Prevalence of Non-Medical Use of Prescription Drugs in the United States in 2016

KP May, CM Haynes, KM Rockhill, ZR Margolin, RC Dart, JL Green

Rocky Mountain Poison & Drug Center, Denver Health and Hospital Authority

Abstract

Prevalence of Non-Medical Use of Prescription Drugs in the United States in 2016

KP May[1], CM Haynes[1], K Rockhill[1], ZR Margolin[1], RC Dart[1], JL Green[1]

Rocky Mountain Poison & Drug Center, Denver Health and Hospital Authority

•**Aim:** The Survey of Non-Medical Use of Prescription Drugs (NMURx) Program was used to describe non-medical use (NMU) of prescription drugs among adults in the US.

•**Methods:** NMURx was administered online in 3Q2016 to adults (18+ years). NMU was defined as medication use without a doctor's prescription or for any reason other than what was recommended by a doctor. We applied post-stratification weights to data to reflect the distribution of adults in the US. Prevalence and 95% confidence intervals (CI) were calculated for demographics; lifetime use, lifetime NMU and past 90 day NMU of opioids, benzodiazepines, stimulant medications, and GABA analogues; and lifetime and past-year use of illicit drugs.

•**Results:** A total of 30,522 adults, representing 247,773,709 US adults, completed NMURx. Prevalence of lifetime use was higher for opioids (62.9%; 95% CI: 62.3, 63.5) than benzodiazepines (22.7; 22.2, 23.2) and stimulants (12.0; 11.6, 12.4). Prevalence of lifetime NMU was higher for opioids (13.1; 12.7, 13.5) than benzodiazepines (3.4; 3.2, 3.6), stimulants (4.3; 4.0, 4.5), and GABA analogues (0.7; 0.6, 0.8). Prevalence of past-90 day NMU was higher for opioids (5.7; 5.4, 6.0) than benzodiazepines (1.0; 0.9, 1.2), stimulants (1.0; 0.9, 1.1), and GABA analogues (0.4; 0.3, 0.4). Among those reporting lifetime NMU of opioids, 66.3% (64.7, 67.9) report lifetime use of illicit drugs.

•**Conclusion:** While NMU of opioids, benzodiazepines, stimulants, and GABA analogues is reported by the general US adult population, NMU is highest for prescription opioids. Almost half of those who reported lifetime NMU of opioids reported NMU in the past 90 days. NMU of prescription opioids is common even among those that do not use illicit drugs.

•**Supported by:** RADARS® System is supported by subscriptions from pharmaceutical manufacturers. It is the property of Denver Health and Hospital Authority, a political subdivision of the State of Colorado, whom retains exclusive ownership of all data. Subscribers do not participate in data collection, analysis, and cannot access data.

Introduction

Aim: The RADARS® System Survey of Non-Medical Use of Prescription Drugs (NMURx) Program was used to describe non-medical use (NMU) of prescription drugs among adults in the US.

Methods

The RADARS® System NMURx program is a large-scale, repeated, cross-sectional online survey of adults (18+) in the US.

- NMURx studies NMU of medications among the general population and characterizes associated behaviors.
- NMU is defined as medication use without a doctor's prescription or for any reason other than what was recommended by a doctor.
- Respondent demographics and characteristics and history of illicit drug use are also collected.
- Post-stratification weights are used to reflect the distribution of adults in the US.

This analysis used data collected in the US in third quarter 2016 to estimate the prevalence of lifetime use, lifetime NMU, and last 90 day NMU of opioids, benzodiazepines, and stimulants, and lifetime and last 90 day NMU of GABA analogues, among adults in the US.

- Respondents could report non-medical use at the drug product level or, in the case that the specific product is unknown, at the drug class level.
- Opioids in this analysis include fentanyl, buprenorphine, morphine, methadone, oxycodone, oxymorphone, tramadol, tapentadol, hydrocodone, hydromorphone, and sufentanil.
- Stimulants in this analysis include amphetamine, dextroamphetamine, and methylphenidate.

Methods, continued

- Benzodiazepines in this analysis include alprazolam, chlordiazepoxide, clobazam, clonazepam, clorazepate, diazepam, estazolam, flurazepam, lorazepam, oxazempam, temazepam, and triazolam.
- GABA analogues in this analysis include pregabalin, gabapentin, and baclofen.
- Data on lifetime use was not available for GABA analogues.

Table 1. NMURx Respondent Demographics

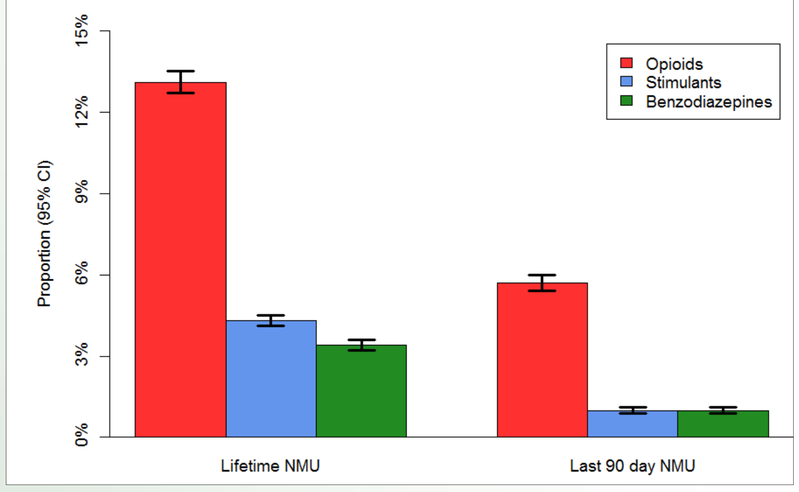
Characteristic	% (95% CI) Weighted N = 247,773,709
Age (years)	
18-25	13.9 (13.4-14.4)
26-34	16.5 (16.1-16.9)
35-49	24.4 (23.9-24.9)
50-64	25.9 (25.4-26.4)
65+	19.3 (18.8-19.7)
Gender	
Male	48.7 (48.1-49.3)
Female	51.3 (50.7-51.9)
Race/Ethnicity	
Hispanic	8.9 (8.5-9.2)
Non-Hispanic White	77.1 (76.6-77.7)
Non-Hispanic Black	7.2 (6.8-7.5)
Non-Hispanic AI/AN	0.6 (0.5-0.7)
Non-Hispanic Native HI/PI	0.2 (0.1-0.2)
Non-Hispanic Asian	3.6 (3.4-3.8)
Other	0.9 (0.8-1.1)
Unknown	1.5 (1.3-1.6)

Abbreviations: AI/AN= American Indian/Alaska Native, HI/PI= Hawaiian/Pacific Islander.

Table 2. Prescription Drug Use and Non-Medical Use

Drug Group	% (95% CI) Weighted N = 247,773,709
Opioids	
Use, lifetime	62.9 (62.3, 63.5)
NMU, lifetime	13.1 (12.7, 13.5)
NMU, last 90 days	5.7 (5.4, 6.0)
Stimulants	
Use, lifetime	12.0 (11.6, 12.4)
NMU, lifetime	4.3 (4.0, 4.5)
NMU, last 90 days	1.0 (0.9, 1.1)
Benzodiazepines	
Use, lifetime	22.7 (22.2, 23.2)
NMU, lifetime	3.4 (3.2, 3.6)
NMU, last 90 days	1.0 (0.9, 1.2)
GABA Analogues	
NMU, lifetime	0.7 (0.6, 0.8)
NMU, last 90 days	0.4 (0.3, 0.4)

Figure 1. Prescription Drug Non-Medical Use



Conclusions

- While NMU of opioids, benzodiazepines, stimulants, and GABA analogues is reported by the general US adult population, NMU is highest for prescription opioids.
- More than a fifth of those who reported lifetime use of opioids (62.9%) reported lifetime NMU of opioids (13.1%).
- Almost half of those who reported lifetime NMU of opioids (13.1% of US adults) reported NMU in the past 90 days (5.7% of US adults).

Discussion

The rate of NMU in the last 90 days for opioids is more than five times higher than that for stimulants, benzodiazepines, and GABA analogues. The high rates of NMU of opioids could perhaps be driven by physician prescribing patterns. The potential for abuse of opioids should urge further study into any potential solutions to reduce the NMU of opioids in the US adult population.

Conflict of Interest

The authors are affiliated with the RADARS® System, an independent nonprofit post-market surveillance system that is supported by subscription fees from pharmaceutical manufacturers. None of the authors have a direct financial, commercial, or other relationship with any of the subscribers

Support

The RADARS® System is supported by subscriptions from pharmaceutical manufacturers for surveillance, research and reporting services. RADARS ® System is the property of Denver Health and Hospital Authority, a political subdivision of the State of Colorado. Denver Health retains exclusive ownership of all data, databases and systems. Subscribers do not participate in data collection or analysis, nor do they have access to the raw data.

Grant Support

None

DENVER HEALTH
Level One Care for ALL

RADARS® SYSTEM

RMPDC
ROCKY MOUNTAIN POISON & DRUG CENTER
Saving Lives with Answers for 50 Years™