Title: Withdrawing from long acting injectable buprenorphine treatment – what does the withdrawal syndrome look like.

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Introduction: Long-acting injectable buprenorphine (LAIB) treatment now accounts for over 25% of opioid dependence treatment in Australia. However, there has been little research examining the severity, onset and duration of opioid withdrawal syndrome when clients discontinue treatment.

Methods: A prospective open-label single group study examining withdrawal related outcomes in clients discontinuing Buvidal 64mg Monthly treatment in an inpatient residential setting, with up to 16-week follow-up after the last dose. Participants were clients in long-term buprenorphine treatment admitted to WHOs OSTAR program, with informed consent. Key outcomes: onset, duration and severity of opioid withdrawal signs and symptoms (COWS, SOWS), cravings, general health (PROMIS-29), patient satisfaction (TQSM), completion rates and urinary buprenorphine concentrations.

Key findings: 25 participants enrolled in the study, with data available for n=24. Six participants completed the sixteen-week study, with the first dropping out on Day 3 and the last terminated on Day 112 (Week 16) (median time to termination 8.5 weeks). There were statistically significant increases in COWS (b=0.08 [CI: 0.02, 0.15]) and SOWS (b=0.05 [CI: 0.02, 0.07]) scores across the 16-week trial but neither increase was clinically meaningful: average COWS scores remained under the threshold for Mild Withdrawal (<6 points) for the entire trial. Withdrawal severity peaked between weeks 4 and 8 for most participants. Opioid cravings showed increases over time, peaking at week 14 (b=0.28 [CI: 0.07, 0.48]). Urinary buprenorphine and norbuprenorphine levels decreased significantly across the trial (b=-0.41 [CI: -0.71, -0.13] and b=-4.22 [CI: -6.83, -1.59] respectively), reaching minimum at Week 12. Patient satisfaction with medication remained high throughout the trial.

Discussions and Conclusions: The data suggests stopping Buvidal treatment is associated with very mild opioid withdrawal symptoms, peaking in weeks 4-8 after the last dose. Whilst clinical outcome trials are required, our data suggests this to be a milder withdrawal than discontinuing sublingual buprenorphine or methadone.

Implications for Practice or Policy: Cessation of methadone or buprenorphine treatment has long been identified as a significant concern for clients. These findings are important for client and clinicians assist informed decision making in treatment planning. Withdrawal from LAIB formulations may become the preferred approach for many clients.

Disclosure of Interest Statement:

Research Based Abstract Template

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