Micro Dosing in the OPTIMA study: Comparing methadone, buprenorphine, and micro dosing of buprenorphine on study drop out and self-reported drug use.

Category: Poster Presentation (in person)

Abstract Body

Introduction: This is a secondary analysis of the OPTIMA study comparing three treatment approaches: methadone, buprenorphine, and micro-doses of buprenorphine (micro-doses are smaller doses given to participants at initiation over a longer administration period). The OPTIMA study (Canadian Research Initiative in Substance Misuse, 2020) ran from seven sites, across Canada, for 24-weeks, as an open label, two-arm parallel randomized controlled trial (Jutras-Aswad et al., 2022). Participants were randomized 1:1 to either a sublingual, buprenorphine/naloxone tablet or oral methadone. Micro dosing was a non standard but approved approach to initiating treatment seekers into the OPTIMA study.

Method: We excluded participants whose responses had inconsistencies (e.g., those that dropped out at baseline) resulting in 208 participants. Survival analyses and Generalized Estimating Equations were run to examine study drop out and self reported drug use of participants from treatment initiation to study completion. All analyses were run using SPSS 28.0. Permission to obtain the deidentified data was obtained through the MICA URCA data sharing portal (#763746) and the secondary analysis was approved by the University of Alberta's Health Research Ethics Board (Pro00117566).

Results: The survival analyses found micro dosing to have the highest drop-out rates (55%), which were significantly different from buprenorphine (31%) and methadone (31%) ($\chi 2$ =8.047, df=2, p=.018). Buprenorphine and methadone were not significantly different from each other.

The generalized estimating equations were run to model the effect of various variables (e.g., demographic, severity) on self-reported drug use (e.g., cannabis, cocaine, amphetamine, heroin) across the trial. Importantly, those allocated to regular buprenorphine reported significantly fewer fentanyl use rates (M=-.830) than (methadone M=2.301) and micro dosing of buprenorphine (M=3.101). There was no significant difference between methadone and micro dosing of buprenorphine. There were also significant positive model effects in the fentanyl self-report use rates for time in the study (p<.001) and DSM score (p=.005).

Conclusion: Regular buprenorphine and methadone appear to have similar effects on drop out. However,

buprenorphine alone shows fewer drug use episodes than micro-dosing or methadone. Regular buprenorphine appears to the better choice between these three approaches. However, there are limitations to this analysis.

Key Words

- COVID-19
- Novel Therapeutics
- Opiate Agonist Therapy
- Opioids/Opiates
- Pharmacologic Interventions
- Psychiatric Co-Morbidities
- Substance Use Disorder (general)

Learning Objective # 1
To understand the efficacy of micro-dosing on opioid use disorder.

Learning Objective # 2
To understand the differences between clinical outcomes for opioid use disorder.

Reference # 1
Canadian Research Initiative in Substance Misuse (2020). OPTIMA Trial. https://crism.ca/optima-trial

Reference # 2
Jutras-Aswad, D., Le Foll, B., Ahamad, K., Lim, R., Bruneau, J., Fischer, B., Rehm, J., Wild, T. C., Wood, E., Brissette, S., Gagnon, L., Fikowski, J., Ledjiar, O., Masse, B., Socias, M. E., & OPTIMA Research Group within the Canadian Research Initiative in Substance Misuse (2022). Flexible Buprenorphine/Naloxone Model of Care for Reducing Opioid Use in Individuals With Prescription-Type Opioid Use Disorder: An Open-Label, Pragmatic, Noninferiority Randomized Controlled Trial. The American journal of psychiatry, 179(10), 726–739. https://doi.org/10.1176/appi.ajp.21090964

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