Mobile Multidisciplinary HIV Medical Care for Hard-to-Reach Individuals Experiencing Homelessness in San Francisco

The San Francisco, California–based HIV Homeless-Health Outreach Mobile Engagement (HHOME) program aims to improve health and housing outcomes for multiply diagnosed people experiencing chronic homelessness whom the HIV care system has failed to reach. From 2014 to 2017, HHOME's mobile multidisciplinary team served 106 clients. Viral suppression increased from 23.6% to 60%, and 73.8% obtained permanent supportive housing (n = 61). System-level changes included the adoption of citywide standardized acuity assessment tools HIV Care Coordination Taskforce by community partners. This article highlights HHOME's core components and its public health implications. (*Am J Public Health*. 2018; 108:S528–S530. doi:10.2105/AJPH.2018.304732)

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The San Francisco, California, Department of Public Health's HIV Homeless-Health Outreach Mobile Engagement (HHOME) project is a mobile, multidisciplinary team–based intervention designed to engage and retain in care the most severely impacted persons living with HIV/AIDS and experiencing homelessness.

INTERVENTION

The HHOME program serves clients with complex comorbidities and addresses the system barriers to care for those clients who have not succeeded with standard linkage and engagement models for housing or HIV treatment. The program goals include the following:

- Deliver low-barrier, client-centered medical, psychiatric, and addiction treatment outside of clinics.
- Offer medication adherence support to achieve viral suppression and psychiatric stability.
- Increase access to emergency stabilization and supportive housing.
- Decrease emergency department and hospital service utilization.
- Leverage resources and strengthen citywide coordination of care.

PLACE AND TIME

In 2012, the San Francisco Department of Public Health received a five-year grant from the Health Resources and Services Administration HIV/AIDS Bureau, Special Projects of National Significance, to initiate HHOME.

PERSON

The HHOME project targets the most complex persons living with HIV/AIDS who are not engaged in HIV treatment, specifically those with a low CD4 count and detectable viral load, high emergency department and hospital utilization, no primary care, active substance use disorders, severe mental illness, and homelessness or unstable housing.

PURPOSE

In San Francisco, 16 010 people are living with HIV,[1] and roughly 7500 persons are counted as homeless.[2] Persons living with HIV/AIDS include 7% of persons experiencing homelessness and 13.5% of high-utilizers of the urgent and emergency care systems.[3] Community stakeholders designed HHOME to address gaps in care for persons living with HIV/AIDS and experiencing chronic homelessness. This population often overuses emergency services for medical and biopsychosocial needs. Clinic-based stakeholders felt they lacked the adequate tools and staffing to address client behavior and acuity, while clients expressed health care system trauma from provider stigma and barriers to care.

IMPLEMENTATION

The HHOME program intervention occurs at the level of the client, the organization, and the system to effect change for individuals and the greater San Francisco community.

Client-Level Intervention

The HHOME program's referral sources are hospitals, clinics, jails, law enforcement, HIV linkage, and community programs. These referring partners conduct HHOME's Acuity and

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Chronicity Assessment, which measures the needs and acuity of clients across six medical and psychosocial domains (Acuity and Chronicity Assessment Tool: http://hhome415.com). Combined with the city's high-utilization list, this tool clarifies whether a referral meets criteria; if so, the client is immediately accepted and outreached by HHOME.

The interdisciplinary team consists of a medical provider, registered nurse, medical social worker, housing case manager, peer navigator, and program manager, who work in mobile dyads at shelters, streets, encampments, hospitals, and treatment programs. The HHOME program also has staff at two drop-in clinics. Clients are seen three or four times a week.

The HHOME team holds a weekly case conference, morning phone check-ins, and a daily e-mail summary. The team uses texts for urgent communication and integrated panel management.

The HHOME program engages clients immediately upon referral with a harm-reduction approach and focuses on support during vulnerable treatment transitions (e.g., hospital discharge). To locate lost or disengaged clients, the team uses persistent outreach and community engagement. Clients are given bracelets that contain HHOME contact information, which allow HHOME to be notified if their clients present at a hospital or program.

Clients are immediately placed in emergency stabilization at shelters, hotels, medical or psychiatric respite, or substance use treatment programs. Permanent housing plans are initiated immediately by obtaining necessary documentation and benefits. If clients choose to remain on the street, the team continues care.

HIV medications are started as soon as possible; otherwise, HHOME begins with such treatment options as vitamins, psychiatric and addiction medication, and prophylaxis. Medications are dispensed on the basis of need, using directly observed therapy or weekly dispensing by the registered nurse or at treatment programs, such as methadone. All treatment is started as mobile care, and shifts to drop-in and clinic escorts, guiding clients toward treatment independence. If clients decline treatment, HHOME supports their choices with harm reduction and palliative care.

Once clients have two appointments in a clinic, are stably placed or housed, have benefits, and are at a lower acuity, they are transitioned to less-intensive case management.

Organizational Intervention

The HHOME program's multidimensional team is created by integrating staff, resources, and philosophies from four agencies:

- San Francisco Community Health Center: community-based drop-in social service agency; contributes peer navigator, social worker, program manager.
- San Francisco Homeless Outreach Team: mobile intensive case management; contributes the housing case manager and stabilization resources.
- Tom Waddell Health Center —Healthcare for the Homeless: safety-net primary care, mental health, and addiction medicine; contributes medical provider and registered nurse.
- San Francisco Department of Public Health Transitions Division: coordination and placement of complex clients; provides administrative and clinical oversight.

System Intervention

The HHOME program established a citywide HIV Care Coordination Taskforce with representatives from HHOME, the San Francisco Department of Public Health's HIV linkage programs, hospitals, and jails. This group meets quarterly to address systems gaps and develop standardized tools, such as the Acuity Assessment outlined in the referral process. The taskforce hosts weekly 30-minute calls to triage referrals of clients—the most complex are accepted to HHOME.

EVALUATION

The HHOME program served 106 individuals, of which 61 participants were enrolled in a longitudinal study from 2014 to 2017. At 12 months after enrollment, 83.6% had two appointments with an HIV primary care provider, 60% were virally suppressed, 79% achieved viral suppression at some point in the 12-month period, 83.6% transitioned to stable placement, and 73.8% entered supportive housing (Table A, available as a supplement to the online version of this article at http://www.ajph.org).

ADVERSE EFFECTS

There were no known adverse effects of the HHOME intervention.

LIMITATIONS

The sample size was small (n = 61) and the findings may not be generalizable to larger homeless populations. HHOME was designed to reach the most vulnerable and, because of the severity of substance use and mental health disorders, it was difficult to consent participants, follow them over time, or use a control group. Forty-five HHOME clients fell into this category and declined or were unable to consent to the study.

Further research is needed to gauge the effectiveness of mobile HIV care interventions in more resource-constrained regions.

SUSTAINABILITY

The City of San Francisco and the Getting-to-Zero initiative recognized the success of the HHOME intervention by continuing its funding and creating step-down programs for HHOME participants. This upstream investment in mobile, high-intensity, and client-driven models of care improves community viral suppression. These types of programs can lead to cost savings and return on investment by increasing care coordination efficiencies and reducing client utilization of the hospital and emergency department.

PUBLIC HEALTH SIGNIFICANCE

HHOME is a successful model for engaging and retaining in care medically acute and socially complex clients. Clients experienced increased viral suppression, housing stability, and a successful transition to standard outpatient treatment.

Caring for high-acuity clients within a four-wall clinic or with emergency services is a drain on resources. Moving

multidisciplinary staff out of the clinic and coordinating care management services increases the capacity of the system. The HHOME program demonstrates the need for "ICU" level of outpatient care to ensure success for the client and system.

This intervention has transformed the San Francisco HIV health care community by shifting where and how we deliver care, addressing social determinants of health from a harm-reduction framework, and standardizing interprovider referrals and communication. The HHOME program demonstrates that the standard health care delivery system does not meet the needs of complex clients and works toward addressing those failures rather than blaming clients for failing treatment. AJPH

CONTRIBUTORS

D. Borne and J. Tryon oversaw the local research and evaluation of the study and drafted the article. S. Rajabiun and J. Fox conceptualized and designed the study and edited the article. A. de Groot was responsible for data analysis. K. Gunhouse-Vigil provided local data and edited the article. All authors approved the final article.

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Note. This information or content and conclusions are those of the authors and should not be construed as the official position or policy of, nor should any endorsements be inferred by HRSA, HHS, or the US government.

HUMAN PARTICIPANT PROTECTION

Human participants signed informed consent paperwork. The research and findings presented in this article were approved by the Ethical and Independent Review Services Institutional Review Board.

REFERENCES

1. San Francisco Department of Public Health. HIV epidemiology annual report 2016. September 2017. Available at: https://www.sfdph.org/dph/files/reports/RptsHIVAIDS/Annual-Report-2016-20170831.pdf. Accessed November 15, 2017.

2. Applied Survey Research. San Francisco 2017 homeless point-in-time count & survey. July 2017. Available at: https://static1.squarespace.com/static/5176dcd7e4b0e5c0dba41ee0/t/55ad6729e4b0fb43f4325c6d/1437427497950/SanFrancisco_HomelessReport_2015_FINAL.pdf. Accessed November 15, 2017.

3. Coordinated Care Management System. Utilization report. San Francisco, CA: San Francisco Department of Public Health; 2017.