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# "I'm Clean and Sober, but Not Necessarily Free": Perceptions of Buprenorphine Among Patients in Long-Term Treatment

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# "I'm Clean and Sober, But Not Necessarily Free": Perceptions of Buprenorphine Among Patients in Long-Term Treatment

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**Abstract**

**Background:** Patients receiving buprenorphine for the treatment of opioid use disorder (OUD) experience a roughly 50% reduction in mortality risk relative to those not receiving medication. Longer periods of treatment are also associated with improved clinical outcomes. Despite this, patients often express desires to discontinue treatment and some view taper as treatment success. Little is known about the beliefs and medication perspectives of patients engaged in long-term buprenorphine treatment that may underlie motivations to discontinue.

**Methods:** This study was conducted at the VA Portland Health Care System (2019-2020). Qualitative interviews were conducted with participants prescribed buprenorphine for ≥2 years. Coding and analysis were guided by directed qualitative content analysis.

**Results:** Fourteen patients engaged in office-based buprenorphine treatment completed interviews. While patients expressed strong enthusiasm for buprenorphine as a medication, the majority expressed the desire to discontinue, including patients actively tapering. Motivations to discontinue fell into 4 categories. First, patients were troubled by perceived side effects of the medication, including effects on sleep, emotion, and memory. Second, patients expressed unhappiness with being "dependent" on buprenorphine, framed in opposition to personal strength/independence. Third, patients expressed stigmatized beliefs about buprenorphine, describing it as "illicit," and associated with past drug use. Finally, patients expressed fears about buprenorphine unknowns, including potential long-term health effects and interactions with medications required for surgery.

**Conclusions:** Despite recognizing benefits, many patients engaged in long-term buprenorphine treatment express a desire to discontinue. Findings from this study may help clinicians anticipate patient concerns and can be used to inform shared decision-making conversations regarding buprenorphine treatment duration.

**Keywords**

opioid-related disorders, buprenorphine, veterans

## Introduction

Buprenorphine is effective, standard of care treatment for opioid use disorder (OUD).[1,2] Patients receiving buprenorphine experience a roughly 50% reduction in the risk of mortality relative to those with OUD not receiving medication.[3,4] Additional associated health benefits include reduction in HIV and hepatitis C risk behaviors, opioid-related acute care, hospitalization and ER visits, and use of illicit drugs, as well as improved retention in substance use disorder treatment.[4-6] Research supports long-term treatment with buprenorphine, as patients treated for shorter versus longer periods of time may experience increased risks with discontinuation.[5,7-9] Despite this, patients often express desires to discontinue treatment,[10-12] and some research suggests that patients may view buprenorphine taper as "treatment success."[13]

Patient-centered care, in which health care is responsive to, and reflective of, patients' needs, values and preferences, is increasingly recognized as a key component of high quality OUD treatment.[14-16] An important aspect of patient-centered care is the use of shared decision-making.[17,18] In processes of shared decision-making, clinicians and patients jointly evaluate the clinical evidence, options,

risks, and benefits of treatment options, which are viewed within the context of patient preferences and values.[17] Preliminary evidence suggests that shared decision-making in OUD treatment is desired by patients,[19] may improve treatment engagement and other key outcomes,[20,21] yet remains uncommon in clinical practice.[14,20,22] However, little is known about the medication beliefs, values, and preferences of patients engaged in long-term buprenorphine treatment that may guide treatment decisions within the context of shared decision-making. Understanding patients' perspectives and beliefs about long-term buprenorphine treatment may help clinicians to prepare for shared decision-making conversations with patients about optimal treatment duration and thereby provide more effective, patient-centered care.[17]

Extant qualitative research examining patient perceptions of buprenorphine has largely been conducted with patients earlier in the treatment process, and often highlighted positive perceptions of the medication.[23] Several studies have documented patient preference for buprenorphine over methadone, described as a more flexible, less stigmatizing treatment.[24-26] Others have documented patients' enhanced feelings of normalcy, stability, and quality of life stemming from engagement in buprenorphine treatment.[24,26-29] Other research has documented patient concerns with the medication, including the need for greater structure and support,[24,29] unwanted side-effects,[27,30,31] "intervention stigma" associated with the use of buprenorphine,[32] and ambivalence about opioid substitution therapy more generally.[10,12,26,32] As most studies have not explicitly sampled patients engaged in long-term treatment, it remains unknown how these findings align with the perspectives of patients in long-term recovery.

We conducted qualitative interviews with a sample of patients who had been receiving buprenorphine for ≥2 years, to allow patients to self-identify experiences, perspectives, and beliefs underlying their treatment preferences.

## Methods

This study was conducted at the VA Portland Health Care System between July 2019 and August 2020. Patients who had received buprenorphine for the treatment of OUD continuously for ≥2 years (except for small disruptions in treatment <1 week) were eligible to take part in a single qualitative interview. To participate, all interviewees completed an informed consent process. We selected this population for sampling as we were particularly interested in understanding medication perspectives among patients who had remained engaged in treatment over a sustained period of time. The study team involved in patient recruitment and interviews consisted of the study PI (JW), a master's level research associate (AHO) and a primary care clinician experienced in buprenorphine prescribing (KM).

Two methods were used to recruit the sample. In the first, all eligible patients receiving care in a primary care-based buprenorphine clinic were provided with a stamped, self-addressed envelope, and a flyer briefly describing the study goals, interview procedures, and incentive provided for study participation. Interested participants called the study team via a number provided on the flyer, or were connected to the interviewer by their clinician directly following an appointment. Participants were informed that the goal of the research was to understand patients' perspectives on the use of buprenorphine, and to learn about barriers and facilitators to engagement and retention in care. These interviews were conducted as part of an evaluation of the development of the clinic, which has been described previously.[33] At the time the study was conducted, 5 patients were receiving OUD treatment within the clinic. All 5 patients agreed to participate in an interview (5/5=100%). To investigate whether the emergent findings we identified in our initial sample were reflective of a broader patient population, we expanded our recruitment efforts to include patients in long-term buprenorphine treatment who were receiving care in non-primary care clinical settings.

The study team conducted outreach to 7 buprenorphine-prescribing clinicians within the same VA Health Care System working in subspecialty addiction and mental health. Clinicians were asked to self-identify patients on their panel who had been prescribed buprenorphine for the treatment of OUD for ≥2 years. Four clinicians shared contact information for 19 eligible patients, who were contacted by letter. Patients who did not respond to

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letters were contacted by phone. Of those contacted, 9 agreed to participate (9/19 = 47%). All interviewees provided informed consent to participate in the study.

All interviews were conducted by the study PI (JW), a PhD trained researcher with more than a decade of qualitative research experience, or a master's level research associate (AHO) who had received training in the conduct of qualitative research as well as study-specific training from the study PI. Interviews were guided by a semi-structured interview protocol (see Appendix A). Sample questions included: How have your impressions of buprenorphine changed over time? What do you wish you had known about buprenorphine before you started treatment? What would you tell another veteran who was considering taking buprenorphine? Interviews spanned 30 to 60 minutes, were audio-recorded and transcribed verbatim.

Analysis was guided by directed qualitative content analysis.[34] ATLAS.ti Version 8 was used to manage and analyze study data. Two members of the study team independently read through all interview transcripts and summarized initial impressions in memos. They each independently coded 5 interviews, tagging key concepts with a descriptive code. Sample codes include: buprenorphine fears, side effects, and medication beliefs. The team members then met to compare coding and build a final codebook. All study documents were then equally divided and coded by both a primary and secondary coder. Inconsistencies were resolved through meeting and discussion.

To analyze study data, the study team identified codes that captured patients' beliefs and experiences with buprenorphine, unanswered questions, and motivations to discontinue. All quotes associated with these codes were pulled, carefully reviewed, compared both within and across interviews, and sorted into categories. Results draw upon illustrative quotes emblematic of key conceptual categories identified. Study results are reported consistent with the Consolidated Criteria for Reporting Qualitative Studies (COREQ) guidelines.

To characterize the sample, a research associate extracted patient demographic and relevant clinical data from the electronic health record. The research was approved by the joint Institutional Review Board at the VA Portland Health Care System and Oregon Health and Science University.

## Review

### Results

Included in our final sample were 14 participants who had received buprenorphine treatment for ≥ 2 years. Most participants were men (12/14, 86%), white (13/14, 93%), and married (9/14, 64%) with a mean age of 50 years (range 30-71). More than half of participants had co-morbid depression (8/14, 57%) and a smaller proportion had post-traumatic stress disorder (PTSD) (6/14, 43%). Most participants did not have a history of non-opioid substance use, however (4/14, 28%) had a history of alcohol use disorder and 1 participant used cannabis. Patients' self-reported time receiving buprenorphine ranged from 2 to 5 years.

### Buprenorphine Perceptions: Regaining Control

Participants were universally positive in their descriptions of bupernorphine as a tool to obtain sobriety. Participants described past attempts to stop taking opioids without the support of a medication as excruciating, "not only do you actually feel like you're going to die, or that you would just like it to end, but you know there's only one thing on this planet that will make you feel better. And you can't have it." Participants described feelings of powerlessness over the symptoms of opioid addiction. In contrast, initiating buprenorphine enabled participants to disrupt their pattern of active opioid use. Participants described buprenorphine as a "a miracle drug" and "a blessing" that had, "saved my life." One participant described his reaction when he learned about buprenorphine as a treatment option:

> As soon as I heard what buprenorphine would do, I was after it. . .I realized that, "oh my gosh, there's a medication that can immediately get rid of my withdrawals and make me not need that pill anymore. Give it to me!. . .I couldn't get to the doctor fast enough. . .I didn't want to take narcotics anymore, but I couldn't stop. It was too painful, too sickening. . .

Buprenorphine allowed this veteran to regain a feeling of self-control, which the cycle of craving and withdrawal had taken away. Participants described a cessation of cravings and return to normalcy upon initiating buprenorphine:

> The first time you take it, you put that nasty thing under your tongue, and you drool all over the place, right?. . .And you leave it there for 15 minutes, you are going to feel so much better. . .you're going to be yourself in 30 minutes. . ..It's literally going to feel like you never were strung out. Ever. It's amazing. . .

While the medication alone provided a crucial stabilizing effect, most participants (12/14, 85%) also emphasized the importance of support groups, counseling, and community alongside medication, particularly in the earlier stages of recovery. "It so drastically allows you to change your life immediately," and yet [with] "big change people need big support." For some, counseling and support groups remained beneficial 2+ years into treatment (7/14, 50%), while others described no longer needing these forms of psychosocial support.

**Table 1.** Patient Perceptions of Bupernorphine: Primary Themes.

| Summary of themes: | Illustrative quote(s) |
|---|---|
| Regaining Control | ". . .you're going to be yourself in 30 minutes. . . .It's literally going to feel like you never were strung out. . ." |
| Perceived Side Effects | "I don't wake up and feel energized."<br>"It sort of dulls you a little bit in a way."<br>"It absolutely kills sex drive." |
| Medication "Dependency" | "I don't want to have to be dependent on a chemical to regulate my world." |
| Medication Stigma | "I still think of it as. . .a kind of a ball and chain and not like I'm fully cured." |
| Buprenorphine Unknowns | ". . . is this going to mess with my liver? Is this going to mess with my kidney? Is there nervous system damage afterwards? . . . We don't have the answers yet, so do I have concerns? Yes." |

Despite their positive views of buprenorphine, most participants (10/12, 83%) expressed a desire to discontinue the medication over time, including 3 participants who had already begun to taper their dose. The remaining 2 participants, who did not explicitly state an intention to discontinue buprenorphine, nonetheless expressed hesitations about continuing the medication. Thus, study results include data obtained from all participants. Patient voiced desires and motivations to discontinue fell into 4 primary categories, which are detailed in the results below. Themes and illustrative quotes are presented in Table 1.

## *Perceived Side Effects*

Perceived medication side effects, and the importance of these side effects, varied across participants. Some interviewees described experiencing "zero side effects," others reported side effects as bothersome but manageable, while for others, side effects were a primary motivation to discontinue treatment.

The most distressing side effects reported were those related to sleep, dreams, and emotions. One participant described a negative change to her experience of dreaming due to her use of buprenorphine:

> I used to have really vivid and prophetic dreams all the time. I never really had any surprises in my life because I always knew ahead of time with my dreams. Buprenorphine took that away, completely gone. . . I really wish I had my dreams back. . .

These effects were so distressing that she had self-tapered off of the medication in the past, but ultimately resumed treatment and did not plan to discontinue it in the future given the benefits, in terms of treating her opioid use disorder as well as co-occuring chronic pain.

Others also experienced alterations in their sleep patterns, which they attributed to buprenorphine:

> I don't wake up and feel energized. I don't ever get a good night's sleep because I believe the medication is preventing me from actually entering into that REM [rapid eye movement] sleep cycle for a long enough time. So it prevents me from getting rest, really. . .. I'm constantly tired all the time.

This participant reported looking forward to discontinuing buprenorphine treatment to be able to wake up feeling happy and energized, a state he had not experienced since initiating treatment.

Emotions also could be affected, with participants reporting a flattened emotional response, "it sort of dulls you a little bit in a way," and a loss of emotional highs and lows. Another participant shared this assessment, "there's a desensitization of emotions, being on this medication. . . Like, it's a lot harder for me to cry, it's a lot harder for me to be empathetic. . .There's just kind of a nonchalance to it, that I feel is kind of like a plateau." His dulled emotional response also affected his family, "It sucks for my wife. It sucks for everyone around [me] because they can't tell if I'm actually happy or not." This patient, actively tapering buprenorphine, described positive anticipation as well as some nervousness regarding the effect discontinuation might have on his emotional state.

Participants were not uniform in their assessment of emotional impact. Another participant feared that, as he continued to taper his buprenorphine dose down and ultimately discontinue the medication, he might return to depression, "being a recluse, not wanting to talk, being cold." This had been his experience following a previous attempt to discontinue, which had proceeded too rapidly, he later realized.

Other side effects that participants reported as bothersome, but not a reason to discontinue treatment, included declining libido, sweating, and constipation. In some cases, participants took additional medications to manage these side effects (eg, a bowel regimen for constipation) which lessened the importance of side effects.

## *Medication "Dependency"*

Participants voiced feelings of unwanted dependency on buprenorphine. Although buprenorphine had been crucial

to respondents' stabilization and recovery from OUD, years into treatment many participants felt that the benefits of the medication no longer outweighed the costs of continuing to take it. As 1 participant described, "I don't want to have to be dependent on a chemical to regulate my world." Participants disliked needing to take a pill every day to maintain feelings of normalcy and avoid withdrawal, and worried about the ability to maintain access to the medication, for instance when traveling. This conception of dependence was not limited to physiological dependency, as some patients felt that relying upon a medication to function undermined their perceived sense of independence:

> I'm 67 years old. . .I need to not be dependent. I think it would help my psyche. . .if I didn't have to worry about going to the VA and taking this medication to make me feel normal.

> . . .not being tied to medication every single day. Not worrying about, did I leave my meds?. . . Being independent. Being my own self. Being my own man.

> I'm trying to reflect to my children that they need to be strong and they need to seek help in other people, rather than things or vices, you know? And. . .that's hard to model to them if I'm. . .taking medication every morning.

The necessity of taking a daily medication seemed to be at odds with these participants' self-concept and identity as self-reliant and independent. Notably, this perception did not extend to other forms of medication, such as antidepressants, "It just feels different somehow," suggesting that, for these participants, beliefs about opioid agonist treatment may be unique compared to other medications used to treat mental health disorders.

### *Medication Stigma*

Stigmatized beliefs about buprenorphine were widespread among participants, and a major motivation to discontinue treatment. Participants described buprenorphine as an "illicit" "addictive drug," that had led them to "supplement one vice for another." Participants stated that family and recovery communities also voiced such beliefs, which likely reinforced these perceptions. They continued to associate the medication with a troubled stage of their lives, "It's a medication I'm taking because I was. . . I'm a drug addict." Framed in this way, some participants voiced a belief that they could not achieve full recovery from OUD until they ceased taking buprenorphine. This was the case for 1 participant whose OUD had been in remission for years:

> It's just how I think about Suboxone [buprenorphine/naloxone]. In that I still think of it as. . .a kind of a ball and chain and not like I'm fully cured, or like I'm 100%. . .no matter how well I'm doing- and I mean I am doing well. . .on the outside, but I still think like on the inside. . .I mean I, consider myself sober, I just don't consider myself like 100%. . .free I guess I would say.

Despite his substantial successes, as long as he continued to take the medication, he felt he had not fully recovered from OUD.

While stigmatized medication beliefs were common, not all participants expressed such views. For instance, 1 participant described how he worked against his own negative perceptions of medication "dependency" by consciously attempting to reframe his understanding of the medication, "I don't like. . . being tied to any particular drug. But I look at it like [if] I had some disease, or I was diabetic, and I had to do something every day to keep myself healthy. This is what I have to do." By drawing a parallel between buprenorphine and a medication used to treat a less stigmatized health condition (ie, diabetes), this participant worked to overcome his own negative perceptions.

### *Buprenorphine Unknowns*

Participants' motivations to discontinue buprenorphine treatment also reflected unanswered questions they had about the medication, including long-term effects on the body, impaired brain functioning and potential interference with pain medications needed for acute pain or surgery. Participants understood that the long-term effects of buprenorphine may not yet be known:

> There isn't a whole lot of history on what happens to people that get off. . . So, whenever there isn't very much science on something I worry. Especially when you're talking about ingesting a chemical. . .the question is. . . is this going to mess with my liver? Is this going to mess with my kidney? Is there nervous system damage afterwards? . . . We don't have the answers yet, so do I have concerns? Yes.

Having sought out, and largely not been able to find, scientific literature addressing the long-term effects of buprenorphine, he feared what long-term use might mean for his future health. Participants also wondered what long-term effects buprenorphine might have on the brain, "Does it really close the [opioid] receptors. . .and restore them to a normal level?" Although participants brought such questions to clinicians, they did not always feel that these questions were adequately addressed.

Finally, participants expressed fears regarding the potentially problematic interaction between buprenorphine and pain medications that could be needed for acute pain treatment or surgery:

> There is one thing that kind of eats at me. . .and that's the fact that if I were in an accident or needed major surgery, any pain

medications with the buprenorphine being an opiate blocker, might cause a problem.

Although he had spoken with his provider about this, and she had reassured him that he needn't worry, he nonetheless looked forward to the time when he was no longer taking buprenorphine and could set this fear to rest. Part of this fear reflected conflicting, or inadequate, information providers had shared about medication interactions in the past.

## Discussion

In this study of patients diagnosed with OUD who had received buprenorphine treatment for 2 or more years, patients strongly endorsed taking the medication, describing it as a way to regain control and provide a foundation upon which to pursue long-term recovery. Yet, in interviews conducted years into recovery, concerns, and negative perceptions about continuing buprenorphine long-term were common. Voiced desires and motivations to discontinue fell into 4 primary categories, including perceived side effects of the medication, unhappiness with being "dependent" on a medication—framed in opposition to personal strength and independence, stigmatized beliefs about buprenorphine and fears about buprenorphine unknowns (including potential long-term effects on the body), and interactions with medications required for acute pain treatment. These findings align with past research, including the perceived benefits of the medication for promoting stability and recovery,[23,27-29] perceptions of medication side effects,[30,31] as well as patients' stigmatized medication beliefs and desires to discontinue treatment despite overall positive perceptions.[11,12,32]

Findings from this study may help inform shared decision-making conversations between clinicians and patients regarding buprenorphine treatment duration and thereby contribute to patient-centered care.[14] While most evidence indicates that longer treatment duration is better than shorter duration, continuing treatment long-term, or without a clear end point, may be contrary to patient wishes, desires, and/or concerns. Recognizing beliefs and medication perspectives that may underlie patients' desires to discontinue treatment may help clinicians to anticipate such concerns and better address them within the context of shared decision-making conversations.

Our study suggests that several key discussion points could frame these conversations. First, clinicians could work with patients to identify troubling medication side effects, as our research suggests that concerns about side effects may influence desire to continue treatment long-term. Addressing specific concerns may include prescribing medications to reduce side effects and/or adjusting the buprenorphine dose to make side effects more manageable.

Second, clinicians could address questions regarding what is known about the long-term effects of buprenorphine, as well as recent guidance suggesting that buprenorphine may generally be maintained throughout surgery and utilized concurrently with standard pain treatments.[35,36]

Third, addressing stigmatized beliefs, including the notion of medication "dependency," throughout the treatment period may be warranted. A strategy for minimizing medication stigma was suggested by 1 participant, who described how he worked to reframe his negative beliefs about buprenorphine by equating it with a diabetes medication that patients took daily to maintain physical health. Clinicians may also want to consider emphasizing the difference between physiological dependency and addiction, as some of our participants continued to conflate these concepts in their descriptions. Concise, accessible educational materials targeting medication stigma are readily available, and can be shared with patients and family members.[37]

Fourth, clinicians might consider whether participation in psychosocial treatment, such as cognitive behavioral therapy, may help to address cognitions that could potentially interfere with treatment outcomes. While extant research has largely shown that psychosocial treatments paired with buprenorphine do not improve patients' addiction-related outcomes (abstinence, retention in treatment),[38] such treatments could help improve patients' quality of life by addressing distressing cognitions related to OUD medication and treatment.

### *Limitations*

This research was conducted with a small sample of mostly male, white veterans receiving outpatient OUD treatment within a single health care system in 2019 to 2020. Experiences with buprenorphine and desires to discontinue treatment may vary across other settings and patient populations. It is also possible that patients' perceptions of and experience with stigma may be changing given widespread efforts to expand access to medications for OUD and increased prescribing in non-specialized treatment settings.[39,40] All participants in this study had received buprenorphine treatment for OUD for $\geq$2 years; patients newly initiating buprenorphine or those with shorter treatment durations are likely to have different perceptions and experiences with the medication. Participants described motivations and desires to discontinue buprenorphine in the future; these expressions may or may not correlate with future actions. Absent longitudinal interviews, we cannot definitively state how participants' perceptions of buprenorphine have changed over time. While our data show the diversity in response among patients within our relatively small sample, a larger sample might reveal additional themes. Finally, data presented here are participants' perceptions and voiced understanding of events and

experiences; these perceptions may, or may not, align with others' perceptions of these events and experiences.

## Conclusion

As patients stabilize in recovery, many may begin to consider tapering or discontinuing buprenorphine. Findings from this study may help clinicians anticipate patient concerns, and can be used to inform shared decision-making conversations between clinicians and patients regarding optimal buprenorphine treatment duration.

## Appendix A. Interview Guide

Thank you for taking the time to talk with me today. My name is _____ [NAME OF INTERVIEWER] and I am a member of the research team for the study you're part of that is examining patient experiences with buprenorphine. We want to learn more about your experiences receiving treatment with bupernorphine over the long-term. We are also interested to know what helped you to stay in treatment in this clinic over time and what factors made it more difficult. This will be the only interview that you do as part of this study. Today's interview will take approximately 45 to 60 minutes and will be audio-recorded for accuracy. As explained during informed consent, all responses are confidential and you can pass on any question you prefer not to answer. Your name will not be linked to this interview; once I start recording I will only refer to you by a study ID number. Your participation is voluntary and you may choose to end the interview at any time. Do you have any questions before we get started?

[RESPOND AS APPROPRIATE]

Great, I'm going to go ahead and start the audio recorder and will ask you if you are aware that you're being recorded before starting with the first questions so your consent is captured on the recording.

[START AUDIO RECORDER]

This is _____[NAME OF INTERVIEWER], Today's date is _____[DATE]. I am with participant _____[STUDY ID#].

Are you aware you are being audio-recorded?

(Following confirmation of verbal consent of awareness that interview is being recorded)

Introduction/background

1. To get started could you tell me when you first started receiving medical care at the VA?
   a. Probe: how did you decide to start using VA health care?
2. Have you received treatment for substance use disorders in the past? [If no, skip to question X].
   a. Can you tell me a bit about this treatment?
   b. Where did you receive that treatment? (VA or non-VA)
   c. Did you find that treatment helpful? Why or why not?
3. Tell me about the problem you were having that led your doctor to prescribe buprenorphine for you [*If applicable*: this time].

Buprenorphine Treatment in VA

4. How did you decide to start receiving buprenorphine treatment in the [fill in as appropriate] clinic?
5. What were your thoughts regarding receiving buprenorphine in the [fill in clinic name] clinic initially?
   a. Probe: What fears or concerns did you have?
6. How has your perception of treatment in the [fill in] clinic changed over time?
7. Could you describe for me the structure of a standard clinical visit?
   a. Probe for clinician style, visit topics, context.
8. What are some of the things that you have liked about the care that you've received in the [X] clinic?
9. What are some of the things you have not liked?
10. Is there anything that has made it difficult for you to receive treatment in the [X] clinic?
    a. Probe:
       - Practical barriers: Transportation, childcare, work
       - Interpersonal barriers
       - clinician attitude/dynamics
       - other patients
       - physical context
11. What might make it easier for you to remain in treatment?
    a. Probe: services, resources
12. Tell me about any other kinds of treatments you are currently receiving for opioid use disorder.
    a. Prove: group or individual counseling, support groups.

[If the Veteran is receiving other treatments ask the following]

13. Is this treatment voluntary?
14. In what ways do you find this treatment to be helpful?
15. In what ways is it not helpful?

Probe: What do you think would make this treatment more helpful for you?

[If the Veteran is not receiving other treatments ask the following]

16. Do you feel that you would benefit from any other treatments in addition to the care you currently receive in the [x] clinic? Why or why not?
17. Do you think [x clinical setting] is the best place for you to receive buprenorphine treatment? Why or why not?

Buprenorphine Impressions

18. How has your perception of buprenorphine as a treatment for opioid use disorder changed over time?
19. What is your long-term plan regarding buprenorphine treatment? Can you tell me why you gave that answer?
    a. Probe: What fears or concerns do you have about discontinuing buprenorphine?
    b. Is there anything you would look forward to about discontinuing buprenorphine?
20. Do you have any unanswered questions or concerns about buprenorphine as a medication?
21. What would you tell other Veterans considering being treated with buprenorphine in the [X] clinic?

Wrap-up

22. Is there anything you think it is important for clinicians to know about prescribing buprenorphine?
23. Is there anything else that you feel it is important that I know?

Thank you for taking the time to talk with me today!

## Author contributions

JW originated the project, obtained funding, conducted interviews, analyzed data and drafted the initial manuscript. AHO conducted interviews and analyzed data. TL, AG and BM contributed to the design of the work. All authors participated in interpreting the results, contributed to the writing of the manuscript, provided critical feedback to the manuscript, and approved the final manuscript draft for submission.

## Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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## Compliance, Ethical Standards, and Ethical Approval

The research was approved by the joint Institutional Review Board at the VA Portland Health Care System and Oregon Health and Science University.

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