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Title

COVID-19 Testing in Vulnerable Populations: A Longitudinal Cohort Analysis

Priority 1 (Research Category)

Social determinants and vulnerable populations

Presenters

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Abstract

Context: The COVID-19 pandemic has disproportionately affected vulnerable populations in the United States, including immigrant groups, racial and ethnic minorities, and those impacted by poverty, unstable housing, and substance use. COVID-19 testing is instrumental in controlling viral spread and linking people to treatment. However, testing rates are often lower among racial and ethnic minorities, and testing sites are less accessible in low-income areas. Objective: Through this community engaged study we aimed to identify demographic characteristics and behavioral factors associated with desired COVID-19 testing behavior in order to inform public health programming. Study Design: We conducted a longitudinal cohort study of at-home COVID-19 testing between March 2022 and October 2023, in Portland, Maine. Population Studied: We partnered with trusted community organizations and aimed to engage a roughly equal number of participants from the immigrant, housing unstable, and low-income/uninsured communities. Intervention: Participants received five at-home COVID-19 tests every eight weeks for 48 weeks; this constituted the “testing program.” Outcome Measures: Participants completed baseline follow up surveys every four weeks on COVID-19 exposures, symptoms, and their use of COVID-19 tests, with additional questions every eight weeks on behavioral factors (i.e. risk perceptions, attitudes, norms) around COVID-19 testing. The primary outcome was “desired testing behavior score,” or the proportion of instances a participant tested when they should have based on CDC guidance (i.e. experienced symptoms or exposure). Results: We enrolled 92 participants, of whom 39 (42%) were immigrants, 29 (32%) were unhoused, 39 (42%) reported substance use, and 52 (57%) were low-income and/or uninsured. To date, overall adherence to CDC testing guidance has been high, with participants on average having a desired testing behavior score of 0.70; testing 70% of the recommended times. In bivariate regressions, four factors (age, race, confidence in ability to use a COVID-19 test, and commitment to COVID-19 testing) were significantly associated with desired testing behavior. Conclusions: Participants from vulnerable communities demonstrated high levels of recommended COVID-19 testing when provided with at-home test kits. Greater confidence in ability to use at-home tests, and stronger commitment towards testing, were associated with higher levels of desired testing behavior.