

SARS-CoV-2 Positivity Rates in Minority Communities



Are minority communities disproportionately affected by SARS-CoV-2?



Background

Studying positivity rates of SARS-CoV-2 among minorities at a national scale is difficult because few states report race/ethnicity with SARS-CoV-2 test results.



Study Design and Results

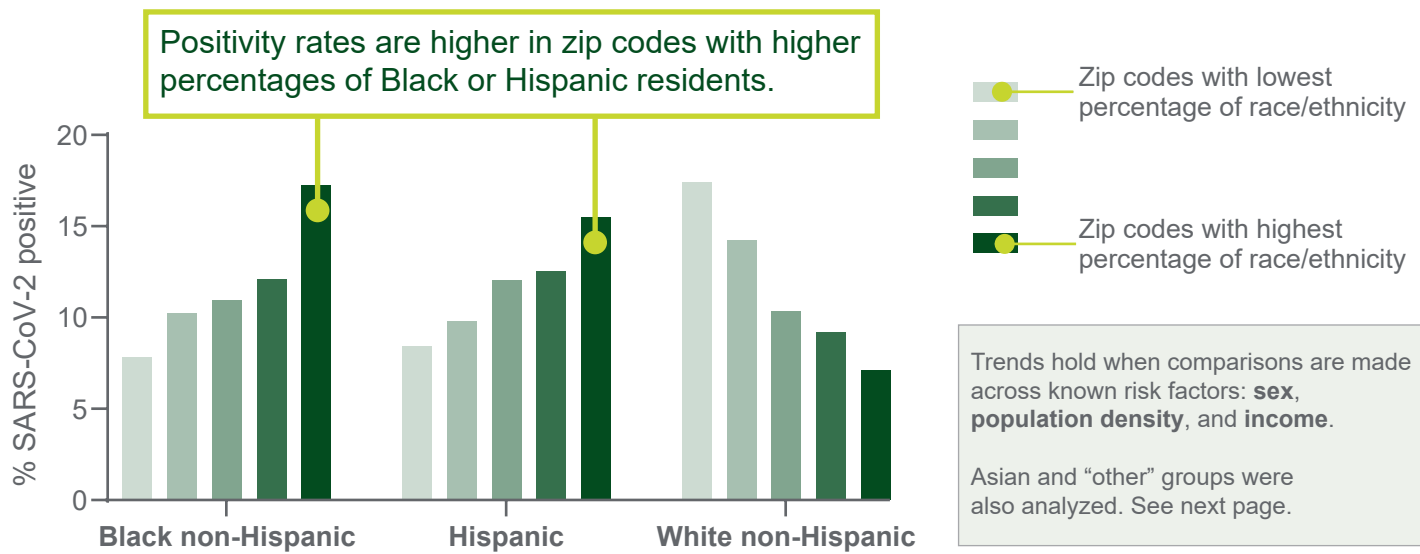
SARS-CoV-2 test data

Percentage of SARS-CoV-2 positivity in each zip code



Race/ethnicity census data

Percentage of race/ethnicity in each zip code



SARS-CoV-2 positivity rates are higher in places with larger Black and Hispanic communities, suggesting that these communities are disproportionately affected by SARS-CoV-2.

SARS-CoV-2 Positivity Rates in Minority Communities

Article Title: Disparities in SARS-CoV-2 Positivity Rates: Associations with Race and Ethnicity

Harvey W Kaufman,¹ Justin K Niles,¹ David B Nash²

¹Quest Diagnostics, Secaucus, NJ, USA; ²Jefferson College of Population Health, Philadelphia, PA, USA

Popul Health Manag. Published online September 23, 2020. doi:[10.1089/pop.2020.0163](https://doi.org/10.1089/pop.2020.0163)

Background

- COVID-19 has had a disproportionate impact on some racial and ethnic groups in the United States; recent data on the number of confirmed cases and mortality indicate a greater impact on Black and Hispanic populations.¹
- However, only 4 states (as of June 1, 2020) reported COVID-19 testing rates by race/ethnicity,² which can make large-scale positivity rates by race/ethnicity difficult to determine.
- This is apparent in conflicting outcomes on the relationship between COVID-19 positivity and race/ethnicity that are being reported from small-scale studies.²
- **Objective:** In this study, investigators used census-based data from all 50 states and Washington, DC to infer associations of COVID-19 positivity with race/ethnicity.

Methods

- The investigators analyzed SARS-CoV-2 test data from the Quest Diagnostics database for specimens tested between March 9 and May 31, 2020. Patients with multiple results were only counted once and counted as positive if any were positive.
- Associations between race/ethnicity and SARS-CoV-2 positivity were assessed indirectly, by comparing positivity rates across zip codes
 - The race/ethnicity composition of each zip code was estimated based on 2018 American Community Survey data. Five race/ethnicity categories were analyzed: Black non-Hispanic, Hispanic, Asian non-Hispanic, White non-Hispanic, and “other” (not shown in this summary).
 - SARS-CoV-2 positivity rates were analyzed by quintile for each race/ethnicity category. For example, the “highest” quintile for Hispanic included the zip codes with the highest percentages of Hispanic people.

Results

- SARS-CoV-2 testing results and zip code data were available for 2,331,175 specimens.
- COVID-19 positivity rates increased from the lowest to highest quintile for all racial/ethnic groups except White non-Hispanic, for which the trend was reversed.
 - Black non-Hispanic: increased from 7.8% to 17.2%, $P<0.0001$
 - Hispanic: increased from 8.4% to 15.5%, $P<0.0001$
 - Asian non-Hispanic: increased from 9.6% to 13.4%, $P<0.0001$
 - White non-Hispanic: decreased from 17.4% to 7.1%, $P<0.0001$
- The observed trends in COVID-19 positivity among Black non-Hispanic and Hispanic communities persisted in stratified analyses and in multivariable models when controlling for sex, population density, income, and other risk factors.

Conclusions

- The findings from this large, nationwide study provide strong evidence that COVID-19 has a greater impact on communities with the highest proportions of Black non-Hispanic and Hispanic populations, even when controlling for other risk factors.
- Though more research is needed, these findings suggest an urgent need to mitigate the increased impact of COVID-19 on Black and Hispanic communities in the United States.

References

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2. Cuthbertson A. Coronavirus tracked: how COVID-19 deaths in the US compare by race and ethnicity. 2020. Accessed June 3, 2020. <https://www.independent.co.uk/news/world/americas/coronavirus-deaths-us-race-black-white-asian-latino-racism-a9544401.html>

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