



Published in final edited form as:

J Subst Abuse Treat. 2011 April ; 40(3): 224–229. doi:10.1016/j.jsat.2010.11.003.

Prescription and over-the-counter drug treatment admissions to the California public treatment system

Rachel Gonzales, Ph.D., M.P.H.^{*}, Mary-Lynn Brecht, Ph.D., Larissa Mooney, M.D., and Richard A. Rawson, Ph.D.

University of California Los Angeles, Integrated Substance Abuse Programs

Abstract

Prescription and over-the-counter (OTC) drug abuse has become a focal point of public health policy, prevention, and control efforts. Adolescents represent one of the fastest growing segments of the general population abusing prescription and OTC drugs as represented by national surveys. This article reports on treatment admission data to the California addiction public system for prescription and OTC drugs among two age subgroups: adolescents 12–17 years and adults 18 years and older. Of the 6,841 admissions for primary abuse of prescription and OTC drugs in California (during 2006–2007), most adolescent admissions (12–17) were for stimulant prescription and OTC drugs (45.3% and 32.1%, respectively), whereas opioid prescription drugs (88.9%) were most common for adults 18 years and older. Differences in psychosocial, treatment, and substance use characteristics between these two age subgroups are described. Results from this study offer useful treatment admission information about prescription and OTC drug abuse within the California public addiction treatment system.

Keywords

Prescription and over-the-counter drugs; Treatment admissions; California

1. Introduction

Today, there are more than 23 million Americans who meet the medical definition of abuse or addiction to drugs and alcohol (Substance Abuse and Mental Health Services Administration [SAMHSA], 2007). Increasingly, prescription drugs, especially opioids prescribed to treat pain (e.g., Vicodin and Oxycontin), stimulants prescribed to treat narcolepsy, attention-deficit/hyperactivity disorder (ADHD), and obesity (e.g., dexedrine, Ritalin, Adderall, and Concerta), and sedative–tranquilizer drugs prescribed to treat anxiety and sleep disturbances (e.g., Ativan, Valium, and Xanax), have been a focal point of public health policy, prevention, and control efforts (National Institute on Drug Abuse [NIDA], 2008, August 2008). National data indicate that prescription drugs account for the second most commonly abused category of drugs, behind marijuana and ahead of cocaine, heroin, and methamphetamine (Office of National Drug Control Policy [ONDCP], 2007). Specifically, 52 million American respondents to the 2009 National Survey on Drug Use

^{*}Corresponding author. rachelmg@ucla.edu (R. Gonzales).

and Health (NSDUH; 20.6% of the U.S. population 12 years or older) reported the misuse of any psychotherapeutic drug (i.e., any prescription-type opiate pain reliever, stimulant, sedative, or tranquilizer) in their lifetime, with approximately 7.0 million (2.8% of the population) reporting current (past month) use (SAMHSA, 2010). Consequences of prescription-type substance abuse have also increased; for example, emergency department visits involving nonmedical use of opioid analgesics more than doubled from 2004 to 2008 (Centers for Disease Control and Prevention, 2010). In addition, several (79%) state and law enforcement agencies report a moderate to high availability of illegally diverted pharmaceuticals—an important proxy measure of drug availability (National Drug Intelligence Center, 2006).

Adolescents younger than 18 years represent one of the fastest growing segments of the general population misusing prescription and over-the-counter (OTC) drugs. National estimates indicate that a growing number of high-school-aged adolescents report the nonmedical use (or misuse) of prescription drugs (Johnston, O'Malley, Bachman, & Schulenberg, 2010). Specifically, approximately 9.7% of 12th graders reported past-year misuse of the opiate Vicodin, 6.6% reported amphetamine misuse, 5.2% reported sedative misuse, and 6.3% reported nonmedical use of tranquilizers (Johnston et al., 2010). The misuse of OTC drugs has also recently caused much alarm. Dextromethorphan (DXM), an ingredient found in more than 140 OTC cough and cold medicines, is generally safe when taken at the recommended doses; however, it may be lethal when consumed in large amounts. Like prescription drugs, abuse of DXM-containing OTC products among adolescents has also become a matter of concern (Bryner et al., 2006). National survey data indicate that about 3.1 million persons 12 years and older have misused OTC medications at least once in their lifetime, with 3.7% misuse among adolescents younger than 18 years (SAMHSA, 2009a).

California-specific data over the past decade also show prescription and OTC drug misuse among adolescents. According to the Biennial California Student Survey (2007–2008), 18% of 11th graders had used opiate painkillers without a prescription, with 8% reporting the misuse of stimulants and 6% the use of sedatives illegally during the past year (Austin & Skager, 2008). Strikingly, and for the first time, 26% of 9th graders reported the misuse of OTC cough medicines to get high, which exceeded levels of marijuana use (25%) for the same reporting period. These trends are concerning, given the greater risk of dependence later in life (Anthony, Warner, & Kessler, 1994).

Access and availability of prescription and OTC drugs are major risk factors for abuse among adolescents (SAMHSA, 2007), as adolescents are most likely to obtain such drugs from the medicine cabinets of their families or friends, a physician, or other social sources (Arria, Caldeira, Vincent, O'Grady, & Wish, 2008). Not only is there access and availability, but the aggressive marketing of pharmaceuticals to health professionals and the direct advertising to consumers are also concerns in terms of contributing to the development of medicine abuse in the adolescent subculture. From 1960 to 2004, the amount spent on prescription drugs has risen from approximately \$2.7 billion to more than \$200 billion (Food and Drug Administration, 2005; National Center on Addiction and Substance Abuse, 2007).

Information about treatment admissions for prescription and OTC drug abuse from publicly funded treatment programs is limited. Based on data from the U.S. Treatment Episode Data Set, opioid-related primary admissions (populations 12 years and older) ranged from 1% in 1997 to 5% in 2007 (SAMHSA, 2008). The primary goal of this article is to examine treatment admission patterns to California's publicly funded addiction system for primary abuse of prescription and OTC drugs, differentiating between (a) adolescents (12–17 years old) and (b) adults (18 years and older). Analyses describe the distribution of these admissions by the following prescription drug categories: opioids, stimulants, sedatives/tranquilizers, as well as an OTC drug classification. Differences in individual (gender, age, race/ethnicity), treatment (type of admission, previous alcohol or drug [AOD] treatment, and treatment referral), and behavioral (lifetime mental health status) factors are also examined among the two age subgroups.

2. Methods

This article reports on data analyzed from the first evaluation of the new California Outcomes Measurement System (CalOMS-Tx), conducted by the University of California, Los Angeles, under contract with the State Department of Alcohol and Drug Programs (ADP). Analyses focus on treatment admissions for individuals 12 years or older ($n = 216,716$) from fiscal year July 2006 through June 2007 and do not reflect unique clients. CalOMS-Tx data consist of a set of questions asked of all clients at admission to and discharge from California public addiction treatment programs around the following data elements: client characteristics, drug/alcohol use, employment/education, mental and medical health, criminal status, and family/social support.

CalOMS-Tx data collection and reporting are required among all 58 California Counties by the State ADP to meet the federal block grant funding mandate of the National Outcomes Measurement System (CalOMS Tx Data Collection Guide, 2009). For purposes of analyses, focus is on examining treatment admissions for primary abuse of prescription drugs classified into three major categories: opiates (e.g., hydrocodone, oxycodone), sedatives and tranquilizers (e.g., sleeping pills, barbiturates, benzodiazepines), and stimulants (e.g., other amphetamines, other stimulants, not including methamphetamine), as well as another category for primary abuse of OTC drugs. Because of the current concern particularly for use of these drugs by adolescents and because users of specific drugs may differ by age, we compared characteristics of treatment admissions for adolescents 12–17 with those for adults 18 years and older. Analyses were conducted under the review and approval of the institutional review boards of the University of California, Los Angeles, and the State of California ADP.

2.1. Data analysis

Descriptive statistics were used to develop a profile of the sample by age subgroup (adolescents 12–17 and adults 18 years and older). In addition, chi-square tests were conducted to examine differences between age groups on their reported prescription and OTC drug classes and on selected factors, including sociodemographics (age, ethnicity/race, gender), behavior (criminal justice involvement and lifetime mental illness) and treatment

characteristics. All analyses were performed using SAS, version 15.0 software. An alpha level of .001 was used for all statistical tests presented in this article.

3. Results

The total number of admissions to the California addiction treatment system as documented by CalOMS for fiscal year 2006–2007 was 216,716 for individuals 12 years and older. Prescription and OTC drugs were reported as primary drugs of abuse for 6,841 of these treatment admissions, comprising 3.2% of the total admissions. The adolescent subgroup accounted for 287 of these primary prescription/OTC drug admissions (1.5% of total admissions), and the adult age group accounted for 6,554 (3.3% of total admissions).

3.1. Type of drug for primary prescription and OTC treatment admissions by age subgroup

Admissions for prescription and OTC drugs differed by type of drug between the two age subgroups (see Table 1). Results show that adolescents (aged 12–17) were more likely to report stimulant prescription drugs and OTC medicines (45.3% and 32.1%, respectively) than the other prescription drug types, whereas adults 18 years and older were more likely to report opioids (88.9%) as their primary drug of abuse (this compares to only 15.0% of adolescents reporting primary opioid prescription use).

3.2. Psychosocial, other substance use, and treatment characteristics by age subgroup

Table 2 displays psychosocial, other substance use, and treatment characteristics by age subgroups. Although gender distributions did not differ significantly between the two subgroups (adolescents 12–17 years old [female = 49.3%] vs. adults 18 years and older [female = 46.9%]), the subgroups differed by race/ethnicity. There was considerably more diversity in the adolescent subgroup (predominately Hispanic at 34.5% and Black at 30.7%) compared to the subgroup of adults 18 years and older (predominately non-Hispanic White at 71.4%). In addition, the subgroup of adolescents 12–17 years old was less likely to report lifetime mental illness (7.4%) compared to the subgroup of adults 18 years and older (30.1%).

Treatment characteristics also differed between the age subgroups. Adolescents 12–17 years old were more likely to be admitted to outpatient treatment programs (91.6%) as compared to adults 18 years and older, who had more admissions to maintenance (24.6%) and detoxification (23.0%) Narcotic Treatment Programs (NTPs). In addition, the adolescent subgroup reported significantly less previous treatment participation for alcohol and drugs (7.7%) as compared to the adult subgroup (55.5%). Source of treatment referral also significantly differed between the age subgroups: “self” was the most dominant referral source for adults 18 years and older (70.7%), whereas “other” was the predominant referral source for the adolescents 12–17 years old (75.6%).

Differences in secondary substance abuse patterns were also explored between the age subgroups. Compared to the adult subgroup, the adolescent subgroup were less likely to report secondary substance abuse problems (none = 73.2% for adolescents vs. 48.4% for adults). For adolescents, marijuana (reported as secondary drug for 11.9%) and alcohol (8.4%) were the most frequently reported secondary drugs, with few reporting any other

substances. For adults 18 years and older, there was more diversity in type of secondary drugs reported, at 5.5%–9.6% for each of the five major substances (see Table 2 for details).

3.3. Admissions for primary or secondary use of prescription or OTC drugs by age subgroup

The preceding focus on “primary” substance abuse admissions follows typical national and state reporting for publicly funded treatment programs (e.g., SAMHSA, 2009b). But for a more comprehensive perspective of prescription and OTC problems presenting to substance abuse treatment, sensitivity analyses included prescription and OTC drugs presented as “secondary” problems and the degree to which age group differences reported in Tables 1 and 2 changed when both primary and secondary prescription/OTC treatment admissions were examined. The combined sample of primary and secondary prescription and OTC drug treatment admissions totaled 10,425 (410 admissions for the adolescent subgroup and 10,015 for the adult subgroup). Sensitivity analyses found that significant age group differences in user characteristics presented in Tables 1 and 2 were also found for this primary/secondary sample. Distributions within characteristics remained consistent with the primary-only sample for most variables. For adults 18 years and older, the type of drug remained predominantly opioids (82.2%); for adolescents younger than 18 years, notwithstanding slight changes in percentages within the age group, stimulants (34.2%), OTC (27.3%), and opioids (23.9%) still remained more prevalent than anti-depressants and sedatives/tranquilizers. Distributions for mental illness, type of treatment, and prior treatment remained consistent with the primary-only results for each age group; the adult ethnicity and referral source distributions also remained consistent. Slight shifts in patterns for adolescents were seen with ethnicity in the primary/secondary sample with a higher percentage of Whites (30.7%) and lower percentage of Blacks (22.4%) than when looking at the primary-only sample, and a decrease in referrals from “other” sources (64.6%) was seen. Females became a slight majority in the primary/secondary sample for both age groups (55.7% of adolescents and 52.8% of adults).

It is also interesting to note that age group differences also existed in the pattern of primary drug reported by the subsample of those presenting with secondary prescription and OTC problems at admission. Specifically, the adolescent subgroup were most likely to report marijuana or methamphetamine as primary drugs of abuse (58.2% and 15.6%, respectively), compared to the adults 18 years and older, who were most likely to report heroin or alcohol as primary drug problems (39.4% and 24.8%, respectively).

4. Discussion

There has been much attention toward understanding the scope of prescription and OTC drug misuse and abuse among the “general” U.S. population 12 years and older, based mostly on data from national and school-based surveys (e.g., Arria et al., 2008; Johnston et al., 2010; White, Becker-Blease, & Grace-Bishop, 2006). We have learned from large national survey studies that the incidence and prevalence of the nonmedical use of prescription and OTC drugs “to get high” have increased over the past decade, particularly among young populations (ONDCP, 2007). But there is less information on this topic for the clinical population within substance abuse treatment settings; hence, questions remain about

who ends up in treatment presenting with primary prescription and OTC drug problems. Information about the population accessing treatment is critical to the development of treatment programs appropriate to these specific populations. There is a need to identify and understand client characteristics and risk factors associated with prescription and OTC drug abuse/dependence, which can help in understanding the potential treatment and recovery challenges inherent among this group.

This study examines treatment admissions for primary prescription and OTC drugs among two age subgroups, adolescents 12 to 17 years old and adults 18 years and older, using data collected from the public addiction treatment system in California. Results can inform clinical practitioners specifically about those who enter treatment for prescription/OTC drug problems, as well as their differences from the general population of prescription drug misusers, most of whom will not necessarily access treatment (from data from national surveys).

Clinicians are typically oriented toward using the more readily available national drug prevalence figures to provide some estimate of what they should expect in treatment, but our results illustrate that national prevalence data may not always parallel what is seen in treatment. For example, findings from our study are generally consistent with national prevalence estimates showing higher rates of opiate pain reliever misuse among individuals 18 years and older, in that adults (18 years and older) were more likely to present for treatment with opiate-related prescription primary drug problems than were adolescents. However, 2007 national prevalence data from the Monitoring the Future (MTF) study for adolescents suggest a different pattern across prescription/OTC drug classes than do our treatment data for a similar period. MTF found overall higher rates of annual prescription/OTC drug use for the opioid category (e.g., for Vicodin 2.7%, 7.2%, and 9.6% for 8th, 10th, and 12th graders, respectively) and for amphetamines (4.2%, 8.0%, and 7.5% for the three grade levels), and lower rates for OTC medications (4.0%, 5.4%, 5.8%; Johnston, O'Malley, Bachman, & Schulenberg, 2008). On the other hand, our adolescent treatment sample showed a strong predominance of stimulants (45.3%) and OTC medications (32.1%) as primary substances. These treatment admission patterns are important for clinicians to consider in that they may reflect the abuse/dependence liability of prescription stimulants and OTC medications within younger populations. A better understanding of why these drugs, compared to other prescription drugs, put adolescents at greater risk for entering treatment may facilitate the development of prevention and early intervention programs.

Although adolescents and adults (18 years and older) may differ substantially in treatment needs based primarily on their age, it is also important to identify additional factors that may distinguish these age groups presenting for treatment of prescription/OTC drug problems. Our study found ethnic/racial differences between the two age groups: the adolescents younger than 18 years tended to be from Latino and African American groups, whereas the adults 18 years and older were mainly Caucasian. These results are useful from a clinical perspective because they can guide providers toward considering potential cultural differences in use patterns (including reasons for use and continued use) as well as culturally appropriate strategies for treatment engagement and retention. Types of prescription/OTC

drugs used by the two age groups differed (as discussed above), suggesting that different prevention messages and treatment strategies may be required for the two age groups. For example, for adolescents, the high rates of stimulant use suggest a need for treatment providers to explore the prevalence of attention deficit disorder/ADHD among this group (Rabiner et al., 2008), and the high rates of use of OTC medications suggest a target for prevention strategies for this group and their parents. The high rates of opioid use among the adult group suggest a possible need for expanding client options for pain management. In addition, we found greater lifetime mental illness among the adult subgroup compared to the adolescent subgroup, which may orient providers to examine reasons for use, particularly among the adult subgroup and the potential dangers of “self-medicating” tendencies. Results indicated that adolescents admitted for prescription/OTC problems are more likely to be seen in outpatient settings and not be self-referrals, whereas adults with similar problems are seen in a variety of treatment settings and are more likely to be self-referrals. This finding may speak to the importance of the adolescent culture and their tendencies “to perceive a low level of harmfulness of prescription and OTC drug misuse” (Arria et al., 2008).

4.1. Limitations

Although the California State data collection system for public treatment programs (CalOMS) collects information on various prescription and OTC drug categories, the reader should be cautious in interpreting numbers of admissions for specific prescription and OTC drug categories reported in this article, as there may be some misrepresentation in these classes of drugs. Questioning any one treatment provider on their knowledge of prescription and OTC drug categories can sometimes result in inconsistent answers, due in part to the recency of inclusion of these types of drugs in epidemiologic measurement. Moreover, two issues in particular can make it difficult for a client to identify or a provider to accurately record prescription and OTC drug use. First, new prescription and OTC medications come on the market frequently. Second, there is wide variability in prescription and OTC drugs in relation to brand names, generic names, chemical names, and street names, which can change over time. Hence, analyses should be replicated with more recent data as they become available to assess trends over time.

5. Conclusion

Our study has examined only a few of the many potentially relevant client characteristics that can inform treatment development and specialization. Additional work should more comprehensively examine adolescents and adults who receive treatment for prescription/OTC drug. For example, just as there is a lot of work being done to identify risk factors for prescription and OTC drug misuse among young populations (Aria et al., 2008; White et al., 2006), treatment providers should also be taking into consideration reasons for use, especially among adolescent populations to determine the most appropriate treatment approach (i.e., involve family relations, focus on peer affiliation and selection, or is it because of academic performance) and early intervention opportunities.

Findings from this article provide information about the nature of prescription and OTC abuse within the treatment setting. This information can benefit the treatment community, as it not only provides an epidemiological measurement framework for understanding who is

presenting to treatment for prescription and OTC type drugs but also orients them to some client characteristics that may be useful for considering when undergoing intervention planning efforts.

To extend the descriptive results in this article, further research should investigate the association between prescription and OTC drug admissions and other primary substance use diagnoses in light of the evidence that adolescents younger than 18 years often report “polydrug” use issues (Dennis et al., 2004) and studies that have shown strong correlations between the misuse of prescription drugs and prior use of alcohol and marijuana (Sung, Richter, Vaughan, Johnson, & Thom, 2005). Other topics of future research should include the extent to which past knowledge/awareness and attitudes related to the long-term addictive consequences of prescription and OTC drug misuse are “risk factors” among individuals in treatment for these drugs; the “motivators” for engaging in prescription and OTC drug use, especially among high risk youth populations such as criminal justice-involved or individuals with co-occurring mental health problems; and the extent to which any urban/rural or regional (within state) differences exist between adolescent and adult admissions for prescription and OTC drugs.

Acknowledgments

Findings from this article were derived from a state contract with the Department of Alcohol and Drug Programs.

References

- Anthony JC, Warner LA, Kessler RC. Comparative epidemiology of dependence on tobacco, alcohol, controlled substance, and inhalants: Basic findings from the National Comorbidity Survey. *Experimental and Clinical Psychopharmacology*. 1994; 2:244–268.
- Arria AM, Caldeira KM, Vincent KB, O’Grady KE, Wish ED. Perceived harmfulness predicts nonmedical use of prescription drugs among college students: Interactions with sensation-seeking. *Prevention Science*. 2008; 9:191–201. [PubMed: 18633709]
- Austin, G.; Skager, R. Highlights: 12th Biennial California Student Survey Drug, Alcohol and Tobacco Use 2007–08. Sacramento, CA: California Attorney General’s Office; 2008.
- Bryner JK, Wang UK, Hui JW, Bedodo M, MacDougall C, Anderson IB. Dextromethorphan abuse in adolescence: An increasing trend: 1999–2004. *Archives of Pediatrics & Adolescent Medicine*. 2006; 160:1217–1222. [PubMed: 17146018]
- CalOMS Tx Data Collection Guide. California Department of Alcohol and Drug Programs. 2009. File Version 1.0 http://www.adp.ca.gov/CalOMS/pdf/CalOMS_Data_Collection_Guide.pdf
- Centers for Disease Control and Prevention. Emergency department visits involving nonmedical use of selected prescription drugs—United States, 2004–2008. *MMWR Morbidity and Mortality Weekly Report*. 2010; 59:705–709. [PubMed: 20559200]
- Dennis ML, Godley SH, Diamond G, Kaminer Y, et al. Main findings of the cannabis youth treatment randomized field experiment. *Journal of Substance Abuse Treatment*. 2004; 27:197–213. [PubMed: 15501373]
- Food and Drug Administration. FDA warns against abuse of dextromethorphan (DXM) (Talk Paper T05-23). Rockville, MD: National Press Office; 2005. <http://www.fda.gov/bbs/topics/ANSWERS/2005/ANS01360.html>
- Johnston, LD.; O’Malley, PM.; Bachman, JG.; Schulenberg, JE. Monitoring the Future national results on adolescent drug use: Overview of key findings, 2007 (NIH Publication No. 08-6418). Bethesda, MD: National Institute on Drug Abuse; 2008.

- Johnston, LD.; O'Malley, PM.; Bachman, JG.; Schulenberg, JE. Monitoring the Future national results on adolescent drug use: Overview of key findings, 2009 (NIH Publication No. 10-7583). Bethesda, MD: National Institute on Drug Abuse; 2010.
- National Center on Addiction and Substance Abuse. "You've Got Drugs!" IV: Prescription Drug Pushers on the Internet (PDF). May. 2007
- National Drug Intelligence Center. National drug threat assessment 2007. 2006.
- National Institute on Drug Abuse (NIDA). Monitoring the future study drug data tables, December 2008. 2008. <http://www.monitoringthefuture.org/data/08data.html>
- National Institute on Drug Abuse. InfoFacts: Prescription and over-the-counter medications, August 2008. 2008. <http://www.drugabuse.gov/Infofacts/Painmed.html>
- Office of National Drug Control Policy (ONDCP). Teens and prescription drugs: An analysis of recent trends on the emerging drug threat. Washington D.C: Executive Office of the President; 2007.
- Rabiner DL, Anastopoulos AD, Costello EJ, Hoyle RH, McCabe SE, Swartzwelder HS. Motives and perceived consequences of nonmedical ADHD medication use by college students. *Journal of Attention Disorders*. 2008; 11:689–699. [PubMed: 17712172]
- Substance Abuse and Mental Health Services Administration [SAMHSA]. Results from the 2002 National Survey on Drug Use and Health: National findings. Rockville, MD: Office of Applied Studies; 2007. DHHS Publication No. SMA 03–3836, NHSDA Series H–22
- Substance Abuse and Mental Health Services Administration [SAMHSA]. Results from the 2008 National Survey on Drug Use and Health (NSDUH): National Findings, September 2009. 2009a. <http://oas.samhsa.gov/nsduh/2k8nsduh/2k8Results.cfm>
- Substance Abuse and Mental Health Services Administration [SAMHSA]. Treatment Episode Data Set (TEDS) Highlights—2007. National Admissions to Substance Abuse Treatment Services; Rockville, MD: 2009b. DASIS Series S-45DHHS Publication no. (SMA) 09-4360. <http://www.oas.samhsa.gov/TEDS2k7highlights/toc.cfm>
- Substance Abuse and Mental Health Services Administration [SAMHSA]. Results from the 2009 National Survey on Drug Use and Health: Volume II. Technical Appendices and Selected Tables. Rockville, MD: Office of Applied Studies; 2010. NSDUH Series H-38A, HHS Publication No. SMA 10-4856Appendices
- Sung HE, Richter L, Vaughan R, Johnson PB, Thom B. Nonmedical use of prescription opioids among teenagers in the United States: Trends and correlates. *Journal of Adolescent Health*. 2005; 37:44–51. [PubMed: 15963906]
- White PW, Becker-Blease KA, Grace-Bishop K. Stimulant medication use, misuse, and abuse in an undergraduate and graduate student sample. *Journal of American College Health*. 2006; 54:261–268. [PubMed: 16539218]

Table 1

Prescription and OTC drug primary treatment admissions, CalOMS, fiscal year July 1, 2006 to June 30, 2007
(*n* = 6,841)

Type of prescription/OTC drug *	Age subgroup ^a	
	Adolescents 12–17 years old (<i>n</i> = 287), <i>n</i> (%)	Adults 18 years and older (<i>n</i> = 6,554), <i>n</i> (%)
Antidepressants	19 (6.6)	281 (4.3)
Sedatives/Tranquilizers	3 (1.1)	255 (3.9)
Stimulants	130 (45.3)	148 (2.3)
Opioids	43 (15.0)	5,823 (88.9)
OTC	92 (32.1)	47 (0.7)

^aPercentages reflect distribution from nonmissing values of characteristic within age group (column) and may not sum to 100% because of rounding.

* *p* < .0001 for comparison of age groups on specific characteristic.

Table 2

AOD treatment admissions for prescription/OTC drugs by age subgroups CalOMS, fiscal year July 1, 2006 to June 30, 2007 ($n = 6,841$)^a

Variables	Adolescents 12–17 years old ($n = 287$), n (%)	Adults 18 years and older ($n = 6,554$), n (%)
User characteristics		
Gender		
Male	145 (50.7)	3,477 (53.1)
Female	141 (49.3)	3,074 (46.9)
Ethnicity *		
Non-Hispanic White	56 (19.5)	4,682 (71.4)
Hispanic	99 (34.5)	962 (14.7)
Black	88 (30.7)	388 (5.9)
Asian/Pacific Island	2 (0.7)	187 (2.9)
American Indian/Alaska Native	26 (9.1)	87 (1.3)
Other	16 (5.6)	248 (3.8)
Mental illness *	21 (7.4)	1,963 (30.1)
Substance use/treatment		
Secondary drug *		
None	210 (73.2)	3,127 (48.4)
Alcohol	24 (8.4)	619 (9.6)
Marijuana	34 (11.9)	537 (8.3)
Cocaine/crack	2 (0.7)	378 (5.9)
Heroin	1 (0.4)	360 (5.6)
Methamphetamine	2 (0.7)	479 (7.4)
Other	14 (4.9)	961 (14.9)
Type of treatment *		
Outpatient	263 (91.6)	1,815 (27.7)
Residential <30 days	4 (1.4)	95 (1.5)
Residential 30 days	15 (5.2)	638 (9.)
Detox	3 (1.2)	884 (13.5)
NTP detox	2 (0.7)	1,509 (23.)
NTP maintenance	0 (0)	1,613 (24.6)
Prior AOD treatment *	22 (7.7)	3,615 (55.5)
Referral source *		
Self	43 (15.0)	4,636 (70.7)
Criminal justice/court	27 (9.4)	863 (13.2)
Other	217 (75.6)	1,055 (16.1)

^aFrequencies may not sum to age group total because of missing data on user or treatment characteristics. Percentages reflect distribution from nonmissing values of characteristic within age group (column) and may not sum to 100% because of rounding.

* $p < .0001$ for comparison of age groups on specific characteristic.