Examining Low-Barrier Buprenorphine Treatment during COVID-19 for Individuals Experiencing Housing Insecurity and Homelessness

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Executive Summary

People experiencing homelessness and housing insecurity are disproportionately affected by the current opioid crisis. However, there is currently little research focusing on barriers to continuity of care for members of these communities receiving treatment. Many people in the Kensington neighborhood of Philadelphia currently face these intersectional challenges, and harm reduction agencies like Prevention Point Philadelphia (PPP) provide essential services to these communities, including buprenorphine-based medication-assisted treatment (MAT) for opioid use disorder (OUD). While the COVID-19 pandemic has added to the risk environment experienced by these individuals, it has also ushered in a wave of regulatory changes for medication-assisted treatment aimed at improving access to care during the pandemic. Given the recency of these changes, their impact has not yet been assessed. In this report, I ask two main questions to address these gaps: **How might obstacles during MAT manifest for individuals experiencing housing insecurity and/or homelessness? Have regulatory changes during the pandemic alleviated any barriers to treatment for these individuals?**

Through retrospective analysis of data from the Stabilization, Treatment, and Engagement Program (STEP) at PPP, I highlight baseline disparities in MAT outcomes for individuals experiencing homelessness. Additionally, I find evidence that regulatory changes significantly improved MAT outcomes but also created new forms of inequity. While STEP already lowers many barriers to MAT access through its medication-first approach, I suggest ways in which it could further support participants by addressing specific challenges that I observed in this study. Based on my findings, I propose that STEP should **pilot a community storage locker program** and **promote greater use of medications with fewer logistical demands**, such as Sublocade. Given that my findings may also be more reflective of broader structural issues, I further suggest that they be used to advocate for the **extension of current regulatory changes to MAT beyond the resolution of COVID-19** and for **more sustainable funding to housing programs as public health initiatives**.

Introduction

In 2017, the opioid crisis was declared a national public health emergency. That year, Philadelphia had the highest overdose mortality rate (65.9 per 100,000 people) among major U.S. cities,[1] with highest density of these occurring in the Kensington neighborhood.[2] In Kensington, the crisis of opioid-related overdoses is also compounded by high rates of housing instability and homelessness, polysubstance use, psychiatric illness, incarceration, and HIV/HCV infection,[3] creating an intersectional risk environment to which MAT must be adapted. Prior research has pointed out **logistical barriers** to primary care for individuals experiencing homelessness, including physical access to health services, difficulty in contacting services, and medication security,[4] but such research has not been sufficiently extended to the more logistically demanding treatment of chronic conditions such as OUD.

Concerns about the opioid crisis have also grown during the COVID-19 pandemic, with a 34.8% increase in overdose-related deaths attributed to synthetic opioids during the 12-month period leading up to May 2020.[5] COVID-19 forced many harm reduction agencies to close or reduce their hours, disrupting treatment routines and increasing social isolation, often leading to relapse or exacerbating existing use.[6] In response to this, the Drug Enforcement Agency relaxed regulations for the delivery of buprenorphine via telemedicine,[7] allowing providers to see patients remotely for both initial visits and additional consultations. Taking advantage of this regulatory change, STEP fully transitioned to **telemedicine delivery** of MAT while **extending prescription intervals** and **eliminating routine urine drug screening (UDS).**

Many have applauded the speed with which the healthcare system adapted to COVID-19 by transitioning to telemedicine, but **what does MAT in the era of telemedicine actually look like in communities where many unhoused individuals lack consistent access to technology?** My thesis investigates the landscape of MAT for people at varying levels of housing instability and homelessness both before and during the pandemic, highlighting the role of logistical barriers and the impact of recent program and policy changes. Through a quantitative analysis of STEP data, I conclude that despite the low-threshold model of care, **housing continues to be a major factor in MAT experiences, even as outcomes improved during the pandemic**. In this report, I present associations that homelessness has with retention, adherence, attendance, and medication security, quantify the extent to which remote telemedicine was used by participants during the pandemic, and describe the impacts of telemedicine and other recent program changes on retention and adherence. Based on my findings, I propose additional ways that STEP may reduce the burden associated with logistical barriers to MAT. Finally, I advocate for the continuation of low-barrier MAT policies beyond the end of the COVID-19 pandemic and for long-term sustainability in funds to housing services.

Methods

This research was conducted using two years (2019-2020) of retrospective data from STEP, including all participants who initiated treatment from January 2019 through June 2020. Participants were identified through electronic health records for OUD-related visits, and six months of follow-up data were collected after each participant intake. Data were pulled from the STEP electronic health record system, intake forms, case management notes, program schedules and the Pennsylvania Prescription Drug Monitoring Program (PDMP). Data extracted include baseline demographic and substance use characteristics, visit dates and modalities, UDS results, reports of missing and stolen medications, and prescription information.

Data were split for two primary phases of analysis: a more granular study of the baseline effects of housing insecurity and homelessness on MAT experiences and a broader comparison of treatment before and during the COVID-19 pandemic. In this first phase, participants were stratified by housing status to compare traditional outcome metrics (retention and medication adherence) and measures of logistical barriers (appointment attendance and medication security). In the second phase, retention was compared between historical controls and new intakes during COVID-19, accounting for telemedicine utilization. Similar comparisons were made for medication coverage in the second phase with additional paired analysis of participants who began treatment before COVID-19 and continued during the pandemic.

Key Findings

1. **Homelessness is significantly associated with poorer treatment outcomes and higher logistical barriers to care.**

Compared to permanently housed STEP participants, participants living on the street had significantly shorter lengths of retention in treatment (1.21 months vs. 2.46 months) and lower rates of medication adherence as measured through UDS results for (63% vs. 87% positive for buprenorphine). These associations remained consistent after controlling for baseline sociodemographic and substance use characteristics. Because these results could be misinterpreted to argue that people who are homeless are inherently less compliant, I further investigated the role of logistical barriers to long-term retention and adherence for these individuals. On average, people experiencing homelessness missed 7% more appointments and reported lost or stolen medications 0.32 more times per month than people who were permanently housed. Although the explanations for these occurrences often went unreported, these represented manifestations of logistical barriers that could lead to periods without medication coverage, leaving individuals more vulnerable to relapse. Previous qualitative

primary care studies have suggested that missed appointments can arise from a lack of consistent transportation to appointments or mailing address/phone number for appointment reminders.[8,9] People living on the street and in shelters have also been shown to be frequent targets for robbery, as their medications have high street value.[10] Taken together, these results suggest that participants who are homeless may have poorer MAT outcomes because they face higher barriers to continuity of care.

2. **Individuals facing street homelessness experience disparities in MAT to a greater degree than individuals with unstable or transitional housing arrangements.**

The previously described associations were also observed with other degrees of housing insecurity, but not with the same level of significance. The four outcomes did not change linearly with levels of housing insecurity, which suggests that transitional housing does alleviate some of the burden from logistical barriers to MAT. Although location could not be accounted for in housing measures, these results may be affected by the close proximity of PPP shelters to the MAT clinic, which facilitates access to care for shelter participants in STEP. This suggests that PPP's co-location of MAT services with housing supports have been successful in improving treatment progress, even though shelter capacity has not been large enough to meet the entire needs of the community. PPP's introduction of a shelter-based provider in early 2020 would be worth studying when face-to-face treatment resumes, as this would seem to further reduce logistical barriers for shelter-based MAT participants.

3. **Remote telemedicine during the COVID-19 pandemic was limited, especially for people experiencing housing instability and/or homelessness.**

Preliminary discussions with STEP staff pointed to a key distinction between telemedicine on the *provider* end and on the *patient* end. Participants who lacked the technology for virtual appointments continued meeting face-to-face with case managers, who facilitated their video or phone calls with providers. Thus, while all providers delivered MAT through telemedicine, not all participants experienced the greater accessibility offered by remote visits. Out of 90 participants in the study who began treatment during the pandemic, 47 did not access remote telemedicine at all, and within the remainder, most participants still had remote appointments less than 50% of the time. While homelessness and housing insecurity were not significantly associated with whether or not participants utilized remote telemedicine at all, they were significantly associated with fewer remote visits among participants who did have them. Thus, many individuals who were already unable to shelter in place also had to have more in-person interactions for MAT. Considering previous findings that people experiencing homelessness have reduced or transient access to technology,[11–14] these findings suggest that further technological support is necessary for more equitable delivery of MAT through telemedicine.

4. **Participant retention significantly increased and medication coverage remained steady during the pandemic.**

The effects of telemedicine delivery during the pandemic were isolated from those of other program changes by comparing new intakes during COVID-19 based on their use of remote telemedicine. The risk of discontinuing treatment for participants who did access telemedicine remotely was only 40% that of participants who did not access it when controlling for demographic and substance use variables. However, within the group of participants who did access telemedicine remotely, the proportion of remote appointments was not significantly related to retention rate. This suggests that having flexibility through the option of remote appointments can improve retention, but the extent of its use may not have a strong effect. The effects of other program changes were also beneficial to retention, as the risk of discontinuing treatment among new intakes during COVID-19 who did not access telemedicine remotely was only 0.44 times that of pre-pandemic participants when controlling for other variables. This demonstrates that even without telemedicine, eliminating routine UDS and extending prescription intervals had positive impacts on program retention. Analyses of medication coverage did not significantly differ between historical controls and new intakes regardless of their use of telemedicine, and paired analysis in continuity participants similarly yielded insignificant results. While this implies that recent changes did not necessarily benefit medication coverage, it demonstrates that they had no negative impacts.

Program and Policy Implications

While STEP already effectively tailors treatment plans to the unique medical and social needs of its participants, my findings indicate housing-related barriers have nonetheless persisted. Despite some unevenness in the accessibility offered by recent program changes, MAT outcomes have still improved during the COVID-19 pandemic. Drawing from these results, I propose several suggestions for STEP as well as the broader public health field.

STEP is already actively working toward lowering barriers to MAT for people in complex risk environments, following established guidelines for healthcare in homeless populations.[15] Other sites with MAT services for similar populations should consider **modeling their programs after STEP** in the following ways:

- ➢ Operation within the broader framework of a harm reduction agency or with linkage to harm reduction services, such as syringe exchange and HIV/HCV testing and treatment
- ➢ Co-location of case management for housing and for MAT to reduce the burden of appointments for participants
- ➢ Operation of nearby shelter services or partnerships with local shelters

PPP could consider piloting a **community locker program** in Kensington to reduce the burden of medication security for participants living on the streets or in emergency shelters by giving them secure storage spaces. MAT participants living on the street are frequently targeted in robberies for their medication, so the option of an external storage site may reduce this targeting. Community lockers could also be used to store other belongings, such as cell phones, which are commonly lost, broken, or stolen among people living on the street.[14] If combined with a **cell phone distribution initiative**, such as PPP's current partnership with the Center for Carceral Communities that has given mobile phones to previously incarcerated MAT participants, community lockers could also make telehealth a more feasible option for people experiencing homelessness. Similar programs have been developed across the country with varying degrees of success.[16–18] To make it most effective, PPP should begin by identifying areas where many people currently reside on the streets, potentially starting in Kensington and expanding to other parts of the cities if found to be successful. Like it was during PPP's recent community fridge installation, community input will be invaluable.

Another way for STEP to reduce logistical barriers to MAT could be through the **promotion of medications with lower logistical demands**, such as **Sublocade**, an extended-release injectable form of buprenorphine. Because of this route of administration, Sublocade requires only monthly appointments (rather than weekly appointments, which most participants start on for orally-administered buprenorphine), and participants would not need to worry about keeping medications secure. STEP providers already frequently recommend Sublocade for these reasons, but utilization remains low. STEP could begin by **surveying participants** to understand why they are hesitant to use it and address any fears they may have in the process. **Peer education resources** from participants who have had success with Sublocade may also be helpful for expanding awareness about the medication.

On the policy end, the current trend in **deregulating MAT** should continue, and public health policymakers should reflect on the origins and necessity of current MAT restrictions. The current exception to the Ryan Haight Act that has allowed providers to initiate buprenorphine prescriptions through telemedicine is set to revert after the resolution of COVID-19,[19] but my findings indicate no negative impacts of telemedicine delivery on MAT outcomes, suggesting that **the current exception should be made permanent**. Many MAT providers have welcomed the **end of routine UDS** during the pandemic, as random testing is rooted in a carceral approach to abstinence that penalizes individuals who are caught with illicit substances.[20] STEP staff have argued that without this, providers are able to focus on how patients have progressed in life rather than informally policing participants for medication diversion.

Although the current study did not focus on it, methadone maintenance therapy has even tighter regulation than buprenorphine, being restricted to heavily DEA-regulated clinics and requiring daily visits. These differences have been linked to structural racism, with methadone used primarily among Black and Brown patients and buprenorphine among predominantly white patients.[21] Pandemic-driven policies that have allowed **take-home methadone doses should be extended** as a first step in deregulating methadone to reduce this inequity.

While this report raised some specific challenges to MAT in Kensington that can be addressed by PPP, many of the disparities I have observed are rooted in more structural issues that PPP cannot resolve by itself. In the current housing crisis, options like emergency shelters and recovery houses are only temporary solutions that are often insufficient for the number of people who lack stable housing. Housing First programs offer more agency to people experiencing homelessness through direct linkage to permanent housing that is not contingent on abstinence, but research has found that the subsidies provided by Housing First are often not enough to help people maintain their housing over time.[22] Programs like these require **more sustainable government funding**, which may be achieved through greater advocacy to policymakers for housing as both a human right and a public health priority.

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