Harm reduction services for veterans in supportive housing: A pharmacist-led, interdisciplinary, street medicine approach

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Abstract

Background: United States Veterans are disproportionately impacted by homelessness. Substance use, mental health conditions, and trauma increase the risk for homelessness and contribute to challenges in maintaining housing. Street Medicine utilizes a trauma-informed approach to provide low-barrier health and social services for those at risk for and experiencing homelessness. Limited evidence exists describing pharmacist roles on Street Medicine teams, including provision of harm reduction services.

Objective: To implement a pharmacist-led Harm Reduction Program Street Medicine intervention at a supportive housing building in San Francisco, California, evaluating overall Veteran acceptance of harm reduction resources and the total number of Veterans who accepted 1) referral for infection screening, immunizations, and follow-up care, 2) referral for mental health and substance use disorder (SUD) care, and 3) pharmacist-provided harm reduction resources.

Methods: During phase 1 (August–September 2022), Harm Reduction Program informational materials were mailed to Veteran residents. During phase 2 (October–December 2022), pharmacists called Veteran residents to offer harm reduction resources. During phase 3 (December 2022–June 2023), an interdisciplinary team (pharmacists, physicians, nurses, and a social worker) completed 6 HUD-VASH housing building visits to offer harm reduction resources. Data were prospectively collected, and descriptive statistics were used to evaluate results.

Results: During Phase 2, most Veterans (49/72, 68.1%) were unable to be reached by telephone. Of those remaining, 16 (22.2%) declined and 7 (9.7%) accepted ≥1 resource. During Phase 3, team members met with 29/73 (39.7%) Veterans a range of 1–6 times. Twenty-three (31.5%) accepted ≥1 resource, and 6 (8.2%) declined. Through combined telephone and on-site outreach, a total of 26/73 (35.6%) Veterans accepted ≥1 resource, including referral for infection screening, immunizations, and follow-up care (n=6, 8.2%); referral for mental health and SUD care (n=6, 8.2%); and pharmacist-provided harm reduction resources (n=24, 32.9%). The harm reduction supplies most frequently accepted included naloxone (n=20, 27.4%), antibiotic ointment (n=11, 15%), alcohol pads (n=10, 13.7%), and bandages (n=10, 13.7%).

Conclusions: Telephone-based outreach to Veterans in supportive housing was challenging, as many did not have a working phone. In-person visits increased Veteran acceptance of harm reduction services from 10% to 36%, demonstrating the value of a Street Medicine approach. Many Veterans reported mistrust of the healthcare system and were not engaged in care. Ultimately, the focus of outreach visits shifted from offering resources to building rapport, tailoring discussions to individual needs, and linking individuals to services, including a new on-site primary care/infectious disease provider. Future research should evaluate impacts on health and patient-reported outcomes and cost-effectiveness.

Keywords: harm reduction, veterans, naloxone, pharmacists, housing

Background

Having access to safe, stable, and affordable housing is a basic human need for achieving and maintaining health, well-being, and dignity. Yet the United States (US) currently faces a public health housing crisis.

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According to the US Department of Housing and Urban Development (HUD) January 2024 Point-in-Time count, more than 770,000 individuals in the US were homeless.[1] US Veterans — individuals who served on active duty in the US Armed Forces, Reserves, or National Guard — are at greater risk for homelessness compared to their civilian counterparts, with as many as one in ten US Veterans having experienced homelessness.[2-4]

Risk factors and correlates for Veteran homelessness include substance use disorders (SUDs), mental health conditions, low income and income-related factors, social isolation, adverse childhood experiences, cumulative trauma burden, and past incarceration.[3,4] Further, Veterans who have experienced homelessness have elevated odds of lifetime suicide attempt,

attempting suicide two or more times, and past-year suicide attempt.[4] These factors underscore the vital importance of connecting Veterans at risk for and experiencing homelessness with trauma-informed care approaches to meet their individual substance use and mental health needs.

The US Department of Veterans Affairs (VA) is committed to ending Veteran homelessness, and since 2012 has followed a "Housing First" approach, prioritizing connecting Veterans to low-barrier, stable housing as quickly as possible and then assisting with healthcare and other supportive services to improve quality of life.[5] According to the National Alliance to End Homelessness, "Housing First means using a trauma-informed approach to meet people where they are, without preconditions or mandatory requirements. It means continuously engaging and being able to respond to what they say they need when they are ready."[6] Following this approach, the HUD-Veterans Affairs Supportive Housing (VASH) program has been successful in reducing Veteran homelessness by over 52% since 2010. Still, however, Veterans and HUD-VASH staff report barriers for Veterans to access and maintain housing through the program,[5,7] including difficult procedures for housing entry, challenging interactions with staff, discrimination, lack of access to affordable and adequate housing stock, transportation, financial resources (e.g., move-in costs, rent, utility, and phone bills, food), program rules (e.g., required participation in case management), frequent staff turn-over and inadequate staffing, having SUD and mental health conditions, and Veteran motivations for maintaining housing and engaging in services.[7]

A Street Medicine approach is one strategy to address some of these housing barriers, including low-barrier SUD and mental health care. As defined by the Street Medicine™ Institute,

> "Street Medicine includes health and social services developed specifically to address the unique needs and circumstances of the unsheltered homeless delivered directly to them in their own environment. The fundamental approach of Street Medicine is to engage people experiencing homelessness exactly where they are and on their own terms to maximally reduce or eliminate barriers to care access and follow-through. Visiting people where they live — in alleyways, under bridges, or within urban encampments — is a necessary strategy to facilitate trust-building with this socially marginalized and highly vulnerable population. In this way, Street Medicine is the first essential step in achieving higher levels of medical, mental health, and social care through assertive, coordinated, and collaborative care management."[8]

VA Homeless Patient Aligned Care Teams (HPACTs) follow a Street Medicine approach, bringing integrated and interdisciplinary care to Veterans at risk for and experiencing homelessness.[9] Teams often consist of medical providers, nurses, social workers, SUD and mental health counselors, and homeless program staff, and aim to provide wrap-around, low-barrier services to Veterans where they live.[9] Evidence suggests that the HPACT model can increase patient engagement and primary care utilization, and may reduce acute care services and associated costs.[10] Further, embedding a mental health pharmacist within an HPACT has been associated with reduced mental health care wait times, identification of medication administration errors, medication optimization and adherence education, reduction in polypharmacy, referral for other services, and cost savings.[11]

To date, no studies have examined the impacts of providing pharmacist-led harm reduction services to Veterans residing in HUD-VASH housing utilizing a Street Medicine approach. This pilot project aimed to implement a pharmacist-led Harm Reduction Program Street Medicine intervention, evaluating overall Veteran acceptance of harm reduction resources and the total number of Veterans who accepted 1) referral for infection screening, immunizations, and follow-up care; 2) referral for mental health and SUD care; and 3) pharmacist-provided harm reduction resources.

Methods

Setting

The intervention was completed at one HUD-VASH supportive housing building for Veterans located in San Francisco, California. The building was managed by Swords to Plowshares in partnership with San Francisco Veterans Affairs Health Care System (SFVAHCS staff), where on-site case management, medical, and social work services were provided. The building housed up to 75 residents at a time, including both healthcare eligible and ineligible Veterans who were at risk for or experiencing homelessness. Each resident had a studio apartment equipped with a private bath and kitchen. Project team members included a harm reduction clinical pharmacist practitioner, a post-graduate year-1 pharmacist practice resident, a social worker, two nurses, and a primary care addiction medicine fellow. The project was led by the SFVAHCS Harm Reduction Program, whose mission is to end drug-related stigma and discrimination in health care, prevent the spread of drug-related infections and overdose deaths, and increase Veteran connections to services. This setting was chosen for the pilot project due to increasing rates of overdose deaths at the supportive housing building and because of the colocation of on-site VA medical and social work staff.

Design

This was a prospective, single-arm cohort quality improvement (QI) intervention implemented from August 2022 through June 2023. All Veteran residents at the HUD-VASH supportive housing building were included, and none were excluded. The Revised Standards for Quality Improvement Reporting Excellence (SQUIRE 2.0) were used in project planning and

results reporting.[12] This project was approved as a non-research QI project and completed in 3 phases.

Phase 1 (August to September 2022)

A list of current Veteran residents (n=72) was provided by the team social worker. A templated letter was developed (Appendix 1) and mailed with a pamphlet introducing the Harm Reduction Program (Appendix 2) to each Veteran. Flyers were posted in the housing facility by the social worker. A telephone outreach script and electronic medical record (EMR) note template were developed (Appendix 3).

Phase 2 (October to December 2022)

Two pharmacists attempted telephone outreach to all Veterans (n=72) to offer: 1) referral for infection screening (hepatitis A, B, and C virus [HAV; HBV; HCV]; human immunodeficiency virus [HIV]; chlamydia/gonorrhea; syphilis), immunizations (human papillomavirus, tetanus), and follow-up care; 2) referral for mental health and/or SUD care; and 3) pharmacist-provided harm reduction education, prescriptions supplies (naloxone, syringes, sharps container, alcohol swabs, bandages, skin closure strips, antibiotic ointment, sterile water, sterile saline, gauze, tape, syringes, condoms, vaginal contraceptive gel, vaginal moisturizer, lubricant, medication disposal bags), and fentanyl test strips. Each outreach attempt was documented in the EMR using the standardized note template, and data were prospectively collected.

Phase 3 (December 2022 to June 2023)

Due to limited engagement via phone call, pharmacist team members transitioned to in-person outreach. A total of six site visits were completed between December 2022 and June 2023. The social worker advertised visits via cafeteria table displays and flyers, and prepared a tentative schedule for each visit with a list of priority Veterans to meet with for 15-minute visits. Visits were conducted by pharmacist(s), physician, and nurse team members in the cafeteria, individually in a private office space, and in the Veteran's apartment units. Pharmacist team members provided education and linkage to harm reduction supplies. The team physician assessed substance use and readiness to change, utilized motivational interviewing strategies, and offered linkage to follow-up care (e.g., SUD treatment programs, infectious disease care, liver imaging/labs). Nurse team members conducted overall wellbeing check-ins and provided blood pressure screenings. When needed, the social worker and/or nurse knocked on Veterans' doors to remind them of the planned meeting with the team. Outreach visits were documented in the EMR using the standardized note template (pharmacists) or personal clinic template (physician, social worker, nurses).

Outcomes

The primary outcome was the total number of Veterans who accepted ≥1 harm reduction resource. Secondary outcomes evaluated the total number of Veterans who accepted 1) referral for infection screening, immunizations, and follow-up care, 2) referral for mental health and SUD care, and 3) pharmacist-provided harm reduction resources.

Data Collection and Analysis

A standardized data collection form was developed in Microsoft Excel (version 2208). Descriptive statistics were used to evaluate results. Statistical calculations were performed in Microsoft Excel (version 2208). Type of resource acceptance was counted once across both telephone and in-person outreach (not double counted).

Results

Telephone and In-Person Outreach

During Phase 2, pharmacists attempted telephone outreach to all 72 Veterans in the housing building. Most (n=49, 68.1%) were unable to be reached (voicemail left, no working phone, voicemail box not accepting messages, invalid number, inpatient admission, discharged from housing). Of those reached, 16/72 (22.2%) declined all resources offered, and 7/72 Veterans (9.7%) accepted ≥1 resource. During Phase 3, pharmacist and physician team members met with 29 of 73 current Veteran residents (39.7%) a range of 1–6 times. Twenty-three (31.5%) Veterans accepted ≥1 resource, and 6/73 (8.2%) declined. Each outreach visit was documented in the EMR using the standardized note template, and data were prospectively collected.

Primary and Secondary Outcomes

Through combined telephone and on-site outreach, a total of 26/73 (35.6%) Veterans accepted ≥1 resource, including 1) referral for infection screening, immunizations, and follow-up care (n=6, 8.2%), 2) referral for mental health and SUD care (n=6, 8.2%), and 3) pharmacist-provided harm reduction resources (n=24, 32.9%). Of the harm reduction supplies offered, Veterans most often accepted naloxone (n=20, 27.4%), antibiotic ointment (n=11, 15%), alcohol pads (n=10, 13.7%), and bandages (n=10, 13.7%) (**Figure 1**).

Discussion

This is the first study to evaluate a pharmacist-led, interdisciplinary approach bringing harm reduction resources to Veterans where they live in supportive housing. In-person outreach was vital, as many Veterans did not have a working phone for telephone-based outreach. Visiting Veterans in supportive housing increased program engagement and resource acceptance from 10% (phone-call only) to 36%. Of all resources offered, harm reduction supplies were the most accepted, at nearly 33% of Veterans, whereas care for infections and mental health conditions/SUDs were less often accepted, at only 8% each.

Lessons Learned

During in-person outreach, many Veterans reported mistrust of the healthcare system and were not engaged in care.

Ultimately, the focus of outreach visits shifted from offering resources to building rapport, tailoring discussions to individual needs, and linking individuals to services, including a new on-site primary care and infectious disease provider. These findings align with similar research published by Owens et al., evaluating an HPACT at the VA Greater Los Angeles Healthcare System.[13] This HPACT consisted of nurse practitioners, primary care physicians, and a preventive medicine physician.[13] The team provided primary, episodic, and urgent care services to Veterans in a tent encampment during the COVID-19 pandemic.[13] Many Veterans had SUDs and mental health conditions and were ultimately connected to psychiatry and psychology care via iPad video visits.[13] In addition, many Veterans were disengaged and distrustful of healthcare services, underscoring the need for building trust and rapport, and for focusing on Veteran needs and priorities.[13]

Recommendations for Replication

Several key factors may be essential for successful replication of this program. First and foremost, partnerships with on-site supportive housing staff are vital. Case managers, social workers, nurses, and other support staff who already have existing rapport with Veteran residents can play a pivotal role in facilitating engagement. This can help bridge mistrust, introduce external team members, and encourage Veteran participation. Integrating outreach into existing housing facility workflows, such as community meetings, coffee chats, and provided meals, can improve visibility and access. Utilization of street medicine approaches, including door-to-door outreach and informal, quick check-ins (e.g., in the hallways and community areas) can increase opportunities for rapport building and service linkage.

To scale this model, programs could incorporate a "train-the-trainer" framework for harm reduction services, which has been demonstrated to be effective in linking individuals to overdose education and naloxone distribution, drug checking, and tobacco use education and treatment.[14-17] Similarly, on-site staff could be trained by harm reduction specialists, including clinical pharmacist practitioners, on overdose prevention, recognition, and rescue response with naloxone, on how to use fentanyl test strips, and on harm reduction principles and practice. These staff could then independently conduct outreach, distribute supplies, and reinforce harm reduction messaging as part of their routine care activities. This decentralized model increases program reach, promotes sustainability, and builds internal capacity for harm reduction within the housing settings.

Ultimately, replicating this QI initiative requires a flexible, Veteran-centric approach that prioritizes trust, accessibility, and continuity of care. Future adaptations may benefit from involving peer specialists with lived and living expertise, standardizing the collection of participant demographics and needs, and integrating feedback for continuous refinement of outreach strategies.

Limitations

Many Veterans served in this intervention reported substance use and mental health concerns. But because team members did not collect sociodemographic data as part of the intervention, we are unable to fully characterize the Veteran population served. Team members did not follow-up with Veterans who could not be reached via phone to update their phone numbers or track reasons that services were declined.

Conclusion

Street Medicine approaches to providing low-barrier, interdisciplinary harm reduction along with SUD, mental health, and infectious disease care demonstrate strong promise to increasing care access among Veterans residing in HUD-VASH supportive housing. Notably, integrating clinical pharmacist practitioners as team members is one innovative strategy for success. These practitioners are licensed clinicians with advanced education and training who provide direct patient care in a variety of patient care settings, focusing on comprehensive medication management.[18] Within the VA, clinical pharmacist practitioners can have a scope of practice to directly prescribe medication therapy, order and interpret laboratory tests, and provide patient education. As demonstrated in this pilot QI project, clinical pharmacist practitioner-led outreach successfully connected many Veterans with harm reduction resources.

Since project implementation, the clinical pharmacist practitioner now has designated time allocated for outreach. The pharmacist and on-site social worker conduct monthly outreach, with door-to-door visits, meetings with Veterans before/after community meetings and during lunch, and individual appointments with the clinical pharmacist practitioner to discuss substance use and individualized goals. Next steps are to expand pharmacist-provided care to include sexual health discussions, sexually transmitted infection (STI) testing, prescriptions for preventive medications like human immunodeficiency virus pre-exposure prophylaxis (HIV PrEP), and linkage to STI treatment. Future research is needed to evaluate sociodemographics, impacts on health and patient-reported outcomes, sustainability, and cost-effectiveness.

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Figure 1. Total Number of Veterans who Accepted ≥1 Type of Harm Reduction Supply (n=73)