



Researched Abuse, Diversion and Addiction-Related Surveillance System

QUARTERLY Technical REPORT

First Quarter, 2017

Tampering with Prescription Opioids Among Individuals Entering Treatment for Substance Use Disorder

Key Findings

1. Among oral solid dosage formulations (tablets or capsules), 62.5% of respondents who endorsed past month abuse of an extended-release (ER) opioid and 66.1% of respondents who endorsed past month abuse of an immediate-release (IR) opioid reported abuse by some form of tampering (use via snorting, chewing, injecting, or smoking).
2. Among IR opioid, ER opioid, and abuse deterrent formulation (ADF) endorsements, snorting was the most frequently selected route of administration (35.2% of IR endorsements; 30.1% of ER endorsements; 28.7% of ADF endorsements) followed by chewing, injecting, and smoking.
3. There were more IR opioid endorsements than ER opioids endorsements for each route of administration asked on the survey (chewing, snorting, injecting, and smoking).
4. More than half of respondents who endorsed an ER opioid (58.9%) also reported abuse of an ADF opioid. However, 48.6% of those who reported injecting an ER opioid also reported injecting an ADF opioid.

Background

Altering oral solid dosage formulations (tablets or capsules) of prescription opioids to administer via snorting, smoking, or injecting is reported among individuals who abuse prescription opioids. This is thought to be particularly prevalent with extended-release (ER) formulations as larger amounts of opioid can be released if the delayed release mechanism is bypassed^{1,2}. The extent to which routes of administration other than swallowing whole are more common with oral solid dosage formulations of ER opioids versus immediate-release (IR) opioids is not well understood. This analysis examines the past month prevalence of chewing, snorting, injecting, and smoking oral solid dosage formulations of schedule II ER and IR opioids among individuals seeking treatment for substance use disorders in the Researched Abuse, Diversion and Addiction-Related Surveillance (RADARS®) System Survey of Key Informants' Patients Program.

Methods

Data Sources

The RADARS System Survey of Key Informants' Patients Program consists of respondents seeking treatment at publicly and privately funded treatment centers across 48 states. Respondents must be 18 years or older and meet DSM-IV criteria for substance abuse with a primary drug that is an opioid (prescription drug or heroin). Respondents complete an anonymous questionnaire asking about prescription and illicit opioids used "to get high" in the past month. In July 2015, the program began asking about past month abuse via four different routes of administration that indicate tampering with an oral solid dosage formulation: chewed, snorted, injected, and smoked. Only respondents who received questionnaires with all four route options are included in this analysis.

Statistical Analysis

Data from July 2015 through December 2016 are used. Schedule II prescription opioids of interest are oxycodone, hydrocodone, morphine, hydromorphone, oxymorphone, and tapentadol. Fentanyl is excluded as most fentanyl prescriptions are not oral solid dosage formulations. Methadone is excluded because the majority of products are intended to treat opioid use disorders.

The drug groups of interest are oral solid dosage formulations of IR and ER opioids. If a respondent endorsed past month abuse of one or more products within the opioids of interest, this respondent is considered an abuse endorsement for that opioid group. If a respondent endorsed use of an opioid via one of the listed routes of administration, then this respondent is considered an abuse endorsement for that route of administration. If a respondent endorsed abuse of an IR and ER opioid, this respondent is considered an endorsement of IR opioid abuse and an endorsement of ER opioid abuse. The same classification method is used for routes of administration. If a respondent endorsed use of an IR opioid via chewing, this respondent is considered an IR opioid abuse endorsement and an endorsement of use via chewing. Respondents could also endorse multiple routes (i.e. a respondent could have endorsements of chewing and of injecting).

We also examined abuse and routes of administration among ER opioids approved, evaluated, and labelled as abuse deterrent by the FDA and that have been dispensed at one or more retail pharmacies during each quarter of the study period. These products include OxyContin®, Hysingla® ER, and EMBEDA®. Confidence intervals are reported using the exact Poisson calculation for counts and the binomial normal approximation method for percentages. Counts and proportions were compared and determined to be statistically significantly different if confidence intervals did not overlap.

Results

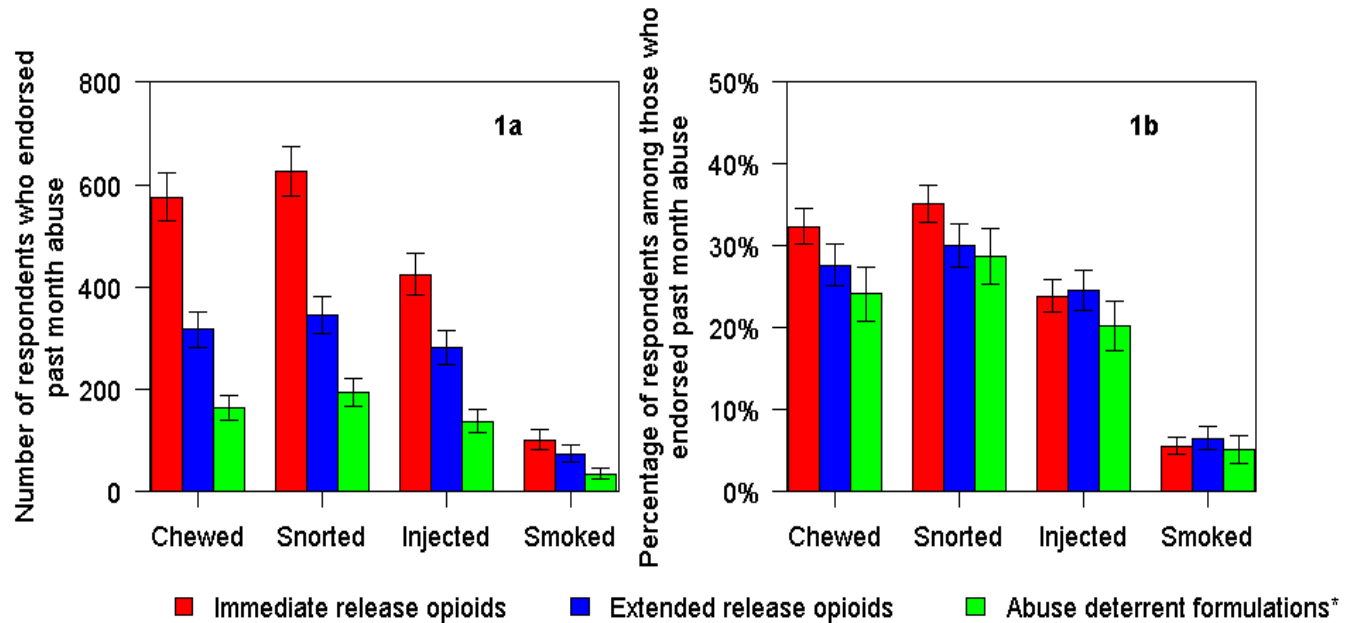
From July 2015 through December 2016, 1,922 respondents endorsed abuse of an IR or an ER opioid oral solid dosage formulation. There were 1,775 respondents who endorsed IR opioid abuse and 1,145 respondents who endorsed ER opioid abuse. Of the 1,145 respondents who endorsed ER opioid abuse, 675 endorsed an ADF opioid. Note that out of the 1,922 respondents, 998 (51.9%) endorsed abuse of both an IR and an ER opioid in the past month.

Of the 1,775 respondents who endorsed past month IR opioid abuse, 1,173 (66.1%) abused via tampering and 414 (23.3%) endorsed more than one route of administration. Of the 1,145 respondents who endorsed past month ER opioid abuse, 716 (62.5%) abused via tampering and 217 (19.0%) endorsed more than one route of administration. Of the 675 respondents who endorsed past month abuse of an ADF opioid, 386 (57.2%) abused via tampering and 103 (15.3%) endorsed more than one route of administration.

For each route of administration, there were more endorsements involving IR opioids than ER opioids (Figure 1a). Though the confidence intervals overlapped, the percentage of IR endorsements where chewing an IR opioid was selected (32.4%, 95% CI: 30.2% to 34.6%) was greater than the percentage of ER endorsements where chewing an ER opioid was selected (27.7%, 95% CI: 25.1% to 30.3%). The percentage of IR endorsements where snorting an IR opioid was selected (35.2%, 95% CI: 33.0% to 37.4%) was greater than the percentage of ER endorsements where snorting an ER opioid was selected (30.1%, 95% CI: 27.4% to 32.8%). The percentage of endorsements where injecting and smoking was selected was similar across the IR and ER formulations (Figure 1b).

Out of the 1,145 respondents who endorsed past month abuse of an ER opioid, 675 (58.9%) reported abusing an ADF opioid. Of the 317 respondents that chewed an ER opioid, 163 (51.4%) chewed an ADF opioid. Of the 345 respondents that snorted an ER opioid, 194 (56.2%) snorted an ADF opioid. Of the 282 respondents that injected an ER opioid, 137 (48.6%) injected an ADF opioid. Of the 75 respondents that smoked an ER opioid, 35 (46.7%) smoked an ADF opioid.

The RADARS System Survey of Key Informants' Patients Program
 Number and Percent of Respondent for Select Routes of Administration
 01 July 2015 through 31 December 2016



*note that "Abuse deterrent formulations" cases are also included in case counts for "Extended release tablets/capsules"

Conclusions

The majority of respondents entering participating treatment programs who reported abuse of an oral solid dosage formulation of a Schedule II prescription opioid in the past month reported use via tampering. Chewing and snorting were the most common routes endorsed for IR and ER groups. A greater number of respondents reported tampering with IR opioids than ER opioids. The majority of individuals who abused an ER opioid abused an ADF opioid (58.6%), but the proportion of respondents who reported abuse via tampering was slightly lower for ADF opioids than ER opioids as a whole. Among individuals entering treatment, abuse of prescription opioids by chewing, snorting, or injecting is prevalent with oral solid dosage formulations of both IR and ER opioids. Further research is needed to determine ways to deter abuse of both IR and ER opioids.

Suggested Citation

Severtson SG, Olsen HA, Ellis MS, Cicero TJ, Green JL, Dart RC. (2017). Prevalence of chewing, snorting, injecting, and smoking prescription opioid tablets/capsules among individuals entering treatment for an opioid use disorder. RADARS® System Technical Report, 2017-Q1.

References

1. Katz N, Dart RC, Bailey E, Trudeau J, Osgood E, Paillard F. Tampering with prescription opioids: nature and extent of the problem, health consequences, and solutions. *The American Journal of Drug and Alcohol Abuse*. 2011;37:205-217.
2. Kirsh K, Peppin J, Coleman J. Characterization of prescription opioid abuse in the United States: focus on route of administration. *Journal of Pain and Palliative Care Pharmacotherapy*. 2012;26 (4):348-61.