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## PRIMARY CARE EMBEDDED WITHIN PERMANENT SUPPORTIVE HOUSING FOR PEOPLE WHO USE SUBSTANCES: A QUALITATIVE STUDY EXAMINING HEALTHCARE ACCESS IN VANCOUVER, CANADA

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### Abstract

Marginally housed people who use drugs and alcohol (PWUD/A) face barriers in accessing healthcare services, which may be improved by providing healthcare in housing settings. This case study examines the experiences of healthcare access amongst PWUD/A who live in a permanent supportive housing model in Vancouver, Canada. This model has an embedded multidisciplinary clinic providing in-reach services. Thirty participants were recruited via posters placed throughout the building and semi-structured qualitative interviews were conducted remotely. Interviews were conducted with participants who accessed onsite care regularly (n = 15) and those who do not (n = 15). Data were analysed to identify both a priori and emerging themes. Participants who accessed the onsite clinic reported benefiting from stigma-free care. Close proximity and convenience of drop-in appointments enabled participants to engage with healthcare services more consistently, though hours of operation and privacy concerns were barriers for others. Participants who did not use the onsite clinic highlighted the importance of continuity of care with their pre-existing primary care team, particularly if their clinic was in close geographic proximity. However, they also described utilising these services for urgent health needs or as an occasional alternative source of care. Shared perspectives across all participants emphasised the importance of low-

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#### AUTHORS' CONTRIBUTIONS

LM and GB contributed to the study design and conceptualisation, collected the data, developed the coding framework, coded and analysed the data, and wrote the original draft of the manuscript. All authors contributed to the interpretation of the findings, edited and developed the manuscript, and approved the final version.

#### CONFLICT OF INTEREST

The authors report there are no conflicts of interest to declare.

barrier services, including medication delivery, convenience and positive therapeutic relationships. Our findings suggest that embedding access to primary care within supportive housing benefits PWUD/A who have previously encountered barriers to healthcare access. This model could be implemented to prevent utilisation of acute healthcare resources and improve health outcomes amongst PWUD/A.

## Keywords

healthcare access; home-based primary care; Housing First; people who use drugs and alcohol; permanent supportive housing; qualitative research; Vancouver; Canada

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## 1. INTRODUCTION

It is well documented that structurally vulnerable people who use drugs and alcohol (PWUD/A) face significant barriers in achieving stable housing due to a myriad of factors, such as stigma, poverty, isolation, intergenerational trauma, recent incarceration and restrictive housing policies (Krüsi et al., 2010; Menzies, 2006; Rowlands Snyder et al., 2021; To et al., 2016). In turn, people who are marginally housed endure significantly poorer health outcomes, utilise greater emergency care resources and experience higher overall mortality rates (Aldridge et al., 2018; Fleury et al., 2021; Hwang, 2000; Hwang et al., 2009; Smith et al., 2019; Turnbull et al., 2007). Despite the higher incidence of illness and emergency service utilisation amongst people who are marginally housed, access to primary care services remains suboptimal (Kendall et al., 2020) and there is a continual need for novel approaches to improve healthcare access.

There is a wealth of evidence supporting the health benefits of housing for marginally housed PWUD/A and there exists a spectrum of interventions (Aidala et al., 2005; Collins et al., 2016; Fitzpatrick-Lewis et al., 2011; Fleury et al., 2021; Kerman et al., 2021; Riley et al., 2019). Some housing interventions are intended to be short-term (e.g. shelters, temporary or transition housing programs), whereas others are designed to be more permanent (e.g. Housing First programs, permanent supportive housing). Amongst supportive housing options, some base their tenancy on behavioural contracts, such as ‘treatment first’ models, requiring sobriety, whereas others are rooted in the philosophy that housing is a human right and tenancy is not contingent on ‘housing readiness’ mandates (Fitzpatrick-Lewis et al., 2011; Hall et al., 2020; Tsai et al., 2010). Despite evidence that demonstrates the linkages between housing and improved health outcomes (Arum et al., 2021; Davies & Wood, 2018; Onapa et al., 2021), health and safety vulnerabilities persist amongst PWUD/A in some housing environments. For instance, although there is mixed evidence regarding the effect of housing stability on substance use patterns, some studies suggest that housing stability is associated with a reduced likelihood of accessing alcohol use disorder treatment (Asana et al., 2018; Cherner et al., 2017; Fortier et al., 2020). Additionally, there are clear links between housing and overdose risk (Bardwell et al., 2019), with the majority of overdose deaths in British Columbia, Canada, occurring in housing environments (Bardwell et al., 2017; MacKinnon et al., 2020). Recent research also indicates that overdose can be a leading cause of death in Housing First programs (Tinland et al., 2021). Further, single room

occupancy (SRO) housing has been considered a ‘mental health risk environment’ that can exacerbate fear and anxiety amongst women who use drugs (Knight et al., 2014). Private SRO environments are also associated with other issues, such as pervasive food insecurity and unsanitary conditions, resulting in physical and emotional health hazards (Bardwell et al., 2019; Byers et al., 2019; Lazarus et al., 2011). The evidence is clear that more is needed to support structurally vulnerable PWUD/A in order to improve housing and health outcomes.

Home-based primary care models are one approach to increasing timely access to healthcare for structurally vulnerable individuals (MacKinnon et al., 2020). These models are gaining traction, particularly in the COVID-19 era with geriatric populations (Franzosa et al., 2021; Ornstein et al., 2021; Ploeg et al., 2005; Ritchie & Leff, 2018; Wolff-Baker & Ordon, 2019). This intervention supports people who have barriers to traditional primary care models by offering longitudinal, multidisciplinary primary care in an individual’s private residence (Franzosa et al., 2021) and has been shown to meet the healthcare needs of home-bound people, decrease overall mortality, increase the likelihood of avoiding placement in long-term care settings, reduce healthcare costs and keep vulnerable people safe during lockdowns (Franzosa et al., 2021; Ornstein et al., 2021; Ploeg et al., 2005; Ritchie & Leff, 2018; Wolff-Baker & Ordon, 2019). While beneficial to geriatric populations, less is known about home-based primary care models for PWUD/A. Some home-based primary care models exist in low-barrier housing settings for PWUD/A and may improve access to healthcare; however, there is minimal research evaluating their effectiveness (Evans & Strathdee, 2006; MacKinnon & Socias, 2021; Taylor, 2012). This model of care may be particularly valuable given the morbidity and mortality associated with the current opioid overdose crisis, which disproportionately affects people who use drugs in housing settings (Bardwell et al., 2017; MacKinnon et al., 2020). Additionally, the ongoing COVID-19 pandemic has exacerbated overdose mortality (Arnold, 2020; Hser & Mooney, 2021; Jenkins et al., 2021), resulting in calls to action for innovative approaches to healthcare delivery during these unprecedented times.

Supportive housing has been described as well positioned for the integration of primary care and health promotion interventions (Henwood et al., 2018; Henwood, Cabassa, et al., 2013; Henwood, Stanhope, et al., 2013). This qualitative study examined a home-based primary care model that was implemented within a low-barrier permanent supportive housing residence in the inner city of Vancouver, Canada. Integrating two of the primary interventions recommended in recent national clinical guidelines for supporting homeless and vulnerably housed people in Canada—supportive housing and comprehensive primary care (Pottie et al., 2020)—the novel model embeds optional primary care access onsite to residents, including those who use drugs and/or alcohol. This low-barrier intervention may be a feasible and acceptable approach to increasing access to primary care and addressing unmet needs amongst this structurally vulnerable group. Therefore, the objective of this case study was to examine residents’ experiences accessing healthcare and to understand the perceived value of embedding primary care within permanent supportive housing, including what leads residents to utilise or not utilise these services.

## 2. METHODS

### 2.1 National and neighbourhood contexts

Substance use is a leading cause of morbidity and mortality in Canada, resulting in substantial costs to the healthcare system. For example, in 2017, health issues related to alcohol consumption accounted for the largest costs at \$16.6 billion, whereas those related to opioid use cost \$5.9 billion (Canadian Institute for Substance Use Research, 2020). Universal health insurance in Canada provides free access to primary care services, and provincial governments have limited drug plans that cover additional costs for various populations, including people on social assistance (Rawson, 2020). There are also a range of government-funded substance use disorder treatment services in both hospital-based and community rapid access programs (Rush & Furlong, 2020), which include opioid agonist therapies like methadone and buprenorphine (Bruneau et al., 2018) and programs that provide regulated substances to reduce related morbidity and mortality such as managed alcohol programs and safer opioid supply programs (Ivsins et al., 2020; Schiff et al., 2019). Complementing these available health services are subsidised and supportive housing programs for structurally vulnerable PWUD/A, some of which include varying levels of access to healthcare (MacKinnon & Socias, 2021). Despite the existence of these affordable health and housing services, many structurally vulnerable PWUD/A continue to face access barriers (Chan Carusone et al., 2019; Paquette et al., 2018), including in inner cities (Goodman et al., 2017).

Vancouver's Downtown Eastside (DTES) is a vibrant inner-city community of 4km<sup>2</sup> that is home to almost 20,000 residents (PHSA, 2020). It is an ethnically diverse population with high rates of vulnerability due to multiple systemic barriers including poverty, residential instability and various health disparities such as high rates of chronic diseases, mental health problems and substance use disorders that contribute to a lower life expectancy (City of Vancouver, 2021; Torchalla et al., 2015). There is a high density of health and social services offered by non-profit organisations, the municipality and regional health authorities (Amram et al., 2019; Carnegie Community Centre, 2019). Sixty-nine percent of the DTES population is attached to a primary care provider (PHSA, 2020).

### 2.2 Study setting

This study was conducted with residents of a low-barrier, permanent supportive housing site with over 100 units in the DTES that is operated by a non-profit organisation under a Housing First framework. People gain residency by applying through the provinces' supportive housing registry and their rent is subsidised. There is a multidisciplinary clinic embedded in the building with a full-time social worker, a nurse for clinical support, a nurse for medication administration and a part-time physician who provides acute and longitudinal care to residents, including substance use care. Healthcare is delivered in the clinical space as well as in residents' units, if requested or needed. There is also an affiliated pharmacy that delivers medications and provides the medication administration support. These clinical supports are available to all residents on an as-needed basis, and residents can become attached to the physician if they are unattached to a primary care provider or if there are barriers to accessing their current primary care provider. In addition to these

clinical services, the building has 24/7 front desk staff; provides home support, two meals per day; a range of wellness, cultural and recreational groups; employment opportunities for residents; and housing-based drug/alcohol consumption services and supplies to encourage safer substance use.

### 2.3 Data collection and analysis

We utilised a case study qualitative approach (Crowe et al., 2011) in an effort to understand how this novel primary care clinic is perceived and experienced by all tenants, including both those who do and do not regularly access it. This case study was bounded temporally based on participants' primary care experiences prior to moving into the study setting up until the period when data were collected (October 2020 to January 2021). An interview guide was used to facilitate semi-structured qualitative interviews. This guide was not pretested, though there were no issues detected during initial interviews. Thirty semi-structured interviews were conducted with residents over 18 years old who lived in the supportive housing site. Purposive sampling was used to interview individuals who used the onsite clinic regularly (n = 15) and those who did not access the clinic (n = 15). Participants who were unable to provide informed consent were excluded from this study.

Recruitment and data collection processes were tailored to meet COVID-19 safety protocols. Recruitment posters were placed in common areas of the building and in the clinic. Front desk and clinic staff provided the consent form to interested residents, as well as available interview dates and times. Staff then faxed the sign-up sheet of prospective participants to the research team and a research team member phoned participants to complete an eligibility screen and review the consent form. The participants were subsequently interviewed if they were eligible and provided verbal consent. Working in partnership with the housing program curtailed any recruitment challenges. As onsite staff engaged with tenants regularly, they were able to provide interview reminders to participants. In addition, onsite management was able to provide \$30 cash honoraria immediately following the interviews, which were conducted remotely due to COVID-19 restrictions.

Interviews were conducted by a clinician scientist and a postdoctoral researcher, both of whom have training and experience working with this population. The latter had no prior relationships with residents, whereas the former had previously worked in the study setting and, thus, refrained from interviewing any past patients. Remote interviews lasted approximately 30–60 minutes and covered a variety of topics, including housing, health and substance use history, experiences accessing healthcare and impacts of the COVID-19 pandemic. Audio recordings of the interviews were transcribed verbatim by professional transcriptionists and reviewed for accuracy. The lead and senior authors reviewed several of the interview transcripts prior to coding the data. Transcripts were first reviewed independently and then we met to develop a coding framework. We took an interpretivist approach to this case study in that our aim was to understand social meanings across all participants (Crowe et al., 2011). We used NVivo 12 to organise and code the data. Line-by-line coding was completed by both the lead and senior authors, who met regularly to ensure consistency and address any discrepancies. Qualitative data were analysed using a sequential process to identify both a priori (e.g. low-barrier healthcare, pandemic effects

on service access) and emerging themes (e.g. therapeutic relationships, close proximity; Corbin & Strauss, 2015). This study was approved by the University of British Columbia/ Providence Health Care Research Ethics Board.

## 2.4 Participants

The majority of participants were cisgender, white and used substances daily (see Table 1). Of the 30 participants, 23 individuals regularly used opioids (e.g. heroin, fentanyl), with 11 being polysubstance users who regularly used both opioids and stimulants. Sixteen participants shared that they used alcohol in the last 30 days and five participants identified that alcohol was the substance they used most often.

## 3. RESULTS

When participants were asked about their access to healthcare, their responses were mixed. Participants discussed the benefits and limitations of accessing healthcare both onsite and offsite. Additionally, common themes related to healthcare access emerged amongst both groups of participants.

### 3.1 Onsite healthcare access

Most participants who accessed care onsite did not access healthcare services prior to their tenancy in the building due to a variety of reasons, including competing priorities and having ‘chaotic’ lives, perceptions that they did not require services, or past negative experiences. Some participants routinely used the onsite clinic, whereas others used it on an as-needed basis (e.g. for infections, injuries and follow-up from hospital discharge). Most participants also utilised the pharmacy affiliated with the embedded clinic and had their medications delivered to their units. Participants expressed that having healthcare access embedded in their residential building contributed to a sense of wellness and community, as illustrated in the following excerpts:

We’ve had some really awesome doctors. They’re friendly. They listen. They seem to care. Like you know, they remember what you told them the week before or whatever. And I don’t know. I just found more of a personal relationship with the doctors than I ever had before.

(P18, cis man, mid-70s)

I appreciate having a doctor and nurses here big time, it helps so much. Like, you just feel thorough, you feel cared for, you feel like you’re on top of things. And, you know ... they’ll even come and knock on your door...they go out of their way more than what they need to do. It’s nice to have a connection in your building – a real community feeling.

(P19, cis woman, early 50s)

Positive therapeutic relationships with, and stigma-free care from, the clinical staff were emphasised as the main facilitator of engaging in continuing care, especially given the negative healthcare experiences, many described having in other healthcare settings (e.g. hospitals, walk-in clinics).

Some participants described that having access to an embedded clinic increased opportunities to have regular primary care encounters. The option of drop-in appointments or outreach to their units minimised barriers to accessing care:

I had no doctor at all except for a methadone doctor, I was missing appointments and stuff like that all the time. Having a clinic here 100 percent helps me to make appointments because the doctor is here. They knock on your door. The doctor comes right to my [unit].

(P30, cis man early 40s)

I'd rather go see the clinic staff downstairs, I just can walk there, I don't have to really use my wheelchair. Unless I was bedridden, then, I'd rather have them come and see me. Having a clinic in our apartment building is convenient.

(P24, cis woman, late 50s)

Some participants outlined other healthcare access barriers they experienced prior to moving into the building, such as lacking identification and the inconvenience of commuting to a clinic, which often led to missed appointments. Altogether, close proximity, convenience and familiarity with the clinical staff enabled participants to engage in care at times when they would have otherwise encountered logistical barriers. The onsite clinic afforded participants more flexibility, thereby preventing interruptions in care.

Others discussed the effects that substance use has on motivation to seek care. For example: *'First thing people do in the morning is get high, and there's no way they're going to go to the doctor. Even if their finger's broken, they aren't going'* (P19, cis woman, early 50s). The flexibility of the onsite clinic in terms of drop-in access and outreach assessments was identified as a way to mitigate obstacles to healthcare access due to substance use and/or intoxication for PWUD/A.

While participants described a variety of benefits to the onsite clinic, they also identified some concerns, including those related to accessibility. Some identified that the clinic's daily hours of operation of 9:00 to 16:00 were not long enough, while others shared that the physician was infrequently onsite. For example: *'The doctors are only here once a week for a couple hours. If I need to talk to one and like and it's Tuesday, what the hell have I got to do, wait till Friday at 1:00 o'clock? No. Sorry. That's not going to cut it'* (P28, cis man, early 60s), and *'I think they should have a nurse on 24 hours a day. It would be better for us because a lot of people have seizures and overdoses in here'* (P24, cis man, late 50s).

Some participants who had used the embedded clinic described significant concerns regarding a lack of privacy, as highlighted in the following excerpt:

When I started getting my methadone through this clinic, I would go downstairs to the clinic and the nurse would administer it. So, then you got any other person in the building who is walking by and the nurse is explaining what I am taking. I'm appalled by it. I will not deal with them in an open area.

(P28, cis man, early 60s)

Some participants used strategies to mitigate privacy concerns, including private unit visits and medication deliveries.

Overall, participants who accessed the onsite clinic positively regarded therapeutic relationships and a sense of closeness that stemmed from having flexible access to embedded healthcare services in their residence. Close proximity, convenience of drop-in and outreach assessments, and familiarity with and compassion of clinic staff provided participants with more opportunities to engage in continuous care compared to their experiences accessing healthcare services elsewhere. However, limited hours of operation and privacy concerns were significant deterrents for some of the participants, which could lead to service avoidance or seeking healthcare elsewhere (e.g. hospitals, walk-in clinics).

### 3.2 Offsite healthcare access

For the participants who did not access the onsite clinic (n = 15), this was primarily due to their pre-existing connections to healthcare teams prior to entering the supportive housing building. Almost all participants explained that the ability to maintain the relationship with their offsite primary care team was important to them. Most of these participants attended their offsite clinics regularly and received medications from a pharmacy that was not affiliated with the onsite clinic. Many participants described developing connections to healthcare teams when they were experiencing homelessness. For example:

I started going to [another clinic] when I first was homeless. I went to get my methadone and that's where an advocate helped me get into housing. So like, I had a really good connection going with the [other clinic] and I've only been living here now for five months, so I've stayed with them.

(P5, cis man, mid-40s)

Continuity of care was instrumental for participants who were attached to healthcare teams prior living in their building. This was especially valued when the participants had positive therapeutic relationships with their offsite primary care provider.

Most participants shared that their healthcare clinics were geographically nearby, and that this proximity was beneficial. Several participants mentioned that leaving their residential building to attend healthcare appointments also gave them a sense of purpose. For example: *'I think it's important for me to be able to get out of the building and make connections with people and to get fresh air and go for a walk'* (P3, cis man, mid-40s), and, *'Sometimes I just like to go in for the walks, you know. Having a reason to go somewhere, and to get away from here'* (P7, cis woman, late 30s). Separation between their housing and healthcare services provided a reason to exercise and an outlet for social connection.

Participants did, however, describe instances where they would use the onsite clinic, which occurred when they required urgent care for wounds, infections, or prevention of medication discontinuations. According to one participant, *'I go and see the doctor here when I have an emergency...I think it's just really good to have it here'* (P15, cis man, late 40s). Overall, most participants highlighted the importance of continuity of care with their pre-existing primary care team with whom they had a positive therapeutic relationship and could conveniently visit, while also utilising the onsite clinic on an as-needed basis.



### 3.3 Shared perspectives amongst participants

Some common themes arose amongst participants regardless of whether they accessed primary care onsite or offsite. For most participants, convenience (e.g. close proximity, flexible hours) and positive therapeutic relationships with safe, non-judgemental healthcare providers were the primary facilitators of positive healthcare experiences. Also, most participants in both groups used the onsite clinic for acute issues (e.g. injuries, new infections) and described how this access prevented the use of emergency departments and walk-in clinics. Furthermore, having access to the onsite clinic for urgent issues enabled some participants who used offsite clinics to continue their opioid agonist treatment when their prescription would have otherwise been cancelled, preventing interruptions in opioid use disorder treatment.

Over a third of the participants who used offsite clinics and most of the participants who used the onsite clinic had medications delivered to their units. They identified that deliveries were important for their medication adherence. It was particularly beneficial for stability on opioid agonist treatment, treatment for infectious diseases, such as HIV and hepatitis C, as well as mental health. For example:

Getting medications from nurses every day definitely helps for treating my mental illness, taking them at the same time every day. I've never in my life been able to take them consistently. I'm getting better and more stable and I am more organized now. I mean, I have actually gone and followed through with specialist appointments, which is like a miracle to me. I am growing in that way; I'm getting stronger that way, but I don't think I would have gotten to this point without nurse support for sure, when I first moved in here, I was not able to consistently take my meds every day.

(P20, cis woman, early 50s)

Medication deliveries prevented interruptions in pharmacotherapeutic treatments, which resulted in improved health outcomes. Altogether, the themes shared across participants highlighted the importance of low-barrier services and positive therapeutic relationships as the primary facilitators of regular healthcare access amongst housed PWUD/A.

## 4. DISCUSSION

Our findings demonstrate the acceptability of onsite primary care amongst tenants in permanent supportive housing and how this embedded model can reduce healthcare access barriers experienced elsewhere. Despite there being an abundance of health and social services in the neighbourhood, none of the participants who regularly accessed the onsite clinic were previously attached to a primary care provider. This indicates that the model is addressing a key gap in primary care delivery for structurally vulnerable PWUD/A who may experience competing needs that prevent service use (Gelberg et al., 1997). Amongst these participants, convenience and non-judgemental care resulted in a supportive environment that fostered safe access to healthcare services. This contrasted with their prior negative experiences accessing care in other clinical settings across the healthcare system. Amongst the participants who did not access the onsite clinic, most emphasised the importance of

continuity of care with their healthcare teams, as well as the close geographic proximity to these services—though they also accessed the clinic on an as-needed basis for urgent issues, preventing them from using emergency services. This study revealed that while there were some barriers identified, healthcare access amongst all participants—regardless of service location—was facilitated by positive therapeutic relationships, low-barrier access to care and convenience, which in turn, helped participants access and maintain treatment for various health concerns.

Studies have demonstrated a plethora of barriers commonly faced by structurally vulnerable PWUD/A when accessing healthcare services. These include: stigma (Collins et al., 2017; Russell et al., 2021; Siersbaek et al., 2021; Torchalla et al., 2015), fragmented and dispersed services (Bardwell et al., 2020; Collins et al., 2017; Russell et al., 2021; Scheim & Werb, 2018; Siersbaek et al., 2021), inconvenient hours of operation and far geographical distances to services (Russell et al., 2021; Sarkar et al., 2020; Timko et al., 2016). Stigmatisation can lead to interrupted care and therefore poorer health outcomes, while addressing stigma in healthcare settings can help to foster positive relationships with healthcare providers and lead to improved health outcomes (Collins et al., 2017; Kerman et al., 2019; Russell et al., 2021; Siersbaek et al., 2021; Torchalla et al., 2015). Our findings are consistent with the research, as participants described experiences of non-judgemental care and positive relationships with clinical staff as the primary facilitators for continued engagement with the primary care team of their choosing. Additionally, in contrast to other settings where services are dispersed and require travel, it is evident from our findings that the centralisation of resources was also a key factor in healthcare service uptake, as many participants appreciated access to multidisciplinary teams in one location, whether it was embedded in their residence or at a nearby offsite clinic. Some participants, regardless of where they accessed primary care, described how the embedded clinics' hours of operation and flexibility in allowing drop-in appointments were useful to address urgent concerns and prevented the utilisation of further healthcare resources.

In addition to the close proximity of services, our findings also demonstrate how low-barrier medication administration programs can facilitate pharmacological treatment retention for PWUD/A, which has been identified in other housing settings (Collins et al., 2017; Fleming et al., 2021; Oviedo-Joekes et al., 2021). For example, in a qualitative study on HIV treatment dispensing models and adherence amongst structurally vulnerable PWUD, Fleming et al. illustrate how antiretroviral treatment adherence is dependent on models that meet the specific needs of patients, whereas those receiving daily delivery of medications addressed barriers to adherence commonly experienced in other models (e.g. pharmacy dispensation), including public transit access and mobility issues (2021). Participants in our study who utilised the onsite pharmacy nursing services or delivery services from community pharmacies uniformly stressed that engagement with daily medication administration programs greatly improved their medication adherence and retention to various treatments, including opioid agonist therapy, HIV and hepatitis C treatment, medications for mental health problems, as well as treatments for other chronic diseases. In addition, this onsite service was used on an as-needed basis by those connected to primary care elsewhere—a benefit for preventing any interruption or discontinuation of opioid agonist therapies. As a recent cohort study in our provincial setting found that opioid

agonist therapy retention is associated with a significant reduction in overdose mortality (Pearce et al., 2020), the role of the studied primary care clinic in supporting medication adherence and retention may be beneficial for reducing overdose risk.

It is evident that the onsite clinic led to improvements in healthcare access amongst supportive housing residents; however, there were some concerns regarding hours of operation and physician availability. While the clinic has full-time nurses providing care every day, physicians only work 1–2 days per week. Increasing operating hours and availability of nurses and physicians could benefit those who identified these as limitations of the clinic, but these are less about the service delivery model and more so related to the availability of funding and resources, especially given the known shortage of primary care providers in our study setting (CBC News, 2021). Exploring a model that includes a nurse practitioner may address some of these staffing issues. In addition to these concerns, some participants identified privacy and confidentiality issues when accessing services in the clinic. Lack of privacy and breaches of confidentiality can be common for PWUD/A and can create mistrust in healthcare systems, which may limit service uptake (Bardwell et al., 2020; Farrugia et al., 2021; Kerman et al., 2019; Philbin & Zhang, 2010). Therefore, clinics embedded in permanent supportive housing programs must consider how to most effectively use existing spaces to provide confidential care, particularly during busy clinic hours. Primary care can be delivered onsite in a flexible manner that meets tenants' preferences (e.g. providing primary care outreach to their units versus in the designated clinical space); however, providers need to be conscientious of confidentiality issues to ensure a sense of safety amongst residents (Kerman et al., 2019). Overall, study participants' perceptions and experiences with the primary care clinic suggest that addressing barriers to care is key to improving patient engagement and health outcomes, as well as potentially decreasing emergency service utilisation as shown in other research (Fleury et al., 2021). Informed by the lead author's clinical experience, this model is well positioned to provide comprehensive primary care access, including the treatment of acute injuries and infections, chronic diseases and mental health problem management, preventative medicine, palliative care and post-admission follow-ups. Additionally, this low-barrier primary care access could prevent downstream medical complications and additional costs for those who have a tendency to forego urgent care when acutely indicated—a key issue for this population (Hwang et al., 2011).

This study occurred at the beginning of the COVID-19 pandemic, which has disproportionately affected PWUD/A. Emerging healthcare access obstacles include decreased overall capacity due to staffing shortages, infection control measures, as well as interruptions in access to substance use disorder treatment (Dunlop et al., 2020; MacKinnon et al., 2020; Searby & Burr, 2021; Volkow, 2020). Additionally, a decrease of in-person provision of care has led to a shift towards telemedicine, which is not consistently accessible for structurally vulnerable PWUD/A who may not have reliable access to telephones or Internet (Hser & Mooney, 2021; Wilson et al., 2021). As a result of the pandemic, affected communities and healthcare providers have called for novel healthcare delivery approaches for this population. Primary care embedded in permanent supportive housing programs may be one promising avenue that warrants further examination. Research has demonstrated that home-based primary care models have benefited older, medically complex patients in some

settings during the pandemic (Franzosa et al., 2021), and previous studies have found these models to be resource-sparing and have improved healthcare access and health outcomes for geriatric populations (Ornstein et al., 2021; Ploeg et al., 2005; Ritchie & Leff, 2018; Wolff-Baker & Ordon, 2019). Our study offers preliminary evidence of similar benefits for PWUD/A when primary care is embedded in supportive housing, where participants reported using fewer emergency services, maintaining continuity of primary care for the first time and receiving treatment with fewer interruptions. Additionally, not only are both permanent supportive housing and primary care essential in improving the health outcomes amongst vulnerably housed people (Pottie et al., 2020), but this model demonstrates the feasibility of how these two best practice interventions can work in tandem through an integrated model.

The acceptability of this primary care model amongst structurally vulnerable PWUD/A aligns well with recent policy developments in British Columbia. The provincial government recently announced its complex care housing policy framework, which includes an emphasis on ‘in-reach’ and onsite primary care services for preventing morbidity and mortality via medication management, rehabilitation and wrap-around supports (BC Ministry of Mental Health and Addictions, 2022). As study participants described multiple benefits of embedding primary care within permanent supportive housing, this clinic model could be used by provincial policy makers in the implementation of the complex care housing framework. Further evaluation and research on the health outcomes associated with the model is also needed to facilitate evidence-based scalability.

There are some study limitations. First, modified recruitment and interviewing techniques were required for this study given necessary COVID-19 infection control measures, which may have affected recruitment, as well as interview length and quality. Second, given the density of health and social service resources in the neighbourhood of the supportive housing site, the results may not be as applicable to PWUD/A living in supportive housing in other jurisdictions. As a result, there may be a greater need for and uptake of primary care embedded in supportive housing programs in communities with fewer service options. Lastly, youth and gender and sexual minorities are underrepresented in this study. Future studies are therefore needed focusing on these populations in order to ascertain any unique barriers and facilitators to healthcare access.

## 5. CONCLUSION

Our study demonstrates the value of providing non-judgemental, highly accessible, centralised multidisciplinary primary care services for PWUD/A in permanent supportive housing. Overall, the findings suggest that embedding access to multidisciplinary primary care within supportive housing is acceptable and beneficial to PWUD/A who have previously encountered barriers to healthcare access or have a history of negative service experiences. Providing residents with an option of home-based primary care visits versus care provided in a designated clinical space lowers barriers to care and may prevent utilisation of acute healthcare resources. While not without its challenges, this housing-based primary care clinic provides a promising model of healthcare delivery for structurally vulnerable PWUD/A, particularly during both the overdose epidemic and

COVID-19 pandemic. Governments, housing providers and policy makers should consider the implementation of sustainable home-based primary care models in supportive housing in order to improve health outcomes amongst PWUD/A.

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## DATA AVAILABILITY STATEMENT

The qualitative data sets for this study are not publicly available given the sensitive nature of the topic, as they contain confidential information that could compromise participant confidentiality and consent.

## REFERENCES

- Aidala A, Cross JE, Stall R, Harre D, & Sumartojo E (2005). Housing status and HIV risk behaviors: Implications for prevention and policy. *AIDS and Behavior*, 9(3), 251–265. 10.1007/s10461-005-9000-7 [PubMed: 16088369]
- Aldridge RW, Story A, Hwang SW, Nordentoft M, Luchenski SA, Hartwell G, Tweed EJ, Lewer D, Vittal Katikireddi S, & Hayward AC (2018). Morbidity and mortality in homeless individuals, prisoners, sex workers, and individuals with substance use disorders in high-income countries: A systematic review and meta-analysis. *The Lancet*, 391(10117), 241–250. 10.1016/S0140-6736(17)31869-X
- Amram O, Socías E, Nosova E, Kerr T, Wood E, DeBeck K, Hayashi K, Fairbairn N, Montaner J, & Milloy MJ (2019). Density of low-barrier opioid agonist clinics and risk of non-fatal overdose during a community-wide overdose crisis: A spatial analysis. *Spatial and Spatio-temporal Epidemiology*, 30, 100288. 10.1016/j.sste.2019.100288 [PubMed: 31421798]
- Arnold C (2020). The US COVID pandemic has a sinister shadow—Drug overdoses. *BMJ*, 371, m4751. 10.1136/bmj.m4751 [PubMed: 33334731]
- Arum C, Fraser H, Artenie AA, Bivegete S, Trickey A, Alary M, Astemborski J, Iversen J, Lim AG, MacGregor L, Morris M, Ong JJ, Platt L, Sack-Davis R, van Santen DK, Solomon SS, Sypsa V, Valencia J, Van Den Boom W, ... Strathdee SA (2021). Homelessness, unstable housing, and risk of HIV and hepatitis C virus acquisition among people who inject drugs: A systematic review and meta-analysis. *The Lancet Public Health*, 6(5), e309–e323. 10.1016/S2468-2667(21)00013-X [PubMed: 33780656]
- Asana OO, Ayvaci ER, Pollio DE, Hong BA, & North CS (2018). Associations of alcohol use disorder, alcohol use, housing, and service use in a homeless sample of 255 individuals followed over 2 years. *Substance Abuse*, 39(4), 497–504. 10.1080/08897077.2018.1449169 [PubMed: 29595364]
- Bardwell G, Collins AB, McNeil R, & Boyd J (2017). Housing and overdose: An opportunity for the scale-up of overdose prevention interventions? *Harm Reduction Journal*, 14(1), 77. 10.1186/s12954-017-0203-9 [PubMed: 29212507]
- Bardwell G, Fleming T, Collins AB, Boyd J, & McNeil R (2019). Addressing intersecting housing and overdose crises in Vancouver, Canada: Opportunities and challenges from a tenant-led overdose response intervention in single room occupancy hotels. *Journal of Urban Health*, 96(1), 12–20. 10.1007/s11524-018-0294-y
- Bardwell G, Strike C, Mitra S, Scheim A, Barnaby L, Altenberg J, & Kerr T (2020). “That’s a double-edged sword”: Exploring the integration of supervised consumption services within community health centres in Toronto, Canada. *Health & Place*, 61, 102245. 10.1016/j.healthplace.2019.102245 [PubMed: 31740126]

- BC Ministry of Mental Health and Addictions. (2022). Complex care housing: Draft strategic framework. Retrieved from [https://www2.gov.bc.ca/assets/gov/government/ministries-organizations/ministries/mental-health-addictions/draft\\_complex\\_care\\_housing\\_framework\\_-\\_feb\\_2022\\_external\\_v2.pdf](https://www2.gov.bc.ca/assets/gov/government/ministries-organizations/ministries/mental-health-addictions/draft_complex_care_housing_framework_-_feb_2022_external_v2.pdf)
- Bruneau J, Ahamad K, Goyer M-È, Poulin G, Selby P, Fischer B, Wild TC, & Wood E (2018). Management of opioid use disorders: A national clinical practice guideline. *Canadian Medical Association Journal*, 190(9), E247–E257. 10.1503/cmaj.170958 [PubMed: 29507156]
- Byers KA, Cox SM, Lam R, & Himsworth CG (2019). “They’re always there”: Resident experiences of living with rats in a disadvantaged urban neighbourhood. *BMC Public Health*, 19(1), 853. 10.1186/s12889-019-7202-6 [PubMed: 31262276]
- Canadian Institute for Substance Use Research. (2020). Canadian substance use costs and harms 2015–2017. Retrieved from <https://csuch.ca/publications/CSUCH-Canadian-Substance-Use-Costs-Harms-Report-2020-en.pdf>
- Carnegie Community Centre. (2019). Help in the Downtown Eastside. Retrieved December 1 from <http://www.carnegieneewsletter.org/help-in-the-downtown-eastside>
- CBC News. (2021). Family doctor shortage. Retrieved February 1 from <https://www.cbc.ca/listen/live-radio/1-91-the-early-edition/clip/15875633-family-doctor-shortage>
- Chan Carusone S, Guta A, Robinson S, Tan DH, Cooper C, O’Leary B, de Prinse K, Cobb G, Upshur R, & Strike C (2019). “Maybe if i stop the drugs, then maybe they’d care?”—Hospital care experiences of people who use drugs. *Harm Reduction Journal*, 16(1), 16. 10.1186/s12954-019-0285-7 [PubMed: 30760261]
- Cherner RA, Aubry T, Sylvestre J, Boyd R, & Pettey D (2017). Housing first for adults with problematic substance use. *Journal of Dual Diagnosis*, 13(3), 219–229. 10.1080/15504263.2017.1319586 [PubMed: 28414579]
- City of Vancouver. (2021). Downtown Eastside community hubs. Retrieved December 1 from <https://vancouver.ca/files/cov/dtes-community-hub-engagement-survey.pdf>
- Collins AB, Parashar S, Hogg RS, Fernando S, Worthington C, McDougall P, Turje RB, & McNeil R (2017). Integrated HIV care and service engagement among people living with HIV who use drugs in a setting with a community-wide treatment as prevention initiative: A qualitative study in Vancouver, Canada. *Journal of the International AIDS Society*, 20(1), 21407. 10.7448/IAS.20.1.21407 [PubMed: 28426185]
- Collins SE, Taylor EM, King VL, Hatsukami AS, Jones MB, Lee C-Y, Lenert J, Jing JM, Barker CR, Goldstein SC, Hardy RV, Kaese G, & Nelson LA (2016). Suicidality among chronically homeless people with alcohol problems attenuates following exposure to housing first. *Suicide and Life-threatening Behavior*, 46(6), 655–663. 10.1111/sltb.12250 [PubMed: 27061738]
- Corbin J, & Strauss A (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Sage Publications.
- Crowe S, Cresswell K, Robertson A, Huby G, Avery A, & Sheikh A (2011). The case study approach. *BMC Medical Research Methodology*, 11(1), 100. 10.1186/1471-2288-11-100 [PubMed: 21707982]
- Davies A, & Wood LJ (2018). Homeless health care: Meeting the challenges of providing primary care. *The Medical Journal of Australia*, 209(5), 230–234. 10.5694/mja17.01264 [PubMed: 30157413]
- Dunlop A, Lokuge B, Masters D, Sequeira M, Saul P, Dunlop G, Ryan J, Hall M, Ezard N, Haber P, Lintzeris N, & Maher L (2020). Challenges in maintaining treatment services for people who use drugs during the COVID-19 pandemic. *Harm Reduction Journal*, 17(1), 26. 10.1186/s12954-020-00370-7 [PubMed: 32375887]
- Evans L, & Strathdee SA (2006). A roof is not enough: Unstable housing, vulnerability to HIV infection and the plight of the SRO. *International Journal of Drug Policy*, 17(2), 115–117. 10.1016/j.drugpo.2005.10.003
- Farrugia A, Pienaar K, Fraser S, Edwards M, & Madden A (2021). Basic care as exceptional care: Addiction stigma and consumer accounts of quality healthcare in Australia. *Health Sociology Review*, 30(2), 95–110. 10.1080/14461242.2020.1789485 [PubMed: 34018910]

- Fitzpatrick-Lewis D, Ganann R, Krishnaratne S, Ciliska D, Kouyoumdjian F, & Hwang SW (2011). Effectiveness of interventions to improve the health and housing status of homeless people: A rapid systematic review. *BMC Public Health*, 11(1), 638. 10.1186/1471-2458-11-638 [PubMed: 21831318]
- Fleming T, Collins AB, Bardwell G, Fowler A, Boyd J, Milloy MJ, Small W, & McNeil R (2021). A qualitative investigation of HIV treatment dispensing models and impacts on adherence among people living with HIV who use drugs. *PLoS One*, 16(2), e0246999. 10.1371/journal.pone.0246999 [PubMed: 33635886]
- Fleury M-J, Grenier G, Cao Z, & L'Espérance N (2021). Profiles of persons with current or previous experience of homelessness using emergency departments. *Housing Studies*, 36(7), 1067–1085. 10.1080/02673037.2020.1745762
- Fortier E, Sylvestre M-P, Artenie AA, Minoyan N, Jutras-Aswad D, Roy É, Grebely J, & Bruneau J (2020). Associations between housing stability and injecting frequency fluctuations: Findings from a cohort of people who inject drugs in Montréal, Canada. *Drug Alcohol Depend*, 206, 107744. 10.1016/j.drugalcdep.2019.107744 [PubMed: 31785537]
- Franzosa E, Gorbenko K, Brody AA, Leff B, Ritchie CS, Kinosian B, Ornstein KA, & Federman AD (2021). “At home, with care”: Lessons from New York City home-based primary care practices managing COVID-19. *Journal of the American Geriatrics Society*, 69(2), 300–306. 10.1111/jgs.16952 [PubMed: 33179761]
- Gelberg L, Gallagher TC, Andersen RM, & Koegel P (1997). Competing priorities as a barrier to medical care among homeless adults in Los Angeles. *American Journal of Public Health*, 87(2), 217–220. 10.2105/ajph.87.2.217 [PubMed: 9103100]
- Goodman A, Fleming K, Markwick N, Morrison T, Lagimodiere L, & Kerr T (2017). “They treated me like crap and i know it was because i was native”: The healthcare experiences of aboriginal peoples living in Vancouver’s inner city. *Social Science & Medicine*, 178, 87–94. 10.1016/j.socscimed.2017.01.053 [PubMed: 28214449]
- Hall G, Walters S, Gould H, & Lim S (2020). Housing versus treatment first for supportive housing participants with substance use disorders: A comparison of housing and public service use outcomes. *Substance Abuse*, 41(1), 70–76. 10.1080/08897077.2018.1449049 [PubMed: 29528786]
- Henwood BF, Cabassa LJ, Craig CM, & Padgett DK (2013). Permanent supportive housing: Addressing homelessness and health disparities? *American Journal of Public Health*, 103(Suppl 2), S188–S192. 10.2105/AJPH.2013.301490 [PubMed: 24148031]
- Henwood BF, Harris T, Woo D, Winetrobe H, Rhoades H, & Wenzel SL (2018). Availability of comprehensive services in permanent supportive housing in Los Angeles. *Health & Social Care in the Community*, 26(2), 207–213. 10.1111/hsc.12510
- Henwood BF, Stanhope V, Brawer R, Weinstein LC, Lawson J, Stwors E, & Crossan C (2013). Addressing chronic disease within supportive housing programs. *Progress in Community Health Partnerships*, 7(1), 67–75. 10.1353/cpr.2013.0005 [PubMed: 23543023]
- Hser YI, & Mooney LJ (2021). Integrating telemedicine for medication treatment for opioid use disorder in rural primary care: Beyond the COVID pandemic. *The Journal of Rural Health*, 37(1), 246–248. 10.1111/jrh.12489 [PubMed: 32579751]
- Hwang SW (2000). Mortality among men using homeless shelters in Toronto, Ontario. *JAMA*, 283(16), 2152–2157. 10.1001/jama.283.16.2152 [PubMed: 10791509]
- Hwang SW, Weaver J, Aubry T, & Hoch JS (2011). Hospital costs and length of stay among homeless patients admitted to medical, surgical, and psychiatric services. *Medical Care*, 49(4), 350. Retrieved from [https://journals.lww.com/ww-medicalcare/Fulltext/2011/04000/Hospital\\_Costs\\_and\\_Length\\_of\\_Stay\\_Among\\_Homeless.5.aspx](https://journals.lww.com/ww-medicalcare/Fulltext/2011/04000/Hospital_Costs_and_Length_of_Stay_Among_Homeless.5.aspx) [PubMed: 21368678]
- Hwang SW, Wilkins R, Tjepkema M, O'Campo PJ, & Dunn JR (2009). Mortality among residents of shelters, rooming houses, and hotels in Canada: 11-year follow-up study. *BMJ*, 339(3), b4036. 10.1136/bmj.b4036 [PubMed: 19858533]
- Ivins A, Boyd J, Mayer S, Collins A, Sutherland C, Kerr T, & McNeil R (2020). Barriers and facilitators to a novel low-barrier hydromorphone distribution program in Vancouver, Canada: A qualitative study. *Drug and Alcohol Dependence*, 216, 108202. 10.1016/j.drugalcdep.2020.108202 [PubMed: 32948372]

- Jenkins WD, Bolinski R, Bresett J, Van Ham B, Fletcher S, Walters S, Friedman SR, Ezell JM, Pho M, Schneider J, & Ouellet L (2021). COVID-19 during the opioid epidemic – Exacerbation of stigma and vulnerabilities. *The Journal of Rural Health*, 37(1), 172–174. 10.1111/jrh.12442 [PubMed: 32277731]
- Kendall CE, Boucher LM, Donelle J, Martin A, Marshall Z, Boyd R, Oickle P, Diliso N, Pineau D, Renaud B, LeBlanc S, Tyndall M, & Bayoumi AM (2020). Engagement in primary health care among marginalized people who use drugs in Ottawa, Canada. *BMC Health Services Research*, 20(1), 837. 10.1186/s12913-020-05670-z [PubMed: 32894114]
- Kerman N, Gran-Ruaz S, Lawrence M, & Sylvestre J (2019). Perceptions of service use among currently and formerly homeless adults with mental health problems. *Community Mental Health Journal*, 55(5), 777–783. 10.1007/s10597-019-00382-z [PubMed: 30798452]
- Kerman N, Polillo A, Bardwell G, Gran-Ruaz S, Savage C, Felteau C, & Tsemberis S (2021). Harm reduction outcomes and practices in housing first: A mixed-methods systematic review. *Drug and Alcohol Dependence*, 228, 109052. 10.1016/j.drugalcdep.2021.109052 [PubMed: 34601279]
- Knight KR, Lopez AM, Comfort M, Shumway M, Cohen J, & Riley ED (2014). Single room occupancy (sro) hotels as mental health risk environments among impoverished women: The intersection of policy, drug use, trauma, and urban space. *The International Journal on Drug Policy*, 25(3), 556–561. 10.1016/j.drugpo.2013.10.011 [PubMed: 24411945]
- Krüsi A, Fast D, Small W, Wood E, & Kerr T (2010). Social and structural barriers to housing among street-involved youth who use illicit drugs. *Health & Social Care in the Community*, 18, 282–288. 10.1111/j.1365-2524.2009.00901.x [PubMed: 20102394]
- Lazarus L, Chettiar J, Deering K, Nabess R, & Shannon K (2011). Risky health environments: Women sex workers' struggles to find safe, secure and non-exploitative housing in Canada's poorest postal code. *Social Science & Medicine*, 73(11), 1600–1607. 10.1016/j.socscimed.2011.09.015 [PubMed: 22018526]
- MacKinnon L, & Socias ME (2021). Housing first: A housing model rooted in harm reduction with potential to transform health care access for highly marginalized Canadians. *Canadian Family Physician*, 67, 481–483. [PubMed: 34261706]
- MacKinnon L, Socias ME, & Bardwell G (2020). COVID-19 and overdose prevention: Challenges and opportunities for clinical practice in housing settings. *Journal of Substance Abuse Treatment*, 119, 108153. 10.1016/j.jsat.2020.108153 [PubMed: 33032862]
- Menzies P (2006). Intergenerational trauma and homeless aboriginal men. *Canadian Review of Social Policy*, 58, 1–24.
- Onapa H, Sharpley CF, Bitsika V, McMillan ME, MacLure K, Smith L, & Agnew LL (2021). The physical and mental health effects of housing homeless people: A systematic review. *Health & Social Care in the Community*, 30, 448–468. 10.1111/hsc.13486 [PubMed: 34423491]
- Ornstein K, Levine DM, & Leff B (2021). The underappreciated success of home-based primary care: Next steps for CMS' independence at home. *Journal of the American Geriatrics Society*, 69(11), 3344–3347. 10.1111/jgs.17426 [PubMed: 34432890]
- Oviedo-Joekes E, MacDonald S, Boissonneault C, & Harper K (2021). Take home injectable opioids for opioid use disorder during and after the COVID-19 pandemic is in urgent need: A case study. *Substance Abuse Treatment, Prevention, and Policy*, 16(1), 22. 10.1186/s13011-021-00358-x [PubMed: 33673847]
- Paquette CE, Syvertsen JL, & Pollini RA (2018). Stigma at every turn: Health services experiences among people who inject drugs. *International Journal of Drug Policy*, 57, 104–110. 10.1016/j.drugpo.2018.04.004 [PubMed: 29715589]
- Pearce LA, Min JE, Piske M, Zhou H, Homayra F, Slaunwhite A, Irvine M, McGowan G, & Nosyk B (2020). Opioid agonist treatment and risk of mortality during opioid overdose public health emergency: Population based retrospective cohort study. *BMJ*, 368, m772. 10.1136/bmj.m772 [PubMed: 32234712]
- Philbin MM, & Zhang F (2010). Exploring stakeholder perceptions of facilitators and barriers to accessing methadone maintenance clinics in Yunnan Province, China. *AIDS Care*, 22(5), 623–629. 10.1080/09540120903311490 [PubMed: 20229375]



- PHSA. (2020). Community health services area (CHSA) health profile. Retrieved December 1 from <https://communityhealth.phsa.ca>
- Ploeg J, Feightner J, Hutchison B, Patterson C, Sigouin C, & Gauld M (2005). Effectiveness of preventive primary care outreach interventions aimed at older people. *Canadian Family Physician*, 51(9), 1244–1245. [PubMed: 16926937]
- Pottie K, Kendall CE, Aubry T, Magwood O, Andermann A, Salvalaggio G, Ponka D, Bloch G, Bric V, Agbata E, Thavorn K, Hannigan T, Bond A, Crouse S, Goel R, Shoemaker E, Wang JZI, Mott S, Kaur H, ... Tugwell P (2020). Clinical guideline for homeless and vulnerably housed people, and people with lived homelessness experience. *Canadian Medical Association Journal*, 192(10), E240–E254. 10.1503/cmaj.190777 [PubMed: 32152052]
- Rawson NSB (2020). National pharmacare in Canada: Equality or equity, accessibility or affordability; comment on “universal pharmacare in Canada: A prescription for equity in healthcare”. *International Journal of Health Policy and Management*, 9(12), 524–527. 10.15171/ijhpm.2019.146 [PubMed: 32610769]
- Riley ED, Vittinghoff E, Koss CA, Christopoulos KA, Clemenzi-Allen A, Dilworth SE, & Carrico AW (2019). Housing first: Unsuppressed viral load among women living with hiv in San Francisco. *AIDS and Behavior*, 23(9), 2326–2336. 10.1007/s10461-019-02601-w [PubMed: 31324996]
- Ritchie CS, & Leff B (2018). Population health and tailored medical care in the home: The roles of home-based primary care and home-based palliative care. *Journal of Pain and Symptom Management*, 55(3), 1041–1046. 10.1016/j.jpainsymman.2017.10.003 [PubMed: 29031914]
- Rowlands Snyder EC, Boucher LM, Bayoumi AM, Martin A, Marshall Z, Boyd R, LeBlanc S, Tyndall M, & Kendall CE (2021). A cross-sectional study of factors associated with unstable housing among marginalized people who use drugs in Ottawa, Canada. *PLoS One*, 16(7), e0253923. 10.1371/journal.pone.0253923 [PubMed: 34197552]
- Rush B, & Furlong A (2020). Rapid access models for substance use services: A rapid review. Retrieved from <https://www.ccsa.ca/sites/default/files/2020-10/CCSA-Rapid-Access-Models-Substance-Use-Services-Rapid-Review-Report-2020-en.pdf>
- Russell C, Ali F, Nafeh F, LeBlanc S, Imtiaz S, Elton-Marshall T, & Rehm J (2021). A qualitative examination of substance use service needs among people who use drugs (PWUD) with treatment and service experience in Ontario, Canada. *BMC Public Health*, 21(1), 2021. 10.1186/s12889-021-12104-w [PubMed: 34742267]
- Sarkar S, Thakur A, Sood E, & Mandal P (2020). Barriers and facilitators of addiction treatment: A qualitative study. *International Journal of Mental Health and Addiction*, 20, 672–690. 10.1007/s11469-020-00394-x
- Scheim A, & Werb D (2018). Integrating supervised consumption into a continuum of care for people who use drugs. *Canadian Medical Association Journal*, 190(31), E921–E922. 10.1503/cmaj.180824 [PubMed: 30087127]
- Schiff R, Pauly B, Hall S, Vallance K, Ivsins A, Brown M, Gray E, Krysovaty B, & Evans J (2019). Managed alcohol programs in the context of housing first. *Housing, Care and Support*, 22(4), 207–215. 10.1108/HCS-02-2019-0006
- Searby A, & Burr D (2021). The impact of COVID-19 on alcohol and other drug nurses’ provision of care: A qualitative descriptive study. *Journal of Clinical Nursing*, 30(11–12), 1730–1741. 10.1111/jocn.15732 [PubMed: 33656227]
- Siersbaek R, Ford JA, Burke S, Ní Cheallaigh C, & Thomas S (2021). Contexts and mechanisms that promote access to healthcare for populations experiencing homelessness: A realist review. *BMJ Open*, 11(4), e043091. 10.1136/bmjopen-2020-043091
- Smith L, Veronese N, López-Sánchez GF, Moller E, Johnstone J, Firth J, Grabovac I, Yang L, Soysal P, & Jackson SE (2019). Health behaviours and mental and physical health status in older adults with a history of homelessness: A cross-sectional population-based study in England. *BMJ Open*, 9(6), e028003. 10.1136/bmjopen-2018-028003
- Taylor J (2012). Primary care outreach in Markham, Ont. *Canadian Family Physician*, 58, 147–148. [PubMed: 22439189]

- Timko C, Schultz NR, Britt J, & Cucciare MA (2016). Transitioning from detoxification to substance use disorder treatment: Facilitators and barriers. *Journal of Substance Abuse Treatment*, 70, 64–72. 10.1016/j.jsat.2016.07.010 [PubMed: 27692190]
- Tinland A, Loubiere S, Cantiello M, Boucekine M, Girard V, Taylor O, & Auquier P (2021). Mortality in homeless people enrolled in the French housing first randomized controlled trial: A secondary outcome analysis of predictors and causes of death. *BMC Public Health*, 21(1), 1294. 10.1186/s12889-021-11310-w [PubMed: 34215235]
- To MJ, Palepu A, Aubry T, Nisenbaum R, Gogosis E, Gadermann A, Cherner R, Farrell S, Misir V, & Hwang SW (2016). Predictors of homelessness among vulnerably housed adults in 3 Canadian cities: A prospective cohort study. *BMC Public Health*, 16(1), 1041. 10.1186/s12889-016-3711-8 [PubMed: 27716129]
- Torchalla I, Linden IA, Strehlau V, Neilson EK, & Krausz M (2015). “Like a lots happened with my whole childhood”: Violence, trauma, and addiction in pregnant and postpartum women from Vancouver’s downtown eastside. 10.
- Tsai J, Mares AS, & Rosenheck RA (2010). A multisite comparison of supported housing for chronically homeless adults: “Housing first” versus “residential treatment first”. *Psychological Services*, 7(4), 219–232. 10.1037/a0020460 [PubMed: 21829324]
- Turnbull J, Muckle W, & Masters C (2007). Homelessness and health. *Canadian Medical Association Journal*, 177(9), 1065–1066. 10.1503/cmaj.071294 [PubMed: 17954899]
- Volkow ND (2020). Collision of the COVID-19 and addiction epidemics. *Annals of Internal Medicine*, 173(1), 61–62. 10.7326/M20-1212 [PubMed: 32240293]
- Wilson CG, Ramage M, & Fagan EB (2021). A primary care response to COVID-19 for patients with an opioid use disorder. *The Journal of Rural Health*, 37(1), 169–171. 10.1111/jrh.12438 [PubMed: 32277732]
- Wolff-Baker D, & Ordon RB (2019). The expanding role of nurse practitioners in home-based primary care: Opportunities and challenges. *Journal of Gerontological Nursing*, 45(6), 9–14. 10.3928/00989134-20190422-01

**What is known:**

- Structurally vulnerable people who use drugs and alcohol (PWUD/A) face barriers in accessing healthcare
- Health and safety vulnerabilities persist amongst PWUD/A in some housing settings, particularly during the overdose epidemic and COVID-19 pandemic
- National guidelines in Canada call for supportive housing and comprehensive primary care to support vulnerably housed people

**What this article adds:**

- There is value in providing non-judgemental, highly accessible, centralised multidisciplinary primary care services for PWUD/A in permanent supportive housing
- Barriers described by some participants, including limited hours of operation and privacy concerns, need to be addressed
- This integrated model improves health outcomes and access amongst vulnerable PWUD/A

**TABLE 1.**

Sample characteristics (N = 30)

Characteristic	Onsite clinic n (N = 15)	Offsite clinic n (N = 15)	Total n (%) N = 30
<b>Age</b>			
Mean (range)	49.2 (34–74)	47.4 (39–59)	48.3
<b>Gender</b>			
Cis man	7	9	16 (53.3)
Cis woman	6	6	12 (40.0)
Two spirit	1	0	1 (3.3)
Trans	1	0	1 (3.3)
<b>Race/ethnicity</b>			
White	9	8	17 (56.7)
Racialised/indigenous	6	7	13 (43.3)
<b>Education</b>			
High school education or higher	9	7	16 (53.3)
<b>Comorbidities</b>			
HIV+	0	2	2 (6.7)
Hepatitis C	9	10	19 (63.3)
Mental health problems	7	12	19 (63.3)
Other chronic illness(es)	3	10	13 (43.3)
<b>Substance use related</b>			
Daily frequency of use	13	13	26 (86.7)
<b>Substance use<sup>a</sup></b>			
Crack cocaine	3	4	7 (23.3)
Cocaine	4	3	7 (23.3)
Crystal methamphetamine	8	8	16 (53.3)
Heroin	10	10	20 (66.7)
Fentanyl	11	10	21 (70.0)
Alcohol	8	8	16 (53.3)
Cannabis	4	1	5 (16.7)
1+ overdose(s) in the past year	5	3	8 (26.7)
Prescribed OAT <sup>b</sup>	13	11	24 (80)
Prescribed hydromorphone	6	0	6 (20.0)
<b>Income<sup>a</sup></b>			
Full/part-time employment	7	5	13 (43.3)
Street-based income generating activities <sup>c</sup>	13	9	22 (73.3)
Social assistance	13	15	28 (93.3)
Pension	2	0	2 (6.7)

<sup>a</sup>Last 30 days.<sup>b</sup>Opioid Agonist Therapy (OAT) refers to prescribed methadone, sustained-release oral morphine, buprenorphine/naloxone, diacetylmorphine, as well as other more novel therapies including transdermal fentanyl and immediate release oral morphine.

<sup>c</sup>Sex work, recycling/binning, street vending, panhandling, drug dealing, theft.

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