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# Lessons Learned from Health Disparities in Coronavirus Disease-2019 in the United States



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## KEYWORDS

• Health disparities • Race/ethnicity • Covid-19 • Black • Latinx • Latino • Hispanic

## KEY POINTS

- The coronavirus disease-2019 (COVID-19) pandemic has disproportionately affected historically marginalized populations, including minorities, immigrants, and economically disadvantaged individuals.
- COVID-19 cases, hospitalizations, and deaths are higher in Black, Latinx, and Indigenous populations than in non-Latinx white individuals, yet vaccination rates in minority groups are lower than the national average.
- COVID-19 disparities are rooted in longstanding health inequities due to structural determinants of health (eg, racism, low socioeconomic status) that affect education, housing, employment, and access to high-quality health care.
- Short-term (eg, subsidies for heavily affected communities) and long-term (eg, universal health care) policies to mitigate the negative impact of structural and socioeconomic barriers have the potential to reduce health disparities in general, and for COVID-19 outcomes in particular.

## INTRODUCTION

As of June 2022, 2 years into the coronavirus disease-2019 (COVID-19) pandemic, 84.2 million people in the United States have been infected, and over 1 million have died.<sup>1</sup> The impact of this calamity has been felt across our society, but the burden of hospitalizations and deaths has disproportionately affected historically marginalized populations, including minorities, immigrants, and economically disadvantaged individuals. Black, Latinx, and Indigenous populations have the infection and death rates higher than non-Latinx White groups (heretofore referred to as “White”).<sup>2,3</sup>

As we have passed the grim 1-million death mark for the ongoing pandemic, the age-adjusted death rates from COVID-19 in younger people are approximately twice as high in Black and Latinx populations than in White groups.<sup>4</sup> In the first year of the pandemic, vaccines were quickly developed and became an effective tool to reduce transmission, hospitalization, and deaths from COVID-19. Since the initial rollout, however, vaccination rates have been lower in Black and Latinx communities. As of June 2022, only 48% and 63% of eligible Black and Latinx people have received at least one vaccine

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dose, well below the national average of 78%.<sup>5</sup> Among Black and Latinx populations, a long-standing mistrust in the health care system and the research enterprise, language barriers, immigration issues, and lack of health insurance in low-paying jobs magnified non-access to vaccines.<sup>6</sup>

Health disparities during the COVID-19 pandemic are not random but rather due to long-standing racial/ethnic and socioeconomic inequities caused by structural racism and discriminatory policies regarding access to high-quality education, employment, housing, and health care.<sup>7</sup> Although access to health care improved following the passage of the Affordable Care Act, millions of people remain uninsured, which compromises the capacity of the US health care system to deliver equitable care, particularly in a health crisis. Moreover, the pandemic overwhelmed hospitals that predominantly care for Black, Latinx, and Indigenous communities, exacerbating already strained, low-resourced health systems and limiting access to advanced treatments and critical care services. This article discusses the challenges faced by marginalized and underserved populations, and the lessons learned from the COVID-19 pandemic.

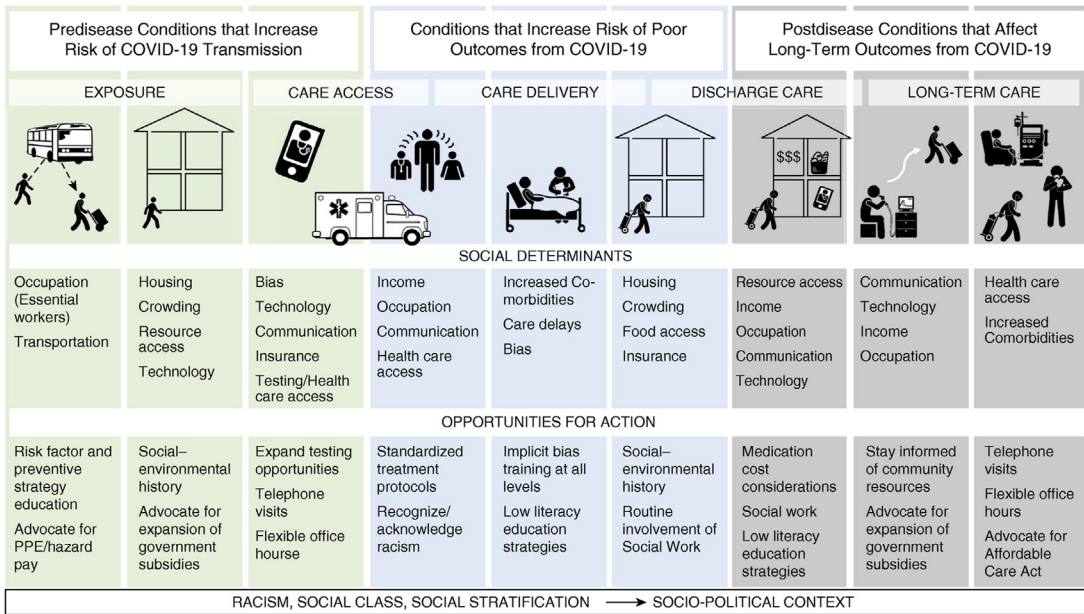
### ***Structural and Social Determinants of Health***

Structural and social determinants of health (SDOH) are “the circumstances in which people live and the systems and structures that model their experience and access to health care.”<sup>7</sup> In prior work, we have used the World Health Organization (WHO) Conceptual framework for Action on Social Determinants of Health (WHO CSDH)<sup>8</sup> to simultaneously examine root causes of existing disparities while also identifying opportunities for action (Fig. 1).<sup>7</sup> This framework proposes that structural bases (eg, social class) impact the socioeconomic and political context (eg, government, policies, and cultures), influencing structural determinants (eg, policies, socioeconomic status, and racism), which shape exposure to intermediary social determinants. The intermediary determinants include health care access, occupational and housing conditions, and psychosocial stress that, in the end, determine an individual’s unique social circumstances that shape behavior and risk for disease.<sup>7</sup> This framework helps us evaluate the immediate circumstances of living while also considering the broader context that impacted COVID-19 outcomes. This article focuses on structural determinants that were essential drivers of health disparities during the COVID-19 pandemic.

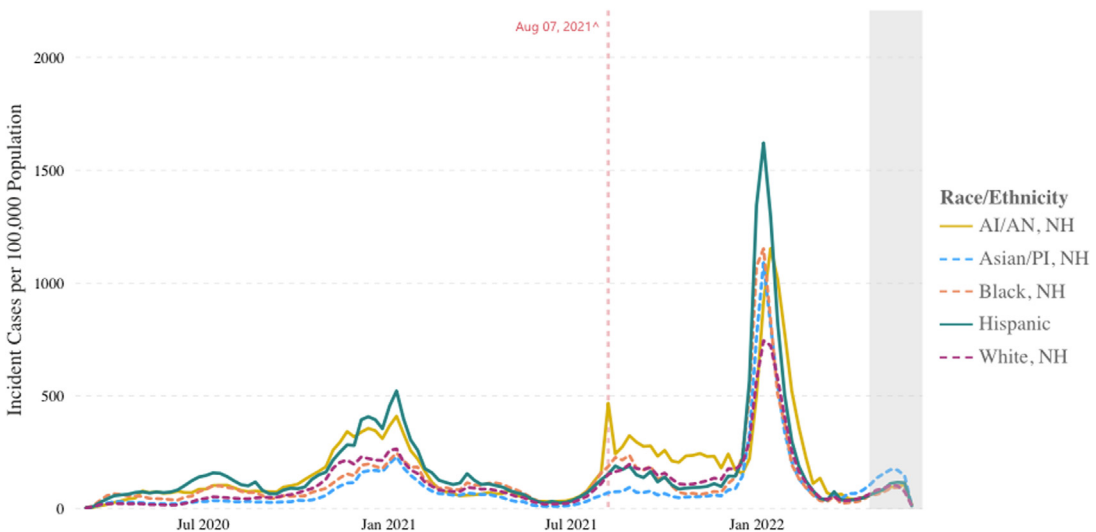
### ***Disparities in Coronavirus Disease-2019 Infection***

Since the early phases of the pandemic, COVID-19 has disproportionately affected minorities living in hotspot counties. The mean difference between the proportion of cases and the proportion of the population was 30.2% and 14.5% for Blacks and Latinx, respectively.<sup>9</sup> In California, Latinx residing in less-advantaged neighborhoods (ie, low median household income, low median educational attainment, and high household density) experienced exponential growth in COVID-19 cases during a 6-week period of observation at the beginning of the pandemic, with the highest increase in low-income areas.<sup>10</sup> This observation was also seen in cities across the United States (eg, Chicago, New York City, Philadelphia, and Newark), where the number of reported COVID-19 was higher in less-advantaged neighborhoods than in more-advantaged ones.<sup>11</sup> Compared with the rates of COVID-19 in White populations, those in Black and Latinx populations were 1.5 to 3.5 times and 1.3 to 28 times higher, respectively.<sup>2,12</sup> Community transmission was up to 28 times higher for Latinx than White populations, whereas in the hospital or health care settings Latinx had 1.3 to 7.7 times higher risk for COVID-19 than White populations.<sup>2</sup> Fig. 2 shows that, regardless of the timepoint in the pandemic, Latinx (green line) and American Indians/Alaska Natives (yellow line) generally had the highest incident cases from early 2020 to June of 2022.<sup>13</sup>

Several structural and socioeconomic factors (neighborhood and household characteristics, income, education, and work conditions) have fueled disease transmission. Black and Latinx populations are disproportionately represented among the poor and are more likely to be frontline workers with low-paying jobs, leading to high levels of COVID-19 exposure but limited job-sponsored benefits.<sup>6,7</sup> Nearly half of Black and Latinx female health care workers earn <\$15 per hour, and more than 10% are uninsured.<sup>14</sup> Black individuals are less likely to telecommute and more likely to work in the service sector and to use public transportation than members of other racial/ethnic groups (Black, 23%; Latinx, 15%; and White, 7%).<sup>15</sup> Moreover, Black individuals were more likely to report leaving the home in the prior 3 days of infection than White individuals,<sup>16</sup> increasing opportunities for transmission. Fueled by economic hardship, Latinx immigrants continued to work in high-transmission jobs while expressing gratitude that lockdown orders did not extend to their construction, cleaning, and cooking jobs, as they were often ineligible for unemployment benefits or income relief because of



**Fig. 1.** Structural and social determinants of health contributing to the racial and ethnic disparities in the coronavirus disease (COVID-19) pandemic in the United States and proposed areas for action, as informed by the World Health Organization Conceptual Framework for Action. PPE, personal protective equipment. (From Thakur N, Lovinsky-Desir S, Bime C, Wisnivesky JP, Celedón JC. The Structural and Social Determinants of the Racial/Ethnic Disparities in the U.S. COVID-19 Pandemic. What’s Our Role?. Am J Respir Crit Care Med. 2020;202(7):943-949.)



**Fig. 2.** COVID-19 weekly cases per 100,000 population by race/ethnicity, United States, March 1, 2020-June 4, 2022. Percentage of cases reporting race, 63.1%. Demographic data for COVID-19 cases is based on a subset of individuals where state and territorial jurisdictions have reported case-level data to the CDC since January 21, 2020. Demographic data have varying degrees of missing data and are not generalizable to the entire population of individuals with COVID-19. All displayed counts include confirmed COVID-19 cases as reported by US states, US territories, New York City (NYC), and the District of Columbia from the previous day. Counts for certain jurisdictions also include probable COVID-19 cases. Case rates displayed for the week ending 08/07/2021 reflect a large data influx. The clinical dates for these data were not available. These data are provisional and will be updated as CDC receives additional information. AI/AN, American Indian/Alaska Native; NH, non-hispanic; PI, Pacific Islander. (From Center for Disease Control and Prevention. COVID-19 Weekly Cases and Deaths per 100,000 Population by Age, Race/Ethnicity, and Sex. Available at: <https://covid.cdc.gov/covid-data-tracker/#demographicsovertime>. Accessed Jun 3 2022.)

their legal status.<sup>17</sup> Unstable housing compounded the situation, with low-income immigrants and work acquaintances sharing residences to reduce cost, exacerbating disease risk, and making self-isolation to curb disease transmission difficult or impossible.<sup>17</sup>

Racial/ethnic differences in COVID-19 infection rates are also observed in the elderly, a high-risk group. An analysis of the Center for Medicare and Medicaid Services (CMS) data between January 1, 2020, and November 20, 2021, showed that over 6 million beneficiaries tested positive for COVID-19 at an infection rate of 9,587 cases per 100,000 population,<sup>18</sup> with some minority groups having the highest rates: Indigenous Populations, 14,413; Latinx, 12,300; Black, 11,182; White, 9,242; Other/Unknown Race, 7,017; and Asian/Pacific Islander, 6,101.<sup>18</sup> The case rate was much higher in beneficiaries with both Medicare and Medicaid Services than in those with Medicare alone (7,936 vs 16,583 per 100,000).<sup>18</sup> People having both services were generally impoverished and experienced higher rates of chronic illness and need for long-term care than those with only Medicare.<sup>18</sup>

Black, Indigenous, Latinx, and economically disadvantaged individuals are 1.1 to 2.8 times more likely to be at high risk for complications from COVID-19 infection by virtue of comorbidities than White or high-income individuals.<sup>19</sup> This high-risk group includes approximately 18.2 million people who may be uninsured or underinsured,<sup>19</sup> a condition more common in Black and Latinx individuals than in their White counterparts.<sup>19</sup> Despite the positive impact of the Affordable Care Act, one in five Latinx or Indigenous people under 65 years still lacks health insurance.<sup>20</sup>

The intersection of different structural factors—socioeconomic status, race/ethnicity, English language proficiency, housing type and transportation, and household composition and disability—are included in the Social Vulnerability Index of CDC, a validated measure of community resilience during disease outbreaks.<sup>21</sup> The conjunction of adverse structural factors impact exposure and disease risk. People living in the most vulnerable counties, which were driven by minority status and non-English language use, had a greater risk of COVID-19 diagnosis than those in the least vulnerable counties (Fig. 3).<sup>21</sup>

### ***Disparities in Coronavirus Disease-2019 Outcomes***

Most people affected with COVID-19 present with mild disease or are asymptomatic, whereas some became severely ill and require hospitalization.

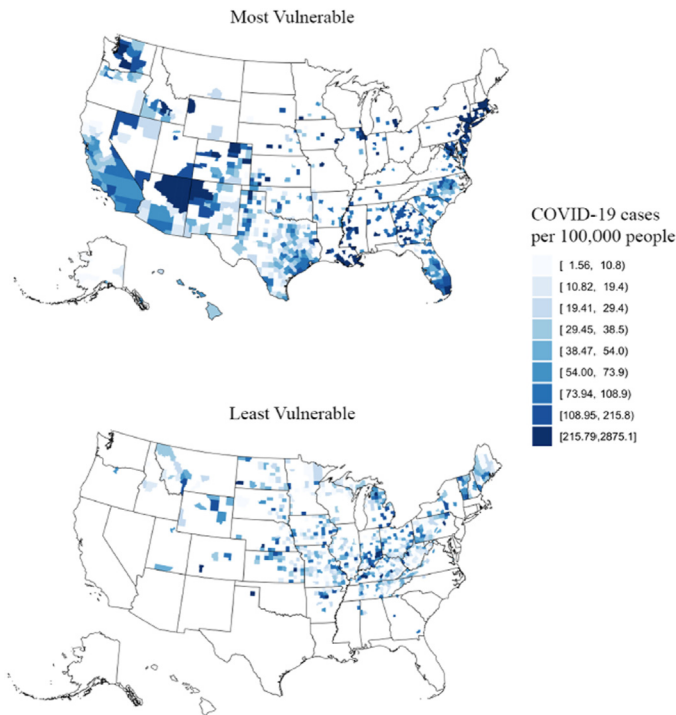
The risk of severe illness and death from COVID-19 is higher in the unvaccinated and older adults.

Early in the pandemic, CDC data showed that Black and Latinx populations each had hospitalization rates ~4.5 times higher than White populations.<sup>22,23</sup> A single-hospital study that included mostly Black and Latinx patients demonstrated that Latinx patients were more likely to be hospitalized than White patients.<sup>24</sup> This early trend continued throughout the pandemic, with a systematic review reporting that Black and Latinx populations were 1.5 to 3 and 1.5 times, respectively, more likely to be hospitalized than White populations in 2021.<sup>2</sup> Further, the CDC's COVID-Associated Hospitalization Surveillance Network (COVID-NET) showed that Black and Latinx populations have more than four times higher risk of hospitalizations than their White counterparts.<sup>2</sup>

The racial/ethnic differences in hospitalization risk were also seen in the elderly. Among Medicare and Medicaid beneficiaries, an analysis of over 1.6 million COVID-19 hospitalizations showed that Indigenous, Black, and Latinx populations had 1.5 to 2.3 times higher hospitalization rates than White populations.<sup>18</sup>

Minority communities also have higher mortality rates from COVID-19 than White communities. Although there is substantial variability across states, aggregate data demonstrate that the risk of death from COVID-19 was significantly higher in Black (standardized mortality ratio [SMR] = 3.57) and Latinx (SMR = 1.88) populations than in White populations.<sup>25</sup> A systematic review including American Public Media data corroborated the increased mortality in minorities, reporting the following rate ratios for minority groups compared with Whites: Asian, 1.2; Pacific Islanders, 2.4; Indigenous, 3.1; Black, 3.2; and Latinx, 3.2.<sup>2</sup> Such mortality risk was particularly striking in non-elderly individuals. Among individuals younger than 65 years, the percentage of Latinx (35%) and non-White (30%) individuals who died from COVID-19 was much higher than that in Whites (13%).<sup>4</sup> Consistent with these differences, the risk of death from COVID-19 was ~7 to 9 times higher in Black individuals aged 25 to 54 years than that in Whites in the same age group.<sup>26</sup> Increased mortality risk estimates (ranging from 5.5 to 7.9) were also reported for Latinx individuals aged 25 to 54 years.<sup>26</sup> Thus, Black and Latinx individuals lost more years of potential life than their White counterparts. The estimated years of potential life lost using a cutoff point of 65 years were 33,446, 45,777, and 48,204 years for White, Black, and Latinx people.<sup>26</sup>

Structural factors, including neighborhood type, contributed to health disparities in COVID-19 outcomes. Among the boroughs of New York City, the



**Fig. 3.** COVID-19 cases per capita between most and least socially disadvantaged counties. This data represents cases from the onset of the pandemic through April 19, 2020. The most vulnerable quartile of counties ( $n = 706$ , top) and the least vulnerability quartile of counties ( $n = 625$ , bottom), as indicated by the minority status and language domain of the US Centers for Disease Control's Social Vulnerability Index. Counties without linked Federal Information Processing Standard code or reported COVID-19 cases were excluded. Darker shades represent counties with more cases per capita. (From Khazanchi R, Beiter ER, Gondi S, Beckman AL, Bilinski A, Ganguli I. County-Level Association of Social Vulnerability with COVID-19 Cases and Deaths in the USA. *J Gen Intern Med.* 2020;35(9):2784-2787.)

Bronx (which has the highest proportion of Black and Latinx residents) and Manhattan have the lowest and highest average income, respectively. Illustrating the impact of economic disadvantage on health outcomes, the Bronx and Manhattan also had the highest (224 per 100,000) and lowest (122 per 100,000) mortality rates from COVID-19.<sup>27</sup> Further, patients cared for in New York's less-resourced, community hospitals were three times more likely to die than those cared for at well-resourced hospitals.<sup>28</sup> A multicenter study of 65 medical centers across the US demonstrated that patients admitted to hospitals with fewer (<50 beds) intensive care units (ICU) beds had a higher risk of death than those admitted to hospitals with higher number ( $\geq 100$  beds) of ICU beds (odds ratio [OR] = 3.28, 95% confidence interval [CI] = 2.16 to 4.99),<sup>29</sup> exposing health care system failures that may continue to contribute to mortality during times of capacity strain (eg, influenza season) well after the COVID-19 pandemic.

Structural discrimination limits employment and education opportunities for minority communities in the United States, ultimately limiting their socioeconomic growth.<sup>30</sup> In the first year of the pandemic, US counties with a higher proportion of residents who were Black, who had less than a high school diploma education, or who had lower household income reported more deaths from COVID-19 than other counties.<sup>31,32</sup> In addition,

language barriers impacted COVID-19 outcomes, as ecological studies showed that counties with a greater proportion of minorities and non-English-speaking people had increased COVID-19 mortality.<sup>21</sup> Although further data on these "invisible" non-English-speaking communities are needed, language barriers might be considered a key social determinant of health in the United States.

### ***Disparities in Coronavirus Disease-2019 Care***

At the beginning of the pandemic, a study in Louisiana showed that Black patients were more likely to be on Medicaid, to be hospitalized, and to be tested for COVID-19 in the emergency department than White patients, who were more often diagnosed by a primary care provider.<sup>33</sup> In Los Angeles, the case fatality rate for COVID-19 patients requiring intubation was higher for a low-resourced safety-net hospital than that for a well-resourced academic hospital. This facility regularly serves mostly Black and economically disadvantaged populations and during the winter 2020 to 2021 COVID-19 surge, most patients who died at this safety-net hospital were Latinx.<sup>28</sup> Similarly, during the November 2020 surge in Chicago, small community hospitals that predominantly care for Medicaid beneficiaries or uninsured populations were overwhelmed by the number and complexity

of patients, whereas large academic hospitals had open intensive care unit beds. Such disparities in health care can be attributed to longstanding unaddressed issues such as structural racism,<sup>28</sup> the totality of ways in which societies foster racial discrimination through mutually reinforcing systems of housing, education, employment, earnings, benefits, credit, media, health care, and criminal justice. Such patterns and practices in turn reinforce discriminatory beliefs, values, and distribution of resources.<sup>30</sup>

Racial health disparities are rooted in the Jim Crow Laws (eg, a collection of state and local statutes that legalized racial discrimination, starting after the Civil War, and continuing until 1965), when health care institutions were segregated by law. Following the Civil Rights Act of 1964<sup>34,35</sup> Medicare mandated that US hospitals receiving federal funding were racially integrated, yet today many hospitals in predominantly Black communities still operate with lower revenues because of charity care, limiting resources for staffing, training, and quality improvement initiatives, and reducing their capacity to respond to increased care needs. All this likely led to worse COVID-19 outcomes among Black communities in the US Southeast.<sup>34,35</sup>

Language barriers can impede optimal health care. In the United States, over 25 million people report "limited English proficiency" (LEP) and may thus require interpreter services during medical encounters.<sup>36</sup> LEP affects access and use of health care and communication with health care providers, which can worsen health outcomes such as hospitalization length.<sup>37</sup> Title VI of the Civil Rights Act of 1964 requires health care institutions to provide language services for people with LEP, a task facilitated by recording the patients' preferred language in the medical record and using technology to increase the availability of interpreters (eg, video and telephone).<sup>38</sup> However, many health care systems still struggle to ensure appropriate interpreter services,<sup>39,40</sup> a fact magnified during the COVID-19 pandemic.

During the initial COVID-19 surge, interpreter services at an academic hospital in Boston could not meet the in-person language needs of the overwhelming number of patients with LEP, predominantly Spanish-speaking patients. Although the challenge prompted physicians to create a Spanish Language Care Group in response to the crisis, improving health care for people with LEP requires a multipronged approach. Such an approach includes expanding access to language services by increasing their reimbursement and maximizing their availability.<sup>36</sup> Speaking the patients' language (Fig. 4) and having a culturally

humble approach to their concerns is a powerful component of care for non-English-speaking populations.

### **Disparities in Coronavirus Disease-2019 Vaccination**

The development of vaccines was a breakthrough in the fight against the COVID-19 pandemic, as they proved effective in reducing the risk of severe disease, hospitalization, and death. As of May 2022, 257.8 million (~78%) of 330 million people in the United States had received at least one dose of a COVID-19 vaccine, and slightly less than a third of those vaccinated had received at least one additional dose (booster).<sup>5</sup> Despite the disproportionate burden of COVID-19 on minority populations, only 48% of Black individuals and 63% of Latinx individuals had received at least one vaccine dose. Surveys have shown that vaccine uptake was lower among Black participants than White participants, even in those who self-reported willingness to get the vaccine.<sup>41</sup> Vaccination hesitancy has decreased in Black populations<sup>42</sup> but poverty and younger age (18 to 49 years) remain as risk factors for vaccine hesitancy in this group.<sup>43</sup>

Vaccination is an act of trust in science and the health care system. Minority survey participants reported that they did not trust the COVID-19 vaccine development process and wanted more transparent information, an attitude justified by prior abuses of trust by researchers and physicians.<sup>44</sup> The year 2022 marked the fiftieth anniversary of the uncovering of the Tuskegee syphilis study, in which Black participants were not given treatment of this life-threatening disease for



**Fig. 4.** Spanish-speaking mother at an English-speaking-only vaccination site. (Courtesy of A. Payá Mora, BS, Santiago, Chile.)



decades despite substantial evidence of the therapy's efficacy.<sup>45</sup> Researchers working for the same agency (the Public Health Service, a precursor of the CDC) that conducted the Tuskegee study purposely infected Guatemalan study participants with syphilis and gonorrhea to develop preventive methods for these infections.<sup>45</sup> Contemporary vaccine hesitancy is not only explained by historical facts but also by ongoing instances of racism in health care. Black patients are more likely to have their pain negated, their illnesses misdiagnosed, and even treatment denied by health care providers.<sup>46</sup> Trust is earned through long-term patient-provider relationships and may be more easily built with racial concordance with health care providers. Black participants had increased information-seeking behavior after listening to videos about COVID-19 from Black physicians.<sup>47</sup>

Language barriers are an important obstacle to vaccination efforts, even in people with LEP who have health insurance. A study of Medicare Advantage beneficiaries demonstrated that Latinx individuals with LEP were less likely to anticipate getting the vaccines than those with English proficiency, despite having a higher rate of a positive COVID-19 test.<sup>48</sup> This disparity was mainly attributed to differences in income but LEP was likely a contributory factor.<sup>48</sup> LEP, inadequate health literacy, and limited Internet access are potential barriers to online initiatives to increase vaccination rates in vulnerable populations, as one study showed that only 10.6% of patients with LEP scheduled an appointment through patient portals.<sup>49</sup>

In the United States in 2018, 43.5 million people, 13.5% of the total population, are non-US born residents,<sup>50</sup> of whom over 10 million were undocumented in 2021.<sup>51</sup> Immigrants are more likely to have high-risk, essential jobs and less likely to seek medical care. Additional barriers to vaccination include lack of time off work, financial resources, and health insurance.<sup>51</sup> Because vaccination sites often require documenting personal information, undocumented immigrants fear that their personal information might be shared with immigration authorities and that deportation may follow.<sup>6</sup> Thus, being an immigrant is both a risk factor for COVID-19 and non-vaccination status in the United States.

### ***Lesson Learned and Opportunities for Action***

#### ***Improving access to health care***

In the United States, the COVID-19 pandemic further exposed profound health disparities caused by structural and social determinants, such as racism and misguided policies on

education, health, and housing.<sup>7</sup> As a society, we must commit to providing medical care for all. Curbing disease outbreaks requires treating all people based on their health needs, regardless of insurance status, race or ethnicity, immigration status, and other attributes. Although implementing medical care will require a considerable investment of money, time, and resources, health equity leads to enormous cost savings and improved overall health in the long term.<sup>52–54</sup>

In the absence of universal health care, short-term policies are needed to mitigate the impact of the pandemic in underserved groups. First, economically disadvantaged communities should continue to receive cash benefits for COVID-related expenses from state and federal sources, and such benefits should be clearly outlined by health care providers serving historically marginalized, underserved communities.<sup>17</sup> This reassurance is relevant, as fear of medical bills can lead to avoidance or delays in seeking preventive and therapeutic care. Second, the Affordable Care Act should be expanded to cover COVID-19 care, including emergency department visits, hospitalizations, and access to virtual services, would improve outcomes in historically disadvantaged communities.<sup>7</sup> Third, safety-net hospitals that care for the urban poor—a group predominantly composed of Black, Latinx, and immigrant populations—should receive adequate resources (eg, protective equipment, equipment for intensive care units, medical and nonmedical staff) to face the health crisis posed by the current pandemic and foreseeable potential catastrophes.<sup>7</sup> Fourth, hospitals and academic institutions should clearly state and improve upon their charity policies. COVID-19 mortality seemed to be higher in counties with predominantly non-English communities, a group mainly composed of low-income immigrants.<sup>21</sup> Fifth, migrants and refugees should receive culturally and language-appropriate care, including for vaccinations. Although data on this vulnerable population are not routinely collected, making them an invisible group, leaders of vaccination campaigns must clarify that personal information is kept confidential to avoid vaccination hesitancy due to fear of deportation.

#### ***Tackling Racism and Implicit Biases***

In the United States, the racial injustices and subsequent protests that occurred during the pandemic highlighted the continued negative impact of structural racism on our society.<sup>7</sup> Scientific evidence has linked structural racism, such as historical redlining of neighborhoods, to unequal environmental exposures leading to a heavy

burden of asthma in Black communities.<sup>55</sup> During the pandemic, movements to address ethnoracial inequities through implicit bias training and implementation of equity, diversity, and inclusion efforts were invigorated at the community level and at academic hospitals and in medical societies.<sup>7</sup> As researchers, educators, and health care providers, we can explicitly tackle disparities at the individual level. For instance, we can apply processes to select trainees and faculty to better represent the rich diversity of our society and provide financial compensation to support these individuals.<sup>7</sup> To better serve migrants and refugees, medical institutions should consider sponsoring highly qualified immigrant trainees.

### ***Job Protections***

Essential workers, who take the risk of keeping our society functioning, need job protections, such as paid medical leave and child and elder care support. State and local officials should implement policies and work with employers to protect front-line workers and give appropriate paid medical leave.

### ***Improving Communication and Facilitating Access to Vaccines***

Messaging about COVID-19 preventive measures, testing resources, vaccines, and general guidance should consider strategies for populations with low health literacy and in multiple languages to reach people with LEP. The use of trusted messengers is one strategy to provide accurate information and has proven to encourage behavior changes, such as seeking information about COVID-19.<sup>6,47</sup>

Vaccination rates should continue to rise for all, as vaccine boosters are needed to keep protection against COVID-19. Using non-English-speaking personnel at vaccination sites, giving transportation vouchers and incentives, employing navigators to help with online appointments, and installing vaccination sites in disadvantaged neighborhoods are some strategies that could increase vaccination rates.

### **SUMMARY**

The COVID-19 pandemic has disproportionately affected historically marginalized communities, such as minority populations, immigrants, and economically disadvantaged individuals. Black, Latinx, and Indigenous people have higher rates of COVID-19 infections, hospitalizations, and deaths than White populations. The pandemic has exacerbated health disparities rooted in historical structural inequalities that our society has chosen

to neglect. Thus, policies that tackle structural inequities (racism, housing, education), ensure access to health care and health information, and protect vulnerable populations should be prioritized. Preventive and therapeutic care for COVID-19 should be provided through an equity lens to ensure that everybody is treated and protected based on their unique needs. Reducing the devastating effects of the ongoing COVID-19 pandemic on underserved and historically disadvantaged communities should be a high priority in our journey to achieve health equity and social justice.

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