COVID-19 Impact on the Underserved

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BACKGROUND

Due to a combination of social determinants of health minority groups have been disproportionately affected by the COVID-19 virus.[5] The pandemic has unmasked numerous health inequities within our health care systems and for minority populations in the United States. Currently 16% of the US population is Latinx while this population makes up 26.6% of the COVID-19 cases.[3] Hospitalization rates for the Latinx population is also 4.6 times higher than those of non-Hispanic white people and the Latinx population are dying at disproportionately younger ages. Maricopa County, home to the Phoenix Metropolitan area, is the 4th largest county in the nation and is 31.4% Hispanic. The county had the highest number of COVID-19 cases in the nation and the world in the summer of 2020.[1] The St. Vincent de Paul Virginia G. Piper Medical & Dental Clinic (SVdP) partnered with CVS and the National Association of Free Clinics (NAFC) to provide free rapid COVID-19 tests to underserved individuals from June 1st to September 30th of 2020 greatly increasing access to testing for populations that are often overlooked or ignored by the healthcare system.[4]

OBJECTIVE

Identify trends and health disparities in COVID-19 testing and positivity patterns for the underserved population at the SVdP clinic compared to Maricopa County and nationally.

METHODS

A retrospective chart review was performed from June 1st to September 30th of all patients who underwent COVID-19 testing at the SVdP clinic. Demographic information including race/ethnicity, age, sex, language and zip code was collected along with the COVID-19 test result and was compared to the publicly available county and national averages utilizing Wilcoxon signed rank, Wilcoxon rank sum, chi-square test and logistic regression.

RESULTS

Demographics

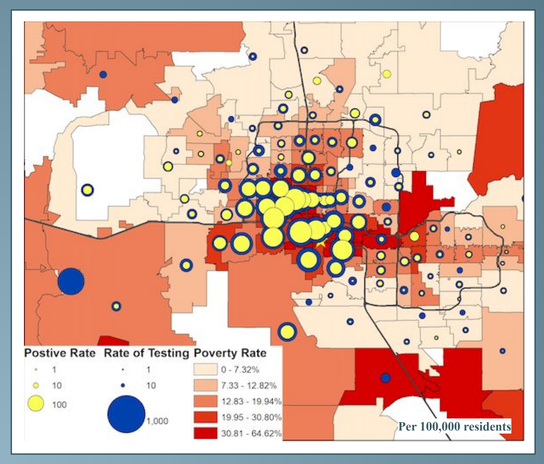
Age	
18-29	31%
30-49	44%
50-64	20%
≥65	5%

Sex	
Female	57%
Male	43%

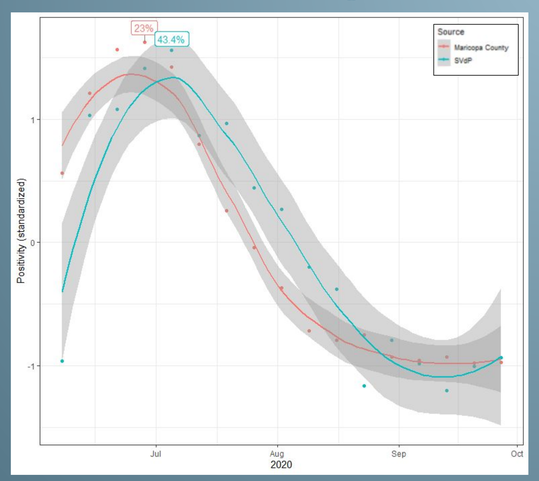
Race/Ethnicity	
Hispanic	73%
White	20%
Black	3.5
Asian	1.3%
Native	0.6%
Other/unknown	1.2%

Language	
English	65%
Spanish	35%

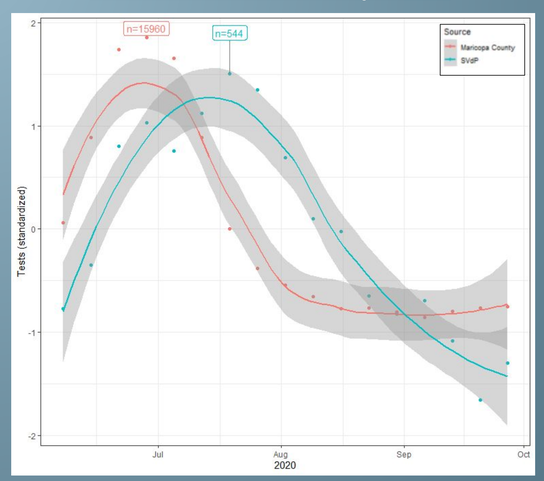
Poverty Testing & Positivity Trends



Standardized Testing Trend

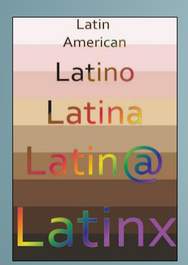


Standardized Positivity Rates



Increased odds of positive COVID test by logistic regression

Spanish Language

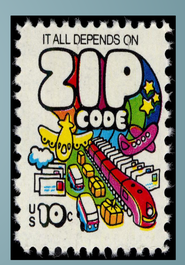


p-value: <0.001

Race/Ethnicity

p-value: <0.001

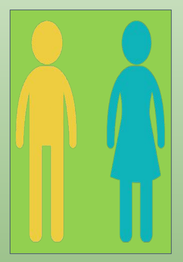
Poverty



p-value: 0.05

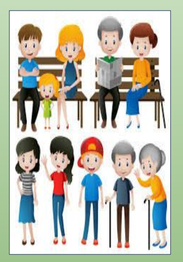
No difference in positive test

Sex

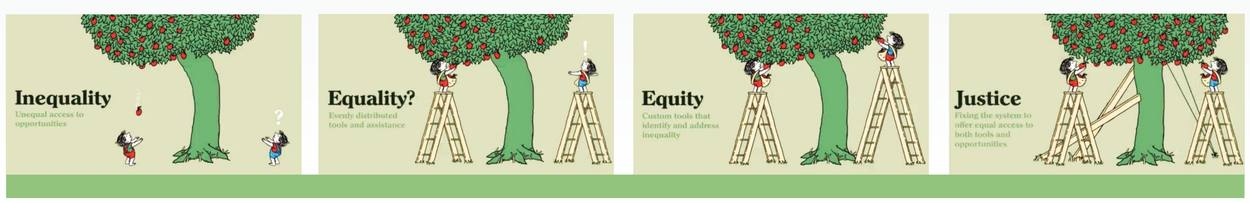


Chi-squared
p-value: 0.76

Age



Wilcoxon rank sum test
p-value: 0.46



CONCLUSION

Latinx race, Spanish language and zip code poverty rate all increased the odds of a positive test, while there was no difference in age or sex for those testing positive or negative. The testing pattern and positivity trend for the free clinic mirrored that of the county except the changes were delayed by about a week and the positivity rate was twice as high at the peak in the free clinic.

DISCUSSION

This study supports the national reports that minority populations are being disproportionately affected by COVID-19. Although there are a number of limitations, in a clinic where undocumented immigrants make up the bulk of the population served, the Hispanic population had a positivity rate that was three times higher than whites. This also occurred about a week after seeing similar spikes in the general population which illustrates that lack of access to proper healthcare resources was a major barrier. This has deleterious effects as people who have been infected have to wait a week to confirm infection, begin quarantine and initiate contact tracing after the efficacious window has closed.

Of the myriad of social determinants that need action taken to pave the road to true health equity, the results of this study suggest addressing immigration status, language, poverty and access to health are part of necessary changes to the US healthcare system.

Health equity requires removing obstacles to health such as poverty, discrimination, and their consequences, including lack of access to good jobs with fair pay, quality education, and housing, safe environment, and health care.[2] Achieving health equity requires actions to increase opportunities to be healthy by first acknowledging the health disparities that are of concern to key stakeholders, identifying social inequities in the access to resources and opportunities needed to be healthy that are more likely to contribute to health disparities.[2] Second, changes in policies, laws, systems, environment and practices to eliminate inequities in the opportunities and resources needed to be healthy are a must in order to attain health equity.[2]

An initial step towards health equity would be to question the prioritization of the COVID-19 vaccine. For example, is it equitable to give priority to medical personal already infected by the virus and who have antibody titers over individuals that are high risk for hospitalization and/or dying.

CITATIONS

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