

Submission Id: 2977

Title

Ethnic Disparities in the Prevalence of SARS-CoV-2 Testing Positivity Comparing Hispanic and Non-Hispanic Populations

Priority 1 (Research Category)

Big Data

Presenters

Cassie Li, , UMD Physiology and Neurobiology Undergrad Major, Jin Mou, MD, PhD, MPH, MSc

Abstract

Context: The Hispanics make up the largest ethnic minority in the United States (US). Hispanics have lower all-cause mortality and many chronic disease morbidities, despite lower socioeconomic status (SES), and barriers to health care. Whether this phenomenon, termed as the “Hispanic Paradox”, holds during an infectious disease pandemic, warrants investigation.

Objective: To examine the ethnic disparities in COVID-19 infection among general patients tested using PCR and understand risk factors of viral positivity other than Hispanic ethnicity.

Study Design: Observational study design using retrospective electronic medical records (EMR).

Setting or Dataset: All patients analyzed were ≥ 18 years old with at least one diagnostic Coronavirus molecular test in a community healthcare system in Washington State. Sociodemographic characteristics (age, sex, and race/ethnicity), date of testing, viral positivity, reasons for testing, body mass index (BMI), key comorbidities, and health insurance status were extracted from the EMR. Derived variables included Hispanic or non-Hispanic, no insurance, age groups, and obesity.

Population Studied: Our analytical focus was on adult Hispanics. The study included both females and males and investigated non-Hispanics. All data were from community healthcare clinical patients.

Outcome Measures: Viral positivity of COVID-19 infection.

Results: Of 108,973 patients, Hispanics had a much higher overall viral positivity (16.9%) than non-Hispanics (8.5%, $p = 0.000$). Symptomatic Hispanic patients had 40.7% positivity at the peak point, compared to 21.0% for symptomatic non-Hispanics. The ethnic disparity also existed for asymptomatic patients (6.6% vs. 3.2%, $p = 0.000$). Symptomatic male Hispanics showed 29.5% positivity, 9.5 times that of non-Hispanic asymptomatic females (3.1%). Multivariate analysis showed that older age, male sex (OR = 1.42, $p = 0.000$), being symptomatic (OR = 6.03, 95% CI: 5.31-6.85), having no insurance (OR = 1.34, $p = 0.041$), obesity (OR = 1.18, $p = 0.002$), and Hispanic ethnicity (OR = 1.45, 95% CI: 1.16-1.82)

were associated with higher likelihood of viral positivity, whilst being White (OR = 0.68, $p = 0.000$), having cancer (OR = 0.69, $p = 0.005$) or COPD (OR = 0.69, $p = 0.000$) were associated with lower test positivity.

Conclusion: We found ethnic and racial disparities in COVID-19 viral positivity rates. The diminishing Hispanic Paradox warrants further investigation into SES, cultural, and behavioral factors.