

# Characterizing Post-Pandemic Social Determinants of Health of the Population Testing for COVID-19 in a Nationwide Network in the United States

Xiaowu Sun<sup>1</sup>, Laura Lupton<sup>1</sup>, Shiyu Lin<sup>1</sup>, Sravanthi Mikkilineni<sup>1</sup>, Leena Samuel<sup>1</sup>, Joaquim Fernandes<sup>1</sup>, David Fairchild<sup>2</sup>

<sup>1</sup> CVS Healthspire™ Life Sciences Solutions; <sup>2</sup> MinuteClinic®; CVS Health®, Wellesley, MA, USA

## BACKGROUND

- The burden of Coronavirus Disease 2019 (COVID-19) in the United States remains significant for the 2024-2025 season. [1]
- Testing for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) within the first few days of infection allows for early detection and treatment. [2]
- Socially vulnerable populations may experience barriers, which limit timely and appropriate access to healthcare. [3-4]
- Hyperlocal access to retail health clinical services may support community-based testing and treatment for socially vulnerable populations.

## OBJECTIVE

- This study describes the social vulnerability characteristics of patients testing for SARS-CoV-2 at a national network of retail health clinics for the 2024-2025 season.

## METHODS

- In the setting of community-based national network of retail health clinics\* (900+ locations nationwide), SARS-CoV-2 rapid antigen testing records were identified between September 1 and February 28, 2025.
- The Centers for Disease Control and Prevention and Agency for Toxic Substances and Disease Registry Social Vulnerability Index (SVI) [5] is a score that ranges from 0 to 1. The SVI is comprised of 4 constituent themes (Socioeconomic Status, Household Characteristics, Racial & Ethnic Minority Status, and Housing Type/Transportation) and 16 factors. Higher values correspond to higher vulnerability.
- SVI was linked to the zip code of patient's residence.
- Tests were summarized by quartiles of overall SVI and its 4 constituent themes and 16 factors. The first and fourth quartiles indicate least and most vulnerable communities, respectively.

## RESULTS

- There were 273,107 tests for 259,084 patients between September 1, 2024, and February 28, 2025.
- Study population characteristics:
  - 16.3% 17 years or younger, 75.0% 18-64 years old, and 8.7% 65 years or older;
  - 62.4% Female;
  - 57.3% White, 9.5% Black, 8.6% Hispanic, 4.9% Asian, and 19.7% other or unknown;
  - 7.3% had Medicare and 7.4% Medicaid.
- The 3rd and 4th quartiles together accounted for 64.5% of the retail health clinic SARS-CoV-2 testing population, demonstrating greater social vulnerability than would be expected in the general population.
- The strongest drivers of social vulnerability within the combined 3rd/4th quartiles were:
  - 69.0% of those with vulnerability Housing Type/Transportation - Group Quarters;
  - 70.4% of those with vulnerability Household Characteristics - Single-Parent Households;
  - 86.1% of those with vulnerability Racial & Ethnic Minority Status;
  - 90.7% of those with vulnerability Household Characteristics - English Language Proficiency; and
  - 93.0% of those with vulnerability Housing Type/Transportation - Multi-Unit Structures.

**Table 1. Percentages of SARS-CoV-2 Testing by Quartiles of Social Vulnerability Indices**

	Q1: <25	Q2: ≥25 - <50	Q3: ≥50 - <75	Q4: ≥75
<b>SVI overall</b>	6.6	28.9	33.2	31.3
<b>Socioeconomic Status</b>	27.2	27.1	23.2	22.4
Below 150 Poverty	41.1	30.6	19.5	8.8
Unemployed	3.1	43.7	40.4	12.8
Housing Cost Burden	11.1	25.7	32.4	30.8
No High School Diploma	31.7	35.4	22.0	10.9
No Health Insurance	16.3	25.8	33.7	24.3
<b>Household Characteristics</b>	8.1	26.7	42.2	23.0
Ages 65 & Older	43.6	32.5	17.6	6.3
Ages 17 & Younger	10.5	26.2	34.0	29.3
Civilian with a Disability	48.7	33.0	15.3	3.1
Single-Parent Households	3.5	26.1	43.3	27.1
English Language Proficiency	2.6	6.7	36.1	54.6
<b>Racial &amp; Ethnic Minority Status</b>	1.4	12.5	40.7	45.4
<b>Housing Type/Transportation</b>	3.0	20.2	42.6	34.2
Multi-Unit Structures	3.4	3.6	24.2	68.8
Mobile Homes	46.1	37.6	11.6	4.7
Crowding	3.1	31.4	40.4	25.1
No Vehicle	8.7	42.0	29.7	19.5
Group Quarters	12.4	18.7	49.0	19.9

## CONCLUSIONS

- A high percentage of the population testing for SARS-CoV-2 at a national network of retail health clinics came from vulnerable communities, which may influence their healthcare-seeking behaviors.
- These findings are consistent with literature. [6]
- Community-based testing and treatment may help address structural and social barriers to healthcare access in vulnerable communities that are associated with known disparities and inequities in these populations.

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## CONTACT

Xiaowu Sun, Ph.D.  
 CVS Healthspire Life Sciences Solutions  
 CVS Health, Wellesley, MA, USA  
[xiaowu.sun@cvshhealth.com](mailto:xiaowu.sun@cvshhealth.com)

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