

Abstract

The mass COVID-19 vaccination campaign is widely touted as one of the largest and most intricately complex health strategies ever attempted in the United States. However, the sheer enormity of this task does not absolve health authorities of the inequitable way distribution has thus far been conducted. Even within the first month of implementation, it became clear that despite making up an unevenly high percentage of deaths due to COVID-19, Black Americans were being vaccinated at a significantly lower rate than their white counterparts, and this cannot be explained by a smaller presence in the essential work force or long-term care facilities. As of the date of writing, only 27 states, including the District of Columbia, have reported race (or ethnicity data in relation to vaccination, and yet the inequalities are blaring. While pre-existing social determinants of health do certainly play a role in lower vaccination rates, it is irresponsible to consider this as a reason to overlook the systemic and structural barriers that people of color face in accessing critical care. This review focuses on Washington, D.C., a minority white city, as a model for the United States response to COVID-19 and its effects on communities of color. Inequalities that have been rampant for years are only being exacerbated by the current crisis. Vaccines are in short supply throughout D.C. and the country, but when mostly-white Ward 3 has 4.5 times as many fully-vaccinated people compared to mostly-black Ward 8, it is indicative of serious systematic barriers Black communities face in gaining access to life-saving resources. The impact of this inequality is evident: the WHO rightly claims that we either win together or lose together. Disregarding an entire group of people, especially an already marginalized group, only serves to prolong the pandemic.

Introduction

Structural racism—also called systemic racism—can be defined as a system in which multiple forces intrinsic to a society contribute to a reinforcement of racial inequity. This reinforcement was elucidated as COVID-19 swept the United States, exacerbating pre-existing gaps in health care access, employment status, and even life expectancy.^{1,2} With all of these inequities in play, it is evermore crucial that vaccination campaigns specifically address the most vulnerable populations. This review investigates Washington, DC as a model for the structural barriers Black Americans continue to face in the ongoing fight against COVID-19, specifically focusing on the distribution of the COVID-19 vaccine.

Disproportionately more Black Americans died of COVID than their non-Black counterparts, and the District of Columbia is no exception (Figure 2B). Despite the fact that the wards are nearly equal in population size, 5%-White Ward 8 had nearly 4 times as many deaths due to COVID-19 than 71%-White Ward 3. While one could argue that social determinants of health (SDH) such as education level, socioeconomic status (SES), or employment status are more to blame for this disparity, this attribution ignores the culpability of structural racism. The fact that these SDH are so tightly tied to the race of the citizens in a neighborhood is *evidence* of systemic racism, as is the fact that the 3 majority-White wards have 30% more pharmacies than the 5 minority-White wards combined (Figure 3A). Even with efforts to alleviate this inequity, such as providing more vaccination sites in Wards 7 and 8 (Figure 3B), these areas still fall significantly behind in vaccination coverage, indicating a systemic and structural issue much deeper than inequitable socioeconomic status.

Methods

A comprehensive search was conducted in both peer-reviewed literature and local news sources specific to the Washington, D.C. area. Key terms included: structural racism, COVID-19, vaccine, D.C., and others. Additional information, including figures, were procured from the D.C. Department of Health's website and publicly available census data to illustrate the effects of not only SDH, but structural racism affecting the COVID-19 vaccination efforts in the District.

Results



Figure 1: Percentage of fully vaccinated citizens in the District of Columbia, by ward.³ A) Data as of February 6, 2021; total coverage in the District: 1.0%. B) Data as of February 14, 2021; total coverage in the District: 2.5%. C) Data as of April 2, 2021; total coverage in the District: 12.3%.



Figure 2: A) Percentage of White (non-Hispanic) residents by ward.⁴ B) Number of lives lost due to COVID-19 by ward.⁵



Figure 3: A) Number of pharmacies per ward.⁶ B) Vaccination sites available through the DC Department of Health vaccine registration system.⁶

Discussion

The District of Columbia began vaccinating residents in mid-December 2020; therefore Figure 1A (February 6, 2021), represents citizens who would have received the vaccine in the first month of the rollout. Within the first month of vaccinations, it was clear that, nationwide, Black Americans were being vaccinated at disproportionately lower rates, a fact which cannot be explained by a smaller presence in the healthcare system or in long-term care facilities.⁷ While initial disparities in vaccine distribution in DC could possibly be explained by a concentration of government officials (who were vaccinated early under the pretense of continuity of government) and healthcare providers living in Wards 1 and 6, the difference of 8 days (Figure 1B: February 14, 2021) highlights a marked increase in disparity. On February 6, Ward 1 had 3.4 times as many fully-vaccinated citizens as Ward 8; by February 8, Ward 3 had 4.8 times as many fully vaccinated citizens as Ward 8.

In registering for vaccinations, DC residents can choose to be contacted either by phone or by email; when they are eligible, they receive a phone call, text message, or email asking them to book an appointment.⁸ These messages are sent out at 10:00 am, which is during working hours for the majority of people, and those who are unable to check personal email or text messages at work are therefore at a disadvantage.⁸ Potential appointments are offered in order of proximity to the relevant address, but no restrictions are placed on where in the District an appointment can be booked. Therefore, it is entirely possible that by the time residents even receive the message to book an appointment, all of the appointments in their area that are outside of their working hours and within reasonable traveling distance could be taken. This is not even taking into consideration the uneven distribution of pharmacies like CVS that are also giving free vaccinations.

With more data, a more stable supply of vaccines, and the introduction of the Johnson & Johnson vaccine, the DC Department of Health has made adjustments in order to address some of the causes of unequal vaccine coverage. Transportation services are available, mass vaccination sites have been set up in order to target those without permanent shelter and those in vulnerable areas, and they are working with organizations like the Black Coalition against COVID (BCAC) in order to increase access.⁸

A discussion of vaccine inequity cannot be complete without mentioning the question of vaccine hesitancy. Many people cite experiments such as Tuskegee as a reason why Black Americans are less likely to seek out the vaccine. But the Los Angeles Times reports that, in actuality, the hesitancy people feel about seeking out care is rooted in their too often negative personal experiences. The issue is not 399 men who weren't given informed consent in 1932; it's physicians being more likely to underestimate their pain, it's Black women being more likely to die in childbirth, and it's Black children getting less pain medication for broken bones in 2021.^{9,10,11} SDH and racist history are both important, but they should not be used as scapegoats to allow the healthcare system to ignore its role in systemic inequities.

References & Acknowledgements

- Centers for Disease Control & Prevention. Risk for COVID-19 Infection, Hospitalization, and Death by Race/Ethnicity. CDC: COVID-19. <https://www.cdc.gov/coronavirus/2019-ncov/covid-data/data-visualization/healthcare-infection-death-by-race-ethnicity.html>. Updated April 16, 2021.
- Andrassy, T. & Goldman, N. Redlines in 2020 US life expectancy due to COVID-19 and the disproportionate impact on the Black and Latino population. *Proc Natl Acad Sci USA*. 2021:01621. <https://www.pnas.org/doi/10.1073/pnas.2016211118>. Feb 2021.
- DC Department of Health. DC Vaccination Data. Government of the District of Columbia. <https://www.doh.dc.gov/data/vaccination>. Updated April 9, 2021.
- DeJoy, W. Washington, D.C. Protect White Population by Ward. <https://www150.statcan.gc.ca/n1/pub/92-629-x/2021001/article/00000-01000-eng.htm>. 2020 April 17.
- Traylor, Y. & Ziskler, K. Pharmacy access varies greatly across D.C. DC Policy Center. <https://www.dcpolicycenter.org/publications/pharmacy-access-varies-greatly-across-dc/>. Published June 3, 2019.
- DeJoy, W. COVID-19 Vaccination Sites in Washington, D.C. (6 April 2021). <https://doh.maps.arcgis.com/sharers/c386-0366f16bf82c4ef00c9211>. 2021 April 17.
- Centers for Disease Control & Prevention. Demographic Characteristics of People Receiving COVID-19 Vaccinations in the United States. CDC: COVID-19. <https://www.cdc.gov/coronavirus/2019-ncov/data/covid19-vaccination-demographics>. Updated April 17, 2021.
- DC Department of Health. Pro-Register for Your Vaccine Appointment. Government of the District of Columbia. <https://www.doh.dc.gov/vaccineinfo>. Updated April 12, 2021.
- Dunham, A. IV and Typhoid. Current medical racism Black Americans face in Washington, LA Times. <https://www.latimes.com/health/la-he-0425-current-medical-racism-black-americans-2021-04-25-story.html>. March 25, 2021.
- Hoffman KM, Traylor, A. & J. Oliver MN. Racism in pain assessment and treatment recommendations, and false beliefs about biological differences between Blacks and whites. *Proc Natl Acad Sci USA*. 2020;117(16):8946-8951. doi:10.1073/pnas.1916047117.
- Madill, G. Racial Disparities Persist in Maternal Mortality, Mortality and Infant Health. American Journal of Managed Care Conference Release. <https://www.ajmc.com/view/full-article/press-release/maternal-mortality-and-infant-health>. Published June 14, 2020.