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PRESCRIPTION MEDICATION EXCHANGE PATTERNS AMONG METHADONE MAINTENANCE PATIENTS

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Abstract

BACKGROUND—Exchange of prescription medications is a significant public health problem particularly among substance abusing populations. Little is known about the extent of medication sharing and receiving behaviors in methadone maintenance treatment (MMT) populations and the factors associated with such behaviors.

METHODS—We examined rates, and factors associated with past year medication sharing and receiving practices of 315 MMT smokers who had enrolled in a clinical trial of smoking cessation. Sequential logistic regression models estimated the effect of demographic and substance use variables on the probability of sharing or receiving medications.

RESULTS—Participants averaged 40 years of age, and 49% were male. Among persons prescribed medications, 19.9% reported sharing. Nearly 40% had used medication not prescribed to them. Pain medications, sleep medications, and sedatives, were most commonly shared and received. Younger age was a significant predictor of both sharing medications (OR = 0.92, 95%CI 0.88; 0.96, $p < .01$) and receiving medications (OR = 0.94; 95%CI 0.92, 0.97, $p < .01$). Financial hardship (OR = 2.05; 95%CI 1.13; 3.72, $p < .05$), and recent use of heroin (OR = 5.59, 95%CI 1.89; 16.57, $p < .01$) or cocaine (OR = 3.70, 95%CI 1.48; 9.28, $p < .05$), were also independently associated with a significantly higher likelihood of receiving prescription drugs of abuse.

CONCLUSIONS—The high prevalence of prescription medication sharing and receiving behaviors among persons in MMT often include substances with abuse potential and suggest the need for comprehensive approaches for minimizing this phenomenon.

Keywords

Methadone; Prescription medication; diversion

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1. INTRODUCTION

The exchange of prescription medications between individuals is a significant public health problem that has received considerable law enforcement and research attention (Fischer et al., 2010; Frauger et al., 2011; Inciardi et al., 2009, 2007). Many of the resources for studying, defining, and understanding prescription drug exchange focus on trafficking, 'doctor shopping,' and internet purchase of illegal prescriptions (Fischer et al., 2010; U.S. Drug Enforcement Administration; Office of Diversion Control). However, prescription medication sharing (giving or selling medication to someone) or receiving (borrowing or buying from someone) also contributes to the illegal use of prescription medications (Ellis and Mullan, 2009; Ellis et al., 2011; Goldsworthy et al., 2008; McCabe et al., 2007, 2011; Petersen et al., 2008; Wilens et al., 2008). Across samples, family members or friends frequently share medications (Ellis and Mullan, 2009; Ford and Lacerenza, 2011; Goldsworthy et al., 2008; McCabe et al., 2006a; Petersen et al., 2008), with individuals being more willing to provide medication to a family member (Ellis and Mullan, 2009; Goldsworthy et al., 2008) than to someone they do not know well.

Emergency department (ED) visits involving illicit use of prescription drugs increased nearly 100% between 2004 and 2009, and accounted for nearly half of all pharmaceutical-related ED visits (Substance Abuse and Mental Health Services Administration; Center for Behavioral Health Statistics and Quality, December 28, 2010). Over that same time span, ED visits for prescription medication abuse has surpassed that for other illicit drugs, such as cocaine or heroin (Substance Abuse and Mental Health Services Administration; Center for Behavioral Health Statistics and Quality, December 28, 2010), often involve multiple drugs (National Institute on Drug Abuse, 2011), and are growing among all age groups including older adults (Substance Abuse and Mental Health Services Administration; Center for Behavioral Health Statistics and Quality, November 25, 2010). Additionally, the number of deaths from prescription drug overdoses has also increased. In 2008, the number of deaths attributed to prescription drug overdoses were greater than double those for illicit drugs (Centers for Disease Control and Prevention, 2011b). Opioid prescription pain relievers were involved in the majority of prescription drug overdose deaths (Centers for Disease Control and Prevention, 2011a, b).

Although ED visits and accidental overdose are serious public health concerns, prescription medication sharing and borrowing poses additional risks. The notable risks associated with this practice include unmonitored side effects and drug interactions (Goldsworthy et al., 2008), addiction (Ellis and Mullan, 2009; Goldsworthy et al., 2008), antibiotic resistance (Ellis and Mullan, 2009), and increased risk of birth defects (Ellis and Mullan, 2009; Petersen et al., 2008).

The National Institute of Drug Abuse (NIDA) estimated that in 2010 nearly 7 million Americans were currently using prescription medications they were not prescribed (National Institute on Drug Abuse, December 2011). Among the general population, the estimated rate of ever having shared prescription medications ranges from 17% to 23% and the rate of ever having received medication ranges from 23%–27% (Goldsworthy et al., 2008; Petersen et al., 2008). The three most frequently shared and received medications in the general population were allergy medicines, antibiotics, and pain medications (Goldsworthy et al., 2008; Petersen et al., 2008). In contrast, college student samples had higher rates of sharing medications (27%–36%) and widely varying rates (7–23%) of receiving medicines (Arria et al., 2008; Garnier et al., 2010; McCabe et al., 2006b; McCauley et al., 2011). Furthermore, among college students, stimulant medications and pain medicines are the most frequently shared and received prescription drugs (Garnier et al., 2010).

1.1 Medication Sharing and Receiving among Methadone Maintenance Populations

In the current environment of rising prescription opioid abuse (Mendelson et al., 2008), special concern surrounds the prescription medication exchange behaviors of opioid-dependent individuals. Persons in methadone maintenance programs commonly have a history of purchasing or borrowing illicit opioids prior to treatment (Bazazi et al., 2011; Gwin Mitchell et al., 2009) and because of high rates of co-morbid mental and physical health conditions (Cullen et al., 2009; Fareed et al., 2009; Kandel et al., 2001; Mertens et al., 2003; Sharkey et al., 2011; Stein et al., 2004), are often taking prescription medications (De Maeyer et al., 2011; Lofwall et al., 2005). Potentially dangerous medication interactions could occur between those legally and illegally consumed. Additionally, retention in methadone has significant health benefits (Fareed et al., 2009), and continued use of non-prescribed prescription medications may interrupt treatment. This population is also typically of low socioeconomic status, and has high rates of being uninsured or underinsured (De Maeyer et al., 2011; Lofwall et al., 2005; Mitchell et al., 2011), which are factors likely to promote sharing and receiving medication. During qualitative interviews with individuals maintained on methadone, participants in one study indicated that methadone clinics were ideal locations to get not only illicit opioids, but also a host of other prescription medications (Inciardi et al., 2007). Findings such as these may suggest that methadone maintenance treatment clinics are an important context for investigating prescription medication sharing and receiving among opioid dependent persons. Moreover, the dearth of studies focusing on this practice among this highly vulnerable subpopulation of substance abusers necessitates further research.

The purpose of this study is to augment current prescription medication exchange research by describing the practices of prescription medication sharing and receiving among MMT individuals and explore participant characteristics associated with sharing and receiving medication. We expect that medication exchanges are common in this population, and hypothesize that those who receive prescription medication do so most often out of financial necessity and frequently utilize family and friends to acquire these medications. Those with substance abuse histories are particularly vulnerable to overdose and adverse events related to illicit prescription drug use (Centers for Disease Control and Prevention, 2011a). Due to this fact, it is especially important to understand the sharing and receiving behavior in this underserved population. This study is a first step in evaluating the public health impact of prescription drug sharing and receiving practices in a methadone-maintained population.

2. METHOD

2.1 Participants

Study recruitment took place from December of 2008 through to January of 2012 at nine methadone maintenance treatment (MMT) sites throughout Southern New England. Potential participants were screened for a smoking cessation intervention trial and were excluded if they smoked fewer than 10 cigarettes per day, had been in methadone less than four weeks, or had any medical or psychological conditions that would interfere with smoking cessation treatment. The study protocol was approved by the Butler Hospital Institutional Review Board.

Of a total of 767 individuals screened for the study, 284 were ineligible. The most common reasons for study ineligibility were self-reported diagnosis of bipolar disorder or schizophrenia or exclusionary medications (coumadin, insulin, lithium, depakote, thorazine, haldol, clozaril). In total, 483 individuals were eligible for the study. Participants did not differ significantly from those ineligible and those not enrolled based on age, gender, race or ethnicity, or mean cigarettes per day. One hundred fifty two eligible individuals did not

attend the initial study visit; 331 individuals enrolled in the protocol. After written, informed consent, an additional 16 individuals were excluded, most often for not completing the baseline visit. The final sample consisted of 315 participants. Baseline data used for this analysis were collected from all participants during an initial interview lasting approximately 45-minutes.

2.2 Measures

Prescription Medication Sharing—Due to the lack of standardized measures for assessing medication sharing behaviors, we developed our own assessment procedure which involved querying participants on their use of 10 different classes of medications (i.e., “mood medicine” such as antidepressants and mood stabilizers) they may have been prescribed in the past year. If they indicated they had been prescribed the medication, they were then asked if they had shared the medication with others.

Prescription Medication Receiving—Participants were asked if they had used any of these 10 classes of medication in the past year without a prescription. Those responding affirmatively were asked from whom they received the medication (“Given by a friend, girlfriend, boyfriend, wife, husband, or roommate,” “Given by a family member,” “Bought from someone you knew from the methadone program,” “Bought from someone on the street,” “Stolen”). Participants were allowed to indicate more than one source of non-prescribed medication receipt. They did not provide additional sources.

Substance Use—Cocaine and heroin use were assessed using an adaptation of the Addiction Severity Index (McLellan et al., 1992). Separate dummy-coded variables were generated to indicate any use of cocaine or heroin in the 30 days prior to baseline.

Baseline Characteristics—Self-reported interview questions were used to assess demographic characteristics included age, race/ethnicity, gender, health insurance (response options: None, Medicaid, Medicare, or Private; dichotomized as none vs. any), and receipt of disability payments. Additionally, as a proxy for financial hardship, participants were asked if they had ever given up food or other necessities to pay for needed medicines and whether they had gone without needed medical care to pay for food or other necessities; persons answering yes to either question were defined as having a financial hardship.

2.3 Analytical Methods

We report frequencies, means, and percentages to describe the background characteristics of this cohort, and patterns of prescription drug use, sharing, and receiving. The likelihood of sharing one’s own prescription medications with others can be conceptualized as the product of two probabilities. The first is the likelihood of having a prescription medication; the second is the conditional probability of sharing the medication with others after it has been obtained. The three possible categorical outcomes of 1) not having a prescription medication, 2) having a prescription medication but not sharing it, and 3) sharing a prescribed medication with others, led to our use of a sequential logit model (Buis, 2007; Mare, 1981) to estimate the effects of participants’ demographic characteristics and substance use on this process. This model is closely related to sequential response model (Maddala, 1983) and to the continuation ratio logit model (Agresti, 2002) and uses a logistic response to simultaneously estimate the effect of predictor variables on the probability of having a prescription medication and on the conditional probability of sharing medications with others. The model assumes a unique path through which each final outcome can be reached. The Wald χ^2 -statistic tests the null hypothesis that the 2 coefficients associated with each predictor variable are simultaneously equal to 0. Rejection of this null hypothesis indicates the corresponding predictor variable has a significant effect on the process

generating the terminal outcome. Interpretation of coefficients for each equation directly parallels an ordinary logistic regression model. We report exponentiated coefficients giving the estimated effect of each predictor on the expected odds of having a prescription and the conditional odds of sharing a prescription. Tests of significance and 95% confidence interval estimates are based on robust standard error estimators. The model was fit using the seqlogit module (Buis, 2007) in Stata 10.1 (StataCorp, 2008). A logistic regression model was used to estimate the effects of predictor variables on the likelihood of receiving drugs of potential abuse from others.

3. RESULTS

3.1 Participant Characteristics

Participants averaged 39.9 (± 9.7 ; range 21–61) years of age, 155 (49.4%) were male, 249 (79.3%) were non-Hispanic Caucasian, 8 (2.5%) were African-American, 38 (12.1%) were Hispanic, and 19 (6.1%) were of other ethnic or racial origins. Non-Hispanic Caucasians were contrasted with all other racial or ethnic minorities in subsequent analyses. Almost 70% had either private ($n = 44$; 14%) or public ($n = 176$; 55.9%) health insurance coverage, 149 (47.3%) had one or more non-emergency outpatient medical visits in the past year, and 132 (41.9%) were receiving disability payments. The mean duration of methadone treatment was 154.4 weeks ($SD=196.6$, median=78). Sixty-five (20.6%) participants said they had gone without food, clothing, or housing because they needed money for medical care in the past 6-months, and 25 (7.9%) said they had gone without needed medical care because they needed the money for food, clothing, or housing during that same period; these were combined to form a dichotomous indicator of financial hardship. Recent (past 30 days) heroin and cocaine use was reported by 22 (7.0%) and 26 (8.3%), respectively.

3.2 Prescription Medication Sharing and Receiving

Altogether, 248 (79.2%) participants were prescribed one or more medications during the past year (Table 1). A total of 206 (65.8%) individuals reported having been prescribed at least one medication not typically abused (e.g., antibiotics) and 206 (65.8%) reported being prescribed at least 1 prescription for medication types with abuse potential. Among those prescribed medications, 42 (13.4%) were prescribed medications with abuse potential only, 42 (13.4%) were prescribed only medications without abuse potential, and 164 (52.4%) were prescribed medications with and without abuse potential. The most commonly shared medications were pain medications, sleep medications, and sedatives, all with abuse potential. About 18.0% ($n=37$) of persons prescribed medication with abuse potential reported sharing those drugs with others. By comparison, only 5.8% ($n=12$) of those with prescriptions for other medications reported sharing; of these 12 participants, none shared more than 1 drug type.

Of the 42 individuals who shared any prescribed medication, 31 shared only one type, 6 shared 2 types of medication, and 5 shared 3 medication types. Notably, 37 people shared a drug with abuse potential, while 5 people shared drugs without abuse potential. Those who shared drugs with abuse potential only shared drugs with abuse potential; those who shared drugs without abuse potential did not also share drugs with abuse potential.

Table 2 describes the use of prescribed medications received from others. The most commonly received were drugs with abuse potential. Sedatives and pain medications were the drugs most commonly received; both were used by 19.6% of the participants. Receipt and use of sleep medications (13.8%) and Suboxone (10.9%) was also relatively common. In all, 112 (35.9%) participants reported receiving prescription medications with abuse potential. Thirty-one (9.9%) said they had received other medications without a prescription;

most common was non-prescription use of antibiotics, which was received by 14 (4.5%) participants.

3.3 Analytic Models

We used sequential logistic regression (Table 3) to estimate the adjusted effects of background characteristics and recent illicit drug use behaviors on the likelihood of having been prescribed and having shared prescription drugs with abuse potential. The Wald χ^2 -test indicates that age, receiving disability payments, past year physician visits, and recent cocaine use were associated significantly ($p < .05$) with sharing medications of abuse with others.

Younger age was not associated with the likelihood of being prescribed medications of abuse but, conditional on having been prescribed a medication, age was associated significantly and inversely (OR = 0.92, 95%CI 0.88; 0.96, $p < .01$) with the likelihood of sharing medication.

Participants receiving disability payments (OR = 3.16, 95%CI 1.67; 6.00, $p < .01$) and those who reported visits to a physician (OR = 3.22, 95%CI 1.89; 5.55, $p < .01$) had significantly higher odds of being prescribed a medication of potential abuse, but these factors were not directly associated with the likelihood of sharing medications with others.

Relatively few ($n = 26$) participants reported recent cocaine use, limiting statistical power, but the Wald χ^2 -statistic ($p = .05$) indicates that recent cocaine use was associated significantly with sharing. While both of the individual coefficients were substantively large, neither was significant at the .05 level, and the confidence interval estimates were relatively wide. In this cohort, recent cocaine users were estimated to be 2.62 (95%CI 0.87; 8.43, $p = .10$) times more likely to have a prescription for a medication with abuse potential than their non-cocaine using counterparts. Additionally, conditional on being prescribed a medication of abuse, they were estimated to be 2.88 (95%CI 0.93; 8.90, $p = .07$) times more likely to share with others.

Receiving medications from others was not associated significantly with gender, ethnicity, having medical insurance, receiving disability payments, or reporting recent physicians visits (Table 4).

The expected odds of receiving a prescription medication decreased significantly as age increased (OR = 0.94; 95%CI 0.92, 0.97, $p < .01$).

Persons who reported financial hardship were estimated to be about 2.05 times (95%CI 1.13; 3.72, $p < .05$) more likely than others to report they had received prescription medications with abuse potential.

Recent use of heroin (OR = 5.59, 95%CI 1.89; 16.57, $p < .01$) and recent use of cocaine (OR = 3.70, 95%CI 1.48; 9.28, $p < .05$) were independently associated with a significantly higher likelihood of receiving medications with abuse potential.

4. DISCUSSION

One in five MMT patients has shared prescription medications and more than a third reported receiving medications from non-medical sources during the past year. Sleep medication, sedatives, and analgesics, all medications with abuse potential, were most frequently shared and received in our sample. These three medication classes were among the most frequently prescribed to our cohort, and thus the high frequency of sharing may be a result of increased availability. Outside of the methadone population, the sharing of

prescription pain medication is consistently high across the general population, college age samples, and elderly populations (Ellis et al., 2011; Garnier et al., 2010; Goldsworthy et al., 2008; McCabe et al., 2006b; Petersen et al., 2008). However, little attention has been paid to the misuse of sleep medication and sedatives in the extant literature, whereas sleep disturbance and high levels of anxiety are common in substance-using populations and were included in the current analysis (Kandel et al., 2001; Stein et al., 2004).

In the current sample, receiving prescription drugs was reported by more than a third of respondents. Interestingly, participants endorsed getting the four most commonly received medications from family or friends more frequently than they endorsed buying medications from a non-medical source (Ford and Lacerenza, 2011). Similar to results of prescription drug sharing, pain medications, sedatives, and sleep medicines were most commonly received. Of note, buprenorphine was frequently received from non-medical sources. This finding is consistent with an earlier study of opioid users, where 76% reported that they had used illicit buprenorphine (Bazazi et al., 2011). Additionally, medication receipt to control pain may also be an explanation, as this has been described in a sample of veterans (Goebel et al., 2011). Exploration of prescription drug misuse in MMT or opioid-dependent individuals has focused almost exclusively on misuse of prescription narcotic pain medication. Receipt of pain medications may be due to continued recreational drug use, but poverty and the need to self-medicate a physical health problem may also drive misuse. As noted above, sleep (Stein et al., 2004) and anxiety disorders (Kandel et al., 2001) are prevalent in this population, and may precipitate self-medication.

We found that age was significantly and inversely related to sharing prescription medications, with younger individuals being more likely to report sharing. General population samples have found similar results, (Petersen et al., 2008) although medication sharing is an emerging problem in older age groups as well (Ellis et al., 2011).

In this sample, age was the only significant predictor of sharing prescription medications which is consistent with general population findings (Petersen et al., 2008). Receiving medications however was associated with not only younger age, but also with being male, in financial need, and having recently used cocaine and heroin. Although this could suggest more complicated mechanisms for receiving medications, it could also reflect a response bias in which individuals are more willing to disclose that they received medication from someone than that they gave away their own medications. However, a similar pattern has been reported in college samples where receiving prescription medication was related to concurrent drug use and age (although in this case, seniors were more likely to receive medication than freshmen; (McCabe et al., 2007, 2006b). It would be of interest to explore concurrent drug use in more detail in order to better understand underlying motivations for prescription drug sharing and receiving.

There are several limitations of the current study. First, medication sharing and receiving was only reported for the previous year. It is possible that lifetime sharing and receiving rates and patterns might be different. Second, this sample was recruited as part of a smoking cessation study. Although nearly 90% of MMT patients smoke (Best et al., 1998; Clarke et al., 2001; Demarie et al., 2011; Teichtahl et al., 2004), it is possible our results would not generalize to non-smokers, or to opioid dependent persons not receiving methadone. Third, the response categories that were used to capture sources of received medication were not mutually exclusive. Fourth, we do not know how much medication was shared or received and whether those with prescriptions took any of their medication or shared it all. Without this information, it is difficult to accurately quantify the problem, or analyze potential health consequences from sharing or receiving medications. Fifth, given the differences in endorsement rates of sharing and receiving, it is possible that participants were more willing

to admit to receiving prescription medication than to having shared. Alternatively, MMT patients may not be very well integrated into the health care system or have financial hardship and therefore would be more likely to receive prescription drugs from others than to share prescription drugs with others. Finally, our study was based on self-report which may not fully capture the range of medication sharing and receiving behaviors in this population.

The exchange, both sharing and receiving, of prescription medications can contribute to several negative outcomes, especially in this vulnerable population. Illicitly taken prescription medications can result in unanticipated side effects and drug interactions (Goldsworthy et al., 2008), addiction (Ellis and Mullan, 2009; Goldsworthy et al., 2008), antibiotic resistance (Ellis and Mullan, 2009), and can increase the risk of birth defects (Centers for Disease Control and Prevention, 2011b; Ellis and Mullan, 2009; Petersen et al., 2008; Substance Abuse and Mental Health Services Administration; Center for Behavioral Health Statistics and Quality, December 28, 2010). This is especially true for individuals in methadone maintenance where co-morbid health concerns are common (Cullen et al., 2009; Fareed et al., 2009). Additionally, social support systems may become strained due to the exchange of medications among family and friends.

Our cohort was opioid-dependent and in treatment at methadone sites where individuals congregate, facilitating sharing and receiving medication. In addition, opioid dependent persons often have histories of illicit recreational drug use as well as medicinal prescription use. Given the low socioeconomic status of the current sample, limited outpatient visits to medical providers, and high comorbidity rates found among MMT patients, it is possible that sharing and receiving medication may be a manifestation of the larger problem of health care treatment access among methadone maintenance populations. Although a large proportion was insured, many had public insurance, and medication access, continuity, and affordability may still be a concern (Hartung et al., 2008; West et al., 2009). The contribution of the potential lack of access to prescription medication and the under-treatment of chronic pain, sleep disorders, and mental health disorders in MMT patients, is worthy of further investigation.

Our study demonstrates that prescription medication sharing and receiving in an MMT population is not limited to prescription pain medications. To our knowledge, other studies have not explored both sharing and receiving of prescription medications, or examined such a broad range of drug classes in an MMT population. Addressing the exchange of prescription medications is especially important in MMT populations, as they often have numerous physical and mental health conditions (Cullen et al., 2009; Fareed et al., 2009; Kandel et al., 2001; Mertens et al., 2003; Rounsaville et al., 1982; Sharkey et al., 2011; Stein et al., 2004), including chronic pain, sleep problems, and ongoing drug use. Non-prescribed use of prescription medication could interfere with medical or psychiatric treatment, or prevent help seeking among those who could use better management of their substance use and health concerns, as well as derail methadone treatment or inhibit treatment effectiveness. Our data offer insight into some individual characteristics that increase the risk of sharing and receiving medication. Reasons for sharing and receiving needs further examination to both prevent the exchange of prescription drugs, and also maximize care to a vulnerable and underserved population.

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Table 1Prescribed Medication Sharing (n = 313^a).

Drug Class (Non-Abused)	Prescribed n (%)	Shared n (%)^b
Allergy Meds	35 (11.2%)	4 (11.4%)
Erectile Dys. Meds (Males)	3 (1.9%)	0 (0.0%)
BP Medications	43 (13.7%)	2 (4.7%)
Mood Meds	103 (32.9%)	3 (2.9%)
Antibiotics	150 (47.9%)	3 (2.0%)
Drugs of Abuse		
Sedatives	114 (36.4%)	15 (13.2%)
Meds for ADHD	14 (4.5%)	2 (14.3%)
Sleep Meds	124 (39.6%)	14 (11.3%)
Pain Meds	114 (36.4%)	14 (12.3%)
Suboxone	14 (4.5%)	1 (7.1%)
Summary Indicators		
Any Non-Abused Drug	206 (65.8%)	12 (5.8%)
Any Drug of Abuse	206 (65.8%)	37 (18.0%)
Any Prescribed Medication	248 (79.2%)	42 (19.9%)

^a Number of participants who provided valid responses to questions about medications shared with others.

^b % of persons who received a prescription for that drug class.

Table 2
Non-Prescription Use of Prescription Medications Received from Others (n = 312^a).

Drug Class (Non-Abused)	Used RX n (%)	Source of Medication ^b				
		A	B	C	D	E
Allergy Meds	9 (2.9%)	2	2	1	0	0
Erectile Dys. Meds (Males)	4 ^c (2.6%)	2	0	0	1	1
BP Medications	5 (1.6%)	0	1	0	3	0
Mood Meds	6 (1.9%)	3	1	0	1	0
Antibiotics	14 (4.5%)	10	3	0	0	0
Drugs of Abuse						
Sedatives	61 (19.6%)	37	8	10	23	0
Meds for ADHD	8 (2.6%)	5	1	0	3	0
Sleep Meds	43 (13.8%)	30	10	1	0	0
Pain Meds	61 (19.6%)	29	10	2	30	0
Suboxone	34 (10.9%)	14	2	0	24	0
Summary Indicators						
Any Non-Abused Drug	31 (9.9%)					
Any Drug of Abuse	112 (35.9%)					
Any Prescribed Med	123 (39.4%)					

^aNumber of participants who provided valid responses to questions about medication use.

^bSource of Medication (not mutually exclusive, participants could endorse multiple sources, or not provide a source).

- A. Given by a friend, spouse, or roommate.
- B. Given by a family member.
- C. Bought from someone you knew.
- D. Bought from someone on the street.
- E. Stolen

^cOf the 155 male participants.

Table 3

Sequential Logit Model Predicting Having and Sharing Prescription Medications with Abuse Potential During the Past Year (n = 313^a).

	Wald χ^2 -Test	Prescription (Yes v No)	Shared (Yes v No)
	(p > χ^2)	OR (95% CI)	OR (95% CI)
Age	(.001)	0.99 (0.96; 1.02)	0.92 ** (0.88; 0.96)
Gender	(.502)	0.82 (0.48; 1.40)	0.67 (0.29; 1.55)
Non-Hispanic Caucasian	(.690)	0.76 (0.39; 1.50)	0.84 (0.32; 2.18)
Medical Insurance	(.339)	1.08 (0.57; 2.06)	0.48 (0.18; 1.29)
On Disability	(.002)	3.16 ** (1.67; 6.00)	1.42 (0.59; 3.41)
Physician Visit	(.000)	3.22 ** (1.89; 5.55)	1.16 (0.52; 2.58)
Financial Hardship	(.254)	0.96 (0.39; 2.34)	0.95 (0.39; 2.34)
Recent Heroin Use	(.491)	1.75 (0.60; 5.16)	1.47 (0.43; 5.08)
Recent Cocaine Use	(.050)	2.62 (0.87; 8.43)	2.88 (0.93; 8.90)

* p < .05,

** p < .01

^aNumber of participants who provided valid responses to questions about medications shared with others.

Table 4

Logistic Regression Model Estimating the Effects of Background Characteristics on the Odds of Using Prescription Medications with Abuse Potential Received from Others During the Past Year (n = 312^a).

Predictor	OR (95% CI)
Age	0.94 ** (0.92; 0.97)
Gender	1.55 (0.91; 2.63)
Non-Hispanic Caucasian	0.75 (0.40; 1.41)
Medical Insurance	0.95 (0.50; 1.81)
On Disability	1.03 (0.56; 1.88)
Physician Visit	1.15 (0.70; 1.94)
Financial Hardship	2.05 * (1.13; 3.72)
Recent Heroin Use	5.59 ** (1.89; 16.57)
Recent Cocaine Use	3.70 ** (1.48; 9.28)

*
p < .05,

**
p < .01

^aNumber of participants who provided valid responses to questions about medications received from others.