Pain Management Strategies for Patients on Extended-Release Buprenorphine for Opioid Use Disorder: A Scoping Review

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Introduction

- In recent years, opioid-related overdoses have reached epidemic levels worldwide.
- Various Opioid Agonist Treatments (OAT) have been developed and introduced, however, there are barriers which hinder treatment retention (i.e., daily dosing) among those with Opioid Use Disorder (OUD)[1].
- Extended-Release Buprenorphine (BUP-XR) was developed to mitigate these challenges in the treatment of OUD.
- BUP-XR is used for the treatment of moderate to severe OUD, and it consists of a subcutaneous depot that is administered once monthly.
- Compared to placebo or sublingual buprenorphine, BUP-XR has been associated with improved abstinence, higher treatment satisfaction, and greater ease in treatment[2,3].

Background

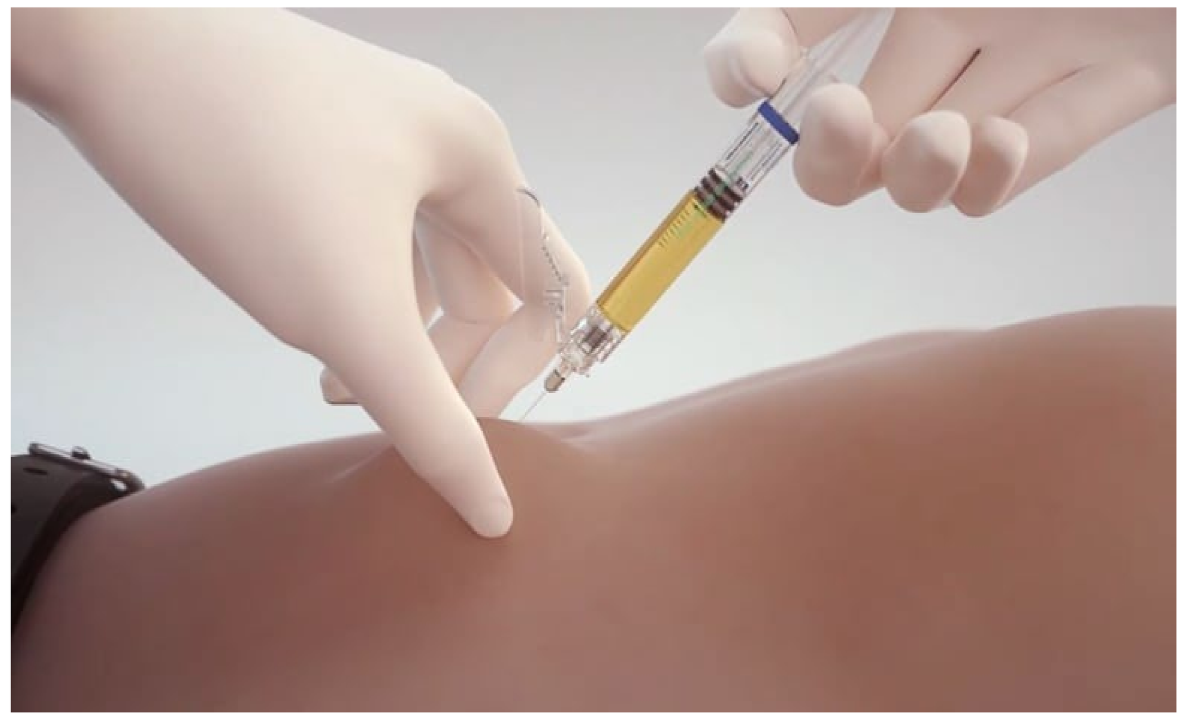
- Pain is a frequently occurring comorbid condition for people with OUD.
- Longitudinal opioid use, either illicit or prescribed, can lead to increased pain sensitivity and increased tolerance to analgesics[4].
- Although, pain is highly prevalent in this population, there is a lack of standardization in pain management strategies.
- Due to the novelty of BUP-XR, there is a dearth in literature on pain management strategies for individuals with OUD using BUP-XR.

Objective

- This scoping review aims to delineate pain management strategies for patients on BUP-XR

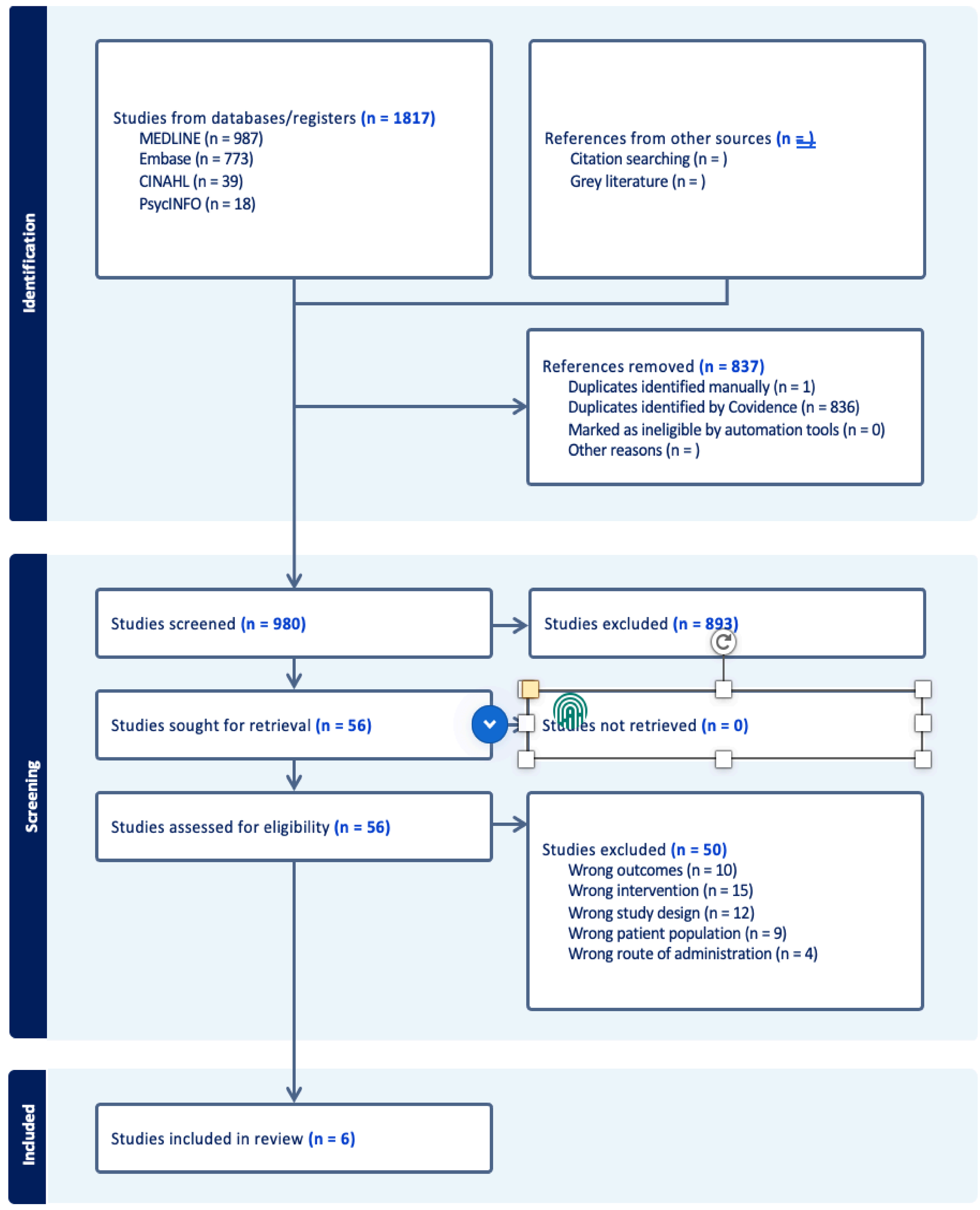
Method

- Electronic searches were conducted in the databases Ovid Medline, EMBASE, CINAHL, Web of Science, and PsycInfo from inception to February 2025.
- All articles that discussed the treatment of acute or chronic pain among patients receiving BUP-XR were included.
- All studies that reported primary data were included and conference abstracts that met the inclusion criteria were also included.
- Studies that reported methadone or other buprenorphine formulations were excluded.
- Data were extracted independently by the authors using a data extraction form designed for this study, including patient demographics; clinical history; pain severity; pain-related functional outcomes; patient satisfaction; and adverse events.
- Extracted data from the final pool of articles were analyzed and summarized qualitatively.



This image is a demo that displays the subcutaneous administration the BUP-XR implant in individuals with OUD. This photo is derived from the CBC news website.

Results



- 10 cases utilized full opioid agonists (i.e., oxycodone, hydromorphone) and non-opioid adjuncts (i.e., acetaminophen)[5].
- Nonsteroidal Anti-Inflammatory Drugs (NSAIDS) such as ketorolac and ibuprofen were also used for pain management[6].
- Intraoperatively, analgesics including acetaminophen, dexmedetomidine, fentanyl, lidocaine, ketamine, and hydromorphone were used for pain management.
- Postoperatively, patient-controlled analgesia pumps (PCA) consisting of either hydromorphone, morphine or hydrocodone were used for breakthrough pain[6,7].
- 13 cases reported the administration of the next scheduled dose of BUP-XR 24-74 days after surgery. Most patients did not report experiencing withdrawal[6-9].

Discussion

- Pain was adequately managed for the majority cases, however, due to the limited number of cases and small sample size, there is insufficient evidence to conclude the efficacy of the approaches utilized.
- In all the cases, it was observed that solely administering non-opioid analgesics was insufficient in providing pain relief.
- Our findings suggest that buprenorphine dosing can be continued during the peri- and postoperative period to support recovery for patients with OUD.
- Pain management for patients using BUP-XR can be achieved through multimodal strategies incorporating full opioid agonists, adjuncts and NSAIDs.

Conclusion

- Our review confirmed that there is lack of standardization in guidelines for pain management strategies for patients on BUP-XR.
- Further studies are required to delineate combinations of analgesic agents and approaches that will provide the most effective pain control.

Disclosure

Dr. Pouya Azar is a consultant for Indivior-led buprenorphine extended-release studies, however the data from these studies are not included in this review. The other authors have no disclosures or conflicts of interests.

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