Creating and Evaluating a Buprenorphine Microinduction Protocol for Opioid Use Disorder

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INTRODUCTION

According to conventional protocols, patients initiating buprenorphine treatment may avoid precipitated withdrawal by postponing initial dosing:

- 12+ hours from last use of short-acting opioids;
- 48-72 hours from last use of for long-acting opioids.

Unfortunately, these delays often result in acute withdrawal symptoms, which are associated with early drop-out.

Risk may be mitigated using a microinduction strategy, by which small doses of buprenorphine administered at a higher frequency, to gradually acclimate opioid receptors to the partial agonist. Microdosing in concert with adjunct symptom management is intended to:

- Decrease drop-out rates in the induction phase;
- Improve induction experience for high-risk patients who previously used fentanyl;
- Increase patient retention over the critical first 90-days of treatment.

However, we were concerned that the complexity of the microdosing regimen could imperil patient success. Therefore, our team needed a solution that communicated the plan faithfully in an accessible manner. Development of this solution is the first half of an ongoing project evaluating the effectiveness and implementation of our buprenorphine microinduction protocol.

AIM

To improve quality of buprenorphine induction in the outpatient setting, we created a guide with pictorial format to clearly and reliably communicate a complex buprenorphine microdosing regimen.

METHODS

1. Development of initial regimen was informed by comprehensive literature review and the clinical experience of senior author Dr. Stevens.
2. The pictorial design of the prototype guide was influenced by recommendations for effective communication from the Institute for Healthcare Improvement and Health Care Education Association.
3. To assess adequacy and intelligibility of the guide, we spoke with patients of Dr. Steven who had already or were considering transition from heroin, fentanyl, or methadone to buprenorphine. Voluntary 5-10 minute interviews were conducted privately during scheduled or walk-in primary visits on 4 weekdays over 2 weeks.
4. Between weeks 1 and 2, a second iteration was made, which was evaluated during week 2.
5. The final guide was redesigned as a flipbook using Canva.com ©2023.

METHODS

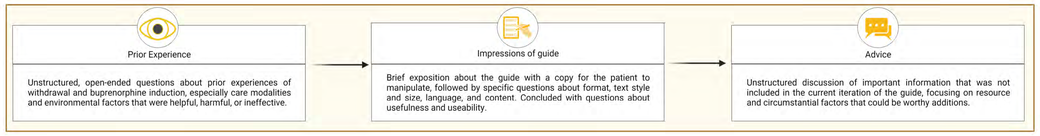

Figure 1. Interviews with patients were semi-structured and formatted to be responsive to patients' past experiences, priorities, and insights.

RESULTS

We conducted 10 interviews (60% week 2) with patients (60% M) who had relevant personal experience and were eager to participate. Interviewees were 50% White, 30% Black, and 20% Hispanic. The predominant age range of interviewees was 40s to 50s (80%). Eighty percent of interviewees were on maintenance buprenorphine at the time for months to years. Of the 80%, 5 had transitioned from heroin, 2 from methadone, and 1 from other opioids.

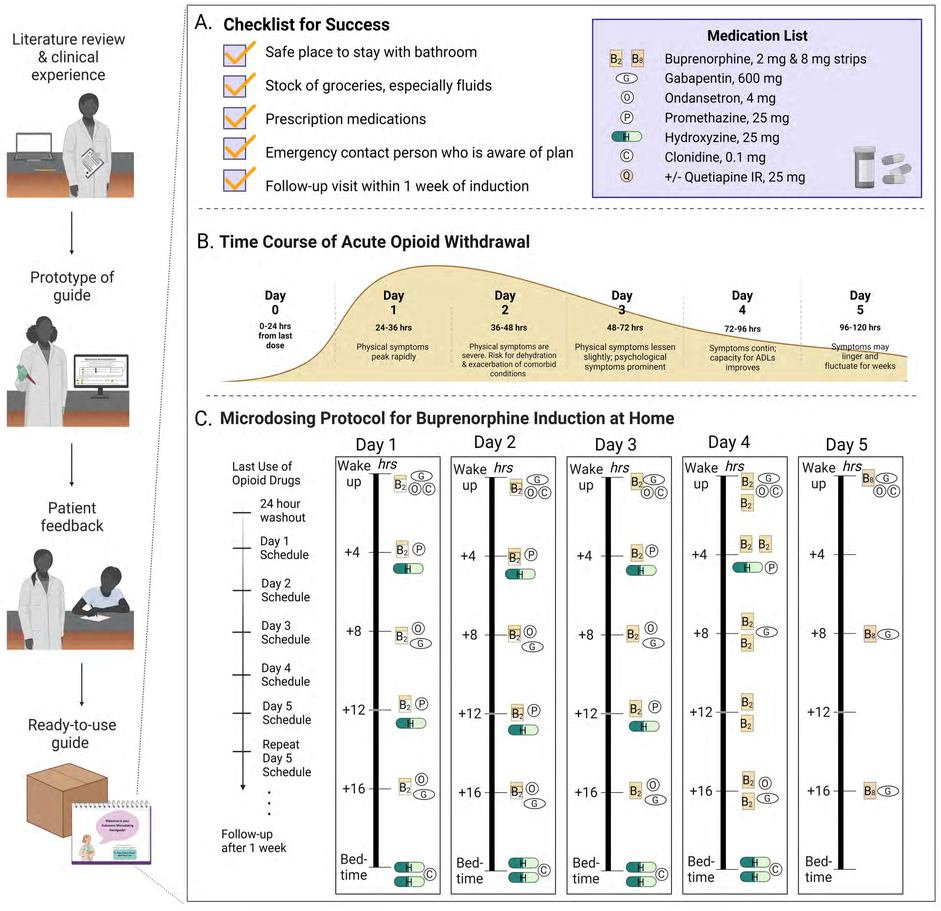

Figure 2. Illustration of the development of the buprenorphine microinduction guide from regimen to flipbook. Panels on the A and C right show selected guide contents. Panel B illustrates the typical course of withdrawal as context to protocol in Panel C.

DISCUSSION

Patient feedback from interviews led to revisions of and additions to the guide that improved useability and extended the functionality of the guide. For example:

- **Revision:** Patients recommended we modify the format to show only one day per page to reduce stress and anxiety and maintain focus, and we elected to redesign the guide as a flipbook.
- **Addition:** Patients emphasized the importance of environment and preparation as determinants of success, so we added a checklist to prompt patients to assure their safety and access to supplies prior to starting induction.
- **Addition:** Patients recounted their past or current confusion regarding cutting buprenorphine strips, so we added a how-to section.

FUTURE DIRECTIONS

The development of this guide is an integral step in our on-going mixed-methods study of the effectiveness and feasibility of buprenorphine microinduction. Next:

1. The secondary qualitative phase will validate the guide. We are currently recruiting 10 patients to use the guide and keep a diary of adherence and withdrawal symptoms. We anticipate further revisions to the guide.
1. The final quantitative phase will evaluate effectiveness and feasibility of the regimen in a larger sample of patients, using clinical and standardized questionnaires.

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