

An Evaluation of the Long-acting Buprenorphine (LAB) depot injection for individuals who have experienced homelessness



University
of Exeter

“Buvidal has made me myself again”: An Evaluation of the Long-acting Buprenorphine (LAB) depot injection for individuals who have experienced homelessness.

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Executive Summary

Background: Opioid use disorder and homelessness are major public health issues in the United Kingdom and while there are many treatment avenues for individuals, many have difficulties adhering to treatment. However, a new formulation of buprenorphine, the long-acting buprenorphine (LAB) depot injection (brand name Buvidal®), has recently been introduced in Exeter Devon, a region in the South West that has a relatively high concentration of rough sleepers, to help tackle opioid use disorder in this complex group.

Aims: This mixed methods study aimed to evaluate attitudes towards and experience of Long-acting Buprenorphine (LAB) depot injection for individuals who have experienced homelessness and opioid dependency both in patients who had experienced treatment and staff working with them in a multi-agency setting (CoLab, Exeter).

Methods: Nineteen in-depth, semi-structured interviews were conducted with a total of 11 LAB patients and eight healthcare professionals. The interviews explored the benefits and challenges of the LAB depot injection. Patient's engagement in healthcare services and substance use prior to the treatment and throughout the treatment was also measured.

Key Findings:

- Reductions in the use of illicit opioids, other recreational substances, and injecting and increases in making positive changes and engagement in healthcare services were reported by patients and observed by healthcare professionals.
- Both patients and healthcare professionals acknowledged the beneficial impact of the LAB depot injection for individuals who were experiencing homelessness.
- Some concerns were identified from the research both on the part of service users and staff which can inform in further roll-out of the services.
- The LAB depot injection is an effective harm reduction strategy, producing a decrease in the use of illicit opioids and other recreational drugs, as well injecting behaviour.
- This research demonstrates that LAB depot injection is an effective treatment for a large number of vulnerable housed individuals in Exeter, a complex population that often has difficulty adhering to treatment plans. Additionally, it helps address issues of adverse effects of alternate opiate substitution medications.

Introduction

Opioid use disorder (OUD) is characterised by the persistent use of opioids [1], regardless of the detrimental effects on the individual's psychological and physical health [2]. In 2019, it was estimated that, of the 600,000 drug-related mortalities around the world, 80% were caused by opioids [3]. In England and Wales, over the last thirty years, opiate-related drug poisonings have surged, with opiates being the cause of nearly half of all drug poisonings in 2020 [4]. Opioid dependency is one of the most prevalent addictions in the UK, and in 2021, there were 140,000 people accessing substance use treatments, with more than half (51%) seeking help for opiate-related issues [5]. It is estimated that more than half of treatment-seeking individuals have difficulty engaging in treatment and do not attain the expected treatment outcomes [6].

The current pharmacological interventions on offer for OUD include opioid substitute therapy (OST), which combine drugs such as methadone or buprenorphine with psychosocial support [7]. Both treatments have been shown to be effective at decreasing illicit heroin use, the transmission of bloodborne viral infections, and mortalities [8]. Buprenorphine is a partial μ -opioid receptor agonist and has become a well-established treatment for OUD. In comparison to methadone, buprenorphine is associated with advantages such as reduced feelings of euphoria and drowsiness [9] and a decreased risk of overdose [10] due to its ceiling effect on respiratory depression [11]. However, there are significant risks and drawbacks with a daily sublingual or supralingual (lyophilisate) formulation, such as misuse [11], diversion [12], non-adherence [13], and accidental use [14]. Additionally, people with daily supervised consumption also face stigma and practical barriers, such as long waiting times, difficulty meeting the treatment criteria, and the inability to attend daily appointments [15].

People experiencing homelessness and opioid use disorder

In January 2023, it was estimated that there were 271,000 people experiencing homelessness in the UK [16]. People who experience homelessness are individuals without permanent, stable living arrangements, such as those who are sleeping rough, living in inadequate accommodation, temporarily staying with friends or family, or in hostels [17]. Individuals who have unstable housing have a greater likelihood of mental illness [18], ill-health [19], exposure to violence, involvement in crime and traumatic injury [17], all of which can lead to a higher risk of substance misuse. It is estimated that 62.5% of individuals who are homeless in UK have a substance misuse problem [20] and many do not receive treatment, due to the increased barriers that the homeless population face accessing treatments. Individuals who are homeless may find it difficult to adhere to a daily supervised prescription of OST due to their lack of stable living circumstances and problems with creating and sustaining routines [21]. Adherence to OSTs amongst people experiencing homelessness is a cause for concern, as medication non-compliance has detrimental effects on treatment and can lead to relapse. There is an urgent treatment need to make OST more feasible for this group of individuals.

Long-acting buprenorphine (LAB) depot injection

In 2019, the first long-acting buprenorphine (LAB) product (brand name known as Buvidal[®]) was approved to be used for people with an opiate dependency in the UK [22]. Buvidal is a novel form of buprenorphine, designed as a liquid crystal solution for weekly and monthly sub cutaneous dosing in a variety of doses. In recent research, it has been found that depot buprenorphine is just as efficacious as a daily sublingual form of buprenorphine with naloxone hydrochloride for treating OUD [23].

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Recent evidence investigating the use of depot buprenorphine for transactional sex workers with an opiate dependency led to improvements in making healthier lifestyle choices, increasing engagement in treatment services, and a reduction in illicit heroin use [24]. This demonstrates the effectiveness of the LAB depot injection in a population of complex individuals, who typically have difficulty adhering to treatment. In a qualitative study, exploring the use of long-acting buprenorphine (LAB) for people experiencing homelessness, participants shared that LAB provided 'freedom' from daily chemist visits and helped combat challenges such as exposure to individuals who use drugs, desire to diverse, time, and travel to and from the pharmacy [21]. This study sheds light on patient perspectives of sub cutaneous forms of buprenorphine and highlights the benefits of this treatment within a group of complex individuals. However, this study does not consider staff experiences of LAB, nor the impact on patient's substance use, and was not specific to buprenorphine depot injection.

Clock Tower Surgery, a GP practice specifically for people experiencing homelessness, and CoLab, a multi-agency facility, have worked together to help provide more effective support to vulnerably housed individuals with substance misuse problems. The Clock Tower Surgery, located in Exeter, is very different from most drug and alcohol services in the United Kingdom due to the LAB depot injection being offered as a rapid or same-day access option through its daily drop-in service. In the majority of alcohol and drug services, individuals are required to stabilise on sublingual buprenorphine for a period of time or have to complete a series of assessments or attend a sequence of appointments before being offered LAB treatment. Consequently, this means that most individuals who are homeless and have multiple complexities are not in treatment or are inconsistent with being in treatment.

Devon County Council funded a pilot study led by Clock Tower Surgery. This pilot involved prescribing LAB to people experiencing homelessness and was only for individuals who had not been able to stabilise on other forms of OST or were currently out of treatment for OUD and experiencing multiple complexities. This research aimed to evaluate the experiences with this novel and innovative way of addressing the issues associated with OST in this group of individuals.

Aims of the Commissioned Research:

This study aimed to evaluate the LAB depot injection as a treatment for individuals who have experienced homelessness and were registered patients of the Clock Tower Surgery, in CoLab in Exeter by conducting qualitative, semi-structured interviews with patients, who had been prescribed and administered the LAB depot injection. The interviews aimed to gain a greater understanding of the benefits and challenges of the LAB depot injection in comparison to other OSTs. These patients are typically very complex due to the co-occurrence of unstable housing, addiction and often, mental health issues.

The research also aimed to conduct interviews with staff members who are frequently in contact with these patients were conducted to gain further insight, this included staff who work at primary care services (e.g., GPs, Outreach nurses) and at other support services (e.g., drug treatment services, housing support). The interviews aimed to understand the positive and negative experiences of the LAB depot injection from healthcare professionals. As part of the evaluation, we collated data on each patient's substance use before and during the treatment, with the aim of additionally describing the impact of the LAB depot injection on patient's drug use.

Methods

Design

This was a qualitative-quantitative (mixed methods) study that involved in-depth, semi-structured interviews with both patients and staff, which lasted approximately 30 minutes. Patient interviews explored their experiences with the LAB depot injection, their substance use both during and prior to the treatment, as well as their engagement in drug-related support services (see Appendix A for interview schedule).

Participants

Nineteen participants (11 LAB patients and 8 staff members) were recruited.

Patients

Eleven participants were recruited from Clock Tower Surgery in Exeter; all participants were registered patients at Clock Tower Surgery, had been prescribed and administered the LAB depot injection (Buvidal) at this surgery, were above the age of 18 and had capacity to consent. Individuals were excluded if they were below the age of 18, not a registered patient at Clock Tower Surgery and unavailable to be interviewed (e.g., in prison or moved away).

All patients prescribed the LAB depot injection were individuals on the STaR project, a collaborative initiative provided at CoLab, bringing together a range of support services aimed at addressing substance misuse, physical health, social inclusion and accommodation. All of the individuals who were prescribed the LAB depot injection also had a very high risk of drug-related death, and due to extremely chaotic lifestyle, were unable to comply with a daily dosing schedule; were unable to comply with safe storage of medications, where there may be significant safeguarding risks; have failed to show clinical response to other available licensed treatments; find daily or weekly attendance at a pharmacy impacts significantly in a negative way on their physical and mental health or their recovery journey; present as a threat to community services that their attendance for supervised dosing is problematic; have significantly impaired mobility and are unable to easily attend for medication dispensing.

Staff

Eight participants were recruited from Clock Tower Surgery or CoLab; all participants were above the age of 18 and a member of staff employed at one of these services and who is contact with individuals who have been prescribed and administered LAB at Clock Tower Surgery. Individuals who were below the age of 18 and who do not work directly with patients who have experienced homelessness and received LAB were excluded.

Setting

All interviews were conducted in-person at CoLab (a wellbeing hub), Clock Tower Surgery or Clock Tower Surgery's satellite hub at homeless hostel Gabriel House, in a private room, by a research assistant from the University of Exeter. Clock Tower Surgery and CoLab are neighbouring agencies located in Exeter. CoLab is a charity-funded multi-agency wellbeing hub that provides support for people with complex needs, including those who are vulnerably housed and homeless. Clock Tower's satellite hub, Gabriel House, is a homeless hostel in Exeter for individuals with substance misuse issues.

Procedure

All patients were provided with an information sheet by their GP and consented to be contacted by the research team 24 hours later. Once consent was obtained, an interview was arranged at one of the designated locations. For staff members, an information sheet was provided directly by the research assistant and were contacted a minimum of 24 hours later to arrange the interview. All interviews were conducted in-person, each interview was audio-recorded using Teams and was transcribed by Teams. Once transcribed, data was checked for inaccuracies and inconsistencies.

Results

Participants

Of the participants who had experience with the LAB depot injection and homelessness, six males and five females aged between 23 and 58, with a duration of opioid use between one and forty years, participated in the study. The demographic and clinical characteristics of the patient sample are reported in Table 1. Eight staff members who were employed at either Clock Tower Surgery or CoLab participated in the study. The sample included a general practitioner, two specialist enablement workers, two housing casework navigators, a substance misuse navigator, an outreach worker and the welcome team lead at CoLab.

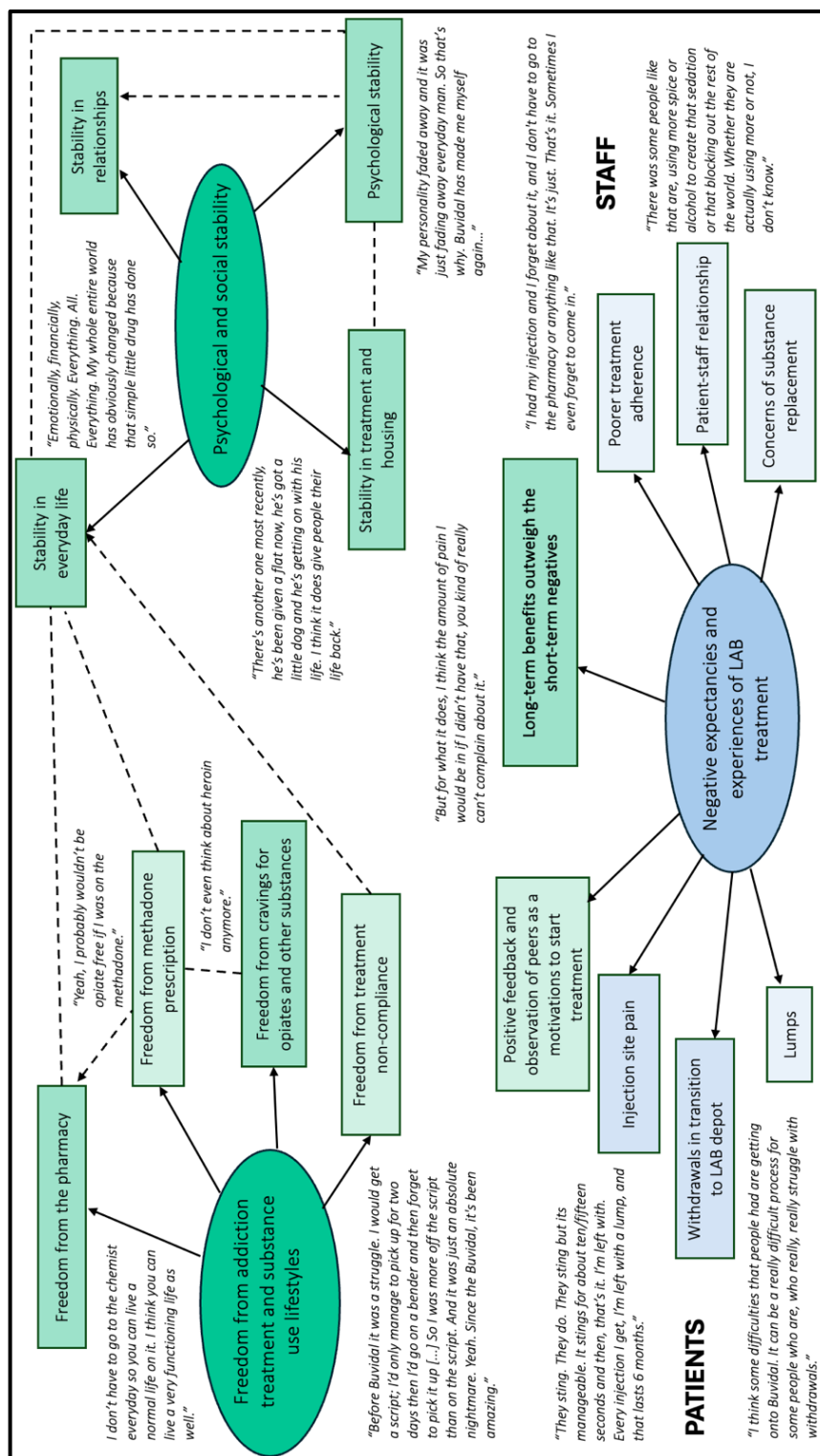
Table 1.

Demographic and clinical characteristics of the patient sample and LAB prescription

PT	Gender	Age	Years using opioids	Average daily use	Reason for starting Bupival Treatment	LAB dose and frequency
1	F	48	31	Heroin (between £50 and £100 per day) smoked or injected	Treatment failure with methadone.	128mg monthly
2	M	55	40	Prescribed opioids and heroin (up to 3g per day) smoked, snorted, or injected.	Treatment failure with both sublingual buprenorphine, oral lyophilizate buprenorphine, and methadone.	128mg monthly
3	M	58	20	Prescribed opioids and heroin (from £10 per day upwards) smoked or injected.	Treatment failure with oral naltrexone, methadone and sublingual and oral lyophilizate buprenorphine.	128mg monthly
4	M	54	24	Prescribed opioids and heroin (up to £40 per day)	Treatment failure with sublingual buprenorphine and methadone.	128mg monthly

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5	F	38	15	Prescribed opioids and heroin (up to 2g per day)	Treatment failure with methadone.	160mg monthly
6	F	23	1	Heroin (between £20-100 per day) smoked, injected, snorted, or swallowed.	Treatment failure with the buprenorphine patch and oral lyophilizate buprenorphine.	64mg monthly
7	M	49	28	Prescribed opioids and heroin (1g per day) injected.	Treatment failure with buprenorphine sublingual tablets and methadone.	128mg monthly
8	F	32	14	Heroin (between £20-200 per day) smoked or injected.	Treatment failure with methadone.	160mg monthly
9	F	28	2	Heroin (up to £120 per day) injected.	Treatment failure with buprenorphine sublingual tablets and methadone.	128mg monthly
10	M	54	10	Prescribed opioids or heroin (up to £60 per day) smoked or injected.	Treatment failure with buprenorphine sublingual tablets and methadone.	128mg monthly
11	M	34	3	Heroin (up to £100 per day) smoked or injected.	Treatment failure with buprenorphine sublingual.	128mg monthly



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Freedom from addiction treatment and substance use lifestyles

The theme ‘freedom’ presented itself in many ways throughout the interviews with participants, such as freedom from the pharmacy, addiction-specific harms, and challenges with methadone treatment.

Freedom from the pharmacy

Participants described that the LAB depot injection provided freedom from daily, mandatory visits to the pharmacy, which was often described as a challenging aspect of alternative OST such as methadone or sublingual buprenorphine. Not having to visit the chemist daily and having to plan their day around picking up their OST treatment allowed more time to focus on alternative, more beneficial activities, opportunities to travel, improved wellbeing and a sense of normality. The LAB depot injection was also described as allowing patients to break away from groups of people that they associate with using illicit opioids and that aspect of their lives.

“The freedom I have got now. I’ve got a lot before I have to get the next injection. I’ve got that freedom to go away and see my fiancé, that’s what I normally like as well to not have to go to the pharmacy.”

(participant 4, male)

“I mean I don’t have to see the people I used to see. I don’t have to do the things I used to do. ...I can pretty much live a normal life now. I’m going to Portugal in two weeks with my mum and I don’t have to worry about having enough medication to take with me... Like I don’t have to go to the chemist everyday so you can live a normal life on it. I think you can live a very functioning life as well.”

(participant 5, female)

The benefits of not having to visit the pharmacy daily were shared amongst several staff members, with healthcare professionals highlighting that this freedom can provide a sense of relief and normality for individuals, as well as an escape from stigma.

“...you’re more within normal society, normal community then I think, without having that noose around your neck”.

(Staff member)

*“It takes away the need to go to a pharmacy, the need to sit there waiting forever and a day, in a corner, in a pharmacy, whilst ‘normal’ customers are being prioritised [...] and that’s the difference. That’s one of the most important things that the client say, ‘I don’t have to go to that pharmacy anymore, where they get treated like sh*t”.*

(Staff member)

However, another theme that arose was that having this freedom was also a challenging aspect of this treatment. There was a sense that, although frustrating, having to go to the pharmacy daily provided structure to daily routines, and some patients found themselves visiting the same facility for various

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reasons. Despite finding the dysregulation of their past routine initially difficult, patients were able to rebuild their daily routine without either illicit drugs or the pharmacy.

“But then it sucks, because that’s my routine. So, I keep going back into the chemist for things like my knees. My knees... I got my own routine again now without the drugs. So that was hard to get. But the Buvidal just made life so much easier.”

(participant 1, female)

“It’s great you don’t have to go to the chemist every day but what do you do? And for a lot of people that’s where they meet their friends. Whether they’re helpful friends or not. That’s where you see everybody. We’re removing a massive chunk of stuff, blocking the substances, but also taking away the purpose of everyday”.

(Staff member)

Removing this part of patients’ routines was also acknowledged as a potential challenge from multiple staff members and it was recognised that although this can provide a sense of freedom, it also leaves patients feeling lost and isolated. Although disconnection from peers associated with their illicit drug use may be helpful for treatment outcomes, it was recognised that this may also remove social support from peers they may have gained from attending the pharmacy.

Freedom from craving for opiates and other substances

The LAB depot injection was also shown to free participants from drug-related harm. Participants described that the LAB depot injection reduced cravings for both illicit opioids and other recreational substances. One participant who had been using illicit opioids for 40 years reported the following: “I really don’t think of heroin one bit. [...] the amount of years I have been on gear is like wanderlust.” (participant 2, male).

“I don’t even think about heroin anymore.”

(participant 7, male)

“Like, the actual opiate kind of like, cravings, they’re not there at all...Like I’m not interested in them whatsoever. So, in that sense it’s a godsend, it’s the best thing I’ve ever taken.”

(participant 5, female)

One participant who used crack cocaine daily reported, “...since I smoked crack as well after my injection, sometimes I feel really ill, and I can’t smoke it. It makes me actually. It turns me off it.” (participant 6, female). Reductions in cravings for other illicit substances were also recognised by healthcare professionals. For example, one staff member reported, “Even something that’s not opiate based. They don’t even want to use that”.

"One of the side effects of the Buvidal is that I can't drink. Like its just, I can, but the smell, the thought, the feeling of being intoxicated through alcohol is kind of. I don't know. I hadn't drank for years. I've always drunk. Always. You know not a problem with it but I've always drunk. I must've had about five beers in these. Year or two. And they probably haven't been finished. I opened it, drank a bit, and poured it down the drain. Yeah, it's good. Buvidal is great."

(participant 11, male)

Freedom from treatment non-compliance

Another theme that came to light was that prior to the LAB depot injection, participants were consistently "falling off of their script" or failing to collect their prescription, which was a challenge for their recovery. Multiple staff members highlighted that the long-acting mechanism of this treatment was a helpful tool at reducing the likelihood of individuals falling off of their treatment plan, which was a frequent occurrence for people who experience homelessness.

"Before Buvidal it was a struggle. I would get a script; I'd only manage to pick up for two days then I'd go on a bender and then forget to pick it up [...] So I was more off the script than on the script. And it was just an absolute nightmare. Yeah. Since the Buvidal, it's been amazing."

(participant 7, male)

Freedom from methadone prescription

Another theme that emerged was that LAB depot was a much preferred alternative to methadone, about which they had negative attitudes. The majority of patients who had prior experience with methadone treatment, expressed some negative attitudes about this treatment, and regarded it as a 'safety net'. Particularly, participants felt that people on LAB depot were more serious about their recovery, because with methadone people are able to still "use on top" or continue to take street opiates and many described having little faith in its success. It was acknowledged by patients that the LAB depot injection eliminates any difficulties associated with continued illicit opioid use and attending the pharmacy on daily for their methadone script.

"If you don't want to give up, you go on methadone and you can take what you like on top of that."

(participant 4, male)

"Methadone is there as a safety net. So, a lot of us are only doing it as we cannot afford to get the gear, so then we have something to fall back on."

(participant 1. male)

"Yeah, I probably wouldn't be opiate free if I was on the methadone."

(participant 11, male)

"To be honest with you, it was picking up the methadone all the time and every day. It was just getting on my nerves. It was taking over my life. Taking over my life it was. Chemist. Chemist. Chemist. Yeah, there is no fuzziness. Like I said all my emotions are coming back."

(participant 1, female)
(participant 10, male)

Staff reported that methadone treatment produced side effects such as drowsiness, which they perceived as affecting the patients' ability to interact with them, be verbally coherent and fully cogent of the world around them. Staff members reported that they had observed changes in patients who had previously been receiving methadone treatment ; in that they were more alert and proactive, which consequently produced changes in other areas of their lives. Staff reported that for some patients, the emotional alertness resulting from the LAB depot injection was an adverse effect, especially when transferring from methadone treatment, which consequently led to discontinuing the treatment.

"She doesn't have that brain fog, she's not experiencing that sluggish, that just, that constant daze that she would describe to me when she was on scripted methadone. She just feels a bit more kind of proactive like in her day, and she's not waking up just like, slug like, like she described herself."

(Staff member)

"I did support one lad that tried it. But when I say about, like, the feeling of the up, he had to leave and then how he just could not cope with it [...] they said, this isn't for me. I'm far too awake, far too alive. And I don't like feeling like this."

(Staff member)

Psychological and social stability

The nature of stability was presented in the context of mental wellbeing and quality of life, specific to individuals who experience homelessness.

Psychological stability

The consequence of the LAB depot injection for many individuals was an emotional awakening, especially for individuals who were previously prescribed methadone. Due to the change in patients' mental states, participants described gaining back a sense of who they are, which consequently enables individuals to focus more on their recovery. Patients expressed that were now more mentally productive, less focused on drug-related activities, and more able to focus on improving other areas of their lives.

"I'm getting to achieve, more, more and more in my life, because my head is more there, cause of the Buvidal."

(participant 1, female)

"It's given me a bit of a life where all the thinking about where I'm getting my next stuff from, that's gone. All my mind is like, It's productive now compared to what it was, I suppose it is productive."

(participant 11, male)

"My personality faded away and it was just fading away everyday man. So that's why. Buvidal has made me myself again...Well, it's just made me normal and just help me get back on my feet innit. Put me on the right path. Get me back into a routine. Be a human again."

(participant 6, female)

This theme was mirrored in the responses by staff members who described that patient's outlook, attitudes, and perspectives had changed since beginning their treatment and often, this had been the first time these staff had observed such positive change. Staff also expressed that patients had also acknowledged these positive changes within themselves.

"It's just her general outlook. There's a shift. It's not a major shift but there's a shift and it's the biggest shift we've had in many years."

(Staff member)

"...her overall mood seems to be more, more positive. And she was going on about how good it was, how well she felt, and she said that to a number of us, on a number of occasions, and that's all down to Buvidal, its not down to any other changes in terms of accommodation [...] That positivity and happiness, and the curve of her confidence in what she was going through in treatment."

(Staff member)

Stability in everyday life

The sense of stability provided by the LAB depot injection was described as consequently positively impacted various areas of individuals lives. Participants described feeling a sense of normality as they are now being able to enjoy simple pleasures which they have previously been unable to do.

"Emotionally, financially, physically. Everything. All. Everything. My whole entire world has obviously changed because that simple little drug has done so."

(participant 1, female)

"Rather running round town looking for some gear, I'll make a cup of tea and some toast in the morning. Things. Normal things."

(participant 2, male)

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Stability in relationships

Whilst for others, individuals are now able to reconnect and re-build relationships with family members.

"I'm talking to my mum, just so many things that are working out for the better. Just actually having some time to reflect on my life."

(participant 7, male)

Stability in treatment and housing

Healthcare professionals' responses, which mirrored this theme, described that the treatment led to improvement to patients' physical health, engagement in support and healthcare services, and their ability to obtain and secure accommodation.

"You know in terms of engagement as well, with engagement with myself, with other services has been humongous. The change has been ridiculous [...]. She would struggle to maintain appointments with myself, the job centre or anything."

(Staff member)

"...he started engaging in other forms of care. So he allowed us to look into housing. And then he got housed, he's in a secure tenancy. You know, he never thought that would happen [...] And he also engaged with some sort of basic health checks and stuff like that, and just built up a really good relationship with me and one of the nurses here."

(Staff member)

"He can be a bit more free and he has actually been really prioritising his health, he's been attending appointments, he's been engaging at the hospital when he's needed to go in."

(Staff member)

"There's another one most recently, he's been given a flat now, he's got a little dog and he's getting on with his life. I think it does give people their life back."

(Staff member)

For healthcare professionals, this theme emerged through concerns of treatment adherence, patient-staff relationship, and substance replacement.

Lumps

Many patients reported that these anxieties stemmed from feedback by their peers. For example, patients reported that their peers were experiencing lumps as a side effect of the injection, which consequently deferred patients entering treatment.

"They were telling me they had these like golf ball size lumps in their stomach [...] I weren't having none of that."

"I've still got the lumps there now where I had the injection done."

(participant 5, female)

Withdrawals in transition to LAB depot

Another theme that emerged was that patients reported being fearful during the transition onto the LAB depot injection treatment due to the experience of withdrawal symptoms.

"Three to four days after I had the injection, I was violently ill. I was in such a bad way. Sick. Physically sick. Everything. I thought it was never going to end. But it did. . After day three as well, I went to bed feeling like I did the day before being sick and everything. And I woke up [...]No rattling. I just wasn't."

(participant 8, female)

"I've been told by one girl and one guy in town that it put them in such a bad rattle and stuff and I believed that..."

(participant 8, female)

"I think some difficulties that people had are getting onto Buvidal. It can be a really difficult process for some people who are, who really, really struggle with withdrawals."

(Staff member)

Injection Pain

Other fears involved the act of receiving the injection due to the injection site pain.

"They sting. They do. They sting but its manageable. It stings for about ten/fifteen seconds and then, that's it. I'm left with. Every injection I get, I'm left with a lump, and that lasts 6 months."

(participant 11, male)

Long-term benefits outweigh the short-term negatives

While it was recognised that starting the treatment was challenging, a theme that also emerged among patients was that the benefits outweighed any fears or anxieties about the treatment, and this was also mirrored in responses by healthcare professionals.

"But for what it does, I think the amount of pain I would be in if I didn't have that, you kind of really can't complain about it."

(participant 5, male)

“Another challenge I have noticed for some clients is that when they do have the injection it is painful, for a little bit. Its like thirty seconds. It doesn’t last long and I think most people acknowledge that the benefits really outweigh that.”

(Staff member)

“But no the, the benefits of it overweigh the negatives. For me, anyway.”

(participant 11, male)

Poorer Treatment Adherence

One of the fears that was shared among healthcare professionals was treatment adherence for patients. While the advantage of the LAB depot injection is the freedom that it provides, it was recognised that a disadvantage of this is that patients forget to attend their appointments. Due to the freedom that the treatment provides, some patients believe they no longer require the treatment, which has resulted in stopping the treatment altogether.

“You know, one of the downsides of it, is that it works too well, you feel too good, and then they don't come back to the next injection because they don’t think they need it, you know.”

“The other thing is that people are feeling so well on it that they stop their treatment. They think they don’t need it anymore. We’ve had a few people that’s happened too and some of them have come back now and again and realised after a few months that the reason they felt so well was because they had Buvidal in their system [...] they’ve got to the point where they realise they need it again. Its almost like being a victim if its own success.”

(Staff member)

“I had my injection and I forget about it and I don't have to go to the pharmacy or anything like that. It’s just. That’s it. Sometimes I even forget to come in.”

(participant 4, male)

“Well I had it, I felt alright. Felt like I didn’t need it anymore so I stopped using it.”

(participant 10, male)

Patient-staff relationship

The LAB depot injection eliminates the need for the daily, required visits to the chemist, but it also takes away a communication channel between the staff and patient. The staff expressed concerns about their inability to contact patients, particularly given the risk associated with this group of people.

"The biggest worry I think I had as a recovery worker and kind of managing the risk, especially with nature of my clients was that of contact with the pharmacy because a lot of my contacts are through pharmacies. So welfare checks. And, you know, even just getting messages because a lot of mine don't have mobile phones. So I think for me, that was the biggest worry was, gosh! I've lost a form of communication to those that probably need it the most."

(Staff member)

"...it's the communication thing so welfare checks, umm because obviously, as someone who is daily supervised, it was a way that I could check that they are okay. So I can call the pharmacy and yeah they have collected today. Bam. I know they are okay for today. So I don't have that contact."

(Staff member)

Concerns of Substance Replacement

For staff, many were fearful that patients had increased their use of other illicit drugs, such as spice, to attain mental states that resembled the effect of full agonist opioids. Many expressed concerns that, because some patients were finding the lack of sedative effects from the LAB depot injection challenging, they were using other recreational drugs to achieve that desired effect.

"I think my only concern is that there are other substances readily available and certainly I think some people have taken to using things like spice to get that dulling of their emotions and everything because they're not coping with being able to feel stuff or they're drinking. [...] I don't think anybody is using anything they weren't before but I certainly think particularly with spice there's a bit of a replacement going on."

(Staff member)

"There was some people like that are, using more spice or alcohol to create that sedation or that blocking out the rest of the world. Whether they are actually using more or not, I don't know."

(Staff member)

Patients expressed various reasons for starting treatment such as fears of criminal involvement, worrying about the impact on physical health, and losing family relationships. Although, many patients described having anxiety about entering the LAB depot injection treatment, that these fears were overcome by hearing positive feedback from peers and directly observing improvement in peers who were in treatment.

"He (participant's peer) said if you've been offered that, you wanna take that, as you will be thinking different in a week. He said go for it. He said if your head is right, and you want to get clean [...] that was all I needed to hear. [...] tried to get me in there time and time again. But I kept pulling. Giving him the swerve. Cause I wasn't getting the right, sort of, answers from <the right> people."

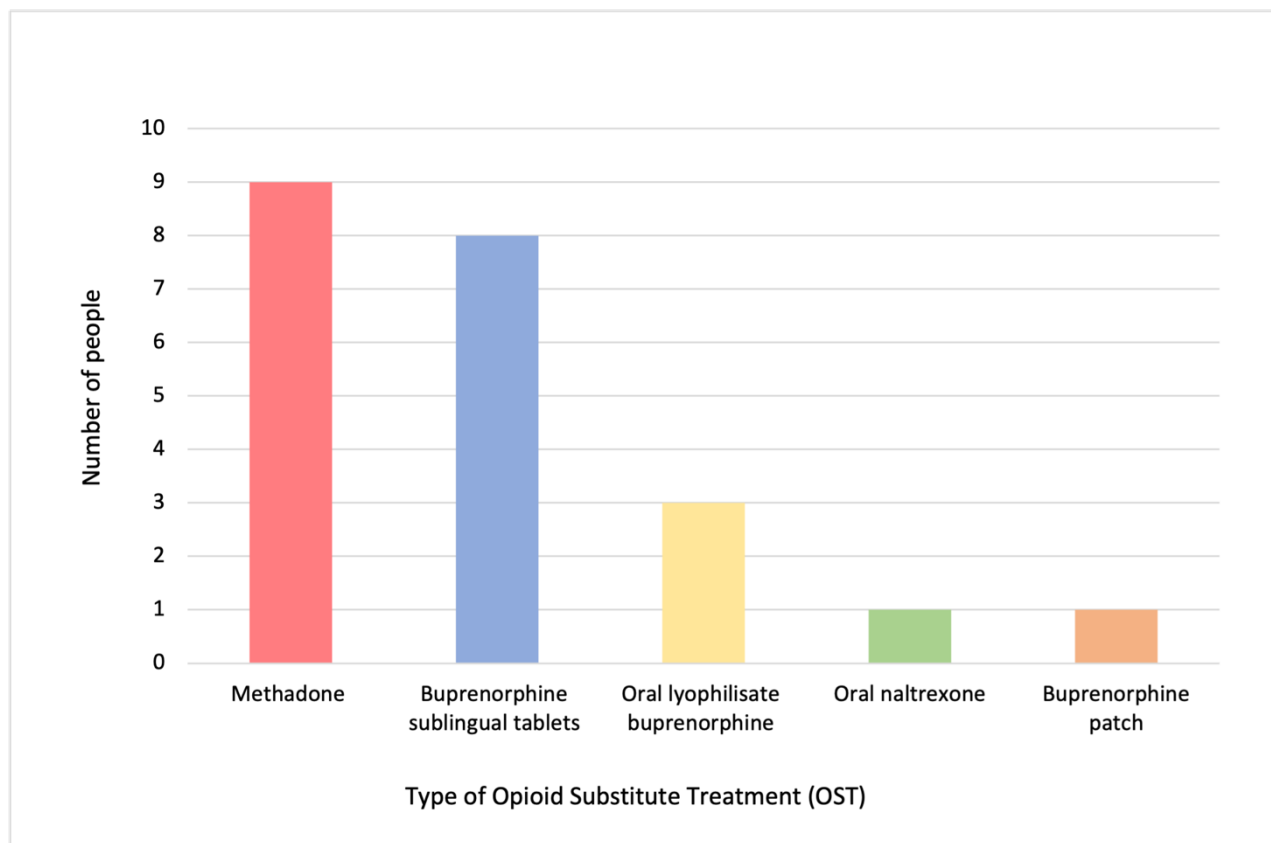
(participant 2, male)

Quantitative Results

When exploring the types of OST treatments used by patients prior to the LAB depot injection, it was found that the majority of participants had experience of methadone and sublingual formulations of buprenorphine (see Figure 2).

Figure 2

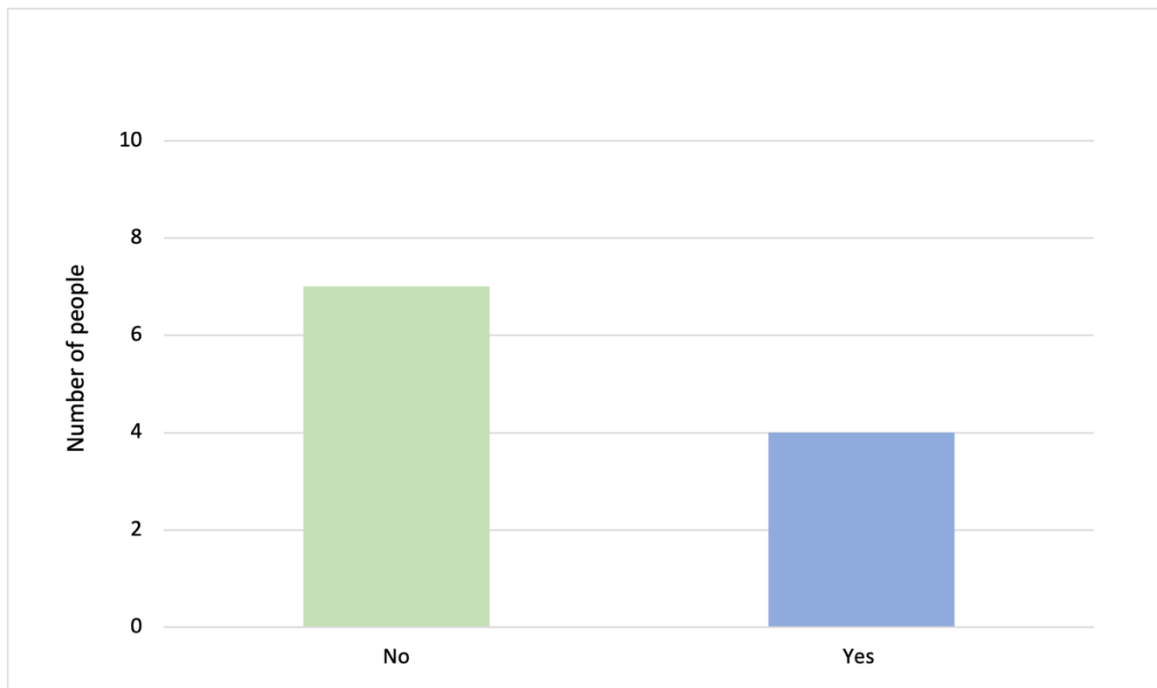
Types of OST treatments used by the study sample prior to the LAB depot injection.



The study also aimed to explore the impact of the LAB depot injection on illicit opioid use. It was found that, while four participants reported having used illicit opioids since the beginning of their treatment, seven participants had not (see Figure 3).

Figure 3

Number of people in our sample who had used illicit opioids since the start of the LAB depot injection treatment.

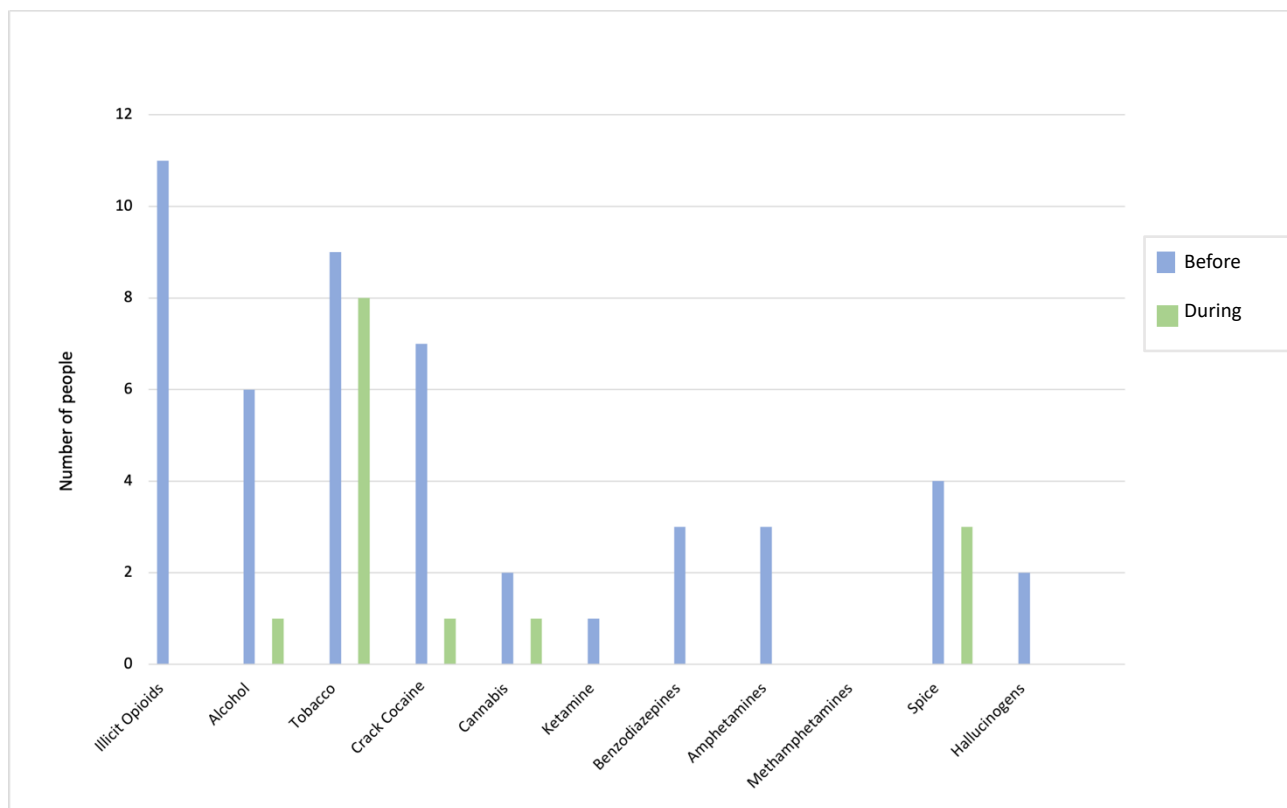


An Evaluation of the Long-acting Buprenorphine (LAB) depot injection for individuals who have experienced homelessness

When exploring patients daily substance use both before and during the LAB depot injection, it is apparent that there is overall reduction in daily consumption across all substances (see Figure 4).

Figure 4

Daily substance use before and during the LAB depot injection

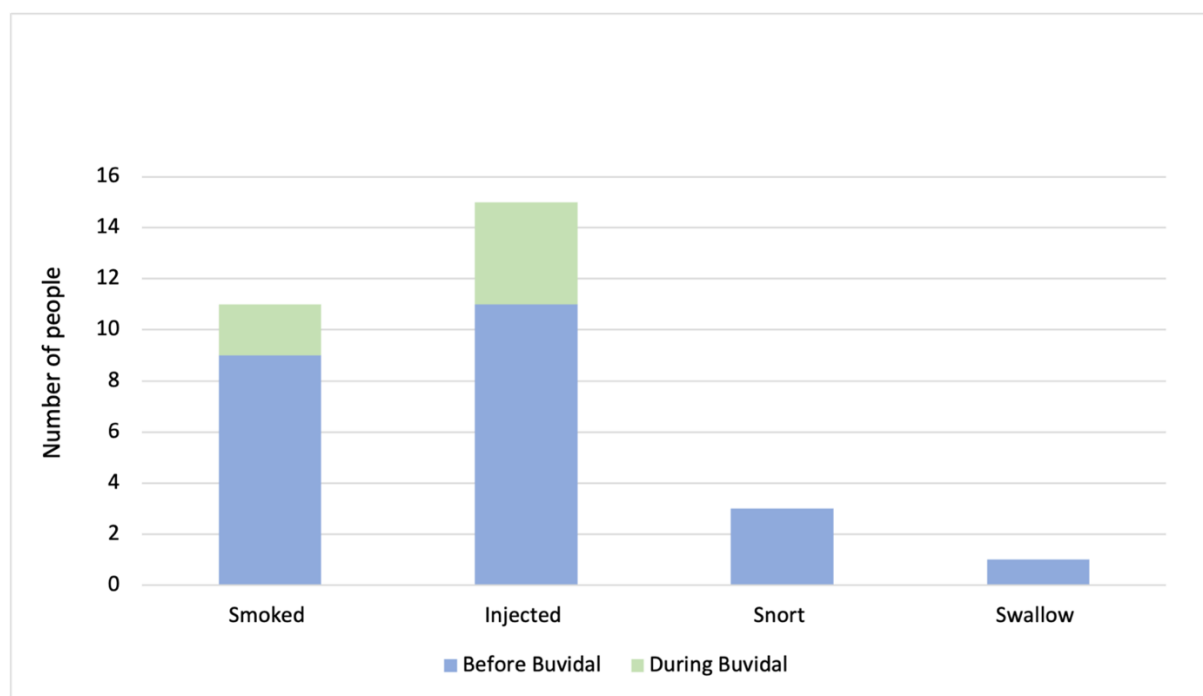


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When exploring what methods of opioid administration were used amongst the group, it was found that all participants reported that they had 'injected' opioids, and majority of participants 'smoked' opioids. Individuals who used illicit opioids during the LAB depot injection treatment reported that they used methods such as smoking or injecting on that occasion (see Figure 5).

Figure 5

Method of opioid administration before and during the LAB depot injection treatment



Summary

This research demonstrated the beneficial experience of the LAB depot injection for individuals experiencing multiple complexities alongside homelessness, both in reports from both patients and healthcare professionals. The majority of participants had experience with alternative opioid substitute treatments and highlighted that the LAB depot injection provided freedom from challenges associated with these treatments, such as: adverse side effects; negative consequences of failing to adhere to treatment or otherwise known as 'falling of script'; daily supervised consumption; and stigma. The freedom provided by the treatment created a sense of normality for participants, enabling more time to involve themselves in activities that enhance their wellbeing, and remove themselves from drug and criminality associated environments. Many participants reported that this treatment assisted with reducing cravings and decreasing the use of both illicit opioids and other recreational substances, and this is mirrored within the quantitative data. While this freedom was seen as advantageous for many participants, both staff and patients acknowledged that this was also a challenge for some due to disconnection from peers and the removal of structure and purpose from one's day. As patients no longer had to visit the pharmacy on a daily basis, many reported feeling isolated from peers and perplexed, as for many patients, this had been a part of their daily routine for a long time. Patients reported that in order to fill this void in their days, they continued visiting the pharmacy for various purposes.

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The evidence also suggested that the LAB depot injection created a sense of stability in patients' lives, with many participants reporting that the treatment enhanced their mental wellbeing and quality of life. It was found that the treatment improved mental clarity for individuals and enabled participants to gain back a sense of identity, which consequently allowed participants to focus more on recovery-focused activities. Consequently, this impacted many facets of their lives, such as reconnecting and rebuilding relationships with family members. By improving participants' physical health, increasing their involvement in healthcare services, and helping them secure housing accommodation, the LAB depot injection was shown to be helpful in creating a more stable environment for the individual to make positive change. This was acknowledged by staff members who observed positive changes in patient's attitudes and outlook on life.

However, a common emergent theme from our interviews was fear, specifically relating to patient expectations and experiences of the treatment. One of the primary concerns shared amongst patients was the expectations and experience of withdrawals and lipohypertrophy or the development of palpable 'lumps' at the injection site. These concerns were exacerbated by negative feedback from peers, which resulted in a disinclination and delay to start treatment. However, there was a shared consensus that the advantages of the treatment surpassed any concerns they may have had, even if it was acknowledged that the beginning of the treatment was difficult. Patients also mentioned fear as a driving force behind beginning the depot buprenorphine treatment; they emphasised that they viewed the treatment as a route out of criminal involvement, negative impacts on physical health, and concerns about their relationships with family and friends were significant motivators. For healthcare professionals, fears relating to the patient-staff relationship were expressed; in the form of the fear that staff would lose a form of communication with their patients due to the lack of daily pharmacy visits. Staff members also reported fears of treatment adherence as a result of participants forgetting to attend appointments or patients having the belief that they no longer require treatment. Additionally, a common thread to appear was anxiety around substance replacement. Staff members expressed concerns that patients, especially those who were previously using methadone treatment, may be using alternative illicit substances to try and mirror the side effects, such as emotional blunting.

The quantitative analyses shed light on the types of opioid substitute treatments used prior to the LAB depot injection, revealing that most of the sample had used methadone and sublingual forms of buprenorphine. Furthermore, it was found that the majority of participants had not used illicit opioids since beginning the LAB depot injection, and reduction in the use of alternative recreational substances was observed across the board. This evidence portrays that the LAB depot injection is an effective harm reduction strategy due to the decrease in injecting, therefore reducing the likelihood of overdose and physical health complications from injecting.

Limitations

One limitation of the study was that it was conducted in an urban setting. The LAB depot injection was delivered from a specialist primary care service in Exeter, meaning that patients could easily access and drop into the service, however, these types of services are not as available in some non-urban areas. Therefore, it is unknown whether these findings are transferable to rural or coastal communities. One further study limitation is relying on participant's recall of their drug use prior to the LAB depot injection treatment. Nevertheless, this study has provided valuable insight into the experiences of LAB treatment from both patients and healthcare professionals.

Conclusion

Overall, both patients and healthcare professionals acknowledged the beneficial impact of the LAB depot buprenorphine injection for individuals who were experiencing homelessness. The themes identified for this specific population were freedom and stability, which showed to have an overall advantageous effect on various areas of patients lives. The reduction in individual use of illicit opioids and other recreational substances and the decrease in injecting demonstrate that this is an effective harm-reduction strategy. The improvement in engagement with both the surgery and other support services is promising considering the challenging nature of this population's ability to adhere to treatment. It is also important to acknowledge that the majority of participants had used illicit opioids for decades (up to 40 years), and all participants failed to show clinical response to other available licensed treatments until they were prescribed the LAB depot injection. However, we identified in this analysis a number of concerns, expressed by both staff and patients, that should be considered. Overall however, this research painted a picture of LAB depot injection in this population where the risks were considerably outweighed by the benefits which were considered life-changing by many. Taken together, the evidence presented in this study highlights the necessity of increasing the accessibility and availability of this treatment for individuals who are vulnerably housed or experiencing homelessness with careful consideration of the identified risks and concerns in both the staff and patient population.

Potential Recommendations

1. Training for pharmacists providing daily opioid substitute treatments to help address the stigma reported by rough sleepers and people using illicit substances.
2. LAB treatment may need to be combined with social support to assist with the formation of new routines and have an agreement on how to receive communication from treatment services in the early stages of transferring on to the LAB depot injection.
3. Nationally, the prison estate is moving towards enabling LAB treatment to be initiated in prisons, which means if there is not funding in the community to sustain LAB treatment, people will be switched to alternative forms of OST. While beyond the scope of this study, it is recommended to conduct future research investigating the impact of starting people on the LAB depot injection and switching them to other forms of OST.
4. Further research should be conducted to examine the cost-effectiveness of LAB depot treatment and investigate whether those who are prescribed LAB depot injection achieve being OST free more quickly in comparison to alternative OST treatments.

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Appendix

Appendix A - [Interview Schedule](#)