WORK-IN-PROGRESS AND LESSONS LEARNED

Lessons Learned through Implementing SARS-CoV-2 Testing and Isolation for People Experiencing Homelessness in Congregate Shelters

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ABSTRACT

Background: The Denver COVID-19 Joint Task Force is a multi-sector community partnership which formed to coordinate Denver's pandemic response in people experiencing homelessness (PEH). **Objectives:** Describe how interdisciplinary community partners collaborated to develop, implement, and pilot SARS-CoV-2 testing and isolation protocols in congregate shelters, and discuss lessons learned and subsequently applied.

Methods: In March-May 2020, community partners collaborated to design, implement and conduct pilot testing paired with isolation in a subset of PEH at a congregate shelter to assess feasibility and inform protocol development.

Results/Lessons Learned: We performed SARS-CoV-2 testing in 52 PEH with 14 (27%) testing positive or inconclusive. Thirteen (93%) of positive or inconclusive participants were transferred to isolation hotels with 9 of 13 (69%) transferred within 72 hours of testing.

Conclusions: Our findings informed development of COVID-19 surveillance testing and isolation protocols for PEH and highlight the value of community partnerships in nimbly responding to the pandemic.

BACKGROUND

Persons experiencing homelessness (PEH) have high rates of underlying medical conditions, restricted access to sanitation and medical care, and limited ability to self-isolate. This places them at increased risk for contracting SARS-CoV-2, and for developing severe COVID-19 disease, hospitalization, and death.¹⁻⁴ Homeless shelters are typically crowded, indoor environments which provide ample opportunities for the transmission of respiratory pathogens. Early in the pandemic, epidemiologic data from several U.S. cities confirmed widespread transmission of SARS-CoV-2 in congregate shelters among mainly asymptomatic and pre-symptomatic individuals, leading the Centers for Disease Control and Prevention (CDC) to recommend a broad, voluntary testing strategy for shelter residents and staff.⁵⁻⁷

Surveillance testing programs in congregate shelters allow for identification of shelters with high prevalence where additional interventions are needed to curb transmission and is recommended by current CDC guidelines for communities with moderate-high transmission.⁸ Further, identification of shelters with low prevalence may allow for understanding best practices for preventing transmission. Isolating PEH who are symptomatic or with positive tests decreases transmission in congregate settings, and also allows for closer monitoring of illness and other supportive services, which may result in improved short and longer-term stability for PEH.

The City of Denver, Colorado has a large, urban homeless population which utilizes congregate shelters.⁹ In April 2020, there were 10 congregate shelters operating in Denver (Supplemental Table 1), serving approximately 2,386 PEH. During that time, the cumulative incidence of COVID-19 among PEH was 11 cases per 1,000 persons compared to 4 cases per 1,000 persons in the highest incidence Denver neighborhoods (personal communication, Christie Mettenbrink, MSPH 2020). However, routine surveillance testing in local congregate shelters was not yet being performed and thus SARS-CoV-2 prevalence in shelters was unknown.

Partnership Context

The Denver COVID-19 Joint Task Force (DJTF) is a multi-sector collaboration of stakeholders from Denver's lead community-based organizations and city agencies serving PEH, which was created in March 2020 to coordinate the multifaceted pandemic response in this at-risk community. The DJTF comprises interdisciplinary community partners from local public health agencies, municipal leaders

(i.e., Office of Housing Stability and Human Services), shelter leaders, clinical partners serving PEH, and community experts with lived experience of homelessness and expertise in peer-navigation. With guidance from the CDC and the Colorado Department of Public Health and the Environment (CDPHE), the DJTF created and implemented a city-wide strategic plan aimed at decreasing transmission and mitigating the impact of COVID-19 on PEH.¹⁰ Initial strategies included: tailored education and support for implementing preventative measures such as physical distancing and mask-wearing in shelters; enhanced clinical support for shelter providers and PEH via onsite clinical teams and a telephone advice line; guidance for symptomatic screening; implementation of a testing/triage pathway for symptomatic PEH into isolation within non-congregate motel/hotels ("Activated Respite"); and the creation of "Protective Action" hotel rooms for temporarily housing individuals with high-risk medical comorbidities defined by the CDC.

In response to epidemiologic data confirming outbreaks in several local shelters and concomitant CDC recommendations for broad, voluntary SARS-CoV-2 testing in shelters, interdisciplinary public health, clinical and community partners of the DJTF collaborated to design, implement and conduct pilot testing paired with isolation in a subset of PEH at a congregate shelter where an outbreak was confirmed. Our aims were to assess the feasibility of this approach and to inform the development of city-wide SARS-CoV-2 testing and isolation protocols for PEH in congregate settings, while gaining preliminary epidemiologic data to guide resource planning for outbreak prevention and control.

METHODS

Setting and Participants

PEH receiving services at a day shelter in Denver, Colorado were eligible for testing if they were adults 18+ years old and had not previously been diagnosed with COVID-19. The day shelter serves approximately 800 PEH daily and provides a variety of services, including access to meals, showers, phones, mail, storage, clothing, and case management. During the 14 days before the pilot testing, the shelter had served 2,467 unique PEH. This site was selected because the DJTF considered the population to be representative of Denver's unhoused community, comprising both sheltered and unsheltered adult men and women of diverse racial/ethnic backgrounds. Moreover, due to an outbreak of

COVID-19 involving ten facility staff in the preceding two weeks, shelter leaders were interested in hosting a pilot testing event.¹¹

Pilot testing was performed on May 4th, 2020. Prior to pilot, shelter partners were provided with information on COVID-19 prevention measures such as physical distancing, hand hygiene, use of masks, and environmental disinfection. A mandatory face mask order was not yet in effect at the time of pilot testing. PEH were being routinely screened for symptoms on entry, and if symptomatic were referred for SARS-CoV-2 testing through clinical partners and transferred to isolation within Activated Respite pending test results. We intended to offer Protective Action Housing to individuals 65+ years and/or with underlying medical conditions increasing risk for COVID-19 as defined by the CDC, but were unable to implement this process at the pilot event. Instead, it was implemented shortly after the pilot event.

Pilot SARS-CoV-2 Testing Paired with Isolation

The pilot testing and isolation protocol was jointly developed by clinical, public health, shelter, and municipal partners on the DJTF over a 2-week period through daily video conferencing sessions. The protocol was drafted by clinical and public health partners and circulated for review and approval from all DJTF partners prior to the testing event. Prior to the testing event and on the day of testing, shelter staff informed all entering shelter guests that on-site testing would be available. The testing team comprised clinical providers and staff of Denver Public Health and the Colorado Coalition for the Homeless (CCH), a provider of supportive housing and integrated healthcare in Colorado. Additional logistical support (e.g., event set-up, crowd management and transportation) was provided by on-site shelter partners, city employees (city dispatch and Human Services) and the Colorado National Guard. Figure 1 outlines the specific partner roles in planning, screening, testing, and triage of individuals during the pilot.



Figure 1. Planning and workflow for SARS-CoV-2 screening, testing, and triage at pilot testing event at day shelter in Denver, Colorado, 2020

A convenience sample of PEH were screened for eligibility upon entry to the shelter until 55 individuals had agreed to test. Participation in testing was voluntary and no incentives were provided. Those who were eligible and interested in participating were referred for on-site testing in an outdoor space adjacent to the shelter on a first-come, first-served basis. Participants provided contact information and consent to be treated, including permission to share demographic information and test results for treatment and public health reporting. Demographic and clinical information collected was entered into CCH's electronic health record. Participants were asked if they had any of the following underlying high-risk medical conditions defined by the CDC: chronic kidney disease, type 2 diabetes, chronic obstructive pulmonary disease, immunocompromised state, obesity (BMI \geq 30), sickle cell disease, or serious heart conditions. We also included third⁻trimester pregnancy due to the uncertainty of risk during pregnancy. Participants were eligible for testing regardless of symptoms. All participants verbally

completed a symptom screening questionnaire, administered by clinical personnel. Nasopharyngeal specimens were collected using a polyester swab in accordance with CDC guidelines and sent to Quest Diagnostics for SARS-CoV-2 reverse transcriptase polymerase chain reaction (PCR) testing.¹² Table 1 describes personnel, roles and materials utilized in the screening and testing process.

Station	No. of	Role Requirements	Role Description	Materials	Time
	Staff				-
Station 1 Registration	1	Client Access Representative or other trained clinical	For new clients, complete new patient form.	Pen, clipboard, new client registration forms	5 min.
	2	staff member	Create new nurse visit and check in. Add client to testing spreadsheet.	Hot spot (if no internet), two Computers with VPN access, client info slips	3 min.
Station 2 Screening	2	Clinical staff or trained volunteer. MA, C.N.A., or DA preferred.	Perform symptom and high- risk conditions screening. Collect temperature, pulse oximetry, pulse. Highlight abnormal results.	One thermometer with probe covers OR two thermometers with alcohol swabs, one pulse oximeter, pen, highlighter	2 min.
Station 3 SARS-CoV-2 PCR Testing	2-3	MA, RN, or MD/DO	Perform COVID-19 NP Swab test. Inform client how and when to receive results. Identify clients with highlighted screening results and guide to station 4.	PPE (gown or suit, N95 mask, face shield, gloves), NP swabs/tests, specimen packaging/transport bags, 2 laptops with VPN access	5 min.
Station 4 Waiting Areas (For symptomatic clients requiring	1	Social worker	Coordinate admission and transport to Activated Respite site.		1-2 hours awaiting transport
intake and transport to activated respite sites)	1-2	Clinical staff or volunteer. Requires trama-informed de- escalation techniques.	Notify RN or manager for anyone who declines further screening/admission. Assist clients to getting any other needs met (i.e. obtain water or coordinate escort of client to restroom).		

Table 1. Screening stations, personnel roles, and materials for SARS-CoV-2 PCR testing at pilot testing event

Participants reporting fever, cough, or dyspnea starting in the prior two weeks met criteria for isolation and were immediately triaged and transported to Activated Respite on the day of testing through mechanisms already in place for isolation of symptomatic individuals. After consultation with local public health authorities and shelter partners, we allowed asymptomatic participants to remain in the shelter pending their test results. These participants were asked to return in 48 hours to receive their results. Once results returned, those individuals testing positive were located and transitioned into isolation at Activated Respite.

Attempts were made to notify participants of their test results the same day results returned (starting between 48-72 hours of testing) directly by a nurse from CCH in partnership with shelter personnel. Additionally, an electronic flag was created within the Homeless Management Information System (HMIS) to alert shelter providers to those with positive tests, and to ensure access to Activated Respite, if desired. However, a positive test was not used as a barrier to accessing shelter or other services. We treated inconclusive tests as positive and moved these individuals into isolation within Activated Respite until repeat testing could be arranged. Case investigation of PEH testing positive was performed by local public health partners. Clinical follow-up of PEH and supportive services for those with positive or inconclusive tests was provided by CCH.

Pilot Outcomes and Analysis

Based on a sample size calculation informed by prevalence data reported by the CDC and using a power of 0.95 and alpha of 0.01, we estimated that a sample size of 41 would be needed to detect a difference in prevalence of SARS-CoV-2 infection (25% vs. 5%).⁶ At the time of the pilot, 60 of the approximately 350 Activated Respite isolation units were unoccupied. Thus, we aimed to test between 41 and 60 PEH to ensure all those being tested could be safely isolated within existing resource capacity, even if all tested positive.

Our primary outcome for analysis was the proportion of persons with confirmed SARS-CoV-2 infection by PCR testing. Additionally, we compared the proportion of persons testing positive who were symptomatic versus asymptomatic at the time of testing (i.e., COVID-19 cases identified through symptom-triggered screening versus broad, voluntary PCR-testing). Demographic characteristics, shelter utilization and the presence or absence of a chronic health condition were assessed in HMIS. We compared the clinical and demographic profile of participants testing positive or inconclusive to those

testing negative. In all comparisons, t-tests were used for continuous variables and Fisher's exact tests for categorical variables. Following the pilot, clinical partners of the DJTF used quality improvement principles of plan-do-study-act (PDSA) to analyze lessons learned and propose scalable SARS-CoV-2 surveillance testing and isolation protocols in PEH to the larger DJTF partnership.¹³

The Quality Improvement Committee of the Colorado Multiple Institutional Review Board determined that the protocol did not to represent human-subject research. Representatives from all partner agencies and organizations of the DJTF contributed to the design and implementation of the pilot protocol and subsequent refinements. This manuscript was prepared by clinical and public health partners and approved by the DJTF.

RESULTS

Of the 150 persons invited to participate in testing, 55 (37%) agreed to participate and underwent symptom screening, and 52 (95%) of those participants underwent PCR testing. Of the three people who refused testing, two reported symptoms, and one reported a recent COVID positive contact.

Demographic and symptom characteristics of the 52 participants who underwent testing are summarized in Table 2. There were no statistically significant differences in demographic characteristics between the study sample and the overall shelter population (Supplemental Table 2).

Characteristic	Positive or inconclusive	Negative SARS-	Р
	SARS-CoV-2 PCR test	CoV-2 PCR test	value*
	(N=14)	(N=38)	
	n (%)	n (%)	
Demographic			
Age, median (IQR), years	54 (14)	49 (17)	0.39
Age group, years			0.84
18-24	0 (0)	3 (8)	
25-54	9 (64)	22 (58)	
55-64	5 (36)	12 (32)	
65 and older	0 (0)	1 (3)	
Gender			0.02
Men	14 (100)	26 (68)	
Women	0 (0)	12 (32)	
Race			0.73
White	10 (71)	18 (47)	

Table 2. Demographic and clinic characteristics of participants in pilot prevalence testing for SARS-CoV-2 stratified by SARS-CoV-2 PCR test result, in a day shelter in Denver, Colorado, 2020

Black/African American	3 (21)	13 (34)	
Asian	0 (0)	1 (3)	
American Indian/Alaska Native	1 (7)	5 (13)	
Multiracial	0 (0)	1 (3)	
Hispanic/Latinx	2 (14)	9 (24)	0.46
Overnight shelter in last week	13 (93)	13 (34)	< 0.001
Underlying medical condition**	4 (29)	13 (35)	0.75
Clinical			
Temperature \geq 100 deg F	0 (0)	0 (0)	
SpO2 <93%	3 (21)	6 (16)	
Symptoms (onset < 2 weeks)***			
Any	2 (14)	13 (34)	0.32
Fever	1 (7)	1 (3)	
Cough	2 (14)	4 (11)	
Shortness of breath	2 (14)	3 (8)	
Rhinorrhea	1 (7)	9 (24)	
Sore throat	2 (14)	4 (11)	
Abdominal pain	1 (7)	4 (11)	
Diarrhea	0 (0)	5 (13)	
Change/loss of taste	0 (0)	1 (3)	
Change/loss of smell	1 (7)	4 (11)	
Myalgia	1 (7)	8 (21)	
Severe Fatigue	2 (14)	4 (11)	
Known contact with person with COVID-19	2 (14)	3 (8)	

Abbreviations: Interquartile range (IQR), Persons experiencing homelessness (PEH), Polymerase chain reaction (PCR)

*Inference testing comparing positive/inconclusive and negative tests for age, gender, race, ethnicity, shelter use, any underlying medical condition and presence of acute symptoms; significance was determined at $p \le 0.05$ using t-tests for evaluating differences for continuous variables and Fisher Exact tests for categorical variables.

**Self-report of type 2 diabetes, immunocompromising condition, chronic kidney disease, chronic obstructive pulmonary disease, serious heart conditions, sickle cell disease, or third trimester pregnancy; n=37 for PCR-negative study participants.

***Symptoms reported at time of testing

Of 52 participants who underwent testing, 10 (19%) had a positive test result and four (7%) had an inconclusive result totaling to a proportion of 27% (95% confidence interval 16%, 41%) with a positive or inconclusive result. Men comprised 100% of the positive and inconclusive tests, compared to 68% of the negative results (p=0.02; Table 2). Of those with positive or inconclusive results, 93% had stayed in an overnight shelter in the past week, versus 34% of those testing negative (P<0.001). Among

persons with positive or inconclusive results, eight (80%) and four (100%) were asymptomatic, respectively. Thirteen (34%) of 38 participants who tested negative reported symptoms compared to two (14%) of the 14 participants with positive or inconclusive tests (P=0.30).

Of the ten participants with positive test results, two (20%) were transferred to Activated Respite at the time of testing due to the presence of symptoms, five (50%) within 72 hours of the testing event, and three (30%) in >72 hours after the event (Table 3). Of the four participants with inconclusive tests, two (50%) were transferred within 72 hours of testing, one (25%) in >72 hours after testing, and one (25%) was unable to be contacted. Of the eight participants who were asymptomatic at the time of testing and tested positive, 3 (38%) developed symptoms within the subsequent 10 days while five (63%) remained asymptomatic. Of the participants testing positive or inconclusive for SARS-CoV-2, 29% reported one or more underlying medical condition compared to 35% of the participants testing negative (P=0.75).

Follow up	Positive PCR (N=10) n (%)	Inconclusive PCR (N=4) n (%)
Activated Respite transfer		
At time of test	2 (20)	0 (0)
\leq 72 hours of test	5 (50)	2 (50)
> 72hours of test	3 (30)	1 (25)
Unable to contact	0 (0)	1 (25)
Symptom follow up*	n=8	n=4
Symptomatic within 10	3 (38)	1 (25)
days		
Asymptomatic after 10	5 (63)	2 (50)
days		
Unable to contact	0 (0)	1 (25)

Table 3. Follow up of PEH with SARS-CoV-2 positive or inconclusive PCR tests in day shelter in Denver, Colorado, 2020

Abbreviations: Persons experiencing homelessness (PEH), Polymerase chain reaction (PCR) *Of those asymptomatic at time of testing

CONCLUSIONS AND LESSONS LEARNED

The DJTF is a multi-sector community partnership with a wealth of collective expertise across the spectrum of public health, clinical, homeless services, and lived experience, which has coordinated

the COVID-19 pandemic response in Denver's unhoused community. Our early partnership development and pilot findings illustrate the value of such partnerships in nimbly responding to a pandemic and mitigating its impact on an at-risk community. The relationships gained and lessons learned through this work facilitated broader, sustainable, and collaborative efforts to implement critical public health interventions such as testing, isolation, vaccination, and medical support for PEH during the pandemic.

Our pilot results represent prevalence data from a subset of PEH at a single shelter during a suspected outbreak and evolving pandemic. Thus, our findings may be influenced by selection bias and may not be generalizable to other populations or settings. However, our pilot produced initial prevalence data early in the pandemic when local surveillance testing was not yet being performed. The prevalence rate of 19% in our sample was eye-opening and guided further resource planning and allocation by the DJTF. Additionally, our pilot informed the development of city-wide, routine surveillance testing and isolation protocols in congregate shelters across multiple agencies and community-based organizations serving PEH in Denver, which was similar to the experience of Baggett et al.^{14,15} Moreover, we have broadened our testing approach to include staff of congregate shelters. These changes are in accordance with updated CDC guidance on SARS-CoV-2 testing in PEH.⁸ We also created action plans to support shelters in which outbreaks are detected, and expanded outreach and testing for PEH who do not utilize shelters.

Close collaboration between interdisciplinary clinical and public health, shelter leaders, community experts and city agencies was critical for all phases of the pilot from planning, implementation and evaluation. Planning was facilitated by the DJTF infrastructure, which brought together community partners with diverse perspectives and expertise to focus on strategic planning and tactical initiatives related to the pandemic response in PEH, and required careful consideration of existing community resource capacity, and a clear, mutually agreed upon plan for safely isolating positive participants. This infrastructure also allowed for pooling and rapid mobilization of personnel and other resources across organizations to staff the testing event, locate PEH to share test results, and to safely isolate those with positive/inconclusive tests. Remarkably, with the help of community partners, we were able to contact and isolate all but one person despite barriers including high migration of PEH and substantial delays in receiving test results.

Participation in pilot testing was voluntary and was not incentivized, and we found that the majority of PEH declined to participate. Subsequent interviews with key informants and surveys of PEH suggested many potential barriers, including concerns about discomfort from the nasopharyngeal swab (described as "brain scraping"), distrust and/or misinformation, lack of knowledge regarding testing and/or susceptibility to COVID-19, and perceived social stigma or concerns that a positive test may be a barrier to accessing services or employment.¹⁶ To address these barriers we sought solutions from community leaders with lived experience of homelessness, and from PEH themselves. Recommended strategies to improve testing included engaging trusted peers and community leaders to convey testing information via one-on-one, word-of-mouth communications, and advertising testing events through telephonic messaging, or community message-boards. Additionally, we offered small monetary incentives (e.g. gift card) to encourage individuals to test and return for results.

This pilot highlighted the need for less invasive and more rapid tests. We experienced challenges to expeditiously isolating participants with positive/inconclusive results, including staggered return of test results 48-72 hours after testing due to test processing delays. This resulted in immense time and effort on the part of some community partners (i.e., a full-time nurse for two consecutive days following the testing event) to locate and transfer participants to isolation facilities. These delays potentially allowed for ongoing transmission from asymptomatic, positive individuals who remained in the shelter awaiting test results. Subsequently, we successfully worked with the CDPHE laboratory to ensure prioritization of expedited test results for PEH to achieve more timely results (within in 24 hours). We also sought more rapid and less invasive tests, and when they became available, we participated in validation in PEH, and integrated them into our testing protocols.¹⁷ Additionally, we developed a multilayered, collaborative approach to notify PEH of test results that included city and state public health agencies and shelter partners, and utilized HMIS to communicate test results to shelter staff and clients, as well as, a results call-in line for PEH. This allowed us to expedite transfers into isolation and increase our testing capacity.

Ideally to minimize transmission, all PEH would be provided protective housing or noncongregate shelter options, especially during high-transmission periods. Our finding that a positive/inconclusive test was associated with use of overnight congregate shelters supports this. However, the DJTF did not have the resources to provide these resources to all PEH. Instead, immediately following the pilot event, we screened participants during testing (and at shelters) for

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underlying medical conditions defined by the CDC as increasing risk for COVID-19 and offered voluntary Protective Action placement for individuals 65+years and/or with one or more of these conditions who had a negative PCR test. This allowed vulnerable individuals to avoid congregate shelters while also taking care to avoid introducing SARS-CoV-2 into Protective Action facilities.

In conclusion, our multi-sector community partnership has been instrumental in responding and adapting to the dynamic needs of PEH over the course of the COVID-19 pandemic, particularly with respect to addressing the unique barriers they face, and in making public health interventions such testing and vaccination more equitable, accessible, and acceptable. The lessons learned though our early partnership development and pilot remain salient to ending the COVID-19 pandemic and responding to health threats in PEH.

CDC STATEMENT

The findings and conclusions in this report 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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CONFLICTS OF INTEREST

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Supplemental Table 1. Characteristics of congregate shelters and clients in Denver County with
estimations of population at risk at the time of testing

Facility	Capacity	Population	Recent	5% Pos.**	25%	60%	Suspected
			Utilization		Pos**.	Pos.**	Cluster
			range				
			(median)*	_			
1	765	Men	682-698 (690)				X
				35	173	414	
2	300	Women and transgender	140-160 (150)	8	38	90	Х
3	300	Men	250-300 (275)				
				14	69	166	
4	250	Men	210-220 (215)				
				11	54	130	
5	99	Families,	89 (89)				
		women,					
		veterans		4	22	54	
6	36	Women and	38 (38)	5	10	22	
		transgender					
7	36	Youth	39 (39)	2	10	24	
8	N/A	All	586-644 (600)	30	150	360	Х
9	N/A	Women and	75-115 (100)				
		transgender		5	25	60	
10	N/A	All for	189-190 (190)				
		breakfast and		10	48	114	
		lunch, men					
		only for					
		dinner					
Total			2386	124	599	1434	

*Utilization in the past month per Denver's Office of Housing Stability

**Estimates of number of individuals infected with SARS-CoV-2 if assuming 5% prevalence (expected baseline positivity percent) compared to expected outbreak positivity percentages (25-60%) based on published outbreaks in congregate shelters

Characteristic	All shelter clients*	All participants n	P value**
	n (%)	(%)	
Total	2,467 (100)	52 (100)	
Age in years, median (IQR)	47 (19)	52(15)	0.23
Age group, years			0.12
18-24	58 (2)	3 (6)	
25-54	1659 (67)	31 (60)	
55-64	607 (25)	17 (33)	
65 and older	143 (6)	1 (2)	
Gender			0.51
Cisgender men	2002 (81)	40 (77)	
Cisgender women	451 (18)	12 (23)	
Transgender men	6 (0.2)	0 (0)	
Transgender women	2 (0.1)	0 (0)	
Nonbinary	4 (0.2)	0 (0)	
Race			0.20
White	1389 (59)	28 (54)	
Black/African American	714 (30)	16 (31)	
Asian	28 (1)	1 (2)	
American Indian/ Alaska Native	116 (5)	6 (12)	
Multiracial	108 (5)	1(1)	
Hispanic/Latinx	570 (24)	11 (21)	0.29
Overnight shelter in last week	917 (37)	26 (50)	0.06
Overnight shelter in last month	1547 (63)	39 (75)	0.08
Underlying medical condition***	640 (27)	17 (33)	0.34

Supplemental Table 2. Comparison of characteristics of overall shelter population with study participants in prevalence survey of COVID-19 in a day shelter in Denver, Colorado, 2020

Abbreviations: Interquartile range (IQR)

*Shelter clients served from April 20, 2020 to the day of testing on May 4, 2020; missingness <10% for all variables.

**Inference testing significance was determined at $p \le 0.05$ using t-tests for evaluating differences for continuous variables and Fisher Exact tests for categorical variables.

***Self-report of presence of underlying medical conditions including type 2 diabetes,

immunocompromising condition, chronic kidney disease, chronic obstructive pulmonary disease, serious heart conditions, sickle cell disease, or third trimester pregnancy from the Homeless Management Information System (HMIS)