

Overdose after Medication for Opioid Use Disorder Initiation Following Hospitalization

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Introduction

- Opioid-related hospitalizations have risen significantly over the years, from 136.8 per 100,000 population in 2005 to 250.4 per 100,000 population in 2020.
- Hospitalizations related to opioid use disorder (OUD) constituted approximately 3.4% of all hospitalizations in metropolitan areas in 2016.
- Opioid-related hospitalizations encompass a range of comorbidities beyond overdose, including HIV, hepatitis, endocarditis, skin and soft tissue infections, and bacteremia.
- **Our objective** was to investigate whether obtaining medication for OUD (MOUD) with buprenorphine, methadone or naltrexone within 7 days of hospital visit (either ED or hospital discharge) is associated with decreased odds of fatal or non-fatal overdose at 6- and 12-months.

Methods

Data Source: The Oregon Comprehensive Opioid Risk Registry (CORR) database, derived from the Oregon All Payer Claims Database (APCD), covering Medicaid, Medicare, and commercial insurance claims for approximately 80% of Oregonians spanning 2013-2020. Patient data in the APCD were linked to the Oregon Prescription Drug Monitoring Program (PDMP), vital records, emergency medical services, and hospital discharge databases for a comprehensive dataset.

Sample: Patients with an Opioid Use Disorder (OUD) diagnosis during hospitalization or emergency department (ED) visits from 2017-2019. The main exposure studied was the initiation of MOUD within seven days post-discharge, identified by receiving an OUD formulation of buprenorphine or naltrexone, or a procedure code for methadone dispensation with no evidence of MOUD in the previous 6 months.

Analysis: Patient outcomes were monitored at 6- and 12-months post-hospital discharge, assessing the occurrence of the first fatal or non-fatal opioid-related overdose, with data collected from underlying cause-of-death codes, hospital discharge records, and APCD ED insurance claims.

Results

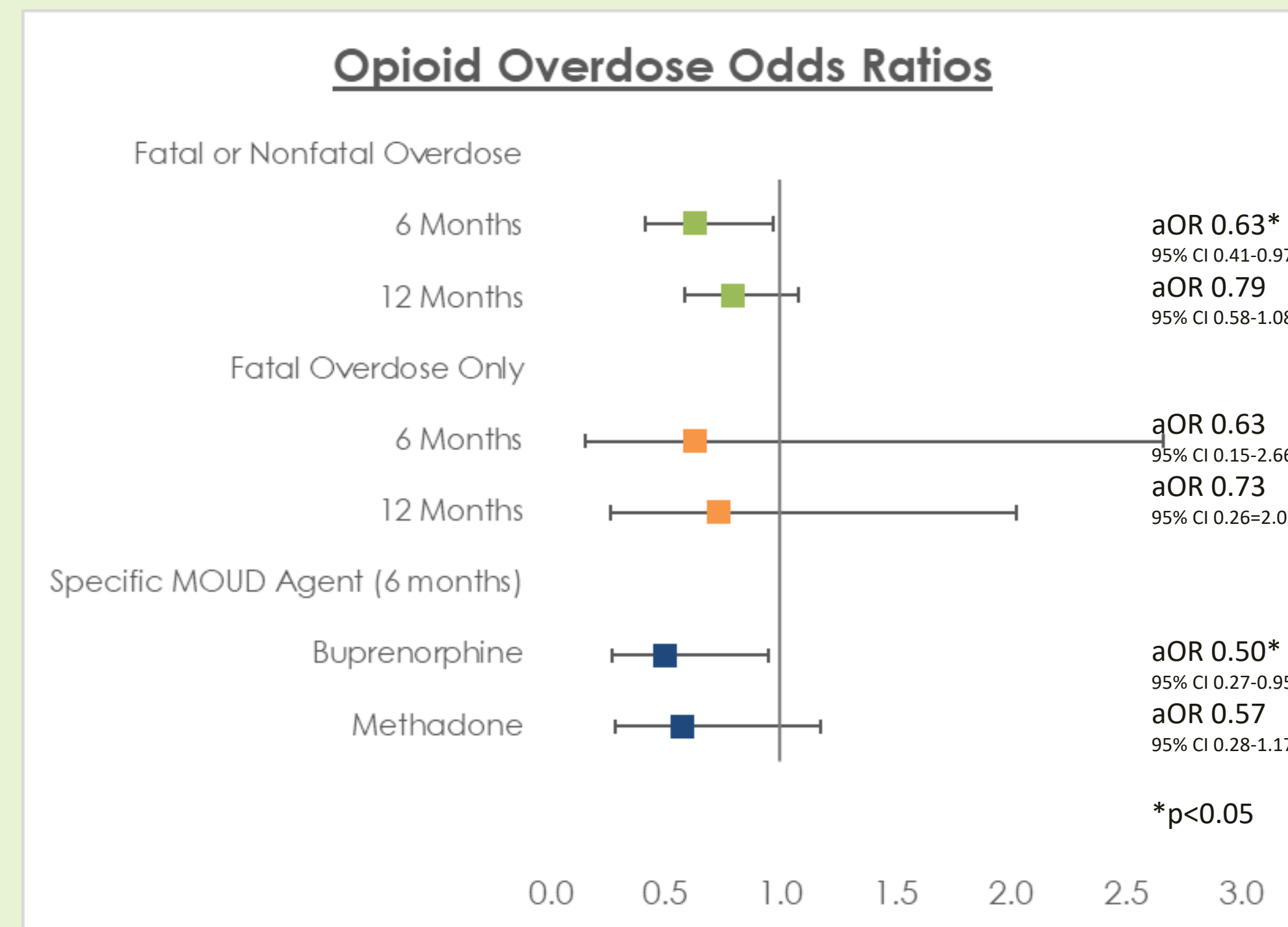
22,235 patients had an included OUD-related hospitalization during the study period, of which 1,184 (5.3%) had MOUD initiation within 7 days of discharge.

683 (3.1%) received buprenorphine, 463 (2.1%) received methadone and 46 (0.2%) received long-acting injectable naltrexone.

There were 452 overdose events in 6 months and 758 overdose events in 12 months. Outcomes related to naltrexone are not reported due to the small number of events (4 overdoses at 6 months).

The risk of fatal or non-fatal opioid overdose was lower at 6 months for:

- ✓ Patients who initiated MOUD within 7 days of a hospital visit
- ✓ Patients who received buprenorphine as the MOUD agent



Conclusions

- Early initiation of Medications for Opioid Use Disorder (MOUD) within seven days of hospitalization is linked to a **significant decrease in the risk of fatal or non-fatal overdose at 6 months**.
- The study suggests a decrease in overdose odds at twelve months, especially for fatal overdoses, although these findings did not reach statistical significance.
- Despite the potential benefits, **only 5.3% of patients initiated MOUD**, indicating an opportunity for improvement in promoting MOUD commencement for hospitalized individuals.
- Society of Hospital Medicine guidelines and other recommendations now endorse MOUD initiation for patients hospitalized with opioid use disorder (OUD)-related issues, emphasizing the importance of adopting this approach.
- Further research is needed to determine retention with MOUD treatment, and why the effect did not extend to 12 months.

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