

Estimates of the number of adults in the United States who only obtain prescription opioids through diversion

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Researched Abuse, Diversion and Addiction-Related Surveillance (RADARS®) System

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Introduction

- Prescription opioids pose serious risks when used nonmedically
- Risk of overdose or death may be greater to those who obtain these medications outside legal distribution (diversion)
 - Not provided appropriate doses or proper administration
 - May not be provided correct medication/counterfeit version
- More than half of those who reported misused opioids reported obtained the most recent opioid misused through diversion¹
- However, the number of individuals who acquire specific prescription opioid analgesics through diversion in the general population is unclear

The aim of this study is to provide estimates of the number of adults who obtain prescription opioid analgesics only through diversion

¹Lipari, R.N. and Hughes, A. How people obtain the prescription pain relievers they misuse. The CBHSQ Report: January 12, 2017. Center for Behavioral Health Statistics and Quality, Substance Abuse and Mental Health Services Administration, Rockville, MD.

Methods

- RADARS System Survey of Non-Medical Use of Prescription Drugs Program
 - Online panel-based general population survey of adults in the United States
 - Respondents are asked about use and nonmedical use (NMU) of prescription medications, include opioid analgesics
 - Calibration weights are used to create nationally representative estimates
 - Data collected in February and March of 2020
 - Survey methods provide valid estimates of prescription drug NMU²
- Six prescription opioid analgesics (hydrocodone, hydromorphone, morphine, oxycodone, oxymorphone, tramadol)
- Estimates of the number of adults who reported past year:
 - **Use** - Use in any way
 - **NMU** - Use in any way not directed by a healthcare provider
 - **Diversion** - obtaining the medication in any way other than with a prescription from a health care professional or pharmacy

²Black JC, Rockhill K, Forber A, Amioka E, May KP, Haynes CM, Dasgupta N, Dart RC. An Online Survey for Pharmacoepidemiological Investigation (Survey of Non-Medical Use of Prescription Drugs Program): Validation Study. J Med Internet Res. 2019 Oct 25;21(10):e15830. doi: 10.2196/15830. PMID: 31654568; PMCID: PMC6914238.

Results

Prevalence estimates of adults in 1st quarter 2020 who reported use, nonmedical use, and acquisition through diversion for select prescription opioid analgesics

Moiety	N - Used in the past year	N – NMU in past year (% among those who used)	N – Diversion in past year (% among those who used)
Hydrocodone	24,366,723	5,102,160 (20.9%)	2,398,121 (9.8%)
Oxycodone	18,059,531	3,825,995 (21.2%)	1,918,814 (10.6%)
Tramadol	15,311,741	2,763,652 (18.0%)	1,314,464 (8.6%)
Morphine	8,478,078	1,856,778 (21.9%)	955,627 (11.3%)
Hydromorphone	2,669,540	615,924 (23.1%)	326,767 (12.2%)
Oxymorphone	1,893,506	605,118 (32.0%)	329,583 (17.4%)

- Among those who used in the past year, the percentage who used nonmedically ranged from 18.0% (95% CI: 16.3%-19.8%) for tramadol to 32.0% (95% CI: 25.7-38.2%) for oxymorphone
- Among those who used in the past year, the percentage who acquired the drug only through diversion ranged from 8.6% (95% CI: 7.3-9.9%) for tramadol to 17.4% (95% CI: 12.5-22.4%) for oxymorphone

Conclusions

- This study is unique in that it provides national estimates on the extent of prescription opioid diversion for specific active ingredients
- For the most potent opioids (hydromorphone, morphine, oxycodone, oxymorphone)
 - >10% of those who used the medication in the past year *only* acquired the drug through diversion
 - \geq 50% of those who reported NMU in the past year *only* acquired the drug through diversion
- Efforts by healthcare providers to educate patients on the risks of prescription opioid misuse may not reach millions of individuals who NMU prescription opioids
- Research into correlates and risks associated with diversion is needed

Limitations

- Cross-sectional
- Limited to respondents ages 18 and over
- Potential differential misclassification

Strengths

- Nationally representative sample of adults in the United States
- Validated control for sample composition biases

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