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Treatment utilization among persons with opioid use disorder in the United States

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ABSTRACT

Background: The United States is experiencing an opioid overdose epidemic. Treatment use data from diverse racial/ethnic groups with opioid use disorder (OUD) are needed to inform treatment expansion efforts.

Methods: We examined demographic characteristics and behavioral health of persons aged ≥12 years that met criteria for past-year OUD (n = 6,125) in the 2005–2013 National Surveys on Drug Use and Health (N = 503,101). We determined the prevalence and correlates of past-year use of alcohol/drug use treatment and opioid-specific treatment to inform efforts for improving OUD treatment.

Results: Among persons with OUD, 81.93% had prescription (Rx) OUD only, 9.75% had heroin use disorder (HUD) only, and 8.32% had Rx OUD + HUD. Persons with Rx OUD + HUD tended to be white, adults aged 18–49, males, or uninsured. The majority (80.09%) of persons with OUD had another substance use disorder (SUD), and major depressive episode (MDE) was common (28.74%). Of persons with OUD, 26.19% used any alcohol or drug use treatment, and 19.44% used opioid-specific treatment. Adolescents, the uninsured, blacks, native-Hawaiians/Pacific-Islanders/Asian-Americans, persons with Rx OUD only, and persons without MDE or SUD particularly underutilized opioid-specific treatment. Among alcohol/drug use treatment users, self-help group and outpatient rehabilitation treatment were commonly used services.

Conclusions: Most people with OUD report no use of OUD treatment. Multifaceted interventions, including efforts to access insurance coverage, are required to change attitudes and knowledge towards addiction treatment in order to develop a supportive culture and infrastructure to enable treatment-seeking. Outreach efforts could target adolescents, minority groups, and the uninsured to improve access to treatment.

1. Introduction

The opioid (opioid analgesics/heroin) overdose epidemic is among the most pressing public health issues in the United States (Volkow et al., 2014). However, substantial barriers exist for persons seeking medication-assisted treatment (MAT), including a limited number of MAT providers that treat opioid use disorder (OUD; Jones et al., 2015a,b). To combat this opioid epidemic, the U.S. Department of Health and Human Services (USDHHS) has launched an opioid initiative to supporting efforts aimed at improving opioid prescribing practices, expanding use of naloxone to prevent overdoses, and extending use of MAT to treat OUD (Macrae et al., 2015). The USDHHS also released a new rule to allow qualified physicians to increase the number of patients with OUD they can treat with buprenorphine from 100 to 275 (Federal Register, 2016). Timely population-based data about persons with prescription (Rx) OUD or heroin use disorder (HUD) are needed to inform federal initiatives for improving access to MAT for population subgroups, including underserved racial/ethnic groups, to reduce opioid addiction. This paper considers both Rx OUD and HUD and focuses on unique aspects of opioid-specific treatment use among racial/ethnic groups.

In the United States, an estimated 12.5 million people were past-year nonmedical Rx opioid users, and an estimated 0.8 million

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people were past-year heroin users in 2015 (Center for Behavioral Health Statistics and Quality [CBHSQ], 2016). Past-year Rx OUD is the second most prevalent illicit or nonmedical drug use disorder (DUD), affecting 2.0 million people aged ≥12 years; and 0.6 million persons aged ≥12 years had past-year HUD in 2015 (CBHSQ, 2016). The National Epidemiologic Survey on Alcohol and Related Conditions–III (NESARC-III) indicated that lifetime prevalence of DSM-IV Rx OUD among adults aged ≥18 rose from 1.4% in 2001–2002 to 2.9% in 2012–2013 (Saha et al., 2016). Whites and low-income adults had elevated odds of lifetime Rx OUD (Saha et al., 2016). Approximately 1% of the US adolescents aged 12–17, or 16% of adolescents that used Rx opioids nonmedically in the past year, had Rx OUD (Wu et al., 2008). In both adolescents and adults, having major depression was positively associated with the severity of Rx OUD (Wu et al., 2008, 2011a). Findings from the Treatment Episode Data Set (TEDS) indicated that the treatment admission rate for opioid use other than heroin was 167% higher in 2013 (57/per 100,000 population aged ≥12 years) than the rate in 2003 (21/per 100,000) (SAMHSA, 2015). The treatment admission rate for primary heroin use was 5% higher in 2013 (118/per 100,000 population aged ≥12 years) than the rates in 2003 (112/per 100,000) with a major increase among whites (SAMHSA, 2015). Overall, while prevalence of HUD is lower than Rx OUD nationally (CBHSQ, 2016), heroin use represented the majority (63%) of all opioid treatment admissions in TEDS (SAMHSA, 2015). The data reveal the importance of characterizing Rx OUD and HUD in treatment use research.

Of note, Rx opioid overdose death rates have increased progressively since around 1999 (Paulozzi, 2012). By around 2009, drug-involved overdose death rates (mainly Rx opioids) have passed motor vehicle traffic crash mortality rates (Paulozzi, 2012). Nearly half a million Americans died from drug overdoses during 2000–2014, and opioids/heroin were involved in 61% (28,647 deaths) of all drug overdose deaths in 2014 (Rudd et al., 2016). Between 2013 and 2014, significant increases in drug overdoses were found among both sexes, whites, and blacks. Heroin use also accounted for recent major increases in opioid overdose deaths (Rudd et al., 2016). Specifically, due to pharmacological similarities, availability, or high purity of heroin, Rx opioid overdoses are linked with a surge in heroin overdoses (Compton et al., 2016). Rx opioid misuse/OUD was positively associated with heroin use/HUD (Jones et al., 2015a,b; Jones, 2016; Pollini et al., 2011). The odds of problematic heroin use indicators tended to be positively associated with frequent nonmedical opioid use across racial/ethnic groups, suggesting that all racial/ethnic groups should be a focus of intervention efforts to reduce opioid addiction (Martins et al., 2015).

Multiple factors have contributed to this opioid overdose epidemic, including availability of prescription and illicit opioids, unsafe prescribing of opioids, doctor shopping for opioids, and opiate diversion (Lev et al., 2016; Paulozzi, 2012). Opioid addiction is a chronic disease that often requires MAT for an adequate duration to facilitate recovery (Kampman and Jarvis, 2015; Volkow and McLellan, 2016). Expanding access to MAT and addiction services to reduce opioid overdoses and enhance recovery is a key emphasis in the federal initiatives (Macrae et al., 2015). Nonwhite racial/ethnic groups, which generally have lower income than whites and experience greater disparities in healthcare, are the fastest growing population in the United States (Colby and Ortman, 2015). To effectively combat the opioid epidemic, federal initiatives to expand access to OUD treatment should reach racial/ethnic and underserved groups. For example, low-income or lack of insurance was positively associated with having Rx OUD, and Rx OUD prevalence had increased among low-income or uninsured people as well as residents of large metropolitan areas (Jones, 2016). Among nonmedical Rx opioid users, the prevalence of heroin use had increased among whites and Hispanics (Martins et al., 2015).

To inform interventions aimed at improving access to Rx OUD and HUD treatment use, we utilize the national sample from the 2005–2013 National Surveys on Drug Use and Health (NSDUH) to examine the prevalence and correlates of treatment use. We include both Rx OUD and HUD to provide fuller information about treatment needs for OUD. This analysis is among the first efforts to leverage national datasets and include both Rx OUD and HUD in an effort to produce newer estimates for opioid-specific treatment use by race/ethnicity. Among persons aged ≥12 years with past-year OUD, we determine their sociodemographic characteristics; calculate prevalence of behavioral health indicators; examine prevalence and correlates of past-year use of treatment for alcohol/drug use, drug use treatment, and opioid-specific treatment, respectively; and explore the location of treatment received among those accessing treatment in the past year. Given that male sex, middle age, white race, low income, non-metropolitan residence, other substance use disorder (SUD), and mental health problems are all positively associate with opioid overdose deaths (Paulozzi, 2012; Rudd et al., 2016), we examine the extent to which demographics, socioeconomic factors, and behavioral health status are associated with receipt of treatment.

2. Methods

2.1. Data source

The NSDUH provides the primary source of national estimates of past-year OUD among civilian, noninstitutionalized persons aged ≥12 years (SAMHSA, 2006, 2014). Its target population included residents of households and persons in non-institutional group quarters (shelters, boarding houses, college dormitories, migratory workers' camps, halfway houses) from 50 states and District of Columbia. NSDUH used stratified, multistage area probability sampling methods to select a representative sample of the U.S. population aged ≥12 years.

NSDUH data collection included screening of the eligible households for eligible participants and the conduct of the face-to-face household interview at the participant's home. Computer-assisted personal interviewing, in which interviewers read less-sensitive questions to respondents and entered the respondents' answers on the laptop, was employed to collect demographic information. Audio Computer-Assisted Self-Interviewing (ACASI), in which respondents read or listened to the questions on headphones and then entered their answers directly on the NSDUH laptop computer, was employed to provide respondents with a private mode for responding to questions about illicit drug use, mental health, and other sensitive behaviors (Turner et al., 1998).

A total of 503,101 persons aged ≥12 years were included in the public-use datasets from the 2005–2013 NSDUH (n = 55,110–58,397/year). These surveys used similar designs to allow analysis of the pooled sample. Weighted response rates of household screening and interviewing for these years were 84–91% and 72–76%, respectively (SAMHSA, 2006, 2014). In the total sample, 0.79% (unweighted n = 6,125) met criteria for past-year OUD (range: 0.69–0.89% in 2005–2013) that formed the analysis sample.

2.2. Study variables

We used Andersen's healthcare utilization model to organize correlates of receipt of treatment (Andersen, 1995), which suggested that receipt of substance use treatment was influenced by persons' predisposing or demographic (age, sex, race/ethnicity),