

Comparative effectiveness of buprenorphine/naloxone versus methadone for treatment of opioid use disorder: emulating target trials with population-level data

Category: Oral Presentation

Abstract Body

Background: Identifying effective treatment options for opioid use disorder (OUD) is critical in bridging the gap between research evidence and evidence-based care for the clinical management. Previous studies on the comparative effectiveness of buprenorphine and methadone featured challenges that limit their applicability to clinical practice.

Objectives: To determine the comparative effectiveness of buprenorphine/naloxone versus methadone, both overall and within key populations, using population-level data and both intention-to-treat and per-protocol study designs.

Methods: We conducted a retrospective cohort study of adults living in British Columbia, Canada, receiving opioid agonist treatment with buprenorphine/naloxone or methadone from January 1, 2010 to March 17, 2020, using linked population-level administrative databases. We compared the effectiveness of the two medication regimens on treatment discontinuation and all-cause mortality using discrete-time survival models.

Results: There were 44,446 recipients of buprenorphine/naloxone or methadone treatment for OUD during study period. After controlling for baseline covariates, the hazard ratio (HR) for treatment discontinuation for buprenorphine/naloxone versus methadone obtained using intention-to-treat (ITT) analysis was 1.37 (95% CI: 1.33, 1.41). After censoring at sub-optimal dose using per-protocol (PP) analysis, the HR decreased to 1.31 (1.24, 1.38). We found no evidence of an association between all-cause mortality and buprenorphine/naloxone versus methadone (ITT: HR=0.62 (0.33,1.16); PP: HR=0.74 (0.31,1.78)).

Conclusions: Assessing the comparative effectiveness of buprenorphine-naloxone versus methadone through both intent-to-treat and per-protocol perspectives addresses both confounding by indication and time-varying confounding, thus providing pragmatic real-world clinical evidence to inform the clinicians and policy makers.

Key Words

- Opiate Agonist Therapy
- Quality Improvement

- Substance Use Disorder (general)

Learning Objective # 1

Learn about the real-world comparative effectiveness of first-line opioid agonist treatment regimens.

Learning Objective # 2

Time to treatment discontinuation was significantly shorter for Buprenorphine/naloxone compared to methadone.

Reference # 1

Piske M, Thomson T, Krebs E, et al. Comparative effectiveness of buprenorphine-naloxone versus methadone for treatment of opioid use disorder: a population-based observational study protocol in British Columbia, Canada. *BMJ Open* 2020;10(9):e036102. doi: 10.1136/bmjopen-2019-036102

Reference # 2

Pearce LA, Min JE, Piske M. Mortality among people with opioid use disorder during an opioid overdose public health emergency in British Columbia, Canada. *BMJ* 2020;368:m772.

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