

“FACTORS ASSOCIATED WITH OPIOID OVERDOSE AFTER AN INITIAL OPIOID PRESCRIPTION”

SOURCE: JAMA NETWORK, 1/28/2022

AUTHORS: SCOTT G. WEINER, MD, MPH ET AL.

SUMMARY

Weiner et al conducted a retrospective cohort study in order to identify the specific patient-related and prescription-related factors that may put a previously opioid-naive individual at a greater risk of an opioid overdose. The study, using data from the Oregon Comprehensive Opioid Risk Registry, followed 236,921 opioid-naive adult patients aged 18 to 100 years for a period of 33.7 months after their index opioid prescription. Of them, 667 patients experienced an opioid overdose. The researchers extensively studied the group of people who experienced opioid overdose and determined certain risk factors that were correlated with higher likelihood of overdose. The severity of each risk factor is also depicted through adjusted Hazard Ratio (aHR) and overdose rate per 100,000 person-years.

STATISTICS

Risk Factors Based on Rate:

1. Long-acting index prescription (734.8 per 100 000 person-years)
2. Comorbid substance use disorder (626.4 per 100 000 person-years)
3. Comorbid psychosis (466.4 per 100 000 person-years)
4. 6 or more opioid prescriptions (395.3 per 100 000 person-years)
5. Opioid prescriptions from ≥ 3 pharmacies (387.5 per 100 000 person-years).

Risk Factors Based on Adjusted Hazard Ratio (aHR):

1. Dual eligibility (aHR 4.37)
2. Medicaid (aHR 3.77)
3. ≥ 75 years (aHR 3.22)
4. Tramadol (aHR 2.80)
5. Medicare Advantage (aHR 2.18)
6. Concurrent use of opioids and benzodiazepines (aHR 2.11)
7. 18 to 24 years (aHR 1.80)
8. Oxycodone (aHR 1.70)
9. Black (aHR 1.55)
10. Male (aHR 1.29)

STUDY DESIGN

Weiner et al conducted a retrospective cohort study to find the risk factors associated with opioid overdose. In a retrospective cohort study, the data is collected from records and the outcomes have already occurred. In this case, the data was collected from the Oregon Comprehensive Opioid Risk Registry. However, this type of cohort study has some limitations which are discussed below.

POINTS DISCUSSED

- The limitations of this retrospective cohort study included missing data on race and ethnicity, missing patient-related factors such as income and education level, and differing clinical applicability. Another limitation is that the study only focused on people living in Oregon; Therefore, the findings may not be demographically representative of people living elsewhere.
- These findings will significantly help prescribers make informed patient and prescription-related decisions to minimize risk of overdose, help lawmakers pass policies to reduce the incidence of overdose, and help researchers develop pharmacologic and public health related preventative measures.

Summaries and commentaries were given by Yashwitha Reddy Thindi & Christina Wira with support of The Premed Scene Journal Club

SOURCES

- WEINER, SCOTT G. EL IBRAHIMI, SANAE. HENDRICKS, MICHELLE A. ET AL, 01-28-2022, "FACTORS ASSOCIATED WITH OPIOID OVERDOSE AFTER INITIAL OPIOID PRESCRIPTION," JAMA NETWORK, [HTTPS://JAMANETWORK.COM/JOURNALS/JAMANETWORKOPEN/FULLARTICLE/2788462](https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2788462)
- MANINDER SINGH, 3-14-2022, "METHODOLOGY SERIES MODULE I: COHORT STUDIES," PUBMED CENTRAL (PMC), [HTTPS://WWW.NCBI.NLM.NIH.GOV/PMC/ARTICLES/PMC4763690/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4763690/)