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Clinic- and Community-Based SARS-CoV-2 Testing Among People Experiencing Homelessness in the United States, March–November 2020

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Abstract

Objective: SARS-CoV-2 testing is a critical component of preventing the spread of COVID-19. In the United States, people experiencing homelessness (PEH) have accessed testing at health clinics, such as those provided through Health Care for the Homeless (HCH) clinics or through community-based testing events at homeless service sites or encampments. We describe data on SARS-CoV-2 testing among PEH in US clinic- and community-based settings from March through November 2020.

Methods: We conducted a descriptive analysis of data from HCH clinics and community testing events. We used a standardized survey to request data from HCH clinics. We developed and made publicly available an online data entry portal to collect data from community-based organizations that provided testing for PEH. We assessed positivity rates across clinics and community service sites serving PEH and used generalized linear mixed models to account for clustering.

Results: Thirty-seven HCH clinics reported providing 280 410 tests; 3.2% (n = 8880) had positive results (range, 1.6%-4.9%). By race, positivity rates were highest among people who identified as >1 race (11.6%; $P < .001$). During the reporting period, 22 states reported 287 community testing events and 14 116 tests; 7.1% (n = 1004) had positive results. Among facility types, day shelters (380 of 2697; 14.1%) and inpatient drug/alcohol rehabilitation facilities (32 of 251; 12.7%) reported the highest positivity rates.

Conclusions: While HCH clinic data provided results for a larger number of patients, community-based testing data showed higher positivity rates. Clinic data demonstrated racial disparities in positivity. Community-based testing data provided information about SARS-CoV-2 transmission settings. Although these data provide information about testing, standard surveillance systems are needed to better understand the incidence of disease among PEH.

Keywords
emerging infectious disease, homelessness, community health center, social determinants of health, disease reporting

People experiencing homelessness (PEH) are at increased risk for SARS-CoV-2 infection, particularly people staying in homeless shelters,[1] where residents are unable to socially distance.[2,3] Furthermore, PEH have a high prevalence of chronic conditions, including respiratory and liver diseases, which may put them at increased risk for severe illness from COVID-19.[4,5]

The Centers for Disease Control and Prevention (CDC) recommends SARS-CoV-2 testing among PEH as a means of preventing transmission.[6] In general, testing for PEH is conducted in 2 ways: through health clinics or community-based testing. Health clinics, especially federally qualified health centers,[7] which receive funding from the Health Resources and Services Administration (HRSA), provide low-barrier access to health care. Nearly 300 of these clinics operating in all 50 states are funded to provide care to PEH and are known as Health Care for the Homeless (HCH) clinics.[8] These

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clinics provide data on positivity rates among those who access health care at these sites.[9]

Community-based testing events at homeless service sites or encampments, often in partnership with local public health departments, provide testing to PEH. These events are intended to offer SARS-CoV-2 testing for every person in the homeless service site or encampment, and these testing data can provide an estimate of overall prevalence. Community-based testing events occur for various reasons, including in response to known cases or to proactively detect cases.

The objective of this study was to describe SARS-CoV-2 testing among PEH in the United States from March through November 2020 using data from HCH clinics and community-based testing events.

Methods

Data Sources

Clinic-based testing. HRSA used a standardized survey to collect SARS-CoV-2 testing data from all federally qualified health centers, beginning on April 3, 2020.[10] The survey collected information about SARS-CoV-2 testing capability, the number of clinic sites temporarily closed, the number of tests (primarily polymerase chain reaction tests using nasal or nasopharyngeal swabs for collection), and the number of positive test results; on April 24, 2020, the survey began to collect data on race, ethnicity, and test turnaround time. The National Health Care for the Homeless Council (NHCHC) received weekly datasets from HRSA for all HCH clinics. We restricted our analysis to HCH clinics without other health center funding streams, referred to as HCH stand-alone clinics, which account for 52 of the nearly 300 HCH clinics. Because health centers report SARS-CoV-2 data in aggregate, using data from HCH stand-alone clinics ensures that most people served by the HCH clinic are experiencing homelessness, as required by HRSA funding.[11] HCH clinics may have conducted testing outside clinics; however, the dataset does not specify testing location.

Community-based testing data source. NHCHC and the CDC COVID-19 Response Homelessness Unit developed and made publicly available an online data entry portal to collect testing data from community-based universal (ie, where the goal was to test all clients regardless of symptoms) testing events at homeless service sites; we invited any organization providing testing for PEH or homeless service staff members to enter data. We requested data from universal testing events to estimate SARS-CoV-2 prevalence in each setting. We collected and managed data by using REDCap electronic data capture tools hosted by CDC.[12,13] This activity was reviewed by CDC and conducted consistently with applicable federal law and federal partner policy.

We disseminated the data entry portal link through NHCHC's newsletters, webinars, and online resource pages for state and local health departments. We also promoted the data entry portal through newsletters run by national organizations such as the National Association of County and City Health Officials and outreach to housing providers through the Corporation for Supportive Housing, and we encouraged HCH providers to share the data entry portal link.

The data entry portal captured information about the facility where the testing event occurred (total bed capacity, primary population served, services provided), the testing event (type of test conducted, reason for testing, test results for clients and staff), and aggregate participant demographic characteristics and symptoms (Online-Only Supplementary File). For organizations that conducted follow-up within 14 days of the original event to reach people who were missed, we requested data to be entered as a single entry. Organizations could submit data for multiple testing events. We contacted any organization that did not complete data entry within 30 days to finalize data. We deduplicated entries at the facility level if data were from the same locations on the same date(s).

The data entry portal opened for data collection in May 2020, but it was possible to enter testing events retroactively. For this study, we collected data from March through November 2020.

Statistical Analysis

We conducted descriptive analysis on HCH clinics and community-based testing events. To comply with data use agreements, we assessed regional differences in positivity rates in the clinic and community datasets by using the 10 HRSA regions; we conducted Pearson χ^2 tests ($\alpha < .05$) to determine significant differences among regions.[14] In addition, we compared positivity rates by month to assess seasonal trends in the general population.[15]

For HCH clinic testing, we assessed SARS-CoV-2 positivity rates (the number of positive test results divided by the number of tests conducted), overall and by race and ethnicity, among patients from April through November 2020. We also described HCH site capability to provide testing and other health care services. Because of racial and ethnic disparities among PEH, the clinic-based analysis focused on these disparities.[16] We compared the positivity rates of each racial group with the positivity rates of all other racial groups combined, such as Asian compared with non-Asian, and we compared Hispanic/Latino with non-Hispanic/Latino. People who identified as >1 race were classified as such and compared with people who selected a single race or were counted as unknown race, as reported in the dataset.

For community-based testing events, we estimated SARS-CoV-2 positivity rates among clients and staff members. We also compared positivity rates by facility type, reason for testing, and whether the person being tested was a client or staff member. Because facility types were not mutually exclusive, we compared results at facilities in a particular

Table 1. Geographic representation of sites that provided data on SARS-CoV-2 testing among people experiencing homelessness, by HRSA-defined regions, March–November 2020

	Clinic-based testing		Community-based testing[b]	
Region[a]	No. of HCH clinics reporting (N = 37)[c]	Positivity rate[d]	No. of testing events reported (N = 287)[e]	Positivity rate[d]
Region 1	1	2.6	13	14.5
Region 2	5	4.4	0	—
Region 3	3	7.0	2	16.8
Region 4	8	4.6	31	1.6
Region 5	1	1.5	64	14.4
Region 6	4	0.2	0	—
Region 7	0	—	2	13.7
Region 8	3	3.8	8	6.0
Region 9	9	5.9	5	21.7
Region 10	3	9.2	162	2.7

Abbreviations: —, does not apply; HCH, Health Care for the Homeless; HRSA, Health Resources & Services Administration.
[a]Region 1: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; Region 2: New Jersey, New York, Puerto Rico, the US Virgin Islands; Region 3: Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, West Virginia; Region 4: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee; Region 5: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin; Region 6: Arkansas, Louisiana, New Mexico, Oklahoma, Texas; Region 7: Iowa, Kansas, Missouri, Nebraska; Region 8: Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming; Region 9: Arizona, California, Hawaii, Nevada, the Pacific Island (American Samoa, Federated States of Micronesia, Guam, Marshall Islands, Northern Mariana Islands, and Palau); Region 10: Alaska, Idaho, Oregon, Washington.[14]
[b]Community-based testing sites were not HRSA-funded organizations. They were grouped into HRSA-defined regions for comparison only.
[c]Clinic-based testing data were reported for April through November 2020; data from March 2020 were unavailable. Data source: HRSA.[10]
[d]SARS-CoV-2 positivity rates were calculated as the number of positive test results divided by the number of tests conducted. $P < .001$ in comparison of positivity rates across regions; determined by the Pearson χ^2 test; significant at $P < .05$.
[e]The study team developed and made publicly available an online data entry portal to collect testing data from universal testing events at community-based homeless service sites and invited any organization providing testing for people experiencing homelessness or homeless service staff to enter data.

category with facilities not in that category (eg, drop-in shelter vs not drop-in shelter). We compared one reason for testing versus all other reasons for testing (eg, proactive vs all other reasons). We used generalized linear mixed models to assess differences in positivity rates. We used a binomial logistic regression model to account for clustering among the sites reporting, because the number of people tested and the number of reported events varied by site. We defined the dependent variable as positive versus negative test results and testing site as the random effects. We generated 95% CIs in IBM SPSS Statistics version 27.0 (IBM Corp); we defined significance as $P < .05$ using a z test.

Results

Clinic-Based Testing Data

From April through November 2020, data were available from 37 of 52 (71.2%) HCH stand-alone clinics in 20 states and territories (Table 1); a weekly average of 25.9 clinics reported data. An average of 11.2 of 22 (51.1%) clinics per week reported a 2- to 3-day turnaround time for test results (Table 2; $P < .001$ in comparison with all other turnaround times); 22.2% (4.9 of 22) reported ≥4 days.

Testing was available at most HCH clinics throughout the study period. In April 2020, 82.4% (28 of 34) of reporting clinics had testing capability, and 81.8% (27 of 33 clinics) had capability in November 2020. Four clinics had no testing capability at any point during the study period. Some HCH clinics closed 1 or more clinic sites temporarily during the study period. An average of 19.2 HCH clinic sites were closed in any given week (Table 2). The number of clinic closures was highest in April, with a weekly average of 32 sites closed, whereas in November, an average of 10 sites closed per week.

Each month, 31-35 clinics reported, with the highest number reporting in June and the lowest number reporting in August and September (Figure 1). HCH stand-alone clinics tested 280 410 people and reported 3.2% positivity rates overall. Positivity rates ranged from 1.6% (October) to 4.9% (August) during April through November. By race, the positivity rate was highest among people identifying as >1 race (11.6%; $P < .001$ compared with all other races), followed by Native Hawaiian/Other Pacific Islander people (5.2%; $P < .001$ compared with all other races) and American Indian/Alaska Native people (4.7%; $P = .01$ compared with all other races), although these latter 2 racial groups accounted for a small percentage of people tested (0.5% and 0.7%, respectively; Figure 2).

Community-Based Testing Data

From May through November 2020, 287 community-based SARS-CoV-2 testing events beginning in March 2020 were

Table 2. SARS-CoV-2 clinic-based testing at the Health Resources & Services Administration's (HRSA's) Health Care for the Homeless (HCH) clinics, April–November 2020[a]

Item	No. of clinics reporting at any point	Average no. of clinics per week (SD)[a]
No. of clinics reporting[b]	37	25.9 (1.8)
No. of states/territories represented[c]	20	17.0 (1.5)
No. of clinic sites closed[d]	—	19.2 (10.0)
No. of clinics with testing capability	33	21.7 (2.1)
No. of clinics reporting turnaround time for test results	33	22.0 (1.8)
Average no. of clinics reporting turnaround time for test results of . . .		
≤12 h	—[e]	0.2 (0.4)
24 h	—[e]	5.6 (1.7)
2-3 d	—[e]	11.2 (2.3)
4-5 d	—[e]	3.3 (1.2)
>5 d	—[e]	1.5 (2.4)
No. of clinics with walk-up/drive-up capability	28	15.4 (2.9)

[a]Data source: HRSA.[10]
[b]Of 52 stand-alone HCH clinics, 15 did not report any data during the study period. HCH stand-alone clinics are defined as HCH clinics without funding streams other than HRSA.
[c]The states/territories were Alabama, Arizona, California, Florida, Georgia, Kentucky, Maryland, Massachusetts, New Hampshire, New Jersey, New Mexico, New York, Ohio, Oregon, Pennsylvania, Puerto Rico, Texas, Utah, Washington, and Wyoming.
[d]HCH clinics may operate multiple sites. As such, a clinic may have closed 1 site but remained operational at another site. The weekly average is reported rather than the total number of sites closed because the weekly reports did not specify which clinic sites were closed, and it is likely that some clinic sites were closed for multiple weeks.
[e]The weekly average is reported rather than the total number of clinics reporting the given turnaround time because the test result turnaround time for each clinic varied by week.

reported from 22 states (Table 1). These events tested 11 563 clients and 2553 staff members (14 116 total tests, 7.1% positivity rate). Demographic information was available for 21.4% (2475 of 11 563) of people tested, of whom 69.4% (n = 1718) identified as Black or African American, 23.1% (n = 571) identified as White, and 16.2% (n = 401) identified as Hispanic or Latino. Events most often occurred at drop-in shelters (44.9%) and tested an average of 45 people per event. More than half of all testing events (n = 150; 52.3%) were held proactively; 75 (26.1%) testing events did not report the reason for testing (Table 3). Of the 287 community-based testing events, 156 (54.4%) screened for COVID-19 symptoms. Overall, 3.1% (447 of 14 563) of clients/staff members offered testing declined: 3.5% (416 of 11 979) of clients and 1.2% (31 of 2584) of staff members.

The SARS-CoV-2 positivity rate was significantly higher among clients (903 of 11 563; 7.8%) than among staff members (101 of 2553; 4.0%; $P < .001$). Positivity was 14.1% among clients at day shelters and 3.9% among people living in encampments. Positivity at "other" facility types, including food banks and temporary emergency shelters, was 3.5%. We found high positivity rates among people at drop-in shelters (stays ≤30 days; 10.2%; $P < .001$ compared with all other sites) and people staying at longer-stay shelters (stays >30 days; 10.2%; $P = .003$ compared with all other sites). Positivity rates were 2.9% at sites conducting proactive testing ($P < .001$ compared with all other reasons) and 18.4% at sites reporting testing in response to ≥2 confirmed cases ($P < .001$ compared with all other reasons; Table 3). Positivity among people at sites reporting "other" reasons for testing, including repeat point-prevalence surveys and follow-up beyond a 2-week time frame, was 1.0% ($P < .001$ compared with all other reasons). The percentage of clients who declined testing varied by site from 0% at inpatient drug and alcohol treatment facilities ($P = .27$ compared with all other sites) to 16.6% at permanent supportive housing sites ($P < .001$ compared with all other sites). Over time, SARS-CoV-2 positivity among clients at community-based events varied by month from 0% to 13.2% (Figure 1).

Discussion

We described SARS-CoV-2 testing and positivity among PEH through clinic-based and community-based testing datasets. The clinic-based data showed low positivity among patients and racial and ethnic disparities in testing and positivity. The community-based data showed higher positivity at testing events and provided context for where transmission occurred. In the absence of national, standardized case surveillance for COVID-19 cases among PEH, the datasets used in our study provide complementary information about SARS-CoV-2 testing among PEH. Access to information on positivity among PEH is essential to stopping the spread of COVID-19 among people accessing congregate shelter options or living in encampments. Identifying outbreaks early can prevent further spread and help connect people to care and isolation and quarantine sites after exposure. Understanding the positivity rates among PEH is important

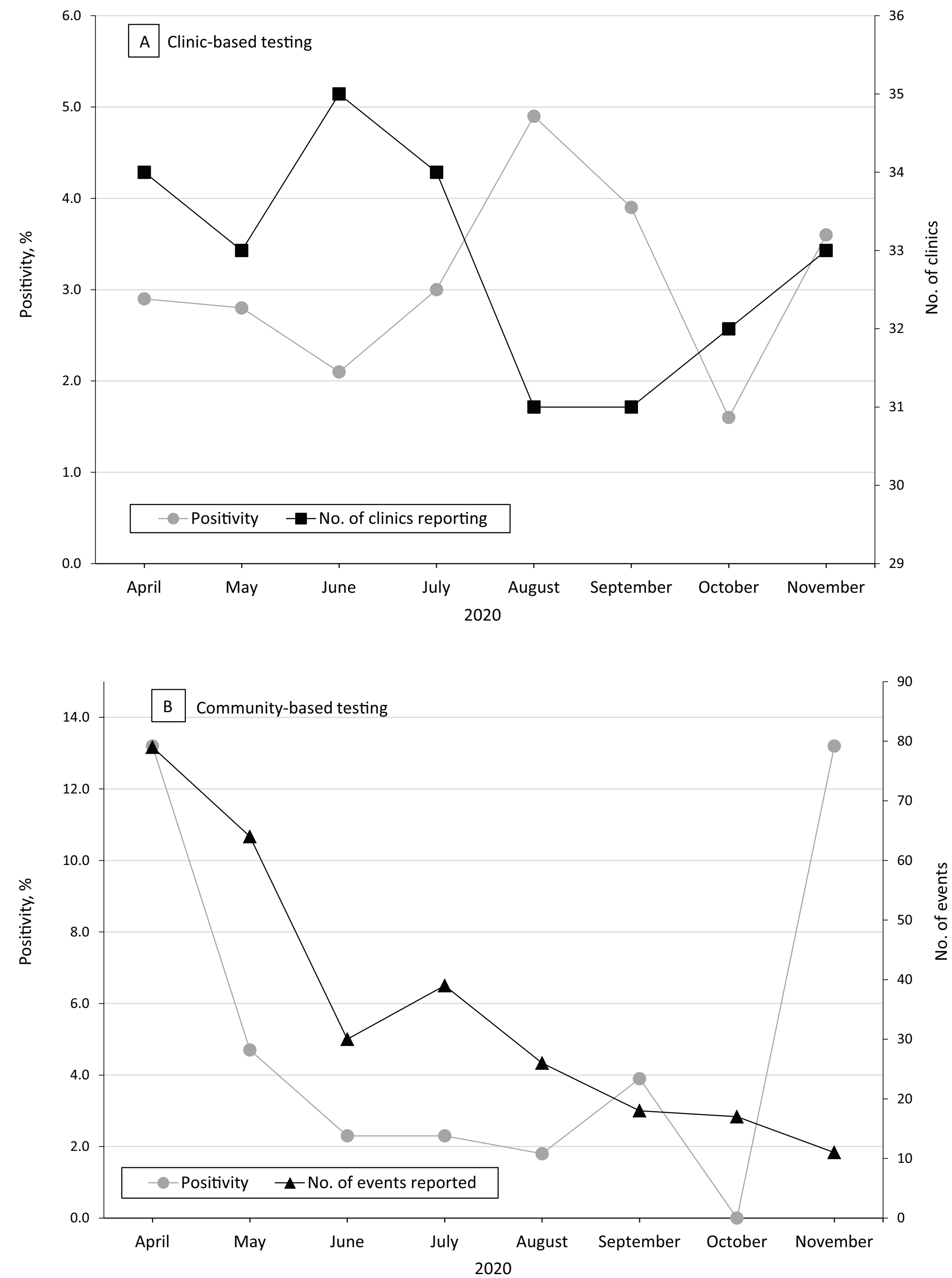

Figure 1. SARS-CoV-2 positivity rates in the United States, by month, among people experiencing homelessness who sought testing at an HRSA Health Care for the Homeless (HCH) clinic, April–November 2020, or participated in a universal testing event at a community-based site serving the homeless. Thirty-seven of 52 HCH clinics in 20 states and territories reported data. Number of clinics that reported data is the number of HCH clinics that reported at any point during the month. (A) Clinic-based testing. (B) Community-based testing. Community-based testing events conducted in March are not depicted because of small sizes (3 testing events; 141 clients tested). Abbreviation: HRSA, Health Resources & Services Administration. Data sources: HRSA[10]; the study team developed and made publicly available an online data entry portal to collect testing data from universal testing events at community-based homeless service sites and invited any organization providing testing for people experiencing homelessness or homeless service staff to enter data.

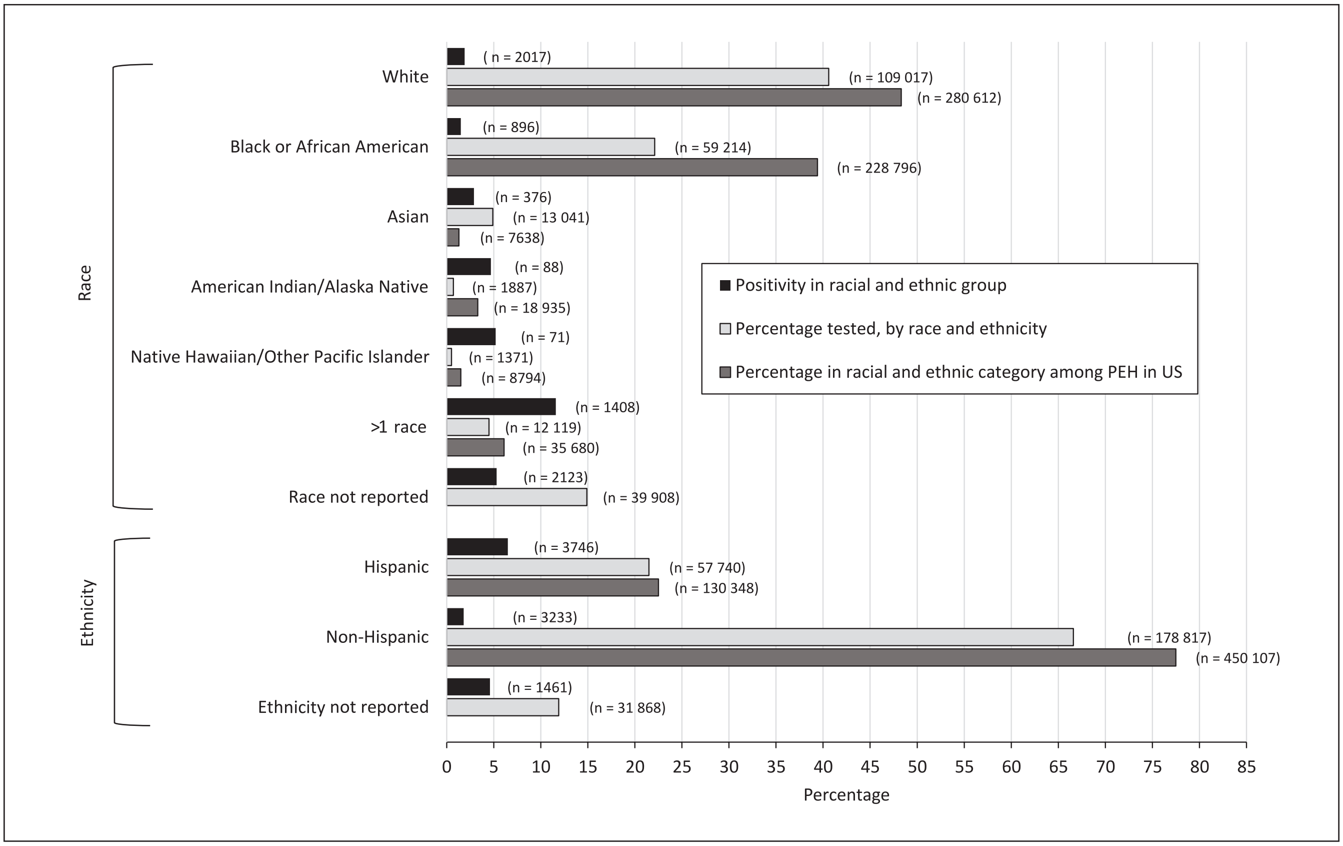

Figure 2. SARS-CoV-2 positivity rates; percentage tested, by race and ethnicity, among people experiencing homelessness (PEH) in the United States who sought testing at an HRSA Health Care for the Homeless (HCH) clinic, and distribution of US population experiencing homelessness, by race and ethnicity, April–November 2020. Thirty-seven of 52 HCH clinics in 20 states and territories reported data. Percentage tested was calculated as the number of people tested who self-identified as a specific race or ethnicity divided by the total number of people tested. Abbreviation: HRSA, Health Resources & Services Administration. Data sources: HRSA[10] and Henry et al.[16]

in planning modes of health care delivery for this population because of the barriers to traditional health care services among PEH, which are well documented.[17] Data on the prevalence of SARS-CoV-2 in this group can inform how various approaches to low-barrier health care delivery can play a role in treating infectious diseases. For immediate use, data from both clinic- and community-based sources were aggregated and incorporated into public-facing dashboards[18,19] beginning in June 2020.

Positivity rates in the clinic- and community-based data differed from national trends in the general population.[20,21] Both datasets showed lower cumulative positivity among PEH from March through November 2020 than among the general population (9.1%), potentially because of more proactive testing methods among PEH.

Overall access to clinic-based SARS-CoV-2 testing has improved since the beginning of the pandemic. Because some HCHs have multiple sites, a clinic may still have been open and operating at other locations when individual sites closed, but clinic site closures pose an important barrier to health care access for PEH. Similarly, a turnaround time of 2-3 days or longer for test results in clinic-based settings may complicate contact tracing efforts because people exposed in one setting may have moved before test results were available.[3] For PEH who do not have a place to self-isolate, a longer wait time could present a challenge for preventing the spread of COVID-19.[22]

The community-based dataset depicted testing at congregate care facilities and encampments, showing lower positivity in the former than in the latter and a low percentage refusing testing in both settings, consistent with findings in an earlier study from a single city.[1] Inpatient drug and alcohol facilities reported one of the highest positivity rates, behind day shelters, with no patients declining testing; however, during the defined period, this facility type had the lowest number of events reported and number of people tested. Positivity was higher when testing was conducted in response to confirmed cases, aligning with previous reports of outbreaks in homeless shelters.[23]

Clinic- and community-based testing appears to have reached different demographic groups. Although data were limited from community-based testing events, the organizations

Table 3. Summary of data on clients from facilities that reported community-based SARS-CoV-2 universal testing events among people experiencing homelessness, March–November 2020[a]

Item	No. of testing events[b]	No. of clients tested[c]	No. (%) of positive test results			No. (%) of clients who declined test[f]
			In category	Not in category[d]	*P* value[e]	
Overall	287 (100.0)	11 563 (81.9)	903 (7.8)	—	—	416 (3.5)
Type of facility						
Drop-in shelter (stay ≤30 days)	129 (44.9)	6144 (53.1)	626 (10.2)	277 (5.1)	<.001	301 (4.7)
Longer-stay shelter (stay >30 days)	81 (28.2)	3870 (33.5)	394 (10.2)	509 (6.6)	.003	207 (5.1)
Day shelter	52 (18.1)	2697 (23.3)	380 (14.1)	523 (5.9)	<.001	20 (0.7)
Permanent supportive housing	62 (21.6)	1182 (10.2)	58 (4.9)	845 (8.1)	<.001	235 (16.6)
Transitional housing	40 (13.9)	2116 (18.3)	170 (8.0)	733 (7.8)	<.001	16 (0.8)
Encampment	20 (7.0)	384 (3.3)	15 (3.9)	888 (7.9)	.92	2 (0.5)
Inpatient drug/alcohol rehabilitation	5 (1.7)	251 (2.2)	32 (12.7)	871 (7.7)	.27	0
Other (eg, food bank, temporary emergency shelter)	37 (12.9)	2092 (18.1)	74 (3.5)	829 (8.8)	.39	174 (7.7)
No facility type selected	8 (2.8)	541 (4.7)	3 (0.6)	900 (8.2)	—[g]	3 (0.6)
Reason for testing						
Testing was proactive, not in response to cases	150 (52.3)	5339 (46.2)	154 (2.9)	749 (12.0)	<.001	230 (4.1)
A confirmed case among clients or staff	32 (11.1)	1260 (10.9)	39 (3.1)	864 (8.4)	.55	2 (0.2)
≥2 Confirmed cases among clients or staff	22 (7.7)	974 (8.4)	179 (18.4)	724 (6.8)	<.001	175 (15.2)
≥1 Suspected case among symptomatic clients or staff	4 (1.4)	176 (1.5)	6 (3.4)	897 (7.9)	.92	3 (1.7)
Confirmed or suspected case(s) at nearby facility or site	0	0	0	903 (7.8)	NA	0
Other	7 (2.4)	393 (3.4)	4 (1.0)	899 (8.0)	<.001	0
No reason selected	75 (26.1)	3607 (31.2)	527 (14.6)	376 (4.7)	—[g]	9 (0.2)

Abbreviation: NA, not applicable.

[a]The study team developed and made publicly available an online data entry portal to collect testing data from universal testing events at community-based homeless service sites and invited any organization providing testing for people experiencing homelessness or homeless service staff to enter data. Facilities from 22 states (California, Colorado, Connecticut, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Massachusetts, Michigan, Minnesota, Nebraska, Nevada, North Carolina, Ohio, Pennsylvania, Rhode Island, Tennessee, Virginia, Washington, and Wisconsin) reported conducting testing events.

[b]Categories are not mutually exclusive; as such, the values in this column add to more than the total number of facilities (N = 287). Percentages are based on a denominator of 287.

[c]Categories are not mutually exclusive; as such, the values in this column add to more than the total number of clients tested (N = 11 563). Percentages are based on a denominator of 11 563.

[d]The denominator for the percentages listed is the total number of clients tested who were not tested at the designated facility type or reason for testing. The denominator for each row is calculated by subtracting the number of clients tested within a specified category from the total number of clients tested. Percentages were calculated by identifying the number of positive results not in a designated category divided by the total number clients tested who were not tested in that category. The number of positive not in a category was calculated by subtracting the number of positive results in that category from the total number of positive results (eg, the positivity rate at facilities that are "not drop-in shelters" is calculated as (903 − 626)/(11 563 − 6144) = (277/5419) = 0.051 = 5.1%).

[e]Each *P* value compares the percentage of positive test results in each category with the percentage not in that category (eg, drop-in shelter vs not drop-in shelter) or each reason compared with all other reasons (eg, proactive vs all other reasons). *P* value determined by z test; significant at $P < .05$.

[f]The number of clients who declined to test was calculated as the number of clients who were offered a SARS-CoV-2 test but declined to take it; these clients were not included in the number of clients tested. The number offered testing was calculated as the total number of clients who were tested plus those who declined. The percentage declined was calculated by using the number of clients offered testing as the denominator (for example, 416/[416 + 11 563] = 3.5%).

[g]Significance tests were not performed because these categories were considered missing values.

that reported race showed that 69.1% of people tested identified as Black or African American. Of people tested in a clinic, 22.1% identified as Black or African American. Because people identifying as Black or African American represented 33.5% of people seen at HCHs in 2020,[24] the difference (22.1% vs 33.5%) is a notable disparity in testing for a population that has experienced higher risk for COVID-19 and poorer outcomes compared with people identifying as non-Hispanic White.[25-28] Studies of the general population have reported that Black or African American people were up to 3 times more likely than

White people to be hospitalized and more than twice as likely to die of COVID-19 compared with the proportion of the population identifying as Black or African American.[25,27] Considering the racial and ethnic disparities in the population of PEH, having data from both settings is crucial to understand the incidence of COVID-19, especially considering that the clinic-based testing data showed disparities in both testing rates and positivity. Community-based testing and outreach can help to reduce the disparity in access to testing at HCHs and is an important consideration as COVID-19 vaccination efforts continue.

Understanding the populations reached through clinic- and community-based testing has important implications for ensuring access to COVID-19 vaccination for PEH. The large number of tests conducted in clinics suggests that offering vaccination in clinic settings can reach many PEH, while the higher positivity in community-based settings suggests that offering vaccination in community settings might reach PEH at increased risk for COVID-19 infection. Both clinics and community-based sites are an essential part of a comprehensive vaccination strategy for PEH. It is important to recognize that populations served in clinic- and community-based settings likely vary by race, ethnicity, and levels of engagement in health care; this recognition can lead to insight into how to make SARS-CoV-2 vaccination widely available and accessible to PEH. Offering community-based vaccination events can remove access barriers and will be important to ensure that people who do not access care in a clinic can receive all necessary vaccine doses.

Limitations

This study had several limitations. First, both the clinic- and community-based data relied on voluntary reporting, although clinic data were more routinely collected by HRSA. Voluntary reporting may have led to selection bias, because some sites reported multiple testing events, and many jurisdictions did not report any. As such, characteristics of those reporting may differ from characteristics of those not reporting, and these differences may limit the generalizability of our findings.

Second, HCH stand-alone clinics see a large percentage of PEH in their patient populations; however, they do not turn away others who seek care. Because data were reported at the clinic level, it was not possible to restrict results to PEH only, and the data may include people from the general population. Third, our clinic-based data are not necessarily representative of PEH seen at all health centers, because we used in our analysis only data from a subset of HCH stand-alone clinics. In addition, the dataset lacked symptom data and reasons for testing. The small number of people identifying as Native Hawaiian/Other Pacific Islander and American Indian/Alaska Native makes it difficult to confidently generalize and compare the positivity rates of these populations with the positivity rates of other populations. HCH stand-alone clinics may have also conducted testing in the community. We do not know the extent to which this testing occurred and was reported in the clinic-based data and how it may have resulted in overlap between the clinic- and community-based data. Because data were reported in aggregated weekly reports and there was an average 2- to 3-day delay in receiving results, tests may have been conducted and reported 1 week and results received and reported the following week. This delay potentially affected positivity rates for tests reported in the last week of the reporting period. The observed trends showed that positivity rates were lower in months in which a higher number of HCHs reported, indicating possible selection bias.

For the community-based analysis, the results relied on self-reporting by organizations that performed the testing, testing might have been more frequent during episodes of high community transmission, and findings may not be generalizable to other areas of the country. Data on demographic characteristics and symptoms were limited because reporting relied on the testing event to collect and report data voluntarily; our findings might not be representative of PEH in other community testing sites. Reporting allowed for multiple responses to type of site and reason for testing to gain a more thorough survey of the field, but these multiple responses complicated analysis. As such, we conducted multiple 2×2 analyses, potentially increasing the risk of error.

Neither dataset comprehensively captured all data on testing conducted for PEH in each jurisdiction; therefore, our data cannot be used to estimate the incidence or prevalence of COVID-19 among PEH. Finally, we were unable to identify or deduplicate repeat testing for people in either dataset.

Conclusion

Preventing the spread of SARS-CoV-2 among PEH and reducing the resulting health inequities rely on a comprehensive community response. Data systems that are more comprehensive and inclusive than those available currently would be helpful to monitor trends in infectious disease among PEH groups disproportionately affected by COVID-19. Providing testing opportunities in both clinic- and community-based settings is essential to reaching PEH, who have historically faced challenges to accessing health care. Importantly, the lessons learned from SARS-CoV-2 testing can be applied to COVID-19 vaccine distribution. Engaging both clinic- and community-based settings for distributing COVID-19 vaccine will help to reach a broader, and potentially more diverse, group of PEH than is currently being reached.

Authors' Note

The findings and conclusions in this article are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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Supplemental Material

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