

Enhanced Telehealth Case Management Plus Emergency Financial Assistance for Homeless-Experienced People Living With HIV During the COVID-19 Pandemic

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Boston Health Care for the Homeless Program, in Boston, Massachusetts, implemented an intensive telehealth case management intervention combined with emergency financial assistance for 270 homeless-experienced people living with HIV (PLWH) to reduce COVID-19 transmission and promote HIV care retention during Boston's first pandemic peak (March 16–May 31, 2020). Our telehealth model successfully maintained prepandemic case management and primary care contact levels, highlighting the importance of such programs in supporting the care engagement of homeless-experienced PLWH and addressing the dual COVID-19 and HIV epidemics. (*Am J Public Health*. 2021;111:835–838. <https://doi.org/10.2105/AJPH.2020.306152>)

The Boston Health Care for the Homeless Program (BHCHP) is a federally qualified health center located in Boston, Massachusetts, that provides HIV medical care and intensive case management to approximately 300 homeless-experienced people living with HIV (PLWH). BHCHP serves a highly sociomedically vulnerable population and receives funding from the Ryan White HIV/AIDS Program.

INTERVENTION

During the COVID-19 pandemic, BHCHP implemented an intensive telehealth case management intervention for homeless-experienced PLWH with the following goals: (1) maintain HIV care engagement during a period of severely disrupted outpatient services, and (2)

reduce COVID-19 transmission risks by proactively assessing and addressing acute socioeconomic needs.

PLACE AND TIME

In response to the COVID-19 pandemic, BHCHP suspended in-person services that were not related to COVID-19 in mid-March 2020 and transitioned non-emergent care to telehealth platforms. On April 15, 2020, BHCHP received one-time funding (to last through March 2021) from the Ryan White HIV/AIDS Program and the 2020 Coronavirus Aid, Relief and Economic Security (CARES) Act to prevent, prepare for, and respond to COVID-19 among PLWH. We describe results from the intervention between March 16 and May 31, 2020, corresponding with the first

wave of the COVID-19 pandemic in Boston, Massachusetts.

PERSON

A total of 270 PLWH were actively in care during the study period. Patients were predominantly male (72%), identified as racial/ethnic minorities (40% Black, 36% Hispanic/Latinx), and had a mean age of 51 years. Twenty percent were monolingual Spanish speakers. All had a lifetime history of homelessness or unstable housing. During the study period, 54.1% were housed (defined as residing in a place with a lease in their name) and 45.9% were unhoused. Sixty-nine percent resided in zip codes with a high prevalence of COVID-19 (defined as higher than the average unadjusted

COVID-19 case rate in Boston of 1970/100 000 on June 25, 2020).¹

PURPOSE

Housing instability is a critical determinant of risk for contracting COVID-19 infection in the United States.^{2,3} Although the health consequences of COVID-19 for PLWH are not fully understood, concern remains that PLWH may be more vulnerable to severe COVID-19 illness⁴ and may be at heightened risk for loss to medical follow-up because of severe care delivery disruptions, thus undermining efforts to end the HIV epidemic in the United States.⁵ Patterns of racialized structural disadvantage that contribute to COVID-19 transmission and mortality risk overlap with HIV risk, leading to the inequitable concentration of these conditions among low-income communities of color.⁶ Intensive case management to address the social determinants of health has shown great promise in supporting unstably housed PLWH to engage effectively in medical care, thus closing equity gaps in HIV health outcomes for this vulnerable group.⁷ BHCHP adapted these strategies during the pandemic in an effort to maintain HIV care engagement and prevent COVID-19 transmission.

IMPLEMENTATION

Case managers contacted all HIV patients who could be reached by telephone and gave them information about COVID-19 prevention and how to access COVID-19 medical assessments and testing. Patients without telephones were provided low-cost mobile phones with unlimited minutes for three months to ensure reliable contact with program staff. Patients were proactively

contacted approximately every two weeks to assess their access to COVID-19 prevention supplies (i.e., cleaning supplies, hand sanitizer, face masks), medical needs, and prescriptions and to assess other key social determinants of COVID-19 risk, including food security, housing stability, status of rental and utilities payments, telephone access, and transportation needs.

Face coverings and hand sanitizer were distributed by mail to housed patients and during walk-in clinic visits for unhoused patients. Those in need received grocery store gift cards, food deliveries, utilities and rental support, vouchers for short-term hotel or motel stays, and transportation to urgent medical visits using shared ride apps rather than public transportation.

BHCHP staff recorded patient contacts, housing status, and services provided in the electronic health record during every medical and case management encounter. BHCHP tracked all SARS-CoV-2 polymerase chain reaction (PCR) test results initiated by BHCHP, major partner hospitals, and affiliated health centers. HIV patients received tests in diverse settings, including as part of BHCHP's universal COVID-19 testing efforts in participating shelters and for symptomatic and occasionally asymptomatic presentations at outpatient clinics, emergency rooms, and hospitals. (Asymptomatic testing was not widely available during this period.)

EVALUATION

We conducted a retrospective review of electronic health record data for the 270 PLWH in care to assess delivery and receipt of program services and outcomes of COVID-19 testing.

An average of 5.75 (SD = 4.7) case management contacts per patient

(telephonic and in-person) occurred during the three-month study period, with a statistically significant difference in contacts between housed and unhoused patients (6.43 vs 4.95; $P = .010$). The same three-month period the previous year showed an average of five contacts per patient.

Attendance rates for HIV primary care provider visits (telehealth and in-person combined) during the study period was 71% (414 of 586 scheduled visits). Housed patients kept 74.7% of appointments compared with 57.1% among unhoused patients ($P = .01$). The overall attendance rate in the three months before the intervention was 63% (447 of 708 scheduled in-person visits).

A total of 56 patients (20.7%) were tested for COVID-19 during the study period. Among housed patients ($n = 146$), 15 (10%) underwent SARS-CoV-2 PCR testing, and none were positive. Of unhoused patients ($n = 124$), 41 (33%) underwent testing, and 14 (34%) were positive (Table 1). Six of the 14 positive patients resided in Boston shelters affected by COVID-19 outbreaks.

Of the 56 patients tested for COVID-19, case management contacts did not differ significantly between unhoused and housed patients (7.2 [SD 5.2] vs 5.2 [SD 3.6]; $P = .19$).

ADVERSE EFFECTS

We observed no adverse effects.

SUSTAINABILITY

BHCHP's augmented telehealth case management intervention during the first COVID-19 pandemic peak was successful in maintaining regular engagement in HIV case management and primary care despite interrupted in-person services. Importantly, high-intensity case management

TABLE 1— COVID-19 Testing and Positivity Rates and Case Management Visits by Housing Status: Boston, MA; March 16–May 31, 2020

	Housed (n = 146), No. (%) or Mean ±SD	Unhoused (n = 124), No. (%) or Mean ±SD	P
Total patients tested for COVID-19	15 (10.3)	41 (33.1)	< .001
Total COVID-19-positive patients	0 (0.0)	14 (34.1)	.012
Case management contacts per patient	6.43 ±4.7	4.95 ±4.6	.01

Note. We used the independent *t* test to examine differences in case management visits by housing status and COVID-19 polymerase chain reaction positivity, and we used the Fisher exact test to examine the association between housing status and COVID-19 polymerase chain reaction positivity. We considered *P* values of <.05 statistically significant. We used SAS version 9.4 (SAS Institute, Cary, NC) for all statistical analyses.

by telephone was feasible regardless of housing status despite risks for being lost to follow-up. Case management engagement intensity and total primary care visit volume were similar to prepandemic levels, and overall attendance rates for scheduled HIV primary care visits improved in the pandemic period.

There were no diagnosed cases of COVID-19 in BHCHP's housed HIV population despite their heightened structural vulnerability for transmission. Conversely, the COVID-19 positivity rate among unhoused HIV patients at BHCHP matched that found among individuals experiencing homelessness in Boston shelters.³ Further study is warranted to determine what role similar outreach programs may have on mitigating COVID-19 transmission risk among PLWH and whether these benefits depend on housing status. Longer-term follow-up is needed to assess program impacts on HIV viral suppression.

Telehealth case management does not require new staff or equipment and will remain an integral engagement and retention strategy for the foreseeable future. However, costs for patient telephones and financial assistance to address socioeconomic barriers were funded via a one-time award through the CARES Act, potentially limiting sustainability of these measures should the pandemic continue beyond March 2021.

PUBLIC HEALTH SIGNIFICANCE

Telehealth case management and targeted resources to address unmet social needs of homeless-experienced PLWH have the potential to support consistent HIV care engagement when nonurgent in-clinic visits are limited. Securing appropriate levels of federal, state, and local funding for structurally vulnerable PLWH throughout the COVID-19 pandemic could play a key role in mitigating impacts and inequities of these dual pandemics. Continued progress on national goals to end the HIV epidemic may depend on it. *AJPH*

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CONTRIBUTORS

J. K. Brody and S. Rajabiun conceptualized and designed the study and drafted the article; they had full access to all study data and take responsibility for data integrity and data analysis accuracy. S. Rajabiun and T. Baggett performed the statistical analyses. All authors provided data acquisition, analysis, or interpretation and critically revised the article for important intellectual content.

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CONFLICTS OF INTEREST

The authors have no conflicts of interest to declare.

HUMAN PARTICIPANT PROTECTION

This study was exempted by the University of Massachusetts, Lowell institutional review board because no human participants were involved in the study.

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