist and aggravate current and future health and wellness (Wood, 2020). Additionally, immigrant detainees and imprisoned individuals often enter detention with previous experiences of trauma and significant social obstacles, such as housing instability, that prevent maintaining wellness and disease management (Saadi et al, 2020). Prison costs taxpayers $80 billion a year and generations of stress and trauma on BIPOC communities that cannot be quantified (Lewis, 2019). If healthcare workers, and society as a whole, are committed to protect

those who are most vulnerable, then these efforts must also be directed against the institutions that uphold the structural racism and towards reallocating funds to community-based services.

Physicians must advocate for systemic changes that promote social equity while also holding ourselves and our institutions accountable for their contribution to structural racism and inequity. The funding of privatized prisons and corporate tax cuts over the protection of our most vulnerable, from Black mothers and children, to immigrants, to the LGBTQI community, to the elderly, to the forcibly incarcerated and many more, sends a very clear statement that government bodies and institutions deem that their lives do not matter enough to protect. Interrelated and intergenerational socially-determined health issues have exacerbated an already disastrous situation onset by the COVID-19 pandemic. It is part of our collective responsibility as healthcare workers to understand and incorporate the broader socio-political context into our patient advocacy and treatment as well as our engagement with political decision-making bodies in our own country.

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