HEALTH DISPARITIES BY RACE AND ETHNICITY DURING THE COVID-19 PANDEMIC: CURRENT EVIDENCE AND POLICY APPROACHES

Adelle Simmons, Andre Chappel, Allison R. Kolbe, Laina Bush, and Benjamin D. Sommers

KEY POINTS

- The COVID-19 pandemic has highlighted stark health disparities among Black, Hispanic, Native American, and Native Hawaiian/Pacific Islander populations in several areas, including infections, hospitalizations, death rates, and vaccination rates.
- Key short-term policy steps to address health inequities include using existing data and collecting more complete data on race and ethnicity to support policymaking to reduce health disparities; ensuring equitable rates of COVID-19 testing, treatment, and vaccination; and improving access to health insurance coverage.
- Longer-term efforts should address socioeconomic drivers of variation in health outcomes and strengthen public health surveillance systems and infrastructure through data modernization.

INTRODUCTION

In order to contain the COVID-19 pandemic, it is crucial to address health equity for all racial and ethnic groups in terms of supporting timely access to and utilization of testing, treatment, and vaccination. This Issue Brief highlights evidence on what is currently known about COVID-19 disparities by race and ethnicity and outlines potential policy solutions to address COVID-19’s disproportionate impact on certain racial and ethnic populations. The Office of the Assistant Secretary for Planning and Evaluation (ASPE) has been following these trends during the pandemic, and this report provides an updated evidence review in several areas — testing, infection rates, hospitalization and death rates, and vaccination — and concludes with a summary of potential policy solutions.

TESTING

There is a need to enhance collection of race and ethnicity information on lab results for COVID-19 tests. The few studies that have examined testing demand suggest there may be a need for greater testing capacity in certain communities. For example, one national review found that COVID-19 testing sites located in Black and Hispanic communities in many major cities potentially face higher demand than sites in higher-income areas and predominantly White communities in the same cities.
A September 2020 analysis of 50 million patient records nationally indicated testing did not differ substantially by race and ethnicity; however, among those who were tested, Hispanic, Black, and Asian patients were more likely than White patients to test positive for COVID-19.\(^5\) Overall, while national testing rates are similar across racial and ethnic groups, the higher disease burden in Black and Hispanic communities (as discussed in the next section) indicates that testing rates in these groups should also be significantly higher than it has been, likely reflecting a lack of adequate access to timely testing.

**INFECTION RATES**

While testing rates have been similar across groups, Native Hawaiian/Pacific Islander, American Indian/Alaska Native, and Hispanic populations have experienced higher age-adjusted COVID-19 case rates compared to Black, White, and Asian populations, as shown in Figure 1. A recent analysis of infections in persons under the age of 25 also found similar infection incidence between Black and White populations, although disparities persisted for Native Hawaiian and Pacific Islander, American Indian or Alaska Native, and Hispanic persons.\(^6\) Disparities in access to COVID-19 testing among racial and ethnic populations may lead to underestimation of the disparities in infection rates. Although national data do not show disparities in infection rates for Asian populations, other work has suggested that disparities may exist at state or local geographies,\(^7,8\) or between Asian sub-populations.\(^9\)

![Figure 1: COVID-19 Age-Adjusted Case Rates per 100,000 Persons by Race and Ethnicity, through March 10, 2021](image)

**Note:** While only 53 percent of reported cases had known race and/or ethnicity, the denominators used for calculating these rates are based on national census data. Therefore, these age-adjusted case rates likely underestimate true rates, and the degree of underestimation might vary across the race/ethnicity groups. These age-standardized distributions show what disparities would look like if the age distribution were the same across all race and ethnic groups.

**Source:** COVID-19 case-level data reported by jurisdictions to the Centers for Disease Control and Prevention.

**HOSPITALIZATION AND DEATH RATES**

As shown in Figure 2, certain racial and ethnic populations, including American Indian/Alaska Native persons followed by Hispanic, Black, and Native Hawaiian/Pacific Islander persons, have experienced higher death rates than White populations. Data from COVID-NET (COVID-19-Associated Hospitalization Surveillance Network),
which conducts population-based surveillance in 99 counties and 14 states that include 10 percent of the U.S. population, showed considerably higher COVID-19-associated hospitalization rates among American Indian/Alaska Native, Black, and Hispanic persons compared to White persons.10 Similarly, an ASPE analysis of statewide hospitalization data in 17 states showed an overrepresentation of Black and Hispanic individuals in COVID-19 hospitalizations.11 While age-adjusted death rates for Asian populations are similar to White populations at the national level, other work has highlighted higher death rates for Asian populations in specific geographic locations or for Asian sub-populations.12,13

A study analyzing electronic health records data for patients from 53 health systems across 21 states found that among patients who test positive for COVID-19, Black, Hispanic, and Asian patients were at higher risk for hospitalization and death compared to White patients, even after controlling for underlying health conditions and socioeconomic characteristics (this study did not report findings for smaller population groups such as American Indians, Alaska Natives, Native Hawaiians and Other Pacific Islanders, or patients who identify as multiple races).14 Another study indicated that Hispanic, Black, and Asian patients admitted at one hospital were more likely to have increased COVID-19 disease severity upon admission compared with White non-Hispanic patients, with higher risks of intubation, need for intensive care, or death.15

Excess death rates – which capture both direct and indirect effects of the pandemic – have also been disproportionately concentrated among Black and Hispanic populations. The Centers for Disease Control and Prevention (CDC) reported 299,000 excess deaths as of October 2020, with 66 percent of excess deaths attributed to COVID-19, and the largest percentage increases were in Hispanic populations.16 An ASPE analysis found higher rates of excess deaths during 2020 among Medicare Fee-For-Service (FFS) beneficiaries who were Black, Hispanic, Native American, and Asian,17 similar to a recently published national study among the full U.S. population.18

Figure 2: Provisional COVID-19 Age-Adjusted Death Rates per 100,000 Persons by Race and Ethnicity, Reported through March 6, 2021

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Death Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Native Hawaiian/Pacific Islander, Non-Hispanic</td>
<td>208</td>
</tr>
<tr>
<td>American Indian/Alaska Native, Non-Hispanic</td>
<td>304</td>
</tr>
<tr>
<td>Hispanic/Latino</td>
<td>288</td>
</tr>
<tr>
<td>Black, Non-Hispanic</td>
<td>236</td>
</tr>
<tr>
<td>White, Non-Hispanic</td>
<td>124</td>
</tr>
<tr>
<td>Asian, Non-Hispanic</td>
<td>127</td>
</tr>
</tbody>
</table>

**Note:** The death rates depicted in this figure are based on provisional death counts received and coded as of the date of analysis and do not represent all deaths that occurred in that period. Counts of deaths occurring after the reporting period are not included in the figure. Lag in reporting death can range from one week to eight weeks or more. These age-standardized distributions show what disparities would look like if the age distribution were the same across all race and ethnic groups.

VACCINATION

Early evidence suggests that there are large differences in vaccination rates among different racial and ethnic groups, though data are subject to significant limitations. As of March 10, 2021, one or more doses of COVID-19 vaccines had been administered to more than 62 million persons in the U.S. (see Table 3). However, information on race and ethnicity was available for only approximately half of COVID-19 vaccine recipients in data reported to CDC by states and territories. Taking this limitation into account, as shown in Table 3, the percentages of vaccine recipients who are Hispanic (8.5 percent) and Black (7.2 percent) are lower than would be expected based on the proportions of the total U.S. population represented by these groups (Hispanic 18.5 percent, Black 12.5 percent). The percentage of White (65.5 percent) and American Indian/Alaska Native persons (1.6 percent) who have received COVID-19 vaccinations appears to be higher relative to the percentage of the total U.S. population represented by each of these groups (White 60.1 percent, American Indian/Alaska Native 0.7 percent). A similar pattern is observed for those who have received 2 or more doses (Table 4). Despite the data limitations related to race and ethnicity, it is important to monitor disparities in vaccination rates considering the existing evidence about disproportionate death rates among racial and ethnic minorities, as well as possible racial and ethnic differences in attitudes and access, and in the racial and ethnic composition of COVID-19 vaccination priority groups.

Table 3: Percentages of People Receiving 1 or More Doses of COVID-19 Vaccine, by Race and Ethnicity, as of March 10, 2021

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Count</th>
<th>Percentage of Vaccinated People</th>
<th>Racial/Ethnic Group as a Percentage of Total U.S. Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic/Latino</td>
<td>2,826,733</td>
<td>8.5%</td>
<td>18.5%</td>
</tr>
<tr>
<td>White, Non-Hispanic</td>
<td>21,743,301</td>
<td>65.5%</td>
<td>60.1%</td>
</tr>
<tr>
<td>American Indian/Alaska Native, Non-Hispanic</td>
<td>541,239</td>
<td>1.6%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Asian, Non-Hispanic</td>
<td>1,571,774</td>
<td>4.7%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Black, Non-Hispanic</td>
<td>2,377,778</td>
<td>7.2%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Native Hawaiian/Other Pacific Islander, Non-Hispanic</td>
<td>84,412</td>
<td>0.3%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Multiple/Other, Non-Hispanic</td>
<td>4,038,185</td>
<td>12.2%</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

Notes: Data from 62,451,150 people with 1 or more doses administered. Race/ethnicity was available for 33,183,422 (53.1 percent) people with 1 or more doses administered. These demographic data in Table 3 represent only the geographic areas that contributed data and might differ by populations prioritized within each state or jurisdiction’s vaccination phase. Every geographic area has a different racial and ethnic composition, and not all are in the same vaccination phase. These data are thus not generalizable to the entire U.S. population. Data source for the percentage of the U.S. population is the U.S. Census Bureau.

Table 4: Percentages of People Receiving 2 Doses of COVID-19 Vaccine, by Race and Ethnicity, as of March 10, 2021

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Count</th>
<th>Percentage of Vaccinated People</th>
<th>Racial/Ethnic Group as a Percentage of Total U.S. Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic/Latino</td>
<td>1,258,035</td>
<td>7.3%</td>
<td>18.5%</td>
</tr>
<tr>
<td>White, Non-Hispanic</td>
<td>11,599,893</td>
<td>67.6%</td>
<td>60.1%</td>
</tr>
<tr>
<td>American Indian/Alaska Native, Non-Hispanic</td>
<td>301,594</td>
<td>1.8%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Asian, Non-Hispanic</td>
<td>736,546</td>
<td>4.3%</td>
<td>5.8%</td>
</tr>
<tr>
<td>Black, Non-Hispanic</td>
<td>1,104,855</td>
<td>6.4%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Native Hawaiian/Other Pacific Islander, Non-Hispanic</td>
<td>43,641</td>
<td>0.3%</td>
<td>0.2%</td>
</tr>
</tbody>
</table>
### Table 1: COVID-19 Vaccinations by Race/Ethnicity

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Count</th>
<th>Percentage of Vaccinated People</th>
<th>Racial/Ethnic Group as a Percentage of Total U.S. Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple/Other, Non-Hispanic</td>
<td>2,123,920</td>
<td>12.4%</td>
<td>2.2%</td>
</tr>
</tbody>
</table>

**Notes:** Data from 32,446,793 people with 2 doses administered. Race/ethnicity was available for 17,168,484 (52.9 percent) people with 2 doses administered. These demographic data in Table 4 represent only the geographic areas that contributed data and might differ by populations prioritized within each state or jurisdiction’s vaccination phase. Every geographic area has a different racial and ethnic composition, and not all are in the same vaccination phase. These data are thus not generalizable to the entire U.S. population. Data source for the percentage of the U.S. population is the U.S. Census Bureau.

### DRIVERS OF COVID-19 DISPARITIES

Several factors contribute to COVID-19 disparities, most stemming from long-standing systemic inequalities and structural racism. Underlying health and social inequities put many racial and ethnic populations at increased risk of getting sick, having more severe illness, and dying from COVID-19. For example, inequities related to employment can affect the risk of occupational exposure to COVID-19, and inequities in income may limit access to safe housing, transportation, or medical care that could affect risk of exposure to COVID-19. An analysis of county-level data for 3,142 U.S. counties showed the majority of observed racial disparities in COVID-19 deaths persisted even after controlling for 2019 mortality rates and COVID-19 cases per 100,000 people, which suggests socioeconomic factors play a key role in these disparities. Differences in quality of care across nursing homes, which serve disabled and older adults, and which have been particularly hard hit by the pandemic, are another key factor.

To avoid basing explanations for disparities on racial stereotypes, COVID-19 disparities should be studied in the context of resource deprivation caused by historical and ongoing discrimination, low socioeconomic status, and place-based risk factors. Racial discrimination can result in chronic stress and contribute to social and economic factors that may put some people from certain racial and ethnic communities at increased risk for COVID-19. Many American Indian and Alaska Native communities face barriers such as remote locations, public health infrastructure challenges, lack of broadband access, and health professional shortages, which affect access to health care services. Research using national data has found that in addition to disproportionately higher COVID-19 infection and death rates among Black and Hispanic populations, other predictors of higher COVID-19 infection rates include larger household sizes, lack of a high school degree, and larger share of non-citizens in a community, the latter of which may relate to immigrants’ perceived or actual ability to obtain needed medical care and participate in government programs. Delivering culturally appropriate and linguistically tailored services, including through utilization of community health workers and community-based organizations, can help address health disparities by correcting misinformation and connecting patients with care providers who help them feel comfortable and engaged in their care.

The National Healthcare Quality and Disparities Report (NQDR), which tracks over 250 quality measures and highlights disparities among various population groups, indicates that while some health care disparities became smaller from 2000 through 2016-2018, racial and ethnic disparities persist, including large differences in access to care. Individuals without health insurance are less likely to have a primary care provider and less able to afford needed health care services. The implementation of the Affordable Care Act significantly reduced rates of uninsured between 2010 and 2017, with the largest gains in coverage occurring among people of color such as Black, Asian, and Hispanic people. However, recent analysis of Census Bureau data indicated that 3.3 million non-elderly adults in the U.S. lost employer-sponsored health insurance (ESI) during the summer of 2020, and nearly half of them (1.6 million) were Hispanic adults.
Factors affecting vaccine disparities include lack of information about vaccine availability, transportation challenges, doubts about vaccine safety, limited access to pharmacies, and lack of access to the internet to obtain vaccination appointments. Results from a December 2020 survey indicated that among Black respondents who said they probably or definitely would not get vaccinated, approximately half of them said they do not trust vaccines in general (47 percent) or that they are worried they may get COVID-19 from the vaccine (50 percent). Furthermore, a January 2021 survey showed that only 46 percent of Black adults and 53 percent of Hispanic adults were confident that vaccine distribution is taking into account the needs of their communities. This survey also identified critical information gaps, with over 60 percent of Black and Hispanic adults indicating that they do not have sufficient information about when and where they will be able to be vaccinated. According to recent data from the Census Bureau’s Household Pulse Survey, Black respondents are especially distrustful of vaccines. Such distrust may reflect skepticism resulting from historical mistreatment in medical studies and ongoing experiences of discrimination in health care. Coordinating with community leaders to share targeted messaging and accurate scientific information about vaccine safety may be especially important for increasing vaccine confidence in these communities.

The HHS Office of Minority Health’s new Advancing Health Literacy to Enhance Equitable Community Responses to COVID-19 initiative will fund localities’ efforts to implement evidence-based health literacy strategies that are culturally appropriate to enhance COVID-19 testing, contact tracing and/or other public health prevention practices, and vaccination among people of color including those living in rural communities. In addition, the Centers for Medicare and Medicaid Services (CMS) is engaging community coalitions in Quality Improvement Organizations’ efforts to improve healthcare access, assist with chronic disease management, and increase the uptake of COVID-19 vaccinations among people of color and other underserved populations.

**POLICY SOLUTIONS AND NEXT STEPS**

Strategies to achieve health equity and reduce or eliminate racial and ethnic disparities in responding to the COVID-19 pandemic include:

- **Improving public health data infrastructure, data collection, and dissemination to inform evidence-based decision making** – An October 2020 ASPE brief noted that county-level data show potential geographic variation in the severity of the impact of the pandemic by race and ethnicity, but state-level data currently are insufficient to fully characterize the pandemic’s disparate impact. This Issue Brief has identified a number of areas where there are current data gaps that, if addressed, could be helpful for monitoring health disparities to better target federal, state, Tribal, and community response efforts – particularly related to vaccination rates by race and ethnicity. A related priority is promoting data reporting with privacy safeguards to protect personal data that are collected. An additional priority is the uniform data collection standards required by Section 4302 of the Affordable Care Act, including collecting data for major racial and ethnic groups and subgroups.

- **Considering the intersection between people of color and disabilities/chronic conditions** – There is a growing literature showing that people of color have higher rates of incidence of a number of chronic conditions/disabilities that are indicated as possible or likely risk factors for severe cases of COVID-19. In-depth consideration of the intersection between disability, chronic conditions, and race and ethnicity can facilitate more comprehensive approaches to mitigate barriers to access to care and result in more holistic, culturally competent interventions.

- **Ensuring equitable access to critical COVID-19 equipment and supplies** – Leveraging partnerships and supporting state, Tribal, and local and territorial efforts to increase access to COVID-19 testing, treatment, and vaccination, as well as personal protective equipment, can help prevent the spread of
COVID-19 and address the impact of COVID-19 on racial and ethnic communities at high risk for adverse outcomes.

- **Expanding access to health care and social services** – Ensuring access to culturally and linguistically appropriate high-quality health care services can help improve health outcomes among racial and ethnic communities and populations with limited-English proficiency. Increasing access to affordable health insurance and strengthening access to mental health services, community health centers, and home- and community-based services can help ensure individuals receive the care they need, whether in-person or through telehealth. Policies to address underlying social determinants of health including employment, nutrition, housing, and access to social services are also critical.
REFERENCES

24. "Structural racism" refers to the ways in which societies foster racial discrimination through mutually reinforcing systems of housing, education, employment, earnings, benefits, credit, media, health care, and criminal justice; and these practices reinforce discriminatory beliefs, values, and distribution of resources. Lancet. 2017 Apr 8;389(10077):1453-1463. doi: 10.1016/S0140-6736(17)30569-X.


43. Internal ASPE analysis of U.S. Census Bureau Household PULSE Survey, Week 23 data.


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