

**Abstract**

Psychiatric readmissions contribute to a significant cost and healthcare burden to physicians, hospitals, and the healthcare system as an entity. Furthermore, as part of the Affordable Care Act, the Centers for Medicare and Medicaid Services (CMS) began to reduce financial coverage to hospitals with overwhelming rehospitalization rates. The purpose of this study was to do a systematic analysis on inpatient psychiatric readmission data and identify co-morbidities and risk factors that lead to high readmission rates. The data collection includes 163 patients with a total of 348 readmissions over the span of 90 days at one inner-city hospital in the Chicagoland area. Study findings suggest that higher rates of readmission are linked to cocaine abuse in both male and female populations. Diagnosis of bipolar in females and schizoaffective disorder in male populations were the among the highest for readmission. Key social factors such as homelessness and low socioeconomic status were identified to contribute to a large proportion of psychiatric readmission burden. However, an overwhelming amount of information was missing due to unobtained labs and lack of current patient social history. By using this data as well as data from electronic medical records (EMRs) to further investigate and identify other features of at-risk patients, hospitals can potentially address these markers to lower readmission rates. Ultimately, a higher understanding of the patients' needs can be understood and can help develop standardized plans of care for prevalent psychiatric illnesses in these populations.

## Prescription Stimulant Misuse and Abuse: Characterization of Exposures Managed by United States (US) Poison Centers

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**Abstract**

The National Poison Data System (NPDS), is the data warehouse for the 55 US regional poison centers. While the primary role of a poison center is to provide medical management to the public and healthcare providers, a standardized database is used to collect case data. These data are routinely used to evaluate drug safety, including characterization of prescription medication misuse and abuse. While an effective therapy for attention deficit/hyperactivity disorder (ADHD), prescription stimulant medications (RxStim) may be misused and abused, a behavior that has been noted as an emerging public health concern particularly in relation to polysubstance abuse. The objective of this study was to characterize

intentional exposures to RxStim in patients age >12 y of age as managed by US poison centers from Jan 2015- 31 Dec 2019.

NPDS cases of intentional exposure to a RxStim in a patient >12 y managed from Jan 2015-Dec 2019 were included for analysis. Intentional exposures are defined in the NPDS manual as exposures that involve a purposeful action. These include intentional misuse, intentional abuse and intentional unknown cases. Intentional suspected suicide cases were excluded.

A total of 12,972 cases met inclusion criteria, of which 62.5% involved a male patient. Most patients were aged 13–19 y (34.7%) or 20–39 y (50.5%). Over one-half (53.3%) of cases were intentional abuse, 29.1% intentional misuse, and 17.6% intentional unknown. While most exposures were via oral route of administration (90.7%), 9.5% were via inhalation/intranasal and 2.4% via injection (multiple routes may be reported). Other substances in addition to a RxStim were involved in 48.2% of cases, including benzodiazepines (11.2%), alcohol (8.8%), marijuana (5.1%), cocaine (3.7%), methamphetamine (3.0%) and atypical antipsychotics (2.5%). The majority of cases resulted in significant medical outcome (60.3%). This included 39.3% with a moderate effect (medical attention indicated, not life-threatening), 6.1% major effect (life-threatening), 1.0% death and 14.0% lost to follow-up but judged as a potentially toxic exposure. Another 22.4% reported minimally bothersome effects. Admission to a healthcare facility was reported for 1 out of 3 cases and another 36.3% were treated/evaluated/released from a healthcare service. An average of 2.3 clinical effects were reported per exposure, the most common being neurological effects (53.2%; examples include agitation, drowsiness/lethargy, confusion, hallucinations/delusions, tremor), cardiovascular effects (50.8%; examples include tachycardia, hypertension), and gastrointestinal effects (9.4%; examples include vomiting, nausea).

RxStim misuse and abuse cases managed by US poison centers most often leads to significant medical outcomes which require medical attention. The role of these medications in polysubstance abuse is concerning and suggestive of needed strategies to address this increasingly important public health concern.

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## Substance Use Trajectories: Nonmedical Use (NMU) of Prescription Stimulants via Non-Oral Routes of Administration Among Adults Recruited from Reddit

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**Abstract**

NMU of prescription stimulant medications (RxStim) intended for treatment of attention deficit/hyperactivity disorder (ADHD) is a growing public health concern, particularly when used via non-oral routes of administration. However, the role of non-oral routes of administration for RxStim NMU in the larger substance abuse pathway is less well studied. The purpose of this study was to characterize RxStim NMU and investigate substance use trajectories among adults who reported non-oral RxStim NMU recruited from Reddit.

Eligible participants must have been located in the US, English speaking, age 18 y, and have reported RxStim NMU via a non-oral route (any route other than ingestion) within the past 5 y. Participants were recruited from Feb-Sep 2019 using banner ads on Reddit, the 5<sup>th</sup> most visited website in the US. Participants completed an online survey which captured demographics, lifetime RxStim NMU and illicit substance use; they were compensated for their time. For purposes of this study, NMU included ANY of the following: (1) use for any reason, even once, without their own prescription, (2) use in ways other than prescribed, and (3) use for the feeling or experience the medication caused.

Respondents (n=225) were primarily male (86.2%), 18–24 (48.0%) or 25–34 (43.1%) years of age, and Caucasian (78.2%), Black (7.1%) or Hispanic (5.3%). Lifetime diagnosis of ADHD was reported by 27.6%, with 53.2% diagnosed at age 11–19 and 35.5% at age 20+ years. RxStim NMU via snorting was reported by 99.1%, smoking 3.6% and injecting 6.2% (multiple routes could be reported). Almost all (n=222; 98.7%) also reported lifetime illicit drug use, among whom 182 (82.0%) initiated substance use by using an illicit drug (77.9% marijuana, 1.8% cocaine/crack, 0.9% inhalants, 0.9% hallucinogens, 0.5% methamphetamine/amphetamines) prior to RxStim NMU. Forty (18.0%) respondents initiated with RxStim NMU; 14.4% then initiated marijuana use, 0.9% initiated cocaine/crack use, 0.9% initiated barbiturate use, and 0.5% initiated heroin, inhalant, methamphetamine/amphetamine, and hallucinogen use. Average age of initial RxStim NMU was 18.7 (SD 3.7) years and most often was via swallowing (89.1%) followed by snorting (10.9%). Respondents began using marijuana at age 15.9 (SD 2.5), cocaine or crack at 19.7 (SD 3.3), and heroin at 20.9 (SD 5.5).

Engagement in RxStim NMU via a non-oral route of administration is most often preceded by marijuana use. Among this Reddit-recruited population of non-oral RxStim nonmedical users, only 1 in 4 reported an ADHD diagnosis and <1 in 5 reported RxStim NMU as their first substance use experience; most of these then added marijuana and few moved toward cocaine/crack or methamphetamine. RxStim NMU via non-oral routes is associated with a larger pattern of risky substance use behaviors. Nearly all non-oral RxStim NMU is associated with concomitant drug use, especially marijuana.

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## The Rapid Mood Screener: A Novel and Pragmatic Screener Tool for Bipolar I Disorder

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**Abstract**

**Introduction.** Approximately 70% of patients with bipolar disorder (BPD) are initially misdiagnosed, resulting in significantly delayed diagnosis of 7–10 years on average. Misdiagnosis and diagnostic delay adversely affect health outcomes and lead to the use of inappropriate treatments. As depressive episodes and symptoms are the predominant symptom presentation in BPD, misdiagnosis as major depressive disorder (MDD) is common. Self-rated screening instruments for BPD exist but their length and reliance on past manic symptoms are barriers to implementation, especially in primary care settings where many of these patients initially present. We developed a brief, pragmatic bipolar I disorder (BPD-I) screening tool that not only screens for manic symptoms but also includes risk factors for BPD-I (eg, age of depression onset) to help clinicians reduce the misdiagnosis of BPD-I as MDD.

**Methods.** Existing questionnaires and risk factors were identified through a targeted literature search; a multidisciplinary panel of experts participated in 2 modified Delphi panels to select concepts thought to differentiate BPD-I from MDD. Individuals with self-reported BPD-I or MDD participated in cognitive debriefing interviews (N=12) to test and refine item wording. A multisite, cross-sectional, observational study was conducted to evaluate the screening tool's predictive validity. Participants with clinical interview-confirmed diagnoses of BPD-I or MDD completed a draft 10-item screening tool and additional questionnaires/questions. Different combinations of item sets with various item permutations (eg, number of depressive episodes, age of onset) were simultaneously tested. The final combination of items and