

The California Street Medicine Landscape Survey and Report



Photo: Mark Horvath, Invisible People

Authors: Brett J. Feldman, MSPAS, PA-C; Corinne T. Feldman, MMS, PA-C; Alexis Coulourides Kogan, PhD; Sonali Saluja MD, MPH, FACP; Michael Cousineau, DrPH

About the Authors: Brett Feldman and Corinne Feldman are the co-founders of Keck School of Medicine of University of Southern California (USC) Street Medicine. Brett is the Director of the Division of Street Medicine. Corinne is the Director of Workforce Development and Education for USC Street Medicine. Dr. Coulourides Kogan oversees research initiatives for USC Street Medicine. Dr. Saluja is the Director of the Gehr Family Center. Dr. Cousineau is Professor Emeritus of Clinical Preventive Medicine at the Keck School of Medicine of USC.

Acknowledgments: The authors would like to thank all the organizations who participated in surveys and interviews for this study (see Appendix A for a full list). Many thanks to Alissa Maier, Bernice Sun, Kylie Sloan, Kimberly Yang-Tzu Su, David Panush, Seth Campbell, and Joel Hunt for their assistance with this project.

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Executive Summary

Introduction

Established in the early 1990s, street medicine is the provision of health care directly to people who are unsheltered in their own environment and has evolved from a fringe movement of health care providers to an organized area of medicine, with programs that span the globe.

With the largest concentration of people experiencing unsheltered homelessness in the nation, California is well positioned to scale the street medicine model in order to reach more people experiencing unsheltered homelessness. This study is the first to examine the current state of street medicine in California by asking, answering, and providing recommendations based on ten salient questions, including:

- Where are street medicine programs in California?
- Who do street medicine programs serve?
- What street medicine models of care have been implemented?
- How are street medicine teams staffed?
- How are street medicine services funded and what are they funding?

Methodology

Our team of researchers at Keck School of Medicine of the University of Southern California's Division of Street-Medicine identified 25 programs in California that met the definition of street medicine, as defined by the [Street Medicine Institute](#). A mixed-methods study of those programs was conducted, consisting of a 41-question electronic survey yielding a 92% response rate. Qualitative interviews with select programs and other health systems stakeholders (e.g., community-based organizations, government entities, managed care organizations, and the California Department of Health Care Services) were conducted, and verbatim transcripts were analyzed to identify salient themes. Finally, site visits with geographically, topographically, and organizationally diverse programs were performed which included summarization field notes and semi-structured interviews with street medicine program team members.

Key Findings

- Twenty-five street medicine programs operating in California were identified, with the majority located in Los Angeles County or the San Francisco Bay Area.
- Nearly half were part of a federally qualified health center (FQHC). Other sponsors were hospitals, independent 501c organizations, government entities, academic institutions, and health plans.
- Street medicine was a critical access point for people of color, with 25% of patients having identified as Black and 23% as Latino/x.
- Prescribers (physicians, physician assistants, and nurse practitioners) formed the staffing backbone of nearly all street medicine teams in California. Teams also routinely included registered nurses, community health workers and peers.

- More than two-thirds of street medicine programs diagnosed and treated mental health conditions and substance use disorder, with 60% having provided medication assisted therapy. The majority provided primary care services.
- Nearly all street medicine patients were insured, with at least 57% having Medicaid and 14% having Medicaid and Medicare.
- In 2021, most street medicine programs managed fewer than 500 patients and provided 500 or fewer visits.
- Two-thirds of street medicine teams reported onboarding and ongoing training specifically tailored to deliver health care to unsheltered people. Seventy-seven percent of respondents desired more street medicine-specific training to support their teams' growth.

Recommendations

The street medicine care model has the potential to reach many more unsheltered people across California, including those unable to seek care in traditional brick and mortar settings and those reluctant to seek care due to previous negative experiences with the health care system. Our recommendations for expanding and scaling street medicine in California include:

- More street medicine teams should be created, and current teams scaled and optimized, to meet the existing needs on the street. The Housing and Homelessness Incentive Program (HHIP) offers an opportunity to fund capacity building and growth.
- Street medicine teams should have a consistent practice of reviewing their race and ethnicity data and comparing it to local point in time (PIT) counts and Homeless Management Information System (HMIS) data as an accountability measure to ensure they're providing equitable access to street medicine services.
- The impact of street medicine and other models of care for people experiencing unsheltered homelessness should be evaluated to establish best practices and inform where limited resources should be directed.
- Robust, thoughtful policy around street medicine should include funding for the technical assistance and training required for street medicine programs to build capacity.

Foreword

Wendy gave the warmest, most comforting hugs of anyone I knew. She also deserves credit for dropping the word “transitional” from “transitional primary care” when describing street medicine. We met on a creek bank where she slept in 2012, a short distance from the shelter she had been asked to leave for coming back after curfew. She was a Registered Nurse and, like so many victims of the opioid epidemic, began with oxycodone after a car accident, then turned to heroin, then was turned out of her job and her home. She had nowhere else to turn but the creek bank that day.

We cared for each other in different ways for the next four years. By 2016, the health network thought everyone with health insurance should see me in the brick-and-mortar clinic where there were “more resources,” and where we could bill for visits. In theory, it should be a seamless transition for a patient to see a provider (me) on the street, and to then transition to seeing that same provider in a clinic. Wendy was a great candidate since we’d grown so close over the last four years. She’d also stopped using heroin for about six months and started the process of getting her nursing license back.

After I saw Wendy in the clinic, I told our nurse, Laura, what a wonderful visit it had been. Laura snapped, “Did she tell you she started using again?!” to which I shamefully had to answer, “No.” Laura said, “Well, she said when she sees you in the clinic, you’re her medical provider. You’re not Brett anymore.” I had been dehumanized the same way we, like so many others, dehumanized her by characterizing her as simply a subscriber to an insurance plan rather than a person. At that moment, I vowed to do two things. First, I vowed to treat patients in the location where the patients want to be treated. Second, since they deserve the same quality of care as patients who can be seen in a clinic, I vowed to improve the care we delivered on the street. Six years later, the state of CA recognized the street as a place where patients can receive their primary care, officially dropping the “transitional” title. Wendy deserves the credit for giving us the courage to be better with the care we were providing on the street, which has laid the foundation for how street medicine is practiced today.”

Background

California (CA) is home to 28% of the nation's homeless with 171,521 Californians having experienced homelessness on any given night in 2020.¹ Of the total number of people experiencing homelessness (PEH) in California, 70.4%, or 115,491 are people experiencing unsheltered homelessness (PEUH). Thus, a staggering 51% of the entire nation's unsheltered population resides within California's borders.² This population, which has been failed by a healthcare system that perpetuates and often magnifies inequality, poverty, and illness, faces significant personal and environmental barriers to healthcare. Street medicine is one access point designed to overcome some of these barriers and provide a conduit to health care and other services. Yet, little is known about the current capacity for street medicine in the state, including practice patterns, funding, and the patients served. To better characterize the depth and breadth of street medicine in CA, University of Southern California (USC) researchers, led by members of the USC Street Medicine team, conducted a landscape analysis of street medicine in the state with the hopes of informing best practices and policy to improve care for PEUH in California.

A staggering 51% of the entire nation's unsheltered population resides within California's borders.

Homelessness serves as a prism reflecting the shortcomings of other systems in society that have led to destitution and a breakdown of social structures. It's the result of systemic racism, poverty, and the objectification of people in such a way that they are dehumanized and treated as a commodity. As a result, people experiencing sheltered and unsheltered homelessness are forced to be preoccupied with survival (e.g., obtaining shelter, food, and safety), and often make health care a distant priority.³ Attempts to intervene have largely been system-centric. That means that efforts have been directed at fitting interventions into a system that was not designed to serve PEUH, instead of starting with patients' realities on the street and building a system to serve them there. Initiatives such as offering phone-based care navigation when the person doesn't have a phone, providing a bus pass without recognizing all of a person's belongings will be stolen if they leave, or extending a transportation benefit that is only accessible to people with an address fail to recognize the reality of life on the street. When a person can't fit into the system, labels like "non-compliant" or "treatment resistant" are assigned to further characterize the person as the problem, absolving the system of responsibility.

The results are disastrous for people excluded from health care. People experiencing homelessness have a high disease burden, with comorbidities and chronic diseases like hypertension and diabetes often left undiagnosed or inadequately treated.⁴ In addition, high rates of childhood trauma and systemic marginalization have resulted in higher rates of drug use and severe mental illness compared to the housed population.⁵ Existing barriers to care coupled with high comorbidities have resulted in increased usage of health care through the emergency department and a lower likelihood of having a primary care physician.⁶ The result of this disastrous equation is early, and often preventable, death, with the average age of death being 42–52 years of age.⁷ Los Angeles reported just under 2,000 homeless Angelenos dying in 2020–2021, the highest number of homeless deaths in the nation and a 56% increase in deaths from the previous year. The largest increases in deaths were among those 18–50 years old and in people who identified as Black or Latino/x.⁸ Other major cities, like San Francisco, also reported marked increases in deaths in 2020–2021.⁹ The top causes of death in major cities in California such as San Francisco and Los Angeles included acute drug toxicity/overdose, coronary heart disease or other chronic illness, and traumatic injury (traffic injury, homicide, or suicide).¹⁰ While COVID-19 contributed to increased mortality, drug overdose was noted as the primary driver of the increased deaths in Los Angeles and San Francisco, primarily due to fentanyl contamination of opioid and methamphetamine supplies.¹¹ Increased mortality among people experiencing

homelessness is not limited to California; a study published in 2018 comparing the mortality rates of adults experiencing homelessness in Massachusetts to housed individuals nationally concluded that the all-cause mortality rate for the unsheltered cohort was nearly 10 times higher than that of the housed population and nearly 3 times higher than that of the sheltered homeless.¹²

The Street Medicine Model

In response to this growing health crisis, street medicine came into existence as an innovative healthcare delivery system for people experiencing unsheltered homelessness. **Animated by the core values of love, authentic solidarity, and mutual respect, street medicine is defined by the Street Medicine Institute as “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.”** It isn’t done in a clinic, RV, shelter, or at a health fair, which all require people experiencing unsheltered homelessness to physically transport themselves to a place of care. It requires teams to “Go to the People,” the tagline of the Street Medicine Institute—to suspend the reality of the health care team and meet the patient where they feel most comfortable. It’s an intentional flip of the power dynamic wherein the patient leads the care team. Street medicine is performed via walking rounds, with care being delivered directly to the patient in riverbeds, under bridges, on the streets, or in any nook or cranny a person can be found. Street medicine providers seek to establish values-based relationships with patients based on mutual respect. This can contrast with the more system-centered relationships these patients have often encountered elsewhere. Street medicine providers have found these sacred relationships to be the essence of health care for those living unsheltered.

The definition of street medicine comes from the Street Medicine Institute, the current and historic global leader in street medicine, which coined the term and owns the trademark of the name. The definition was informed by years of experience serving people experiencing homelessness and participating in programs worldwide. The definition of street medicine and its differentiation from other types of medical outreach and mobile medicine has been reaffirmed by other notable organizations such as the National Health Care for the Homeless Council.¹³ Street medicine is distinct from other forms of health-related outreach such as mobile/RV medicine, street medics, and street health, which either don’t include care being delivered in the patient’s lived environment, or lack a provider (physician, physician assistant (PA), or nurse practitioner (NP)), and thus necessitate reliance upon referrals to a brick-and-mortar clinic.



The Evolving Street Medicine Model

Started by Dr. Jim Withers in the early 1990’s in Pittsburgh, Pennsylvania, street medicine has evolved to become a global movement. Street medicine grew beyond the prevailing outreach-based model of the time, which is still used today, of engagement, then referral, then treatment. Engage-refer-treat means outreach is conducted by medical and/or non-medical personnel with the goal of establishing a relationship on the street (engage), referring people to a brick-and-mortar or mobile clinic location (refer), and then beginning treatment (treat). In this model, care is not delivered in the patient’s environment as it is done in street medicine, but rather the patient must leave their environment to receive care in another location.

Street medicine was originally conceptualized as “transitional primary care,” with the goal of providing a basic level of care on the street so the patient can transition to a brick-and-mortar or fixed mobile clinic for further care

and treatment. However, it became evident that this model was often inadequate for people experiencing unsheltered homelessness, and that the barriers that prevented patients from presenting in traditional clinics remained despite the trust that had been built between patients and the street medicine team. After decades of experience, and assisted by advances in technology (e.g., electronic medical record keeping, point of care ultrasound, point of care lab testing), many street medicine teams have since dropped the “transitional” label from their approach and now have the goal of providing the same level of care on the street as is offered in the clinic.

It is unrealistic to expect people experiencing unsheltered homelessness to be housed prior to receiving comprehensive, patient-centered care.

In California, the piloting, scaling, and optimization of street medicine could not come at a more critical time. While street medicine is not new to California, with a handful of programs having existed (and sometimes been extinguished) over the last twenty years, the growth of programs within the state is undeniable. The Keck School of Medicine of USC Division of Street Medicine (USC Street Medicine), which provides workforce development and training to street medicine organizations in CA, has noted an increase in requests for training and technical assistance from programs within California. USC Street Medicine received 11 requests in 2018; that number increased each year, culminating at 21 in 2021. California’s sizable homeless population and skyrocketing housing and building costs have led those working in health and social services to realize that it is unrealistic to expect people experiencing unsheltered homelessness to be housed prior to receiving comprehensive, patient-centered care. While ending homelessness remains the ultimate goal for each city across California, the current reality of people experiencing homelessness must be acknowledged, and meaningful care on the street must be provided for as long as it is needed.

Current data characterizing street medicine programs is sparse, and primarily focuses on potential payment models or draws parallels with other similar locations of care (e.g., home visits) that are reimbursable.¹⁴ To our knowledge, there has never been a landscape study of street medicine published in the United States. This landscape study aims to characterize the current state of street medicine in California by focusing on the following ten key questions:

1. Where are the street medicine programs in California?
2. What types of organizations sponsor street medicine programs?
3. Why do organizations and people choose to do street medicine?
4. Who do street medicine programs serve?
5. What street medicine models of care have been implemented?
6. How do street medicine teams utilize referrals and partnerships to better serve patients?
7. How are street medicine teams staffed?
8. How is quality measured by street medicine teams?
9. How is the street medicine workforce being prepared for this work?
10. How are street medicine services funded and what are they funding?

Methodology

A mixed-methods study was conducted consisting of an electronic survey of street medicine programs in California; qualitative interviews with select programs and other health systems stakeholders; and site visits with geographically, topographically, and organizationally diverse programs. This study was approved by the Institutional Review Board of the University of Southern California.

Survey Development

Together, members of the study team developed a 41-item survey consisting of single-answer and open-ended questions. The survey was pre-tested for face validity, clarity, and appropriateness by two street medicine program directors outside of California (not included in the study sample). Programs were deemed eligible for the survey if they met the definition of street medicine set forth by the Street Medicine Institute.¹⁵ Programs that did not meet the criteria for street medicine were excluded from completing the rest of the survey.

Survey Participants

A list of known street medicine programs operating in the state of California was compiled based on knowledge of study team members, referrals from other programs and community partners, and administrative listserv data from the Los Angeles Street Medicine Symposium. A total of 38 programs were contacted via email and invited to participate in the survey; 3 programs did not respond to initial or follow-up invitations. Thirty-five programs responded (92% response rate), however, nine programs indicated that they were not currently performing street medicine at the time of the survey invitation. Out of the 26 responding organizations, one program had only been in operation for two months and their data were omitted due to concerns for validity with imputed or annualized data calculations. Survey data from 25 street medicine programs were included in analyses.

Study inclusion criteria targeted programs providing street medicine as defined by the Street Medicine Institute since it aimed to characterize the current state of street medicine in California. Programs and services for PEH that didn't include health care, provided health care exclusively in medical vans/RVs, or relied on referrals to locations that were unfamiliar to patients (e.g., clinic, shelter), while providing a valuable service, were excluded because their work does not meet the definition of street medicine.

Interviews and Site Visits

In addition to the survey, in-depth interviews were conducted with four different groups of stakeholders: street medicine programs, organizations partnered with street medicine programs (community-based or government), managed care organizations, and the California Department of Health Care Services (DHCS).

- In-person interviews were conducted with program leaders at five street medicine programs across California chosen for their diverse geography, topography, organization type, and program volume.
- In-person site visits were conducted to witness street medicine practice across the state first-hand at five street medicine programs that were also surveyed. Similarities and differences observed in programs' approaches, techniques, and strategies informed interviews and case examples.
- Interviews were conducted via HIPAA-compliant Zoom calls with four partner organizations, three managed care organizations, and the California Department of Health Care Services. The partner organizations were referred to a member of the study team as an exemplary or unique partner with a street medicine team in California.
- All interviews were guided by a semi-structured research protocol developed by the study team, audio-recorded, transcribed verbatim, and analyzed by a team of independent coders to identify salient themes. Interviews lasted between 25 and 99 minutes.

Limitations

There were several notable limitations to this study.

1. People currently experiencing sheltered or unsheltered homelessness were not interviewed for this study. While their voices are critical to understanding the impact of street medicine, the goal of this study was to gain an understanding of the scope and breadth of street medicine in California, as well as the challenges of and facilitators to practicing street medicine, from the perspective of street medicine programs and practitioners. Further research on the impact of street medicine programs should incorporate the views of people experiencing homelessness.
2. To ensure that the survey could be feasibly completed within a reasonable time frame, it was not possible to ask more detailed questions about the type of care that is provided, the context of care, or the patient population. For example, providers were asked if they were able to diagnose and treat mental illness; however, it was not feasible to ask about which types of mental illness they were able to manage.
3. The “other” category for insurance was not further differentiated making it possible that uninsured patients were captured through this selection.
4. Data were self-reported and are potentially subject to bias. Programs were asked to give their “best estimates” when electronic health record or population level data were not readily available. In many cases, street medicine program metrics and financials were not separated out from the sponsoring institution’s data and could not be reported separately. Additionally, it is possible that providers may have inflated the value of the care they provide as part of a street medicine program. However, the majority of street medicine providers also practiced in brick-and-mortar clinic settings, suggesting that they were able to make reasonable comparisons between each of the care settings.
5. Some limitations to the data on funding and finances for street medicine programs led to an incomplete data set. Several programs were either unable or unwilling to provide data or were unsure about how to respond to several of the survey questions. One reported reason was that the survey taker did not have access to financial data and a representative with access was unavailable. Another reason was organizations didn’t isolate street medicine financials and metrics from other programs, making street medicine data and expenditures inseparable from the general organization’s budget items. Finally, retrieving exact data is difficult and time-consuming. The inaccessibility of budgetary data highlights the need to build administrative infrastructure around street medicine programs to accurately track and report operating costs.

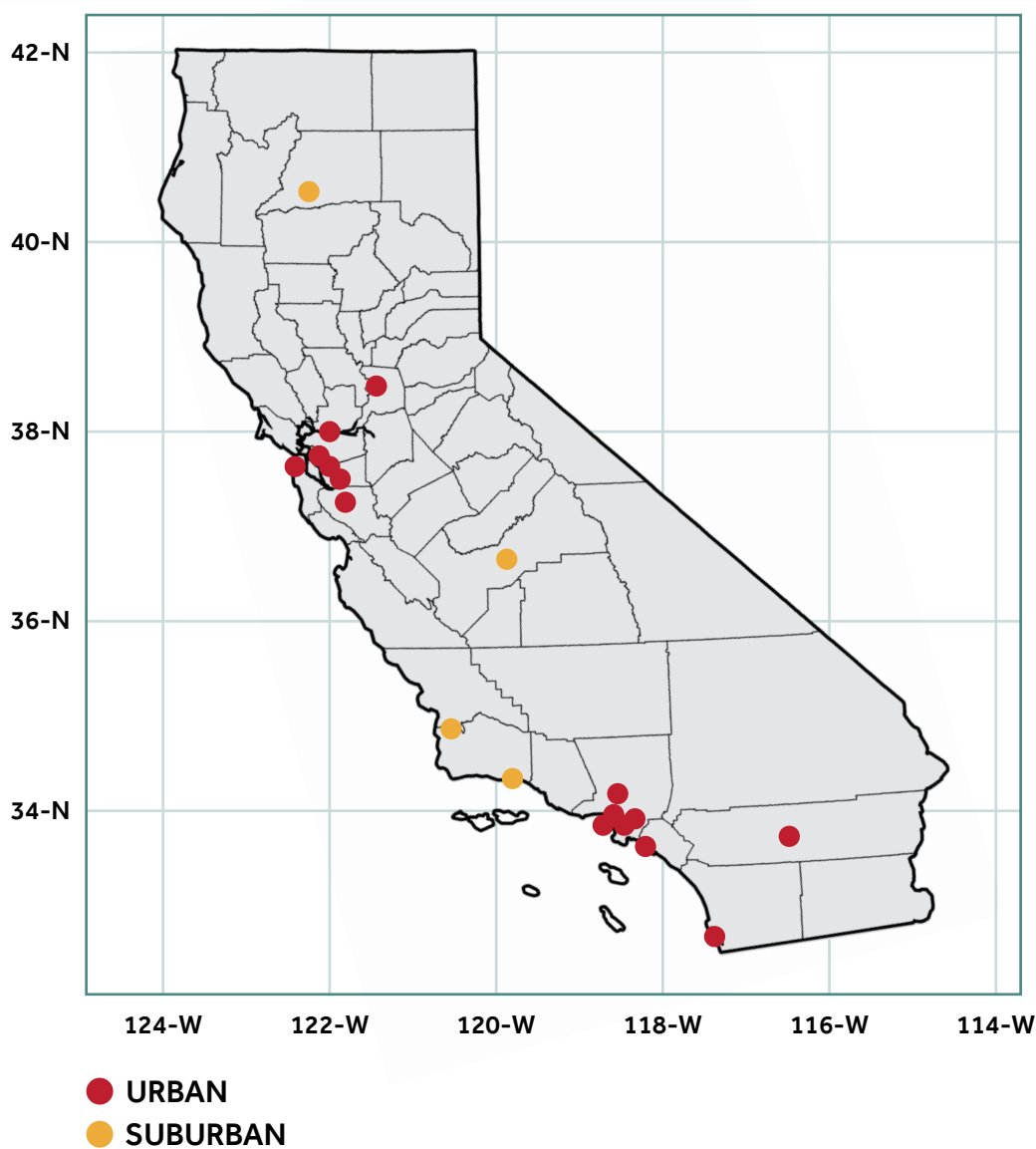
The findings from this study are organized to address ten salient questions that can help describe the current state of street medicine in California.

Question 1: Where are the street medicine programs in California?

Location

At the time of our survey, street medicine programs in California (N = 25) were most commonly located in Los Angeles County (32%) or the San Francisco Bay Area (32%), followed by other Southern California areas (16%), the Central Valley (12%), and Northern California (8%). While the vast majority of programs were located in an urban area, it is important to note that some programs travel to and care for patients in suburban and rural areas.

Figure 1. Geographic Locations of Street Medicine Programs in California



Source: Data collected by authors during survey conducted March and April 2022. Data visualization performed by Trevor Pickering, PhD, supported by grants UL1TR001855 and UL1TR000130 from the National Center for Advancing Translational Science (NCATS) of the U.S. National Institutes of Health. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

Discussion

This study yielded data from 25 street medicine programs from across the state. Two thirds of street medicine programs are in the two areas with the largest number of PEUH. Los Angeles County alone accounts for 42% of unsheltered homelessness for the state of California, and 21% of the nation's unsheltered homeless. The concentration of people experiencing unsheltered homelessness in Los Angeles County and the San Francisco Bay Area, coupled with county level funding to support them, likely spurred the creation of a larger number of street medicine teams to respond to the crisis compared to other areas of the state. The number of street medicine programs operating in the state is surprisingly high considering the general lack of federal, state, or local infrastructure to create or sustain street medicine programs. However, the vast of geography and varied topography of California creates many gaps, especially in counties that have a high percentage of people experiencing unsheltered homelessness but no operating street medicine programs. For example, there are over 2,300 people experiencing unsheltered homelessness in San Bernardino County alone and nearly 1,000 more persons residing in shelters, yet the county has no street medicine programs. The geographic spread of people experiencing unsheltered homelessness presents a substantial challenge to determining how to create and deploy street medicine teams. Our research also suggests that a lack of sustainable funding, organizational or administrative capacity, technical support, and perhaps knowledge about how to start and sustain street medicine programs are potential reasons that many PEUH still remain without access to street medicine health services in the state.



Recommendations

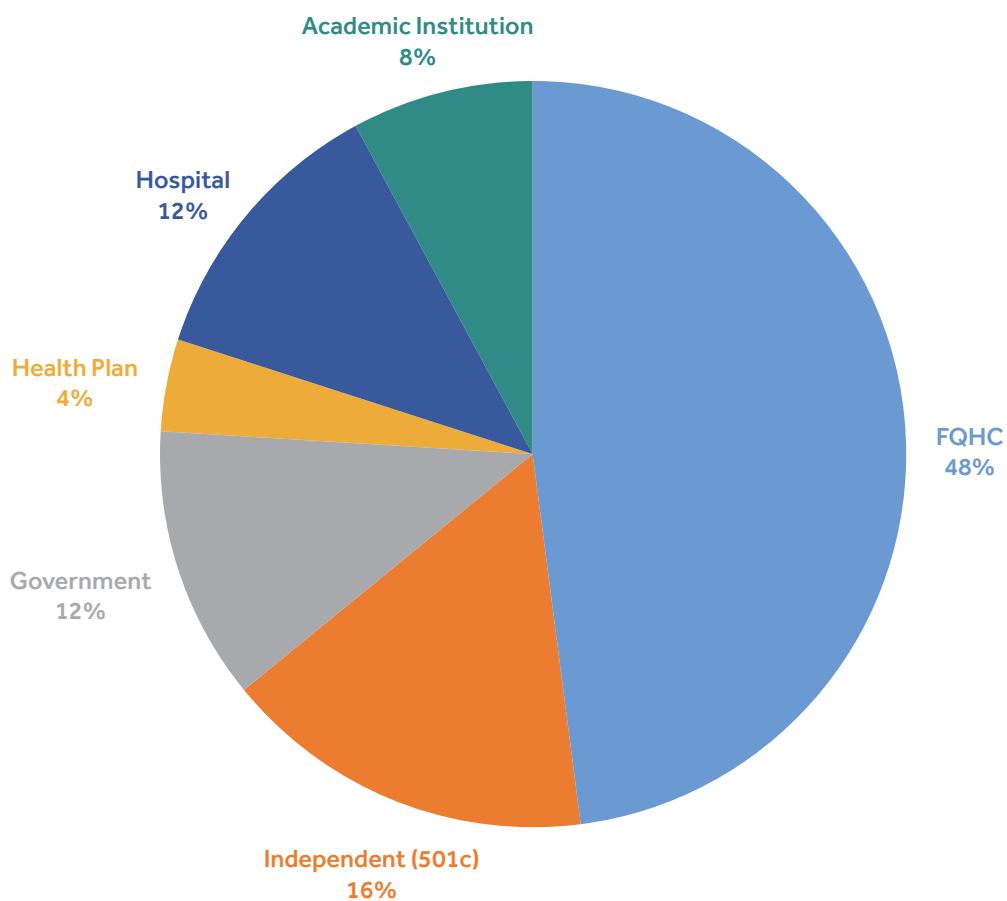
1. Currently, the number and distribution of street medicine teams is insufficient to cover the geographic area over which people experiencing unsheltered homelessness reside. Scaling the model of street medicine will require financial support to establish street medicine personnel and cover operational costs (e.g., transportation, field supplies).
2. A system for providing technical support for organizations should be established. State or federal funding programs should be developed to incentivize and support organizations to develop and sustain street medicine programs while providing money and time for organizational and administrative capacity development and ongoing technical support from experts in the field.

Question 2: What types of organizations sponsor street medicine programs?

Organization Type

Street medicine programs in California are sponsored by several different types of institutions. Among those surveyed, nearly half of responding programs reported being sponsored by a Federally Qualified Health Center (FQHC; 48%). Other programs reported being an independent 501c organization (16%), or being sponsored by a hospital (12%), government agency (12%), or academic institution (8%). Programs were least commonly sponsored by a health plan (4%).

Figure 2. Sponsoring Institutions of Street Medicine Programs across California



Note: FQHC is Federally Qualified Health Center.

Source: Data collected by authors during survey conducted March and April 2022.

Discussion

Nearly half of respondents were sponsored by FQHCs, which is unsurprising considering the alignment of street medicine with FQHCs' mission to provide care for underserved populations regardless of a patient's ability to pay. FQHCs can also qualify for grants to support their work, and have the resources to successfully write applications and submit them to funding agencies (e.g., Health Care for the Homeless Council). These programs may also have the infrastructure to support specialty referrals or other ancillary services that already exist within their clinic structure. The other half of street medicine programs come from a variety of organizational structures (e.g., independent non-profits, academic institutions, hospitals) demonstrating the willingness and ability of all organizations surveyed to care for this community.

Any organization wanting to do street medicine should be supported in doing so. However, because most benefits are linked to the type of sponsoring institution (e.g., hospital, FQHC), policy changes have a potential to only benefit certain organization types. For example, Hospital Presumptive Eligibility is used when an uninsured patient is admitted to the hospital as a way for hospitals to seek reimbursement for the care and for the patient to have Medi-Cal for 1–2 months upon discharge. This buys time for the application for Medi-Cal to be approved. Recently, Hospital Presumptive Eligibility has been approved to be used in the streets, not just in hospitals. Policies that extend Hospital Presumptive Eligibility to the street only for street medicine programs affiliated with hospitals would benefit the hospitals, and not the other organizational types. In this scenario, patients seen by street medicine programs affiliated with hospitals are presumed eligible for Medi-Cal by virtue of being homeless. While this marks an improvement from when Hospital Presumptive Eligibility could only be done in hospitals, limiting this privilege to hospitals would restrict benefits for non-hospital system patients seen by street medicine. Similarly, efforts to preserve the FQHC Prospective Payment System rate wouldn't benefit the other 52% of organizations who aren't FQHCs, leaving them a smaller reimbursement rate for the same work. These issues are important and may need to be addressed, but resolving them will only represent one step in the right direction. A comprehensive policy that links sustainability measures to the location and situation of the patient, rather than the system or organization in charge of their care, is recommended.

Relationship to Brick-and-Mortar Clinic

Every respondent had at least one relationship with providers in a brick-and-mortar clinic. The nature of the relationship was variable, but included: referring patients to clinics/health centers (80%), providing care to patients in clinics/health centers (60%), providing care to patients using mobile clinics/vans (52%), and referring patients for care from mobile clinics/vans (20%).

Discussion

In fact, street medicine exists along a robust continuum of homeless health care (e.g., mobile clinics, shelter-based clinics) that is often staffed by street medicine team members who split their time with traditional clinics.

Street medicine programs have a strong relationship with brick-and-mortar clinics and are often deployed from them. They aren't disconnected from the system at large. It is notable that the majority of respondents also reported delivering health care to the unsheltered population in a traditional clinic or mobile clinic/van where patients could be seen. At one time, street medicine was seen as a fringe movement in health care and somewhat rogue from standards or oversight. Programs often operated with little integration into the larger healthcare system. This data suggests an evolution from that period in time. In fact, street medicine exists along a robust continuum of homeless health care (e.g., mobile clinics, shelter-based clinics) that is often staffed by street medicine team members who split their time with traditional clinics. For patients, knowing that there are various opportunities and venues to receive care from a known provider may minimize fear of institutional re-traumatization.

The significant impact that a bad medical encounter can have on an unhoused patient was unanimously reported and highlights the importance of continuity across settings. One program director explained why continuity among the patients' providers is important, saying, "That's [referring patients to specialists/brick-and-mortar clinic care] actually a big concern because we can do everything to let our patients know that we care about them and we're doing what is medically best for them. But if I send them to a specialist who is a prick and treats them like trash, then they've stolen a lot of the capital that I put in. I worked really hard to have this person, not just trust me, but have a little bit more trust in the medical establishment. And then to send them to someone who just treats them like trash is awful."

Recommendations

1. Organizational type (e.g., Federally Qualified Health Center, health plan, non-profit, academic teaching center) does not determine whether street medicine is feasible. Organizations interested in doing street medicine should pursue it regardless of their organization type.
2. A comprehensive policy that links the sustainability measures to the location of the patient, rather than the system or organization, is recommended.
3. Many street medicine team members provide care on the street and in other settings where they may see the same patients. Further study is needed to understand how this might impact the health outcomes of these patients.

Question 3: Why do organizations and people choose to do street medicine?

The analysis of interviews conducted with an array of sponsoring institutions and their team members highlighted three main drivers for choosing to do street medicine.

Street Medicine Aligns with the Organizational Mission

Organizational mission was a strong driver for sponsoring street medicine programs. For example, one program director described the origins of their program blossoming from, “. . . this strong social justice mission and [it] felt that street medicine just fit into that”. Another explained that at their FQHC, “. . . there’s a mission to provide health care for the underserved, generally”. For a third site, this specifically meant caring for all patients regardless of insurance status and ability to pay: “The mission of our organization is, basically, to provide medical services to people irrespective of their ability to pay. So, whether you have insurance—good insurance, bad insurance, no insurance—it doesn’t matter. We want you to get high-quality medical care.”

Street Medicine Aligns with an Employee’s Personal Mission

Street medicine providers also highlighted two larger, related questions: “Who are we responsible for?” and “Who is the community we’re trying to serve?” During the interviews, program directors described a realization that even when street medicine services refer back to brick-and-mortar clinic services, there are limitations in their ability to care for everyone. One program director explained that while they were working for a community hospital, they questioned, “Was our community only the people who were coming to us or was our community a larger version of that, that extended beyond our four walls? When I decided that I needed to be outside with the people, that my community extended beyond the hospital, I left to start doing street medicine.” Interviewees further commented on their desire to provide equitable care for patients with a provider stating, “I’ve always been drawn to the social justice aspects of street medicine. I like the purity of what street medicine represents within medicine as a whole,” and described feeling like the model of care needed to be “flipped” to really meet people where they are in order to provide the best care possible.

“I had a patient early on who came in [to clinic] and trusted me to see him. He was so excited, and things had turned around for him. He was doing so well. When he left to go back to his encampment from our appointment, someone had burned down his tent and all of his belongings. It was hard for me not to feel guilty of our medical system. The model didn’t meet his needs in that moment.”

Street Medicine Allows This Population to Have Continuity of Care

A desire to improve continuity of care was also a significant driver for developing street medicine programs. Programs mentioned that they felt street medicine provided an opportunity for patients to have better, more coordinated longitudinal care compared to the typical health care utilization pattern of emergency department care. One program reflected, “I think our patients, more than anyone, can speak to the value of street medicine. Historically, they haven’t had the best experience with health care, and they haven’t had a medical provider that’s

maintained continuity with them, or at least been cognizant of trying to meet their needs. I think our patients respond very positively to that." Community-based organizations have also observed the value street medicine patients place on continuity. One representative of a community-based organization succinctly explained this finding: "Folks would rather see them [street medicine providers], if possible, than go to the emergency room. It's a beautiful thing that thing is. [But] it certainly demonstrates the breakdown in access to medical care."

"I think our patients, more than anyone, can speak to the value of street medicine. Historically, they haven't had the best experience with health care, and they haven't had a medical provider that's maintained continuity with them, or at least been cognizant of trying to meet their needs."

Discussion

The barriers people experiencing unsheltered homelessness have to accessing traditional health care are numerous, and include both external system barriers and internalized cognitive or emotional barriers that may be mitigated by the delivery of trauma-informed, compassionate street medicine. It has been suggested that the need for street medicine to exist is an indictment of the current system, and our interviewees described powerful moments of being fed up with the status quo and feeling moved to act. Reasons to start a street medicine program were varied, and the authors hypothesize that a combination of motivators are needed for the successful launch and optimization of a street medicine team. When the concept of street medicine meets an organizational mission, it can easily gain support and momentum across all levels of the organization. Still, something more than institutional support and permission is needed to build something from the ground up; understanding intrinsic motivators of key team members is critical to program success. Organizations often rely on a person or small group of people to champion street medicine initiatives. Because of their intrinsic motivation, they are able to work through inevitable challenges inherent to starting something new. A challenge to scaling street medicine may be in finding enough individuals who are intrinsically motivated and feel they have the skills required to create new street medicine programs. It is imperative that institutions seek out street medicine champions whose personal missions align with institutional missions, and that there is tangible institutional support for leadership development in street medicine champions as well as a commitment to helping to mitigate challenges that arise.

One specific intrinsic motivator described by our interviewees was that street medicine counteracts moral injury. Moral injury occurs when we "perpetuate, bear witness to or fail to prevent an act that transgresses our deeply held moral beliefs."¹⁵ Moral injury was originally described by the Veterans Administration to explain the experience of soldiers who returned from combat unsure of their morality as a person based on the decisions and actions they took while deployed.²⁰ Since the COVID-19 pandemic, research around the cause of burnout and moral injury in health care has grown. Our interviewees describe distress and disillusionment around the negative experiences street medicine patients had with the health care system and the provider's potential role in perpetuating a system that endorses this treatment through system-centric policies. Researchers suggest that the remedy for moral injury in health care is allowing for greater freedom (e.g., time allowed for a visit, encouragement to provide equitable care) in how we care for patients.²¹

“I think the message that we send to our patients—that society hasn’t turned their back on them—I think is worth more than any other outcome we can measure.”

The authors hypothesize that individuals and organizations acted by either developing or joining street medicine teams and gaining a renewed sense of satisfaction and meaning from their work. One interviewee stated, “. . . I think what we do in street medicine does make a difference. It doesn’t always feel that way, but when you look back, you can see: one, that we’ve really been able to help people in their care. Then . . . I think the message that we send to our patients—that society hasn’t turned their back on them—I think is worth more than any other outcome we can measure.” Another interviewee further commented that, “I think [street medicine] represents the best of us in medicine. I think it represents what medicine is meant to be...I think street medicine...gets us down to what medicine is at its core: That’s taking care of someone where they’re at and cutting away some of the extraneous fluff...But being able to say, in its very basic form, this is someone who’s sick and needs help and I’m going to do what I can to help them...I like the purity of that. I like, I think, the ethical simplicity.” Street medicine disassociates health care from a previously traumatic environment, placing it in the center of a community that is meaningful to the patient. The authors hypothesize that this physical separation from space allows the provider and patient to reconnect, with medicine as the instrument of peace. This also allows street medicine team members to take their personal philosophy of social justice, echoed in their interviews, and assertively live it through their medical practice.



Recommendations

1. Organizations considering launching new street medicine programs should strive for alignment of their mission (e.g., how community is defined, how success is measured) with the personal missions of those hired to work in street medicine.

Question 4: Who do street medicine programs serve?

Number of Patients and Visits

In FY 2021, on average street medicine programs in California reported caring for 615 discrete patients (SD = 694.5; range = 30–2,195) and conducting 2,352 patient visits (SD = 3,353.3; range = 77–11,546). However, about two-thirds of the programs reported caring for 500 or fewer patients in FY 2021 (37% cared for 1–250 patients; 32% cared for 251–500 patients). A wide range in the number of patient visits was observed, however, programs most commonly (30%) reported conducting 500 or fewer visits in FY 2021. There was no distinction in the survey between patients seen longitudinally for primary care versus for a singular urgent care visit. Furthermore, “panel size,” a term used in brick-and-mortar primary care settings where patients are assigned to a clinic, was not recorded since this wasn’t possible for street medicine at the time of the survey.

Discussion

Street medicine programs are providing critical access points for thousands of patients each year. The wide variations of unique, unduplicated patients reported and patient visits provided (SD 694.5 and 3,353, respectively) is likely due to a combination of factors. Some factors that may influence the number of patients served include scope of practice (e.g., focusing on acute care vs. management of chronic conditions), size and staffing of the team, frequency of street medicine rounds, or team experience. Programs that are smaller may have more limited dedicated budgets, less street time, or fewer dedicated personnel, resulting in fewer unique patients seen and patient visits performed than programs with more experience, dedicated funding, personnel, or time on the street.

Panel Size

Panel size wasn’t specifically asked about in the survey because no such official designation exists for street medicine providers. However, determining a street medicine panel size and corresponding staffing ratios can be inferred from the data and used to estimate the number of teams needed to cover an area. Patient panel sizes, defined as the number of individual patients under the ongoing care of a specific provider (physician, MD, DO), are commonly tracked in primary care settings. These data are used to determine if practices can accept new patients and inform an ideal staffing model based on a provider-to-patient ratio. Though not specifically determined through our data set, panel sizes are smaller for street medicine programs than a typical primary care clinic of 1200–1900 patients per provider considering the majority of teams (made up of multiple full-time equivalents) cared for 500 or fewer unique patients per year.²² Identifying an ideal patient panel size in primary care has been linked to improved health outcomes for patients because of its impact on access to care. Essentially, when patients can easily access their care, and more services can be provided during a single visit, people are healthier.²³ Literature suggests that ideal panel sizes should be adjusted based on practice style and patient complexity. A typical primary care patient is seen 3–4 times per year.²⁴ However, street medicine patients either move or are moved frequently, and their severity of medical and social complexity leads most teams to see patients weekly or every other week lest they lose them. Panel sizes are also linked to the number of non-clinical support staff (e.g., social workers) needed to support physicians, PAs, and NPs. Since street medicine uses a true team-based model, higher ratios of non-provider staff to patients are needed as well.

One program director stated, "... People experiencing unsheltered homelessness just can't access care the way the rest of us do. If they deserve care, which they do, then it's our duty to leave our offices and to go to them, to go to the people in a very assertive way...This requires a very high level of touch."

An additional consideration when determining the appropriate panel size is to consider how funding structure may limit the capacity of street medicine teams. Many teams in California operate as a subcontracted medical service to a social service organization. While patients benefit from having access to experts in both medicine and housing traveling together, this partnership can influence panel size in two distinct ways. First, the panel size for the case manager determines the panel size for the street medicine team. Since they're subcontracted, they can't operate outside the parent organization's panel size. One program director commented, "We are subcontracted to three multidisciplinary teams. Each team has a max caseload of 20 clients which means our patient panel is limited to 60 patients. We have the capacity to see 300 but can't because they are maxed out." In addition, case managers for the organization typically lead the engagement efforts, enroll a patient for case management services, and then determine if the patient has medical needs. If the case manager determines no medical services are needed for clients on their panel, the street medicine panel size is limited further. Multiple street medicine programs surveyed operated in a subcontractor capacity as described, potentially lowering the average panel size from the optimal capacity of the street medicine programs reported in this study.

There can also be a mismatch in measurable outcomes. Social service organizations often have a primary indicator of success linked to the number of clients housed whereas a street medicine team follows health-related outcomes. This can lead to disparate lists related to client/patient selection and prioritization, and could potentially fracture the working relationship between partners. Organizational leadership from both street medicine and community-based organizations should be aware of the potential for competing priorities and develop a joint strategy that allows the most medically-vulnerable and housing-ready people to be seen equitably. This could include liberalizing rules concerning who may make the first contact with a potential patient, or allowing street medicine teams to have a separate panel of patients.

Time Allocation on the Street

Street medicine providers commented on the fact that street medicine visits take longer and yield a lower patient volume than do visits in brick-and-mortar clinic settings. In a brick-and-mortar practice, clinicians address 3 diagnoses²⁵ and spend an average of 20.8 minutes per visit.²⁶ Shorter, time-pressured visits are associated with contributing to disparities of care observed in socially disadvantaged groups. This leads to fewer discussions about applying preventive measures or addressing psycho-social needs, and is associated with clinical inertia, meaning that clinicians "watch and wait" rather than implement appropriate action around chronic disease management.²⁷ Such an association may be even more pronounced in PEUH, who often need physical, mental health, and substance use disorder diagnoses to be addressed.²⁸ The burden of disease observed in the street medicine population discussed below, coupled with complex social needs, supports this perceived and documented need for longer, more frequent visits. Other factors such as travel time used to search for patients must be accounted for when determining panel size, visit volume targets, and time dedicated to the street. Lastly, all patients scheduled in brick-and-mortar clinics have agreed to be seen on the first visit, whereas street medicine teams may require multiple visits to prove trustworthiness before establishing care. This is different from a no-show appointment in a clinic. A clinic "no-show" would be analogous to street medicine teams searching for but finding no patients. Street medicine "no-show" visits require a larger time investment compared to the empty time slot in a clinic due to the time spent searching.

Lastly, street medicine teams travel together, giving patients a multi-disciplinary, patient-led experience. This is great for care coordination, but requires a larger amount of provider time investment, leading to less overall patient volume. For example, if a patient visiting a brick-and-mortar clinic needs to see the physician, social worker, and community health worker, appointments to see these professionals can be scheduled consecutively. When the patient is finished seeing the physician, they will see the social worker, and the physician will simultaneously see another patient. The same will happen with the community health worker. Assuming 20 minutes a visit, the physician will see three patients. Because teams travel together in street medicine, the physician will be present for all three visits with other team members, leading to a significant decrease in volume.

Further investigation into time spent accessing and attempting to access patients, time spent with patients, number of diagnoses addressed during a visit, social and environmental complexities, and proper staffing ratios would inform a proper panel size for a street medicine team, as well as whether a panel size is the correct way to view those cared for by street medicine teams.

Patient Demographics

Age

Research into homeless adults has observed “accelerated aging,” which is believed to be a result of exposure to the elements, poor nutrition, poor access to health care, and, sometimes, unmitigated substance use disorder.²⁹ Due to these factors, people experiencing homelessness have been found to have a functional age similar to a housed person 20 years older.³⁰ Further, unsheltered older and geriatric adults experience a much higher prevalence of geriatric conditions beginning at a younger age, which further supports the concept of premature and accelerated aging.³¹ For these reasons, researchers often categorize homeless individuals aged 55 years or more as ‘older adults.’³² In this study, ‘older adults’ were operationalized as aged 55 or older, which comprised 42% of patients cared for by street medicine teams in California. Older adults, aged 55 years or older have been identified as the fastest growing group of PEH.³³



There are notable challenges to caring for patients in this age group who are living on the street. Older adult patients experiencing homelessness are more likely to have multiple chronic conditions and require daily medications and disease monitoring. Such conditions might also make it harder for patients to walk or transport themselves in order to access clinics or other resources such as public bathrooms and water sources. Victimization rates for PEUH of any age are considerably higher than they are for those who are housed, and the risk of maltreatment rises as adults age. Elders on the street are approximately 11 times more likely to be assaulted, have a 12 times greater risk of being robbed (in which a perpetrator and victim come into contact), and over 20 times increased chance of experiencing theft (meaning that items are stolen but there is not contact between victim and perpetrator).³⁴

This combination of medical fragility and limited access to resources with severe social vulnerability requires a high level of support and care that street teams may be well suited to provide.

The remaining 58% of patients cared for by street medicine teams in California are ages 0-54, with those aged 25–54 years accounting for 49%. This population represents a significant opportunity for preventive medicine to be performed on the street, a practice that has been increasingly incorporated into street medicine through the distribution of fecal immunochemical tests for colon cancer screening, vaccine administration, and HIV testing. As mentioned previously, mortality among PEH is largely attributed to preventable diseases.

Finally, transitional-aged youth, or those aged 18–24, represented the smallest population (8%) served by street medicine teams. Their numbers are in line with the proportion of transitional-aged youth tallied in the 2020 California Point In Time (PIT) count (7.9%).³⁵ Federal law, such as the Runaway and Homeless Youth Act of 1974, provides specific funding for sheltering and housing this population, which likely contributes to their relatively lower representation on the street.³⁶ Leveraging a relationship with organizations that can access these and other similar funding streams to support street-dwelling youth should be a priority for street medicine programs caring for this population.³⁷

Table 1. Street Medicine Patient Demographics in California, by Total% (N = 25 Programs)

Demographic Characteristics of People Receiving Street Medicine Services in CA, by total% (N=25 programs)		
	<i>Mean</i> †	<i>Min-max</i> §
Age		
Children age 18 and under	1%	0-5%
Youth age 18-24	8%	0-30%
Adults age 25-54	49%	22-78%
Older adults age 55-61	25%	10-51%
Geriatric adults age 62+*	17%	5-30%
Gender		
Male	59%	22-90%
Female	35%	8-73%
Transgender	2%	0-10%
Gender nonconforming	1%	0-5%
Race and Ethnicity		
American Indian and Alaska Native	2%	0-5%
Asian	2%	0-8%
Black	24%	3-71%
Latino/a/x	23%	5-60%
Native Hawaiian and Pacific Islander	0.70%	0-3%
White	45%	15-80%
Multiracial/Other	10%	0-27%
<p>*One organization combined older adults with geriatric †Mean: Average number of patients cared for by surveyed programs who identify with each category §Min-max range: the lowest and highest reported percentage of patients cared for by surveyed programs who identify with each category</p>		

Source: Data collected by authors during survey conducted March and April 2022.

The Point in Time count provides unduplicated one-night estimates of both sheltered and unsheltered homeless populations. The one-night counts are conducted by continuums of care (COCs) nationwide and occur during the last week in January of each year.

Gender Identity

Compared to the 2020 California PIT count, street teams in our sample are seeing more patients who identify as female (35% vs 28.6%), transgendered (2% vs 1.1%) or gender non-conforming (1% vs 0.5%).³⁸ This also supports the idea that street medicine creates a critical access point for those who are female, transgendered, or gender non-conforming. PEUH who identify as female experience higher levels of victimization, trauma, and violence in their lifetime compared to men who are unsheltered. They are also more likely to self-report their health as “poor,” which has been a predictor of mortality in other homeless populations.³⁹ Why this population is overrepresented in street medicine patient panels is not understood based on the data obtained in this survey and would benefit from further study. Street medicine teams should be well equipped with reproductive health services and services for transgendered or gender non-conforming patients, or able to establish referral patterns for their provision.

Race and Ethnicity

Black and Latino/x people have historically been overrepresented in homeless populations, likely due to disproportionate levels of poverty spurred by decades of structural racism. Black people specifically have had exceptionally disproportionate representation in homeless counts compared to their overall representation in state census data. For example, the 2020 California Census showed that 7.1% of the population identified as Black or African American, but that Black or African American Californians represent 31% of the state’s homeless and 29% of the state’s unsheltered homeless populations.⁴⁰ A report from the Los Angeles Housing Services states homelessness is a by-product of racism within systems of “education, criminal justice, housing, employment, health care

and access to opportunities.”⁴¹ On average, about 25% of patients being seen by California street medicine teams are Black/African American, with some teams reporting as much as 70% of their patient panel is within this category. Similarly, Latino/x populations have been overrepresented in homelessness counts compared to local census representations. 24% of California street medicine patients identify as Latino/x and make up 31% of the state’s unsheltered population. These populations are already subject to the health disparities associated with lifetime exposure to structural racism, resulting in, and compounded by, unsheltered homelessness. Racial and ethnically underserved groups can have high degrees of medical mistrust as a result of centuries of racism in the US health care system and egregious events in past and recent history, such as the Tuskegee Syphilis Study among Black men and the mass sterilization of Puerto Rican and Mexican women (among others).⁴²



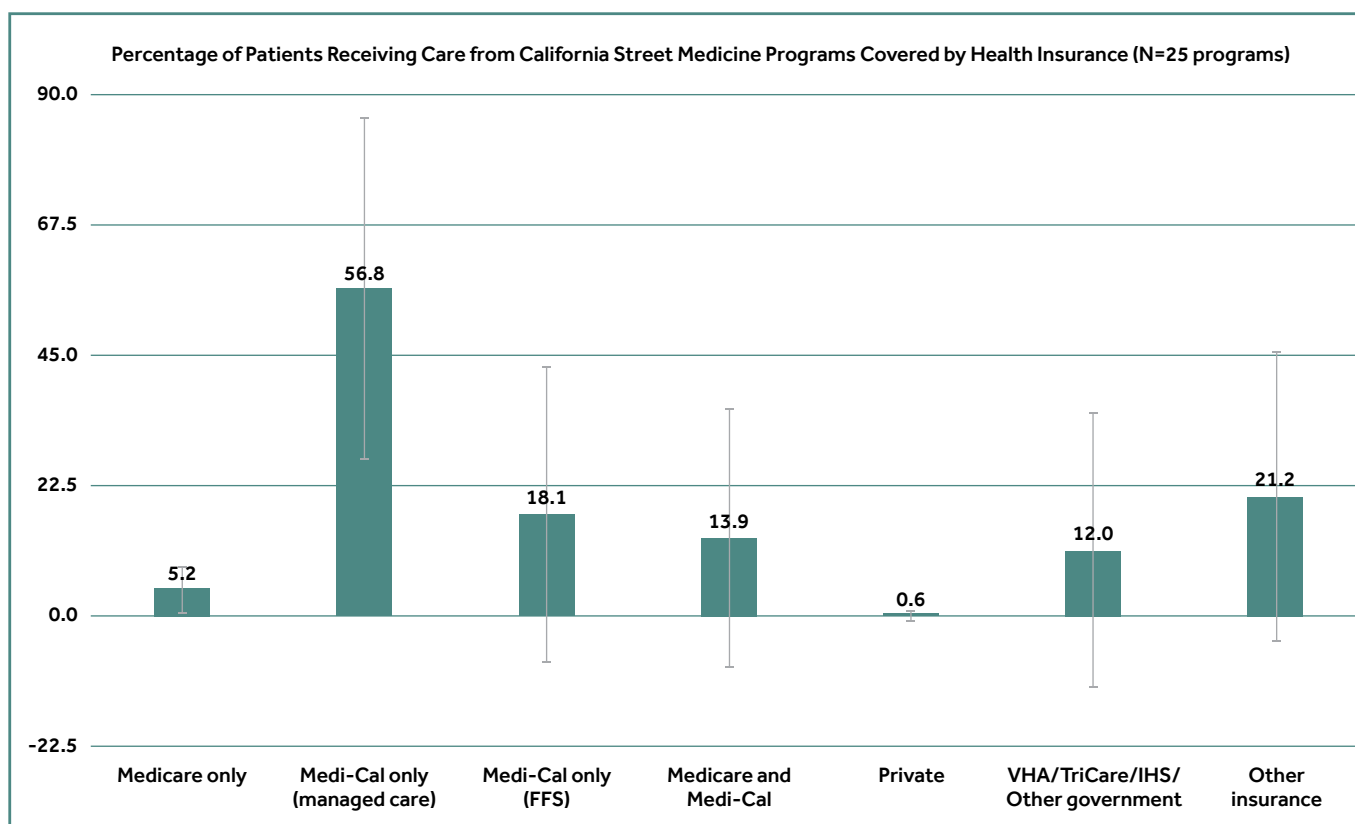
These data identify street medicine as a critical access point of health care for these populations. One important hallmark of street medicine is the assertive engagement of patients. In contrast to typical care, in which patients initiate each encounter, street medicine teams seek out patients directly. Street medicine’s proactive care model has the potential to reach more racially/ethnically diverse patients who might otherwise be reluctant to seek care due to medical mistrust or previous negative experiences, including racism, with the healthcare system. Conversely, if bias or racism creeps into the street medicine teams, the potential to perpetuate structural injustice arises. Street medicine teams should have a consistent practice of reviewing local race and ethnicity Point in Time

count data as an accountability measure to ensure populations experiencing unsheltered homelessness have equitable access to street medicine services. When Point in Time count data are felt to be too broad (e.g., encompassing an entire city or county), street medicine teams are encouraged to review hyperlocal general census data with the understanding that unsheltered homelessness disproportionately affects people of color.

Patient Health Insurance

Patients cared for by street medicine programs in California held several different types of health insurance at the time of our survey, with the most common coverage being Medi-Cal managed care (57%). Other types of patient health insurance were Medi-Cal fee-for-service (18%), dual enrollment Medi-Cal/Medicare (14%), Veterans Administration/TriCare/Indian Health Service/Other government insurance (12%), Medicare only (5%), and private insurance (1%). Street medicine programs reported, on average, that 21% of the patients they cared for in FY 2021 had “other” insurance. However, none specified what constituted “other” insurance, nor if uninsured patients were included in that number.

Figure 3. Percentage of Street Medicine Patients in California Covered by Health Insurance (N = 25 Programs)



Note: FFS is fee-for-service; VHA is Veterans Health Administration; IHS is Indian Health Service

Source: Data collected by authors during survey conducted March and April 2022.

Discussion

Most street medicine patients have Medi-Cal managed care coverage, which assigns a primary care provider (PCP) to patients who then acts as the “gatekeeper” for many of their benefits including access to specialty care, durable medical equipment (e.g., wheelchairs), medications, and blood work. However, since street medicine patients are primarily cared for by street medicine teams and not the PCP they were assigned, this often results in a gap between benefit eligibility (e.g., benefits the patients are eligible for) and benefit accessibility (e.g., the benefits they can use). The California Department of Health Care Services has recognized this to be a significant barrier to care for PEUH, and has issued an All Plan Letter making street medicine providers Direct Access Providers and creating a pathway for them to be PCPs without a brick-and-mortar location. One site director explained, “Basically, our patients who are insured, when they get insurance they get assigned to a PCP, which has probably never seen them...That means that their assigned PCP is getting a per-member, per-month rate in order to not see that patient versus us [street medicine program] who are seeing that patient every week, sometimes twice a week, are getting no payment in order to provide that care...The other challenge is that all of their specialist referrals, durable medical equipment, medications, labs, all that, can only be ordered by their PCP in which they’re assigned to and who they don’t see...What ends up happening is we have to actually make an appointment for them for their PCP, who they’ve never seen. We have to take the time to go with them in order to ask the PCP to order these things that we could order and that we know that they need. Not only is it, quite frankly, a waste of resources for us, because these are things that we could do on our own, but it delays care. Patients get worse.”

Making street medicine providers Direct Access Providers will play a critical role in expanding access to primary care for PEH given that the majority of PEH utilize the emergency department as their primary source of care, or don’t access care at all. As Direct Access Providers, street medicine providers can access benefits for patients immediately without being their assigned PCP. Eliminating this barrier will save months of time waiting to switch a PCP assignment, as well as time and resources trying to access an assigned PCP to place an order the street medicine provider could place. Most importantly, patients will get the care they need in a way that honors the complexity of their conditions.

Ensuring that all who qualify for Medicare or Medi-Cal due to age, disability, or income are enrolled is essential to maximizing access to care and other services. Survey respondents reported that 5% of their patients had Medicare alone. However, most of these individuals would likely be Medi-Cal eligible based on income. Patients who are dual-eligible may qualify for extended services such as wrap-around services and long-term services and support, in addition to added discounts on pharmaceuticals extended to Medi-Cal beneficiaries but not Medicare beneficiaries.⁴⁴

Similarly, enrolling eligible patients in Medicare could improve access to medical care (some providers don’t accept Medi-Cal due to low reimbursement rates, but do accept Medicare) or open the door to more housing options with higher levels of care. Street medicine providers may tend to overlook age-related benefits associated with Medicare in favor of connecting patients to homeless-service related benefits; however, both sets of benefits should be utilized to maximize support for patients.

Health Characteristics of Street Medicine Patients

Street medicine programs in California reported that, on average, most of their street-based patients are diagnosed with one or more chronic physical health conditions (86%), a mental health disorder (64%), and a substance use disorder (67%). Importantly, some programs reported that 100% of their patients fell into one, two, or all three of those diagnosis groups. Street medicine also takes care of a disproportionately high number of people experiencing chronic homelessness (homeless for at least 12 consecutive months or on at least 4 separate occasions in the last 3 years). Street medicine programs reported that 76% of the patients they care for are chronically homeless, while the US Department of Housing and Urban Development reports that 37% of PEH in California experience chronic homelessness.⁴⁵

Discussion

Street medicine teams often follow the moniker of “letting the streets build the program,” meaning individual street medicine programs should build services that reflect the specific needs of the patients’ realities.

Street medicine teams often follow the moniker of “letting the streets build the program,” meaning individual street medicine programs should build services that reflect the specific needs of the patients’ realities. While nearly all patients had at least one or more chronic physical health conditions, two thirds had either a mental health disorder or a substance use disorder. Street medicine teams also tend to care for a high proportion of PEH that are chronically homeless with trimorbidity (i.e., experiencing a physical health condition and substance use disorder and a mental illness), perhaps in part because these highly vulnerable patients are most urgently in need of care from street medicine teams.⁴⁶ Chronic homelessness is a powerful structural determinant of health that includes repeated exposure to trauma, weather, infection, chronic stress, and stigma; leads to complex social, physical, and mental health needs; and results in very high mortality rates. Therefore, street medicine teams have responded by building robust clinical delivery systems that care for physical and mental health, as well as address other basic needs like food, water, and clothing as described in Question 5.

Recommendations

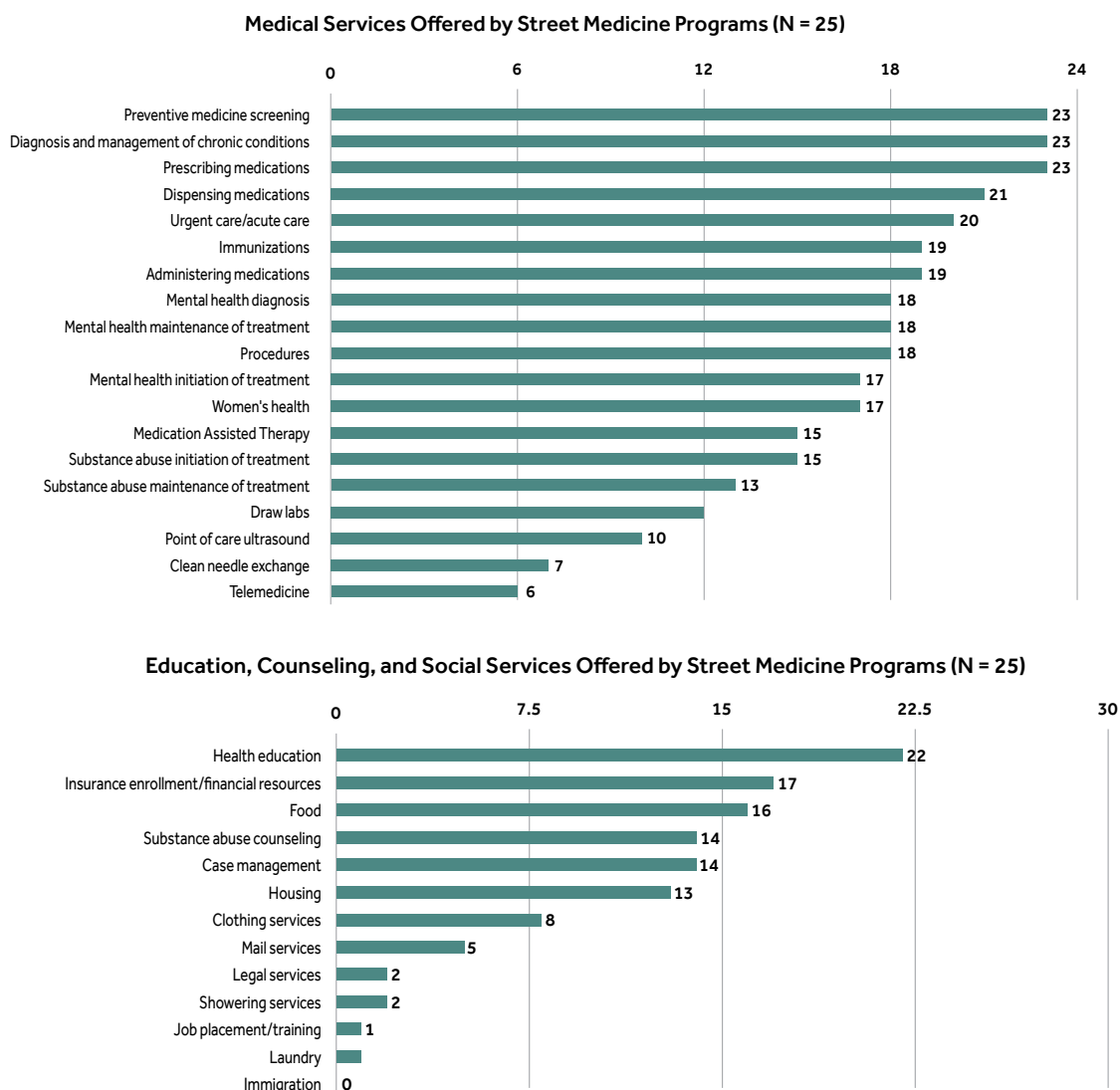
1. Research should be undertaken to better describe details of street medicine patient encounters (e.g., time spent, number of diagnoses addressed, frequency of visits, addressing physical and social needs simultaneously) to improve understanding of the ideal street medicine models and the impact of street medicine on health outcomes. This can also inform panel size.
2. Street medicine teams should have a consistent practice of reviewing local race, ethnicity, and age Point in Time count data as an accountability measure to ensure populations experiencing unsheltered homelessness locally are having equitable access to appropriate street medicine services. Teams should pay special attention to age-appropriate preventive screening (e.g., FIT testing, HPV self-sampling).
3. PEUH in California are aging while homeless. Policies and programs should be designed to support an aging population, accommodate for higher rates of age-related cognitive decline, and address their greater physical vulnerability on the streets. While resources like job training/placement wouldn't be appropriate to offer someone of retirement age, alternative programs which similarly enhance dignity, self-worth, and independence should be offered.

Question 5: What street medicine models of care have been implemented?

Services Performed by Street-Based Medicine Teams

Programs selected which services they offer from a comprehensive list of 32 different services that may be performed by street medicine programs surveyed. The most common services performed by over three-quarters of programs included: preventive medicine screening (92%), diagnosis and management of chronic conditions (92%), prescribing medications (92%), providing health education (88%), dispensing medications (84%), urgent/acute care (80%), administering immunizations (76%), and administering medications (76%). The authors found that 72% of programs make mental health diagnoses and perform mental health maintenance of treatment, and 68% initiate mental health treatment. Only six programs (25%) indicated that they were providing telemedicine care at the time of the survey. Thirteen programs (52%) are providing housing services as part of their street medicine programs.

Figure 4. Services Offered by Street Medicine Programs in California (N = 25 Programs)



Source: Data collected by authors during survey conducted March and April 2022.

Discussion

Acute and chronic condition diagnosis, disease management, and preventive medicine are nearly universally practiced by street medicine teams, which is in line with the practice of primary care. Notably, California street medicine teams have developed a higher capacity to treat substance use disorder than traditional primary care; 60% of teams surveyed are providing medication assistant therapy compared to 7% of primary care practices nationally.⁴⁷ Since two-thirds of California's street medicine patients are thought to have a mental health condition, it is essential for teams to provide mental health care. Our results indicate that indeed street medicine teams are routinely diagnosing mental health conditions, initiating treatment, and maintaining treatment for patients. In interviews, programs describe providing a higher level of behavioral health care than would be typical in a primary care office, including the use of long-acting injectable antipsychotics to treat conditions such as schizophrenia and bipolar disorder, as common practice. Though the argument could be made that patients with severe mental illness should ideally receive care from a psychiatrist, forthcoming evidence described in this landscape study reveals street-based psychiatric care for this population is scarce, requiring that street medicine teams provide a higher level of behavioral health care than is typical in primary care.

“There’s very few psychiatrists that actually go out into the streets. We don’t bill . . . it’s all grant money . . . but it’s also not sustainable. We’re looking into other models of doing consultation. Doing more tele-psychiatry and then also helping our primary care providers increase their knowledge of providing psychiatric care PCPs [who] go out into the streets do a lot of psychiatry. As a psychiatrist, I want to support my colleagues in that and then also be there . . . because there’s no way that we’ll have enough psychiatrists physically going out into the field, even though I’d love that.”

Our data show that street medicine recognizes the importance of access to vital ancillary services like the pharmacy, labs, and diagnostics. Providing these services on location is critical because the barriers that interfere with PEUH going to a clinic also interfere with them accessing ancillary services. In response, street medicine teams have developed systems to perform these services on the street. For example, 84% of teams are dispensing medications (i.e., over the counter and prescription medications) despite the service’s heavy administrative, regulatory, and financial burdens. When directly dispensing medications, programs are not able to utilize patients’ insurance pharmacy benefits and must often buy medications using their budgets. Another example of bringing services to patients is the use of point of care ultrasound, which is provided by 40% of California street medicine programs.

Further, street medicine in California recognizes the need for whole person care with respect to access to basic needs like food, water, clothing or even mail services by providing these services as part of their typical programming. This commitment to honoring the comprehensive needs of a PEUH is remarkable, especially considering the lack of funding or infrastructure to support or reimburse this type of care. [CalAIM](#), (California Advancing and Innovating Medi-Cal) a large-scale California Department of Health Care Services initiative providing a “long-term commitment to transform and strengthen Medi-Cal, offering Californians a more equitable, coordinated, and person-centered approach to maximizing their health and life trajectory,” had just been implemented at the time of the survey. CalAIM recognizes the provision of food and other essentials as part of health care through its Community Supports Program but doesn’t include reimbursement for meeting other social needs such as mail or clothing services. Both health care organizations and partnering community-based organizations can seek

funding for Community Support through CalAIM. CalAIM has already broadened the definition of health care, and further broadening is a topic for future policy consideration. CalAIM and the Housing and Homeless Incentive Program (HHIP) (See Question 10 on funding) include metrics and funding for housing services with health care. Over half of street medicine programs are already doing this without funding or incentives, demonstrating their commitment to the people they serve. This also places street medicine workers in an important position during the implementation of these programs, as they can share their experiences with new programs and inform policy decisions on how to integrate health care and homeless services.



Relatively few street medicine programs are using telemedicine services although many providers, including Federally Qualified Health Centers, hospitals, and clinics, are using some form of telemedicine.⁴⁸ In 2020, 95% of FQHCs reported providing clinical services via telemedicine.⁴⁹ The significant expansion of telemedicine across nearly all medical practices was in part because of the relaxing of federal and state restrictions on reimbursing for non-face-to-face visits in response to the pandemic. This might suggest a solution to the lack of care on the street could be to support linkage to either specialists or, in cases where a street team does not have a provider present, to a primary care provider. However, as seen with housed patients, telemedicine favors those with a phone or computer, stable internet access, unlimited phone minutes, and/or the ability to use technology without assistance.

The effective use of telemedicine is highly dependent on individual characteristics as well as the availability of telemedicine infrastructure and the program's capacity to support the patient and provider with telemedicine visits. Programs report using telemedicine when outreach is done by non-provider employees and to increase access to specialty care. One interviewee expressed concern that telemedicine will be the sole source of health care used in lieu of doing street medicine with a provider. Telemedicine visits can only offer a limited physical exam. In a housed population, the lack of physician exams could be compensated for by imaging, but street medicine patients typically lack access to imaging, making the full physical exam even more valuable. For example, a patient suspected of having pneumonia seen via telemedicine could have an X-ray to aid the diagnosis. Many street medicine patients won't be able to access an X-ray, so the provider will rely on a physician exam to inform the diagnosis. If the visit is done via telemedicine, they rely only on the patient interview, which can severely impact the quality of care.

Street medicine programs report that telemedicine's greatest potential use may be in increasing their patients' access to specialty care. One consideration, however, is that access to telemedicine will rely on the street medicine teams, which usually travel together. This means to access a specialty appointment, a street medicine provider, RN, and outreach worker might all be present for the specialty visit. How will the time that the team spends supporting the specialty provider be compensated? How will the team make up the time that they weren't able to spend with another patient? Answering these questions is key to allowing telemedicine to function in a street medicine setting.

Follow into Housing

Just over half of programs indicated that they follow street-based patients into temporary/transitional AND permanent housing (58%), while 17% follow their patients into temporary/transitional housing only. No programs follow their patients only into permanent housing. A quarter of the sample (25%) reported not following their patients into either temporary/transitional OR permanent housing.

Discussion

“That longevity is really important, and we follow people. If they move encampments, if they move inside, we follow them. The care goes wherever they go.”

A considerable number of street medicine teams follow their patients across housing settings from the street to permanent sites. This may be surprising considering the focus of street medicine is to provide care to patients living outside, and street medicine teams are scarce compared to the number of PEUH. However, people who are newly housed need significant levels of support to transition from street to housed living, even when the patient is lucky enough to get into permanent supportive housing. Street medicine teams have often established trusting relationships with their patients and tend to have unique insight into factors that support or challenge a patient’s ability to remain in housing. Street medicine teams expressed concern about their patients feeling abandoned by their street medicine team once they were in housing. One site director explained, “That longevity is really important, and we follow people. If they move encampments, if they move inside, we follow them. The care goes wherever they go.” This potential lack of continuity could become another competing priority, where the patient has to choose between housing or seeing their medical team. Additionally, many barriers to traditional care which existed on the street continue to exist after move-in day, such as lack of trust in providers seen in the clinic, inability to navigate the clinic system, transportation challenges, or competing priorities like finding work. Finally, since patients often transition back to the street, street teams expressed that following patients indoors is a critical piece to care continuity and continued support for when individuals become unhoused or unsheltered again.

Recommendations

1. Street medicine is now being recognized as primary care because it’s providing primary care services. Attention needs to be paid to adjusting the system where needed to maintain the integrity of street medicine practice. For example, street medicine practices should be able to forgo the brick-and-mortar site visit currently needed to qualify as a primary care provider under Medi-Cal.
2. Street medicine teams provide many non-traditional medical services. Street medicine teams are providing these services rather than relying on community-based organizations. Some services will now be reimbursed through new programs by the California Department of Health Care Services, but the California Department of Health Care Services and/or health plans should further expand reimbursable services to match what street medicine providers, informed by their patients, have found to be most needed.
3. The use of telemedicine in improving access to care and enhancing the quality of care is worth exploring. However, its success will require adequate support for patients and street medicine providers. The feasibility and acceptability of incorporating telemedicine into street-based practices, from both street team members and patient perspectives, is an important area for future research exploration.

Question 6: How do street medicine programs utilize referrals and partnerships to better serve patients?

Referrals

Programs reported initiating referrals to 12 common types of social services. Referrals were most commonly made for housing (92%), mental health or addiction treatment (88%), food (84%), showering services (84%), and insurance enrollment/financial assistance (84%). Programs were also queried about their perception of how successful their referrals were to the different social services, along with their perception of how adequate each resource was to support the expressed needs of their patients. The authors found that programs that initiated patient referrals to food, showering, clean needle exchange, insurance enrollment/financial assistance, mail, and clothing services perceived them to be more successful than referrals to immigration, job training/placement, housing, mental health or addiction treatment, legal, or laundry services. Perception of sufficiency for each of the services was found to be similar, where the most sufficient resources were felt to be insurance enrollment/financial assistance, showering, clean needle exchange, food, and clothing services. Programs reported feeling that the least sufficient resources in their area were housing, job placement/training, and immigration services. One program specified that they also initiate referrals to “pet and veterinary” services, which have been successful and sufficient for their patients’ needs.

Street medicine programs provided comments on the challenges they face when referring patients to various services through community-based organizations in an open-ended survey question. The most commonly reported challenge was difficulties with partnerships. Specifically, this meant challenging hand-offs and follow-ups, capacity constraints (partner agencies not taking new clients), long lead times/wait times, five-day work weeks (not working on weekends), and lack of coordination. One program responded, “Most services are appointment-based, and appointments are the enemy of people experiencing homelessness.” Importantly, nearly as many programs that reported experiencing challenges with initiating patient referrals to other services (n = 7) indicated “no challenges” doing so (n = 6).

Table 2. Referrals to Community-Based Organizations and Perceptions of Success and Adequacy

Referrals to Community-Based Organizations and Perception of Success and Adequacy			
	% of programs referring	Average rating of perceived 'success' of referral*	Average rating of perceived 'sufficiency' of service*
Housing	92%	2.6	1.7
Mental health or addiction treatment	88%	2.8	2.7
Food	84%	3.5	2.9
Insurance enrollment/financial assistance	84%	3.4	3.3
Showering services	84%	3.5	3.1
Clean needle exchange	72%	3.5	3.0
Legal services	72%	2.7	2.4
Clothing services	68%	3.0	2.9
Laundry	56%	2.5	2.5
Immigration services	52%	2.0	2.0
Mail Services	48%	3.0	2.7
Job training placement	44%	2.0	1.9
Other	8%	3.5	—

Other= "pet and veterinary"; "refer patients to our health center"
**Rating scale 1-5 where 1=not successful/not sufficient and 5=always successful/definitely sufficient*

Source: Data collected by authors during survey conducted March and April 2022.

Partnerships

The notion of 'partnerships' was a salient theme during the interviews with street medicine programs and several community-based organizations that work (both formally and informally) with street medicine teams. The types of organizations interviewees mentioned as partners of street medicine teams varied widely (e.g., housing organizations, clean needle exchange programs, durable medical equipment company, government representatives). Interviewees described a strong level of "inter-reliance" between street medicine and other service providers, but a "double-edged sword" effect where that inter-reliance can be both beneficial and detrimental. Positive partnerships were described by street medicine programs as contributing to success, while poor partnerships were felt to impede or serve as barriers to success. Characteristics of 'good' partnerships included those with a strong sense of teamwork; common ground through a shared dedication to the work and population, common goals, and shared values; responsiveness and open communication; flexibility; recognition of roles and duplication avoidance; and "hav[ing] something to offer." Conversely, ineffective partnerships were characterized as those with a mismatch of values, goals, and philosophies; bureaucratic hurdles; poor communication and unresponsiveness; limited street involvement (i.e., "stay in the office"); or struggle due to burnout and moral injury. One site director made a distinction between some community partners. They explained, "They're generally great people who have been working with the homeless a lot longer than I have. And somehow, they're still resilient. And somehow, they're still like, genuinely looking out for this population's best interest [sic] . . . And then it seems like there's a lot of idealist people who are just getting into it, who don't really know what they're doing. They sort of treat patients in a parental way instead of an equal-value way...so there's good and bad people out there doing this."



Interviews with four community-based organizations that partner with street medicine teams in California revealed similar sentiments on the symbiotic nature, potential value, and characteristics of partnerships. Importantly, only one of the four organizations had a formalized, documented partnership (i.e., contract or memorandum of understanding) with street medicine. Nonetheless, they unanimously agreed that their partnership with street medicine “works” because their organization’s mission (described as their “guiding light”) is so closely aligned with street medicine. The prevailing theme that street medicine serves as a gateway or conduit to other services, such as those provided by the community-based organization, was pervasive throughout all four interviews and highlights the importance of partnership. For example, one interviewee explained that “any touch

point that offers a rope back to mainstream stuff” is an asset. They went on to provide an example: “. . . We started partnering with a needle exchange program and it completely opened up this population that wouldn’t talk to us, wouldn’t see a doctor, wouldn’t do anything. Suddenly they’re, ‘Are you coming back on Thursday?’ ‘I got your 30-gauge come your way, no problem.’ ‘And a peanut butter sandwich!’ ‘Yep, yep.’ Suddenly they’re talking to you!” Another interviewee explained how word-of-mouth can be mutually beneficial for street medicine programs and community-based organizations. They shared, “Street medicine is up here telling them [patients] about not just our services, but our vaccine clinic services ... Street medicine and their folks spread the word ... it’s very collaborative.”

Discussion

No one does this work alone. Realized referral patterns and sustained, mutually beneficial partnerships are critical to the sustainability of street medicine and the health of street medicine patients. Ideally, street medicine teams are able to do the things they do best (e.g., physical and mental health) while partnering with other community-based organizations that have expertise in other areas like housing or immigration services. Effective partnerships are about more than a list of services that each organization checks off a menu. They are primarily about mission alignment, parallel methodology (e.g., willingness/ability to leave the office, nimble responses), and shared measurable outcomes. In the absence of this ideal, street medicine teams seem to respond by taking on a wide scope of practice to include services well beyond that which is typically found in a primary care setting.

Among the most common, but least successful, referrals are those for mental health treatment, substance use management, and housing, which is likely driving the number of street medicine programs offering those services. In addition, the nature of individual readiness for mental health or substance use treatment or for housing often requires immediate action as the window of tolerance for the steps needed to see a specialist or complete housing paperwork closes just as quickly as it opens. On the other hand, referrals to food, showers, or clean needle exchange were very common, found to be easily obtained, and sufficient to meet local needs. It is possible that this is because these tend to be fixed site organizations that don’t require appointments or government issued identification, and that have consistency in scheduling and services offered.

Community-based organizations are often thought of as a bridge for street medicine teams to enter into the community with credibility. While they serve this important and ongoing role, this landscape study demonstrates that the relationship is mutually beneficial. Street medicine teams often have a much higher individual touch per patient than a community-based organization would have with a client. For example, a housing navigator would not have a reason to update a patient weekly on the lack of available housing. Street medicine, on the other hand, has multiple reasons to be in contact with patients several times per month. They become important messengers of information on behalf of the community-based organizations for individual patients or for entire unsheltered populations.

Recommendations

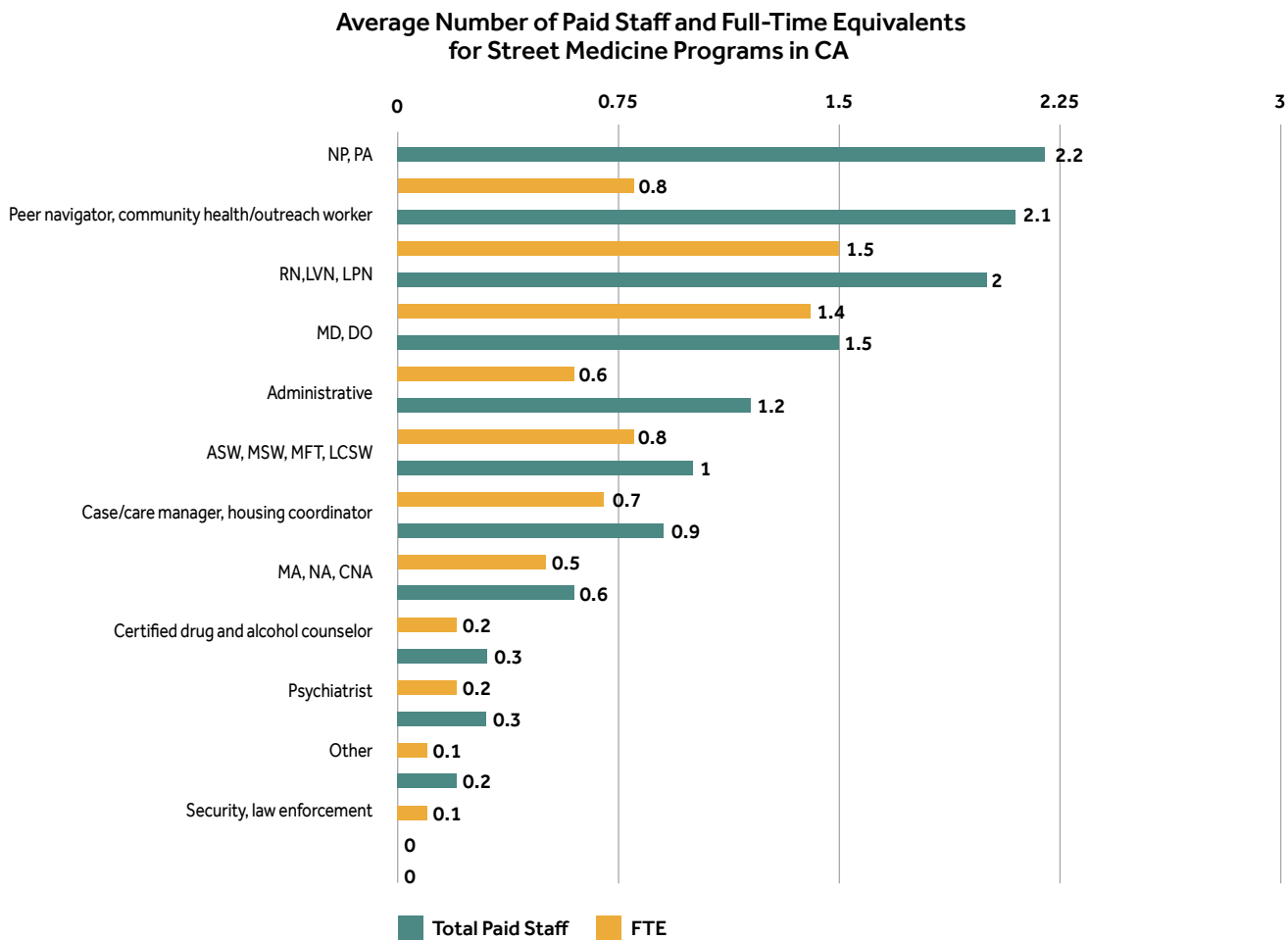
1. Street medicine programs should seek partnerships, both formal and informal, with organizations that share a similar mission and methodology in caring for people experiencing homelessness that offer expertise beyond medicine.
2. Partnered organizations should capitalize on the mutual benefits of partnerships to accelerate impact on homeless communities through aligning measurable outcomes and mitigating or eliminating patient barriers to successful referrals.
3. Street medicine programs should encourage, or even train alongside, organizations that accept referrals for people experiencing unsheltered homelessness to learn how to apply trauma-informed strategies to account for the impact of living unsheltered on accessing services, such as adjusting office policies on strict appointment times.

Question 7: How are street medicine teams staffed?

Program Staffing

Street medicine programs were asked how they staff their services (total paid staff, total Full Time Equivalents (FTE) of 40 hours per week, and total volunteer hours per month) with the following common types of professionals: non-psychiatric physicians (MD/DO), psychiatrists, advanced practice providers (NP/PA), nurses (RN, LVN/LPN), medical assistants (MA/nursing assistant/CNA), social workers (ASW/MSA/MFT, LCSW), certified drug and alcohol counselors, care/case managers/housing coordinators, security/law enforcement officers, peer navigators/community health/outreach workers, administrative personnel, and other staff. Across street medicine programs in California, wide variation in the average total paid staff, total FTEs, and total volunteer hours for each of the different types of professionals was observed. However, several prominent findings emerged:

Figure 5. Average Number of Paid Staff and Full-Time Equivalents for Street Medicine Programs in California



Notes: NP is nurse practitioner, PA is physician assistant, RN is registered nurse, LVN is licensed vocational nurse, LPN is licensed practical nurse, MD is doctor of medicine, DO is doctor of osteopathic medicine, ASW is associate clinical social worker, MSW is master of social work, MFT is marriage and family therapists, LCSW is licensed clinical social worker, MA is medical assistant, CNA is certified nursing assistant. Source: Data collected by authors during survey conducted March and April 2022.

- There are 33.9 FTE street medicine providers (physician, PA, NP) in California. There are more advanced practice providers dedicated to street medicine (19.3 FTE) compared to street medicine physicians (14.6 FTE).
- Of respondents who indicated they had at least one type of staff member listed on their team, all but one program had a provider on the team (physician, PA, or NP).
- A wide variation of staffing combinations was observed. Of respondents who said they had at least one type of staff member listed on their team (N = 19), 84% (n = 16) had at least a prescriber, nurse, and peer navigator. One team listed only a psychiatrist; one team listed an MD/DO and a peer support as the only team members; and one team listed an MD/DO, psychiatrist, PA/NP, and nursing, but no peer support team member.
- The total number of paid staff did not equal the total number of FTEs for any of the respondents, meaning that in all cases, more than one staff member contributed to a full 1.0 FTE. For example, an organization may utilize four people to achieve a 1.0 FTE.
- On average, programs reported spending 38.96 hours serving patients per week, with responses ranging from as little as 2 hours per week to 200 hours per week. Nearly half of the programs deploy providers (physician, PA, NP) to the street 20 hours or less per week. Twenty percent reported that providers spend between two and eight hours per week on the streets, and 28% spend 12 to 20 hours per week. Sixteen percent spend 24–40 hours per week while 24% spend 44–80 hours per week on the street. Finally, 8% responded they have 84 to 200 hours of provider time on the street each week.
- The greatest number of volunteer hours per month were from 'other' staff (mean = 16.6±75.8 hours/month; specified as: "coordinator," "driver," "medical students," "student volunteers," "resident physicians of family medicine," and "scribe"); social workers (mean = 5.8±21.6 hours/month); certified drug and alcohol counselors (mean = 3.2±16.0 hours/month); peer navigators/community health workers (mean = 3.2±16.0 hours/month); and physicians (mean = 3.1±7.3 hours/month).
- The role of volunteers appears to be a very important one. Instances of substantial hours of monthly volunteer support coinciding with lower FTEs for paid positions were observed. For example, one program reported 80 volunteer hours per month to support one paid person at 0.4 FTE (16 hours). Another program had one administrative staff person at a 0.1 FTE (4 hours) supported by 40 hours per month of volunteer work.

Discussion

Many street team members are only present on the street for small amounts of time per week. In addition to disrupting continuity of care for the patient, when street team members spend less time devoted to care on the street, they limit the growth of their street medicine skill set and hamper their care coordination proficiency.

Prescribers (i.e., physician, PA, NP), registered nurses, and community health workers/peer support members are the most common combination of roles making up the backbone of nearly all street medicine teams in California. This structure is responsive to the needs of patients who typically require medical care, care coordination, and emotional support from someone with similar experiences. This data set supports that the total number of provider full time equivalents to cover a population size of nearly 116,000 unsheltered patients is inadequate. If no additional provider FTEs were added, each provider would need to carry a patient panel size of 3,364 patients. Clearly, this is not feasible, and more provider FTEs will need to be added to adequately care for this population. It was demonstrated that many street team members are only present on the street for small amounts of time per week. In addition to disrupting continuity of care for the patient, when street team members spend less time devoted to care on the street, they limit the growth of their street medicine skill set and hamper their care coordination proficiency. For example, a high level of proficiency in behavioral health and substance use disorder treatment is necessary in street medicine. Practicing such skills one day a week as opposed to five can delay proficiency and make ongoing monitoring of the care plan in the setting of an evolving environment challenging. In provider and managed care organization interviews, all agreed that more time on the street was necessary to meet the needs of the current unsheltered population. One managed care organization noted “there needs to be significant efforts and intervention to reach out to them [people experiencing homelessness] and improve the overall quality of health. And it has to begin with Street Medicine because those are the programs that are best positioned, best know their community needs and how to support their members.”

With the data available, the authors were unable to discern if providers are using their partial FTE to visit the same locations repeatedly for continuity of care, or various locations less frequently to provide urgent care services. Many team members who are not working in street medicine full time are working in other clinical or care settings. While having providers work in other settings may provide some continuity for patients when they are ready to transition to a brick-and-mortar clinic, limited time on the street can jeopardize continuity for most PEUH who don't tend to use brick-and-mortar clinics. For example, three PAs are hired to provide a total of 4 days of care per week (0.8 FTE). In this case, either each patient could be shared among providers, which may disrupt the continuity of care, or the team would need to intentionally schedule the patient to be seen by the same provider each time. Future studies that focus on the implications of visiting the same location repeatedly versus covering a broader area with less frequency could help street medicine teams learn how to use their allotted street time for the greatest impact.



Notably, psychiatry is minimally represented in street medicine programs, despite the high prevalence of mental illness and substance use disorder in this population. While there is a nationwide shortage of psychiatrists for all populations, the lack of street psychiatry is likely magnified by increased time needed to locate patients and build rapport before a billable visit can occur. This leads to a lower potential patient volume and less revenue from a population that is primarily insured by Medi-Cal, which offers lower reimbursement rates compared to commercial payers. These challenges, paired with health care infrastructure that silos physical from mental health administratively and financially, can lead to very limited access to psychiatry for PEUH. As a result, there is evidence of non-psychiatry prescribers increasingly managing mental health and substance use disorder, rather

than waiting for the psychiatry shortage to abate. Co-locating mental and physical health services is a known best practice. Policy, payment, and systemic innovations in street medicine, which have typically focused on physical health, will need to integrate mental health to have optimal benefit. Second, there must be a realistic approach to

mental health care for PEUH. It's not feasible to staff every street medicine team with a psychiatrist due to funding and psychiatrist shortages. Employing PAs, whose profession allows lateral movement, to work in primary care and psychiatry simultaneously with oversight from a primary care physician, is a good way to extend the workforce. Alternatively, family nurse practitioners can pursue additional certifications which would allow for psychiatric treatment of patients while also managing primary care needs. Organizations such as SAMHSA offer training in substance use disorder treatment, including medication assisted therapy, that could allow street medicine team members to augment their skills.⁵⁰ Developing more training specific to the challenges of substance use disorder and treatment among PEUH, would be useful in supporting workforce expansion.

The use of telemedicine or simultaneous consultation with psychiatry or addiction medicine specialists may help enhance the care provided on the street if the use of technology for care is acceptable to patients. Two programs described integrating tele-psychiatry visits and street medicine provider-led psychiatric care into their practice. These strategies were born out of an identified patient need in their area and were gleaned by "listening to the streets". One site director explained, "We're looking into other models of doing more consultation. Doing more tele-psychiatry and then also helping our primary care providers [on the streets] increase their knowledge of providing psychiatric care."

All street medicine teams surveyed manage safety without the presence of a person specifically trained in this skill set (i.e., security, law enforcement). While safety is likely a top priority for street medicine teams, they instead employ street guides, who are sometimes referred to as outreach workers, community health workers, or peer navigators.

As a trauma-informed response to the negative interactions PEH have historically had with law enforcement, the history of the criminalization of homelessness, and the systemic racism that has often contributed to individuals' homelessness, all street medicine teams surveyed manage safety without the presence of a person specifically trained in this skill set (i.e., security, law enforcement). While safety is likely a top priority for street medicine teams, they instead employ street guides, who are sometimes referred to as outreach workers, community health workers, or peer navigators. One of the most common, and perhaps most essential, positions on a street medicine team, street guides work to locate and follow patients as they move or are moved by authorities. They then become situational awareness resources by monitoring the surroundings for potential safety threats when the team is present. Individuals who have personal experience with living on the street are better suited for this role as opposed to students or volunteers who serve as "look-outs" but don't have first-hand knowledge of the challenges posed by the streets.

Volunteers can serve an important role in street medicine and are filling critical gaps (e.g., extension or coordination of care) out of necessity where mainstream health care falls short. For example, a volunteer cardiologist can assist by providing specialty care on the street or helping with a seamless transition to see specialty care within four walls. Volunteer students serve as an important pathway to developing the future street medicine workforce or building a culturally competent workforce within four walls. However, a heavy reliance on volunteers suggests funding for street medicine programs is inadequate. Organizations that depend on volunteers may lack the

administrative infrastructure to meet standard risk management, compliance, and access standards. Services such as a 24-hour on-call provider or after-hours lines are often impossible to achieve with a volunteer-based organization. These organizations are also unlikely to have a billing department that can submit and process claims, in the event that equitable reimbursements for services were to ever be offered. Volunteers tend to have higher rates of attrition and require more people to reach a complete FTE compared to a full-time work force, making continuity of care more difficult. For example, the mean number of volunteer hours for a physician is 3.1 hours per month. To reach a complete FTE, it would require approximately 53 volunteers. To be able to deliver high quality health care to PEUH reliably, street medicine programs need a consistent and well-supported workforce, one in which volunteers and students can supplement care but are not central to the programs' functions.

Recommendations

1. The number of paid providers and staff must be increased to adequately meet the primary care needs of the nearly 116,000 PEUH in California by investing in the recruitment and development of interested team members and through a comprehensive sustainability plan that will minimize financial risk to organizations that want to begin street medicine programs.⁵¹
2. Increasing access to psychiatric services for PEUH and access to consultations for other street medicine providers is critical to addressing the high burden of mental illness and SUD in the population. Teams should consider feasibility and acceptability of telemedicine for patients needing psychiatric or addiction medicine consultation.
3. Training for non-psychiatric street medicine providers to diagnose, treat, and manage mental illness and SUD for PEUH should be offered, encouraged, and supported.
4. Sustainable funding for street medicine should be improved to allow volunteer and student roles in street medicine programs to be supportive of, as opposed to central to, program functioning.

Question 8: How is quality measured by street medicine teams?

Quality Metrics

Many programs reported that they collect their own quality metrics (39%). However, 26% collect no quality metrics. Some programs collected their own metrics along with Healthcare Effectiveness Data and Information Set (HEDIS) measures (17%), collected HEDIS-only metrics (9%), or were unsure (9%). Fewer than half of programs reported examining their impact on their patients' emergency department visits (33%), hospitalizations per patient per year (29%), or 30-day hospital readmission rates (17%).

Discussion

Quality metrics are essential in quality assurance and quality improvement for care being provided to patients. However, there was much debate about how to define quality of care among street medicine programs, managed care organizations, and the California Department of Health Care Services during interviews. Most programs collect some quality metrics, though they are not consistent across programs. The majority collect both Centers for Medicare and Medicaid (CMS) quality metrics (e.g., HEDIS) and their own. While following a national standard can be appealing as a benchmark to ensure care being delivered on the streets is comparable to usual clinic care, one shortcoming of using CMS benchmarks is that the comparison group is unequal. For example, CMS benchmarks for hypertension control are based on a population that is predominantly housed and does not serve as an appropriate comparison group for the patients served by street medicine programs. A more appropriate comparison group would be metrics associated with PEUH who are primarily managed by a brick-and-mortar clinic. To compensate for the lack of suitable external benchmarks and utilize metrics that reflect the unique needs of PEUH, street medicine programs have developed internal metrics. Such metrics incorporate the population's highly prevalent diseases and a lack of access to basic resources. For example, a street medicine team may track Narcan distribution given the enormous increase in overdose deaths related to fentanyl contamination, or consistent access to a bathroom due to the public health ramifications of forced open urination or defecation. In interviews with street medicine organizations working with clinics, managed care organizations, and the California Department of Health Care Services, none were able to provide HEDIS metrics for PEUH specifically.

Development of a validated standardized screening tool to accurately distinguish a patient's homeless experience (i.e., sheltered vs. unsheltered) could recognize and document the health disparities associated with this distinction and inform appropriate benchmarks for standards of care and the most effective location to provide care for PEUH, be it the street, clinic, another setting, or a combination of sites.

Organizations noted difficulty identifying PEUH. A new ICD 10 code exists for “unsheltered homelessness,” (Z59.02) and “sheltered homelessness,” (Z59.01) which might allow for data from the PEUH population to be analyzed separately if providers utilize these codes in their electronic medical record systems. However, one managed care organization noted, “Training on how to use the [ICD-10] codes is going to have to take place. Because a lot of the providers that are now offering these services are not familiar with these steps.” Validated screening tools for homelessness have routinely yielded higher-than-predicted rates of homelessness in health care settings versus reliance on self-reported status. While screening for homelessness has become more common, differentiating sheltered from unsheltered homelessness has not. Development of a validated standardized screening tool to accurately distinguish a patient’s homeless experience (i.e., sheltered vs. unsheltered) could recognize and document the health disparities associated with this distinction and inform appropriate benchmarks for standards of care and the most effective location to provide care for PEUH, be it the street, clinic, another setting, or a combination of sites.

Individuals who are placed in housing may transition back to shelter or street living, and vice versa. Ascertainment of current housing status can be difficult. As was noted by the Department of Health Care Services, “The hard part is if someone transitions into housing, they’re no longer homeless. We don’t have the best loop back to update the data.” One way to address tracking of a patient’s housing status could be to leverage the Homeless Management Information System (HMIS). Established by the HEARTH Act (2009), HMIS is a locally administered information technology system that is used to collect data about the housing and social services offered to people who are homeless or people at risk of homelessness. This system should document which community organization is engaging with the patient, what services are being offered, and which case manager has been assigned to the patient. There is theoretical benefit to sharing this information with managed care organizations and street



medicine teams. However, there are several notable limitations to HMIS. First, many street medicine teams do not have access to HMIS and have experienced barriers gaining access from local administrators of HMIS. Second, only patients who have been outreached to and completed a full client intake will be accounted for in HMIS. It will not provide a true denominator of unsheltered homelessness in a location. Third, street medicine teams who have gained access to HMIS find that client encounters are not routinely documented, and points of contact are not updated when staff turnovers occur, making coordination of care difficult. The efficacy of using HMIS as a tool to track housing status or coordinate care is only as good as the corresponding outreach and documentation input. Real-world utilization of this tool in that capacity has been so limited that this is not seen as an effective option by street medicine programs currently.

It may be surprising that teams are not tracking more data on health care utilization impacts (e.g., ED visits, rehospitalizations). While shifting utilization of acute care services (like the ED) to ambulatory service sites (like street-based care) is often a goal of street medicine teams, it is also often extremely difficult to track. Accurately capturing this data would require each street medicine team to have access to all the electronic medical records in their direct area or have a data use agreement for each system to track utilization across health systems. However, tracking health care utilization is still of significant value and may support the large-scale impact that street medicine could have on population health and hospital spending downstream. Managed care organizations are better equipped to report utilization across health systems, but first must accurately identify members as PEUH. Lastly, statistics like avoided ED visits are difficult to prove and lack a standard measurement tool.

Recommendations

1. Benchmarks for traditional quality metrics for PEUH should be established so that street teams and traditional settings can determine how best to care for PEUH. This will require an accurate method of distinguishing housed, sheltered homeless, and unsheltered homeless patients.
2. Additional quality metrics centered around PEUH that capture the unique environment, challenges, and disease prevalence faced by PEUH should be developed with input from PEUH as to what quality of care means to them.
3. Institutions should liberalize the ability of street medicine teams to have access to electronic medical records outside of their sponsoring institution and the Homeless Management Information System, potentially through 'read-only access' or similar modes, to improve care coordination and quality of care.
4. Relationships between managed care organizations and street medicine teams should be formed to assess how street medicine impacts utilization of health care services across systems through analysis of claims data.

Question 9: How is the street medicine workforce being prepared for this work?

Street Medicine Team Onboarding and Training

Most of the programs indicated that new personnel receive street medicine training at onboarding (63%) and on an ongoing basis (65%). Street-based medical training provided prior to seeing patients in the field was most commonly characterized as shadowing/observation (n = 8); formal didactic education (n = 4); orientation/onboarding policies (i.e., HIPAA and sexual harassment training; n = 3); operations/internal workflow training (n = 3); “USC street medicine” (n = 2); harm reduction (n = 2); and trauma-informed care (n = 2). The number of ongoing training hours varied across the programs and between those employed, volunteering, or learners/students working with street medicine teams. On average, employees had the most ongoing training hours per year (mean = 28±19.0, range = 5–60 hours), followed by learners/students (mean = 24±13.4, range = 5–36 hours) and volunteers (mean = 18±17.1, range = 0–36 hours). The majority of programs reported feeling that their street medicine team needs more street-based medicine-specific training (77%), yet some were unsure (14%).

Discussion

The commitment to initial and ongoing training of street medicine personnel by street medicine teams in California is evident and represents a departure from how the homeless service workforce is typically trained.⁵² Previously, street medicine workforce members reported little to no formal training in street medicine or “on the job training”. The observed high rates of onboarding and continuing training suggests that programs are recognizing that most new street medicine team members are inexperienced in street medicine, given the newness of this field of medicine, and that teams need initial and ongoing education to adequately support the complex and unique needs of PEUH. The diversity of training, ranging from shadowing and didactic training to trauma-informed care in addition to transactional/procedural training, also supports this idea.

Despite this apparent commitment to training, three quarters of the programs felt they needed more street medicine-specific training. One challenge with homeless service training has been the ‘ad hoc’ style of training in which each session is independent of the next rather than given collectively to create a foundation upon which future training sessions can build.⁵³ An important area of further research is to understand how to build the capacity of

the street medicine workforce through transformational education. A limitation of the study was not ascertaining the content of the training to glean what is perceived as being important to practicing street medicine, identify potential opportunities to fill knowledge gaps, and discern what training was provided for different types of professions represented on the team.

Students represent a critical component of developing a workforce that is competent to care for the unsheltered population. The literature supports that students think learning about homelessness and working with this population as part of their education is important for future practice.⁵⁴ In addition, students with early, repeated exposure to homeless populations are more likely to pursue



jobs in primary care and have higher rates of working with underserved populations or volunteering in homeless medical clinics.⁵⁵ However, outside of addressing anxiety around physical and emotional safety during these experiences, little is known about what training is best to prepare students for and support them throughout the experience. This is an important area of future study. Several street medicine programs pointed to a shortage of providers (“dry provider pipeline”) as a threat to their sustainability and the future of street medicine. Specifically, it was noted that the availability of providers from “diverse backgrounds,” as well as those who can fill the roles of peer navigation and addiction support, were most limited, yet important.

“Our sustainability plan is self-care for the individual and for our team.”

Too often, sustainability is viewed from a financial lens, but like many forms of health care work, street medicine can be taxing on the mind, body, and soul, leading to compassion fatigue, burnout, and turnover. Consideration of how to support the emotional needs of a workforce that may experience secondary trauma or be re-traumatized during the course of a typical day is critical. While creating safe spaces for supportive reflective practice is recommended, one interviewee explained how teamwork and training/education contribute to the emotional sustainability of their program. “Our sustainability plan is self-care for the individual and for our team...Then going back to those trainings and education. That [training and education sessions] does bring a sense of community and learning and that professional development [aspect] that I think [is] part of self-care as well. It keeps people going.” This suggests that ongoing training and education may help to fortify the workforce and mitigate high turnover rates that have historically plagued the homeless services industry.

Recommendations

1. Local, state, and federal funding should be dedicated to the development and implementation of training for all members of street medicine teams, including the development of a strong peer and community health worker workforce. Organizations should dedicate protected time to providing initial and ongoing training of street medicine teams as a key step in building organizational capacity.
2. Research should focus on determining if specific types of training are needed for different street medicine team members based on position (e.g., nurse vs. community health/peer support worker vs. prescriber).
3. Street medicine teams should incorporate students into their teams whenever possible as an investment in the future of the workforce, and should consider ways to support students in order to optimize learning and impact.

Question 10: How are street medicine services funded and what are they funding?

This section represents how street medicine programs were funded at the time the survey was conducted in March and April of 2022. Street medicine funding opportunities in California are evolving quickly as detailed in the next section, “Sustainability: Policy and Payment Opportunities and Challenges.” Especially noteworthy is the November 8 DHCS All Plan Letter 22-023 that provides guidance to managed care plans (MCPs) on funding street medicine programs in light of the new “Place of Service” codes which facilitate billing. While the path to sustainability for street medicine programs is much clearer now than it was a few months ago, the data in this section continue to provide relevant insights as MCPs and existing street medicine programs shift in response to this new guidance.

To learn more about how the November 8 DHCS All Plan Letter 22-023 provides additional clarity around these issues you can read the [CHCF Issue Brief: A Game Changer for Street Medicine: Key Takeaways from New Medi-Cal Guidelines](#). In the following section, asterisks are used to indicate points that are addressed in the All Plan Letter.

Street Medicine Funding

Street medicine programs most commonly rely on a patchwork of funding. Like other community providers, 18 programs (64%) receive support from a combination of government contracts, grants, donations, and insurance reimbursement. Nine programs reported receiving all funds from either government contracts (5), their parent organization (2), a foundation (1), or a charitable donation (1).

The least common income source was reimbursement from insurance, including Medi-Cal. Six programs reported receiving some insurance reimbursement for their street-based patient visits. However, the percentage of reimbursed patient visits varied between 5% and 85%. Five of these programs are Federally Qualified Health Centers. The sixth is affiliated with a health plan with active managed care contracts. The question as to whether street medicine visits were reimbursable through Medi-Cal was a repeated topic in street medicine provider interviews,

with interviewees agreeing this is unclear. Of the three Federally Qualified Health Centers interviewed, all agreed the policy was unclear. One decided to bill anyway and acknowledged a risk of audit or future repayment; one billed only visits for patients assigned to their clinic who were seen in the brick-and-mortar clinic at least once; and one didn't bill at all, citing the risk of audit, need to pay back funds, or possible unintentional fraud. The lack of clarity over billing is reflected in the larger survey with only 5 of 12 Federally Qualified Health Centers seeking reimbursement for services rendered. All interviewees attributed this lack of reimbursement clarity to the absence of Place of Service Code for “street” as a place/location where a visit can be performed.



Interviews with street medicine programs in California revealed that they all think about sustainability and are concerned about it, yet do not have a formal plan to address it. As one site director stated, “We’re working on it ... Right now, there’s no [plan].” All programs unanimously lamented that funding is the greatest threat to their sustainability and that “diversifying” funding sources and the ability to bill for their services are their greatest hopes

for addressing this concern. When asked about the adequacy of funding, one site director replied, “Absolutely not. Absolutely not ...We don’t bill, as you know. It’s all grant money ... but it’s also not sustainable.” Another explained how the lack of funding is pivotal to their ability to sustain their program: “There are a few things missing. Sustainability, which comes from reimbursement. This is an unfortunate fact but that is the reality of the system that we work in. If teams can’t get some sort of reimbursement, if they can’t be financially sustainable, then no one’s going to be able to build these teams.” *

Table 3. Street Medicine Program Respondents’ Expenditures for FY 2021

Street-Medicine Program Expenditures			
	<i>Means [SD]</i>	<i>Min-Max</i>	<i>Adequacy of funds*</i>
Clinical personnel	\$811,887 [853,188]	0-2,000,000	25.0%
Transportation (for patients)	\$12,600 [9,667]	0-21,000	45.5%
Transportation (for street-based team)	\$28,484 [37,842]	0-110,000	27.3%
Non-pharmaceutical supplies	\$18,960 [15,571]	1,000-50,000	63.6%
Pharmaceutical supplies	\$12,000 [10,863]	0-25,000	55.6%
Administrative	\$227,116 [228,308]	0-600,000	30.0%
Other	\$201,352 [332,752]	20,406-700,000	50.0%
TOTAL EXPENDITURES	\$1,300,264 [1,229,836]	200-2,912,270	14.3%
*Respondents were asked if they felt that their funding for each of the above budget lines were 'adequate' (response set: yes, no, unsure). Percentage of respondents that indicated 'yes' are reported			

Source: Data collected by authors during survey conducted March and April 2022.

This table’s line items include street medicine budgets, the mean amount spent by survey respondents, and the minimum and maximum ranges. The wide variability in ranges highlights the diversity of street medicine programs and their expenditures. “Adequacy of funds” is a self-reported measure indicating whether the funding in a given category is enough to meet a program’s patients’ needs.

About one-third of the programs surveyed provided financial and budgetary data for their program for FY 2021. Programs’ expenditures averaged just over \$1.3 million, with 14.3% saying this was adequate to meet the needs of their patients. The largest expenditure line is for clinical personnel, followed by administrative support. However, these two items were also perceived to be the least adequate to meet the need. Other street medicine expenditures are not typical of other primary care practices. Most patients seen by street medicine programs are insured, and members are entitled to benefits such as medications and transportation, which are not typically paid for by their primary care provider, but rather through medical insurance. The survey revealed most programs pay for their patients’ transportation (mean = \$12,600) and pharmaceuticals (mean = \$12,000) out of their own budget instead of using patients’ medical insurance or Medi-Cal benefits to cover these costs.

Budgetary Changes

Programs were asked to reflect on any budgetary changes they experienced between FY 2020 and 2021. Nearly half of the programs (47%) reported an increase in their budget by more than 25%. A third were unsure of how much their budget had changed (32%). Fewer (16%) reported their budgets as having stayed within 10% between those years or having been increased by 10–25% (5%). No programs reported a decrease in their overall budget in this period.

Discussion

Lack of Sustainable Funding Source

Similar to program size and number of patients seen, the budget sizes and income sources of street medicine programs in California vary widely. The reliance on grants and donations for operation jeopardizes sustainability because these are usually non-renewable. It also means the small, dedicated staff must spend time writing grants or searching for donations, taking time away from providing patient care.

To increase the sustainability of street medicine programs, it is important for insurance reimbursement to be a reliable source of revenue, much as it is for typical brick-and-mortar clinics and other established health care delivery systems. Programs cited the lack of “street” as a Place of Service code as a reason for not billing. Five of the six programs that bill insurers are sponsored by Federally Qualified Health Centers, which isn’t surprising given their ability to receive a prospective payment system (PPS) rate in non-traditional settings. This is still less than half of all federally qualified health center respondents and only 20% of all street medicine providers. In essence, even though the services being delivered are reimbursable, the location where they’re being delivered disqualified them from Medi-Cal/Medicaid reimbursement. While this was the case during the time this survey was conducted, on December 10, 2021, [the California Department of Health Care Services issued a billing clarification allowing for fee-for-service billing on the street](#).⁴² The billing clarification has now opened the door for managed care organizations and other insurers to contract with Federally Qualified Health Centers and non-federally qualified health center street medicine providers, and for providers to receive reimbursement for services rendered. Though important, this change only applies to Medi-Cal members. Services to Medicare members are still not reimbursable.

It is important to note that the above pertains to Fee-For-Service (FFS) Medi-Cal. In managed care, there are different models. In some counties in CA, if a Medi-Cal managed care plan member is assigned a primary care provider under a capitated model, the clinic receives a payment for each patient attributed to them every month, regardless of the volume of services that person receives (this is known as per member per month, or PMPM). Federally Qualified Health Centers can also bill FFS on top of the PMPM rate. While Federally Qualified Health Centers might receive a PMPM rate for the unsheltered patients assigned to them, they might not bill for care delivered outside the four walls of the health center. Eight of the twelve federally qualified health center street medicine programs were either not seeking, or not receiving, the PPS rate based on fear of an audit.

Street Medicine is Funding Medi-Cal Benefits

Health care is more than a visit from a medical provider and includes the acquisition of medications, blood work, and other diagnostic tests and treatments. Medi-Cal covers even more, such as transportation. Many teams end up paying out of pocket for things that are benefits covered by Medi-Cal, but that are not readily accessible to PEUH, such as pharmaceuticals and transportation (Table 3 on Street Medicine Program Expenditures). Traditionally, a patient is seen in a brick-and-mortar setting and the provider prescribes medications to a pharmacy. The patient picks up these medications and the pharmacy bills the insurance company or a third party. PEUH, for the same reasons they can't go to a brick-and-mortar clinic, also can't access other parts of the health care system like pharmacies. One street medicine provider estimated that only 10% of the patients pick up their prescriptions, necessitating that medication be dispensed by their team at the time of the patient encounter. This requires street medicine teams to purchase medications and keep an inventory. Since the medications aren't attached to a specific patient at the time of purchase, health insurance isn't billed, and it is paid for out of the street medicine programs' budget. This causes costs to shift from insurance payors to street medicine organizations.

Similarly, transportation is a Medi-Cal benefit that is inaccessible to PEUH. Transportation must be scheduled in advance and linked to an address. As such, unhoused beneficiaries don't have access to this benefit. When unsheltered patients need to get to an appointment in a brick-and-mortar location, street medicine organizations pay for transportation, which is usually a ride-share, out of their budgets. Again, the cost is shifted from the payor to the street medicine organization.

Recommendations

1. Street Medicine programs have not been self-sustaining due to systemic and bureaucratic barriers within traditional health care. The California Department of Health Care Services has created multiple programs to address the challenge in a way that preserves the street medicine model (See next section on Sustainability). Street medicine programs and managed care organizations must work collaboratively in the execution of these programs with the goal of equity in care and reimbursement.
2. Mechanisms should be created to help street medicine teams facilitate access to the full scope of Medi-Cal benefits for their unsheltered patients. Until that can happen, possible workarounds might be the creation of a street medicine payment bundle that would allow reimbursement for a comprehensive set of services, or a centralized fund which programs can draw from. Street medicine programs must have the financial flexibility to remain nimble to respond to the shifting needs of the street.
3. Insurance reimbursements are designed to sustain already existing programs, but not to support the start of new ones. The creation of a seed grant fund, or other capacity-building funding, to support organizations in starting new street medicine programs is necessary. Funding should cover all components needed to start a program, including provider and non-provider time, technical assistance, and training while the patient panel is being built.
4. Policies or programs designed to encourage or sustain street medicine programs should take into consideration start-up costs, the need to create infrastructure, and the ramp-up period needed to begin a new program. Street medicine stretches many departments in organizations (e.g., IT, Risk Management, Compliance, and Pharmacy) to find creative solutions for delivering care on the street. This takes time.

Sustainability: Policy and Payment Opportunities and Challenges

When considering sustainability for street medicine, it is useful to begin by taking stock of the services currently provided by street medicine teams, then identifying equitable and reliable funding in those areas of service. It is also important to remember that value-based care is not just a financial concern; it also includes health outcomes. Equitable care, with a goal of improved health outcomes, will cost more because PEUH need more. A comprehensive view of sustainability must start from the street with what services are needed, what types of disciplines in what ratios are needed, and what patient volume is realistic based on the time needed to care for people well. This will inform fair rates.

“What do we need in order to be successful? We need, of course, financial support and sustainability so that we can focus on the patients and not as much on making sure that we stay open.”

One interviewee eloquently summarized threats to street medicine sustainability as the following: “What do we need in order to be successful? We need, of course, financial support and sustainability so that we can focus on the patients and not as much on making sure that we stay open. Of course, more staffing would be wonderful because we’re not coming anywhere close to meeting the need. But we also need people to be understanding and know that people experiencing homelessness are part of their community, not just pieces of trash to be moved from one area to the next.”

This landscape captured the point in time when the survey was given, but policy and funding opportunities have changed since then and continue to evolve. While some of these opportunities have already been launched and some are part of future planning, the effectiveness and impact of all measures are yet to be determined. Given the rapidly changing landscape, this section will provide an overview of the most relevant opportunities as they relate specifically to street medicine. The main focus is Medi-Cal managed care, since this is the type of insurance held by most PEUH in California, as well as providing an overview of the policy and funding changes along with keys to their success where applicable.

DHCS Clarification on Billing Guidelines for Street Medicine Providers

Issued by the California Department of Health Care Services in December 2021, this clarification resolved confusion around the Place of Service Code for street medicine, allowing for Place of Service Code 16: Temporary Lodging, to be used for street visits.⁵⁷ This is specifically for billing Fee-for-Service under Medi-Cal.

This guidance does not remedy the inability of street medicine programs to bill Medicare. Since Medicare is administered at the federal level, the Division of Street Medicine at USC and the Street Medicine Institute have formally made a request to the U.S. Centers for Medicare and Medicaid Services (CMS) to create a Place of Service Code for “street” or “field,” or to permit the use of another code in its stead, just as the California Department of Health Care Services has done. This request was initiated in January 2022, and as of January 2023, CMS had not yet made a decision. Should CMS issue similar guidance, or add a new place of service code, street medicine would be reimbursable country-wide through Medicare and Medicaid.

All Plan Letter 22-023

The purpose of the Street Medicine All Plan Letter (APL) issued by DHCS in November 2022 was to provide guidance to Medi-Cal managed care health plans on opportunities to contract with street medicine providers to address the “whole person” clinical and non-clinical needs of their Medi-Cal members experiencing unsheltered homelessness. The significance of this APL in increasing healthcare access for PEUH can’t be understated. The All-Plan Letter first clearly defines street medicine, reaffirming the Street Medicine Institute’s definition that care must be performed in a patient’s lived environment, differentiating it from mobile medicine done in an RV where patients must still go to. It outlines how a street medicine team can be an assigned PCP regardless of its relationship with a brick-and-mortar clinic. This honors the reality of the street and the difficulty patients have in accessing brick-and-mortar care or mobile medical vans by declaring that, in certain circumstances, primary care is best delivered on the street. This officially permits dropping the “transitional” from “transitional primary care,” marking a clear step forward from the way street medicine was viewed in the early 2000’s. Second, it makes street medicine workers Direct Access Providers, allowing patients cared for by street medicine providers to access their benefits regardless of managed care plan assignment. This also honors the reality of the street by allowing patients to receive care at the moment they have access. For example, if a patient is seen in their encampment by a street medicine provider, but their assigned primary care provider is a brick-and-mortar provider, the street medicine provider can still place a specialty referral if they have a contract with the managed care organization in which the patient is enrolled. This will require street medicine providers to have contracts with managed care organizations, which many don’t currently have. The contractual process for many provider-managed care organization relationships has already begun.

The APL also outlines how street medicine teams can contract to be Enhanced Care Management providers under CalAIM. From a financial sustainability lens, this approach to funding may help support the critical non-clinical staff needed to engage patients, coordinate care, and operate a street medicine team. The ability to contract with managed care plans and bill for rendered care is a critical step toward financial sustainability. The All-Plan Letter doesn’t address reimbursement rates.

CalAIM

Perhaps the most comprehensive health care program designed to serve PEH in California history, CalAIM recognizes that basic necessities like housing and food are part of health care. The two main programs in CalAIM that impact PEH are Enhanced Care Management (ECM) and Community Supports (CS). For more information on these programs, what they include, and how they intend to improve care for PEH, the [CHCF CalAIM and homelessness landing page](#) provides a good overview.

Street medicine, and care for PEH, requires higher ratios of non-billable staff such as community health workers, peer support staff, and patient navigators than is required for most people able to access care in a brick-and-mortar setting. ECM provides a funding mechanism to support these additional staff in proper ratios. The limitation of CalAIM is that it doesn’t support street medicine providers’ time on the street. Street medicine providers are the

chassis that drives care. Without providers on the team, care navigators or coordinators must ultimately rely on referrals to a brick-and-mortar clinic for medical care. This limits access to care and ultimately reduces the success of the program. The combination of CalAIM and APL 22-023 provides an opportunity for street medicine teams to contract as both primary care or treating providers and ECM providers, potentially allowing them to bill enough to help cover their costs.

It will be important to minimize the administrative burden for street medicine ECM providers and their patients by recognizing the environment in which documents will be completed and care will be provided. Street medicine providers are all too familiar with intake or screening forms that take over an hour to complete, necessitating prolonged time in potentially unsafe places, or requiring additional follow-up because patients can't initially commit to the time and focus needed to complete the forms. This detracts from the patient relationship and can ultimately undermine a program's good intentions. DHCS and managed care plans must decide what is absolutely necessary to enroll patients experiencing homelessness while making the process easy and expediting approval.

CalAIM Providing Access and Transforming Health Initiative (PATH)

As demonstrated by this paper, many street medicine programs are new, under-resourced, and lack funding to support the infrastructure needed to operate in managed care structures. Additionally, many more programs are needed to meet the demand for care for PEUH in California. CalAIM-PATH "is a five-year, \$1.85 billion initiative to build up the capacity and infrastructure of on-the-ground partners, such as community-based organizations, public hospitals, county agencies, tribes, and others, to successfully participate in the Medi-Cal delivery system."⁵⁸ It's important to note that PATH is specifically designed to build capacity for CalAIM initiatives such as ECM and CS. It's well designed to fund the critical period when street medicine programs are either beginning or expanding, learning about their community, and acquiring new patients, before CalAIM contracting can cover operating costs. Street medicine is a new practice for many, and even for experienced providers, establishing in a new geographic area takes time. This funding source could have a great impact on the spread of street medicine across the state.

Housing and Homelessness Incentive Program (HHIP)

The Housing and Homelessness Incentive Program (HHIP) provides \$1.3 billion in one-time funds to encourage and support managed care organizations in developing capacity and partnerships to connect members to housing services and prevent or resolve homelessness.⁵⁹ For more information, Homebase provides a good overall [summary of HHIP](#).

HHIP has three priority areas: partnership and capacity to support referrals for services, infrastructure to coordinate and meet member housing needs, and the delivery of services and member engagement. Managed care organizations in each county were required to submit a plan to DHCS to meet a set of metrics needed to acquire the incentives. The measurement period ends in late 2023, making this a short-term program requiring immediate attention.

Many key priority metrics relate directly to street medicine, including managed care organizations contracting directly with street medicine programs, and increasing the number of members receiving street medicine services. Other metrics involve street medicine programs directly or indirectly as they relate to members receiving services through CalAIM. Lastly, there are metrics that relate to screening for homelessness or placing members into the [Homeless Management Information System \(HMIS\)](#), which will likely require some involvement of street medicine

organizations. On September 30, 2022, each county submitted investment plans to DHCS, showing how they will invest awarded funds in their community. Which plans will receive investment, how funds will be dispersed, and how that will be decided isn't known at the time of this writing.

Some metrics, such as increasing the number of plan enrollees seeing street medicine providers, will be difficult to meet because baselines haven't been established in most cases. Other metrics, such as the implementation of widespread screening for homelessness, will take community-wide efforts and time to come to fruition. Widespread screening will also greatly increase the denominator of PEH since providers miss most PEH when not systematically screening. One important key to success will be the involvement of street medicine organizations in the process of refining the metrics and carrying out the work. Many teams are unaware that the program exists or that they could receive funding through it. USC Street Medicine hosts a CA Street Medicine Collaborative, which was started with the initial goal of connecting street medicine programs to plans to help meet HHIP metrics, ultimately resulting in more services being delivered to PEUH. Street medicine providers have the unique perspective of straddling both health care and homeless systems and are valuable resources.

Of importance across all of these new initiatives is that not all counties have street medicine organizations or street medicine organizations with experience. Only a small number of managed care plans have experience contracting with street medicine providers. Providing technical support for both plans and street medicine organizations, as well as opportunities for peer to peer and cross-system learning, will be critical to ensure success in these counties.

Potential opportunities and challenges for Managed Care Organization Reimbursement

“Street medicine, no brainer, we need to contract with street medicine providers We just haven't done it because it's new and it's different enough that makes it complicated.”

Much has been said thus far about California Department of Health Care Services innovations supporting the practice of street medicine and street medicine teams, but reimbursement models are still being explored. Managed care organizations' current options for reimbursement lie between capitated payments to street medicine providers and fee-for-service payments. In interviews, managed care organization leaders showed that they understood street medicine as playing a critical role in the care of PEUH. One plan said, “Street medicine, no brainer, we need to contract with street medicine providers We just haven't done it because it's new and it's different enough that makes it complicated.” Most plans feel that fee-for-service payments to street medicine are feasible. Some are willing to provide capitated payments to street medicine providers if comprehensive services are being offered to patients. One plan felt strongly that a fee-for-service approach would be easiest to implement as it might prevent redundant services and billing, making it more attractive: “if [our managed care organization] pays [clinics] the same amount and we pay [street medicine programs] more, then you're asking us to lose money. Right. So, I think the easiest is if [street medicine] would just bill for what they're doing, and we pay you for that.” Another plan had concerns about empanelment challenges and competition with community clinics if capitated payments were made to street medicine providers. This plan had, however, entertained the idea of a school-based health services model: “one possibility [is] using the school-based health model, where you have limited number of fee-for-service visits that you pay for, for kids who go to a school-based health clinic who may be assigned to a different provider.” One managed care organization was open to both capitated and fee-for-service payments:

“Ideally what Street Medicine really is, which is providing primary care in the encampments, I think we would like to do a capitated model because that makes the most sense. If we’re still looking at episodic care, then I think that would be more of a fee-for-service model because we’re not providing holistic care.”

Street medicine organizations have yet to develop a preference between capitation or FFS rates, either. One option brought up by multiple organizations since the November 8 APL release (after the drafting of this report) is using a capitated model when street medicine is the assigned PCP, and a FFS model when acting under direct access. This would be similar to an urgent care center that can function in both capacities. Additionally, new payment models such as bundled payments are also being explored to include services provided by street medicine organizations that are benefits through Medi-Cal and not part of CalAIM. An example would be transportation benefits.

Unanswered Questions

The innovative programs described in this section provide a pathway to funding street medicine programs by allowing billing; funding non-provider services; creating a pathway for street medicine to seek reimbursement by two mechanisms within managed care (capitated and FFS); and incentivizing plans to contract with street medicine. However, critical questions remain.

1. CalAIM funds non-provider services. How will equitable rates for providers be determined that recognize the increased complexity and time required to deliver street medicine?
2. Will prospective street medicine organizations be able to take advantage of the opportunities provided by California Department of Health Care Services, or will the administrative burden overwhelm the process?
3. Expenditures related to street medicine, such as having medications on hand to dispense or paying for a ride-share to transport patients, are not covered by the above programs. How will these essential services be covered in the future? Would a street medicine bundled payment be a viable solution?
4. Mental health services, including reimbursements, are siloed from physical health. Currently, most street medicine programs provide mental health care. Ideally, they will also offer psychiatric care in the future. How will these systems be integrated for the benefit of PEUH and others?
5. These innovations are focused on insurance coverage linked to individuals, an approach that works well in brick-and-mortar settings because patients are screened and treated on individual bases. However, in many cases, street medicine providers treat both the individual and the community. When faced with a lice or scabies outbreak, a street medicine team takes on the role of a public health department, caring for whole encampments without regard for insurance status. How will public health work, such as outbreak management and containment, be reimbursed?

Conclusion

The practice of street medicine was created in response to the inadequacies of the current health care model and its inability to meet the needs of people experiencing unsheltered homelessness. Decades of systemic racism, chronic stress, stigma, and exclusion from society have created an untenable increase in morbidity, mortality, and dehumanization in our communities. In the most populous state, with the largest number of people experiencing homelessness, at least 25 street medicine programs have emerged to address the primary care needs of the unsheltered. Street medicine teams have demonstrated their recognition of the reality of the street and stretched what can be provided in street care to include drawing labs, dispensing medication, performing ultrasounds, and addressing the significant lack of access to basic needs like food, water, and clothing. A diverse group of sponsoring organizations represented by this study demonstrates the desire and capacity of any organization to make an impact in their community. Incredibly, these programs have been established despite a historic lack of financial infrastructure to support the initiation or sustainability of street medicine, which speaks to the intrinsic motivation of organizations and their employees to be part of the solution.

And yet, more must be done.

Currently, the California state government is in the process of including street medicine, and thus people experiencing unsheltered homelessness, into the health care system, while attempting to leave the values and philosophy that made street medicine successful unchanged. A vision that all people experiencing unsheltered homelessness should have access to street medicine must be adopted. Additional street medicine teams must be created, and current teams scaled and optimized, to meet the existing needs on the street. Additionally, the impact of street medicine and other models of care, including traditional clinic-based models, for people experiencing unsheltered homelessness must be evaluated to establish best practices and inform where limited resources should be directed. Robust, thoughtful policy must be created to ensure financial sustainability that also supports the technical assistance and training required for street medicine capacity building. The creation of such policies will require all parties to be at the table—including street medicine providers, patients experiencing homelessness, and payors—to create a plan that demonstrates a commitment to the values, philosophy, and methodology of street medicine. This is the way forward to the development of a healthcare system that embraces street medicine and its patients as valuable members of the community.

Glossary of Terms

Chronically homeless individual: an individual with a disability who has been continuously homeless for one year or more or has experienced at least four episodes of homelessness in the last three years where the combined length of time homeless on those occasions is at least 12 months.

Continuums of Care (CoC): local planning bodies responsible for coordinating the full range of homelessness services in a geographic area, which may cover a city, county, metropolitan area, or an entire state.

Homeless: a term that describes a person who lacks a fixed, regular, and adequate nighttime residence.

Hospital Presumptive Eligibility: According to the California Department of Health Care Services, the Hospital Presumptive Eligibility program provides “qualified individuals immediate, temporary, no cost Medi-Cal while applying for permanent Medi-Cal coverage or other health coverage.” Eligibility is based on age, income, California residency, lack of current insurance coverage with Medi-Cal, having no history of utilizing the program in the previous 12 months, and pregnancy or parent/caretaker roles.

Older adult: individuals aged 55 or older.

People experiencing homelessness (PEH): refers to people who are either sheltered or unsheltered.

Permanent supportive housing: a housing model designed to provide housing assistance (project- and tenant-based) and supportive services on a long-term basis to people who formerly experienced homelessness. HUD’s Continuum of Care program, authorized by the McKinney-Vento Act, funds PSH and requires that the client have a disability for eligibility.

Point in Time Count (PIT): unduplicated one-night estimates of both sheltered and unsheltered homeless populations. The one-night counts are conducted by CoCs nationwide and occur during the last week in January of each year.

Prospective Payment System (PPS): The Prospective Payment System (PPS) comprises predetermined, fixed-rate, paid-for Medicare and Medi-Cal services rendered at a Federally Qualified Health Center (FQHC) or Rural Health Center (RHC). The rate is set by Centers for Medicare and Medical Services and is higher than a typical payment for a similar service performed in a general medical clinic without the FQHC or RHC designation.

Sheltered homelessness: refers to people who are staying in emergency shelters, transitional housing programs, or safe havens.

Street Medicine: 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.

Street Medicine Institute (SMI): an international organization that facilitates and enhances the direct provision of health care to the unsheltered homeless where they live by providing communities and clinicians with expert training, guidance, and support to develop and grow their own street medicine programs.

Street Medicine Provider: a physician, physician assistant or nurse practitioner who provides medical care to the people experiencing unsheltered homelessness in their own environment.

Transitional housing programs: programs that provide people experiencing homelessness a place to stay combined with supportive services for up to 24 months.

Unsheltered homelessness/People experiencing unsheltered homelessness (PEUH): refers to people whose primary nighttime location is a public or private place not designated for, or ordinarily used as, a regular sleeping accommodation for people (for example, the streets, vehicles, or parks).

Appendix A. Participants

Alameda County Health Care for the Homeless

Bay Area Community Health Center

Clinica Sierra Vista

Coachella Valley Volunteers in Medicine

Contra Costa Health Care for the Homeless

Doctors Without Walls/Santa Barbara Street Medicine

Father Joe's Village

Healthcare in Action

Kaweah Delta Health District

Los Angeles Christian Health Centers

Lifelong Medical Trust Clinic

Marian Regional Medical Center (Dignity Health)

Northeast Valley Health Corporation

Office of (former) Mayor Eric Garcetti, City Homelessness Initiatives

- Jose "Che" Ramirez, Deputy Mayor
- Ana Gomez, Executive Officer
- Lakesha Williams, Unified Homeless Response Center (UHRC) Director
- Megan Weiss, UHRC Coordinator
- Calvin Sung, UHRC Data Director

Roots Clinic

Saban Community Clinic

Sacramento Street Medicine

Shasta Health

Tiburcio Vasquez Health Centers

UCLA Ventura/Harbor Hospital

University of San Francisco

Keck School of Medicine of University of Southern California Street Medicine

Greater Los Angeles Veterans Administration Healthcare System

Valley Homeless Health Care Program

Venice Family Clinic

San Francisco Health Network, Street Medicine

Los Angeles County Department of Health Services, Housing for Health

Appendix B. DHCS View of Street Medicine: Conceptual Alignment Needing Structural Adaptation

The California Department of Health Care Services (DHCS) has been a critical partner in working toward bending the Medi-Cal system to include street medicine in its intended form, rather than adjusting the street medicine model to fit into the status quo. They received high praise in interviews with street medicine providers and were described as “great listeners,” and “innovative.” One street medicine Director said, “Working with DHCS has been a great joy in my life. We talk about the need to recognize the humanity in people experiencing homelessness and they (DHCS) taught me to recognize the humanity in our decision makers. They genuinely had the best interest of the people we serve in mind.”

To date, DHCS has taken several steps toward sustaining and scaling street medicine. They issued guidance for Hospital Presumptive Eligibility to be done on the street and expanded codes to allow for Medi-Cal fee-for-service billing for street medicine services. They plan to update codes as delivery models evolve and made clear that they “100% support street medicine and want to make sure there aren’t barriers for billing fee-for-service and managed care.” On November 8 2022, DHCS released APL 22-023, an All Plan Letter to provide guidance to managed care plans (MCPs) on contracting with street medicine providers. DHCS would like to see MCPs expand their provider networks to include new provider types that can effectively address the clinical and non-clinical needs of their members experiencing homelessness.

When asked why they are making these changes now, DHCS leadership responded, “Why not now?... We have a governor who is very focused on improving access to the appropriate services. And so when all the stars align, you move as fast as you can and you get the structures in place and you appreciate that support and vision and you run with it.” The administration on the federal level is also supportive of these efforts. At the same time, the advancements in street medicine have contributed to the confidence DHCS has in the model. DHCS appreciates that more comprehensive primary care services including mental health and substance use disorder treatment, point of care testing, blood work, and dispensing medications are now routinely offered by street medicine teams

In their interview, DHCS recognized that integrating street medicine “won’t be easy,” and acknowledged that the “will of the managed care plans” to adapt their contracting models will play a pivotable role in scalability. DHCS reported that MCPs are conceptually aligned and see the value of street medicine and did not report any known opposition to street medicine services. Lastly, they shared that “not all street medicine programs are created equal,” and street medicine integration will require time to support capacity building and some standardization of street medicine services so that when MCPs are contracting, there is a clear understanding of what they’re contracting for. DHCS acknowledged that many street medicine organizations haven’t been Medi-Cal billers, and as such, building the relationships and infrastructure to contract with MCPs will take time. At the same time, DHCS will explore new ways to reimburse street medicine, including examining the possibility of bundled payments. Ultimately DHCS wants to ensure that “payment aligns with the type of work being done,” referring to the work described in this report.

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